



Bundesministerium
für Digitales
und Verkehr

Bundesministerium für Digitales und Verkehr (BMDV)

At the BMDV family of authorities, we create the conditions for people, goods and data to get fast and safe from A to B.

25,000 employees in more than 40 authorities at over 200 locations in Germany

Industry: Ministry of the Federal Republic of Germany

ORGANIZATION DESCRIPTION

The Federal Ministry of Digital and Transport (BMDV) is expanding the digital and transport infrastructure of our country, supporting digital innovation and promoting future technology. Its task is to create the framework conditions for modern, sustainable and safe mobility. This includes promoting digital strategies, 5G networks and modern digital applications. In transport policy, the BMDV strives for an interconnected and environmentally friendly transport system. It promotes both the expansion and modernization of transport infrastructure and the development of low-emission means of transport and the use of renewable energy.

ORGANIZATIONAL VISION

Our goal for mastering the challenges of our time is the digital awakening of Germany. We are creating the conditions for people, goods and data to get from A to B quickly and securely. We want to catch up with the leaders in digitalization, which we see as a key to the mobility of the future.

With innovative technologies such as AI and comprehensive data integration, we can use the existing transport infrastructure more efficiently, improve the mobility of citizens with customized offers and protect the environment.

Road safety is also to be improved. Through preventive measures, the use of modern technologies and comprehensive data analysis, traffic accidents are to be reduced and German roads made safer for all road users.

With innovation, sustainability and European cooperation as its clear goals, the BMDV is working to make mobility in Germany sustainable in the long term and to improve the quality of life.

PROBLEM STATEMENT

Description of the problem and formulation of the question

Drones as ideal data suppliers – Use drones to generate new data and help shape the future of mobility!

In Germany, unmanned aerial vehicles (UAV), also commonly referred to as drones, are being used for an increasing number of tasks in the civil sector. For example, they transport particularly urgent (medical) goods. They support rescue workers in the search for missing persons or carry out pollutant measurements in the event of environmental disasters. For this purpose, they are equipped with a variety of sensors. These flight systems are small, highly efficient and, thanks to their automation, require hardly any operating personnel. However, the sustainability of their services can be further improved if, for example, they use the sensors for further data recording on empty flights (e.g. on the way back from their deliveries).

The data obtained in this way can also be merged with open data from the BMDV and thus used for new mobility solutions. The BMDV already provides extensive open mobility data sets in its Mobilithek – the BMDV data platform for mobility data. Data from all over Europe is provided by the National Access Points (NAPs) of the individual member states. The European project NAPCORE coordinates the cooperation of these access points and creates the basis for a Europe-wide harmonization of transport and mobility data. Using this open data in combination with the new drone data can lead to innovative solutions and business models.

Your task

Develop ideas for what data can be obtained from empty or other drone flights and what (additional) sensors can be used for this purpose. Be sure to also take data protection requirements into account! In the next step, consider how this data, in combination with other data from the Mobilithek or other NAPs, can be used for new mobility solutions.

What you should do

Use data: Use data from the Mobilithek and comparable European data platforms and combine them with the new data to be obtained from drone flights. Make sure that the drone can still transport its necessary payload even with additional sensors.

Overcome borders: Develop a concept that also allows the inclusion of data from other European countries.

Create a prototype: Construct a prototype that shows how your solution would work in the real world. The prototype can, but does not have to, include the drone itself.

Consider interoperability: Make sure that your solution works with commonly used interfaces to achieve a high degree of interoperability.

Your goal

Present us with a solution that is not only clever but also truly feasible. Show us how you would use the right data to shape the future of mobility – making it more efficient, environmentally friendly and inclusive.



OTHER

For example, existing guidelines, previous efforts, and strategies for responsible AI, digital ethics, or digital responsibility.

Evaluation criteria:

- Degree of innovation: How innovative is the proposed solution compared to existing approaches?
- Practical applicability: How well can the solution be implemented in practice?
- Use of mobility data: How effectively have the available data sources been used and integrated?
- Social application: How much does the public benefit from the solution?
- Environmental compatibility: To what extent does the solution help to reduce environmental pollution?
- Interoperability: How well does the solution take into account the cooperation and data integration between different national systems?

Interesting datasets:

- <https://mobilithek.info/offers/573358032858050560>
- <https://mobilithek.info/offers/590852599932948480>
- <https://mobilithek.info/offers/662346412446343168>

The datasets provided are for reference only. However, we encourage you to explore the Mobilithek, NAPCORE, and other access points for suitable datasets.