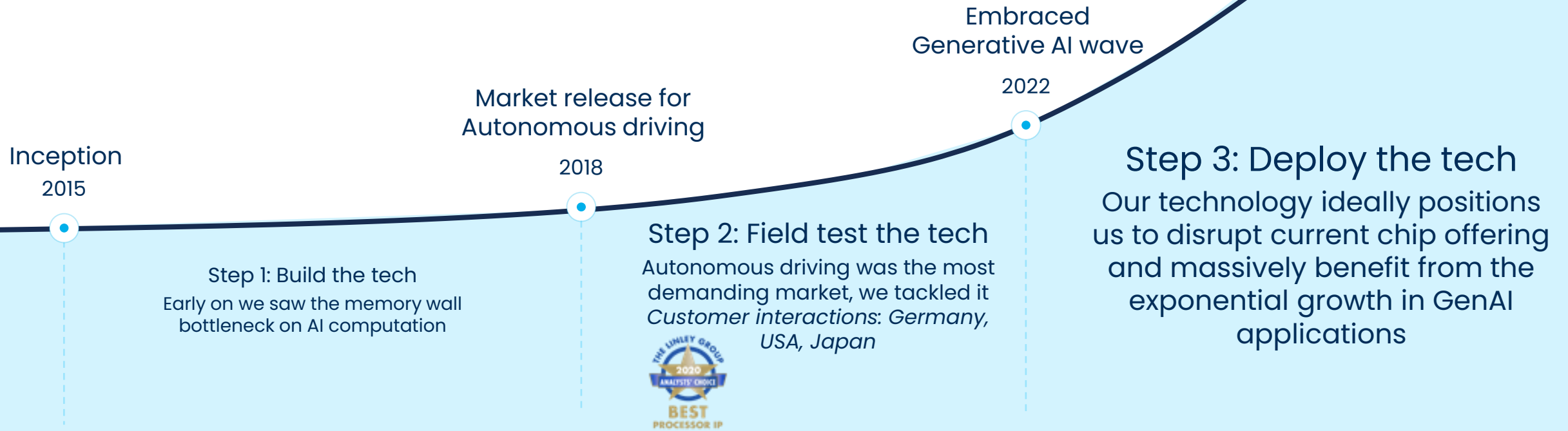


Software friendly solution for new Levels of Supercomputing

VSORA Software Development Flow

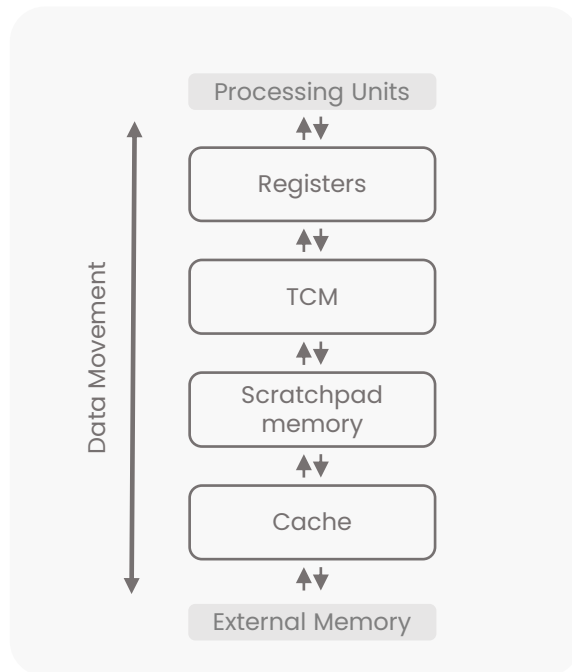


We have **built a technological edge early on** that positions us to disrupt the AI computation environment.



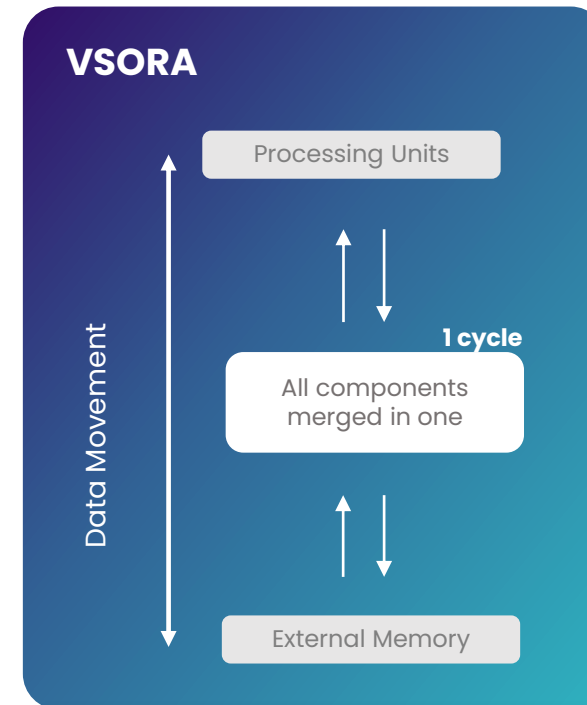
New architecture to Break the **Memory Wall!**

Scalar native architecture



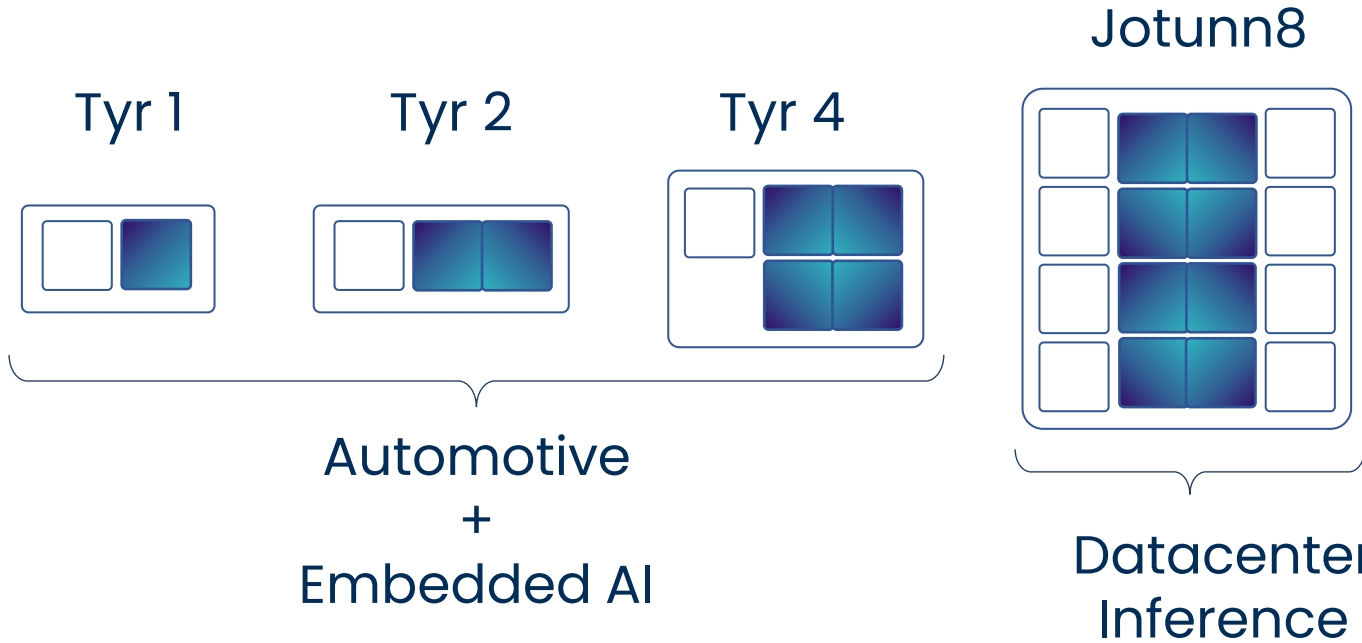
GPT-4 processing efficiency
3% for current solutions

Vectors/Matrices native architecture

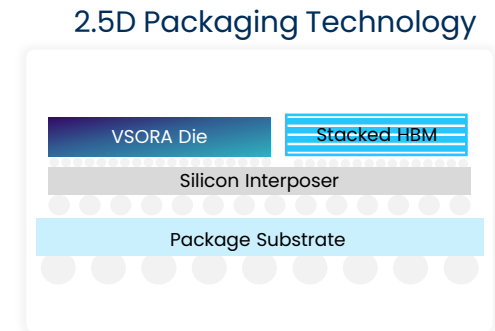



GPT-4 processing efficiency,
50% efficiency

Product Lines **Embedded AI + Datacenter**



	Fp32 & Int32	25
Processing power	Fp16 & Int16 / FP16 TensorCore	50 / 1,600*
	Fp8 & Int8 / FP8 TensorCore	100 / 6,400*
Memory	(GB)	192
Peak power	(w)	180



 VSORA chip
 HBM (High Bandwidth Memory)

- Fully programmable companion chip
- DSP & AI

Quick & Simple SW development flow

High-level coding

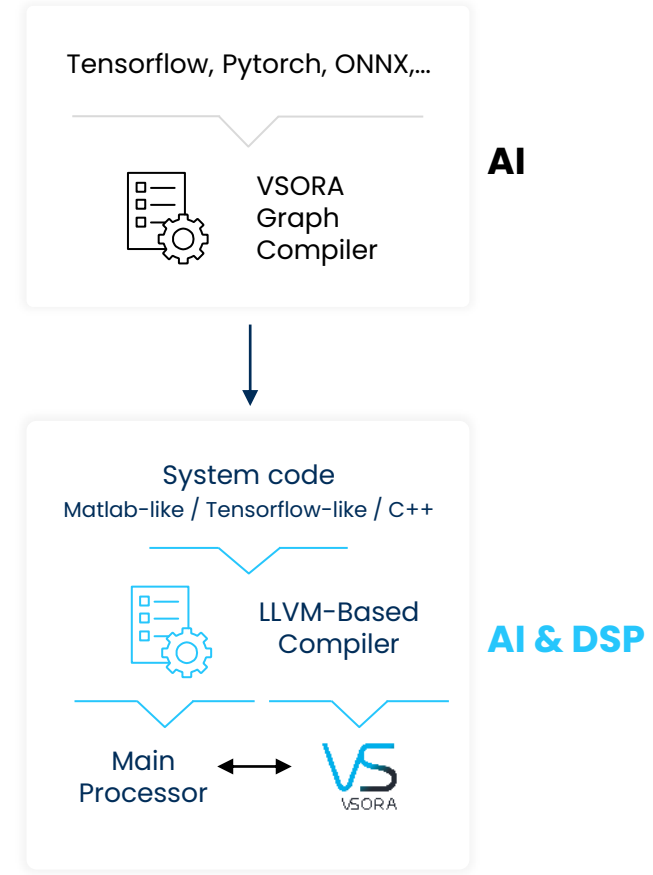
Matlab-like / Tensorflow-like / C++
No need for low-level programming!

Common code for algorithms & main processor

Jotunn functional co-processor to main processor
Physical code execution location transparent to user
Code separated by compiler at compilation

```

{
  net inPort, outPort;
  Int mu = 0;
  cout << "Processing the case mu = " << mu << "\n";
  if (mu==0) {
    cMatrix3d A(4,4,48);
    cMatrix3d B(4,4,48);
    inPort >> A;
    inPort >> B;
    cMatrix3d C = A*B;
    outPort << C;
  }
  else {
    cMatrix3d A(32,32,24);
    cMatrix3d B(32,32,24);
    cMatrix3d C = A*B;
    cMatrix D = sum(C);
  }
  double r = 0;
  for (int i=0; i<10; ++i)
    r+=i;
};
    
```



Multiple simulation platforms

Better interaction between teams

Lower risk

Faster TTM

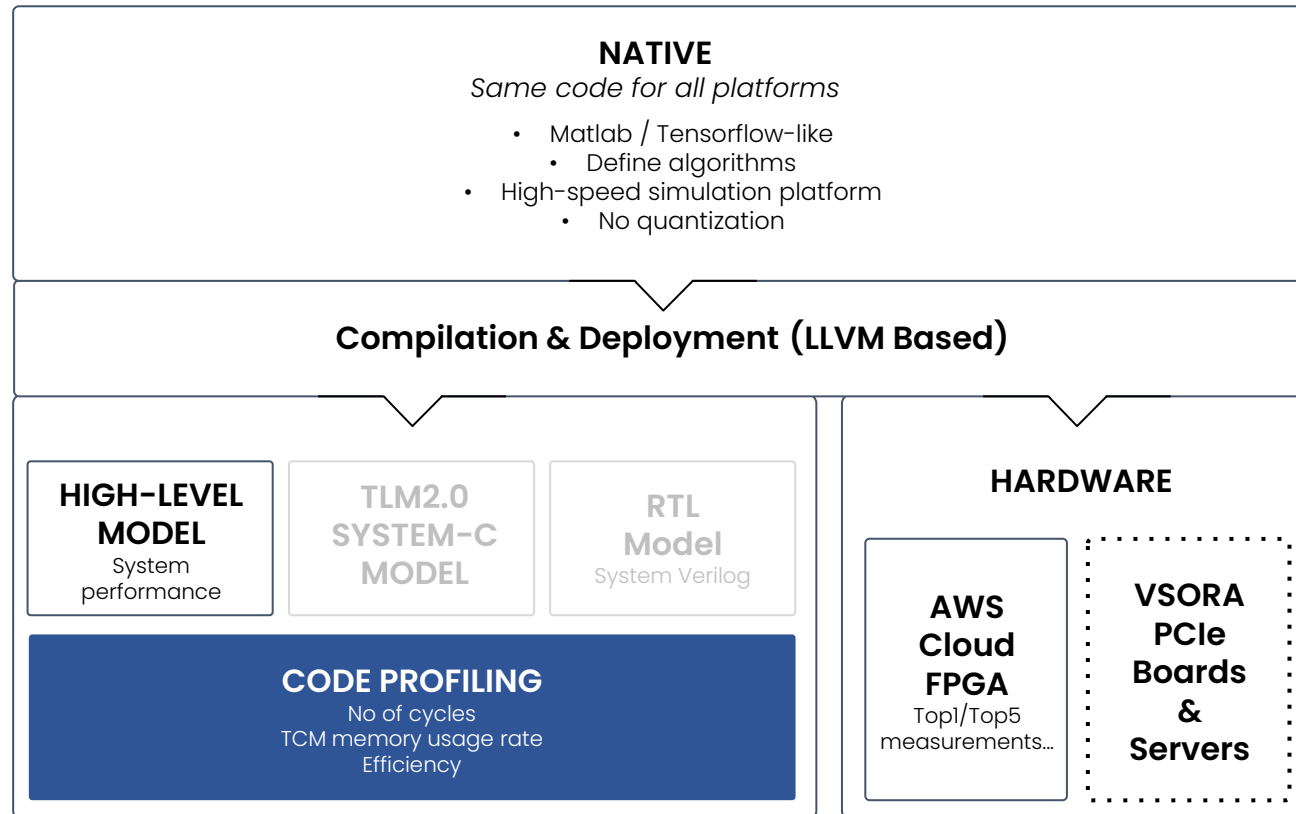
Higher flexibility

System deployment and Simulation Platforms

Core / Chip / Software / System

Same development flow regardless of target hardware

System/Algorithm engineers have full control



TARGET HARDWARE
System Dimensioning

- Number of cores
- Input / Output DMA mapping
- Software deployment to the cores
- Quantization (performance check)

Thank you

