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The noise survey of Lappeenranta

Lappeenrannan Lyseon lukio

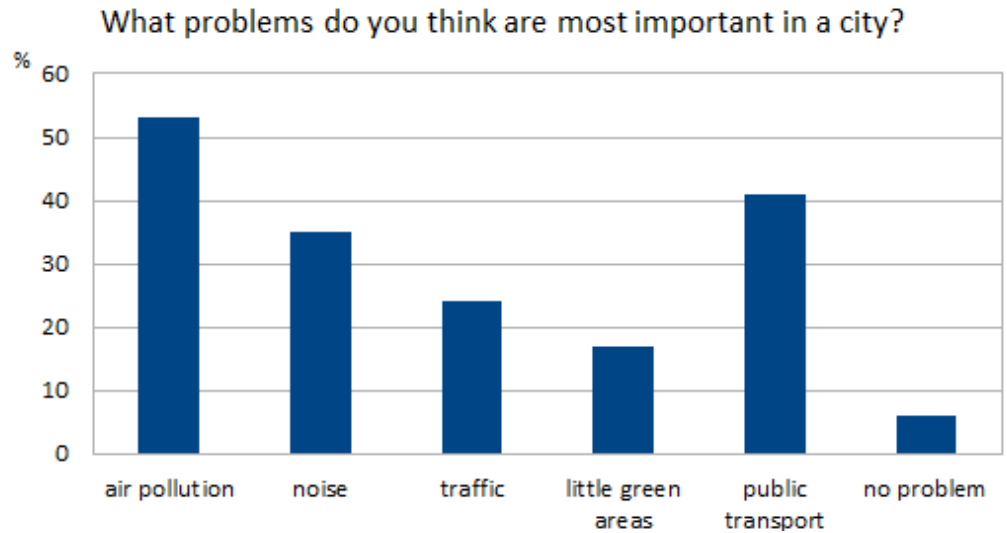
Problems and solutions

What do the residents think?

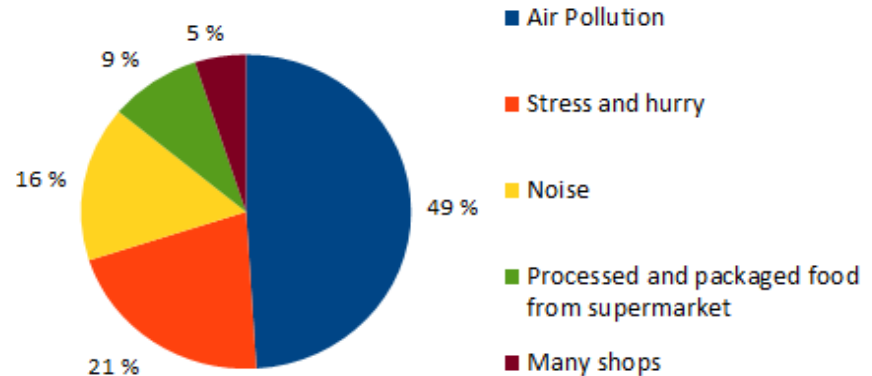
As seen from the results, residents of Lappeenranta consider noise as a major problem and a negative aspect of urban life.

We need to notice the worry of the residents and so something about it.

Another problem is public transportation. Preferring cars over public transportation creates more noise pollution, which causes more problems.

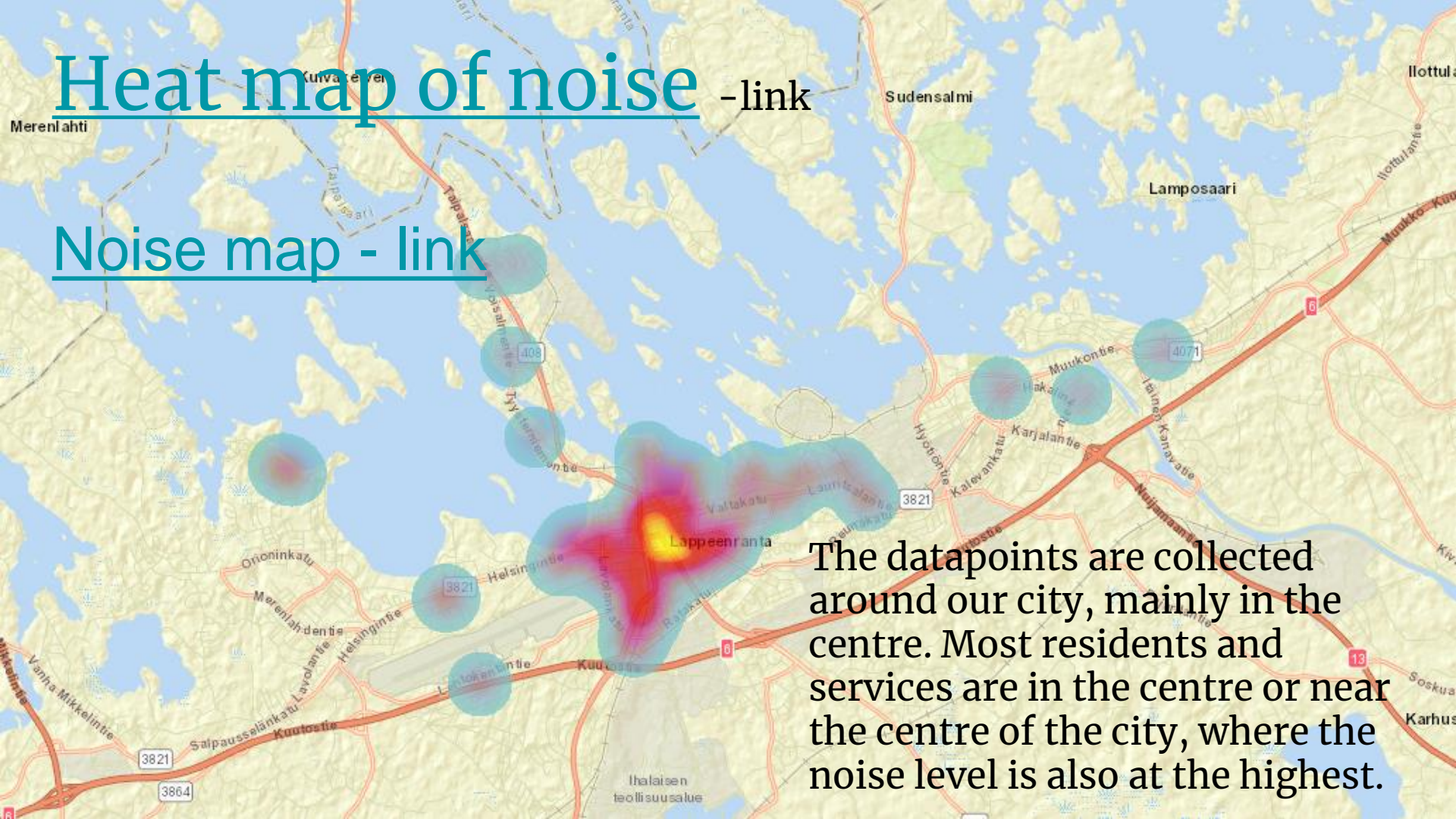


What negative aspect would you highlight about life in the city?



Heat map of noise -link

Noise map - link



The datapoints are collected around our city, mainly in the centre. Most residents and services are in the centre or near the centre of the city, where the noise level is also at the highest.

Highest noise level

In our survey, only 16% said that noise is a problem. The noise is highest in the centre because markets and services are located there.

The main problems are a dual carriageway and other major roads located a few kilometres away from the centre and one major street going through it.

The highest noise levels were measured in front of a major supermarket, as the store is located at a busy intersection. There are apartment buildings nearby, which causes more problems.

It was also windy when the noise levels were measured, which may have affected the results.



Low noise area

A tiny percentage found noise a problem. Although Lappeenranta is the 13th largest town in Finland, residents don't perceive noise as a problem. We didn't take noise measurements in the countryside, where there would be almost no noise.



Solutions



Our solutions are soundproofed buildings, preferring cycling, electric cars and local buses.

- The buildings in the city center could be built with more soundproof materials and the old buildings could be altered to be more soundproof.
- Around the streets in the high noise area can be planted trees to help reduce the sound or there could be built sound barriers around the streets to the places that have homes near.
- New bicycle paths encourage people to bike more and biking also makes less noise which will help especially in the city center.
- Busses that run on biogas make less noise. By having more of these busses there would be less noise around the areas where many busses pass by daily. By lowering the ticket prices we could have more people taking the bus every day.
An alternative way to this would be to have different routes for the busses and having driving in the city center restricted around night time.
- In the winter the snow from the streets is gathered in big piles. Big snow piles around the city block traffic sounds. Because of this there is less noise in the winter.

Problems caused by noise pollution



There have been studies that have shown that noise pollution can affect to citizens health in many different ways. One of the major problems is sleep quality. It has been studied that at least one million healthy years of life are lost in Europe yearly due noise pollution.

Bad quality of sleep can affect to persons health in many level. It can create tiredness, stress, decrease in creativity, memory and judgement skills.

It has been studied that even if you dont wake up to the noise, the background noise can still make your body create stress hormones which raises blood pressure and heart rate.

We shall not also forget about the effects to wildlife. Noise pollution actually affect to animals more than it does to humans, as wild animals are more depend on the sound. Animals face many behavioral problems for example animals may suffer from hearing loss, which makes them easy prey and leads to decreasing the size of populations. Species that depend on mating calls to reproduce are often unable to hear these calls due to excessive man-made noise. As a result, they are unable to reproduce and cause declining their way when migrating.

Problems of public transportation



We have problems with the inconsistency of buses. During weekends and in the late hours, the bus service is significantly reduced. A good way to fix some of the misunderstandings and confusion would be to implement a better app for the bus service. One like the HSL-app, which is used in the metropolitan Helsinki region, would be great, as you can see the routes and buy tickets on it. We do have an individual apps where you can by tickets and see the routes, but they could be improved. Another improvement would be to put little screens showing the remaining wait time on the bus stops, now we only have those in the main stops. Finally, maximum wait times should be decreased at least to 20 minutes from the current 30+ minutes. This would also encourage more spontaneous use of the buses.