

# Societal engagement on SMRs and SMR waste management

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## Significance of societal engagement and public acceptance for SMRs deployment

The **SAFER2028-programme funded SMRSiMa** project focuses on “SMR siting and waste management”. Advancing the understanding on the societal engagement aspects related to plant and repository siting for SMRs in Finland.

Public consultation and acceptance are prerequisites for considering SMRs for district heating in proximity to municipal resident areas, and furthermore for addressing waste management aspects.

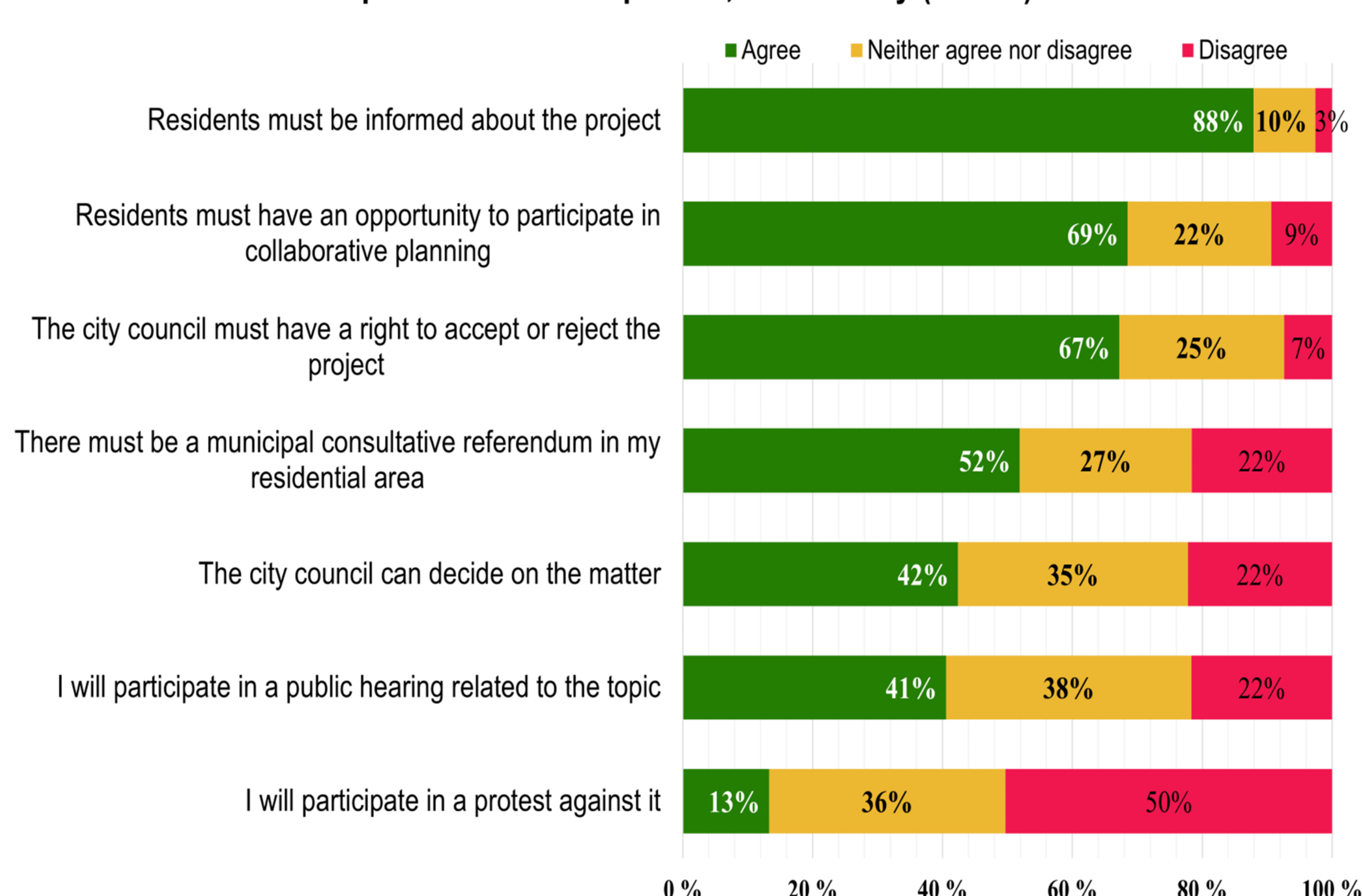
## Research partners and focus of the study

**LUT focus:** Public opinion on SMR siting and nuclear waste management strategies, analysis of resident survey data from 2021 and 2022.

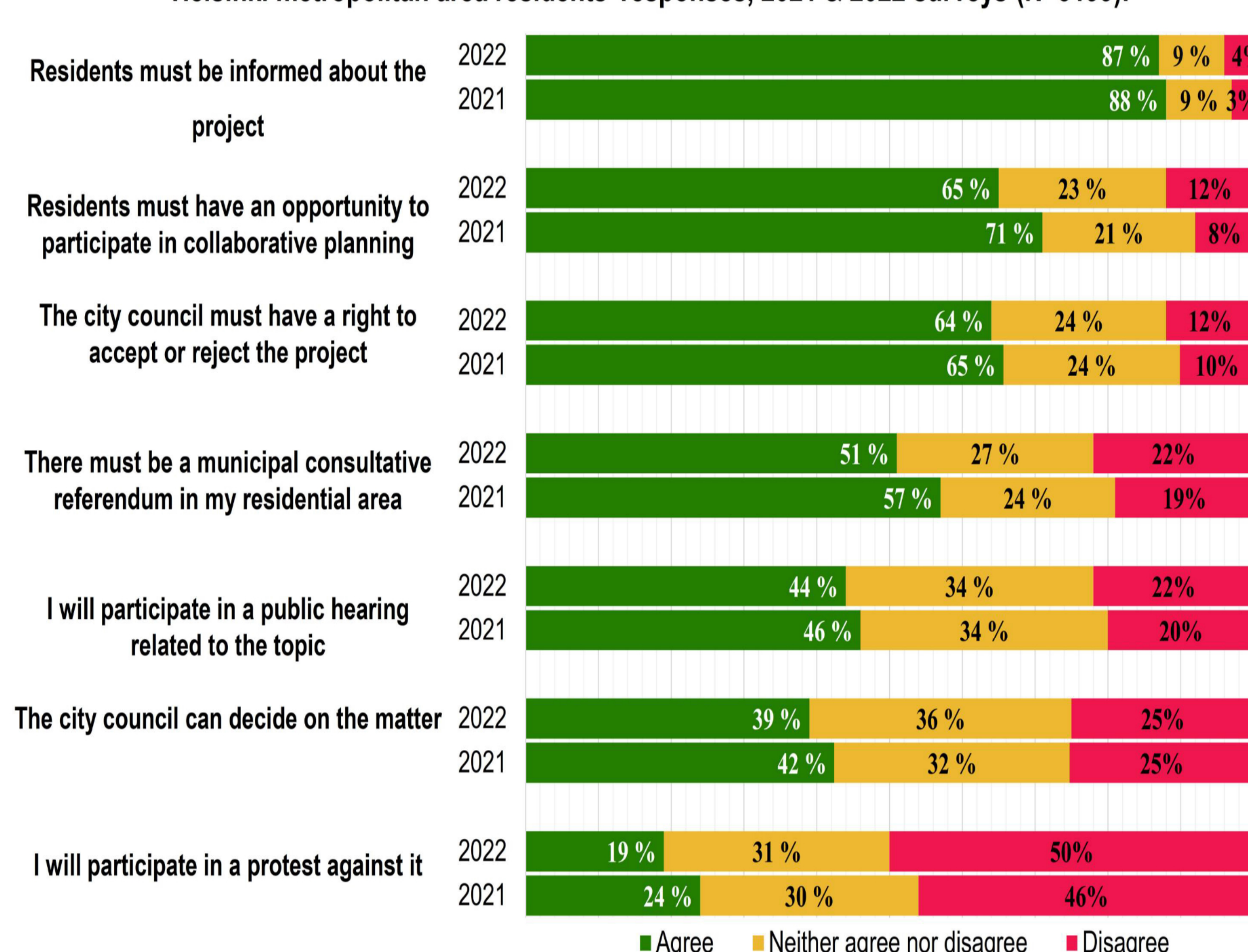
**VTT focus:** Resident engagement in pre-zoning phase by reviewing previous experiences in societal engagement experiences, and the findings from analysis of LUT's 2022 resident survey data.

**LUT and VTT aim at co-creating a preliminary roadmap for addressing societal engagement issues related to SMR technology adaptation in district heating, especially from the municipalities' perspective.**

“If an SMR is planned for my municipality, then in my view..”  
Tampere residents' responses, 2022 survey (n= 504).



Helsinki metropolitan area residents' responses, 2021 & 2022 surveys (N=3199).



Residents' responses to public engagement and communication practices related statements, if possible SMR project would be planned in their own municipality. On the left: residents of Tampere responses from 2022, (n=504). On the right: Helsinki metropolitan area (Helsinki, Espoo & Vantaa) residents' responses to similar questions, both from 2021 and 2021 surveys (N= ~3200).

## Resident surveys 2021 & 2022

LUT University collaborated with University of Jyväskylä to conduct SMR resident surveys in Helsinki metropolitan area (November 2021 & 2022) and in the city of Tampere (2022). Surveys were conducted via online web panel among Finnish-speaking residents. Data collection had quotas to match demographics of target population.

### Total of (N) ~3700 residents responded:

**2021** Helsinki metropolitan area (N=1600). Response rate: 36% for Helsinki, 44% for Espoo and 35% for Vantaa. Margin of error: 2,4%

**2022** Helsinki metropolitan area (n=1599) and Tampere (n=505). Response rate: 38% for Helsinki, 23% for Espoo, 16% for Vantaa, and 24% for Tampere (N=2104). Margin of error: 2.1%

## Key insights from the resident surveys

Most of the residents perceive SMR siting positively, if one would be located to their own residential area. **Positive responses to SMR siting are increasingly common:**

**In 2021**, 46% of residents of Helsinki metropolitan area had positive, 23% had neutral and 31% had negative perception to siting.

**In 2022**, 55% had positive response, meanwhile neutral responses (23%) remained on the same level, and the negative responses decreased to 22%. (Kojo et al. 2022;2023)

Similarly, Tampere residents perceive the possibility of SMR siting in their own residential area mostly in a positive manner: 54% had positive, 22% had neutral, and 25% had negative responses to SMR siting.

According to Helsinki metropolitan area residents' open-ended responses in 2021 & 2022, most important aspects to consider in SMR siting were **1) safety and risks, 2) location and residents, and 3) nuclear waste** (Kojo, Vainio & Kiviluoma 2023, forthcoming).

## Conclusion

- **Societal engagement processes have major significance for deploying SMRs in proximity to resident areas, and for addressing waste management aspects.**
- **Safety and risks are the most important aspects that should be taken into account, according to the resident survey results in 2021 & 2022.**
- **A preliminary roadmap for addressing societal engagement issues will be developed in SMRSiMa project to support awareness building and strategic planning for SMRs from municipalities' perspective.**

### References

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