

Removal of objects from motorway lanes

Translation of “Call for Ideas”

<https://www.ioeb-innovationsplattform.at/challenges/detail/entfernung-verlorener-gegenstaende-von-der-fahrbahn/>



An initiative of

In cooperation with

Challenge

Tyres, transport belts, stones: objects like these are very dangerous obstacles in the middle of the motorway. They cause damage and force vehicles to take daring evasive action. In order to prevent fatal consequences, the ASFINAG, the Austrian motorway maintenance company, remove all these objects as quickly as possible.

How do they do it up to now? At present, the employees steer the mainline service vehicle onto the lane on which the small or large obstacle lies. The warning system on the back of the vehicle, which blinks clearly even in daylight, signals that an operation is taking place. The driver reduces the speed and brings the vehicle to a standstill. The lane is thus closed for a short time. The object is now a few metres away from the vehicle. Depending on its size, one or two people get out to remove the object from the lane. Although the employees proceed with caution, a certain risk remains if the lane has to be entered for such a removal from the lane. The great danger here is that vehicles may recognize the operation too late and cause an accident.

What complicates matters is that not every lost object is small, light and handy. Sometimes refrigerators, ladders, mixing machines or a sofa bed become detached from transport vehicles and block the lanes. The situation is somewhat more relaxed if objects are lying next to the roadway or on the breakdown lane. Nevertheless, work takes place in a dangerous environment.

ASFINAG documented 3,200 cases of lost objects in 2017.

Some categories of objects have to be removed from the road particularly frequently:

- * 20-25% are tyre parts (wheels, tyres, spare wheels, carcasses, treads)
- * Approx. 5 - 10 % each are fastening/packaging tools (i.e. belts, nets, foils, ropes, mats, tarpaulins, bags, pallets), metal parts, wooden parts, vehicle parts, rock/mixed material (i.e. stones, gravel, chippings, gravel, earth, asphalt, concrete, building rubble, rocks), road equipment, plastic parts.
- * Containers, tools and dead animals are at approx. 3% each.

Furniture occasionally lands on the road, household appliances only very rarely.

Main Question

Which device can help the Austrian motorway operator to remove lost objects from a lane?

Desired situation

A technical solution reduces the potential danger: ASFINAG employees do not have to get out of the vehicle. Removal works faster. Sometimes it is not even necessary to stop the service vehicle.

The device can be used to remove obstacles. Whether your idea is based on a tipping trough, robot arm, pick-up, battering ram, vacuum cleaner or something completely different is not important: In the course of the Challenge, we would like to get into conversation with potential suppliers of promising approaches. ASFINAG is also interested in solutions applicable for some but not all categories of objects.

The feasibility with current and future vehicles (Ford Transit, e.g. MAN TGE) would be an advantage, but is not at all necessary. The fleet is subject to continuous changes anyway. With the Challenge, we also would like to understand which framework conditions have to be created in order for a solution/device to work. However, since the fleet is overhauled quickly due to the extraordinary loads, a device should be easy to assemble and transfer.

What we don't want:

- * Remote-controlled cranes on flatbed vehicles.
- * A restriction of the usability of the service vehicles by the new device during normal activity (control and monitoring of the track with regard to anomalies, maintenance of the road equipment, event management). It is therefore important that the device can be mounted on vehicles, which are also useful for the normal activities of a road service team.

Call for proposals

Do you develop technical systems that could be suitable for the described application? Or you already have the solution? Submit your proposal in both cases. You are also welcome to do this with cooperation partners. An early exchange helps all sides to turn the idea into a procurement project.

Click on the following link: <https://www.ioeb-innovationsplattform.at/challenges/detail/entfernung-verlorener-gegenstaende-von-der-fahrbahn/>

Then on the button "Idee einreichen" on the right side. Please register quickly, just with your name and e-mail address.

- * Post a meaningful short description of your product or solution by **03 June 2019**.
- * You can also enter a rough, non-binding, non-public cost estimate there. The jury members involved commit themselves to confidentiality.
- * You can also attach a PDF document - make references to the evaluation criteria there.

Note: We are currently exploring the market with the Challenge. Therefore, the following is not yet necessary at this stage to arouse interest: completely new designs, detailed technical drafts or feasibility studies developed especially for this Challenge.

Keep it short (up to five A4 pages or ten presentation slides in total). In particular, describe how the evaluation criteria will be met and how you will contribute to improving the situation.

Benefits of the Challenge and further course of the project

With this Challenge, ASFINAG gets an overview of approaches and potential partners. The ASFINAG jury then invites those companies to an innovation dialogue whose solutions stand out.

>>Save the date: August 28, 2019<<<

For companies this means: By participating in the Challenge, you will be on the radar of the public contractor. Your submission will be visible to other interested parties after the Challenge has been completed. You position yourself for further public-sector purchasing projects. If you are among the winners and are invited to the subsequent innovation dialogue, you can present your solution/approach in detail. You exchange ideas directly with the project managers and experts in charge.

This creates sensitivity and understanding on the part of the public client for suitable innovations. This is important so that the public client can consider innovative approaches to any purchasing project under the Federal Procurement Act after the market survey.

Depending on the complexity, the necessary framework conditions, the degree of maturity, the expected costs and benefits, ASFINAG will decide on the project design after the Challenge. A possible first step is a pilot project with tests.

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