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# Content

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## Mission:

**Set up 33 National Competence Centres (NCCs)**

In the fields:

- High-Performance Computing (HPC)
- High-Performance Data Analytics (HPDA)
- Artificial Intelligence (AI)

## Participating countries (33)

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom

Supported by **CASTIEL** (Coordination and Support Action)



## Goals

- Provision of a **broad service portfolio** tailored to the needs of industry, academia and public administrations
- **Catalogue and increase national HPC competences, HPDA and AI capabilities**



## Ambitions

- Establish each NCC as a **single point of contact** towards the world of HPC in the respective states and the EU
- At the end of the projects, all NCCs will **deliver innovative services and show a clear improvement** of their overall structure and handling of users



## Mission:

### Support and Connect the NCCs

#### Participating countries (5)

Belgium, France, Germany, Italy, Spain

CASTIEL sets the framework of activities that support the evolution of each single National Competence Centre (NCC) and enable them step by step to get closer together in terms of capabilities and expertise.

CASTIEL will take the role of a single and central reference point at the European Level to coordinate and support the National Competence Centres.



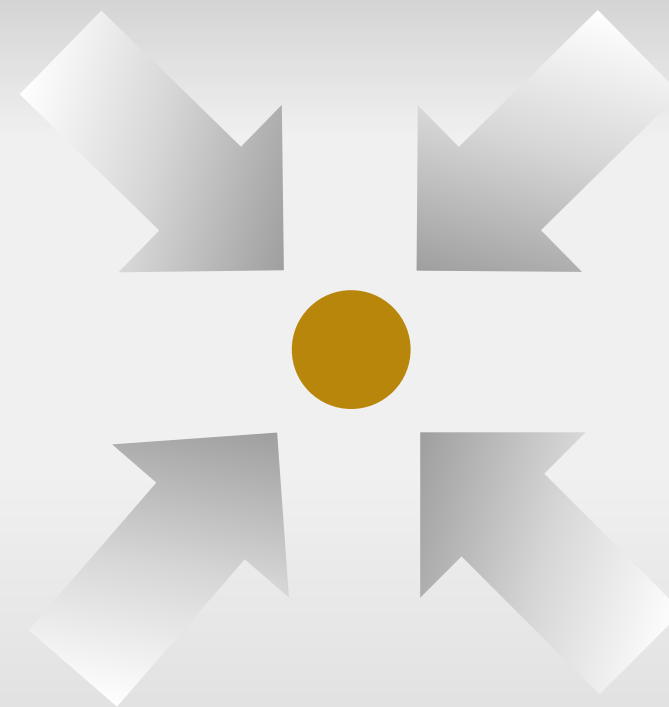
## Goals

- Provide a European excellence baseline by **closing existing gaps**
- Provide mechanisms for **exchange and support** between the NCCs
- **Support** the NCCs with material and mechanisms



## Ambitions

- Becoming a Pan-European **network enabler** of NCCs all over Europe
- **Fostering development** of the participating countries with measures within EuroHPC



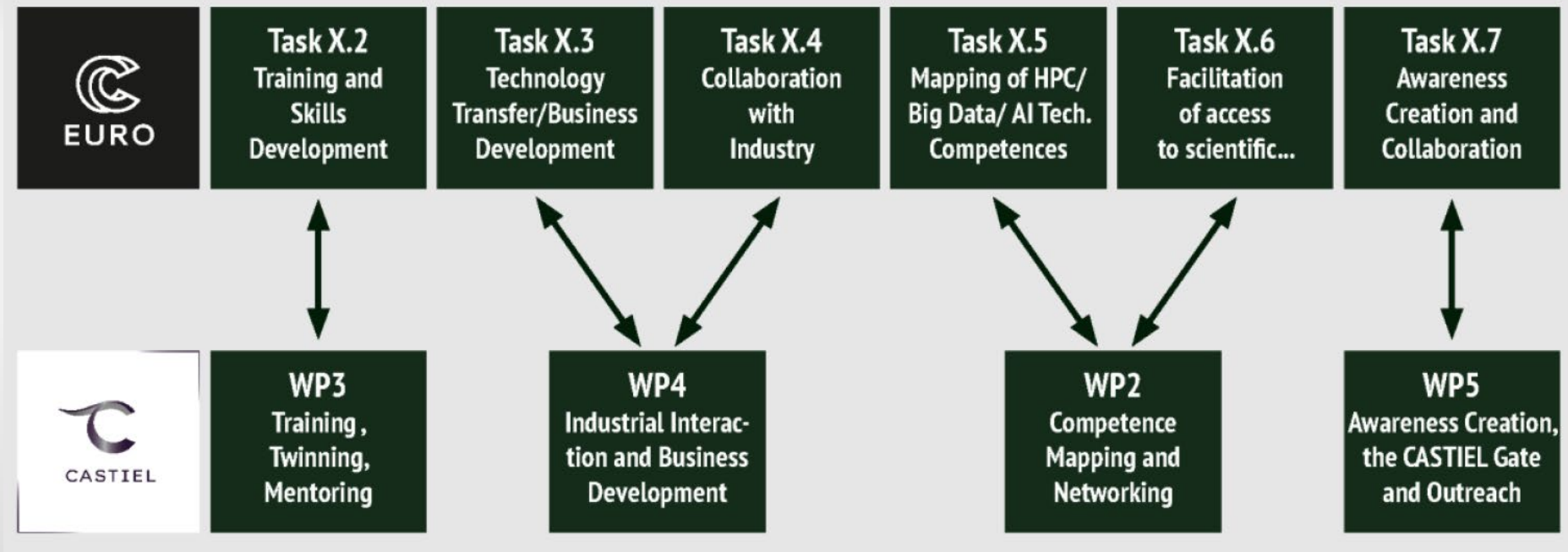


## Tasks & Challenges

- High-level management monitoring the evolution of the NCCs
- Help NCCs to set up operation frames, getting access to and making best use of available experiences and expertise on a national level

*Challenge: Addressing diversity in maturity of HPC in Europe.*

## Interdependencies between EuroCC tasks and CASTIEL work packages



# European Training Opportunities in HPC

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## The CASTIEL Training Mapping Survey

### STRUCTURE OF THE MAPPING DOCUMENT

#### THE ULTIMATE GOAL

**To identify and catalogue the current state-of-the-art of training in HPC, HPDA and AI across Europe**



#### **1. The generic section**

- To understand the resources, constraints and needs of each NCC

#### **2. The training activities section**

- A specific section detailing all training activities in the academic years 2020/2021 and 2019/2020



### SCOPE OF THE MAPPING

- Training activities by **all providers in the whole country.**
- Alternatively, training activities provided by **the NCC and its partners or the NCC only.**

**All countries (33) provided their initial training mapping survey.  
The level of information was diverse and heterogeneous.**

# European Training Opportunities in HPC

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## Key Training Providers

- PRACE – PTC, PATC
- European HPC centres – e.g., BSC, CINECA, HLRS, CSC – IT Centre for Science
- Technology providers – e.g., NVIDIA, Intel, AMD
- Centres of Excellence – e.g., BioExcel, POP, EXCELLERAT
- Other providers

*Challenge: various training portals.*

# HPC in Europe Portal

## Martina Blazkova, BSC



### High-Performance Computing in Europe

The portal for European HPC services

HPC ACCESS TRAINING AND EVENTS SUPPORT APPLICATIONS TECHNOLOGY DOCUMENTATION

#### RESEARCH

Access to HPC systems  
Support to HPC users  
Advanced training  
HPC prototyping

#### INDUSTRY

Access to HPC systems  
Support to Industry  
Training for Industry  
**Specific for SMEs**  
Support for SMEs  
HPC access for SMEs

#### SKILLS DEVELOPMENT

Guide to HPC training  
Courses and workshops  
Online learning  
Academic programmes  
Mobility and mentoring

#### FOR HPC COMMUNITIES

Community Access to HPC  
Domain-specific training  
Domain-specific support  
On-demand training

#### Related communities

Artificial Intelligence, Deep Learning, Machine Learning  
Quantum Computing, Quantum Communication Initiative  
Cyber Security

#### GENERAL PUBLIC, STAKEHOLDERS AND POLICY MAKERS

##### Media and resources

Map of HPC systems  
White Papers and BPGs  
Use cases and Success Stories

##### Events

EuroHPC Summit Week 2020

##### Technology information

European Processor Initiative  
PET/HPC projects results  
ETP4HPC

COLLABORATORS

CONTRIBUTORS

LEGAL NOTICE

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### High-Performance Computing in Europe

The portal for European HPC services

HPC ACCESS TRAINING AND EVENTS SUPPORT APPLICATIONS TECHNOLOGY DOCUMENTATION

Search

#### Training events

LEVEL - Any - DOMAIN - Any -  
AUDIENCE - Any - Filter

NAME	SCOPE	LEVEL	DOMAIN	STATUS	PROVIDER	ACCESS
Green Computing		Potential users	Mathematics		UNIOS-FERIT	Link
Visualization and Advanced Data Structures		Beginner	Mathematics		CaStoRC Cyl	
ONLINE: Modern C++ Software Design		Potential users, Intermediate,			LRZ	Link

Display of training events in EuroCC Access (embedding of the HPC portal database).

EURO ACCESS

HOME NEWS ABOUT TRAINING NCC AREA

Find training offers from the National Competence Centres here! From beginner to expert courses, if C++ or Open MP, there's something for everybody.

Search

INITIATIVE Castel and EuroCC LEVEL - Any -  
AUDIENCE - Any -  
SCIENTIFIC DOMAIN - Any -  
TECHNICAL DOMAIN - Any - FORMAT - Any -  
LANGUAGE - Any - COUNTRY - Any - SORT BY Service Start  
ORDER Asc ITEMS PER PAGE 10 Filter

Provider	Title	Level	Scientific Domain	Technical Domain	Service Start	Service End	Provider	Access
	VSC - Linux intro	Potential users, Beginner		HPC			KU Leuven	
	Information Retrieval and Knowledge Discovery		Mathematics	Artificial intelligence, machine and deep learning			FMI UNI SOFIA	Link

<https://hpc-portal.eu/>

# Thank you for your attention!

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**EuroHPC**  
Joint Undertaking

