	Referee #2	**Reply by authors**
	General comments	
1	I have reviewed the manuscript nhess-2023-143 'A dense MEMS-based seismic network in populated areas: rapid estimation of exposure maps in Trentino (NE Italy)' by Scafidi et al. The work presents a novel accelerometric network made up 76 stations with MESM in the Trentino region in Italy. The purpose of the network is to complement the existing accelerometric network in the area, increasing the density of stations in inhabited areas of the region. The novel MEMS-based network can allow improving the rapid response phases after a moderate or a large earthquake by providing a more accurate measure of ground motion intensity with respect to estimates derived by the standard network and the use of ground motion prediction equations. The work is well organized, and the topic is suitable for NHESS.	Dear Referee, we would like to thank you for your concerns and suggestions, and for the time you have spent evaluating our manuscript. Answers to your specific comments are listed below.
	Specific comments	
2	I have only a few minor concerns/suggestions for the Authors. I agree that MEMS can be perfect for the purpose of the work (the strong ground motion). However, throughout the paper it is mentioned a few times that the MEMS would fine to record weaker seismicity too. The sentence is very general and could be misleading for readers. Indeed, the possibility to record the earthquake signals depends on the hypocentral distance. It is true that in Fig. 5 the MEMS allows to record a bit of frequencies also for a Mw 2.5 earthquakes, but this is at 10 km of distances only. I imagine that if the hypocentral distance increases the MEMS it is too noisy to record the source signals (Fig.7 nicely show this effect). Moreover, the amplitudes of sources in Fig. 5 are also strongly influenced by the attenuation. In conclusion, I suggest clarifying the effective utility of MEMS with respect to weaker seismicity.	We agree that MEMS stations are not useful to register low magnitude earthquakes (M_L <3) at relatively large hypocentral distances (> 10 km). In the revised manuscript, we will better explain this point, also more clearly stating the primary aim of the MEMS network presented in this study (compare also with point #5 of Referee #1). That is, to perform densely distributed and quasi real-time strong motion data and exposure maps in the urbanized areas of Trentino, based on locations performed by using the permanent seismic network of the Autonomous Province of Trento. In fact, in the case of strong earthquakes, MEMS stations can be crucial both in order to register strong motion data and to integrate the automatic location system (for example, with additional phase arrivals in the epicentral area).
3	Did you consider directivity and finite fault effects in the worst-case scenario of Fig. 10? While these aspects do not limit the advantage of having a MEMS network in urban area, the scenario in terms of losses	We did not consider directivity and finite fault effects in the scenario shown in Fig. 10. For this reason, we agree that the scenario could be even worse than presented. This point will be accordingly clarified in the

	could be even worst of the one shown. Maybe, it is sufficient clarify that this is a simplified simulation.	revised text, specifying that is a simplified simulation.
4	Page 1. Line 24. “even more” it is not clear more with respect to what.	The sentence will be rephrased, as suggested.
5	Page 4. Line 122. Clarify the comparison with instrumented dams in Fig.6. I agree that is an important and useful information, but clarify the sentence	The sentence will be clarified, in order to highlight that intensity values at 16 instrumented dams (definitive number updated on Fig. 6) are also available on the exposure map PDF, in the case of strong earthquakes.
6	In conclusion, I suggest minor revision	According to the received suggestions, the manuscript will be improved.