

Productivity at Exascale

EPEEC's main goal is to develop and deploy a production-ready parallel programming environment that turns upcoming overwhelmingly-heterogeneous exascale supercomputers into manageable platforms for domain application developers

High Coding Productivity

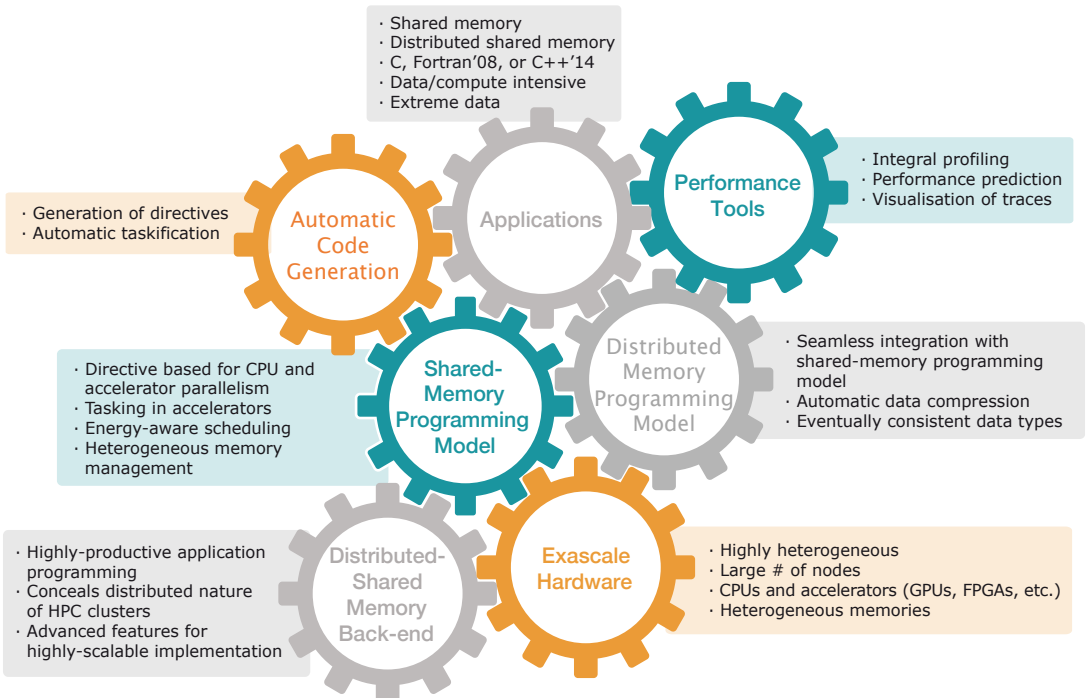
A set of tools that can exploit the full power of the emerging hardware by turning them into manageable platforms for domain application developers

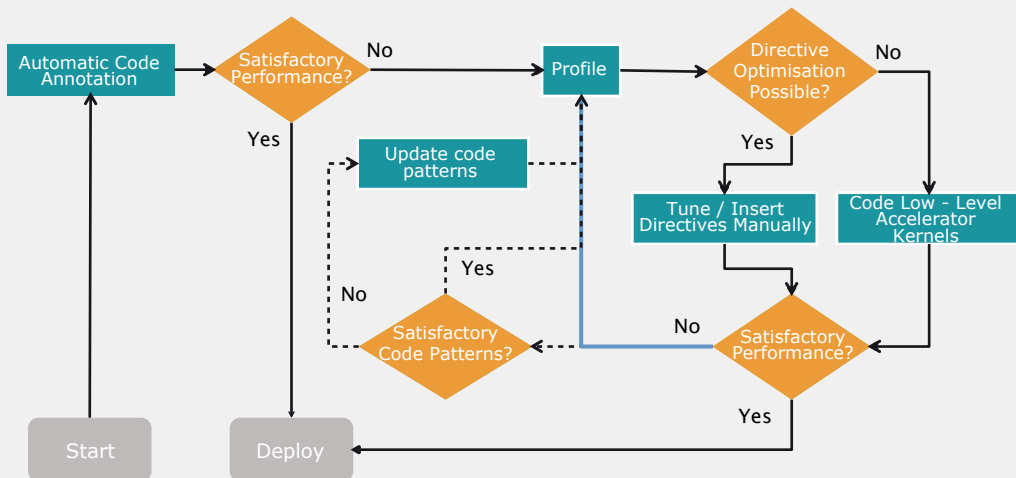
High Performance

A programming environment with all relevant functionality at TRL8 for current pre-exascale systems and TRL4 for exascale platforms

Energy Awareness

Efficient and energy-aware management of hardware heterogeneity, both in terms of processing elements and memory subsystems further favouring coding productivity



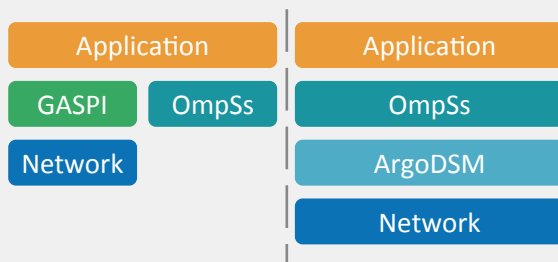


Programming Environment Components

- **Parallelware** - Appentra
- **OmpSs** - BSC
- **GASPI** - Fraunhofer
- **ArgoDSM** - Uppsala, Eta Scale
- **Extrae** - Paraver, Paramedir, BSC

Applications

- **AVBP** - Cerfacs
- **DIoGENeS** - Inria
- **OSIRIS** - INESC-ID
- **Quantum** - ESPRESSO, Cineca
- **SMURFF** - IMEC



Application developers will be able to leverage two flavours of parallel programming paradigm, given their personal preference and expertise: **shared memory or distributed-shared memory**, and code in their preferred programming language.



The EPEEC project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement N° 801051

www.epeec-project.eu

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