

**INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION
ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)**

**Geneva, Switzerland
21-22 October 2024**

Contribution by Germany

to the CSTD 2024-2025 priority theme on “Diversifying economies in a world of
accelerated digitalization”

DISCLAIMER: The views presented here are the contributors’ and do not necessarily reflect the views and position of the United Nations or the United Nations Conference on Trade and Development

1. What are the specific challenges your economy is facing to develop or adapt frontier technologies and AI?

Germany published a national AI strategy in 2018, which was updated in 2020. Germany was one of the first states to publish and implement a strategy. The strategy was underpinned with 3.5 billion € of funding and comprised of around 160 measures. The German AI ecosystem has recently been evaluated by OECD [see published OECD report https://www.oecd-ilibrary.org/science-and-technology/oecd-artificial-intelligence-review-of-germany_609808d6-en#:~:text=Germany%20ranks%20highly%20worldwide%2C%20excelling,Germany's%20standing%20in%20AI%20technologies]. The OECD report shows, that Germany is well-positioned with a view to AI research and development as well as deployment. Part of the AI funding has gone into AI research, transfer and infrastructure, priorities that the OECD has also identified as particularly important.

2. Can you provide successful examples of AI and other frontier technologies uptake in your country?

Germany does have a very active start-up community. Especially universities and big research institutes like Fraunhofer encourage top scientists to engage in founding enterprises and there are several support schemes for founders in Germany on the federal as well as on the regional level.

A glance at the spin-off figures - the supreme discipline of transfer - clearly shows these activities. In 2022, Fraunhofer had 18 start-ups, Helmholtz had 14 spin-offs, Leibniz achieved 2 spin-offs, Max Planck achieved the second-highest number of spin-offs since 2016 with 10. A number of them have become “unicorns” within a few years, i.e. they have achieved a company valuation of more than one billion dollars. The spin-off leader – and not just among the [universities](#) – is [Technical University of Munich](#) (TUM), which has produced nine unicorns. Three examples of successful start-ups [<https://www.deutschland.de/en/topic/knowledge/spin-offs-from-german-universities-and-institutes>]:

TUM: Synthesia makes videos using AI

Led by TUM professor Matthias Nießner together with London-based scientist Lourdes Agapito and two entrepreneurs, this spin-off develops software that produces deceptively natural videos which are used for learning purposes, for example. The company says its main focus is on preventing [deepfakes](#), i.e. fake videos of real people. Founded in 2017, Synthesia 2023 has already achieved unicorn status.

TU Chemnitz: Staffbase gets colleagues communicating

Martin Böhringer and Lutz Gerlach knew each other from when they both worked at Chemnitz University of Technology. The two had already tried their hand at a start-up when they met Frank Wolf – and the idea for Staffbase was born. Staffbase is an app that enables internal employee communication in companies of all sizes – something that’s more in demand than ever in times of mobile work and working from home. This is reflected in the company’s success: founded in 2014, it has been a unicorn since 2022.

DLR: Agile Robots controls robots

A spin-off of the German Aerospace Centre (DLR), the [Munich-based](#) company develops software that controls (industrial) robots, and it also makes robots. Its main goal is to combine artificial intelligence and robot technologies. Long-standing researchers at the DLR Institute of Robotics and Mechatronics Zhaopeng Chen and Peter Meusel founded Agile Robots in 2018, and the company is now considered a unicorn.

3. Has your country put in place inclusive policies for innovation and economic diversification specifically tailored to diffusion of digital technologies and AI?

Germany has a Digital Strategy which focusses on implementation of digital technologies in all sectors, including administration [<https://digitalservice.bund.de/en/projects/digital-strategy>; <https://digitalstrategie-deutschland.de>]. More inclusive policy instruments are summarized in the annual economic report mentioned in Nr. 4. For example, the Federal Ministry for Economic Affairs and Climate Action has established the Funding Priority “Mittelstand-Digital”. “Mittelstand-Digital” supports small and medium-sized enterprises, crafts, and start-ups in digitalisation and IT security with information, qualification, and implementation. It includes 2 different “pillars”, the “Network of Mittelstand-Digital Innovation Hubs” and the initiative “Cybersecurity for SMEs”. The “Network of Mittelstand-Digital Innovation Hubs” contains vendor-neutral and tailored offerings for SME’s on all issues of sustainable digitalisation. The initiative „Cybersecurity for SMEs“ consists of a “Transfer Centre Cybersecurity for SMEs (CYBERsicher)”, a nationwide network of experts that supports SME’s with all IT security issues.

With a special focus on innovative startups, Germany has published an enhancing Startup Strategy in July 2022 in order to strengthen the startup ecosystem in Germany and Europe. It contains around 130 measures in ten major fields of action. The implementation has made good progress; Federal Government will publish the second progress report soon. [09/17/2024]

4. Do you have examples of policy instruments in place to favour the diffusion of frontier technologies in the economy and targeting specific sectors?

Germany has put in place various instruments to foster diffusion of new technologies. We have published a new annual economic report this month [<https://www.bundesregierung.de/breg-en/news/annual-economic-report-2024-2261744>].

5. Has your country put in place mechanisms to strengthen industrial capabilities through partnerships among different stakeholders (e.g., university-industry, or private-public)?

See annual economic report mentioned in Nr. 4. also for mechanisms to strengthen industrial capabilities.

6. How can international cooperation support the uptake of new technologies and the development of technological capabilities in your country and ensure that industrial policies will benefit all and do not worsen inequality?

The national Digital Strategy is complemented by our Strategy for International Digital Policy [<https://bmdv.bund.de/SharedDocs/EN/Articles/K/strategy-international-digital-policy.html>], which was adopted in February 2024. With this strategy, the German federal government lays out its vision for a global digital order that promotes democracy and freedom, prosperity as well as sustainability and resilience. To this end, the strategy defines nine guiding principles, including: enhancing value-based technology partnerships, advocating for a global, open, free and secure Internet, and further promoting human-centric and innovation-friendly rules for the digital space. With these principles, Germany thus defines a long-term framework for an active and coherent international digital policy.

The German federal government has also anchored a decidedly international approach in its current national AI strategy. According to the strategy, the potential of AI should be used for sustainable development and contribute to achieving the Sustainable Development Goals of the 2030 Agenda. Cross-cutting technologies such as AI have a global impact, which is why policymakers must also think and act across borders. Germany is therefore expanding international cooperation as well as bilateral and multilateral cooperation in the field of AI. [Home - KI Strategie \(ki-strategie-deutschland.de\)](https://www.ki-strategie-deutschland.de).

7. What can do the UN CSTD to support an economic transformation that enhances your country productive capabilities and foster an inclusive digital transformation?

Since Germany has a continuing challenge in implementation of new scientific results into the productive sector due to i.a. lack of skilled staff, the UN CSTD could support promotion of inclusion of skilled staff from all UN members into the German productive sector. This could at the same time foster diversity and inter-cultural understanding as well as intensify knowledge-sharing and international cooperation.

In order to foster an inclusive digital transformation, specifically in the field of AI, UN CSTD should support an international AI governance that promotes innovation while ensuring that AI is human-centered, safe and trustworthy. To this end, we encourage UN CSTD to continue to work closely with our international partners, and to take especially countries from the Global South into account in AI governance and to foster open source AI that is in the public interest, accessible to all, recognizable as AI for the user, and sustainable.