

### 4. Guidebook and effect size of noise annoyance moderators

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Who might use the guidebook?

- Decision makers
- Road planners
- Noise abatement planners
- The public in noise exposed areas along roads









Moderator	Effect size
Trust / acceptance	±10 dB
Expectations met	5 to 10 dB
Access to silent side	6 to 9 dB
Low/no visibility of the road	2 to 10 dB
Increased traffic volume	~1.5 dB per doubling
Neighbourhood noise	up to 10 dB
Orientation of outdoor areas	8 to 12 dB
Traffic safety expectations	5 to 8 dB
Vegetation and greenery	6 to 10 dB
Visual appearance of the barrier	2 dB



#### Summary of moderators





# Uncertainties on the annoyance equivalent noise level shift

The modifiers stated has a significant effect, but:

- Different studies find different sizes of the effects
- The size depends on the context
- The effects are seen for roads but the size may be adapted from other sources
- The effect sizes are not additive



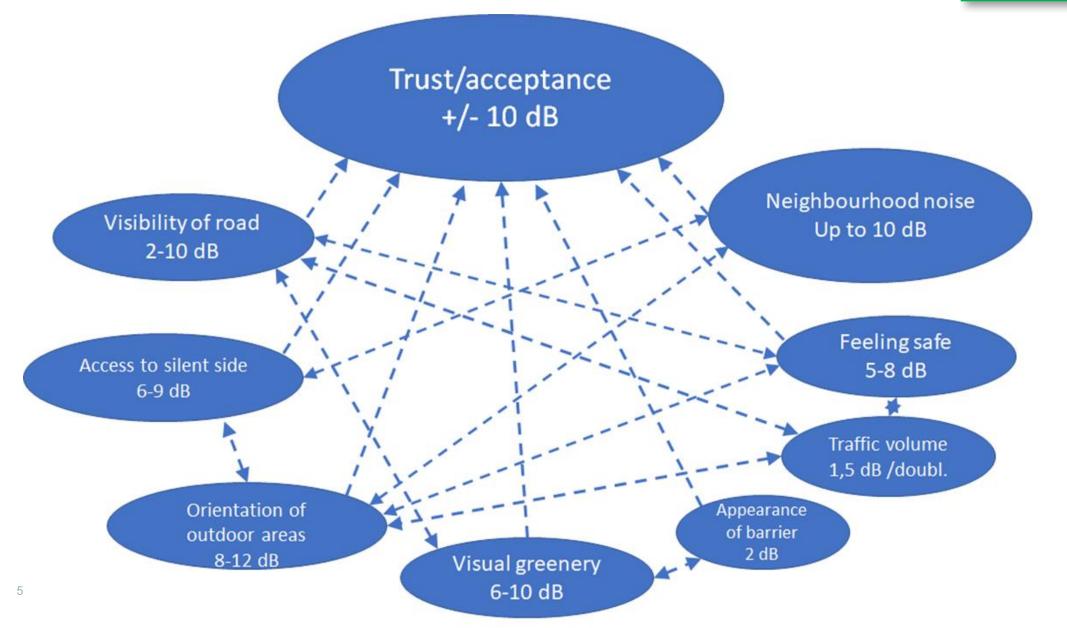






#### **Dependencies and interactions exists**







#### **Effects not simply to combine!**

- Moderators with the highest effect should be considered first
- The appearance of a green noise barrier might influence the visual greenery and thus have a higher effect
- Visual greenery might cover the view to a noise barrier and thus make the influence of the visual appearance of the barrier irrelevant
- If the road is not visible, the perceived safety might increase
- Reduced neighbourhood noise can increase the chance of a quiet side







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## Time for comments, questions and discussion!

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