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# SAMSUNG MEMORY

Investor Presentation

2025



# CONTENTS

- BUSINESS UPDATE
- MEMORY MARKET OPPORTUNITIES
- SAMSUNG STRATEGY



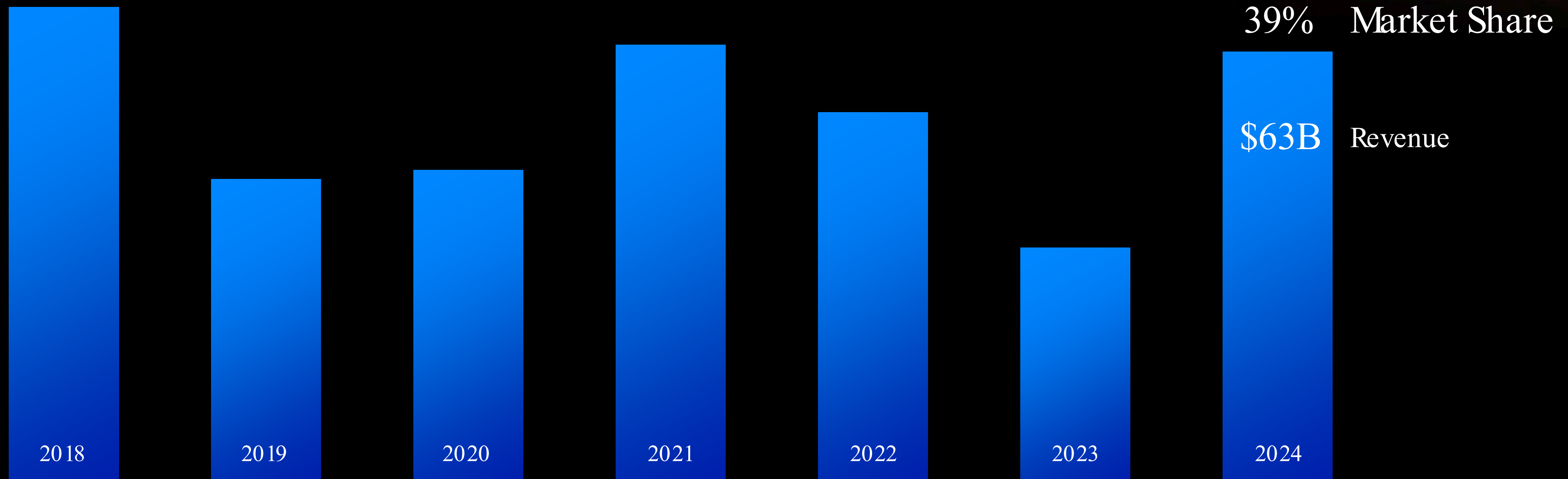
# SAMSUNG MEMORY BUSINESS REVIEW

#1 in Memory Worldwide Since 1993, Well Balanced DRAM/NAND Portfolio

2024 Market Share

DRAM **41%**

NAND **36%**





# MEMORY BIZ. PARADIGM SHIFT LED BY SAMSUNG

Samsung is Powering the Technologies that bring Innovation to Lifestyle

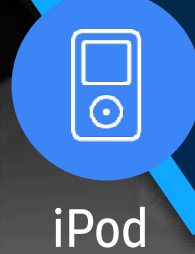
Big Fluctuations

1<sup>st</sup> Jump

2<sup>nd</sup> Jump

3<sup>rd</sup> Quantum Jump

Memory  
Revenue



iPod



iPhone



App Store



Galaxy S



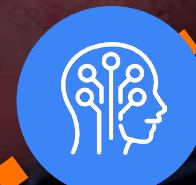
Android Market



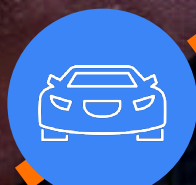
China S/Phone



Data Center



AI



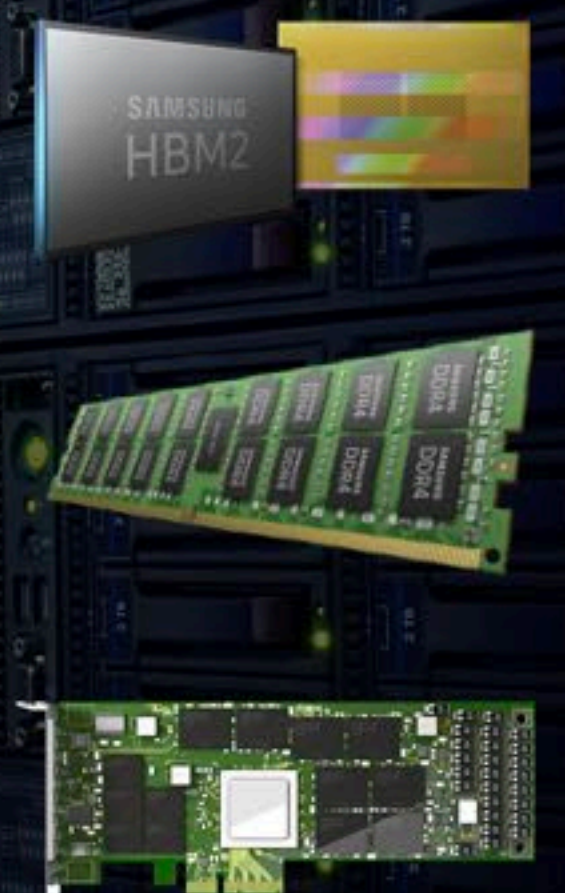
Autonomous

1990

2000

2010

2020





# Beyond The Boundary

HUMAN

SAMSUNG  
Memory

AI



# CONTENTS

BUSINESS UPDATE

- MEMORY MARKET OPPORTUNITIES

SAMSUNG STRATEGY



# SPREAD-OUT OF PUBLIC CLOUD

Explosive Growth of Data

1<sup>st</sup> WAVE



Cloud Service Providers

2016

2<sup>nd</sup> WAVE



.Com & Forbes Top100

3<sup>rd</sup> WAVE



Telcos

2020

## THE FLOOD OF DATA

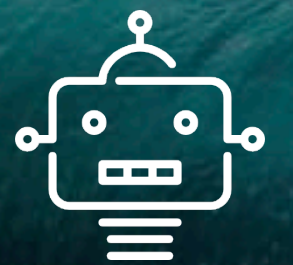
4<sup>TH</sup> WAVE



AI



Automotive



Robot

2025



# SMART CITY & AUTONOMOUS CAR FUELED BY 5G NETWORK

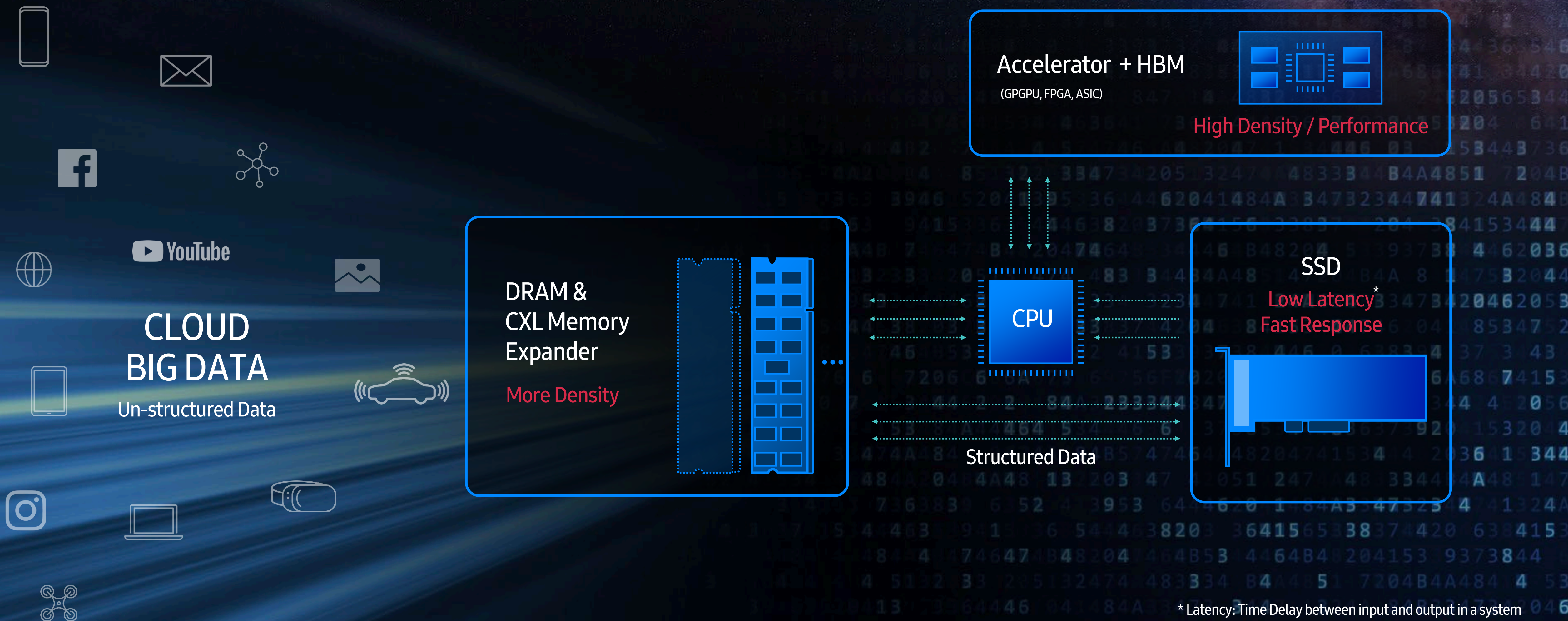
Huge Amounts of Data Generated by Hyper-connected Devices





# MARKET OPPORTUNITY IN BIG DATA ANALYTICS

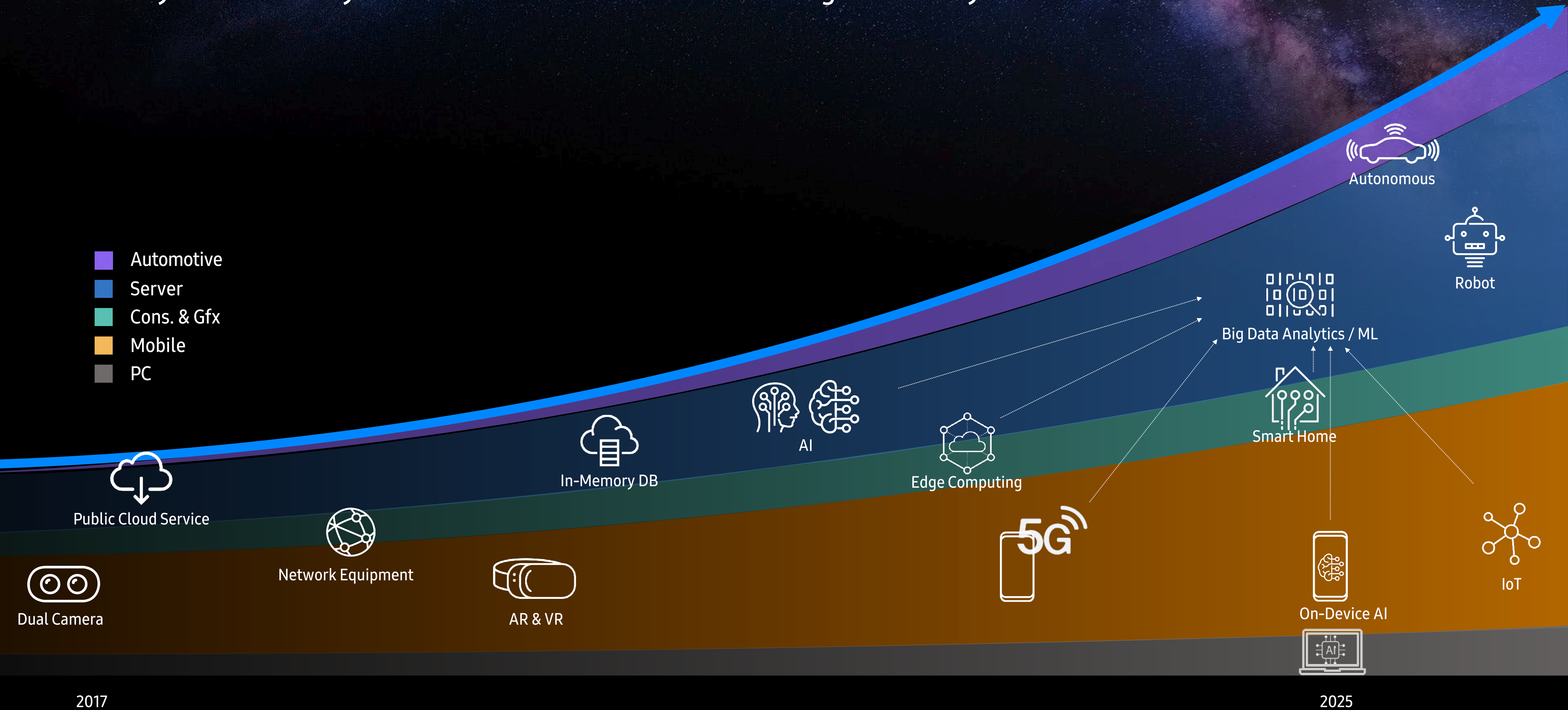
Demand Increase for High Density & Performance Memory to Enhance Computing Power





# CONTINUOUS GROWTH OF MEMORY DEMAND

Memory Growth led by Server & Mobile devices based on Big Data Ecosystem





# CONTENTS

BUSINESS UPDATE

MEMORY MARKET OPPORTUNITIES

- SAMSUNG STRATEGY



# SAMSUNG STRATEGY

Break-through  
Technology

—  
TECH LEADERSHIP

Enhanced  
Solutions

—  
S/W & CONTROLLERS

Advanced  
Manufacturing

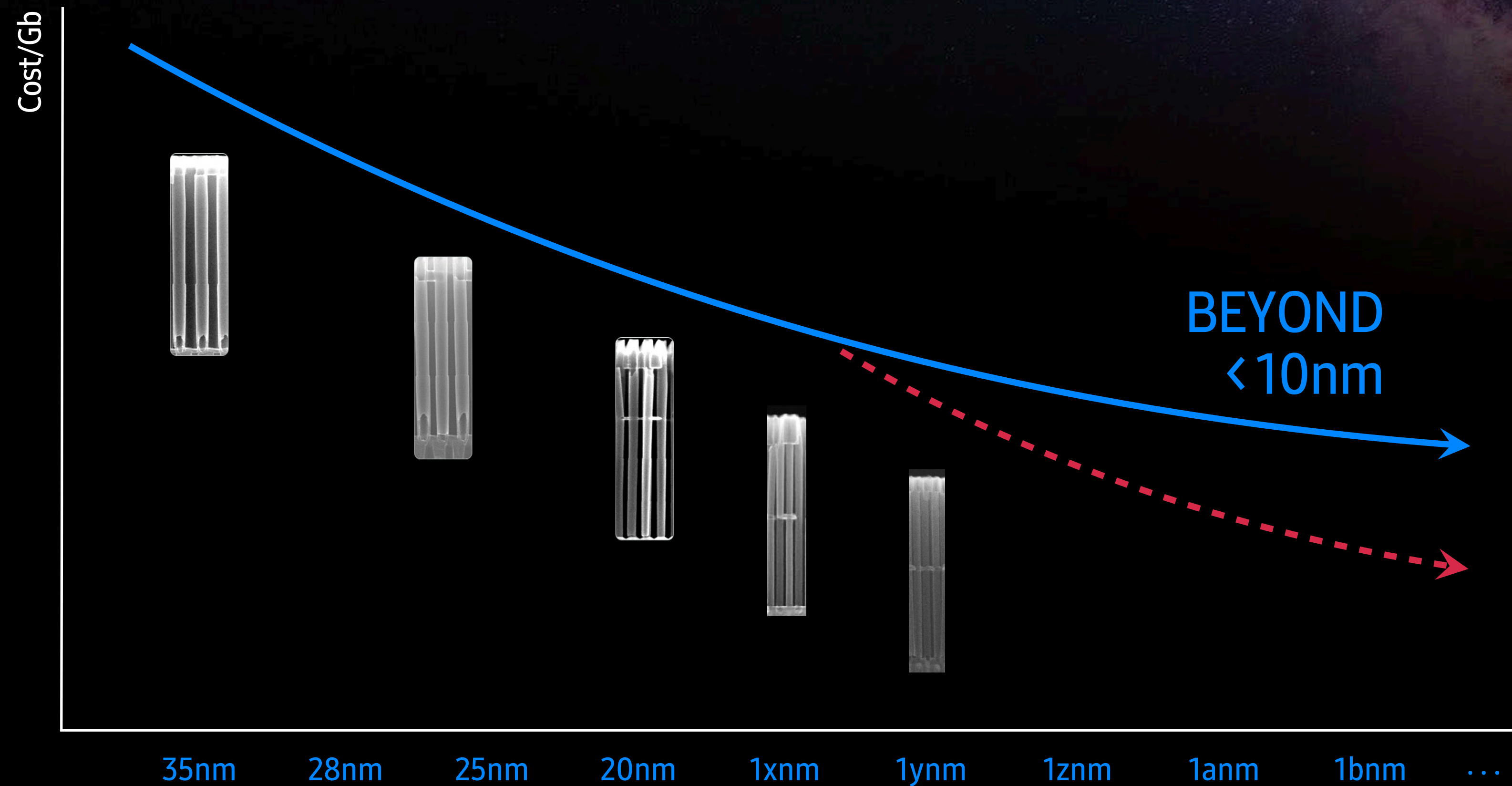
—  
EFFICIENCY & FLEXIBILITY



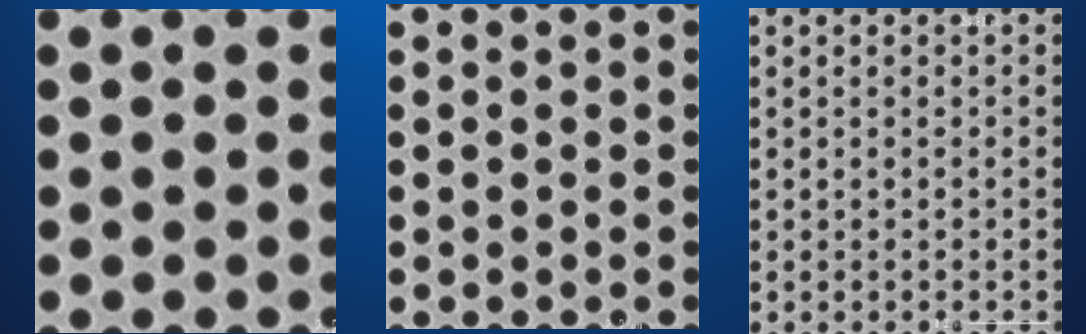
# CONTINUOUS TECHNOLOGY SCALING

Thru Technology Evolution

## DRAM



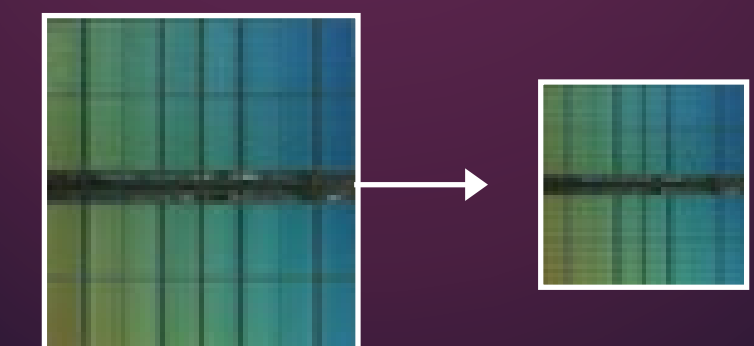
## FUTURE DRAM TECHNOLOGY



DPT      QPT      EUV

\*DPT : Double Patterning Technology  
\*QPT : Quadruple Patterning Technology  
\*EUV : Extreme Ultra Violet

## ADVANCED DESIGN TECH

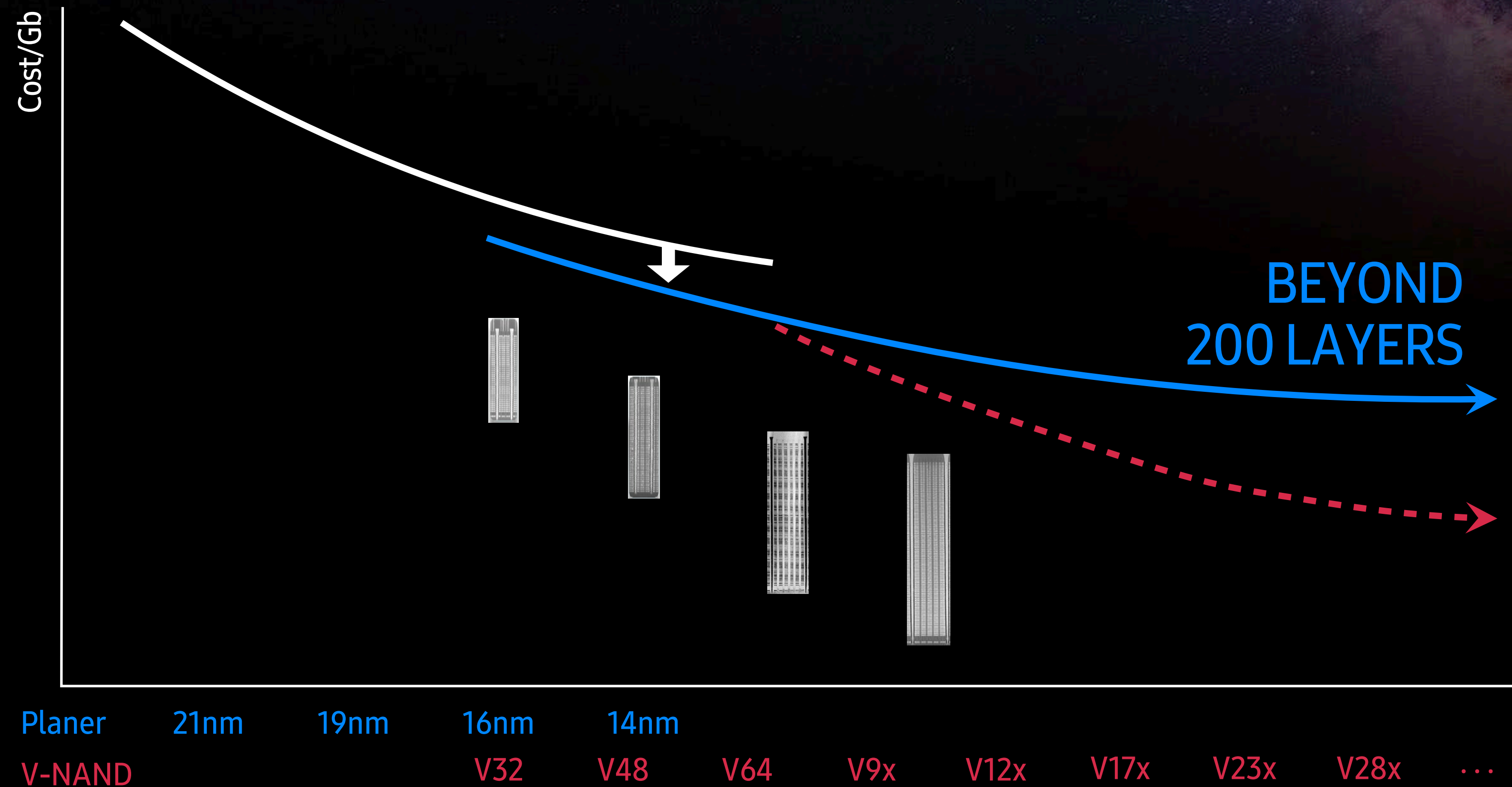




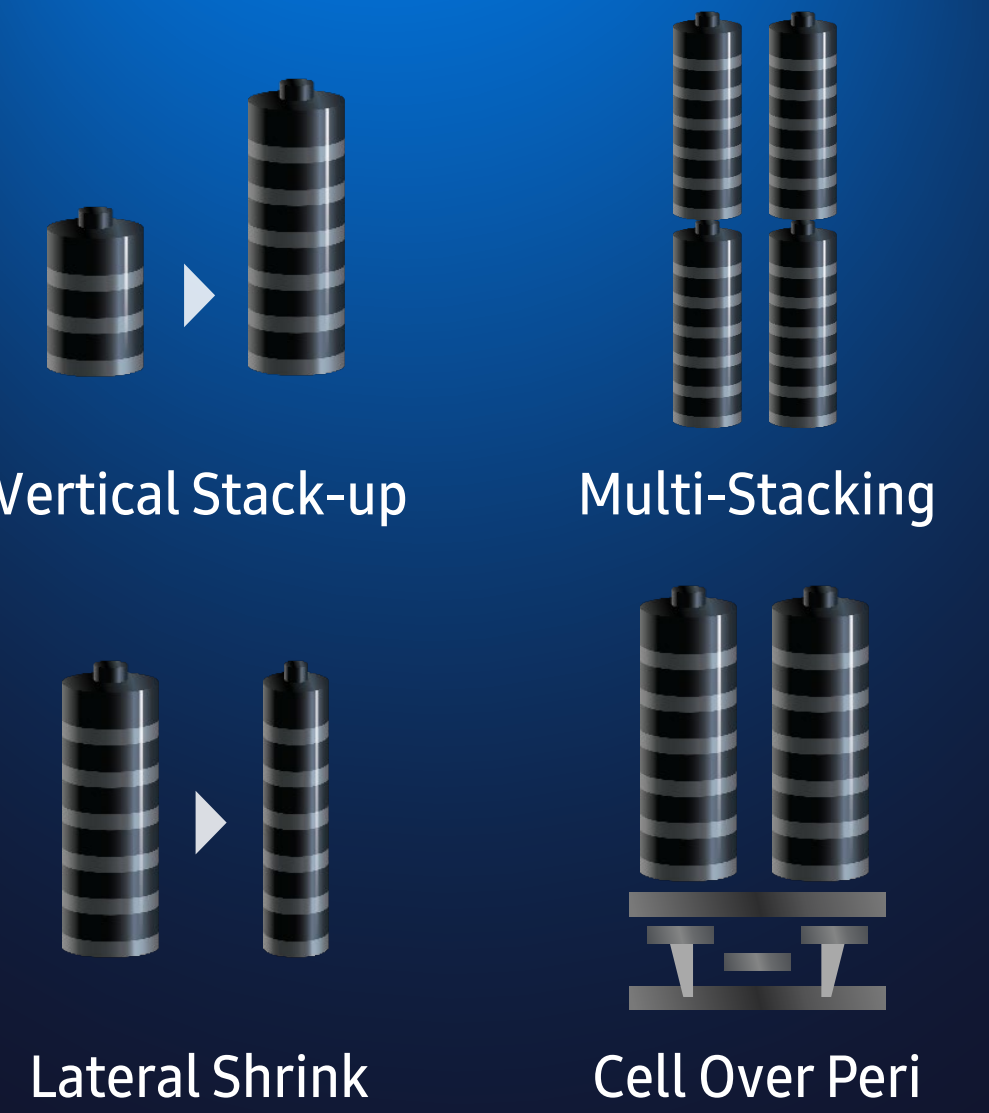
# PUSHING THE LIMITS OF V-NAND

Thru Innovative Layer Stacking Technology

## NAND



## FUTURE V-NAND TECHNOLOGY



## QLC



\* QLC: Quad-Level Cell

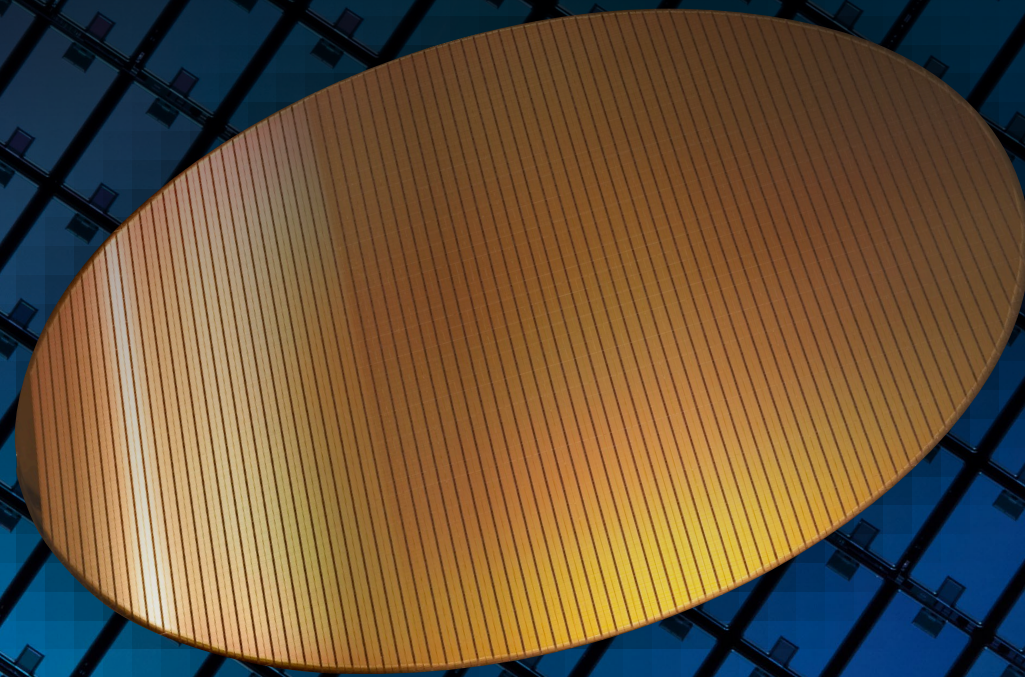


# UNIQUE CAPABILITIES FOR DIFFERENTIATED SOLUTIONS

Integrating Key Components to Deliver Value-added Solutions

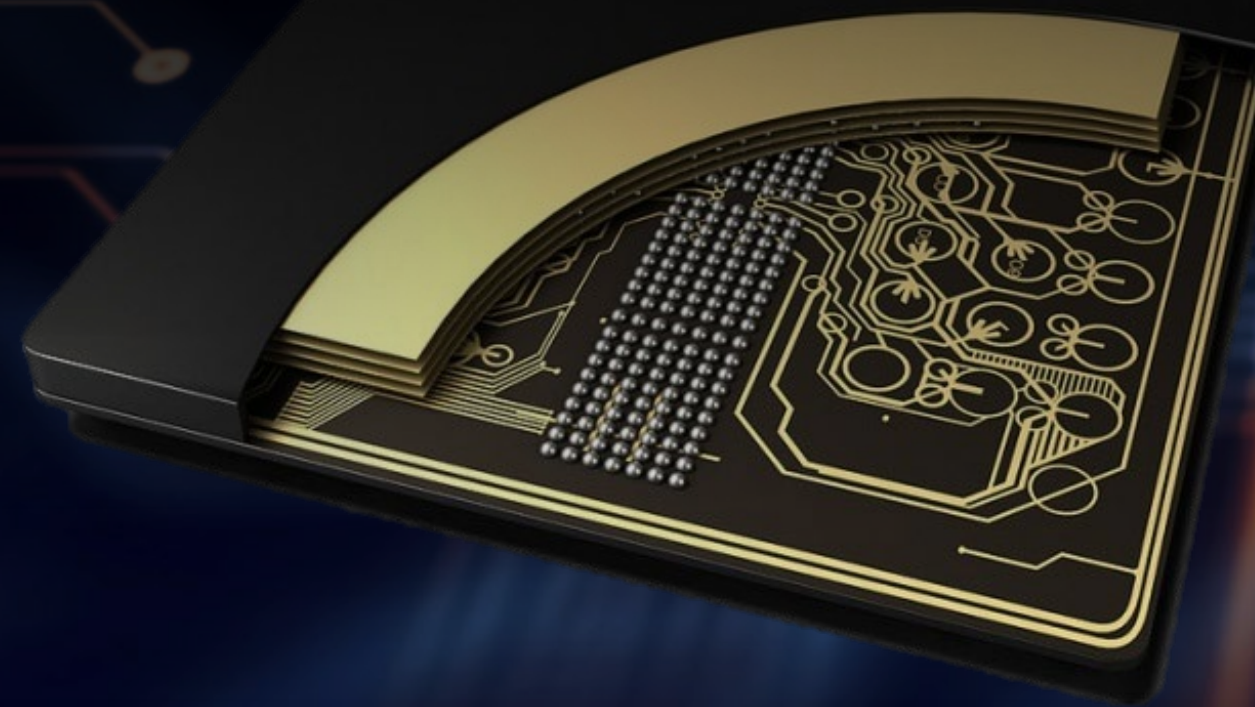
## ADVANCED PROCESS TECHNOLOGY

Wafer / Chip



## ADVANCED PACKAGING TECHNOLOGY

Stacking / TSV



## VERTICAL INTEGRATION

Software & Logic (Controller)



Smaller



Higher Density



Less Power Consumption



Faster



Thinner



Smaller



No Performance Loss



Customized



Expandable



Smarter



Secure

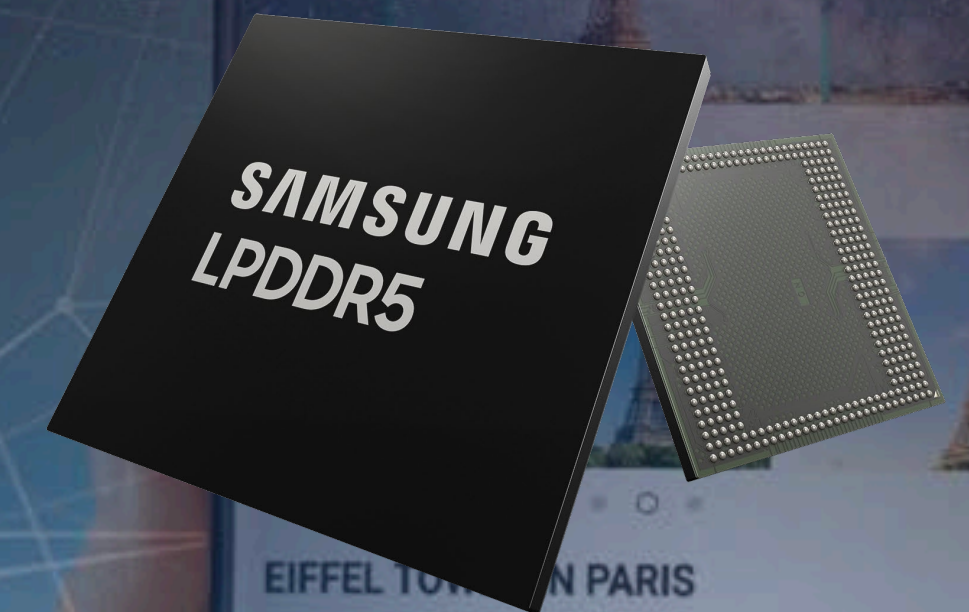
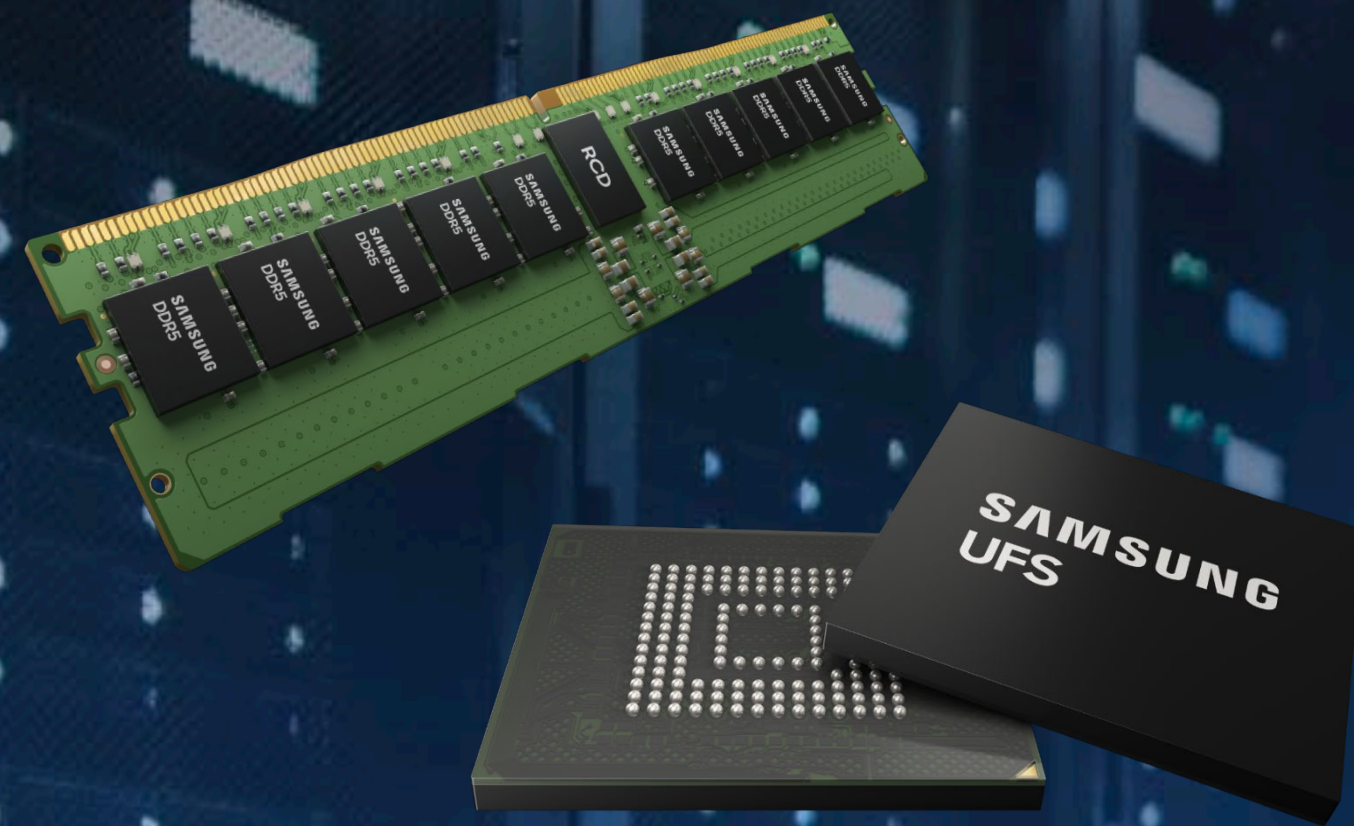


# SAMSUNG SOLUTIONS FOR THE 5G ERA

Enhanced Processing for Massive Data with Lower Latency & Less Power Consumption

FASTER DATA RATES WITH LOW POWER

# 5G



## RDIMM, UFS

Low Latency \*

High Capacity

Stable QoS

## LPDDR5/5X

Higher Speed

Lower Power Consumption

Smaller Package

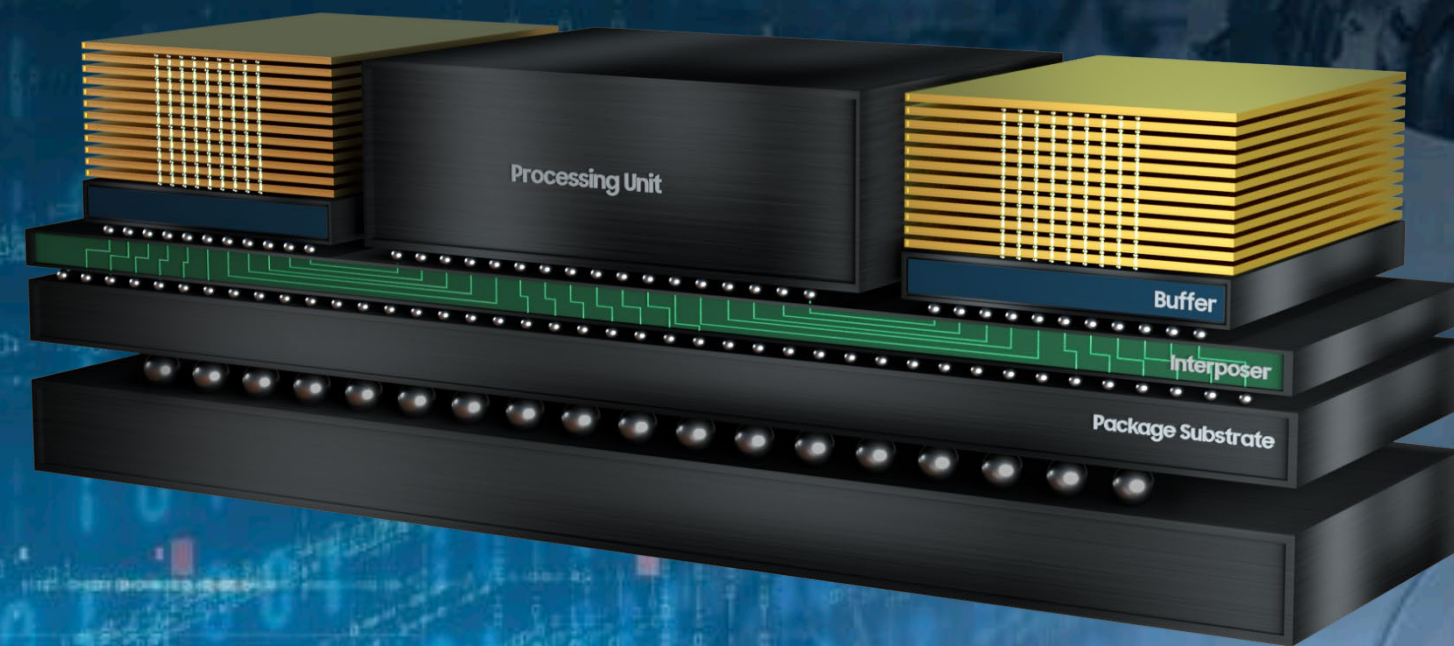
\* Latency: Time Delay between input and output in a system



# SAMSUNG SOLUTIONS FOR ARTIFICIAL INTELLIGENCE

Superlative Performance and High Reliability Using Less Energy

ENHANCED PERFORMANCE  
FOR DATA-INTENSIVE TASKS



36GB HBM3E<sup>\*</sup>

Fastest Performance

Energy Efficiency

64/128TB NVMe SSD

Largest Density

Higher Reliability

Unparalleled Performance

<sup>\*</sup> HBM: High Bandwidth Memory



# SAMSUNG SOLUTIONS FOR AUTOMOTIVE INDUSTRY

Advanced Total Memory Solution for Autonomous Driving Technology

Dedicated Support for automotive

Full Memory Line-ups

Quality & Longevity

Full In-house Solution

ELECTRIFIED



CONNECTED



AUTONOMOUS



## Automotive Storage

High Density

High Performance

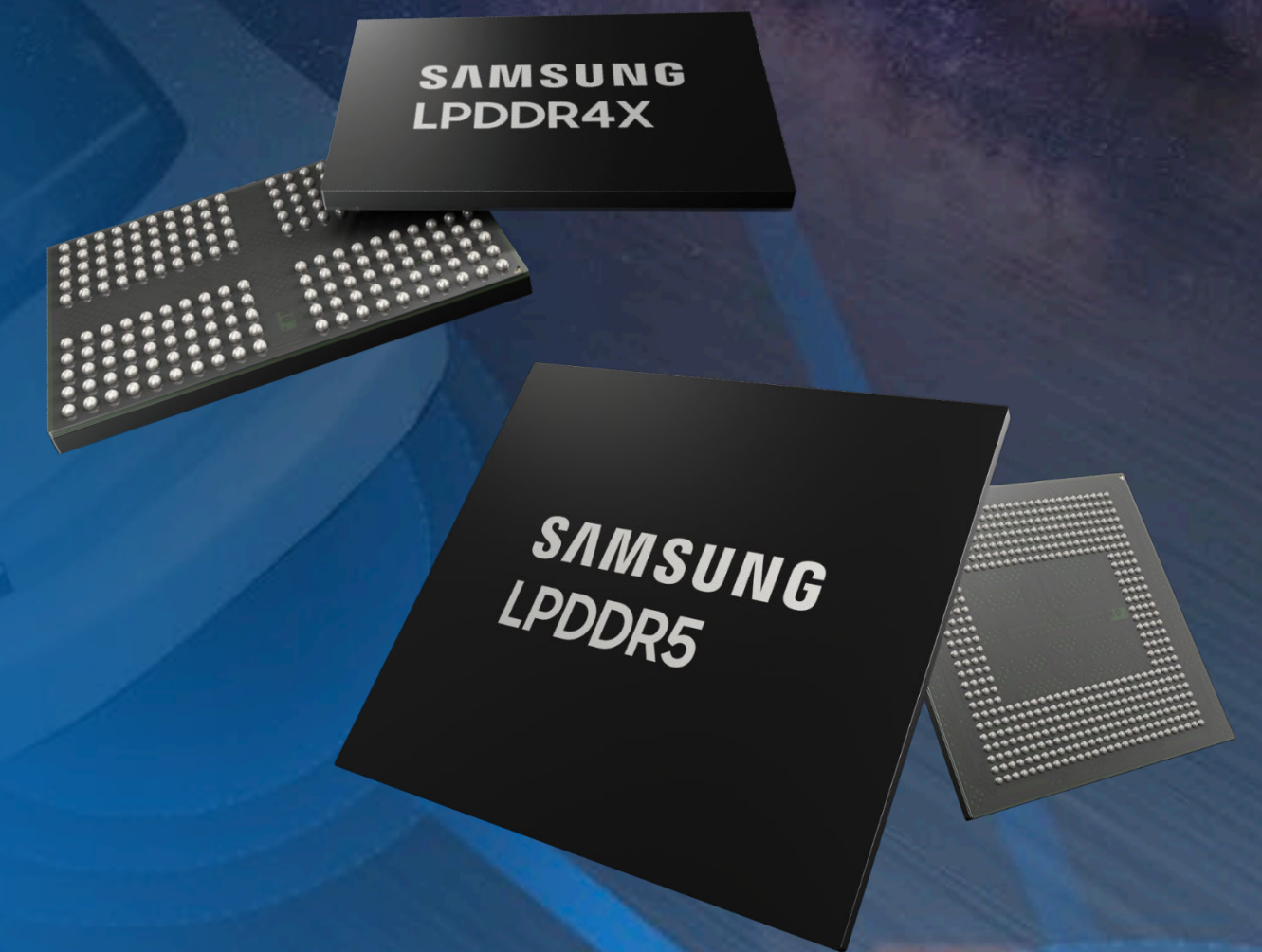
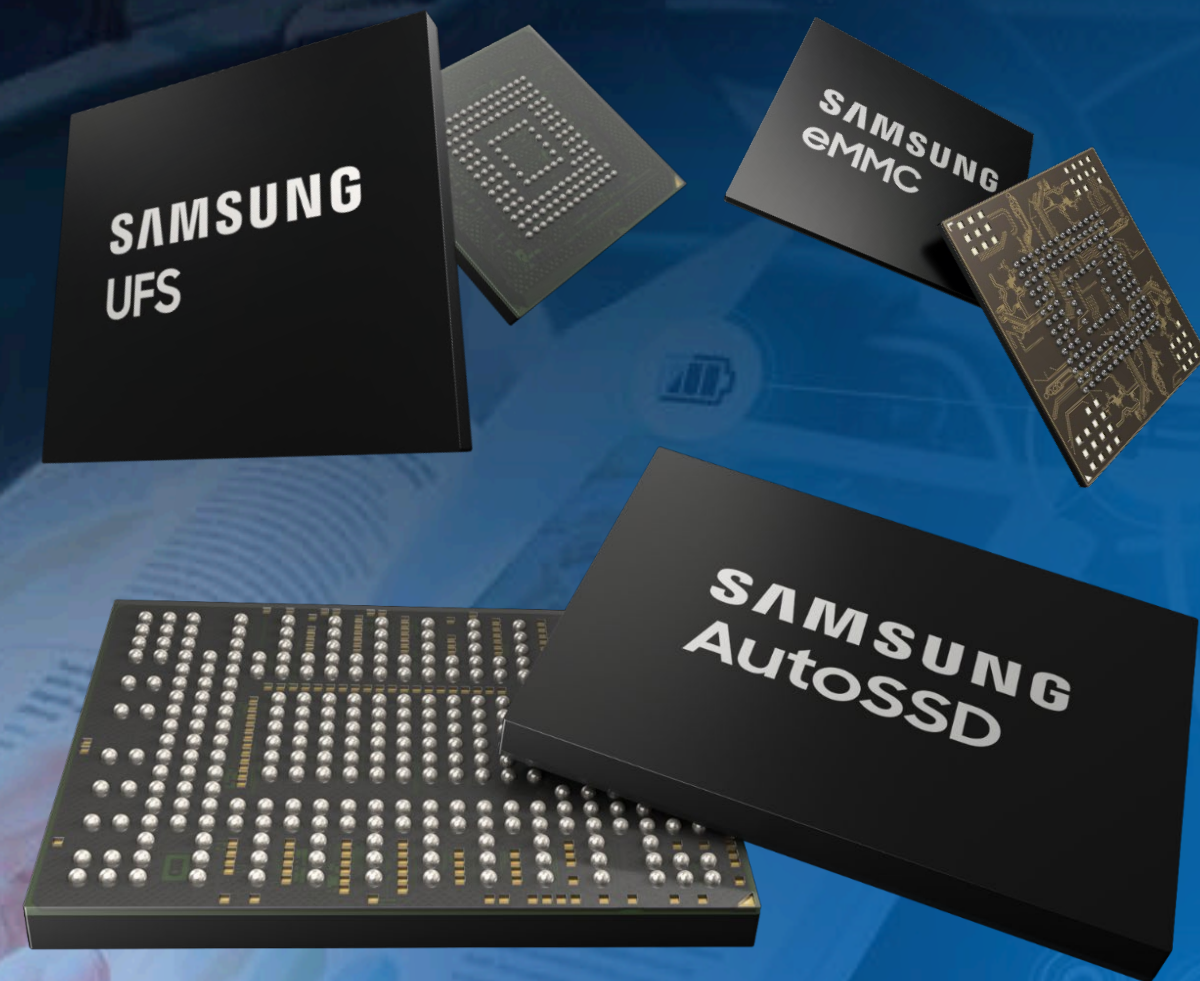
High Reliability

## Automotive DRAM

High Bandwidth

Lower Power Consumption

Higher Reliability





# APPLICATION-ORIENTED LINE MANAGEMENT

2-Track Strategy for Efficient Production & Capacity Allocation

ARTIFICIAL  
INTELLIGENCE

HIGH  
PERFORMANCE  
COMPUTING

AUTOMOTIVE

INDUSTRIAL

NETWORK

PERFORMANCE

Leading Process Technology

FLEXIBILITY

DRAM/NAND Conversion

LONGEVITY

Proven Process Technology



# EVOLUTION TO SMARTER FACTORY

Customer Value Improvement through High Productivity and Enhanced SCM

SCM

PRODUCTIVITY





# QUALITY BY DESIGN

Meet the Industry Standard and Expectation of AI & Automotive Customers





# Placing Memory at the Forefront of Future Innovation and Creative IT Life

## Technology

Leading Technological  
Breakthroughs

## Customers

Supporting Customers'  
Future Innovation

## Employees

Fostering Employees'  
Creativity

## Society

Enriching a New Way of  
Digital Life