

## **EuroHPCJU**

## EuroCC

## **EuroCC Austria**

## EuroHPC Joint Undertaking

Governing board:
 EU-representatives and participating member states

#### EuroCC

- EU-funded international initiative aimed to support the uptake of High-Performance Computung (HPC) in Europe
- Aim: development and expansion of the services of national competence centres (NCCs) in 33 participating member states

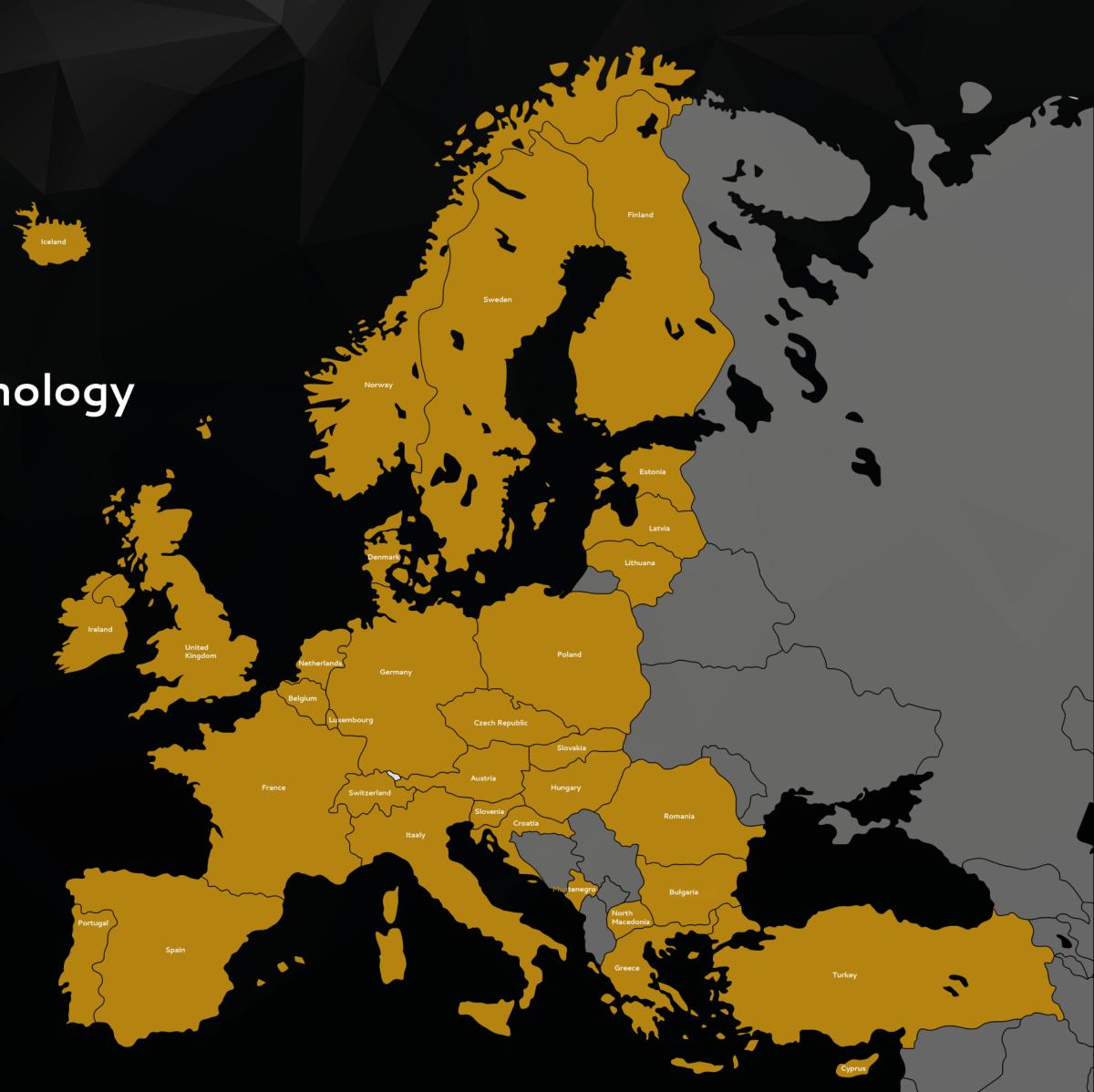
#### **EuroCC Austria**

- National competence centre for supercomputing, Big Data and Artificial Intelligence in Austria
- Funded by the EU and BMBWF Federal Ministry of Education, Science and Research
- Collaborative initiative of six Austrian partners



# EuroHPC Joint Undertaking - Support for HPC users based in the EU -> AIM: Establishment of a European HPC ecosystem

- Financial support
- Provision of research and innovation grants
- European "low-energy processor" initiative
- Exascale supercomputers featuring European technology
- Developing a world-class supercomputing infrastructure in Europe (procurement and deployment of three pre-exascale and five petascale-systems)
- Establishment of national Competence Centres
   → Euro CC
- Establishment of an academic HPC Master programme



## EuroCC

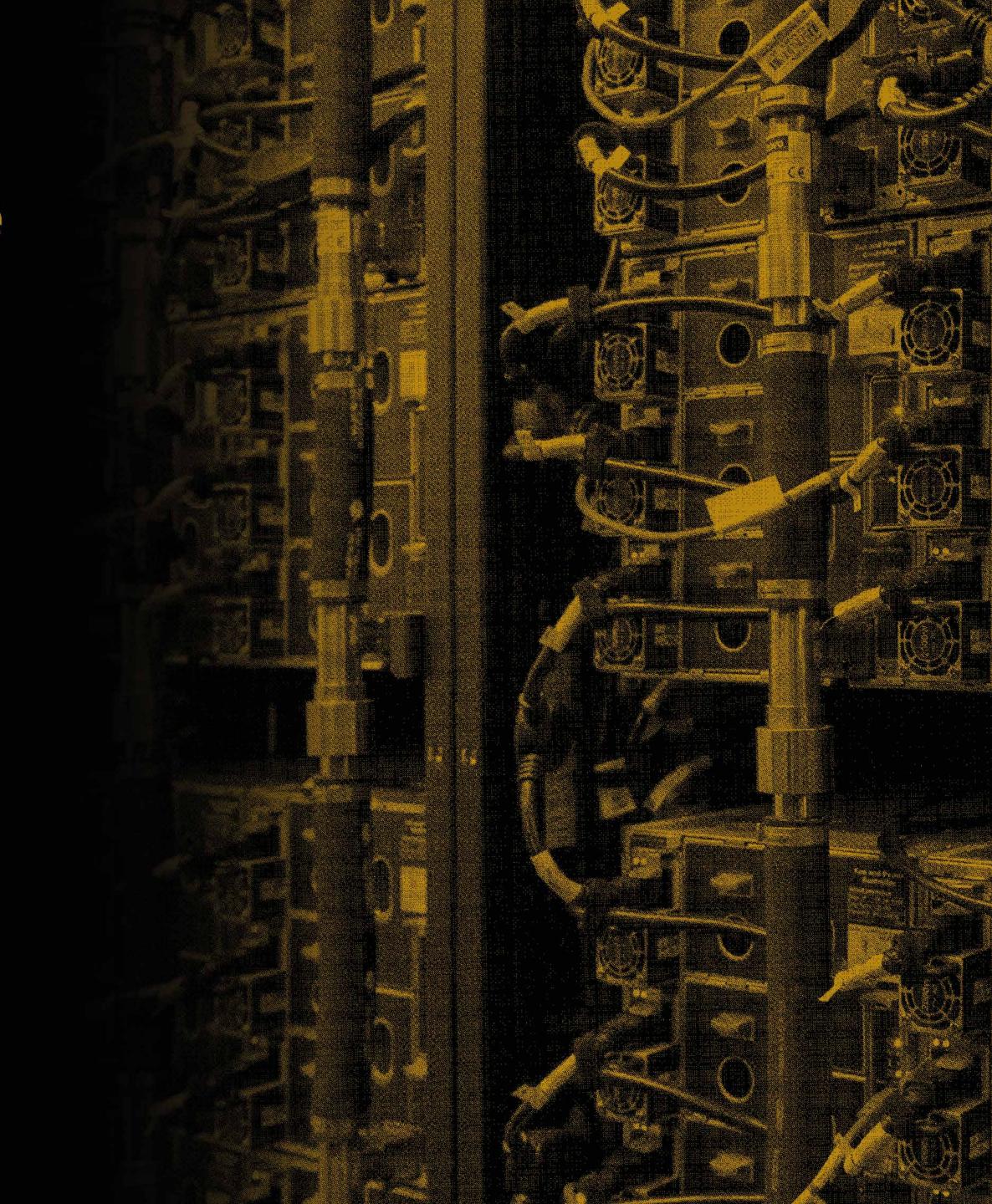
→ AIM: Establishment of 33 national competence centres (NCCs) in Europe

### TARGET GROUPS

- Academia
- Industry
- Public Administration

#### SERVICES

- Networking of the entire national HPC ecosystem
- Joint external appearance and coordination by EuroCC
- Identify and close systemic gaps



## EuroCC AUSTRIA

## -> AIM: Installation of the Austrian EuroCC network

## EXISTING INFRASTRUCTURE

- Universities
- Private research facilities

### **TASKS**

 Collection, documentation and coordination of core activities and competencies in HPC, Big Data and Artificial Intelligence on a national level

• HPC/BD/Al expertise and know-how for science, industry and the public sector

#### JKU - Johannes Kepler University Linz Central ACSC Compute Server @ JKU Linz In-Memory Supercomputer MACH-2 (SGI UV3000) ACR - Austrian Cooperative Research University of Vienna IBS - Simulation computer for the development Nvidia® DGX-1™ Deep Learning System, FluiDyna of virtual prototypes Life Science Compute Cluster, Econocom HPE Superdome Flex Server Cluster/SuperServer 2027GR-TRF with Xeon Phi und Nvidia Tesla TU Wien University of Salzburg Vienna Scientific Cluster 4 (VSC-4) Scientific Cluster Salzburg 1 (SCS1) Vienna Scientific Cluster 3 (VSC-3) High-Performance Computer ORACLE Sun Server X5-8 Clinical micro CT (Scanco XCT) Vienna High-Performance-Computing Equipment HPC-Cluster Database Research Cluster **GEOCLIM Server** Contextual User Experience Lab **EODC** Infrastructure ZAMG Zentralanstalt für Meteorologie und Geodynamik Supercomputer (HPC ICE-XA) NEC HPC AURORA IT Mainframe Computer HPC ICE-X CRAY HPC CCCA - Climate Change Centre Austria - Data Centre **CCCA Data Centre** University of Innsbruck HPC Compute-Cluster LEO4 HPC Compute-Cluster Leo3 + Leo3e University of Graz High-Performance-GPU-Server Server infrastructure for integrated data management Medical University of Innsbruck Medical University of Graz Server Configuration Bioinformatics MedBioNode HPC Apollo 6000 System **Graz University of Technology** Visualisation of 3D data **HPC** in progress

Fraunhofer Austria Research GmbH

Fraunhofer Austria - Visual Computing

**EURO** 

**AUSTRIA** 

## **EuroCCAUSTRIA**→ **SERVICES**

#### AREAS OF APPLICATION

- Modelling and simulation
- Training of algorithms
- Visualisation, evaluation of large amounts of data
- Code- and softwareoptimisation
- Solving of complex problems and acceleration of proccesses

#### **ACTIVITIES**

- Access to computing time and software on high-performance computers in Austria & EU
- Networking with experts and providers in the field of HPC / Big Data / Artificial Intelligence
- Training and courses
- Project support
- Support with public funding

#### BENEFITS

- High computing power and storage capacity
- Data security: data processing on local servers, usual legal framework
- Time and cost efficiency through:
  - Simulation instead of iterative, physical prototype development
  - Less "time to market/result"

