#### Contact



Karsten Strauch Head of staff unit Phone: +49 2204 43-1600



Anke Lohbeck Deputy Head of staff unit Phone: +49 2204 43-1601

The tasks of the staff unit are the establishment, scientific planning and realization of an academy for securing skilled workers, recruiting skilled workers and qualifying skilled workers for the field of the mobility of the future.

#### Publisher:

BASt Federal Highway Research Institute Brijderstraße 53 | 51427 Bergisch Gladhach | Germany

Academy of Sustainable Highway and Traffic Engineering

E-Mail: akademie@bast.de

www.bast.de/academy

Design: MedienMélange: Kommunikation!

State: September 2023

Graphic credits:

Page 1: Photographer is my life./Moment/Getty Images

Page 2: Matrioshka/stock.adobe.com

Page 4: freshidea/stock.adobe.com

Page 7: Abdul Qaiyoom/stock.adobe.com

Page 8: Daniel Carreño / hatandcap.de (both)



# From the Idea to the Academy

The "Missing Link" in recruiting skilled workers

## **Academy**

of sustainable highway and traffic engineering

Future-proof, sustainable infrastructure needs qualified skilled workers

### Challenges

- \_ 151,300 engineering vacancies are not filled
- 56,000 jobs need to be re-staffed every year (average demographic replacement demand)
- 15 % fewer first-year students in engineering and computer science
- $\_\,$  53 % of all students drop out  $\,$  of STEM studies
- \_ Under 10 % of the population belongs to the 15-24 age group





#### Shortage of Skilled Workers in the Engineering Sector

The modernization of infrastructure is associated with many planning, technical and digital challenges and leads to a growing demand for engineers which will continue to rise in the coming years. At the same time, demographic change is exacerbating the already existing shortage of skilled workers.

The public sector is particularly affected. The problem is exacerbated by an increasing loss of image of engineering studies, especially in road and traffic engineering. In addition to declining student numbers, engineering studies, like other STEM courses, are increasingly being dropped out or not started at all.

A large number of positions cannot be filled due to the shortage of skilled workers, necessary infrastructure measures cannot be implemented and innovations in the road and transport sector cannot be developed. There is a shortage of qualified specialists not only in public authorities and institutions, but also in companies and in science. This is one of the biggest challenges in Germany, hindering economic growth and the maintenance and further development of public infrastructure, among other things.

### The academy as Part of the Solution

- The academy would like to network with all stakeholders, drawing on their expertise and their existing good, local approaches in a global, systematic overall concept.
- As a provider of innovative advanced training and further education in the field of mobility of the future, the Academy offers support in the third educational path.
- \_ The Academy develops and provides modern teaching and learning tools (webinars, OER, supplements, etc.).
- \_ The Academy develops the BMDV's grant programs to secure skilled workers in the department, invites tenders for them and awards them.

Meet the shortage of skilled workers globally and systemically



From the Idea to the Academy - Sustainability through Innovation



#### **Target Groups**

The Academy offers specific, innovative qualification programs for (inter)national graduates, re-entrants and career changers which are based on fundamental university content that provides participants with necessary engineering-specific expertise not previously taught in universities – both for jobs in industry and in government authorities.

As a contact point for topics relating to securing skilled labour, qualifying skilled workers and recruiting skilled workers in the field of future mobility, the academy brings together all stakeholders and builds up comprehensive knowledge bases and data bases on past, current and planned measures for recruiting skilled workers and other subject-specific content.

In an initial innovative approach, German universities will be able to apply for federal grants for study advisors, teaching materials and concepts through the academy via an innovation program.

The Academy of Sustainable Highway and Traffic Engineering is funded by the German Federal Ministry for Digital and Transport (BMDV).



Specialist Training in the third Educational Path