# Germany: Economy's engine switching to AV

**With over 6.3 million cars produced in 2019 and a gross value added of €106 billion, the German automotive industry has for decades literally been the country's economic engine. But it has come under increasing pressure, not least from the transition to new mobility concepts such as electric, shared and AV. In response, the German government and private sector has given AI and AV higher priority in recent years. Today, with over €18 billion in investment and half of all related patents originating in Germany, the country is fast becoming the world's innovation leader in AV and connected driving.**

**Government driving transformation**

When in 2018 chancellor Merkel published Germany's AI strategy with a budget of €3 billion, mobility was identified as one of the key application areas. A National Platform for Future Mobility (NPM) was established, with separate working groups headed by leading figures from the public and private sector. The digitalization working group advises on how to create a safe infrastructure and level playing field. Data-sharing and communications are critically important to the ministries of Infrastructure (BMVI) and Economic Affairs (BMWi), who have proposed international cooperation via the European Data Taskforce (DTF) and a European cloud service for production data called GAIA-X.

**Innovating companies, innovating communities**

Many test initiatives occur at a local level. For example, a network of AV test fields has been set up on highways near Munich. Karlsruhe has a live test field and parking garage that combine smart parking systems and charging stations. In Berlin, a digital test location has been created where AVs drive around campus. And in Dresden, drones are being used to collect traffic data.

Every car manufacturer and mobility-focused company in Germany is also busy developing exciting new digital technologies. A few examples:

- Bosch has a new highly-sensitive MPC3 camera that reliably detects objects and people;
- Daimler uses heart rate sensors in the steering wheel and AI predictive algorithms so the car knows to intervene if a driver is falling asleep;
- BMW uses AI in its production processes, delegating repetitive tasks to robots;
- Volkswagen has set up an AI research unit at its Munich data lab (headed by Dutchman, Patrick van der Smagt) that is collaborating with the Technical University of Munich and the German AI research institute (DFKI).

**A sector in transition**

These are just some of the numerous examples of pioneering AI and AV work taking place. However, KPMG's latest AV Readiness Index says more progress is still needed on both infrastructure and consumer acceptance levels, for example through practical test cases. To address this, many German carmakers are working closely with partners to test AV technologies. This includes Dutch partnerships, such as BMW's collaboration with the city of Rotterdam and a joint deep learning lab set up by Bosch and the University of Amsterdam. But more such collaborations will be needed if Germany is to remain the leading automotive nation that it is today.