



FRAMEWORK PARTNERSHIP AGREEMENT IN EUROPEAN LOW-POWER MICROPROCESSOR TECHNOLOGIES



THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION
PROGRAMME UNDER GRANT AGREEMENT NO 826647

DRIVERS OF THE EPI PROPOSAL (3)

- Servers and Cloud Low Power CPU needs:
 - energy efficiency - lower power consumption
 - new generation of secure and safety-aware virtualization capabilities
- Sovereignty (data, economical, embargo)



HOW EUROHPC WILL HELP TO MAKE US STRONGER

- Developing a new European supercomputing ecosystem: HPC systems, network, software, applications, access through the cloud
- Making HPC resources available to public and private users, including SMEs.
- Stimulating a technology supply industry



EUROPEAN PROCESSOR INITIATIVE

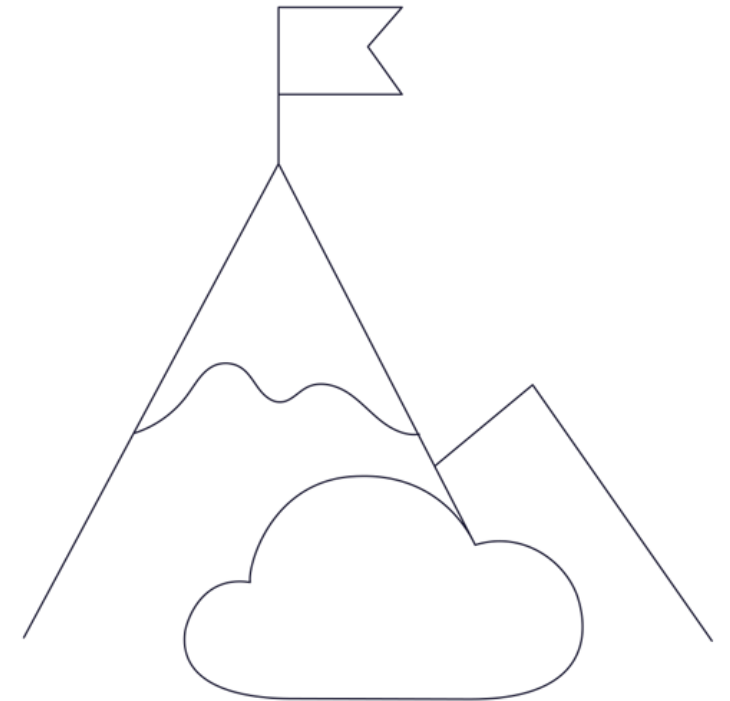
- High Performance General Purpose Processor for HPC
- High-performance RISC-V based accelerator
- Computing platform for autonomous cars
- Will also target the AI, Big Data and other markets in order to be economically sustainable

EPI PARTNERS



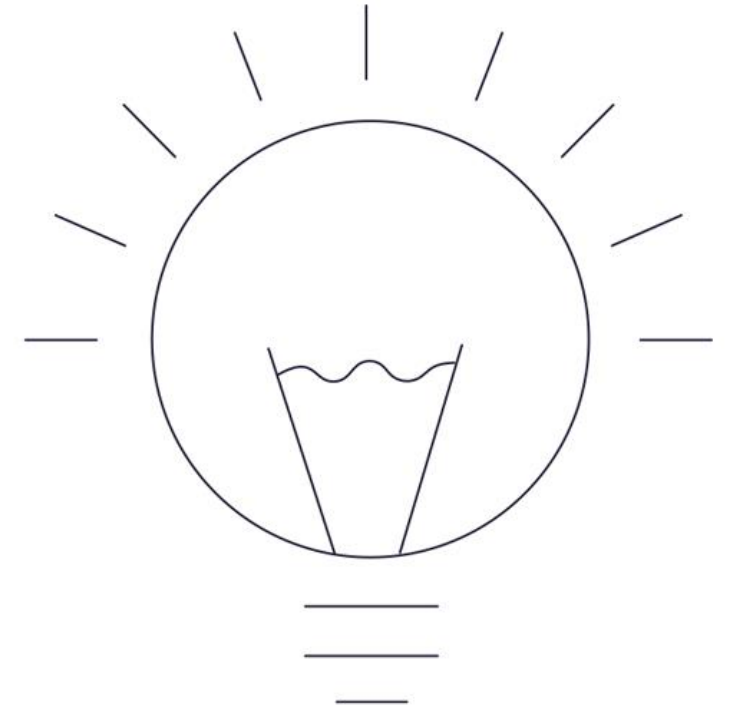
MISSION

- European independence in High Performance Computing Processor Technologies
- EU Exascale machine based on EU processor by 2023
- Based on solid, long-term economic model, Go beyond HPC market
- Address the needs of European industry (car manufacturing market)
- End-to-end security



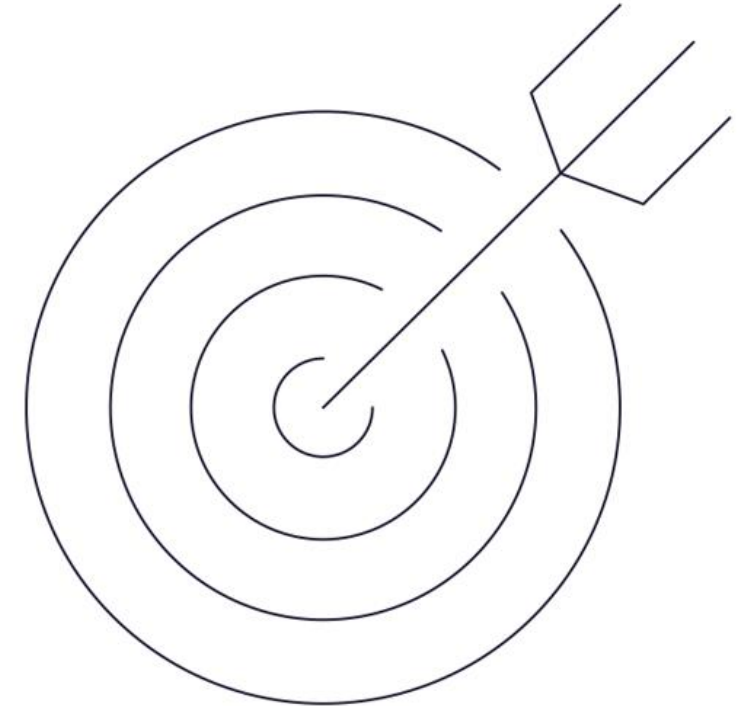
VISION

- High Performance Computing needs for Exascale machines beyond 2022
- Connected mobility & AD Autonomous Driving computing needs beyond 2023
- Low power CPU needs for Servers and Cloud
- Other markets under exploration (Server and Cloud)

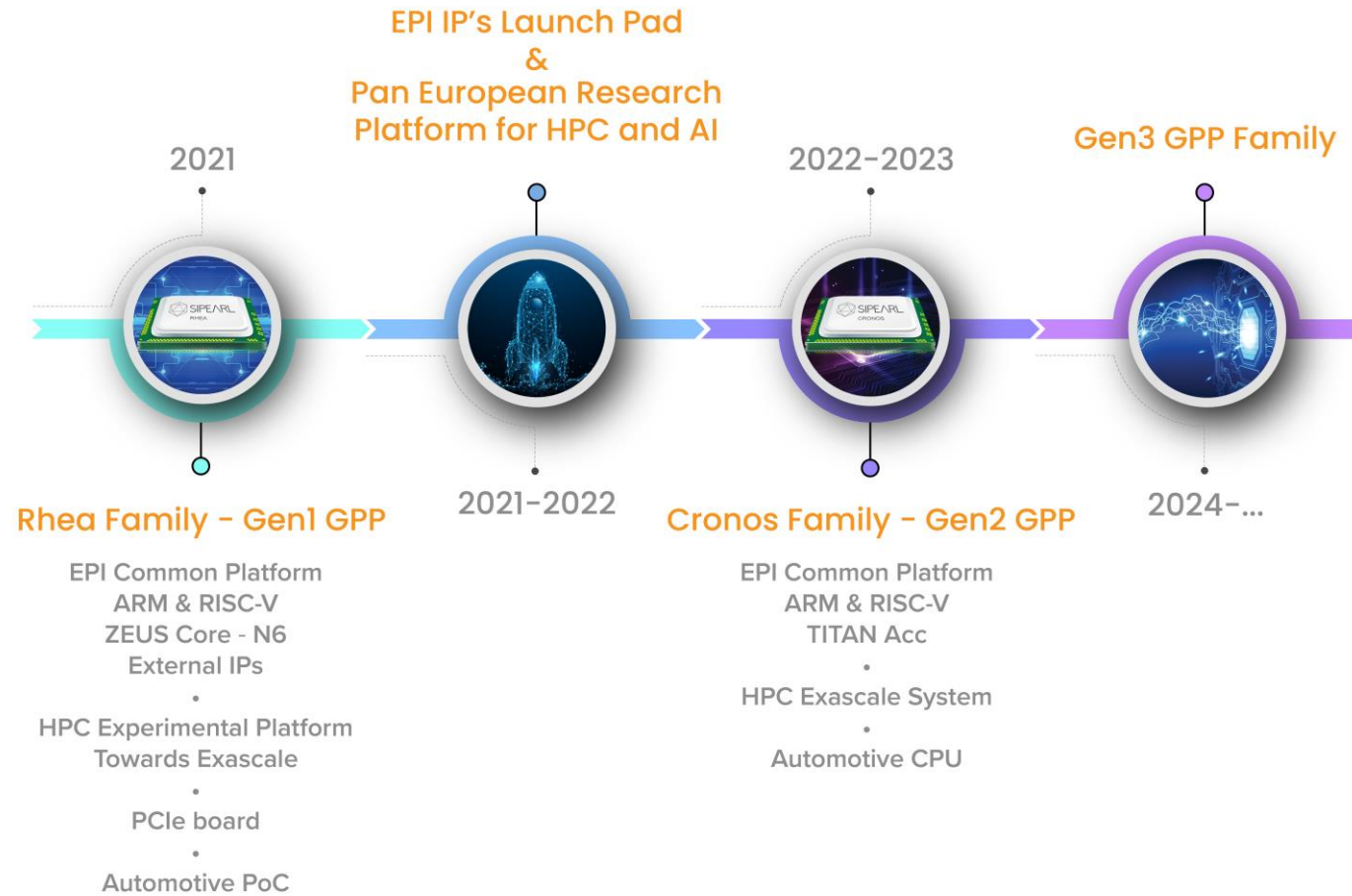


EXPECTED IMPACT

- Strengthening the competitiveness and leadership of European industry and science
- European microprocessor technology with drastically better performance/power ratios
- Tackling important segments of broader and/or emerging HPC and Big-Data markets



ROADMAP



EPI TUTORIAL

FIRST STEPS TOWARDS A MADE-IN-EUROPE HIGH-PERFORMANCE MICROPROCESSOR

HIPEAC, BOLOGNA, ITALY, 14:00 TO 17:30 JANUARY 22, 2020,
BOLOGNA POLO CONGRESSUALE, ROOM BIANCA B

The tutorial/training will provide most up-to-date information on European Processor Initiative project and its activities.

SECTION	FROM	TO	TOPIC	SPEAKER
Intro, General Overview, Accelerator, PCIe	14:00	15:30	Introduction to tutorial	Josip Knezovic, University of Zagreb
			General EPI overview	Denis Dutoit, CEA
			Common Platform & Rhea 1st implementation	Denis Dutoit, CEA
			Accelerators & Power aspects	Andrea Bartolini, University of Bologna, Mauro Olivieri, BSC
			EPI PCIe daughter card as software development vehicle	Fabrizio Magugliani, E4
	15:30	16:00	BREAK	
EPI and RISC-V	16:00	17:30	EPI RISC-V Vector Compiler explorer, Emulator Visualizer + Hands-on	Filippo Mantovani, BSC Roger Ferrer Ibanes, BSC