



SIPEARL

European high-performance energy-efficient CPUs for sovereign supercomputing, AI & data centre

They help address strategic challenges in the fields of security, defence, health, energy and engineering with a reduced environmental footprint.

JUNE 2026



Agentic AI



Security



Defence



Big challenges

need

Big computers



Finance



Climate

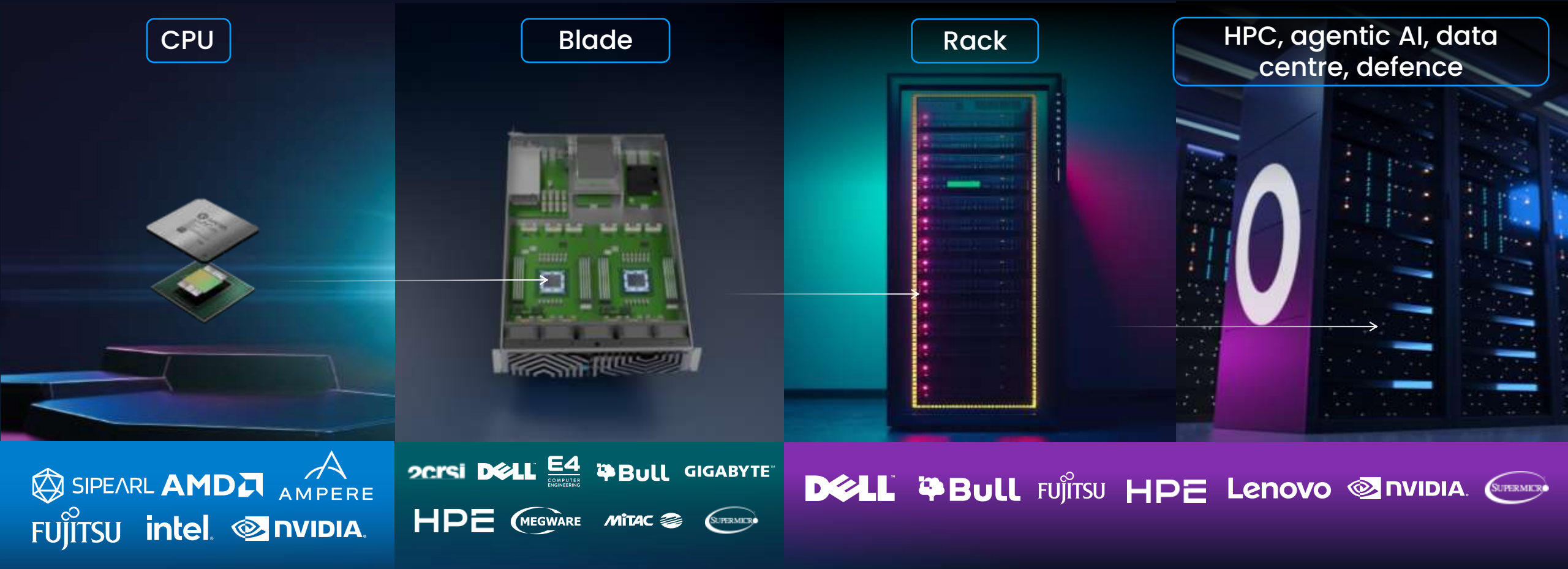


Health



Supercomputers and data centres are essential to address strategic scientific societal and environmental challenges.

Our business: High-performance energy-efficient processors for HPC⁽¹⁾, AI, data centre & enterprise





A leading IC
design house



The vision that led to SiPearl's inception

In 2015, supercomputers and data centres that processed Europe's strategic data ran mostly on non-European hardware. Philippe Notton, CEO and founder of SiPearl, had an intuition:

// Europe will only gain strategic Independence when it has sovereign high-performance CPUs⁽¹⁾. //



EuroHPC
Joint Undertaking



Our mission: Strategic independence in high-end CPUs

A dramatic situation for Europe

Strategic data are processed by non-European CPUs

Huge impact on:

- Security
- Safety
- Sovereignty



No European digital sovereignty without sovereign hardware

SiPearl's CPUs will fuel Europe's



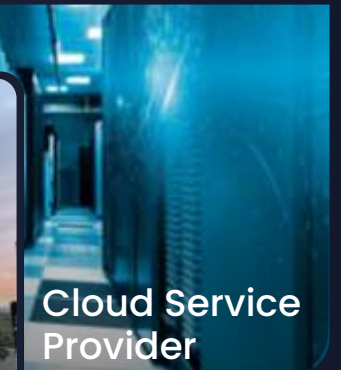
Supercomputing



Agentic AI



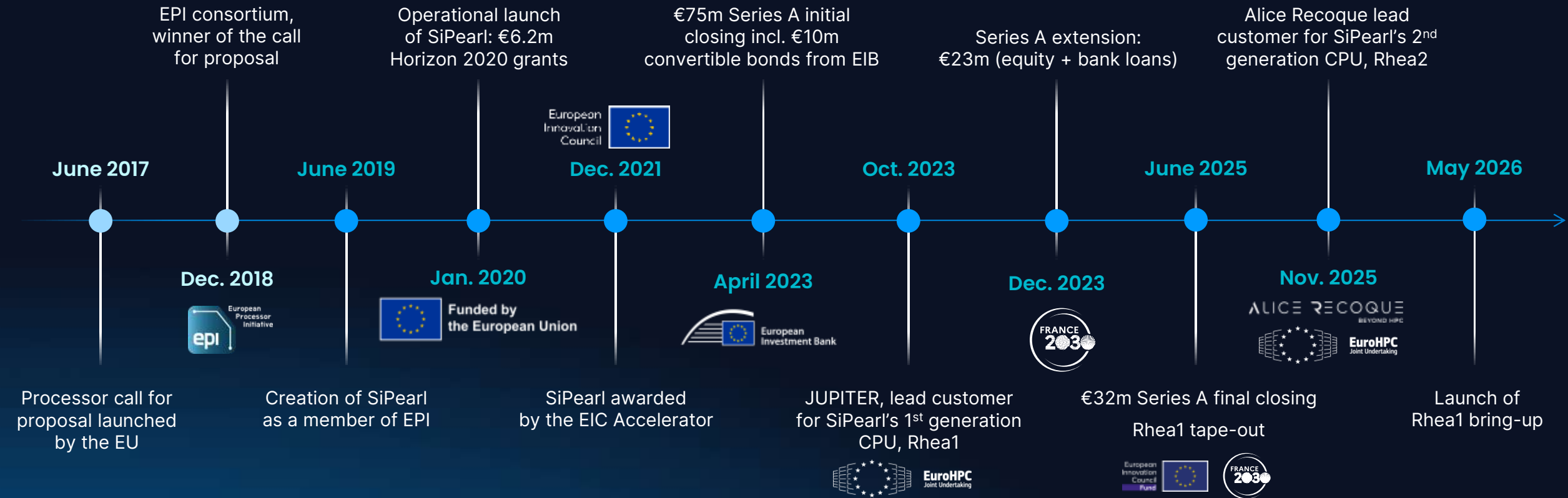
Enterprise
(Defence, Government,
Aerospace)



Cloud Service
Provider

From a European Union concern to SiPearl's ramp-up

Our common goal: fostering the return of high-performance, energy-efficient CPU technologies in Europe.



A world-class "Processor Team"...

Leadership



Philippe Notton
CEO & Founder

Bull



Guillaume Etorre
Chief Operating Officer



Delphine Démeron
VP Human Resources



Jean-Luc Gilbert
Group CFO & IR



Craig Prunty
VP Marketing & Buis. Dev.



Ying-Chih Yang
Chief Scientist Officer

Bull



Gaël Paul
Senior VP Engineering



Vincent Casillas
Chief Technology Officer



Anna Riverola
International Dev. & Public Affairs Director
Country Manager - Spain

Board



Ian Jenks
Chairman



Wayne Liang
Independent Director



Jean-Michel Deligny
Advisor to SiPearl CEO

Investors & shareholders

European
Innovation
Council



bpifrance



arm

國泰創投
Cathay Venture

Bull

**European
Investment Bank**

...with a pan-European footprint

Maisons-Laffitte (HQ)



Massy



Barcelona



Sophia Antipolis



Eppes data centre



Reims data centre



Grenoble



Bologna



HPE

CINECA
ECMWF



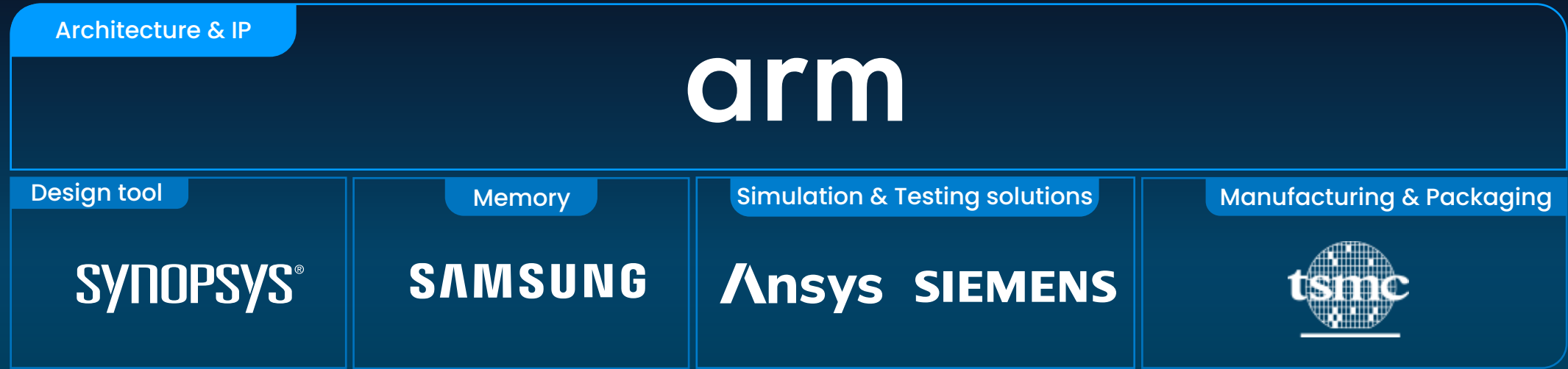
Next planned extension

Taiwan
July 2026

We are close to the pools of engineers and our end-users!

Technological partnerships with leading industry suppliers

Tier 1 technology providers



Acceleration specialists



Leading server suppliers



2 sovereign proprietary data centres

Sovereign design & data centres
located in northern France



258 Servers

188 in Eppes / 70 in Reims

14,000 cores

212 TB RAM

55 Networks

Switch / firewall

48 Storage

26 storage / 22 synology

3 PB

5 Backup servers

Cohesity & Veritas technologies
Eppes & Reims

Unique EDA design centre
in Europe



SiPearl's financing since its launch

Seed Money

Operational launch: €7.4m
Horizon 2020 grants



Design start →

January 2020

Initial closing

€75m
incl. €10m convertible
bonds from EIB



April 2023

Series A: €130m

Extension

€23m
€15m equity + €8m bank loans



December 2023

Final closing

€32m
convertible bonds



June 2025

→ Tape-out

Launch of the
Series B round

S1 2026

SiPearl in a nutshell



Incorporated

In France in June 2019,
deployed in Spain, Italy



Seed funded

By the European Union
& France



Financing

Series-A: €130m



Sovereign design

Data centre in France

258 servers / 212TB memory
14,000 cores / 3PB storage



Technological partnership

Intellectual property

arm



200 employees

from AtoS, AMCIATER, ST, FUZZELL, NXP, HPE, intel, NOKIA



1st tape-out done

June 2025



Fabless IC design house

Manufacturing entrusted to TSMC with N6P



2 design wins

JUPITER & Alice Recoque, 2 first
European exascale supercomputers



Our first products



Gen1: R H E A 1 for HPC and AI

The most complex CPU ever designed in Europe

SILICON
PROCESS

6 nm
TSMC N6



LOGIC DIE IN ADVANCED
SILICON PROCESS

80 arm®
Neoverse V1
cores⁽¹⁾

+61 billion
transistors

7.8 billion
equ. gates

16 metal
layers

6 PCIe x16
Gen5

2 PCIe x4
Gen5

4 DDR5
interfaces

80 MB
distributed
SLC

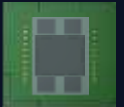
SILICON INTERPOSER



2.5D advanced
packaging

4 HBM
4x16=64GB

PACKAGE



5,430 pins



Gen1: RHEA 1 for HPC and AI



Launch of the 12-week bring up process in May for a general availability late 2026

A server as reference design

SEINE REFERENCE
SERVER

Multifunctional, flexible & versatile

1. Full expertise

Processor: Architecture / Design /
Go to production / Deployment

Server: Schematics / Layout / Thermals

2. Reference design

3. Validation & testing

4. Multiple demos



Gen1: ATHENA1 for defence and aerospace

ATHENA1

Dual-use processor

European technology

SKUs of 16, 32, 48, 64 or 80
Arm Neoverse V1 cores

New packaging

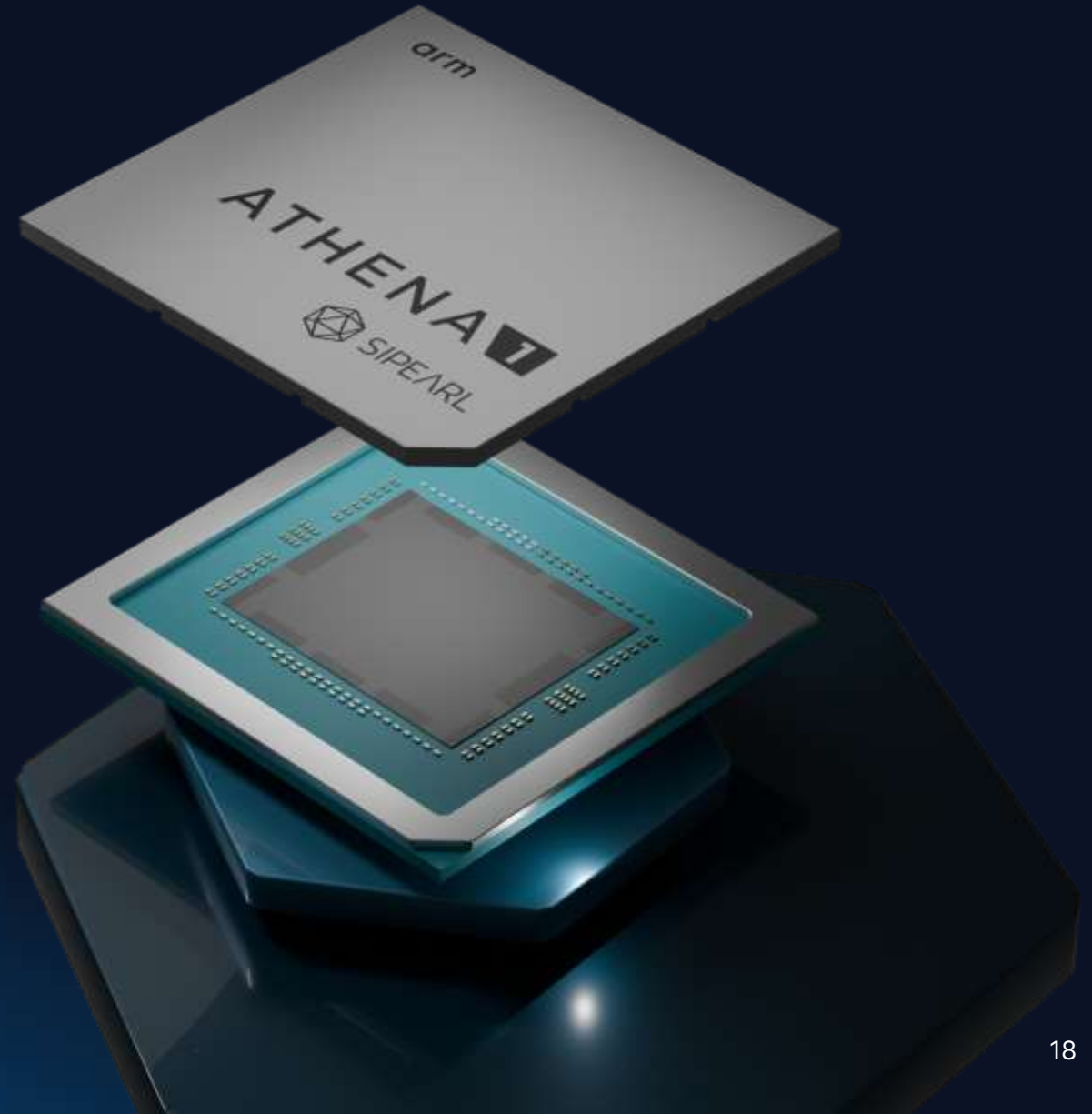
No HBM

Defence

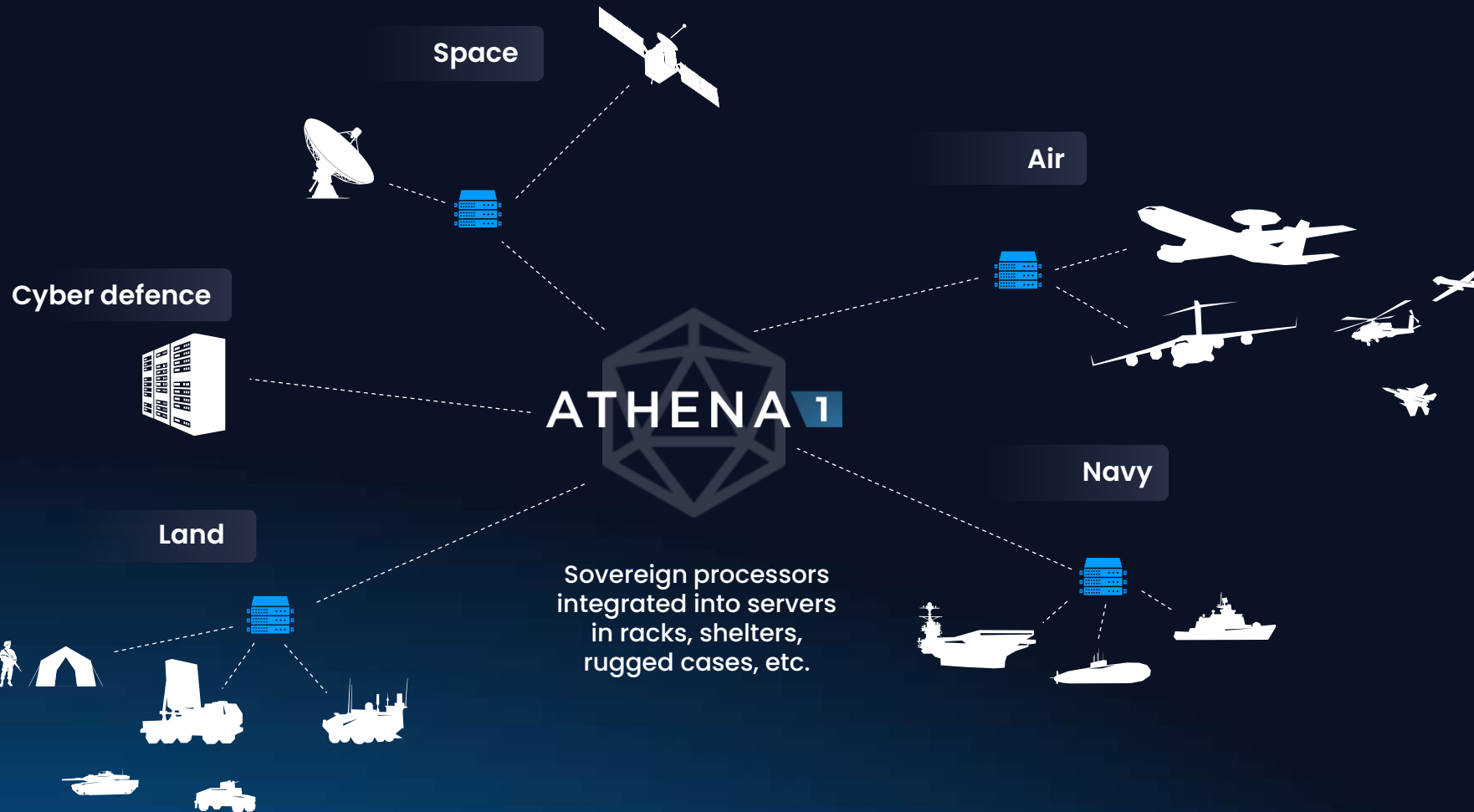
Aerospace

Private data centre

Release: H2 2027



Gen1: ATHENA 1 for defence and aerospace



Applications

Secure communications & intelligence

- Cyber security
- Intelligence processing
- Tactical networks

Electronic warfare & cyber defence

- Jamming systems
- Electronic detection & countermeasures
- Cyber defence

Simulation and training

Challenges & issues to be addressed

Security and integrity

Computing power and miniaturization

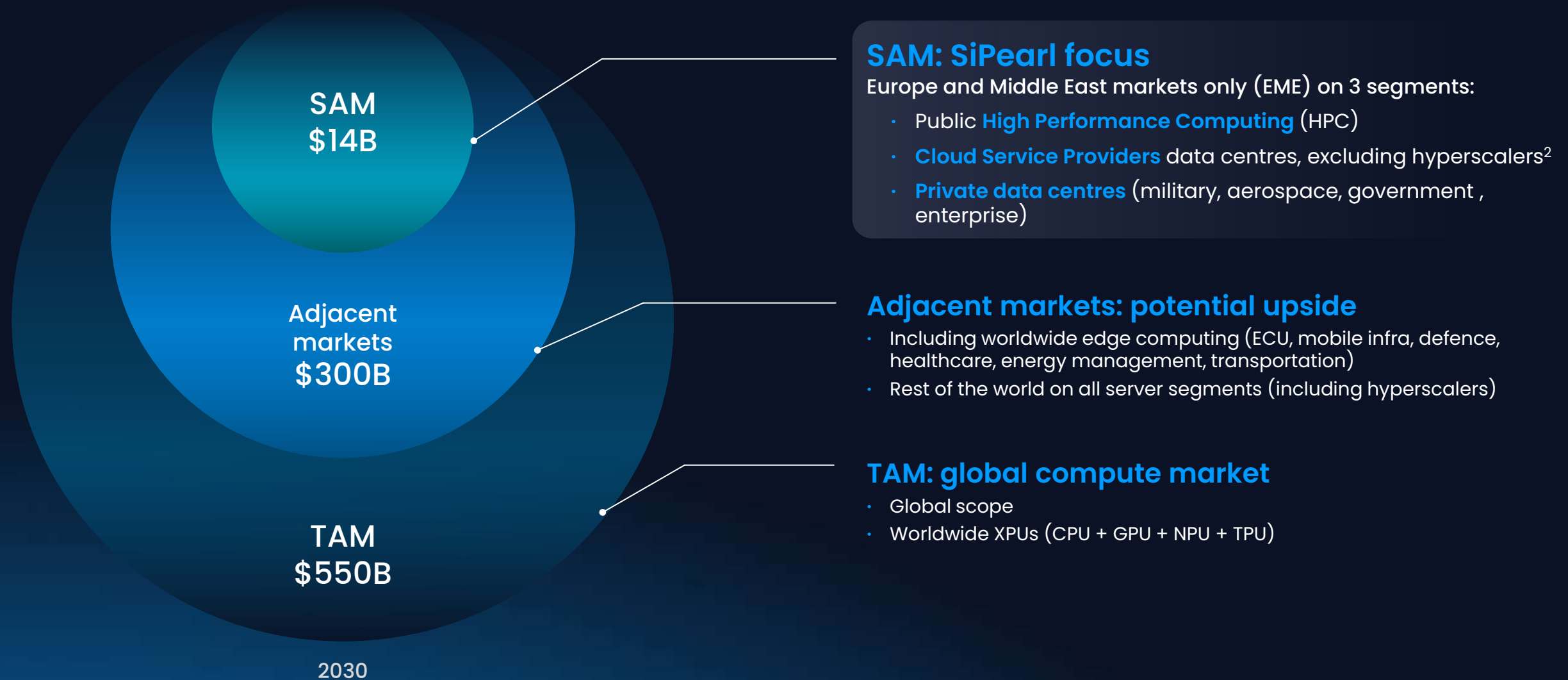


A huge market

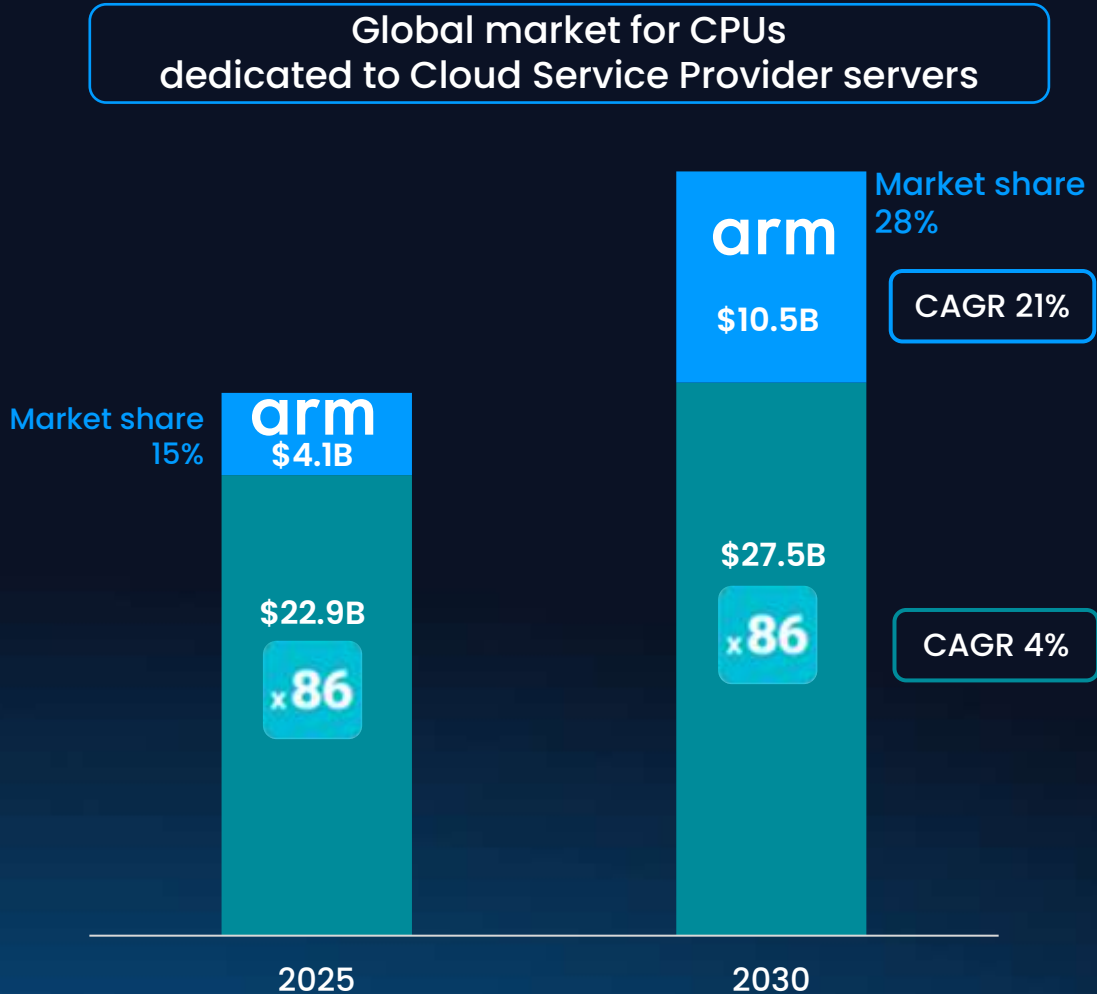
Strengthening Europe
sovereignty



SiPearl addresses 3 segments worth \$14B+ in 2030 (8% CAGR)¹



SiPearl, the world's only independent Arm-based CPUs provider



Arm-based CPUs for servers

Leader supplier

arm

Third-party CPU suppliers

Rising players



SIPEARL

Independant innovator



AMPERE

Bought by Softbank in 2025

Legacy players



FUJITSU



nVIDIA

In-house CPU design



aws



Meta



Google Cloud



Microsoft Azure

FOCUS: Europe's supercomputers, 148 of the global Top 500⁽¹⁾

5 machines in the TOP10



No4: JUPITER Booster – Germany

(1 exaflop)  EuroHPC Joint Undertaking



No6: HPC6 – Italy

(478 petaflops)



No8: Alps – Switzerland

(435 petaflops)



No9: LUMI – Finland  EuroHPC Joint Undertaking

(380 petaflops)

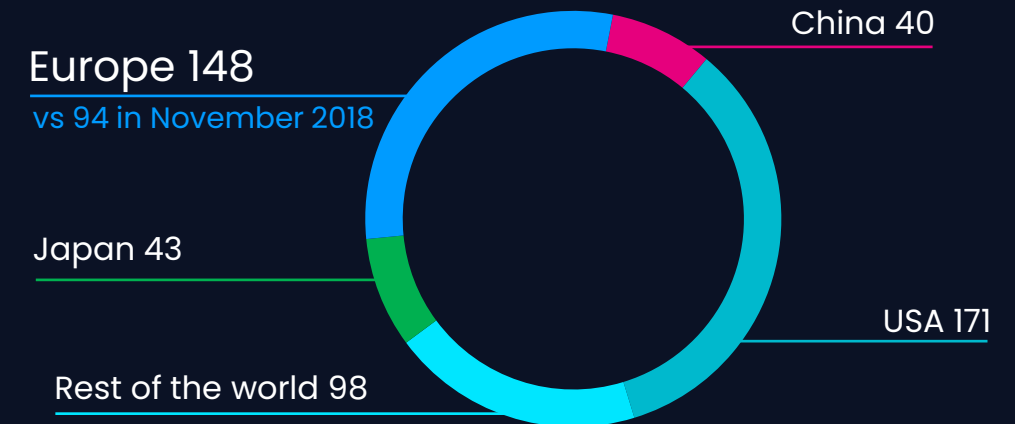


No10: LEONARDO – Italy  EuroHPC Joint Undertaking

(241 petaflops)

A rising demand for supercomputers in Europe

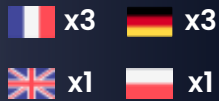
Since the launch of EuroHPC in 2018
+ **54** European supercomputers in the TOP500⁽¹⁾



FOCUS: Europe supercomputers, significantly greener than US⁽¹⁾

TOP10 – Green500
Supercomputers

Europe
8



#1

KAIROS
73.28 Gflops/W

CALMIP / University of Toulouse
CNRS
France



3,046 TFlop/s
46.18 kW

#2

ROMEO-2025
70.91 Gflops/W

ROMEO HPC Center
Champagne-Ardenne
France



9,863 TFlops
160.16 kW

#3

Levante (GPU extension)
69.43 Gflops/W

DKRZ - Deutsches
Klimarechenzentrum
Germany



6,747 TFlops
109.78 kW

JUPITER booster

The most energy-efficient exascale machine

63.32
Gflops/W



El Capitan
60.94 Gflops/W



Frontier
54.98 Gflops/W



Aurora
26.15 Gflops/W





Our go-to-market strategy



SiPearl's winning strategy



Perf. / watt



Perf. / \$

WHILST ENSURING...



Sovereignty

To strengthen Europe's technological leadership and independence



High Performance

To surpass the performance of 10,000,000 desktop computers



Backdoor-free & kill switch free security

Fully auditable to protect data with secure end-to-end network transmission.



Energy-efficiency

Significant energy savings with Arm-based architecture



Flexibility

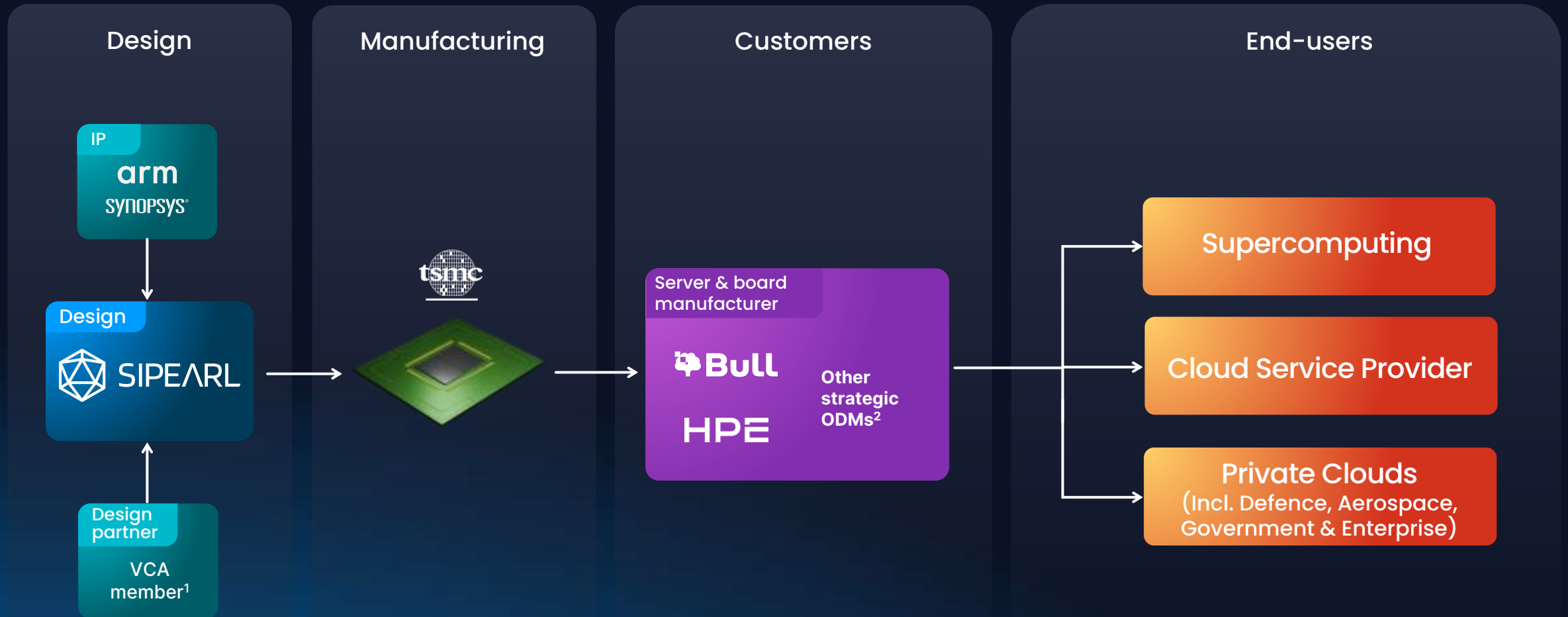
Designed to work with any third-party accelerator (GPU, artificial intelligence, quantum)



Software ecosystem

Arm mature software ecosystem

SiPearl's go-to-market is a push-pull via server providers



A go-to-market focused on dual-use

Civilian use: SiPearl will equip...



EuroHPC
Joint Undertaking

European projects

**Rhea1
for JUPITER,
1st major award**

*Award: Oct. 2022
Installation: 2027*



**Rhea2
for Alice Recoque,
2nd major award**

*Award: Nov. 2025
Installation: 2027*



Sovereign Cloud



Sovereign Centres of Excellence



Highly complex engineering



Materials modeling & simulations



Using AI to process gigantic
volumes of data
(dark matter for instance)



Plasma simulations

A go-to-market focused on dual-use

Defence-use: Ideal customers



SiPearl is everywhere sovereign advanced compute needs to be.



About... SiPearl

SiPearl is the European fabless designer of secure high-performance energy-efficient CPUs built for sovereign HPC, AI and data centre. These CPUs will help address strategic challenges in the fields of security, defence, medical research, energy, climate and engineering with a reduced environmental footprint.

Featuring 80 Arm Neoverse V1 cores with 61 billion transistors, SiPearl's first-generation CPU, Rhea1, will be released end of 2026. SiPearl's CPUs will equip the two first European exascale supercomputers: Rhea1 will be integrated into the JUPITER machine based in Germany and Rhea2 will be part of Alice Recoque in France.

Supported by the European Union and France, SiPearl employs 200 people in France, Spain, and Italy. Following a €130 million Series A, the company has launched its Series B round.



Funded by
the European Union