

Press release

## EUROPE'S DIGITAL SOVEREIGNTY: GREEN LIGHT FOR INNOVATION COMPETITION

**SPRIND and BMWK launch innovation competition on composite learning / Almost EUR 12 million for approaches to decentralized training of AI models**

*Leipzig, 15 November 2024*

Advances in the development and training of artificial intelligence (AI) are having a massive impact on society and the economy. AI models can accelerate medical discoveries, pave the way for self-learning industrial robots, or optimize complex traffic processes. The ability to process and use data for AI has a direct impact on the competitiveness of companies and national economies.

A few companies in North America and Asia with large centralized computing capacities currently dominate the race for powerful AI. Germany and Europe are increasingly falling behind when it comes to training large AI models and becoming unable to seriously compete in this key technology field. To meet this challenge, the Federal Agency for Breakthrough Innovation, SPRIND, is launching the SPRIND Challenge "Composite Learning" on behalf of the Federal Ministry for Economic Affairs and Climate Action (BMWK) today. Composite learning refers to a combination of decentralized, distributed, and federated learning. In the challenge, up to ten teams will compete on solutions for decentralized training of AI models on heterogeneous hardware over the course of three stages. The challenge links into the "Important Project of Common European Interest" on "Next Generation Cloud Infrastructure and Services" (IPCEI-CIS), part of the European 8ra initiative.

**Dr. Anna Christmann, BMWK Commissioner for the Digital Economy and Start-ups said:** "German and European economies need their own abilities and capacities for key digital technologies like artificial intelligence and cloud computing. To achieve this, we need to be able to pool expertise and resources. With the SPRIND innovation competition, we are focusing on the decentralized training of AI models. This is an important step towards strengthening the digital sovereignty of Germany and Europe. I hope that there will be broad participation and that we will soon see the results of the competition in practice."

### **SPRIND innovation competition over three stages**

The teams are working at the technological frontier shaping the future of decentralized AI training. The aim of the challenge is to develop a comprehensive framework demonstrating the potential of composite learning in distributed and heterogeneous environments. The solutions are intended to show how AI models can be trained efficiently and safely in different locations, with different hardware and data. Ideally, participants will develop innovative approaches for overcoming existing barriers, such as a lack of compatibility between chips, communication bottlenecks, and dependence on central update servers.

**Participating teams each receive up to EUR 1.65 million**

# SPRIND

The SPRIND Challenge “Composite Learning” has a duration of 2.5 years in 3 stages. A total of almost EUR 12 million is available to finance the teams. SPRIND will support up to ten teams in stage 1, up to seven teams in stage 2, and up to five teams in stage 3. In stage 1, the selected teams receive up to EUR 530,000 each at the beginning of the challenge. This fast, flexible, and unbureaucratic financing contributes significantly to the success of the project.

The selection of successful teams will be made by a jury of experts following a Pitch Day that takes place in Leipzig on January 29/30, 2025. Stage 1 starts immediately afterwards and lasts twelve months.

The application deadline for participation in the SPRIND Challenge “Composite Learning” is January 15, 2025. Further information and the conditions of participation can be found at [www.sprind.org/composite-learning](http://www.sprind.org/composite-learning).

The innovation competition builds on the work of the BMWK's IPCEI-CIS to promote digital sovereignty in Germany and Europe. The overarching funding objective is to develop advanced technologies for the “multi-provider cloud-edge continuum,” which will enable the exchange and processing of large volumes of data with extremely low latency.

## About SPRIND Challenges

SPRIND Challenges are innovation competitions in which the participating teams receive quick and unbureaucratic financial support to develop solutions for the major social and technological challenges of our time. In SPRIND Challenges, the teams take part in a multi-stage competition. At the end of each stage, the teams' work is evaluated and only the best teams remain in the competition and receive further financial support to continue developing their idea.

## About SPRIND

The Federal Agency for Breakthrough Innovation SPRIND was founded in 2019 and is based in Leipzig. The sole shareholder is the Federal Republic of Germany, represented by the Federal Ministry of Education and Research (BMBF) and the Federal Ministry for Economic Affairs and Climate Action (BMWK). SPRIND closes a gap in the German innovation landscape: It finds new, groundbreaking technologies for the major challenges of our time and at the same time ensures that the added value of the resulting companies and industries remains in Germany and Europe. SPRIND is financed by funds from the federal budget. It is headed SPRIND by Rafael Laguna de la Vera and Berit Dannenberg.

## About IPCEI-CIS

The IPCEI-CIS is the central digital initiative for Europe, with more than 100 companies and research institutions from 12 EU Member States making advances to build the world's first multi-provider cloud-edge continuum. The main goal is to create a completely new decentralized software infrastructure for the advanced use of data processing resources from the cloud to the edge. This new type of open ecosystem, which is operated by several providers, will reduce both technological dependencies and lock-in effects. It will also enable new and innovative data-driven business models, e.g., in connection with artificial

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intelligence and IIoT (Industrial-Internet-of-Things), for a wide range of applications in industries such as manufacturing, mobility, energy, and tourism.

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