

A series of white, 3D-style geometric lines that form a series of nested, overlapping right-angled triangles or chevrons. These lines originate from the bottom-left corner and extend towards the top-right, creating a sense of depth and movement. The lines are set against a dark blue background that features a subtle gradient, becoming slightly lighter towards the top-right.

# 2024 SK hynix AI INFRA



# HBM Market Forecast amidst the Worldwide AI Explosion

AI memory line-up for AGI

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HBM, Essential memory for AI server

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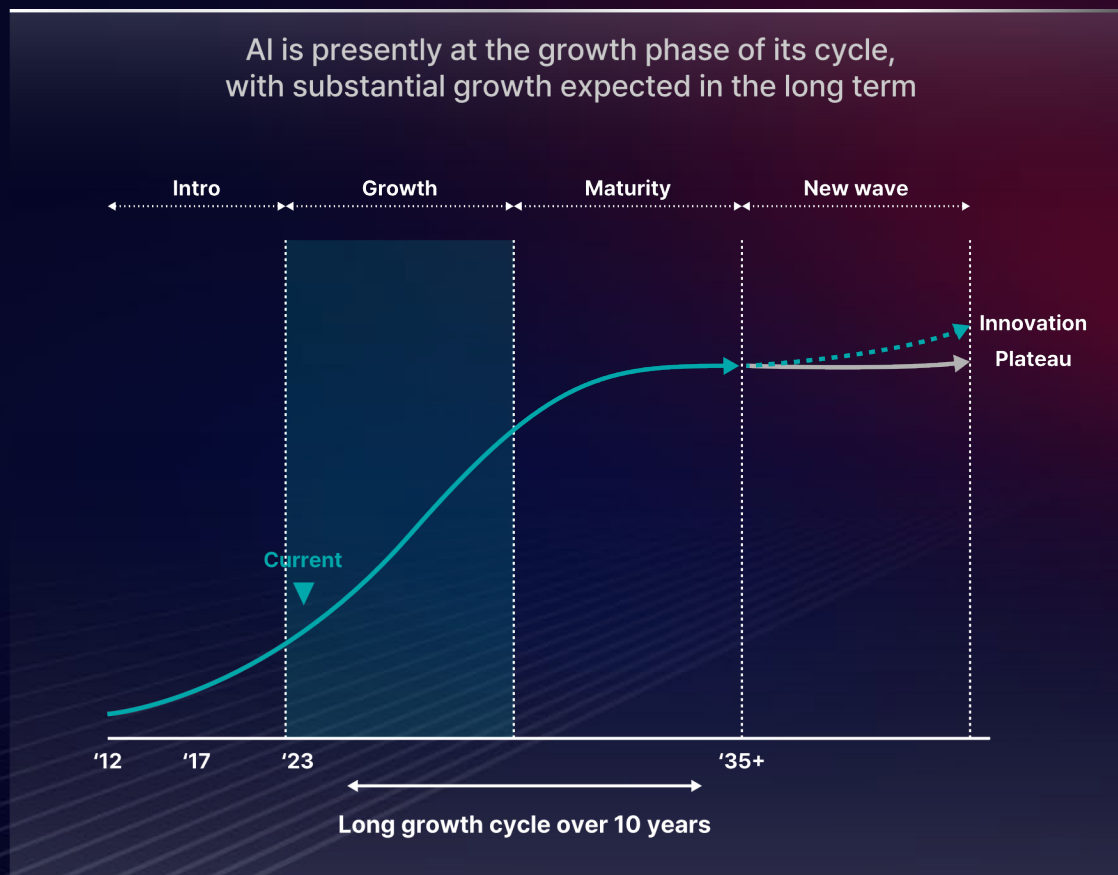
An abstract graphic on the left side of the slide consists of multiple stacked, slightly offset rectangular layers. These layers create a sense of depth and perspective, resembling a staircase or a series of planes receding into the distance. The layers are rendered in a dark blue color with lighter blue highlights on their edges, giving them a three-dimensional appearance.

## AI memory line-up for AGI

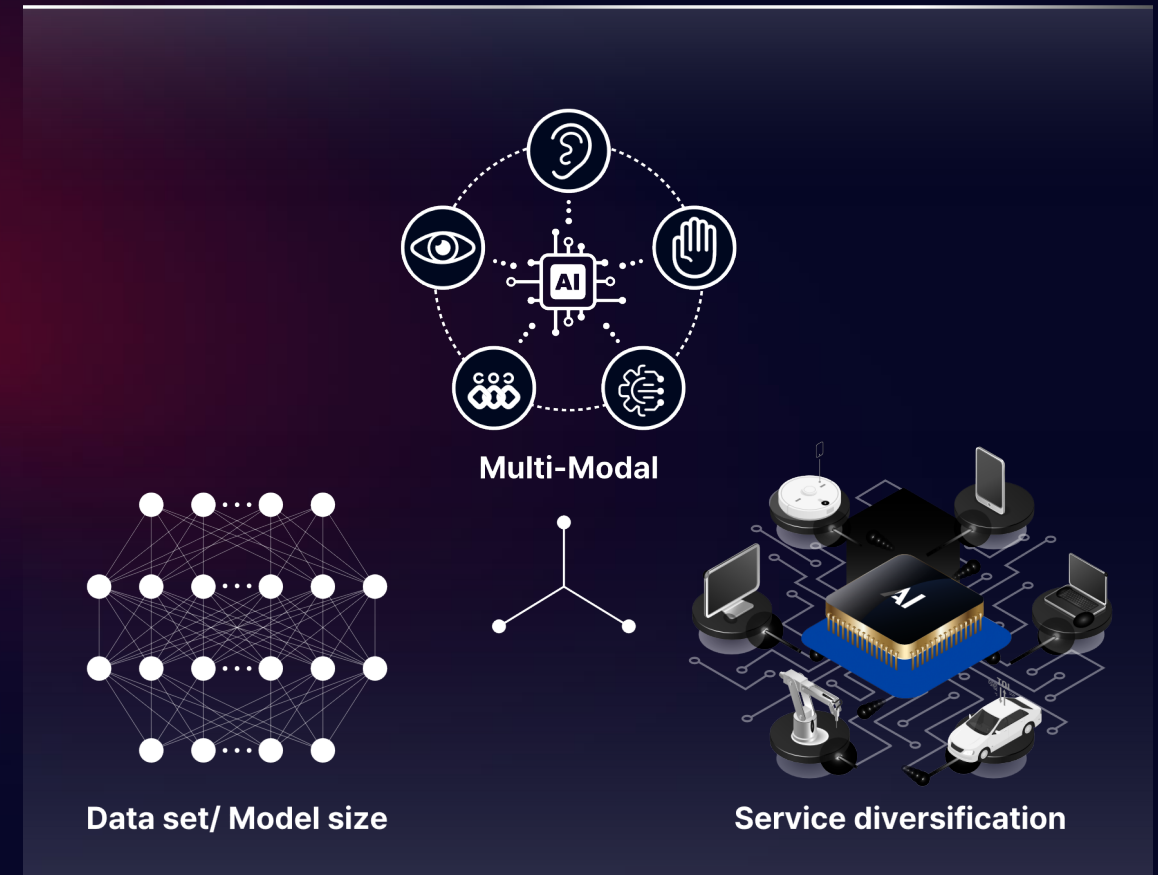
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# AI is only at the Beginning of the Growth stage

## AI Growth Cycle



## Market's Potential

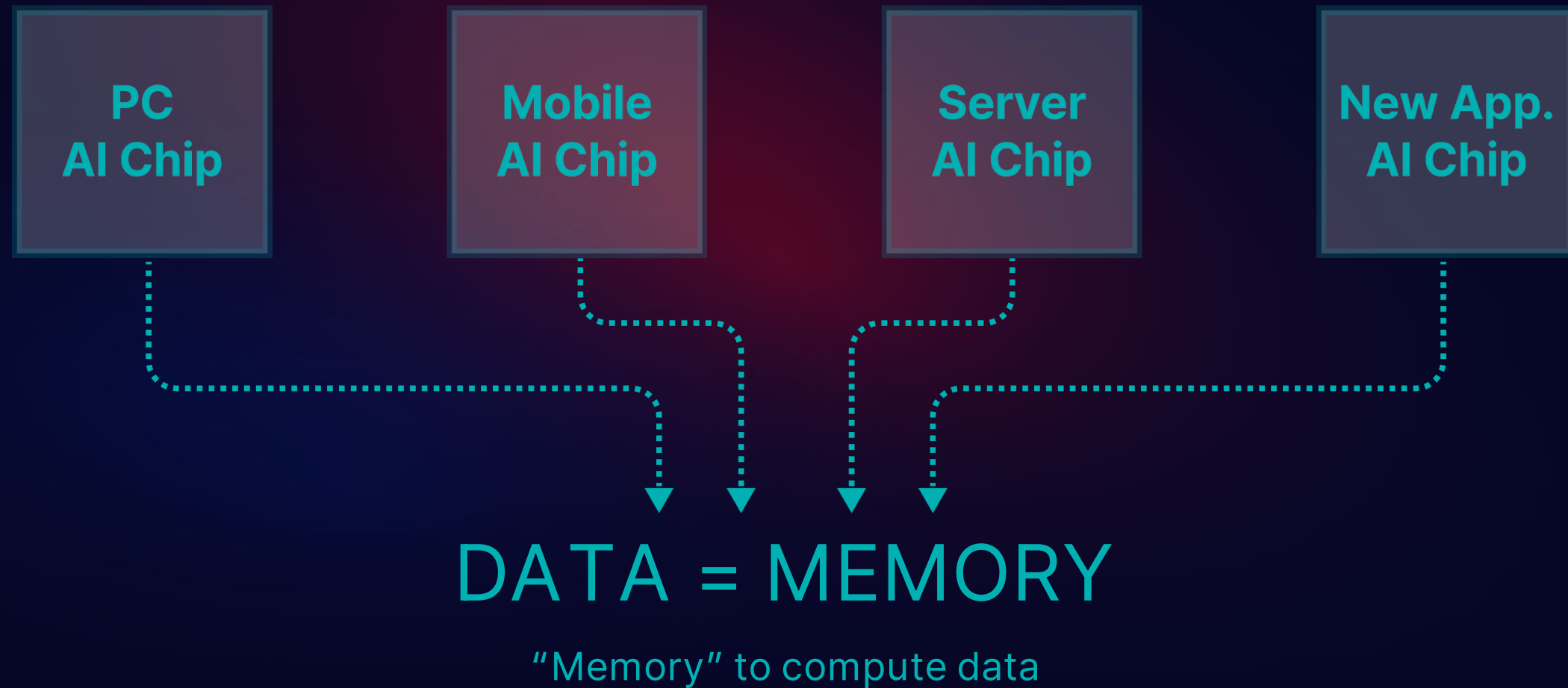




# To achieve AGI, Expanding the applications is essential



Expanding memory demand is inevitable for each applications.



# Ultimately, AGI will lead to a new era of “Memory Centric”

Memory centric. Everywhere with SK hynix Technology

## AGI

World's Best  
& Largest Share



**HBM3E**

## AI on Datacenter

World's Highest  
Capacity Server Memory



High Capacity  
**TSV DIMM**

## AI on Mobile

World's Fastest  
Mobile Memory



**LPDDR5T**  
(Turbo)

## AI on PC

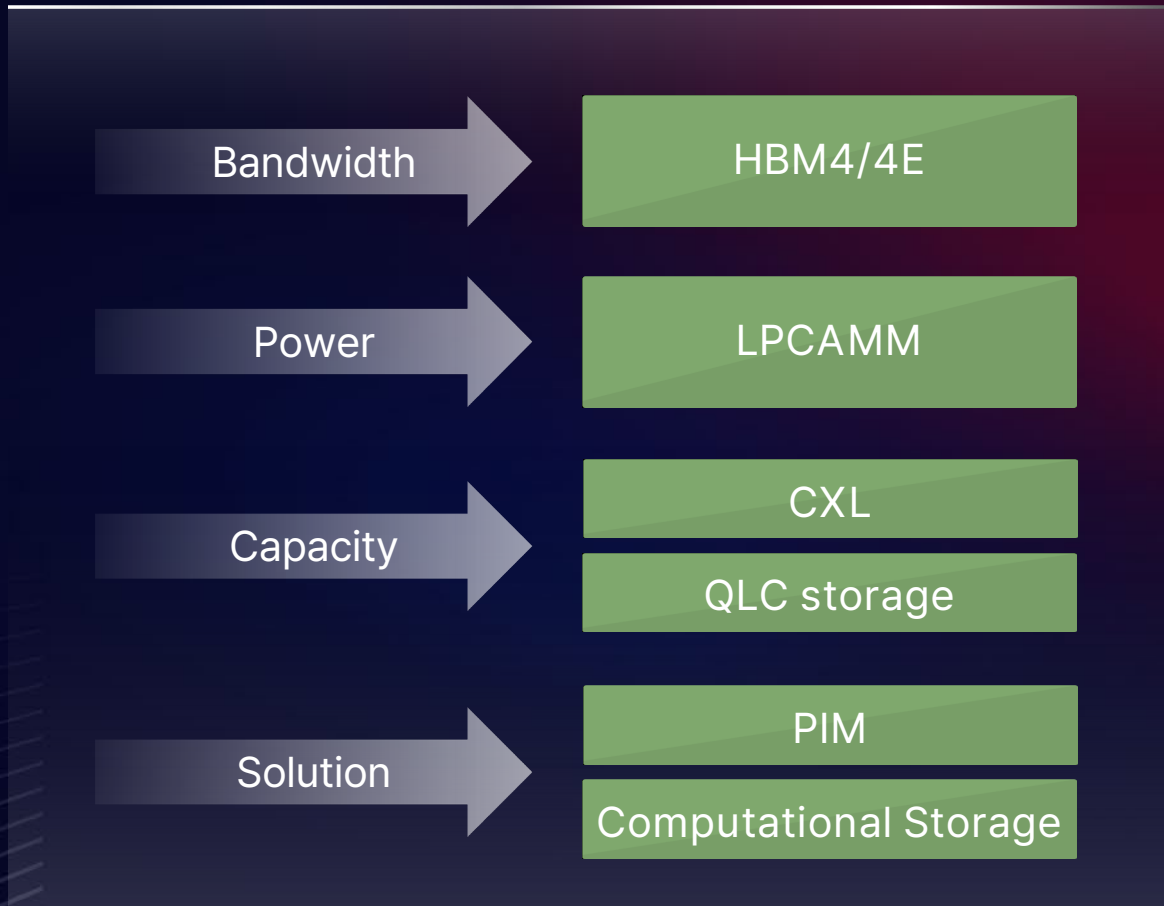
World's Best  
Performance Memory



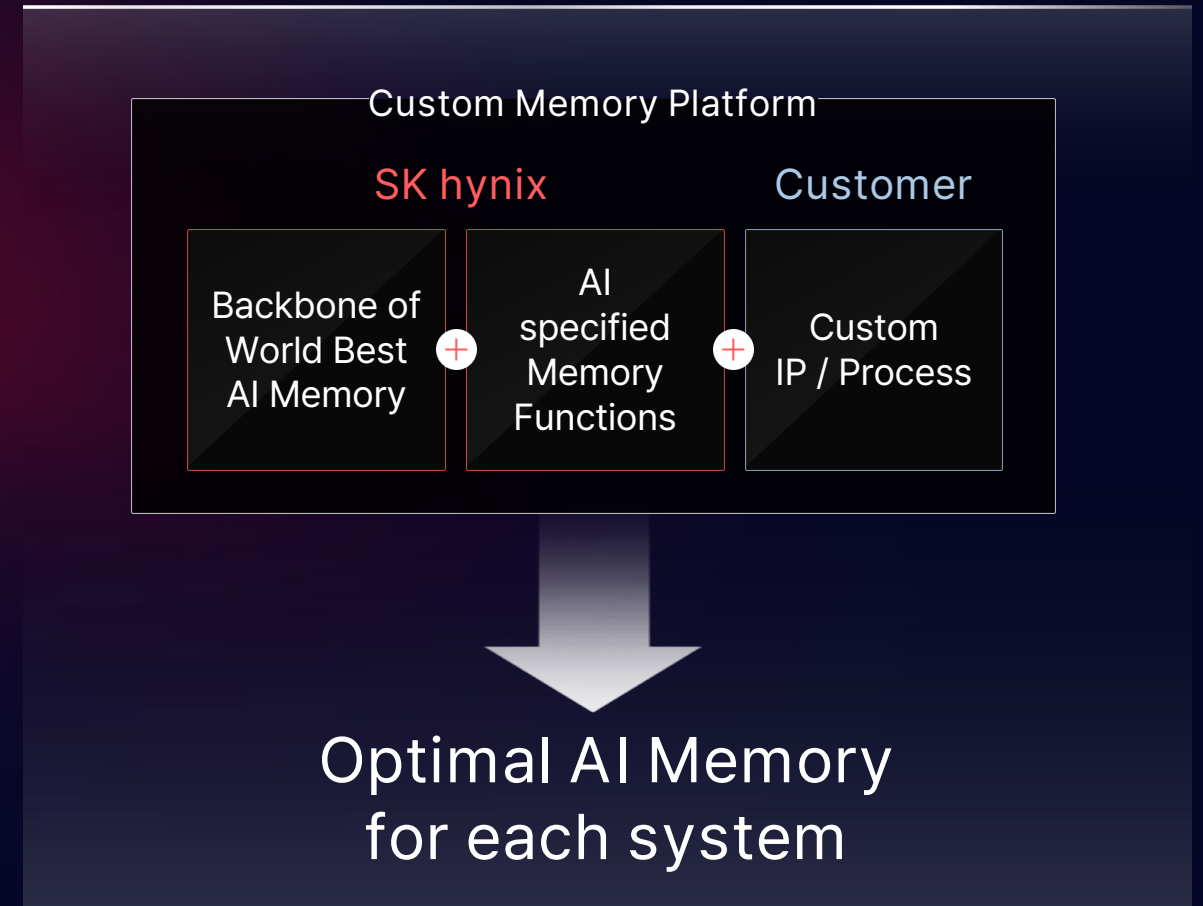
High Perf.  
**DIMM**

# SK hynix, Tech Leadership for AI Memory Solution

## AI memory Roadmap



## Custom memory platform





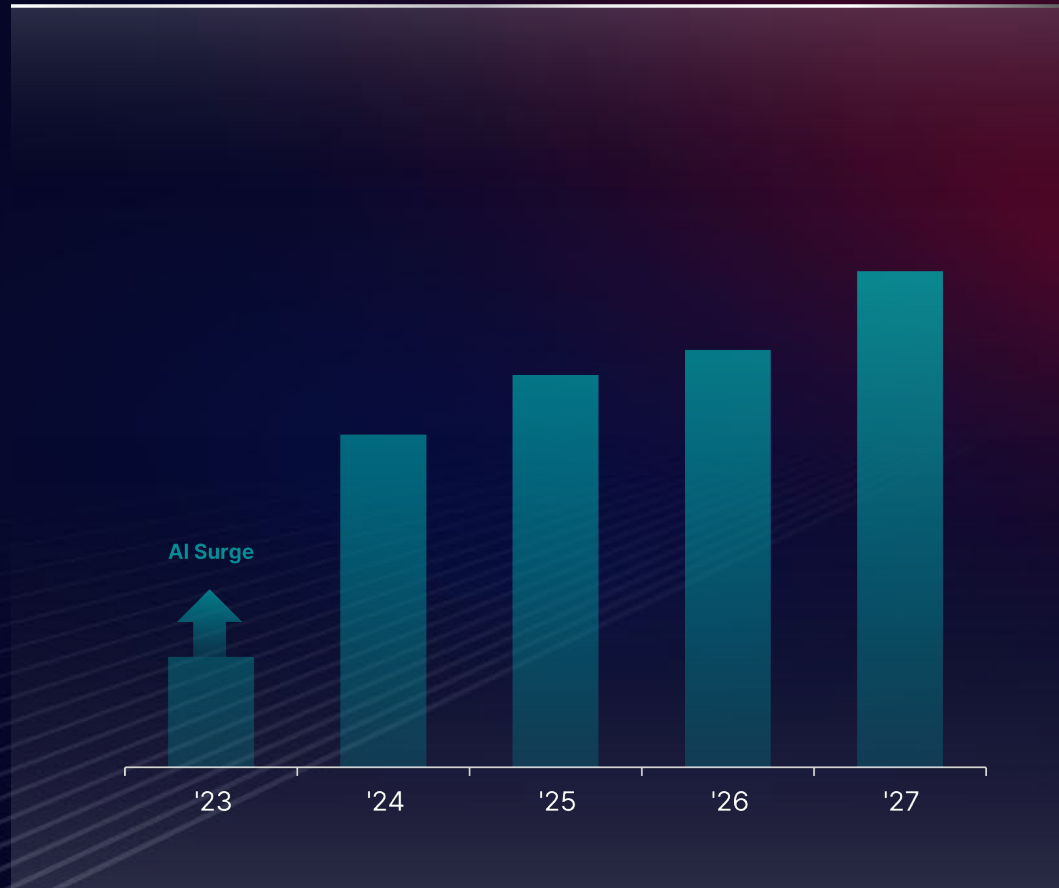


# HBM, Essential memory for AI server

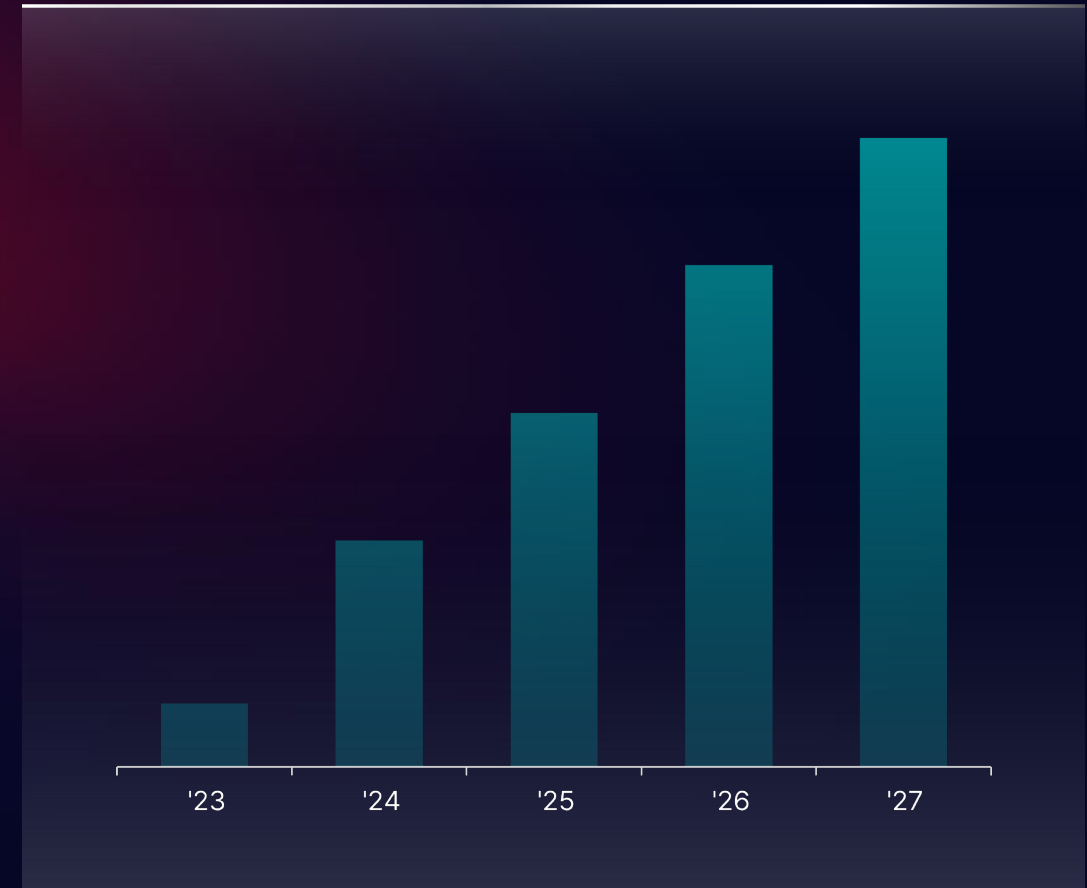
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# HBM demand is expected to keep increasing in the long-term

AI Chip Forecast





HBM Market forecast



# AI Server memory to grow both quantitatively and qualitatively

## AI server capacity

Server type	Current	In 5 years
General Purpose	0.5TB (DDR5 only)	2TB+
 Training	2.5TB (DDR5 2TB / HBM 0.5TB)	10TB+
 Inference	1TB (DDR5 0.7TB, HBM 0.3TB)	4TB+

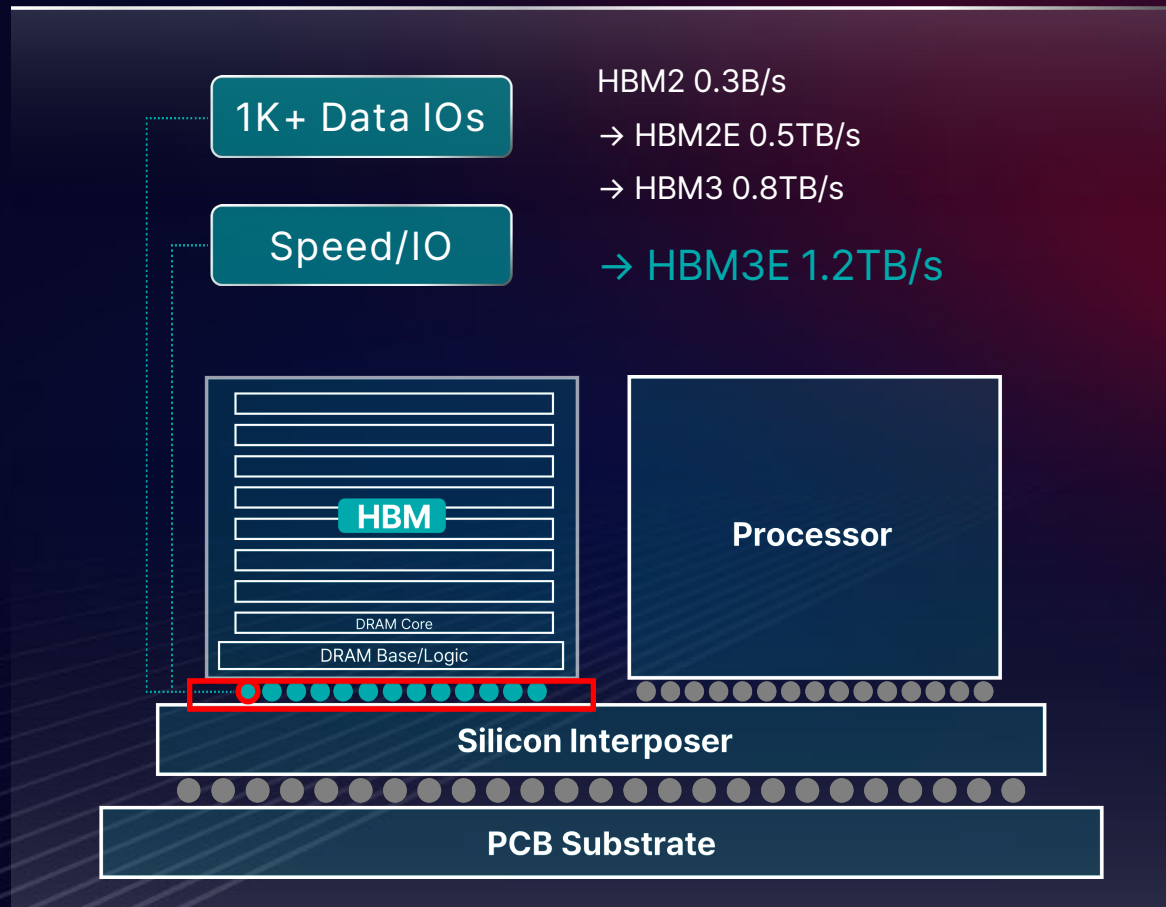
*Annotations: X5 (General Purpose to Training), X2 (Training to Inference)*

## Requirement for memory

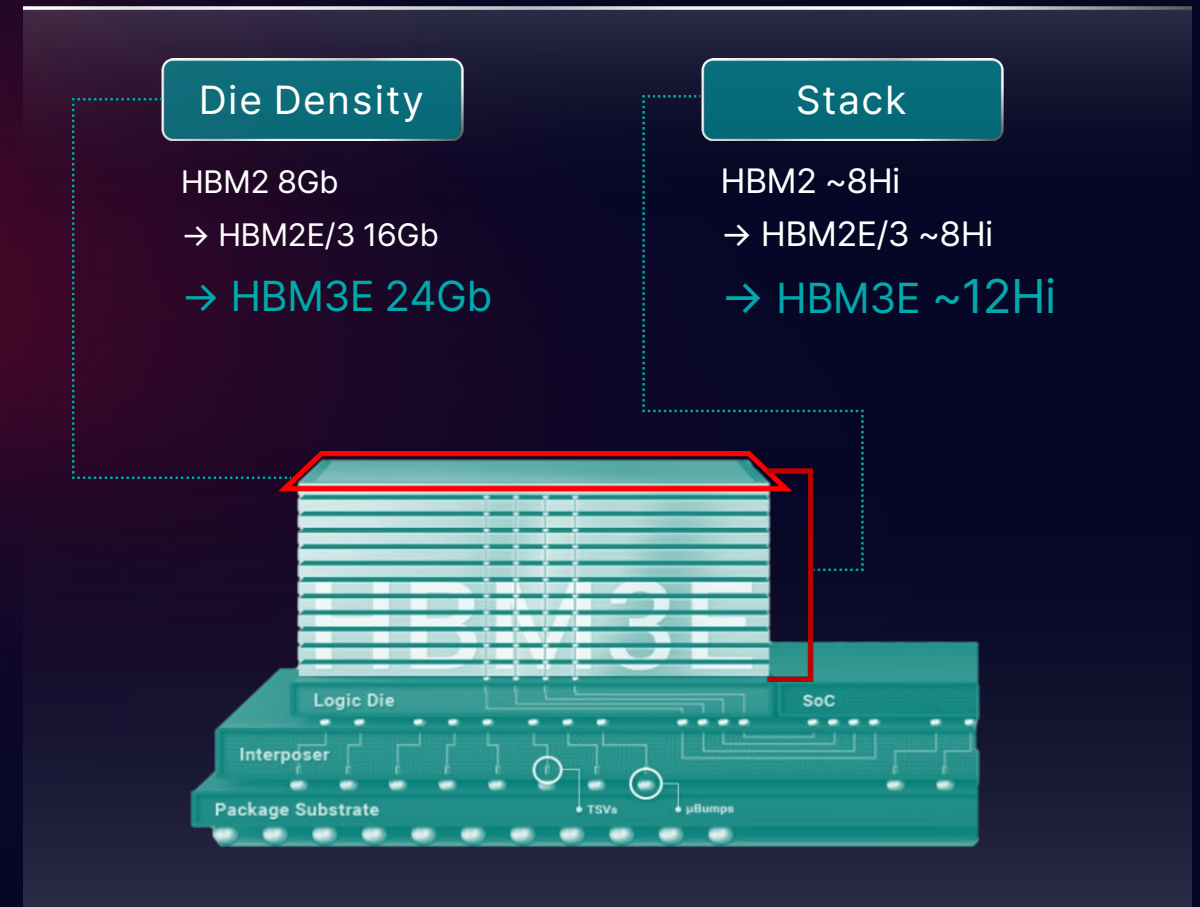
- 01 High Bandwidth  
to support multi-processing of accelerators
- 02 High Density  
for the huge size of data and parameters
- 03 Power efficiency  
for power management

# HBM, best solution for AI Server

## Powerful Perf.



## High Density





# Expanding HBM adoption in SiP system

## HBM Adoption in SiP

The amount of HBM for AI system depends on its application, training or Inference, etc.

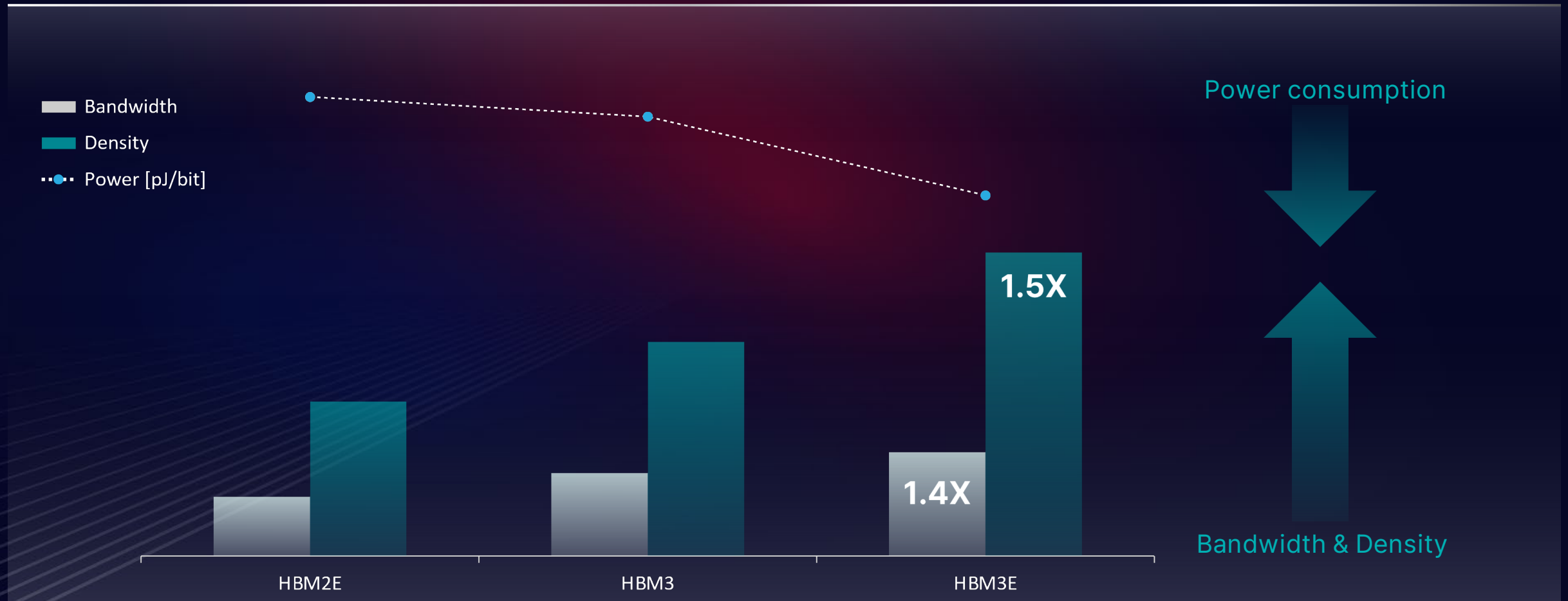


## The Number of HBM Cube per SiP

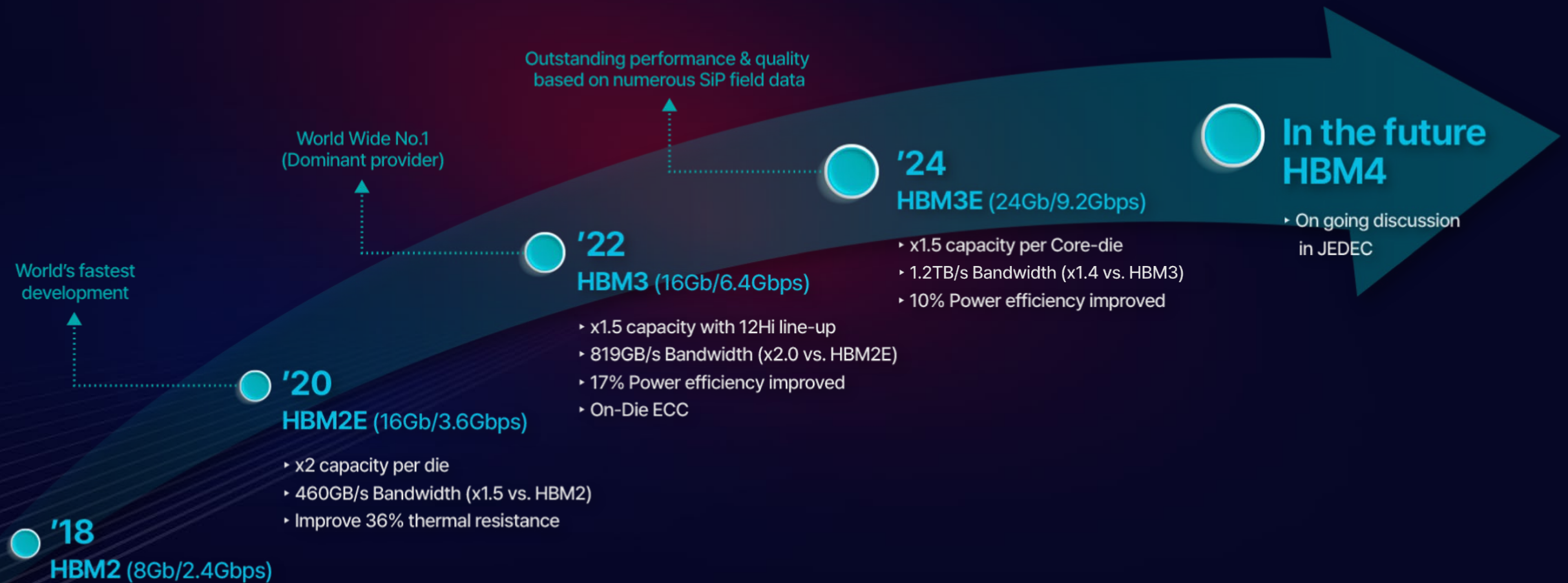
Server type	Current	Near term	Long term (TBD)
Traninig	4~5	8	12
Inference	2	4~5	8

# SK hynix kept improving the power efficiency of HBM

SK hynix HBM power efficiency will be improved gradually while density and power were increased around 50%

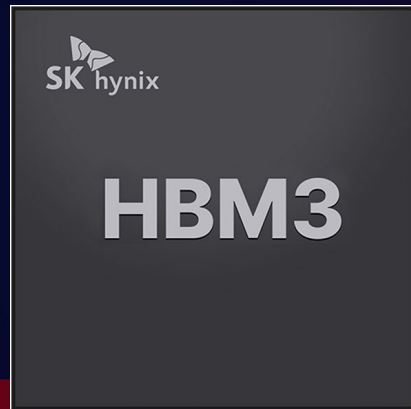


# SK hynix, the leading company of HBM market



# SK hynix, HBM Market Leader

SK hynix,  
Unrivaled supplier



2023



2024

Memory Speed 9.2Gbps+

Supporting up to 12Hi stacks of 24Gb

High Quality based on Advanced MR-MUF

Collaboration with AI leading companies





# THANK YOU

THE END