



# Germany

## *A continental colossus in innovation and tech*

An Innovation Leader in its inaugural year, Germany earns high marks in several categories, but loses points for rules that restrict emerging technologies.

Germans enjoy great freedom and excellent broadband service, and over the past several years, have increased their R&D Investment to a current total of 2.88 percent of GDP — well above what many other Scorecard countries devote.

With 43 percent of its workers qualifying as highly skilled, Germany also boasts a remarkably well educated labor force. The country ranks in the top 10 in awarding STEM degrees, with more than a third of all degrees awarded in Germany going to graduates of STEM programs.

Although Germany has a lower annual entry rate for new businesses than almost every other European Union country on the Scorecard — only 1.29 per 1,000 people — it is home to 10 unicorns, second in Europe only to the United Kingdom.

German authorities have regrettably slapped burdensome rules on the transformative technologies of the sharing economy, however, notably on ridesharing. As in other countries looking to protect local taxi industries, Germany banned UberPop, Uber’s service for rideshare drivers without taxi licenses. Uber now operates only with taxi drivers in major markets like Berlin.

Sources: (OECD) (Washington Post)

## WHAT DID WE DO RIGHT?

In 2017, the German parliament passed a bill and the Transport Ministry issued a set of ethical guidelines allowing self-driving vehicles to operate with a driver at the wheel. The country also has an average fixed broadband speed of 15.3 mbps and an average mobile speed of 24.1 mbps.

## WHAT CAN WE DO BETTER NEXT YEAR?

Germany should ease red tape on ridesharing drivers, lower the corporate tax rate from 29.8 percent and lift taxes on streaming services.

Diversity	B-
Freedom	A
Broadband	A-
Human Capital	A-
Tax Friendliness	D+
R&D Investment	A-
Entrepreneurial Activity	B-
Drones	C
Ridesharing	D
Short-Term Rentals	B
Self-Driving Vehicles	A
Environment	A-



## Human Capital

At 43.3 percent, Germany lags behind neighboring France in the percentage of its workforce that is highly-skilled, but outperformed the French in the percentage of STEM degrees awarded to German graduates.



## Broadband

A handful of programs could improve Germany's already impressive broadband speeds. For example, Vodafone has a plan to roll out gigabit internet to everyone on its network by 2020.



## Entrepreneurial Activity

Germany's new business entry rate lags well behind many of its European counterparts, but the country counts 10 unicorns among its domestic startups, more than most other countries.



## Short-Term Rentals

Short-term rentals can be found throughout Germany, but restrictions in key markets such as Berlin require renters to offer guests only spare rooms, rather than entire homes.

# MUNICH

Home to many household names in the automotive and manufacturing industries, Munich has long been a financial and industrial powerhouse in Germany. Now, entrepreneurs in the Bavarian city are benefiting from the willingness of those established firms to fund new ventures in a variety of sectors.

Start-ups in the smart home, transportation and financial technology sectors have put down roots in Munich. Within 10 years, BMW is expected to funnel €500 million into developing new companies as part of a plan to diversify its business. BMW i Ventures has already partnered with new companies like Shift, a car buying service, and Stratim, developer of fleet software

The venture capital arm of Siemens AG also offers funding to fledgling businesses. Among those was Tado, a Munich-based start-up that developed a smart thermostat and air conditioning controller. Between 2011 and 2016 Tado raised \$57 million in funding, including a round in 2016 to support an international expansion.



Well known companies are turning their attention to new ventures in Munich. The venture capital arms of Siemens AG and BMW have partnered with Munich startups like Tado, a company that developed a smart thermostat and air conditioning controller.

Sources: (Wired)(Spiegel) (TechCrunch) (TechCrunch) (BMW)