



Isambard-AI and Isambard 3

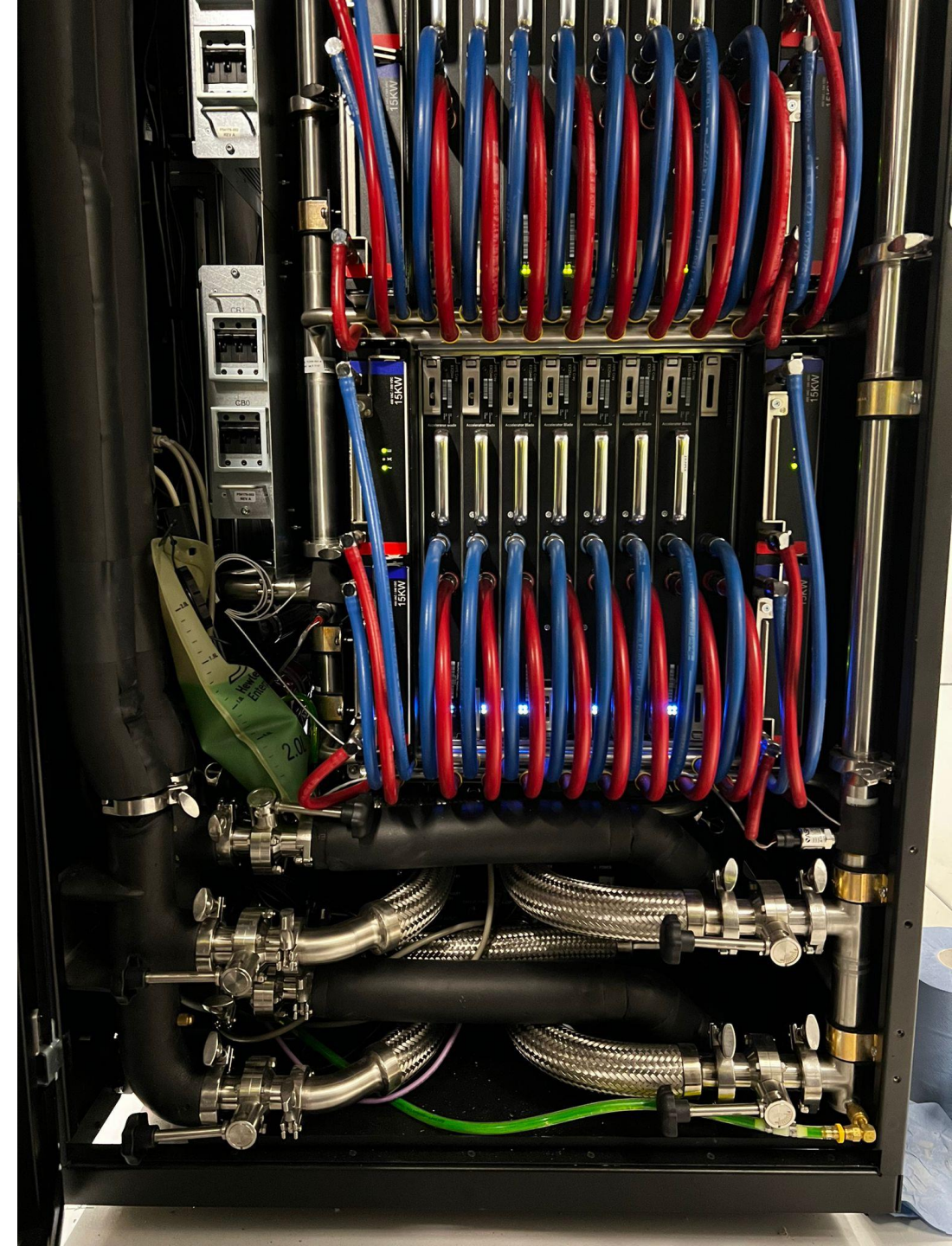
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Supercomputing (BriCS)

What is Isambard-AI?

- **A new >£300M** investment by UK Government in AI capability
- Funding **a large new supercomputer optimized for AI** in a new, 5MW HPE modular data centre (MDC) facility in Bristol
 - In Top 10 supercomputers in the world
 - Had to be delivered extremely quickly – 12-18 months vs the 4-5 years usually required
- £211M capital for system, £15M to build site
- OPEX ~£15M pa for 5-6 years

Isambard-AI status

- **Isambard-AI phase 1** (168 Grace-Hopper GPUs) now running early access projects
 - ~200 users, >20 projects, including 3 from AISI. **Reporting a good user experience.**
- Calls to allocate for time on this system will be coming from UKRI/DSIT imminently
- **Isambard-AI phase 2** (5,280 Grace-Hopper GPUs) will be commissioning in 2Q next year
- Bristol has 5% dedicated allocation; further 1% allocation to NCC





Isambard-AI phase 2 system now completed testing in HPE's factory in the Czech Republic



Factory visit on June 11th 2024. 5,280 GPUs now all built, in Top10 in the world

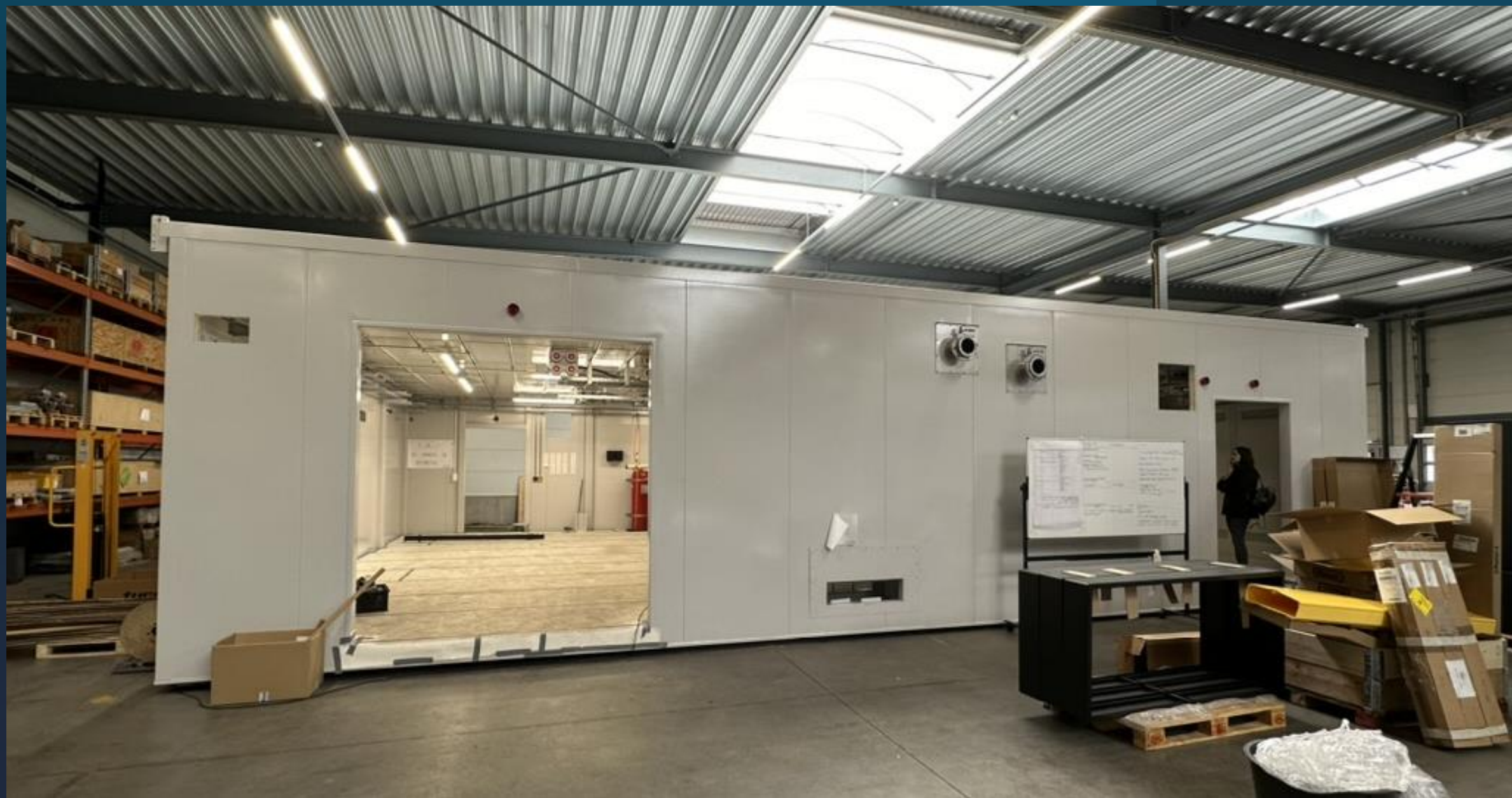


Hewlett Packard
Enterprise

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Isambard AI

University of
BRISTOL





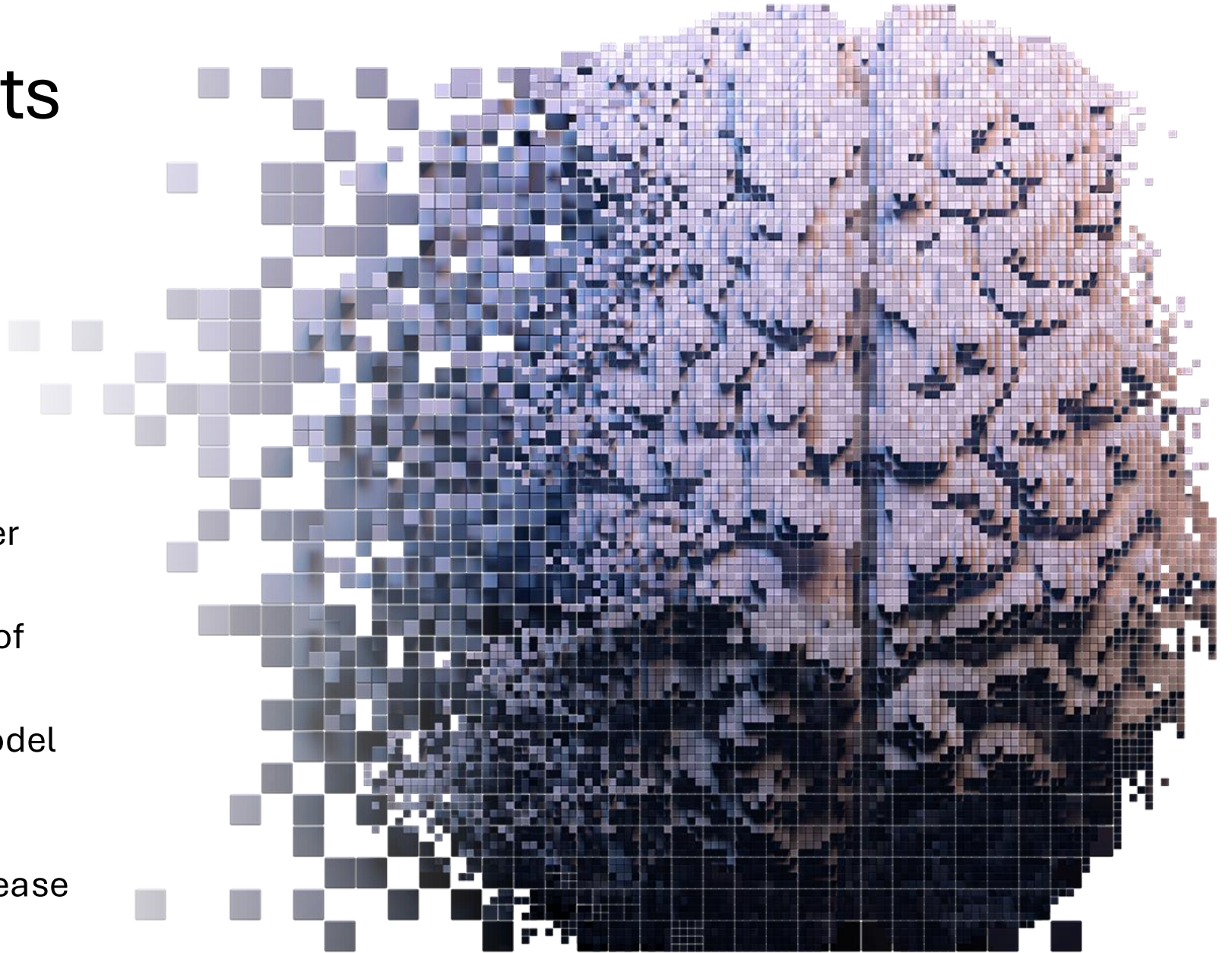
What is Isambard-AI for?

- **To enable AI research in the UK:**
 - Training large language models
 - Large-scale inference
 - Foundational AI research
 - AI safety and understanding
 - Machine learning
 - Hybrid AI + simulation workflows
- Can run AI problems at a wide range of scales
 - From one GPU up to thousands



Example projects already running

- AI assisted drug design
- Wildlife conservation
- Heart health
- Tackling bias in AI skin cancer diagnosis tools
- Reducing memory footprint of transformers
- Improving large language model security
- To come: AI development of vaccines for Alzheimer's disease



Isambard 03

GW4



UNIVERSITY OF
BATH



UNIVERSITY OF
BRISTOL



UNIVERSITY
OF EXETER



UK RESEARCH
AND INNOVATION

Healthcare
Enterprise
ARM
C-SPARK





Isambard 3

- Based on NVIDIA Grace-GPU CPUs
- 144 cores per nodes, >55,000 cores total
- 2 PetaBytes storage
- Fast 200Gbps Slingshot network
- Arm-based cores
- More memory bandwidth than most other systems

Isambard 3 status

- Half the system is now installed and up and running
- First users on the system last week, going well so far
- Ramping up early access projects through Oct/Nov
- Remaining compute racks installed early Nov
- Should go into production in Dec
- >55,000 compute cores, 10% dedicated to Bristol, 10% to each GW4 partner, remaining 60% for UKRI national service
- First UKRI DRI call live now

Questions?

Isambard-AI is funded by the UK Government's Department of Science, Innovation and Technology (DSIT) via UKRI / STFC. The project has only been possible thanks to a very talented and extremely hardworking team of people across the University of Bristol, HPE, Contour, NVIDIA, the National Composites Centre, and our building contractors, Oakland.

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