

Motorways and expressways: Reduce noise pollution through technology

This is a translation – for the original challenge description, contacts and submission got to: <https://www.ioeb-innovationsplattform.at/challenges/detail/autobahnen-und-schnellstrassen-laermlast-durch-technologie-reduzieren/>



An initiative of

 Federal Ministry
Republic of Austria
Digital and
Economic Affairs

In cooperation with

 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

 **BBG**
BUNDESBESCHAFFUNG

[ASFINAG | Autobahnen- und Schnellstraßen-Finanzierungs-Aktiengesellschaft](#)

Point of Departure

Responsible noise protection is an important issue for ASFINAG. In a European comparison, Austria is among the leaders both in terms of protective measures and threshold values (60 decibels during the day, 50 decibels at night). Prevalent measures of active noise protection are walls, dams or embankments as well as passive noise protection through appropriate doors and windows for neighbouring residents. All noise protection walls of ASFINAG, if placed one next to the other would have a length of about 1400 kilometres. The existing measures will be continued and, if necessary, strengthened. Hereby, the regulations of the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology's apply. ASFINAG endeavours to find satisfactory solutions for those affected by supplementary measures.

Main Question

How can acoustic, vibration or other technology be used for noise control measures on motorways?

Desired situation

ASFINAG considers innovative technology as a complementary means of reducing noise pollution. Active Noise Cancelling has become a common solution for consumer headphones. Achieving such efficiencies in the open field may remain utopian. However, similar methods could help to influence the propagation of sound from motorways and expressways (in terms of the frequency spectrum of road traffic or construction site noise). Masking the unpleasant frequency ranges would also be a possible solution, for example.

In the future, active acoustic and vibration technology could be used in neuralgic places in addition to existing structural noise protection facilities in order to further reduce noise pollution for humans and animals. A possible outcome of this market consultation is to carry out a test installation at a suitable location on ASFINAG's more than 2,000 km long network of routes, if there is sufficient prospect of success.

Based on previous experience and parallel projects, the following solutions are not of interest for this challenge: Planting or simple improvement of noise barriers with regard to their construction, material, etc.

Call for proposals

This challenge is aimed to involve companies with concrete offers or competencies for the development of the outlined systems. Companies with possible partial contributions to a functioning overall system should also submit their proposals here and thus find each other for future cooperation.

This is what the online submission consists of:

Description:

Outline your product, your know-how/skills and your assessment (for implementation, effort and scope) of the possible project.

- Describe relevant reference projects.

- What other components and competences are needed in addition to yours?
- Which stumbling blocks/risks would you like to point out to ASFINAG (technically and with regard to the project)?

Added value: Summarize briefly and concisely why you should be invited to a market talk (innovation dialogue) and what your unique selling point is.

Optional: You can add a file attachment (PDF) to the two text fields above. This file should supplement the text fields but not replace them. Avoid redundancies!

Confidential information for the jury: Use this field for what you consider sensitive information that should not be public. (including rough costs, cost estimate)

Cover picture: Your submission needs a visual signboard at the overview of all submissions to this challenge (Attention: small image!).

General NOTES: Keep it short (guideline for file attachments: three A4 pages or ten presentation slides in total). We are in the market exploration phase with the Challenge. Therefore, the following is not yet necessary for participation to arouse interest: completely new, final and concepts or feasibility studies that have been developed especially for this event. The aim is to convey ideas and competence or to deposit information at an early stage, which is essential for the public client's project design.

Benefits of the Challenge and further course of the project

The submissions to this market survey provide ASFINAG with an overview of solutions and potential partners for market early engagement and implementation. The jury of internal experts invites those submitters to an innovation dialogue whose contributions stand out particularly positively in the evaluation criteria and provide information for the project design.

By taking part in the Challenge, companies get on ASFINAG's radar. They can influence the design of the purchasing project in the early stages in order to make it in line with the market (not a specific supplier). On the part of the public client, sensitivity and understanding for suitable innovations and approaches is developed. This is important so that the public client, after the market exploration, can consider innovative approaches in the possible procurement project according to the Federal Procurement Act.

Publishing large parts of the submissions also puts you on the radar of possible cooperation partners. Your submission remains visible as your business card even after the challenge has been completed (except for confidential content, of course). If you are among the winners and are invited to the final innovation dialogue, you can present your approach to the solution at a market talk. You will exchange information directly with the project managers. Be optimistic: **Please keep October 16, 2020 free for this purpose.**

Depending on the results, the further project plan provides for the following:

The goal after the market sounding could be a demonstration of feasibility under real conditions with the aim of noticeably and measurably reducing noise in areas which need to be protected (e.g. a housing estate). The benchmark will be purely "conventional" measures (including consideration of lateral radiation of noise). This

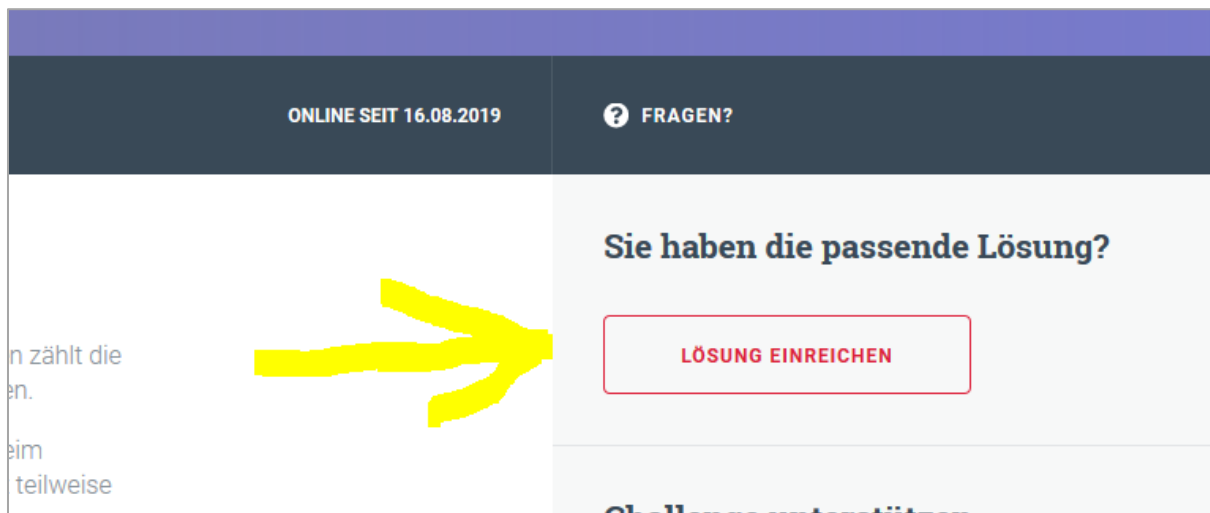
could possibly be subject to the awarding of a pilot project or a development contract under federal procurement law (BVerG 2018).

Your Questions

Contact the moderator or post your question about the Challenge. Our moderators will check, research and publish your question together with the answer. This way, all potential participants are certain to receive the same information.

How to submit a solution/idea

Go to the challenge page. Click on the button "Lösung einreichen" on the top right side of the page.



- Beschreibung
Post a meaningful description (make references to the description of the challenge and evaluation criteria on the right side of the challenge page)
- Mehrwert
Highlight the benefits of your solution.
- Titelbild
Upload a picture to be displayed on the landing page of the challenge.
- Kooperationspartner
If you are handing in a joint contribution with other companies, this is where you make sure they are represented with logos and names.
- Dateien & Infos
If necessary in addition to the descriptions above: add pdf-files (e.g. existing product brochures). But: Keep your contribution manageable for the jury.
- Vertrauliche Infos
If necessary, place a confidential information for the jury, the sponsor and moderator (e.g. indication of approximate price range). All other parts of the contribution will be public.

Please be aware of the fact, that a challenge is market research / market engagement prior to a possible procurement. The challenge will not decide upon a contract award nor will it lead to any unfair advantage in a tender. Please balance your time and effort.

Contact Information

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