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of the Bavarian Academy of Sciences and Humanities

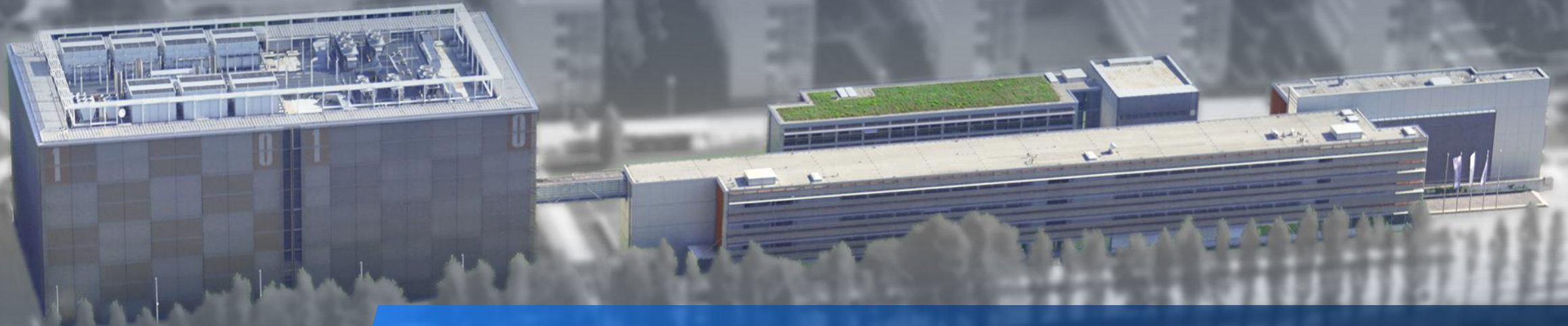
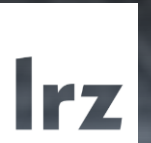
The Blue Swan AI Gigafactory: A Bavarian Proposal



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Leibniz Supercomputing Centre (LRZ)
of the Bavarian Academy of Sciences and Humanities

Partner for Digital Transformation of Science & Research



IT-Services for Science since 1962

Munich Universities, Bavaria, Germany, Europe, ...

The next national supercomputer Blue Lion

Classical Simulation &
Modelling combined with
Artificial Intelligence



The AI Continent Action Plan - published on 9 April 2025

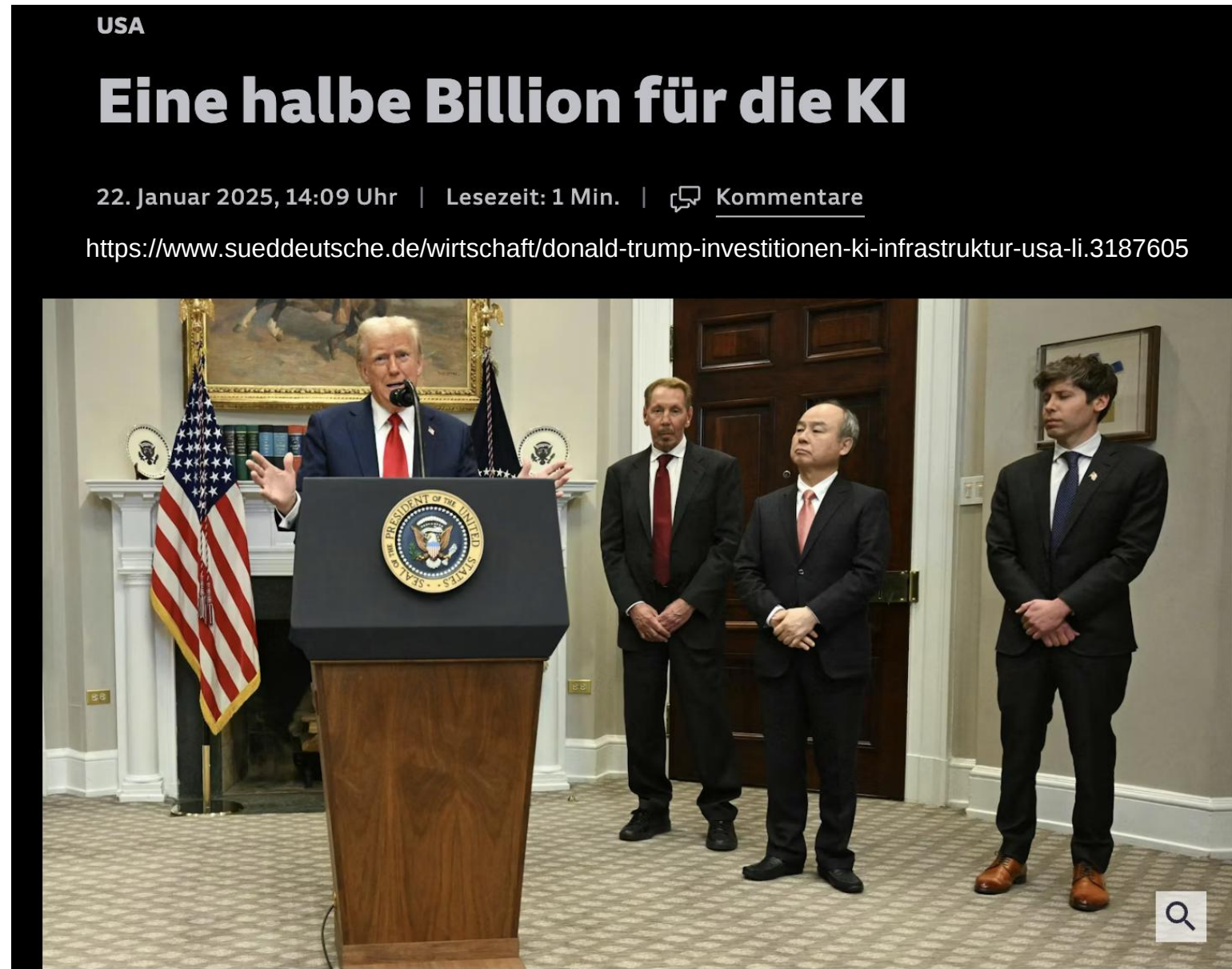


- **Build large-scale AI computing infrastructure** (AI Factories & AI Gigafactories)
- Increase access to high-quality data and European data spaces
- Accelerate AI adoption across science, industry, and public services
- Strengthen AI skills, talent development, and workforce training
- Promote trustworthy, secure, and sovereign AI ecosystems
- Foster innovation through partnerships among academia, industry, and governments



Project „Stargate“

- 5 Steps Project to build AI Data Centers
- 2026 First Data Center Microsoft jointly with OpenAI
- In Mt. Pleasant, Wisconsin
- Costs: 10 Billion USD
- 2030 Completion of Supercomputer „Stargate“
- Total: 115 Billion USD
- Electricity: 5 GWatt





LANCIUM

LANCIUM CLEAN CAMPUS | ABILENE, TEXAS | MARCH 2025



Energy Consumption

NVIDIA H100 GPU (AI Chip)



1,5 – 2 Mio.
NVIDIA H100
sold in 2024

3741 kWh/year

at average capacity utilization of 61%
electricity consumption (excl. cooling)

3200 kWh/year

For comparison: energy consumption
of a German household (2020)

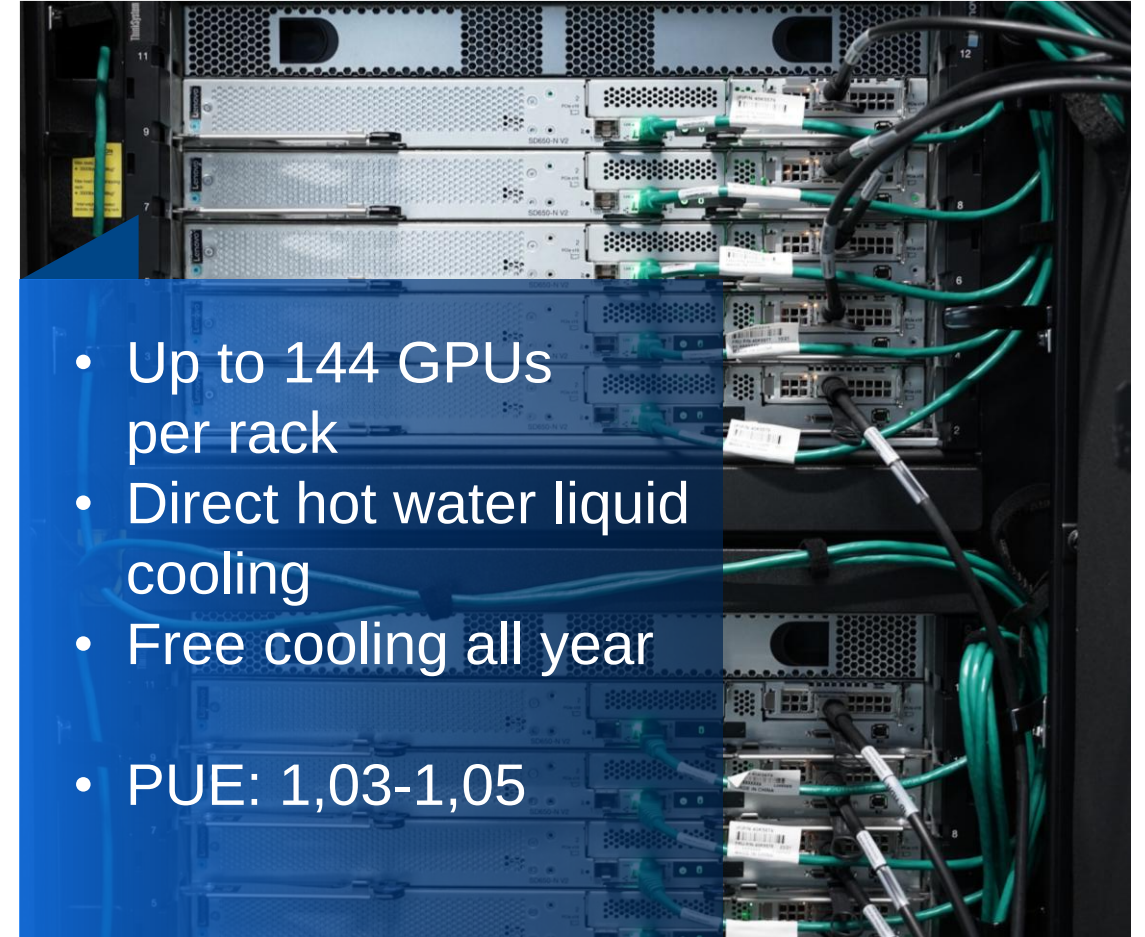
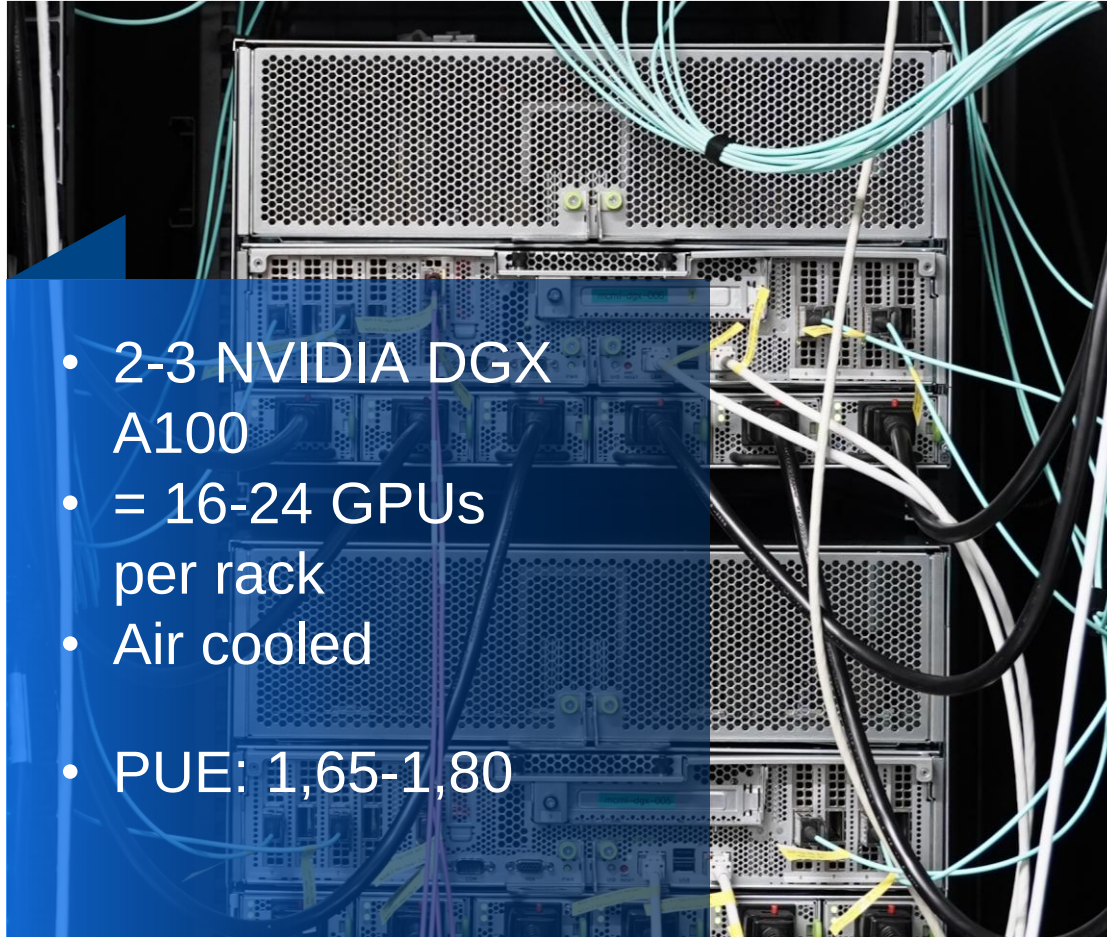
EOS NVIDIA DGX SUPERPOD



EMAS - Eco-Management and Audit Scheme

Key Indicators





Bavarian High Performance AI Infrastructures

AI Factories

Bavarian Level BayernKI



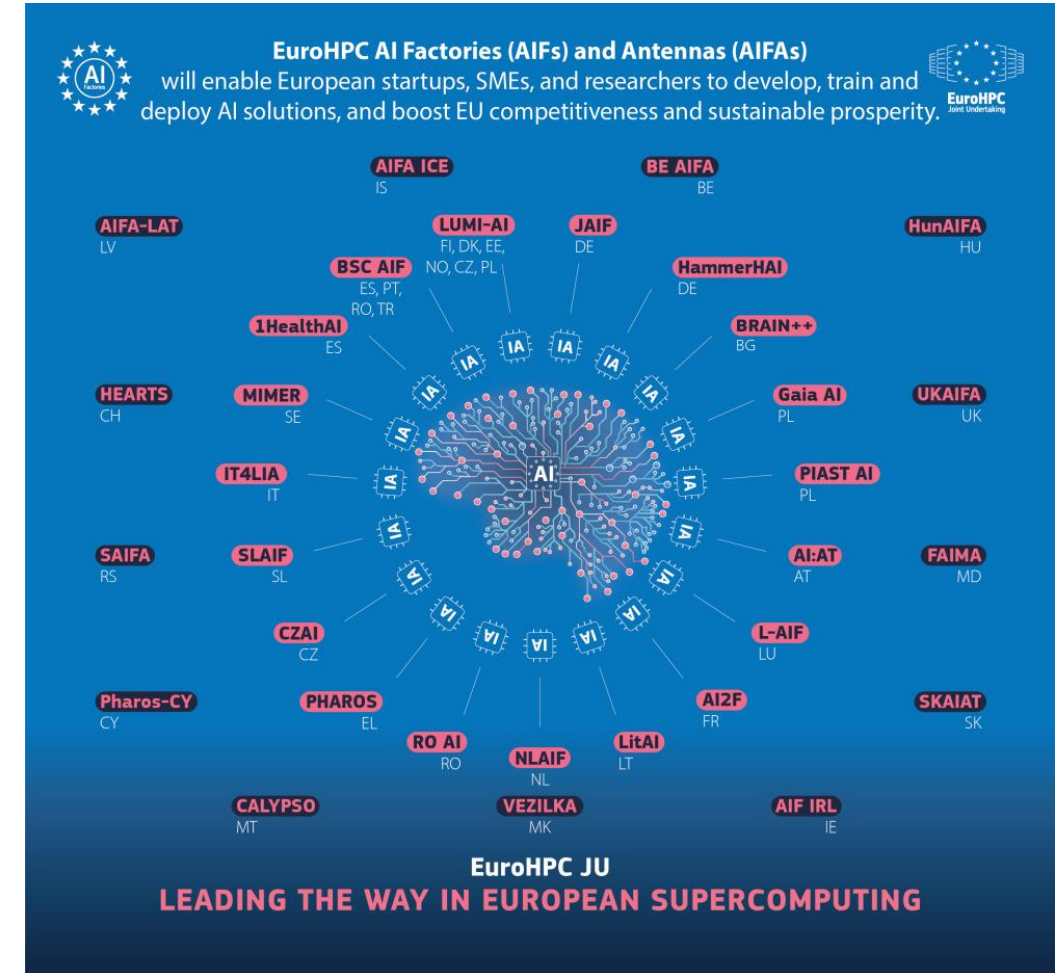
European Level HammerHAI



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https://www.eurohpc-ju.europa.eu/ai-factories_en



The German government wants to “bring at least one AI Gigafactory to Germany”



Verantwortung für Deutschland

Koalitionsvertrag zwischen
CDU, CSU und SPD

21. Legislaturperiode

Signed on 5 May 2026

Germany as a Data Centre location

- We are strengthening Germany’s position as a leading European data centre hub by supporting clusters and regional and decentralised developments.
- **We will attract at least one of the European ‘AI gigafactories’ to Germany** and drive forward edge computing.
- We are accelerating the construction and expansion of data centres, [...]
- We are driving forward the practical implementation of climate neutrality and facilitating, for example, the use of waste heat to feed into district heating networks

Hightech Agenda Deutschland

- **Key Technologies – Artificial Intelligence –... Objective 2: Expanding AI capacities and AI gigafactories**
- To measurably improve the availability and usability of AI capacities ([...], data centres, ...] AI chips) – for science, research, business, public administration and society.

Expressions of Interest for AI Gigafactories



EN

Shaping Europe's digital future

[Home](#) | [Policies](#) | [Activities](#) | [News](#) | [Library](#) | [Funding](#) | [Calendar](#) | [Consultations](#) | [AI Office](#)

[Home](#) > [News & Views](#) > Overwhelming response as 76 respondents express interest in the European AI Gigafactories initiative

Overwhelming response as 76 respondents express interest in the European AI Gigafactories initiative

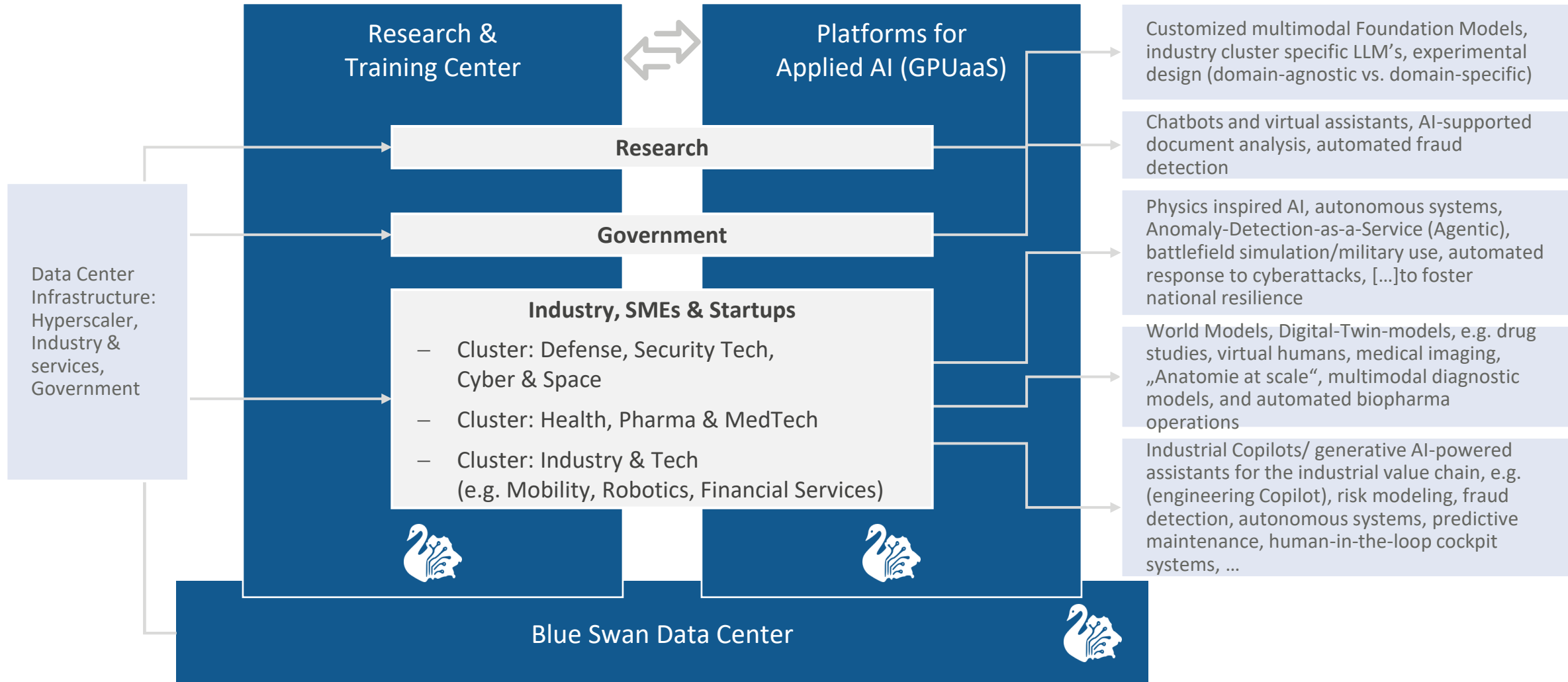
DIGIBYTE

Publication 30 June 2025

A total of 76 expressions of interest proposing to set up AI Gigafactories in 16 Member States across 60 different sites have been submitted in response to the Call for Expression of Interest in AI Gigafactories, which closed on 20 June.



Blue Swan accelerates industry demand for GPUaaS by integrating the scientific ecosystem to enable industrial scaling and usage

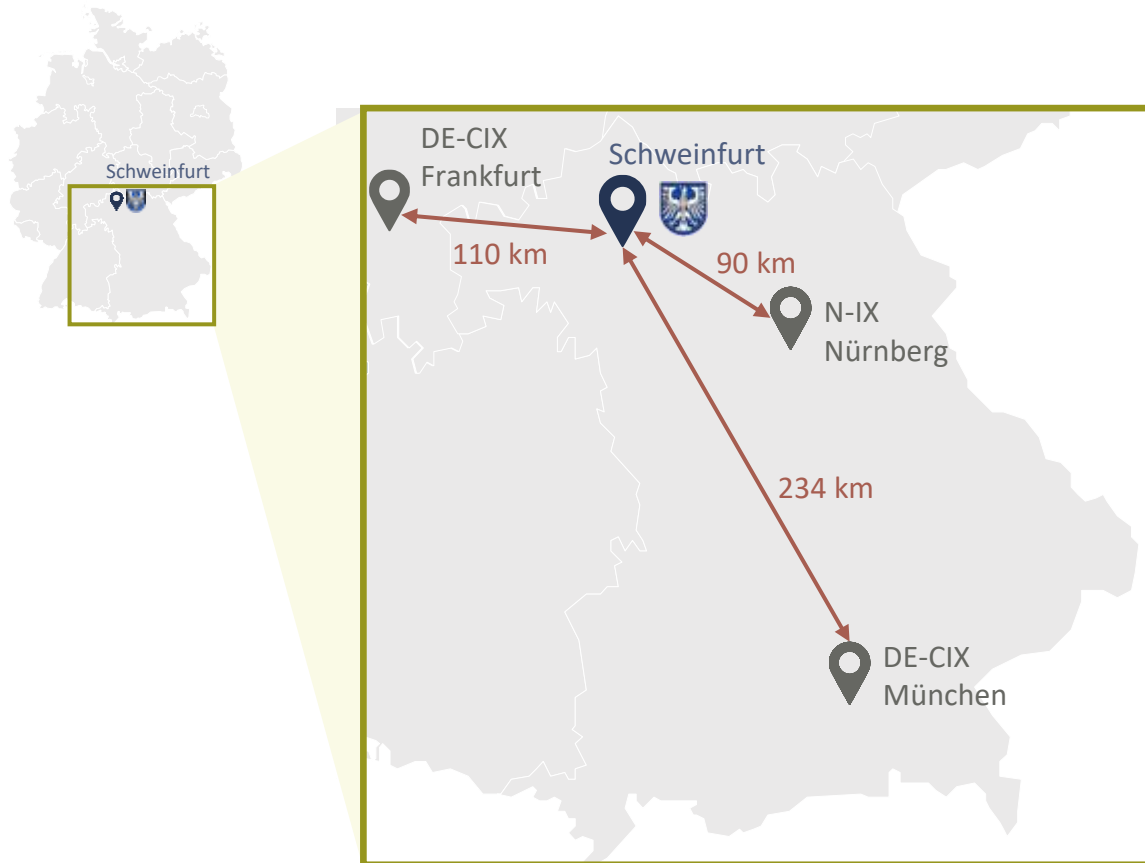


The Bavarian Approach: Schweinfurt as excellent Data Centre Site



- Used as a barracks and air base until the withdrawal of US forces in 2014
- ~110km to DE-CIX Frankfurt (~12-18 Tbit/s)
- Multiple carrier connections, 4-way redundant connection of the site

- 48-ha development site for Data Center (32 DC modules planned)
- Power: Connection to Südlink with 4 GW in 2028 via Bergrheinfeld converter station (380 kV substation, earth-cable to data center)



Blue Swan Data Center: Phase 1

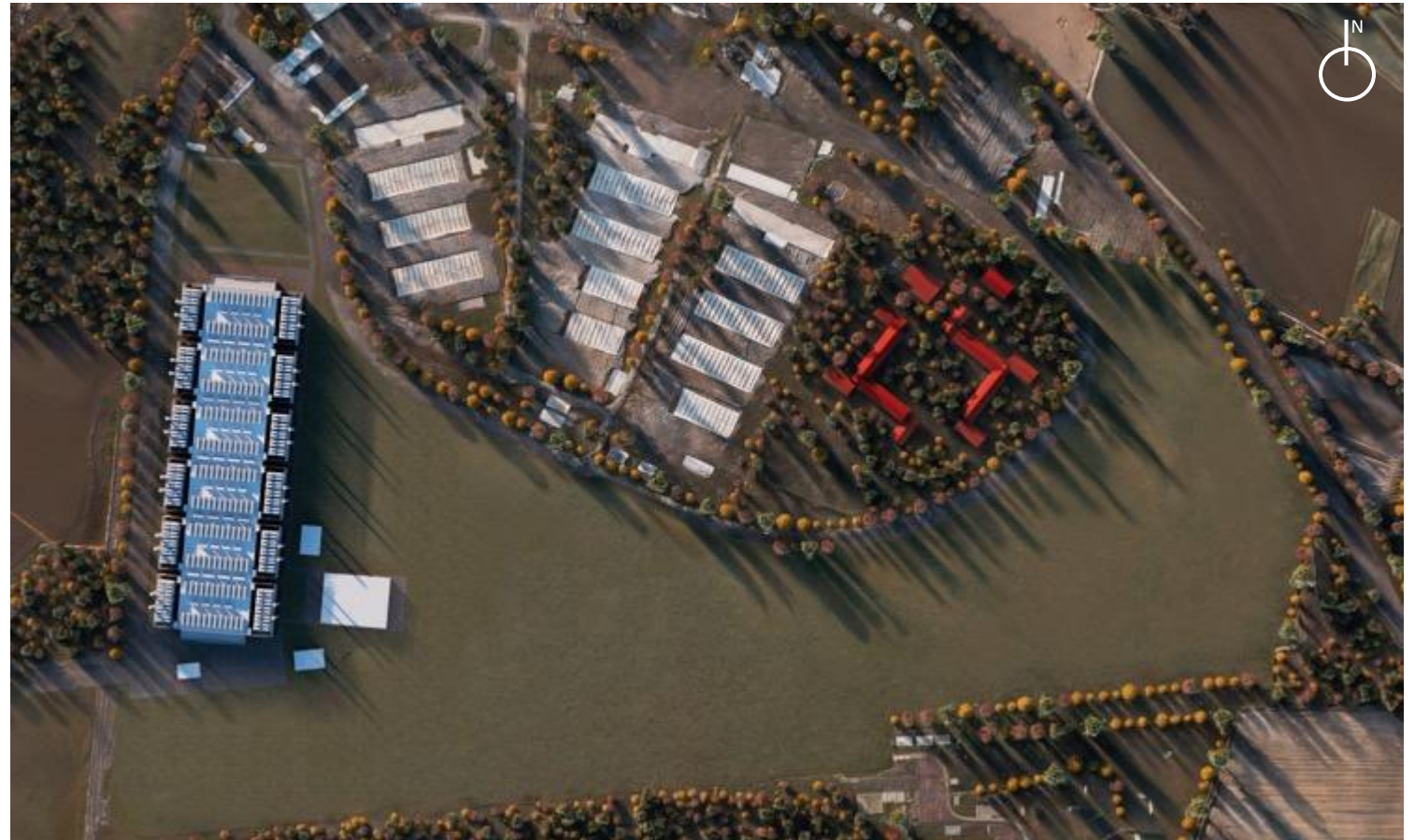


Scope

- 6 data center modules
- 223 MW (63 MW + 160 MW)
- Central infrastructure
- Security building
- Transformer stations

Start of construction in subsection Q1

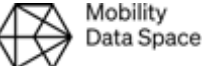
- 2 x AI data center modules | 63 MW
- Development plan in progress
- Building permit planned



Partner Network throughout Germany



Research & Training Center



Multiple Platforms for Applied AI



Government



Industry

Defense, Security Tech, Cyber & Space



Health, Pharma & MedTech



Industry & Tech
(Robotics, Financial Services, Mobility)



Startups & ecosystems





7 Partner Workshops: Use Cases and Requirements for AI ☑ Blue Swan Offering

LRZ/Garching:
Defense,
Security Tech,
Cyber & Space:
~20 Participants



LRZ/Garching:
Health, Pharma,
& Industry:
~20 Participants



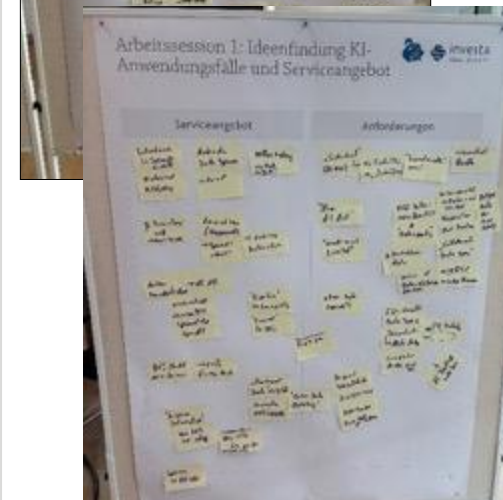
KI Park Berlin/
Online:
Industry &
Startups:
~30 Participants



UTN/Fraunhofer/
Nürnberg:
Industry &
Robotics:
~90 Participants



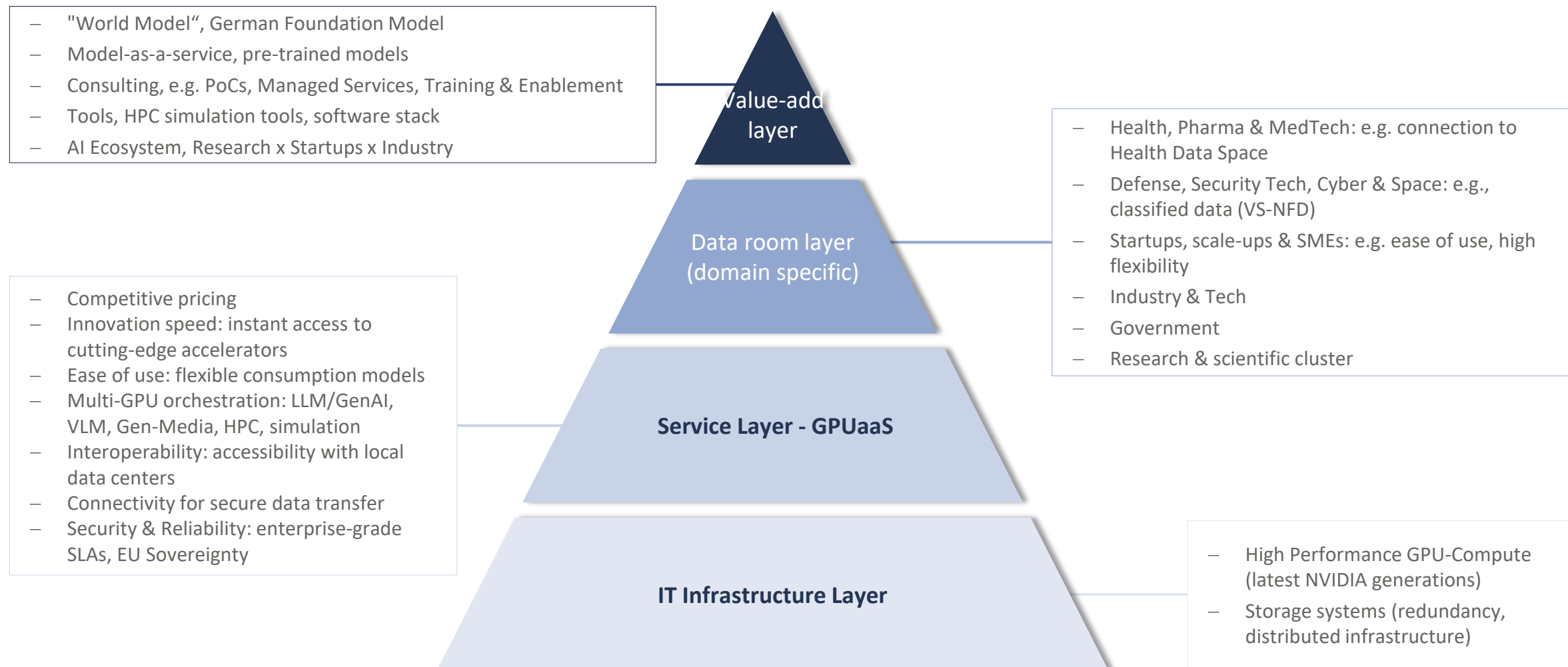
AI Use Case Canvas



Blue Swan Sizing Model



Blue Swan Offering



The Blue Swan AI Gigafactory – A Bavarian Proposal



Europe is pushing AI forward – AI Factories exist today, regional activities are a strong contributor to this □ BayernKI

.....

The **Bavarian Blue Swan proposal** for a European AI Gigafactory is a science-driven, holistic approach for success

.....

Energy efficiency and sustainability in AI are not optional, especially for AI Gigafactories. Instead, this must be a **priority!**

.....

We know how to do it, so **let's do it**

Prof. Dr.
Dieter Kranzlmüller

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