

Survey Results

(06.10.2025)



BATS: Winter Maintenance for Walking and Cycling – Mapping Processes, Identifying Challenges, and Finding Solutions

This survey investigates how European cities **organize and deliver winter maintenance services** that ensure safe and accessible conditions for walking and cycling during snow, rain, storms, and darkness. The focus is on mapping existing processes, identifying bottlenecks, and learning from best practices across municipalities. The questionnaire addresses seven key areas:

1. Service organization and planning, including prioritization of road users and preventive measures;
2. Resources and technology, with emphasis on equipment, workforce, and innovation;
3. Contracts and cooperation, highlighting procurement models, subcontracting, and flexibility;
4. Communication and supervision, exploring information flows, monitoring, and accountability;
5. Data, know-how
6. Preparedness for emergencies;
7. Spatial planning challenges that influence maintenance effectiveness (street design, parking).

jesus.lopez@spinunit.org [Switch accounts](#)



Not shared

* Indicates required question

Name of the city *

Your answer



Name of the city

4 responses

Klaipėda

Gothenburg

Gothenbourg, Sweden

City of Porvoo

Your institution and role (department of the city or university you work in)

3 responses

Klaipėda public transport authority. Traffic analyst.

Stadsmiljöförvaltningen

City infrastructure, maintenance manager

Describe the relevant conditions of your city's local context very generally. **What characterizes your city?**

4 responses

City near the sea, rainy and wet.

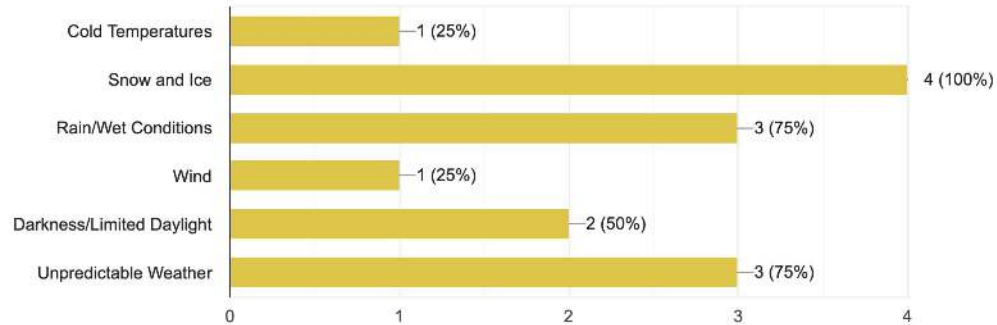
Near zero celcius conditions. Wet conditions freezes in the morning and warming up during the day. Coastal climate.

Gothenbourg is in the south of Sweden close to the sea, so we normally have more rain than snow and ice. However, when there is snow and ice the winter maintenance can sometime be slow to remove the snow and ice for cyklists and people who walk. That makes it a bit unpredictable and difficult to know which cyklists roads are ok to use and which ones are blocked.

Medium-size city in Finland, vicinity of the sea affects the weather, old city district challenging to maintain, still many state-maintained roads within the city area.

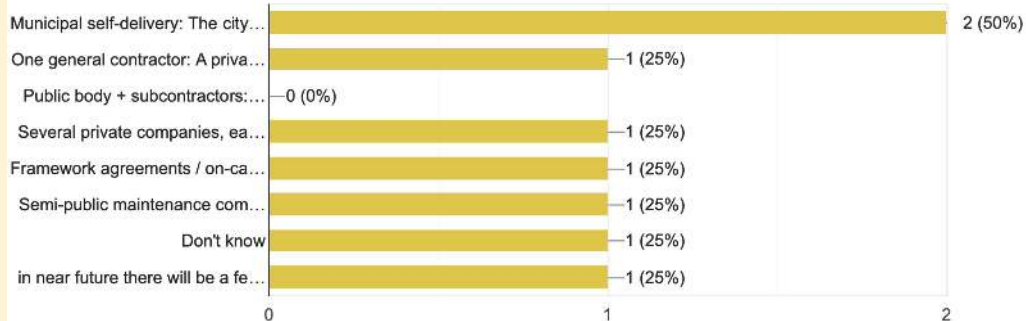
What are the main weather-related challenges that active mobility in your city is facing?

4 responses



Who is in charge of public space maintenance when it comes to weather conditions (e.g. snow removal, street clearance)?

4 responses



Service organization and planning

How are **location priorities** organized when it comes to implementing services (which roads to remove snow first, which later)?

4 responses

Main roads first.

Main roads used by public transports.

It says on the website för Gothenbourg municipality that the goal is to remove snow from the main cycle roads (the bigger ones) when 2-3 of snow is there and to have it removed after maximun 6 hours.

Separate cycle paths prioritized, for city streets 3 classes (main roads in class 1)

How are priorities organized by **user groups** (cars, public transport, bicycles, pedestrians) and do they vary in different locations?

4 responses

Main public transport first, cars second then pedestrians. Cycle paths are usually used for storing snow

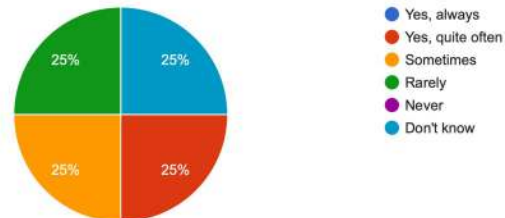
Public transport, cycles and pedestrians first.

Don't know.

Bus routes in class 1, simple pavements on property owners's responsibility, shared pavements and cycle paths in the same priority as the accompanying street

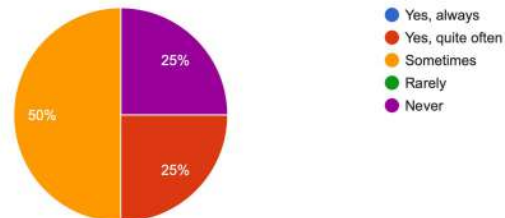
Do the current equipment and workforce resources realistically cover all needs during peak events (strong storms, heavy snowfalls or rain)?

4 responses



Does the prioritization process often lead to some areas being left unattended for too long (e.g. snow uncleared for several days)?

4 responses



What **preventive measures** (e.g. based on weather forecasts) are used to start work earlier?

3 responses

Road forecasts.

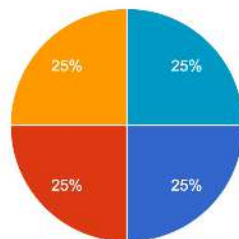
Don't know

Commercial weather services used, also own weather stations, anti-slippery measures made in anticipation

Resources and technology

Is current public equipment sufficient and in a good condition (e.g. snow removal machines)?

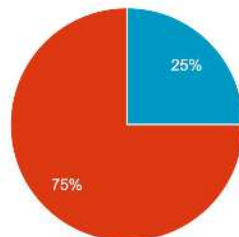
4 responses



- Yes, we are very well equipped
- Equipment is in a good condition but not sufficient
- Equipment is sufficient but quite old
- Equipment is a struggle every year
- Equipment is insufficient and obsolete
- Don't know

Is public labour (machine operators, coordinators) enough, or its shortage a frequent problem during the winter season?

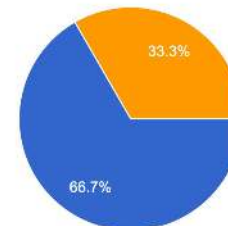
4 responses



- Yes, we are very well equipped
- Yes, but workforce sometimes falls short
- We find it hard, but we somehow manage
- Labour is a struggle every year
- No, the workforce is insufficient
- Don't know

Is there enough suitable technology in your area of responsibility to ensure timely action for all user groups (especially pedestrians and cyclists)?

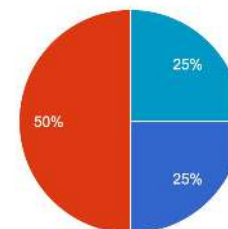
3 responses



- Yes, we are very well equipped
- Yes, but technology sometimes fall short
- We find it hard, but we somehow manage
- Technology is a struggle every year
- No, technology is insufficient

Do the contracting partners have enough spare equipment, employees, or technology to ensure continuity?

4 responses



- Yes, they are very well equipped
- Generally yes, but they sometimes fall short
- They find it hard, but we somehow manage
- Equipment, employees and technology are a struggle every year
- No, Equipment, employees and technology are insufficient
- Don't know

Contracts and cooperation

Explain very generally how **procurement** for winter maintenance of public space works in your city.

3 responses

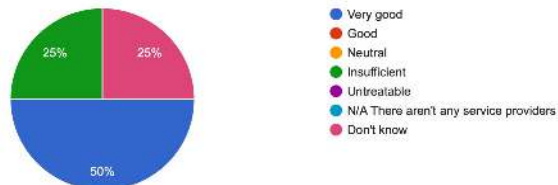
City is divided in three bigger parts and three separate procurements are placed. Northern part, center part and southern part of Klaipėda is divided and three different companies manage these areas.

Don't know

E.g. last procurement in August, contracts signed in September, 5 years (2 + optional 3). Most procurements for hour-rate services called upon when needed

How would you describe the quality of the relationship between the city and the service providers in terms of trust?

4 responses



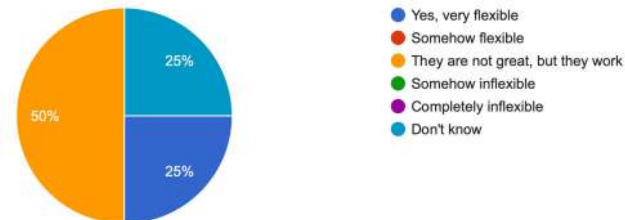
Do disputes or confusion often arise about who is responsible for a specific road section or street (municipality vs. private road vs. private owner) and...e these affected the quality of service provision?

4 responses



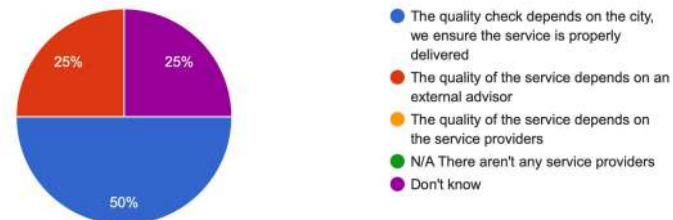
Are existing maintenance contracts flexible enough to cover exceptional weather conditions (record snowfalls)?

4 responses



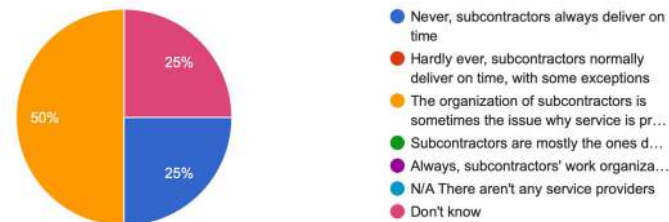
To what extent does the quality assurance of work depend on the work organisation of subcontractors?

4 responses



How often the work organisation of subcontractors has become an issue in providing timely services?

4 responses



Communication and supervision

How and **between which institutions/persons** does communication take place regarding the organization of work?

3 responses

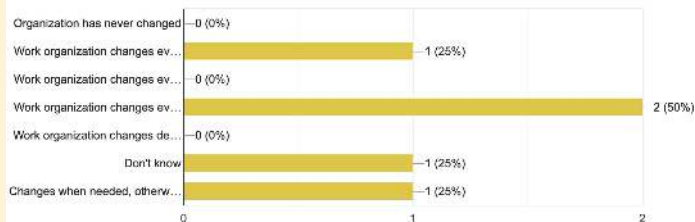
A too complex answer required here ...

Don't know

Main communication between the city officer-on-duty and the employee drivers or subcontractors, also between the officer-on-duty and the maintenance manager

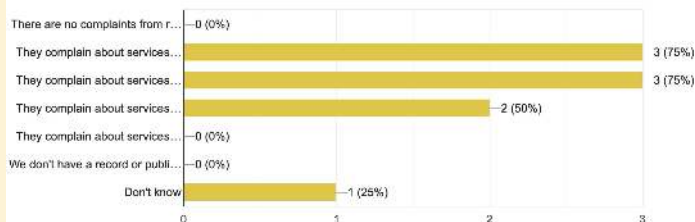
How often do changes in the work organization occur?

4 responses



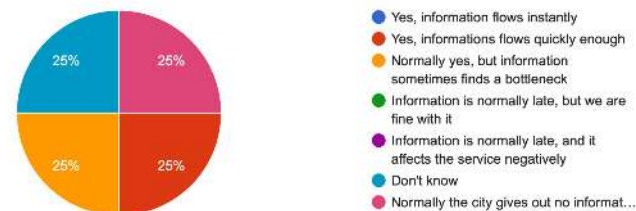
What is the main complain from residents regarding the quality of work?

4 responses



Does information about weather conditions and work progress move quickly enough between different parties (municipality, entrepreneur, police, rescue services, residents)?

4 responses



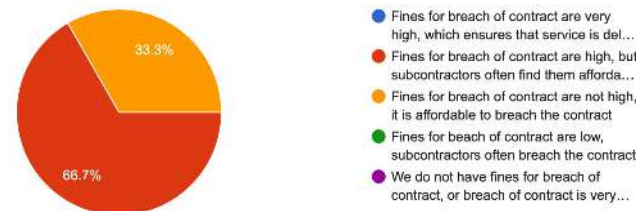
Are there problems with documenting or reporting work (e.g. the times and places of work do not match reality)?

3 responses



How large are the fines for breach of contract and how large do you estimate their impact?

3 responses



Data and know-how

What kind of **training is provided for operators** and coordinators to improve efficiency and safety?

1 response

Always right before the winter season a startup training session, otherwise when needed

What opportunities to exchange experiences or **learn from other municipalities** facing similar challenges is your city benefiting from?

2 responses

Meetings and sometimes visits to discuss common problems.

National conferences and seminars, personal networks

How is **knowledge from past winters** (successes and failures) documented and used to improve planning?

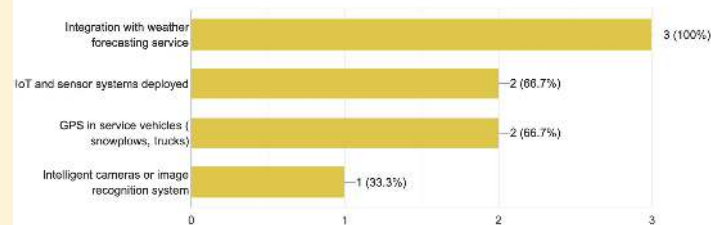
2 responses

Meetings with contractors.

Failures are reflected in order to improve the action, no regular survey or other measure of satisfaction

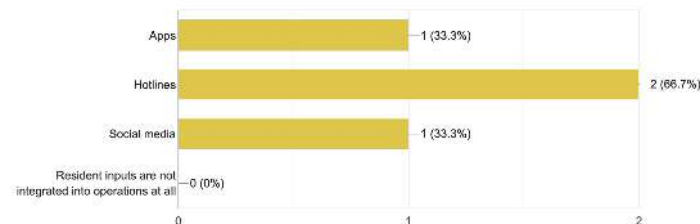
Do you use smart city applications or real-time data (e.g. sensors, GPS on vehicles, weather data integration) to guide and monitor services (e.g. snow removal or street clearance)?

3 responses



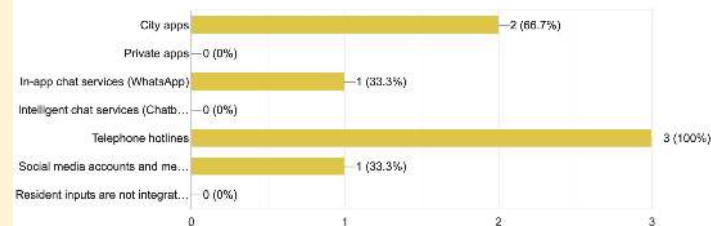
How are residents' reports and feedback integrated into operations?

3 responses



How are residents' reports and feedback integrated into operations?

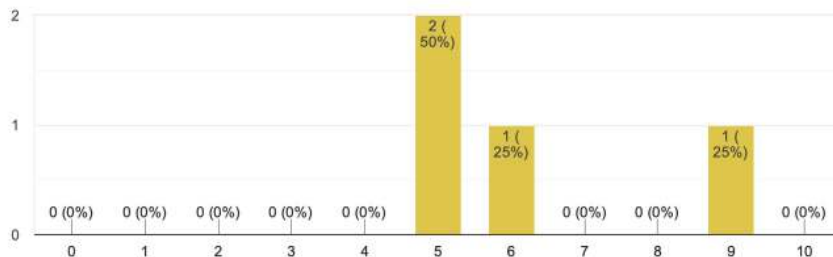
3 responses



Emergency situations

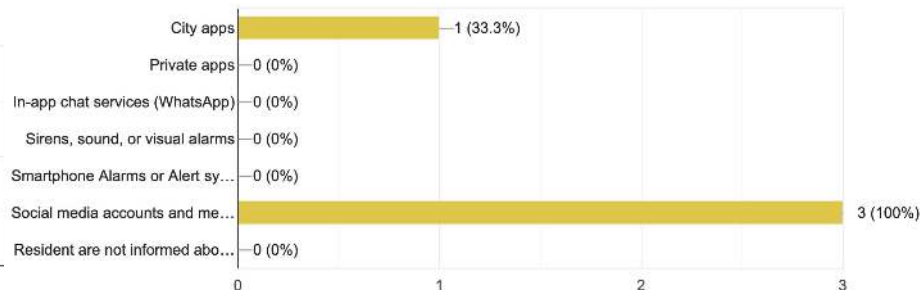
How much do you rate the preparedness of local governments for emergency winter weather situations (e.g. heavy storm, heavy rain)?

4 responses



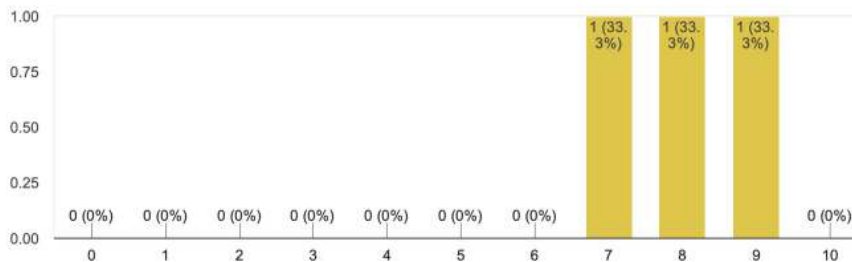
How is information delivered to residents?

3 responses



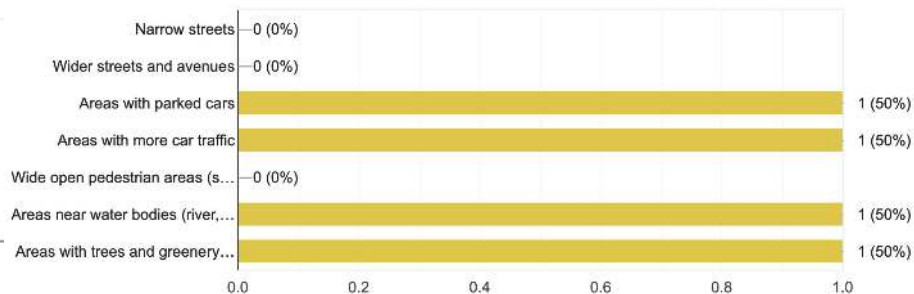
Has the change in the weather patterns affected your work?

3 responses



In which places or conditions do emergency situations occur most often?

2 responses



Spatial setting

In your opinion, what are the biggest problems from a **spatial design perspective** that affect active mobility in hard weather conditions? How do they affect different user groups (pedestrians, cyclists)

3 responses

If snowfall is big enough then the companies do not have the capabilities to clean it fast enough. Cycling paths usually are the very low on priority list

Open areas to temporarily store snow.

The lack of space for the removed snow, parked cars on roadsides

What changes or additions should be made to the street network planning standards to make winter weather maintenance (e.g. snow removal) more effective in the future?

1 response

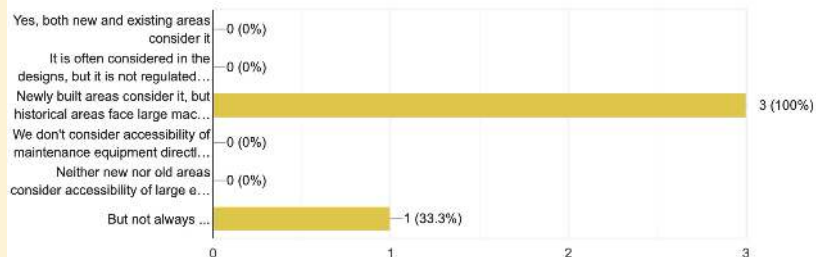
Nearby space for the removed snow, storages for anti-slippery materials and a road network where maintenance vehicles can minimize moving from one place to another

Thanks for participating!

Your response is very appreciated

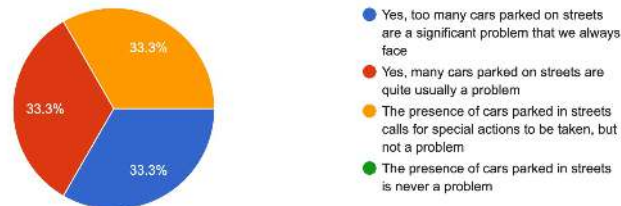
When designing streets and blocks, is sufficient space taken into account for maneuvering maintenance equipment (snow removal machines' turning radii, narrow streets, dead ends)?

3 responses



Is the abundance of parked cars that hindering public space maintenance (too many parked cars for removing snow effectively)?

3 responses



When constructing streets and sidewalks, are sufficient snow collection points or snow storage areas planned?

3 responses

