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Alibaba Cloud

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Apple

aramco

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AT&T

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BlackRock

BMW GROUP

BNP PARIBAS

Bristol Myers Squibb

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Coca-Cola

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CoreWeave

CORTEVA

databricks

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ddn

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DELTA

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GSK

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Hewlett Packard Enterprise

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HRT

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NetApp

NOVARTIS

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OpenAI

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PEGATRON

PEPSICO

PETROBRAS

Pfizer

PG&E

PING AN

QCT

Red Hat

rescale

RIVIAN

ROBLOX

Roche

Rockwell Automation

RBC

SAAB

salesforce

SAP

SAMSUNG ELECTRONICS

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Tencent

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T Mobile

together.ai

tsmc

Uber

UBS

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usbank

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VISA

vmware

VOLVO

VW

waabi

Walmart

WAYMO

WAYVE

Weights & Biases

wipro

XI

xiaomi

Yum!

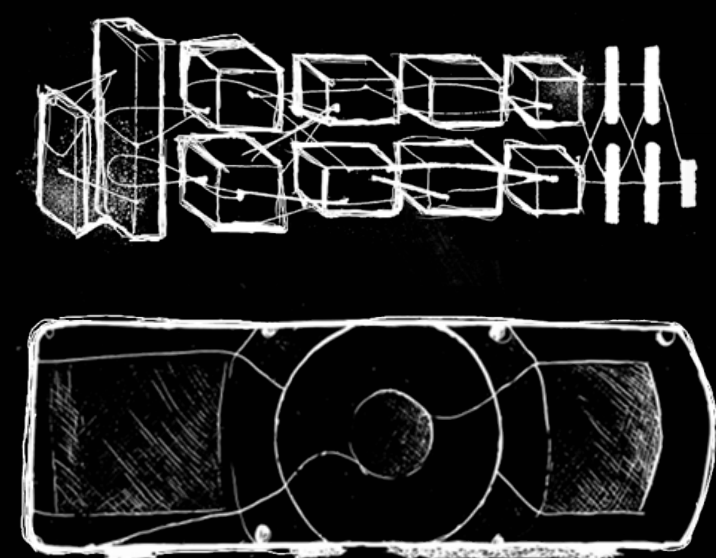
ZOOX

GTC25





2012 ALEXNET



PERCEPTION AI

SPEECH RECOGNITION
DEEP RECSYS
MEDICAL IMAGING

GENERATIVE AI

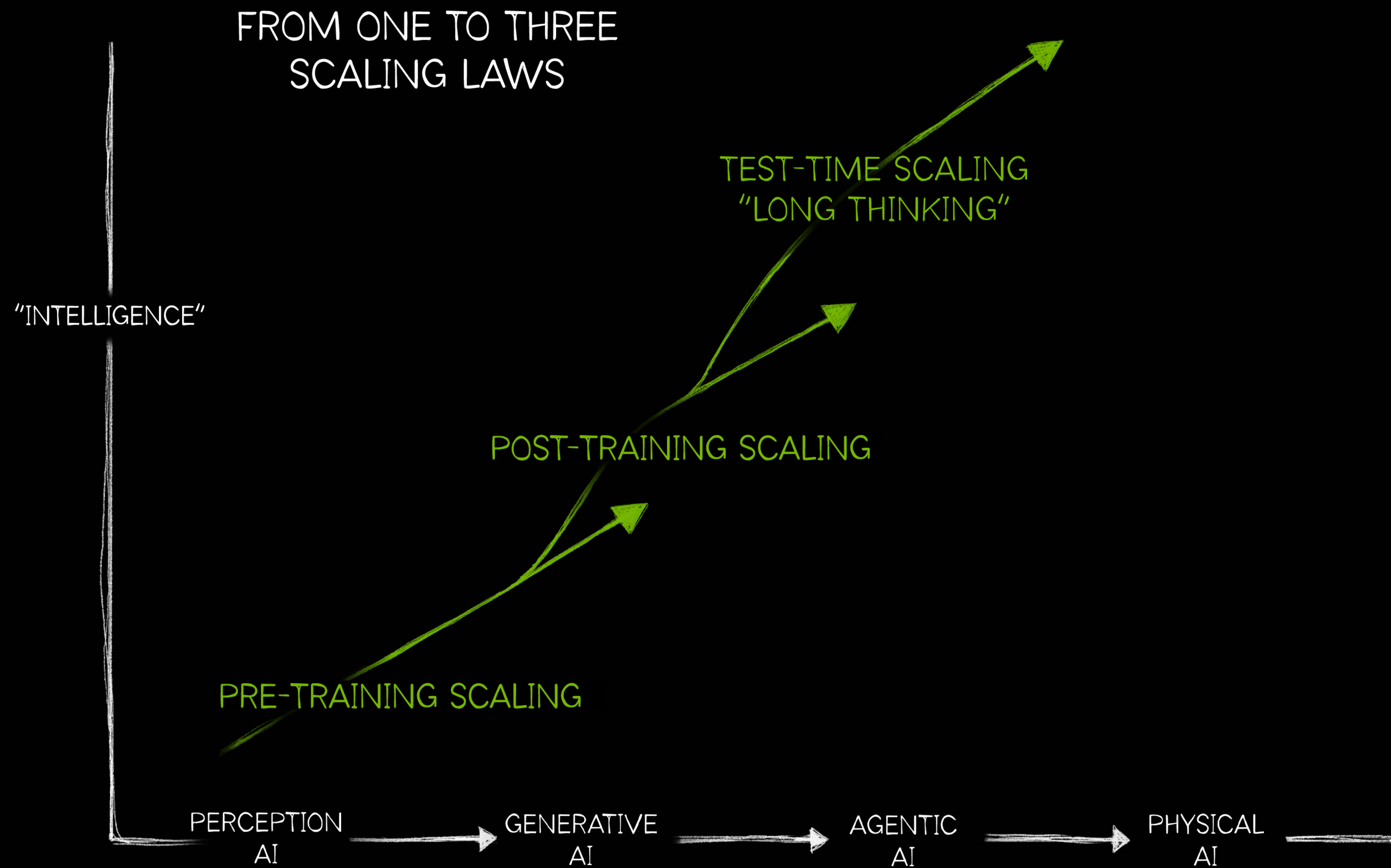
DIGITAL MARKETING
CONTENT CREATION

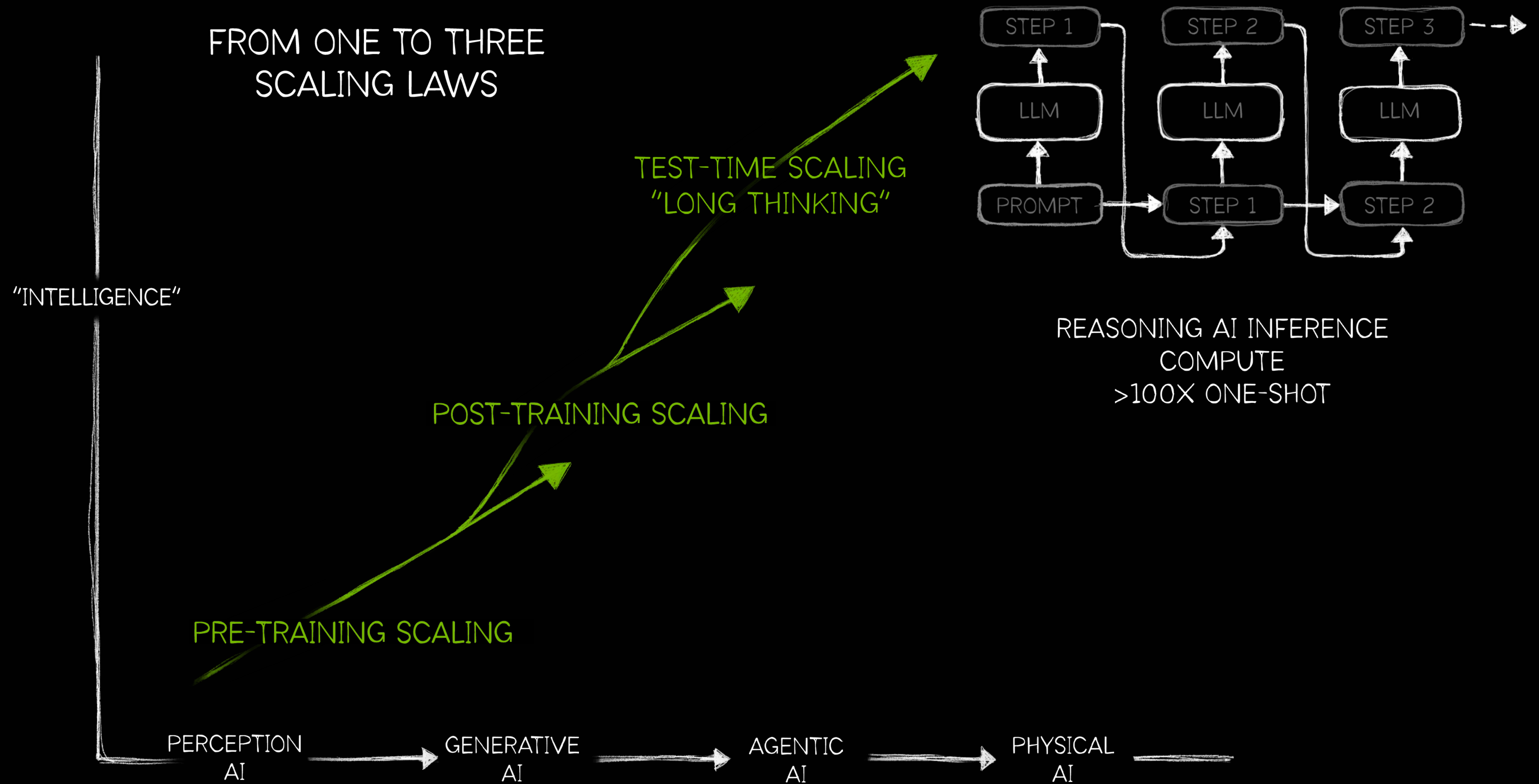
AGENTIC AI

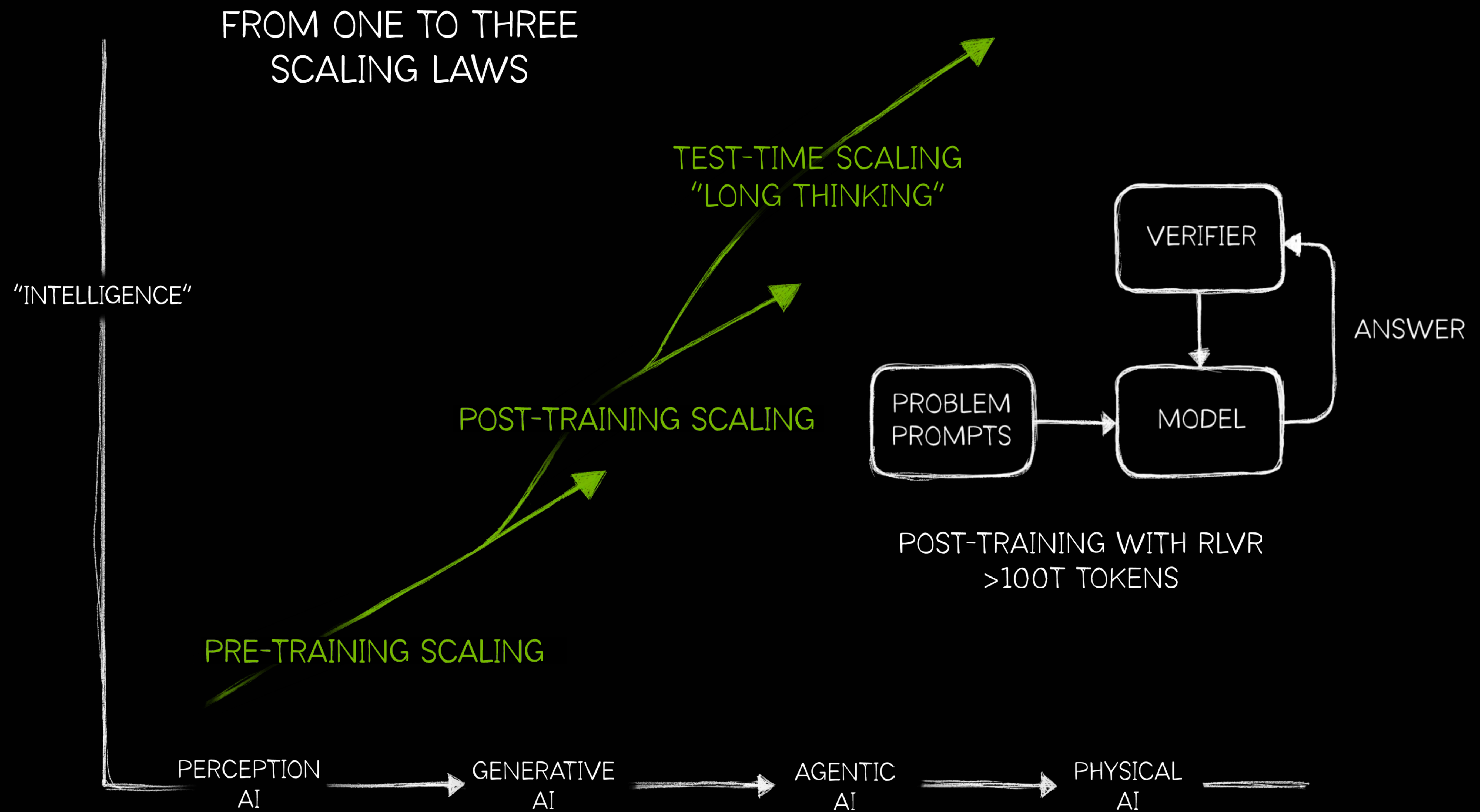
CODING ASSISTANT
CUSTOMER SERVICE
PATIENT CARE

PHYSICAL AI

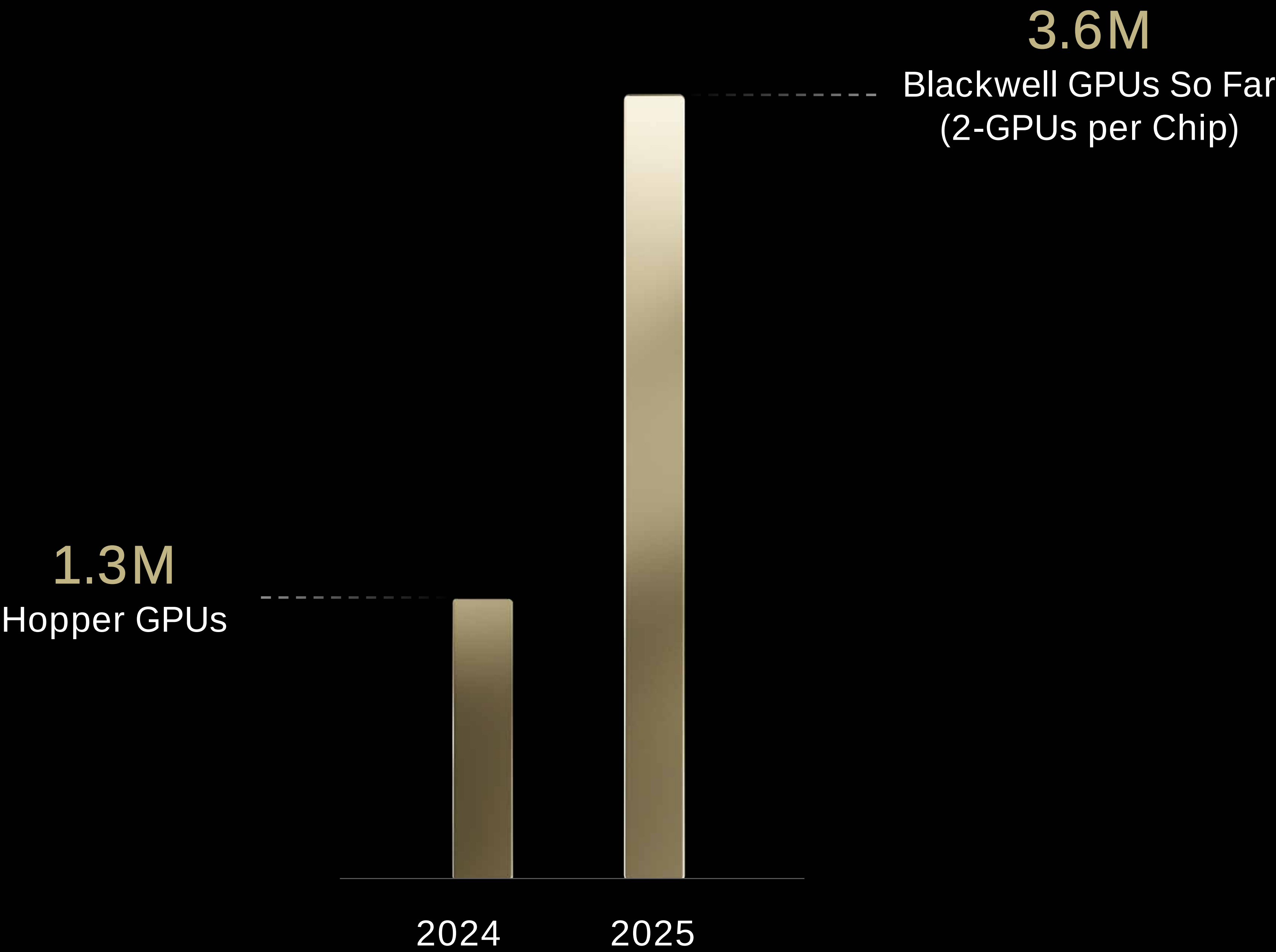
AUTONOMOUS VEHICLES
GENERAL ROBOTICS



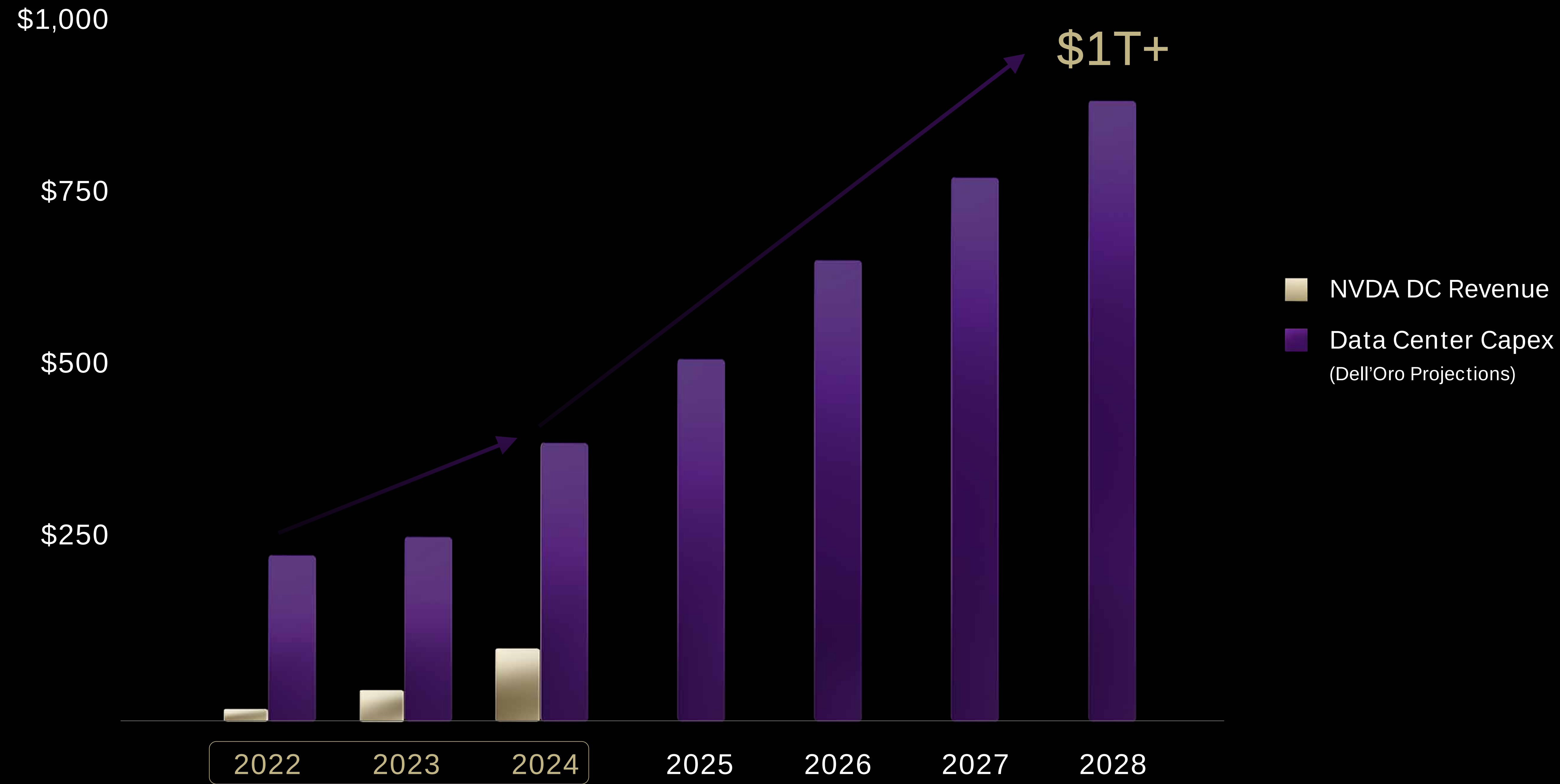




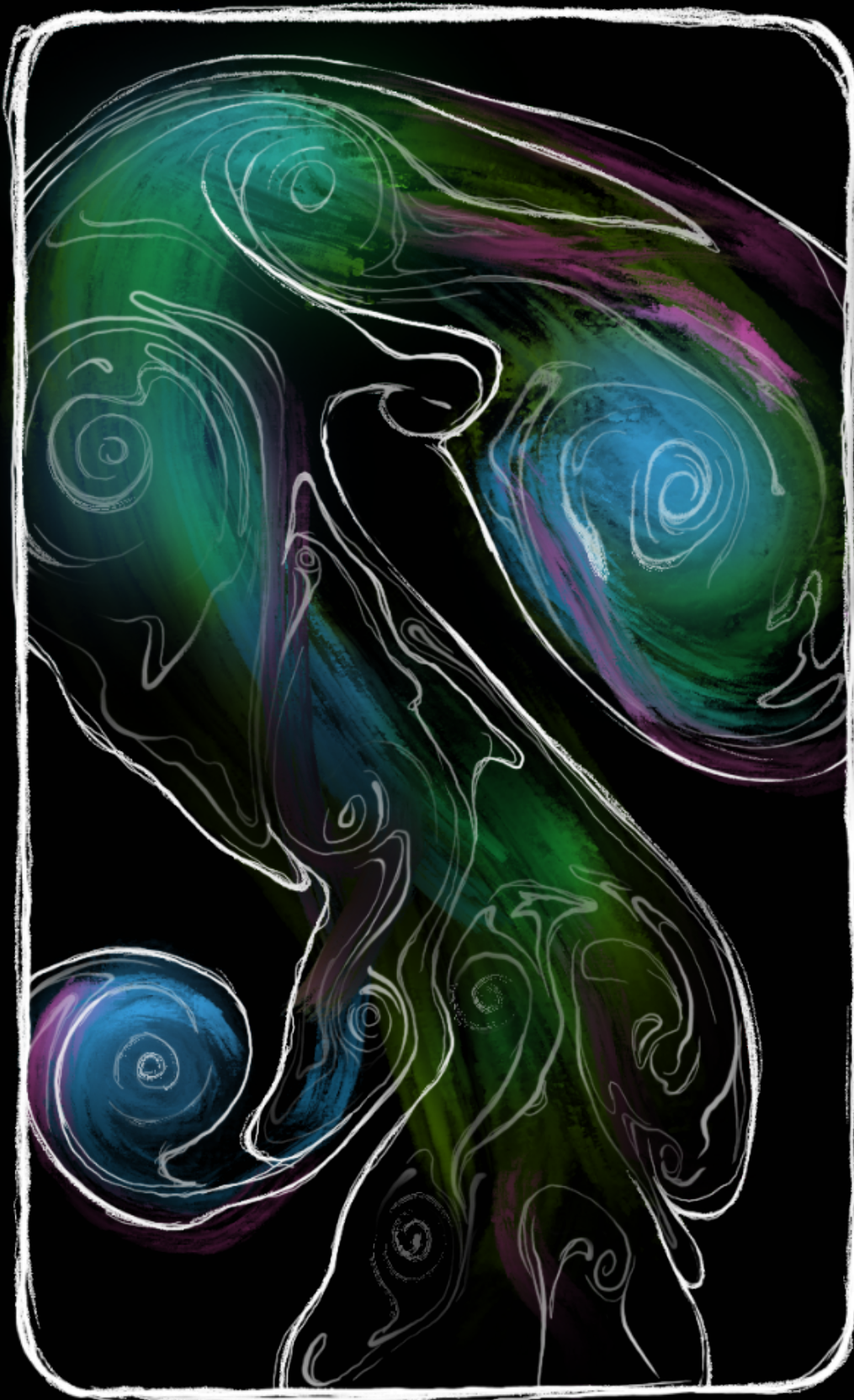
Top 4 US CSPs



Computing At Inflection Point

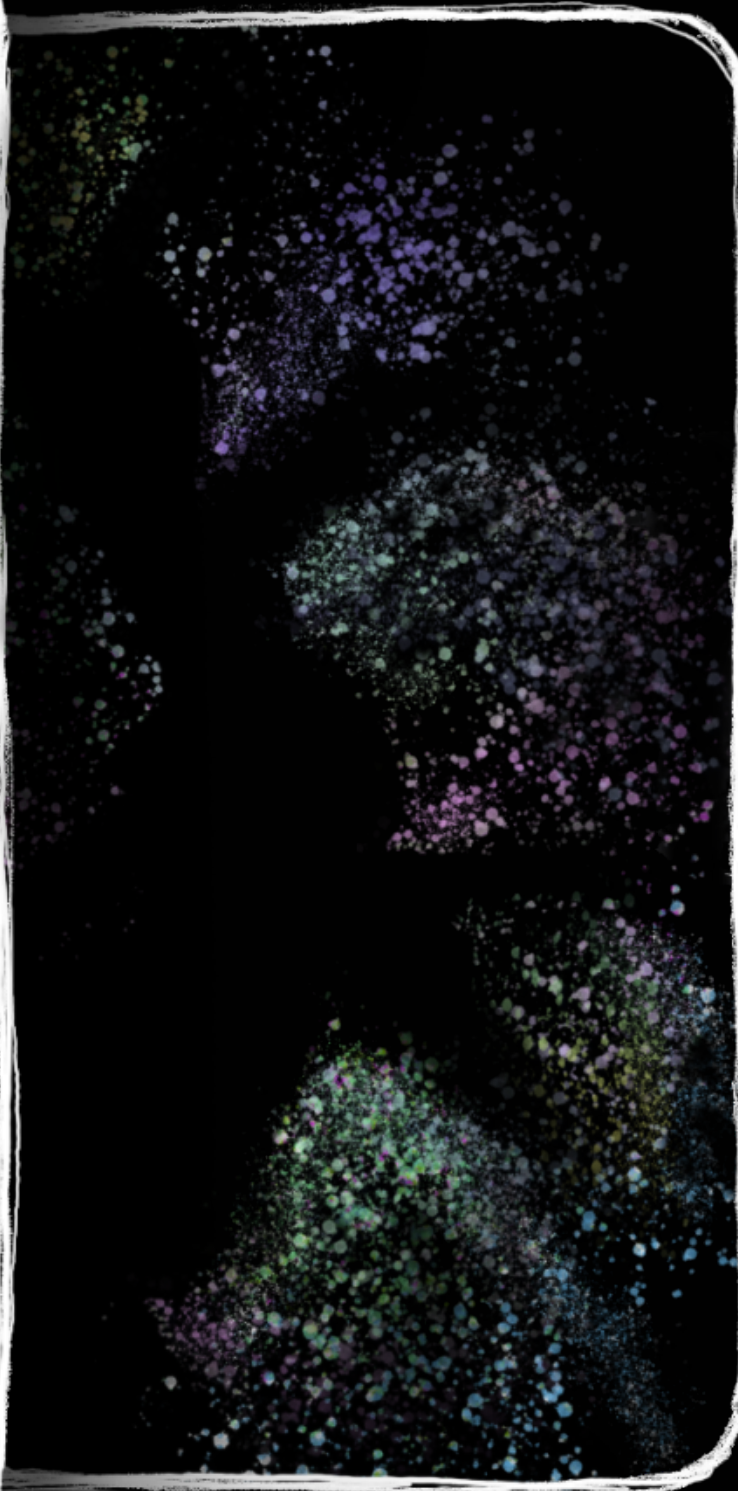


CUDA-X FOR EVERY INDUSTRY



WARP

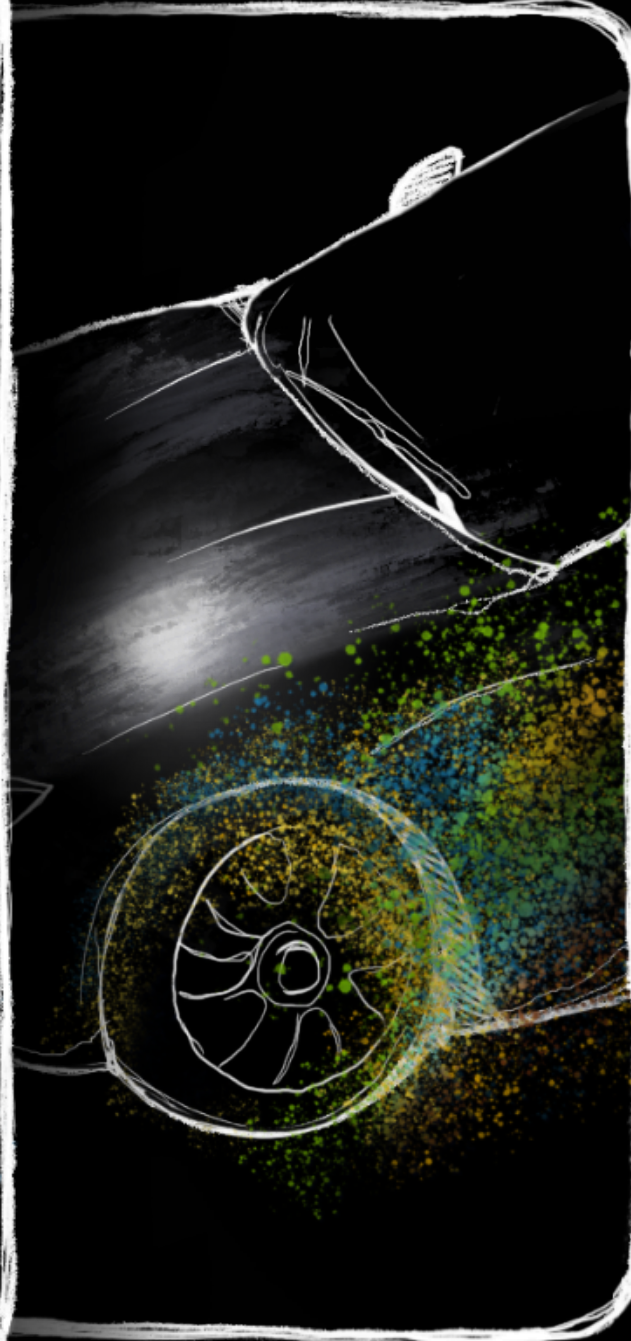
PHYSICS



cuDF

cuML

DATA SCIENCE
AND PROCESSING



cuDSS

cuSPARSE

cuFFT

AMGX

COMPUTER AIDED
ENGINEERING



TRT-LLM
MEGATRON

NCCL

cuDNN

CUTLASS

cuBLAS

DEEP
LEARNING



cuEQUIVARIANCE

cuTENSOR

QUANTUM
CHEMISTRY



cuQUANTUM

CUDA-Q

QUANTUM
COMPUTING



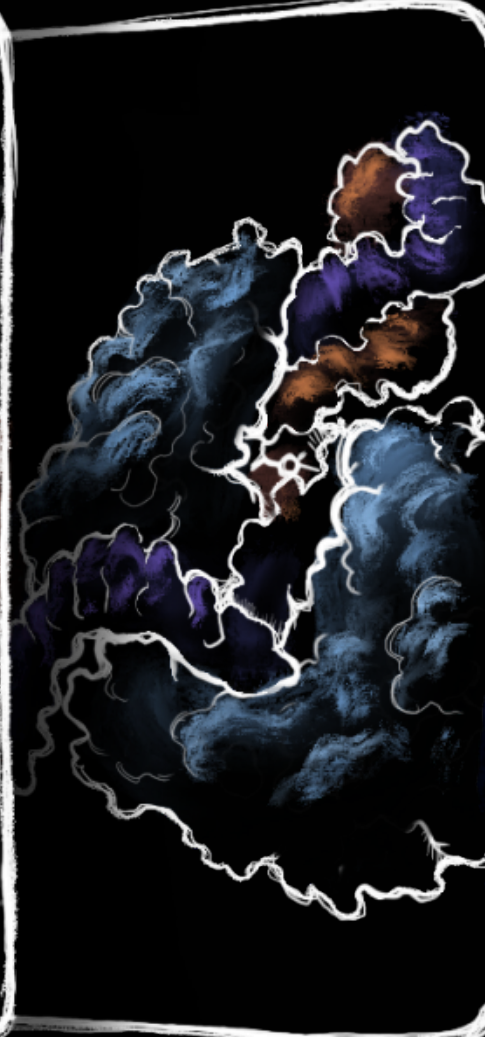
EARTH-2

WEATHER
ANALYTICS



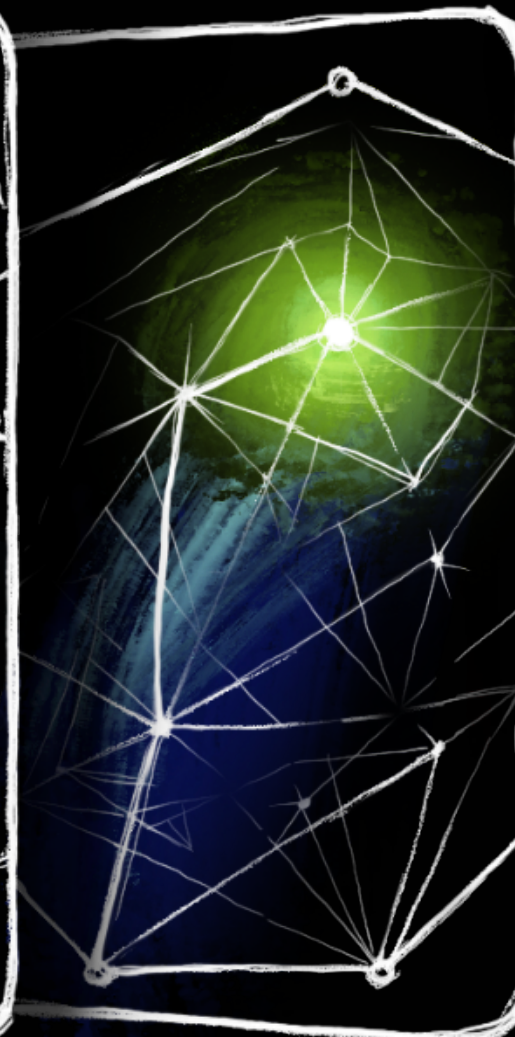
MONAI

MEDICAL
IMAGING



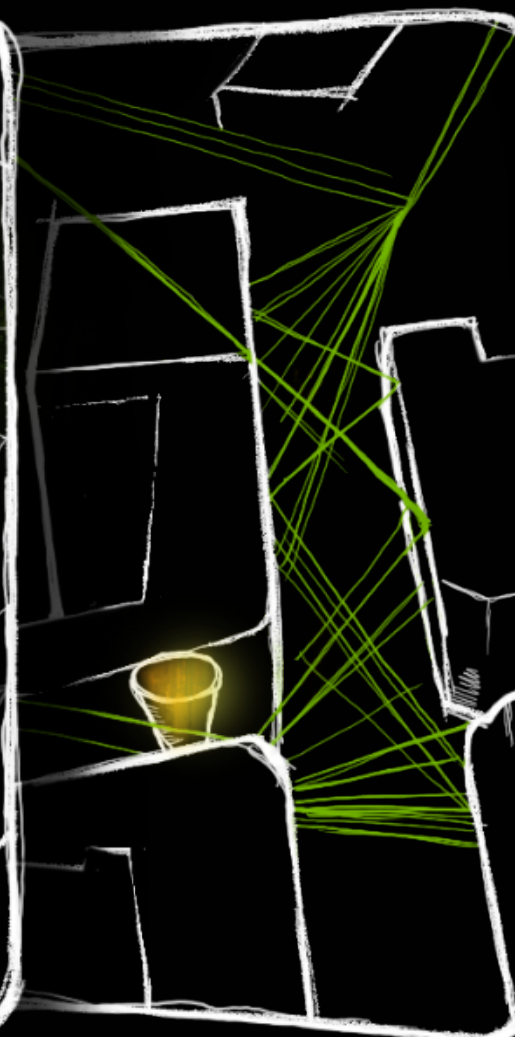
PARABRICKS

GENE
SEQUENCING



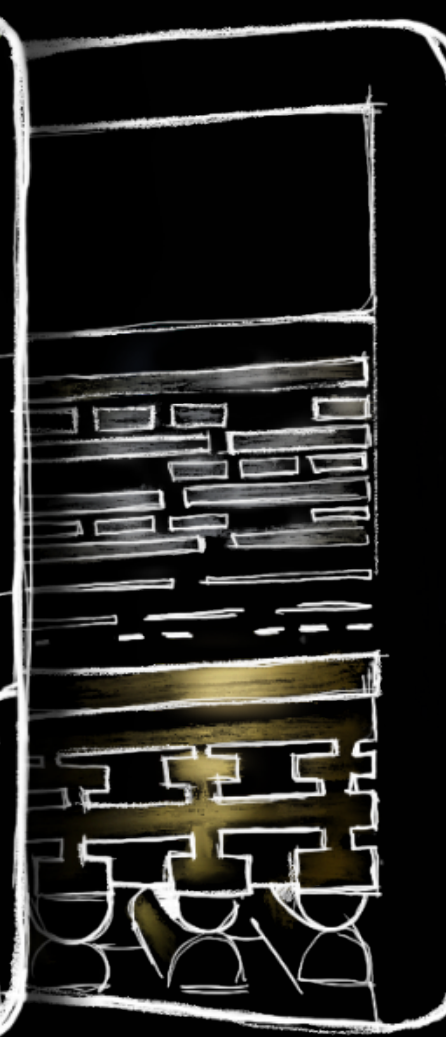
cuOPT

DECISION
OPTIMIZATION



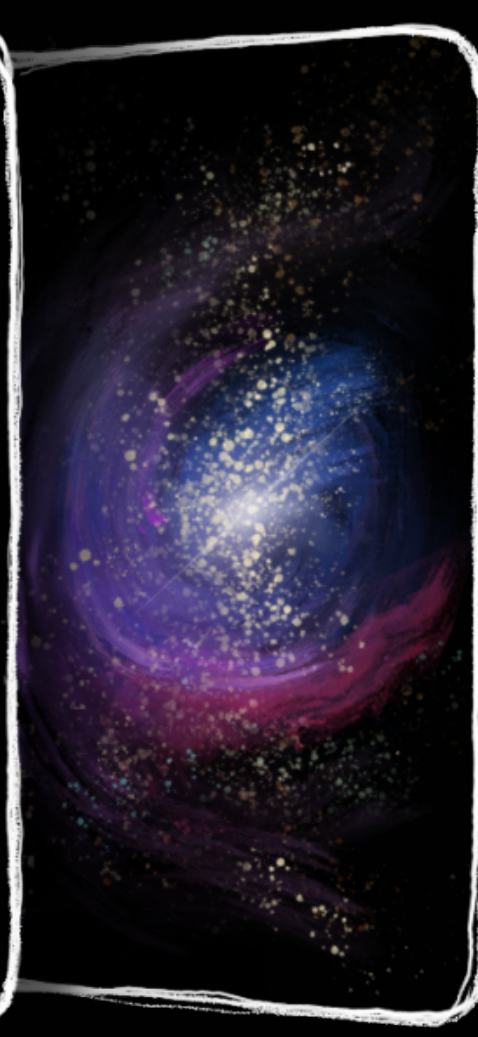
AERIAL
SIONNA

5G/6G
SIGNAL
PROCESSING



cuLITHO

COMPUTATIONAL
LITHOGRAPHY

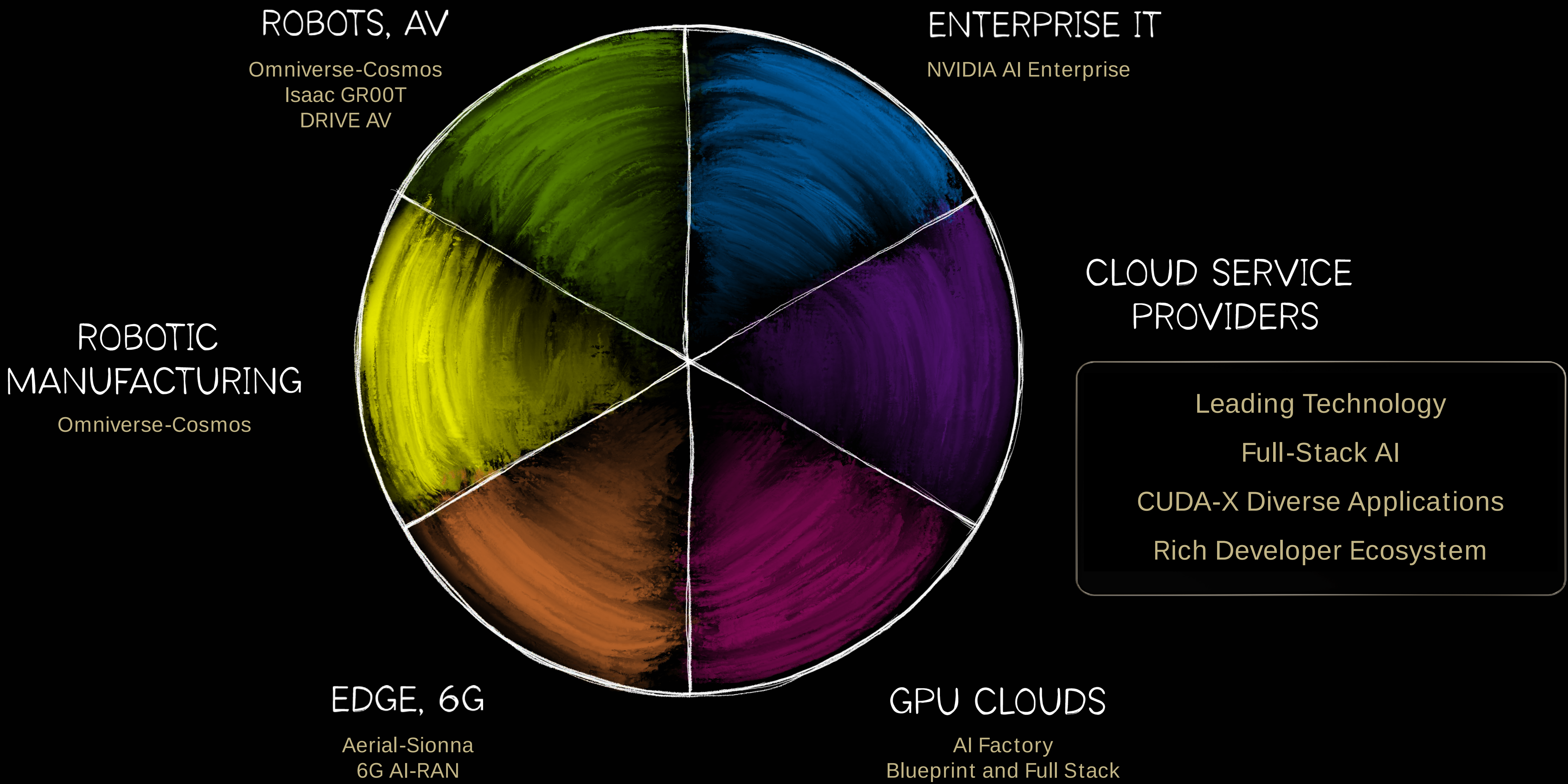


cuPYNUMERIC

NUMERICAL
COMPUTING



AI FOR EVERY INDUSTRY





AI Conference March 17-21, 2025 | Keynote March 18 | Exhibits March 18-21 | Workshops March 16-20 | San Jose, CA & Virtual

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Autonomous Vehicle Safety Day

Safety is the top priority in autonomous vehicles. In this workshop, we'll showcase how NVIDIA is accelerating the development of safe and secure AVs.

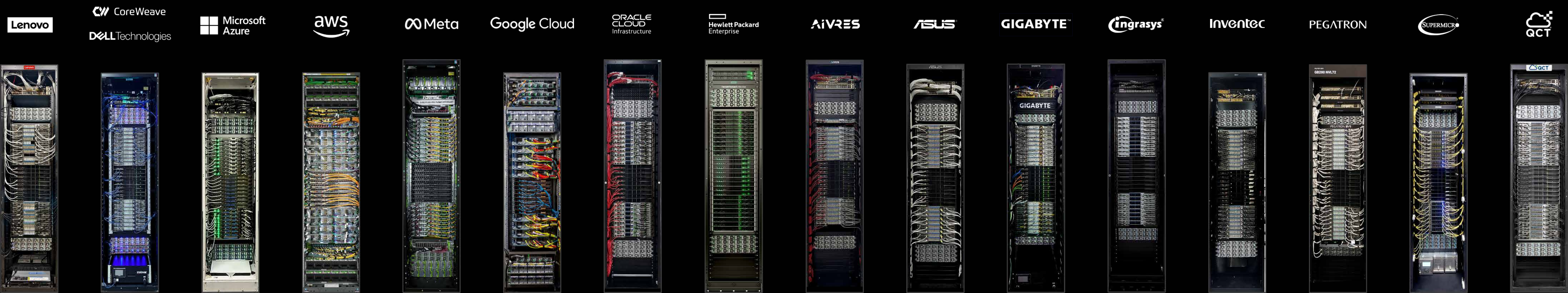
[View All Autonomous Vehicle Safety Sessions](#)

Featured Sessions

Introduction to NVIDIA's Strategy for AV Safety [S74743] Marcus Pappas Director, Autonomous Vehicle Research NVIDIA James Niles Director of Safety Engineering, Head of AV Safety NVIDIA Karl Deitz Sr. Director Safety Engineering NVIDIA We'll introduce NVIDIA's framework for autonomous vehicle (AV) safety, comparing state-of-the-art techniques and surface components, tools, and models as well as the Add to Schedule Thursday Mar 18 10:00 PM - 1:00 PM PDT	Guardrails for AV Safety Across the Product Life Cycle [S74744] Ed Schermer Sr. Research Scientist NVIDIA Wu Lian VP of Autonomics NVIDIA Alexandra Humeau Research Scientist NVIDIA This session will explore the presentation of NVIDIA, the framework for autonomous vehicle (AV) safety, with a focus on deployment from pre-validation to early safety guardrails. Add to Schedule Thursday Mar 18 2:00 PM - 2:50 PM PDT	Safety Regulation and Standardization in the Era of AI-Based AVs [S74745] Riccardo Martini VP Safety NVIDIA Tina Winkler Manager Regulatory Affairs NVIDIA This session will explore NVIDIA's strategy for compliance with safety regulations and international standards, including the implications related to the use of AI-based. Add to Schedule Thursday Mar 18 3:00 PM - 3:50 PM PDT	Navigating the High-Stakes Safety Challenges of Autonomous Driving [S73122] Riccardo Martini VP Safety NVIDIA Warren Marshall Vice President, Policy, AVS Regional Accreditation Board Melissa Healy Sr. Director of Government Affairs & Public Seema Roy Singh Head of Systems Engineering NVIDIA Building an autonomous vehicle to navigate safely in the complex physical world is challenging. The system needs to perceive and understand its surroundings holistically and Add to Schedule Thursday Mar 18 4:00 PM - 5:00 PM PDT
Exploring NVIDIA's Strategy for AV Safety [CW4730] James Niles Director of Safety Engineering, Head of AV Safety NVIDIA Riccardo Martini VP Safety NVIDIA Alexandra Humeau Research Scientist NVIDIA Karl Deitz Sr. Director Safety Engineering NVIDIA Ed Schermer Sr. Research Scientist NVIDIA This technology pillar is NVIDIA's blueprint for physical AV safety, integrating design, development, test, and validation. Add to Schedule Thursday Mar 20 3:00 PM - 3:50 PM PDT	From Research to Production: Transforming AV Technology With AI [S72707] José Alvarez Director, Research NVIDIA Brian Isomae Senior Project Scientist and Manager, Autonomous Vehicle Research NVIDIA Learn how AI is transforming the development of autonomous vehicle self-driving, both in the lab, sensor and in the vehicle. We'll focus on three key areas: (1) self- Add to Schedule Wednesday Mar 19 4:00 PM - 4:50 PM PDT	Accelerate the Future of AI-Defined Vehicles and Autonomous Driving [DD40000] Xinshuo Wei VP of Autonomics NVIDIA AI-defined vehicles are shaping the future of autonomous driving. To safely develop and deploy these vehicles, an end-to-end platform that combines high performance in context and Add to Schedule Thursday Mar 20 9:00 AM - 10:40 AM PDT	Developing Next-Gen AVs with Physical AI-Powered World Foundation Models [DD40001] Noam Marks Robotics Field Ops NV Autonomous Enterprise NVIDIA Haim Neftci Chief Lead of Solutions Architecture and Engineering NVIDIA This session demonstrates how NVIDIA is leveraging its Open World Model Foundation platform and end-to-end world models for safety, developer and deploy autonomous. Add to Schedule Thursday Mar 20 9:00 AM - 10:40 AM PDT
Advancing AV Development With Sensor Simulation and Cosmos [DD40002] Gustavo Rodriguez Sr. Manager, Product NVIDIA Learn how the NVIDIA Cosmos Developer Kit for Simulation and Cosmos are enabling the developers to simulate their simulation environments and the most realistic? Add to Schedule Thursday Mar 20 10:00 AM - 10:40 AM PDT	Advancing AI to Build the Most-Trusted Driver [S72844] Danyal Ibrahim Sr. Head of Research NVIDIA We'll present some of NVIDIA's latest research, with a focus on understanding the capabilities of plug-and-play autonomous vehicle, and those of the simulator that they rely on. Add to Schedule Thursday Mar 20 11:00 AM - 12:40 PM PDT	AI's Next Frontier: Taking Autonomy From Digital to Physical Reality [S73138] Rezaul Karim Founder Coda Octopus NVIDIA We'll explore the exciting potential of generative AI beyond the digital realm, serving into its real-world applications and the challenges involved here in deploying such solutions. Add to Schedule Wednesday Mar 19 10:00 AM - 10:40 AM PDT	Crafting a New Automotive Experience With End-to-End Embodied AI [S72691] Alex Kendall Co-founder and CEO Maye Knight Rider: The Reinforce Learning Society has stream of automating vehicles for decades, but what does the next? Embodied intelligence like Alex Kendall, Co-founder and CEO of Add to Schedule Wednesday Mar 19 10:00 AM - 10:40 AM PDT



Grace Blackwell in Full Production



NVIDIA Blackwell System

72 Blackwell GPUs
1.1 EF FP4

576 Memory Chips
20 TB
576 TB/s

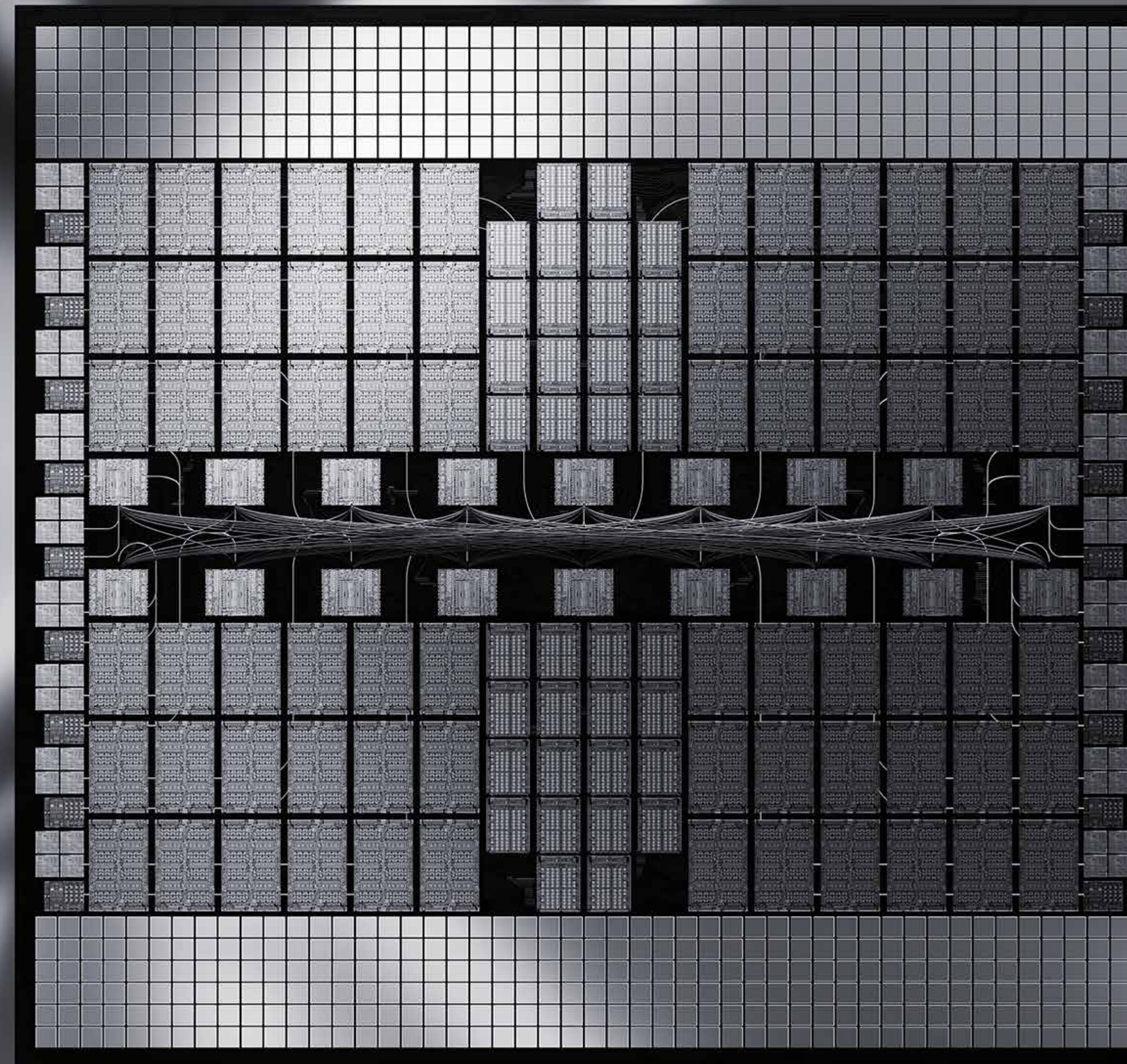
18 NVLink Switches
130 TB/s All-to-All

130 Trillion Transistors

2,592 Grace CPU Cores

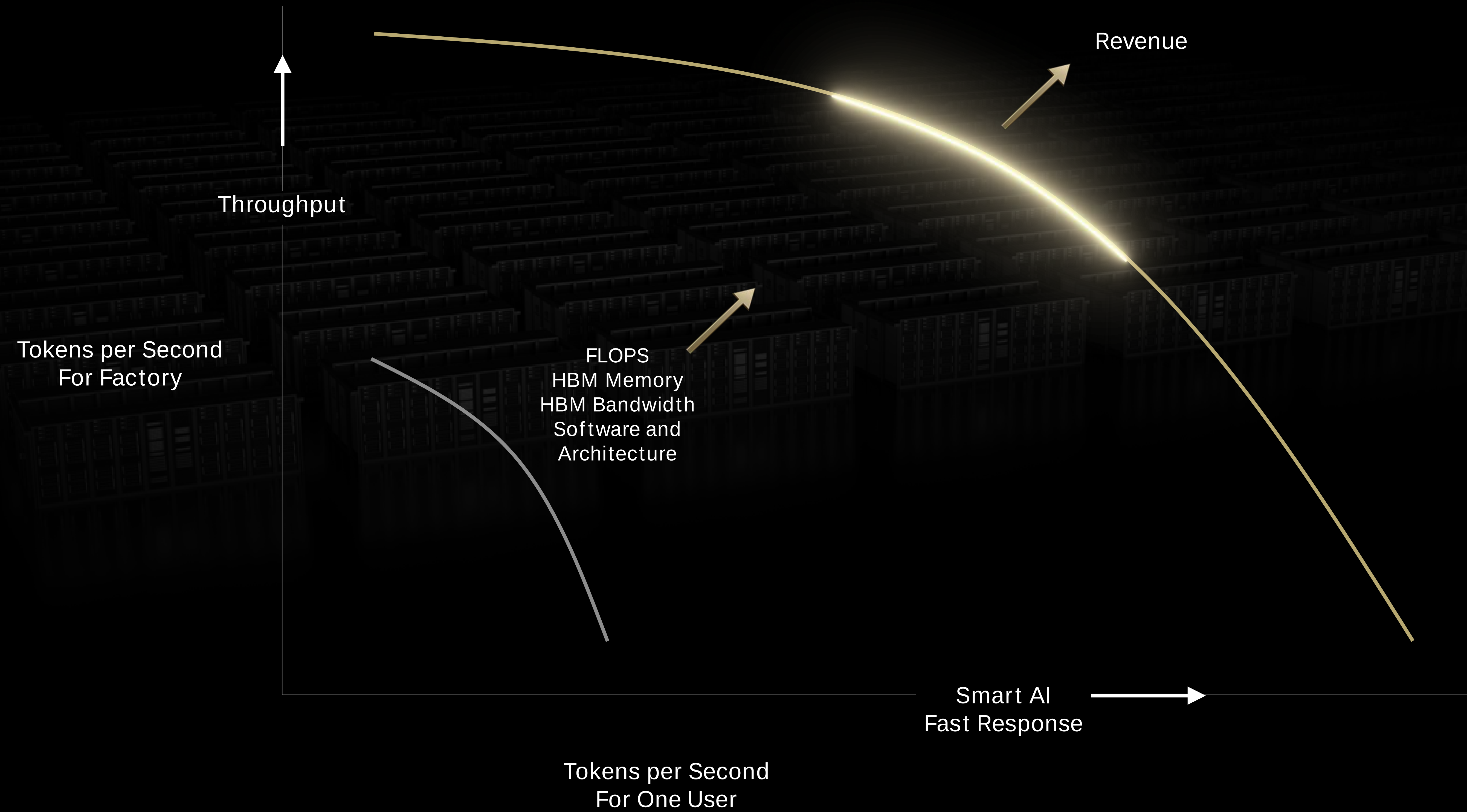
72 ConnectX-8 NICs

18 BlueField DPUs



Grace Blackwell NVLink72

Inference At-Scale is Extreme Computing



I need to seat 7 people around a table at my wedding reception, but my parents and in-laws should not sit next to each other. Also, my wife insists we look better in pictures when she's on my left, but I need to sit next to my best man. How do I seat us on a round table? But then, what happens if we invited our pastor to sit with us?

 Send

Traditional LLM Model

Tokens: **439**

Reasoning Model

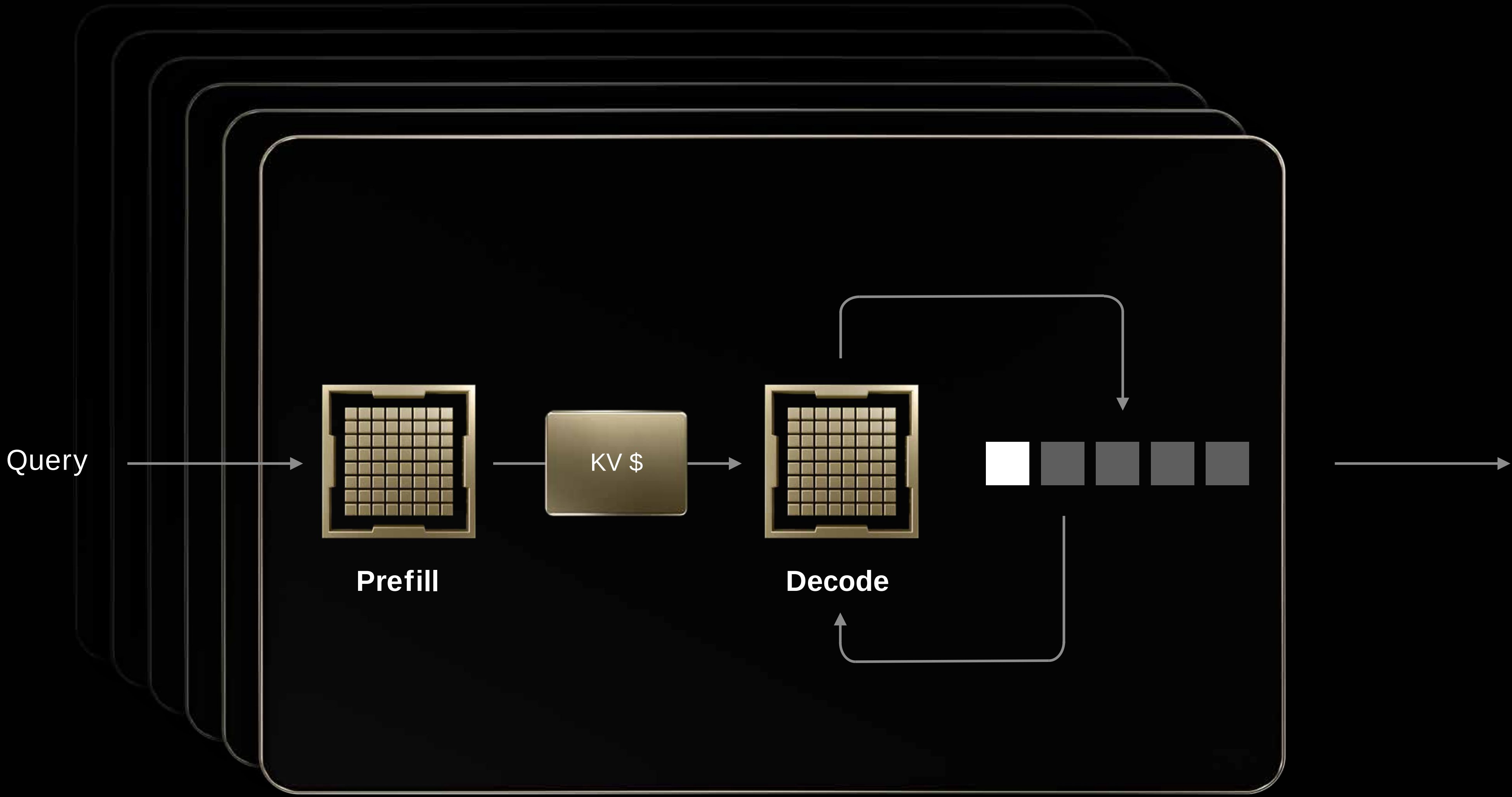
Tokens: **8,559**

☒ Reasoning On

20x More Tokens
150x More Compute

Announcing NVIDIA Dynamo

Distributed Inference Serving Library



Disaggregated Inference

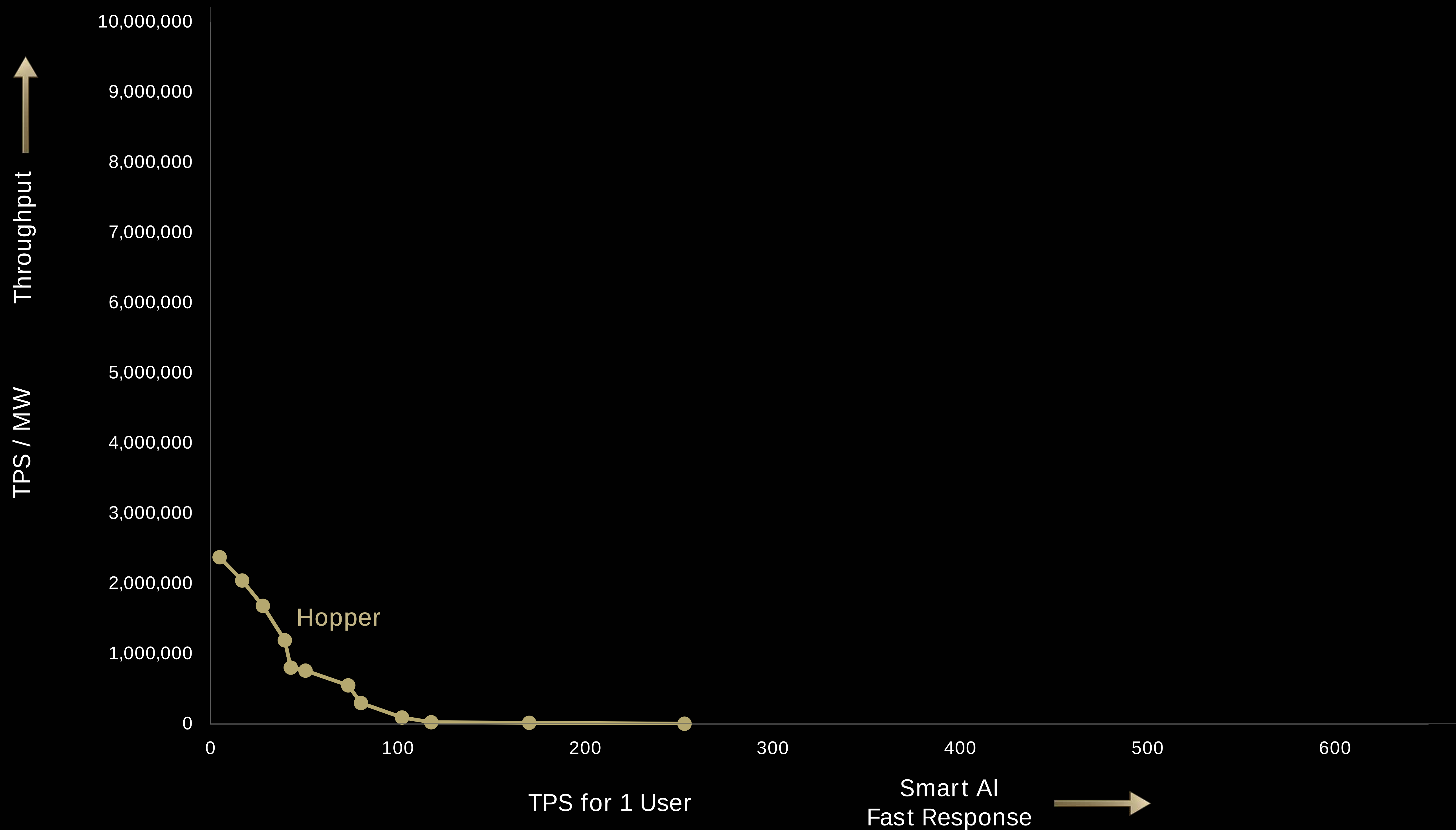
GPU Resource Allocation

KV Cache Routing

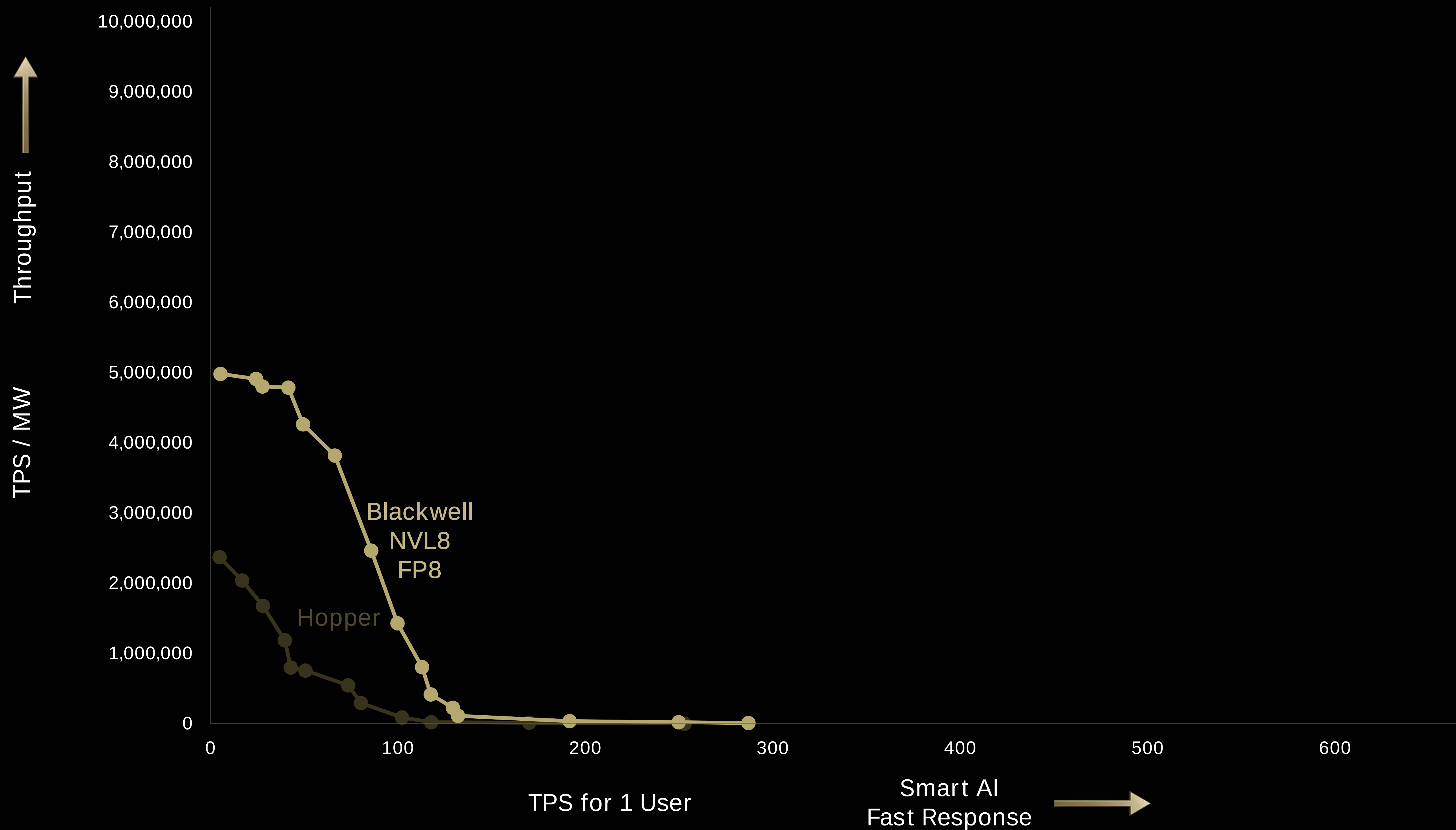
Communication Library (NIXL)



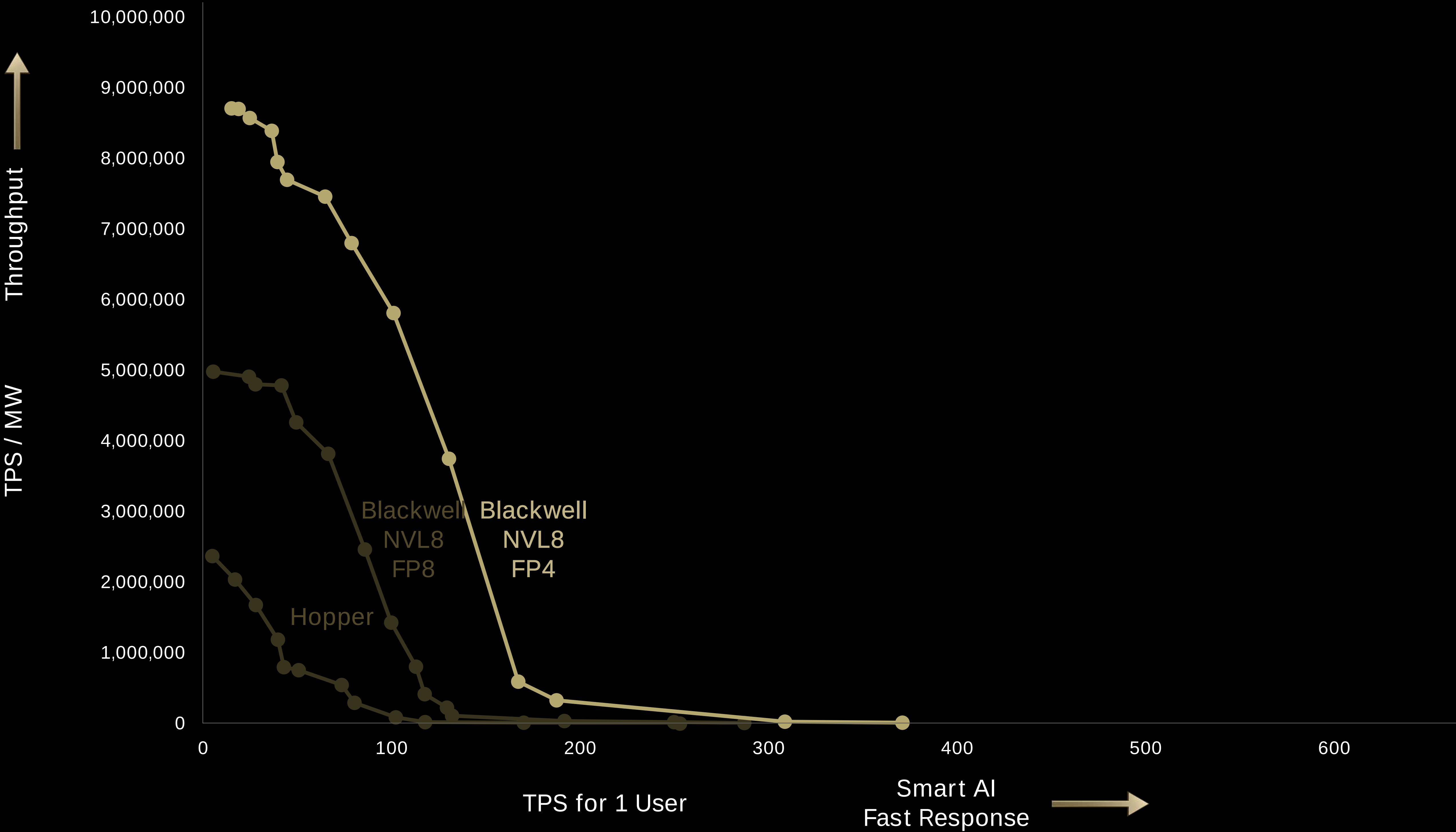
Blackwell Giant Leap in Inference Performance



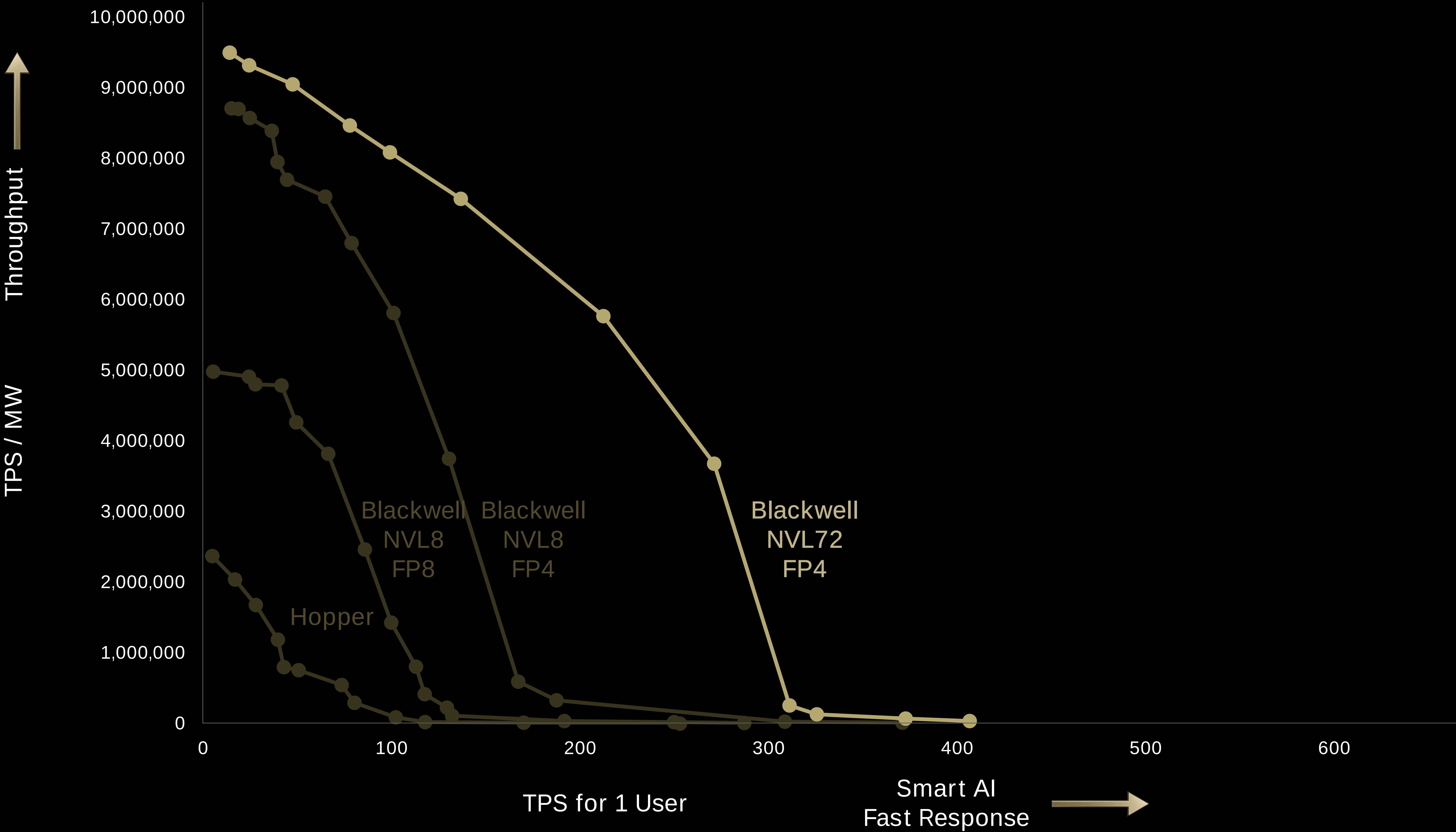
Blackwell Giant Leap in Inference Performance



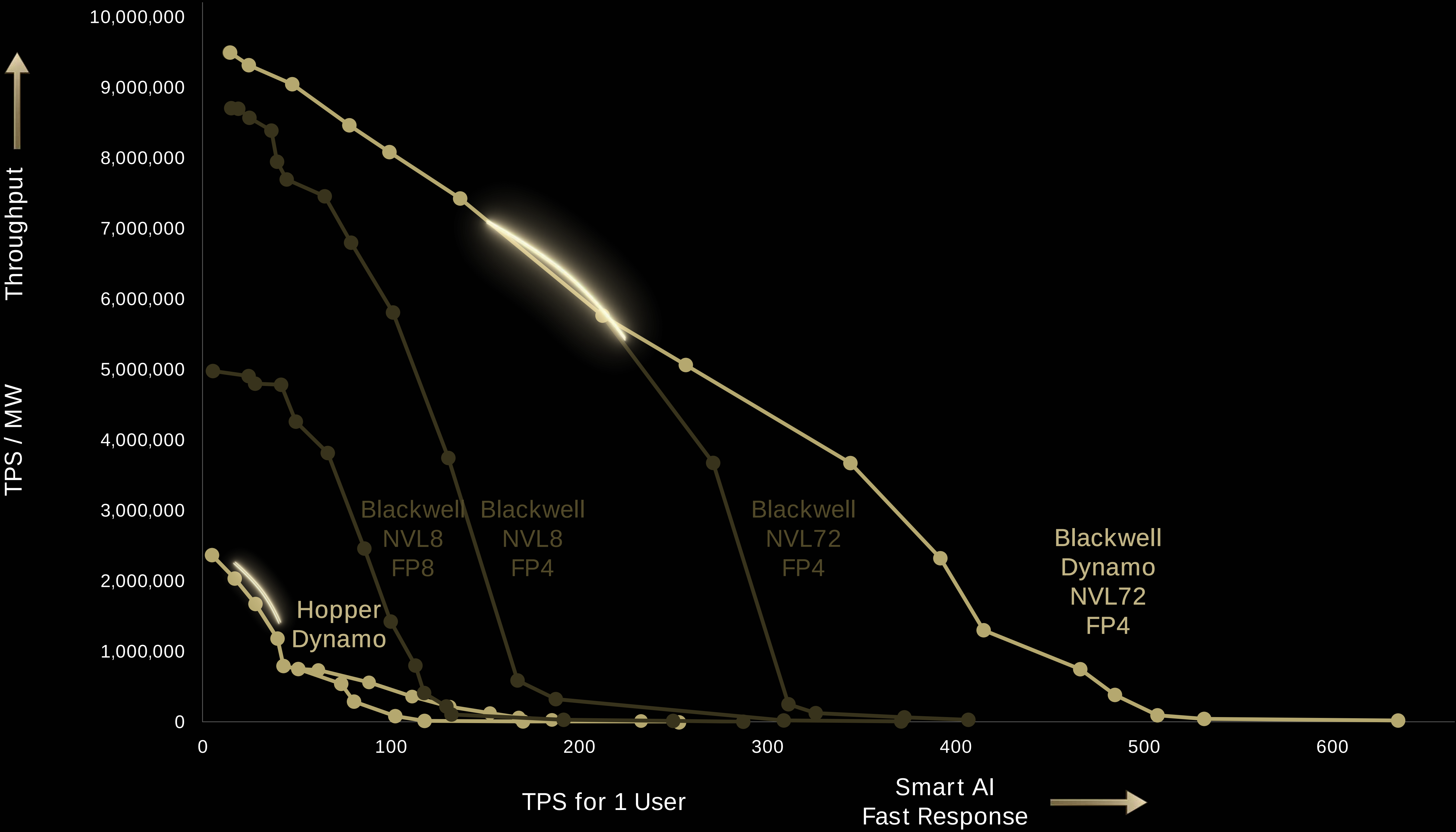
Blackwell Giant Leap in Inference Performance



Blackwell Giant Leap in Inference Performance

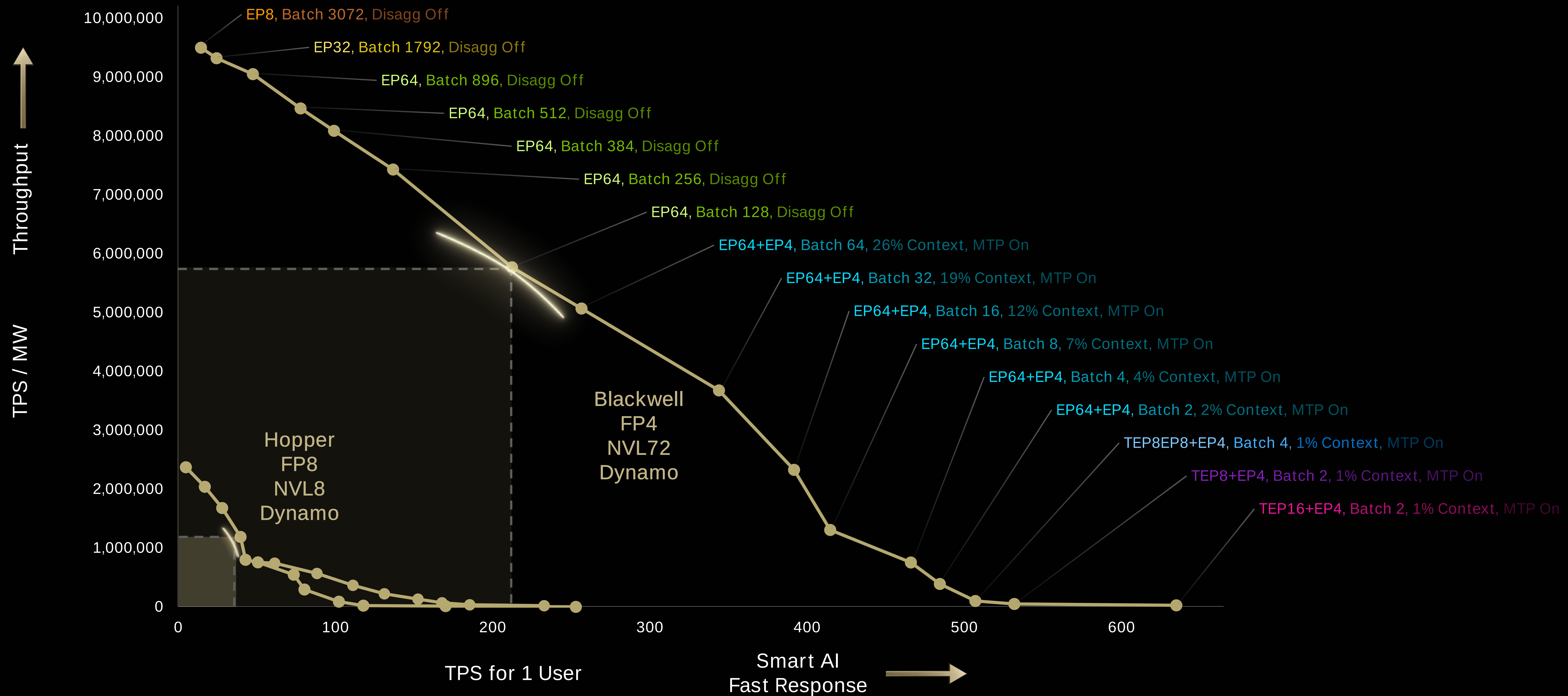


Blackwell Giant Leap in Inference Performance



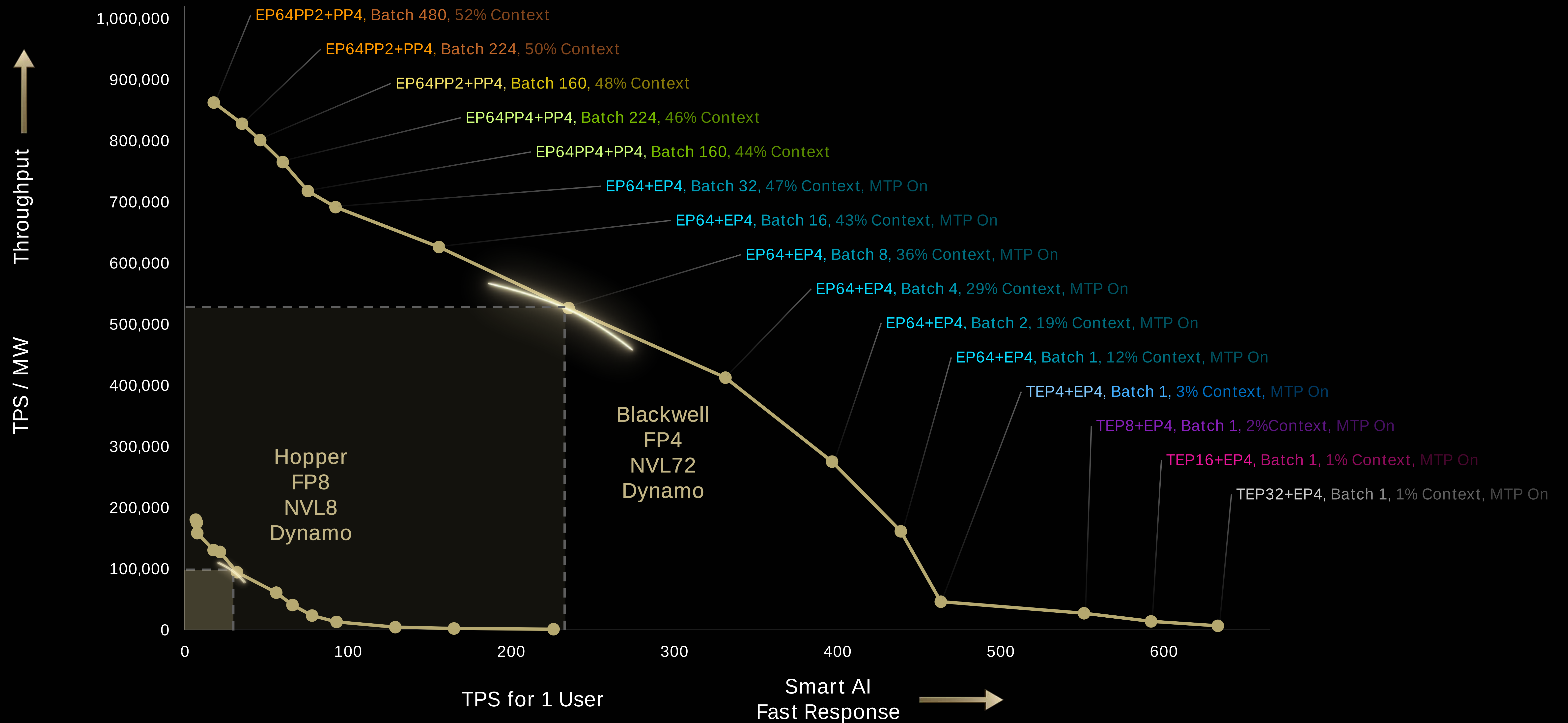
Blackwell 25X Hopper

FP4, NVL72, Dynamo, and TRT-LLM Continuous Optimization
1K ISL / 2K OSL



Blackwell 40X Hopper

FP4, NVL72, Dynamo, and TRT-LLM Continuous Optimization
32K ISL / 8K OSL





100 MW AI Factory	H100 NVL8
GPU Dies	45K
Racks	1,400
Data Center Productivity	300M

Blackwell 40X Hopper Inference Performance

NVLink Flops Per Watt ~ AI Factory Output



100 MW AI Factory

H100 NVL8

GB200 NVL72

GPU Dies

45K

85K

Racks

1,400

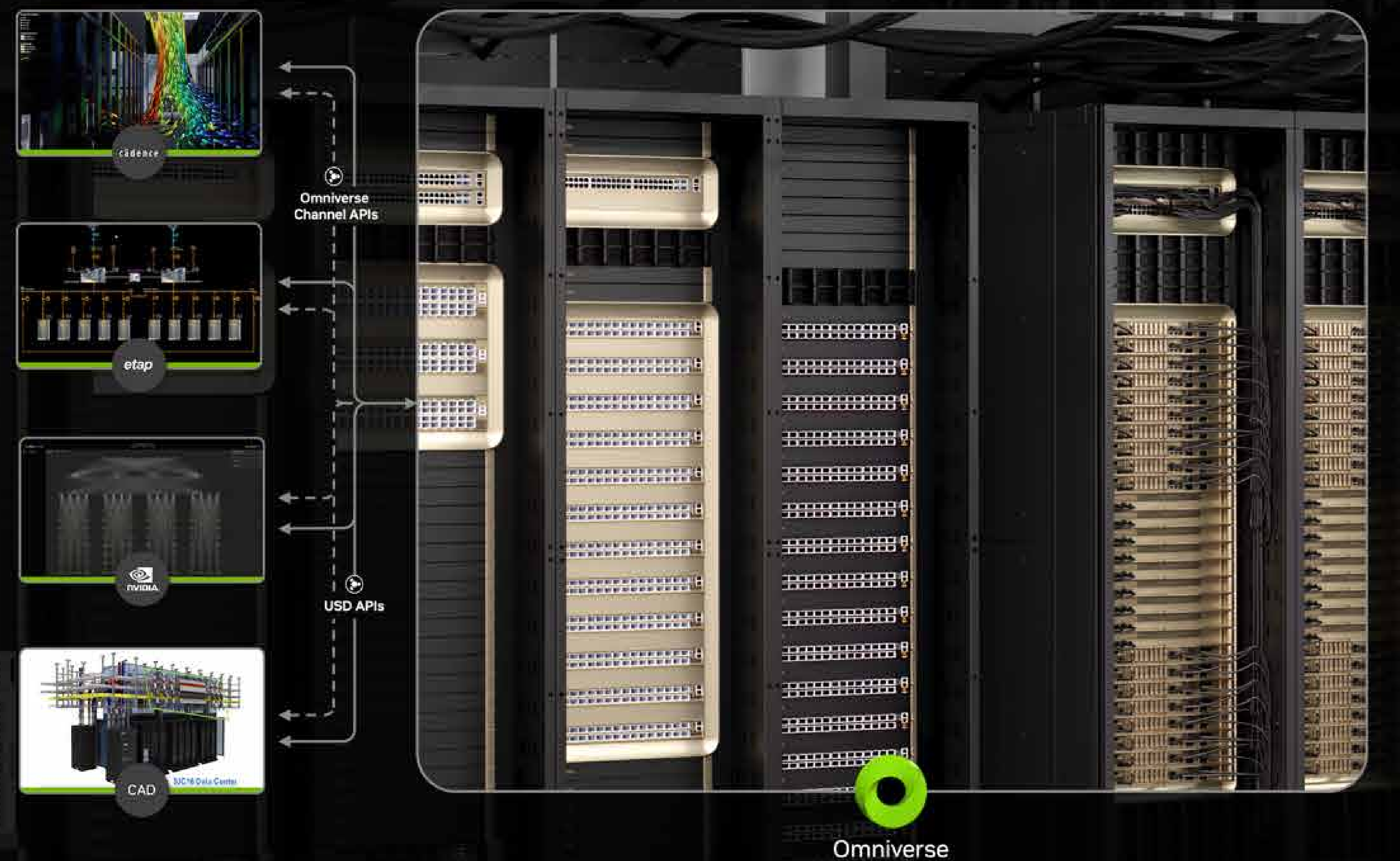
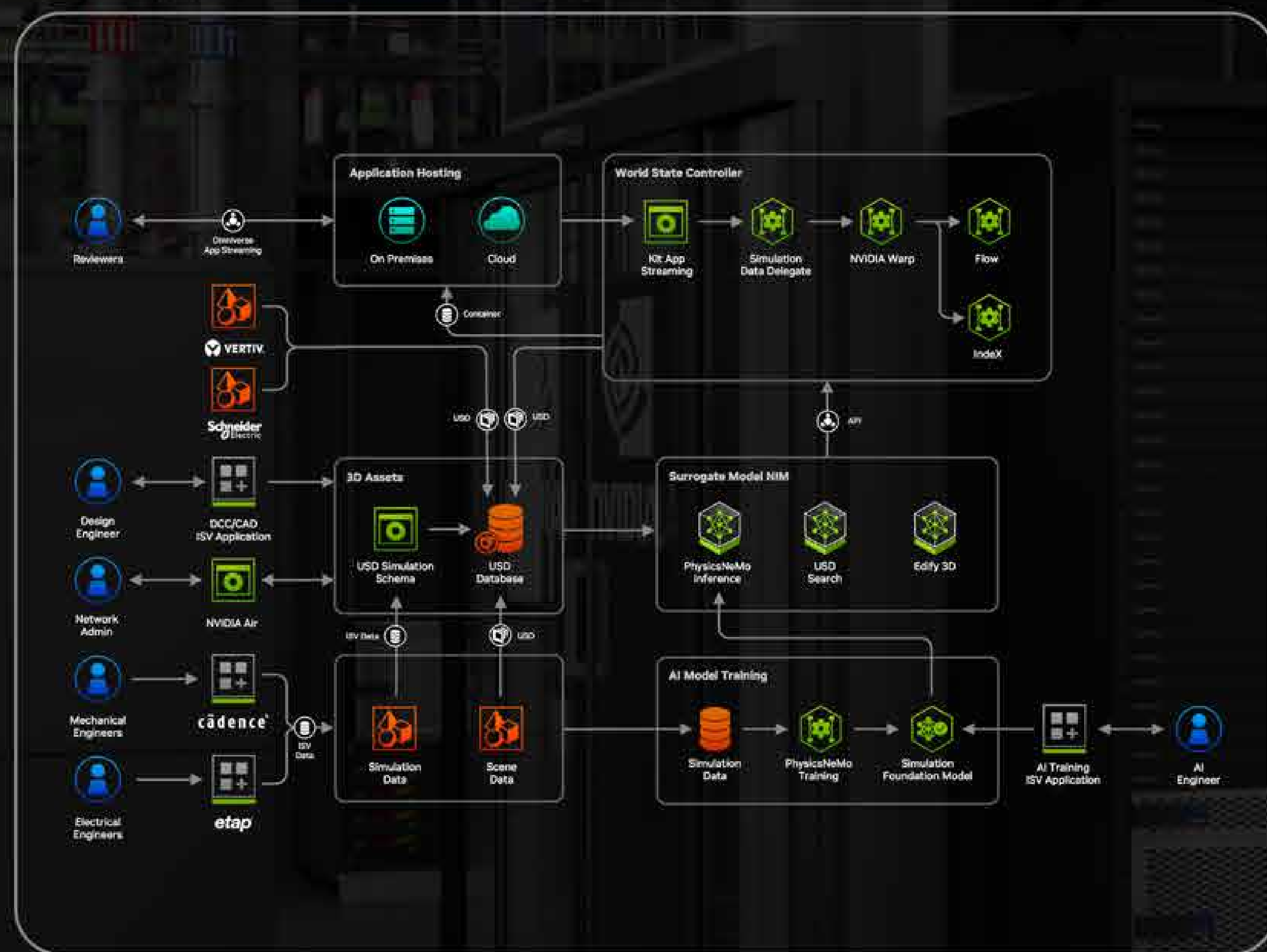
600

Data Center Productivity

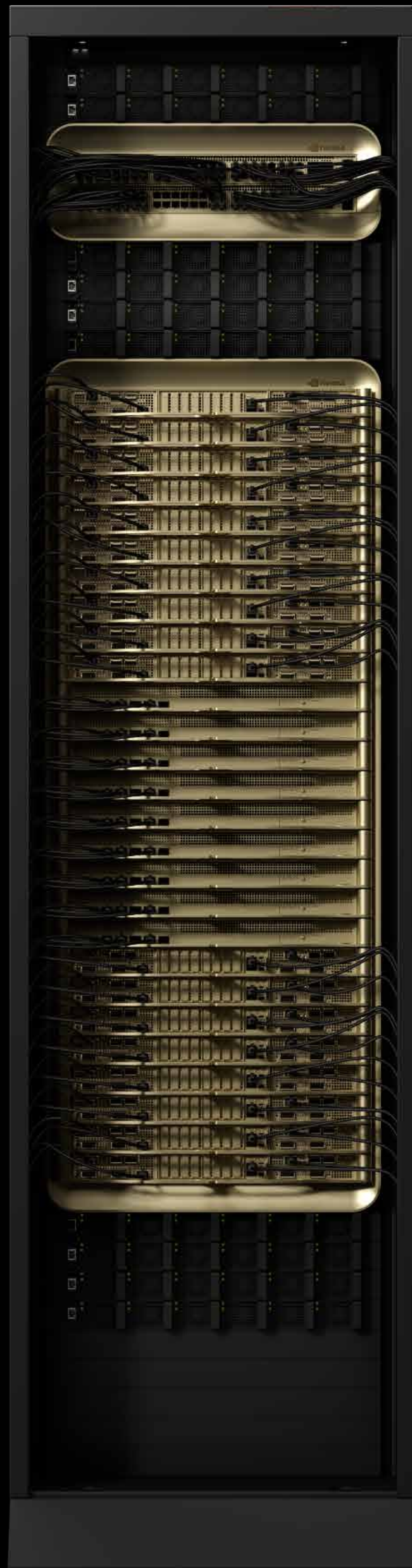
300M

12,000M

40X More Token Revenue







*Oberon Rack
Liquid Cooled*

Blackwell Ultra NVL72

Second Half 2025

1.1 EF Dense FP4 Inference

0.36 EF FP8 Training

1.5X GB200 NVL72

New Attention Instructions

2X

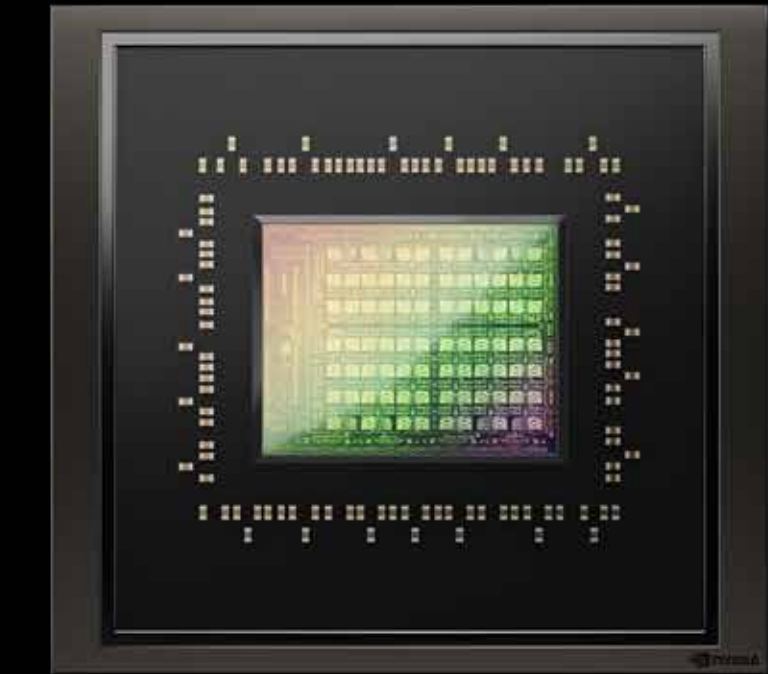
20 TB HBM | 40 TB Fast Memory

1.5X

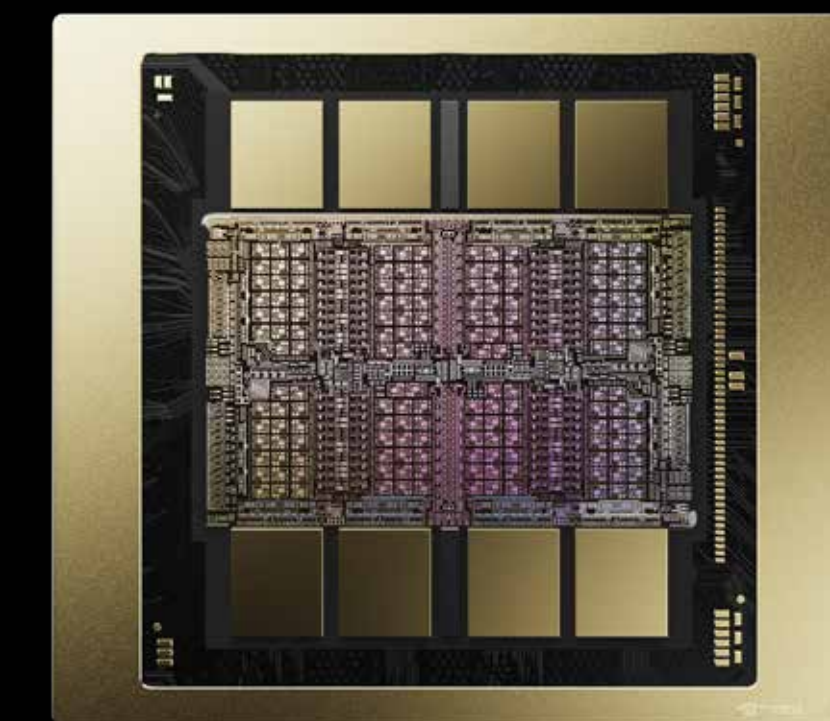
14.4 TB/s CX8

2X

Grace

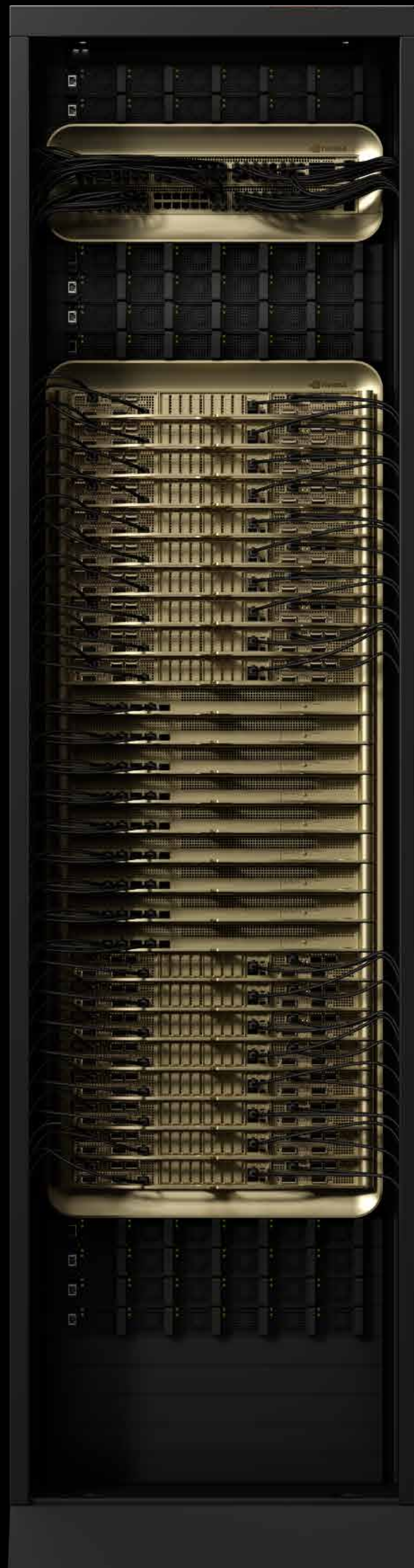


Blackwell Ultra



2 Reticle-Sized GPUs

15PF Dense FP4 | 288GB HBM3e



*Oberon Rack
Liquid Cooled*

Vera Rubin NVL144

Second Half 2026

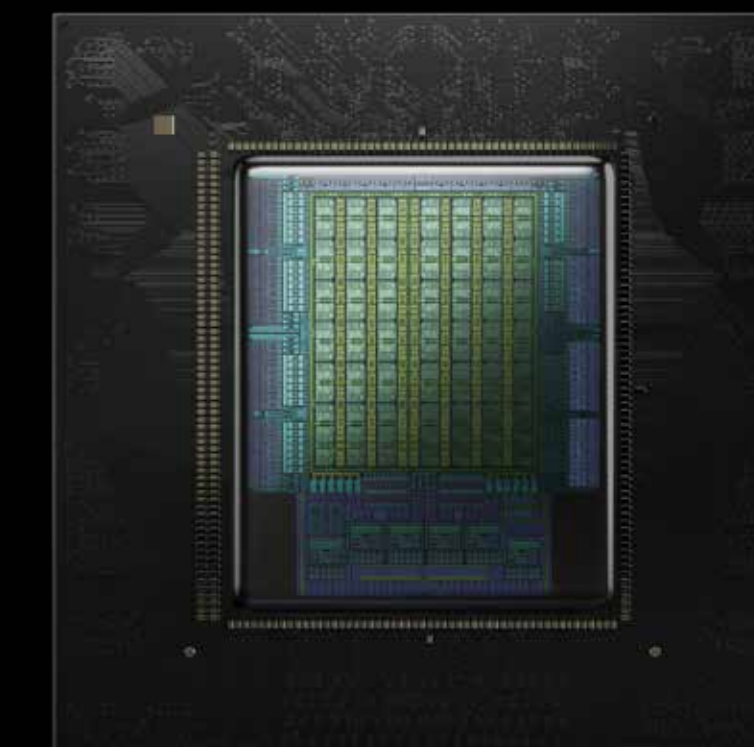
3.6 EF FP4 Inference
1.2 EF FP8 Training
3.3X GB300 NVL72

13 TB/s HBM4
75 TB Fast Memory
1.6X

260 TB/s NVLink6
2X

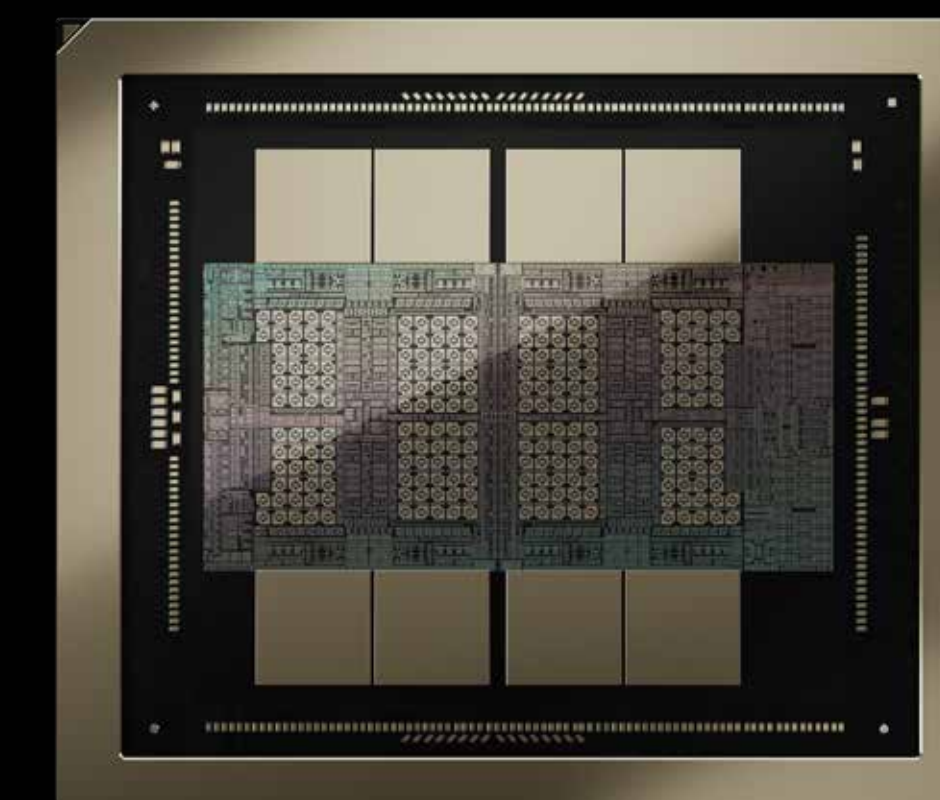
28.8 TB/s CX9
2X

Vera



88 Custom Arm Cores
176 Threads
1.8 TB/s NVLink-C2C

Rubin



2 Reticle-Sized GPUs
50PF FP4 | 288GB HBM4



*Kyber Rack
Liquid Cooled*

Rubin Ultra NVL576

Second Half 2027

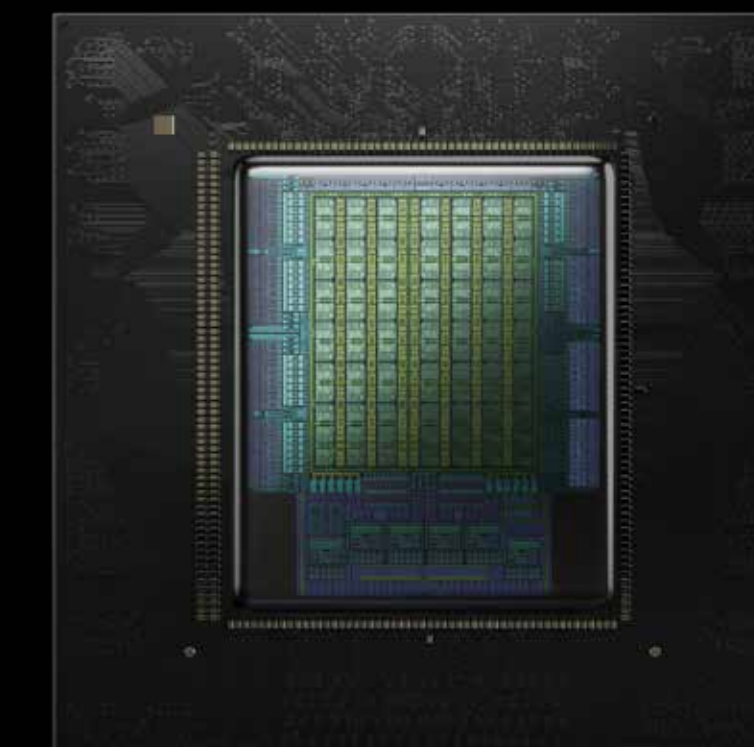
15 EF FP4 Inference
5 EF FP8 Training
14X GB300 NVL72

4.6 PB/s HBM4e
365 TB Fast Memory
8X

1.5 PBs NVLink7
12X

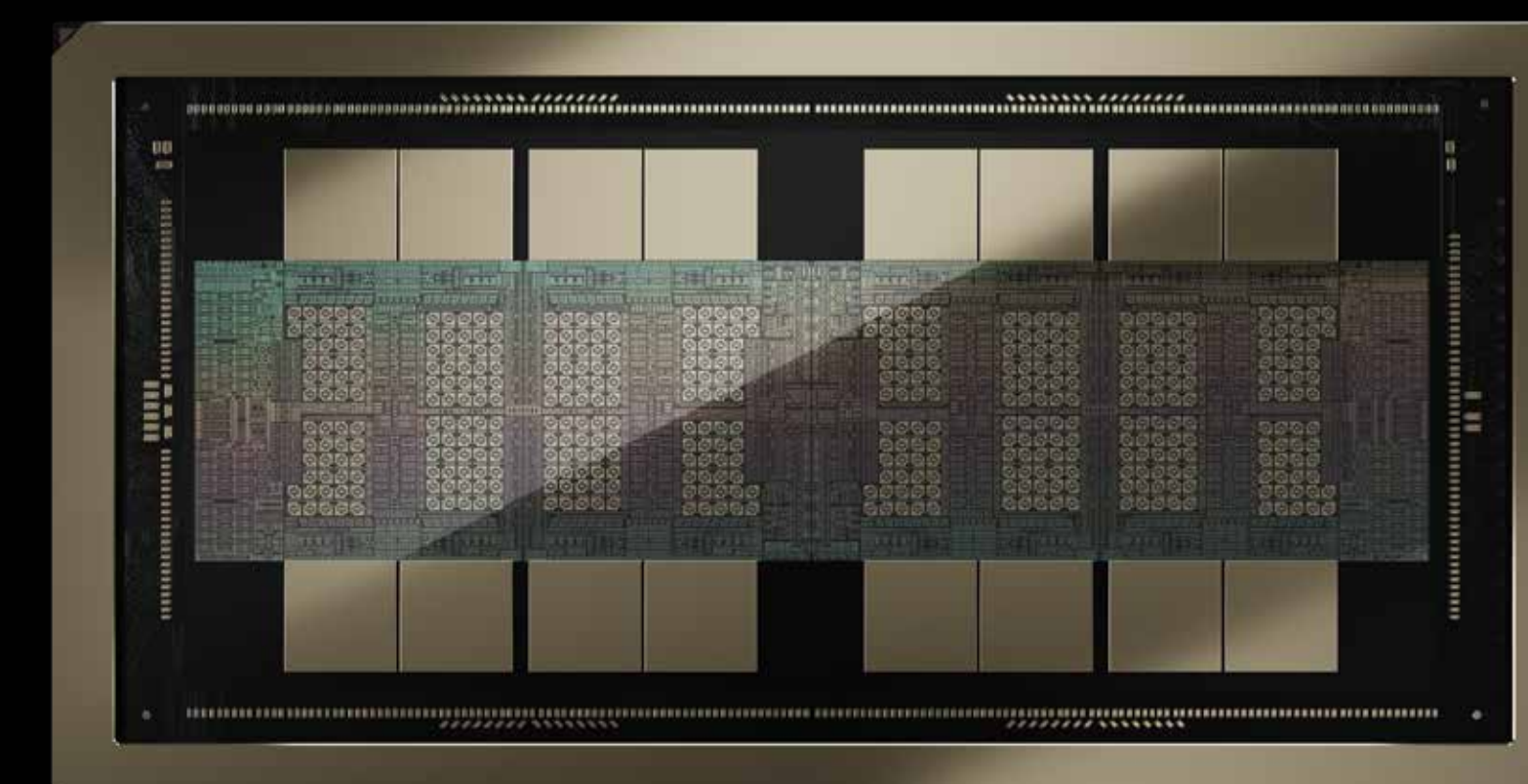
115.2 TB/s CX9
8X

Vera



88 Custom Arm Cores
176 Threads
1.8 TB/s NVLink-C2C

Rubin Ultra



4 Reticle-Sized GPUs
100PF FP4 | 1TB HBM4e

NVIDIA Rubin System

576 Rubin GPUs
15 EF FP4

2,304 Memory Chips
150 TB
4600 PB/s

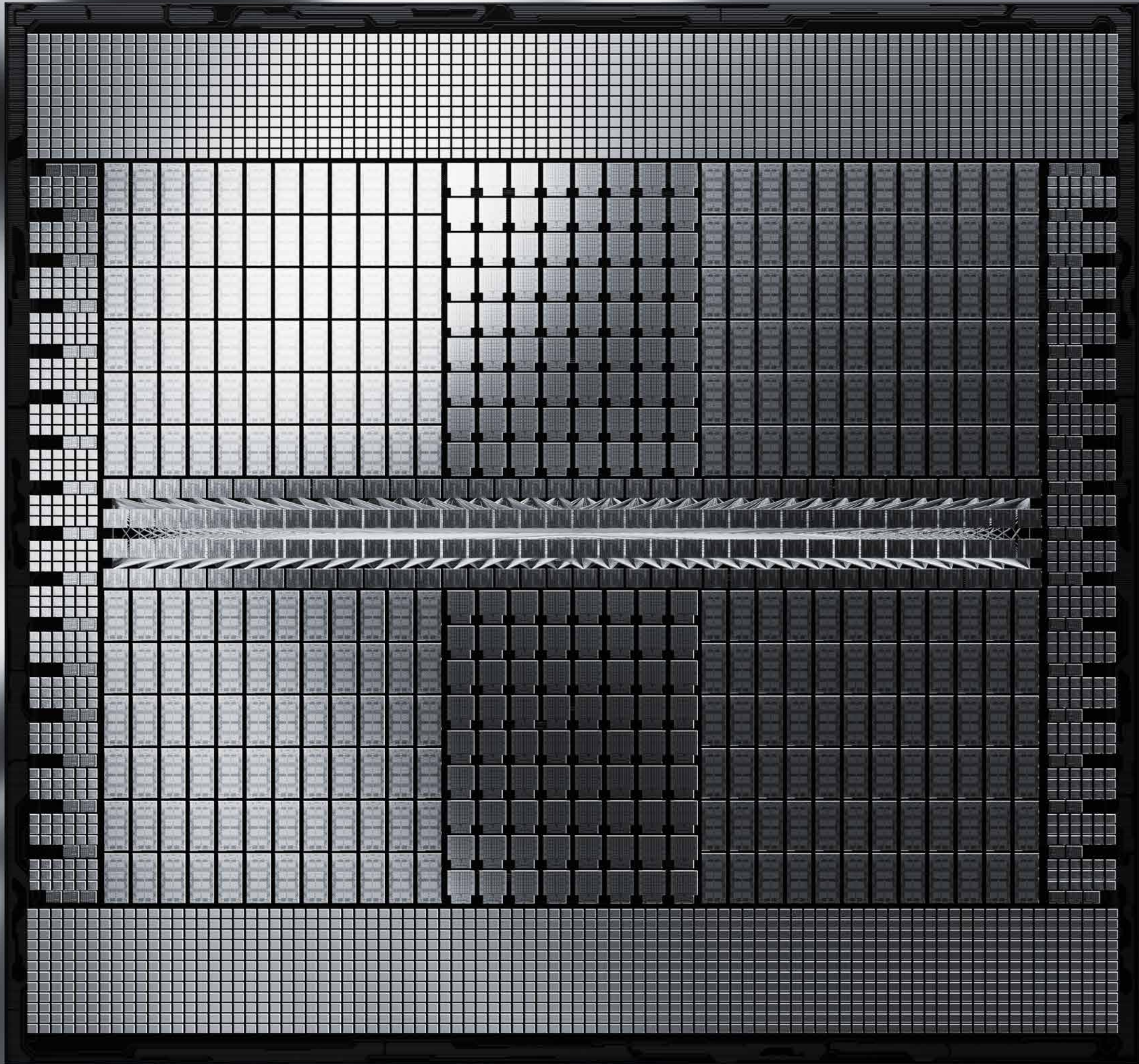
144 NVLink Switches
1500 PB/s

1,300 Trillion Transistors

12,672 Vera CPU Cores

576 ConnectX-9 NICs

72 BlueField DPUs



Vera Rubin NVLink576

NVIDIA Blackwell System

72 Blackwell GPUs
1.1 EF FP4

576 Memory Chips
20 TB
576 TB/s

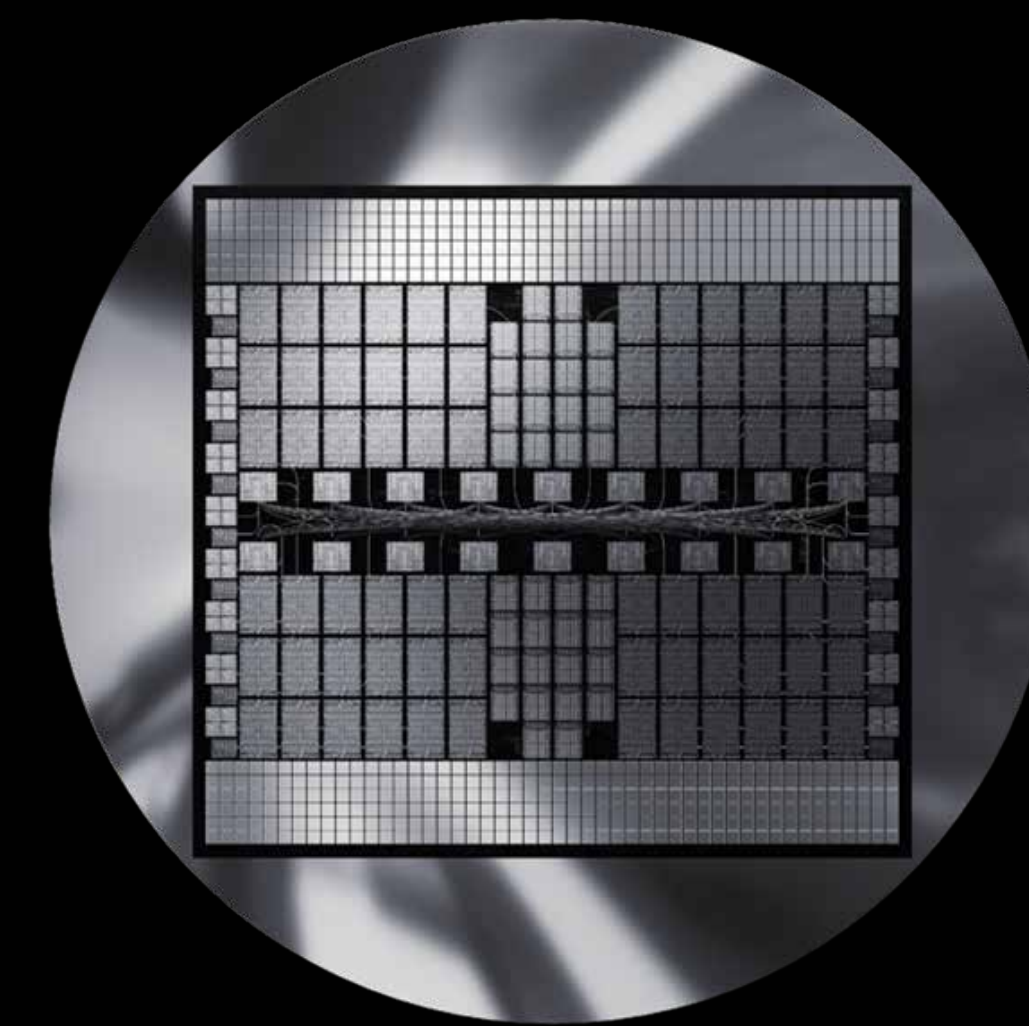
18 NVLink Switches
130 TB/s

130 Trillion Transistors

2,592 Grace CPU Cores

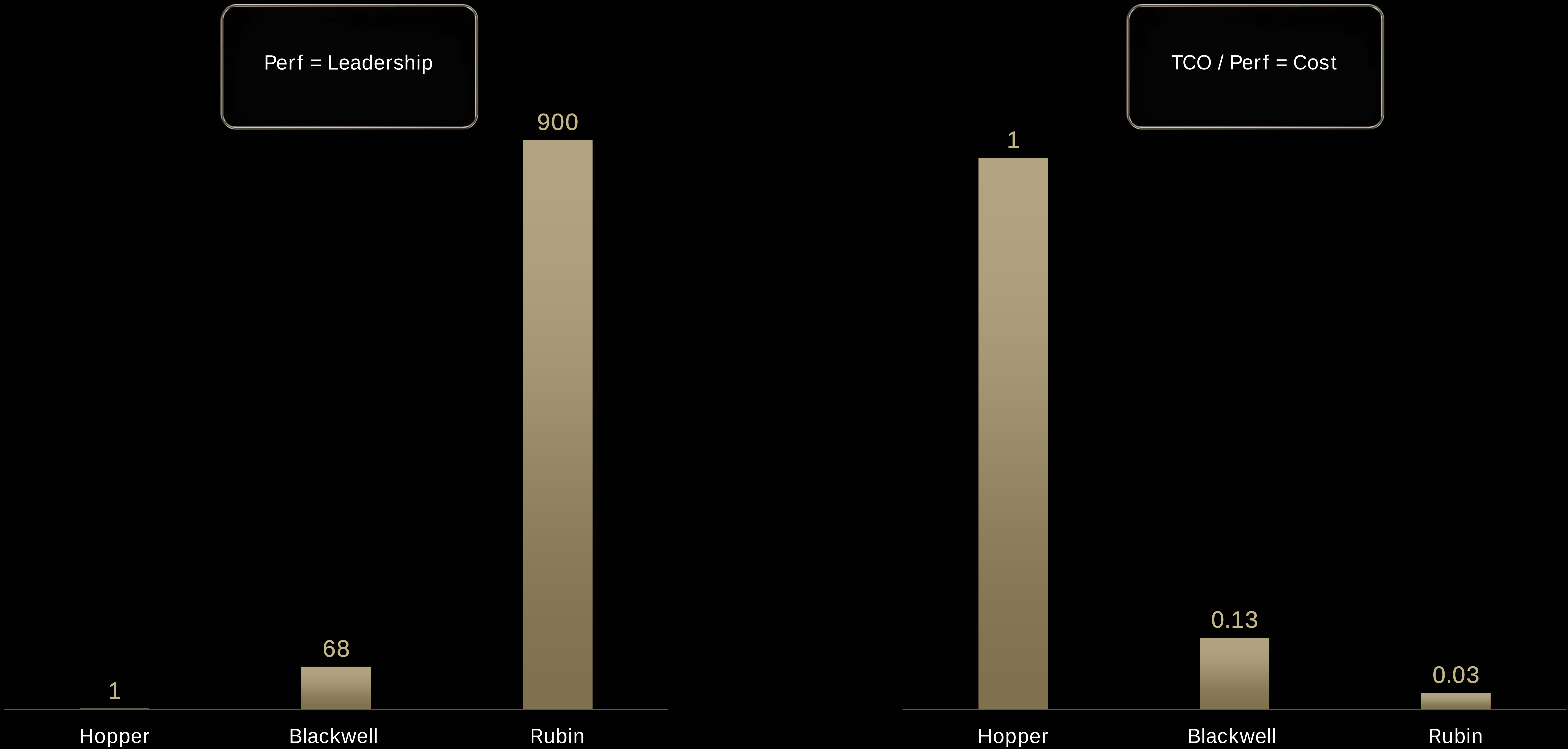
72 ConnectX-8 NICs

18 BlueField DPUs



Grace Blackwell NVLink72

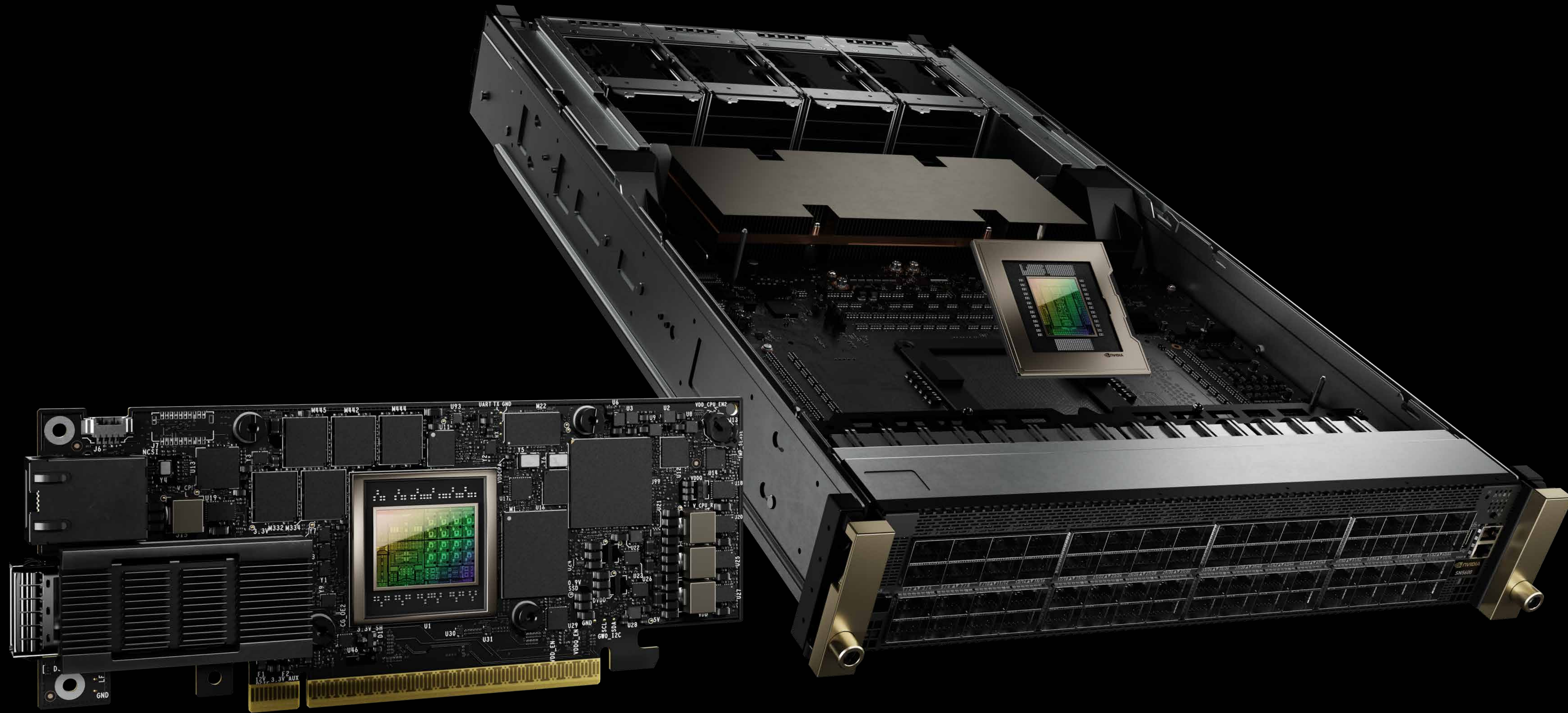
Fast Roadmap Drives AI Factory Economics



**Without sparsity*

Spectrum-X “Supercharged” Ethernet

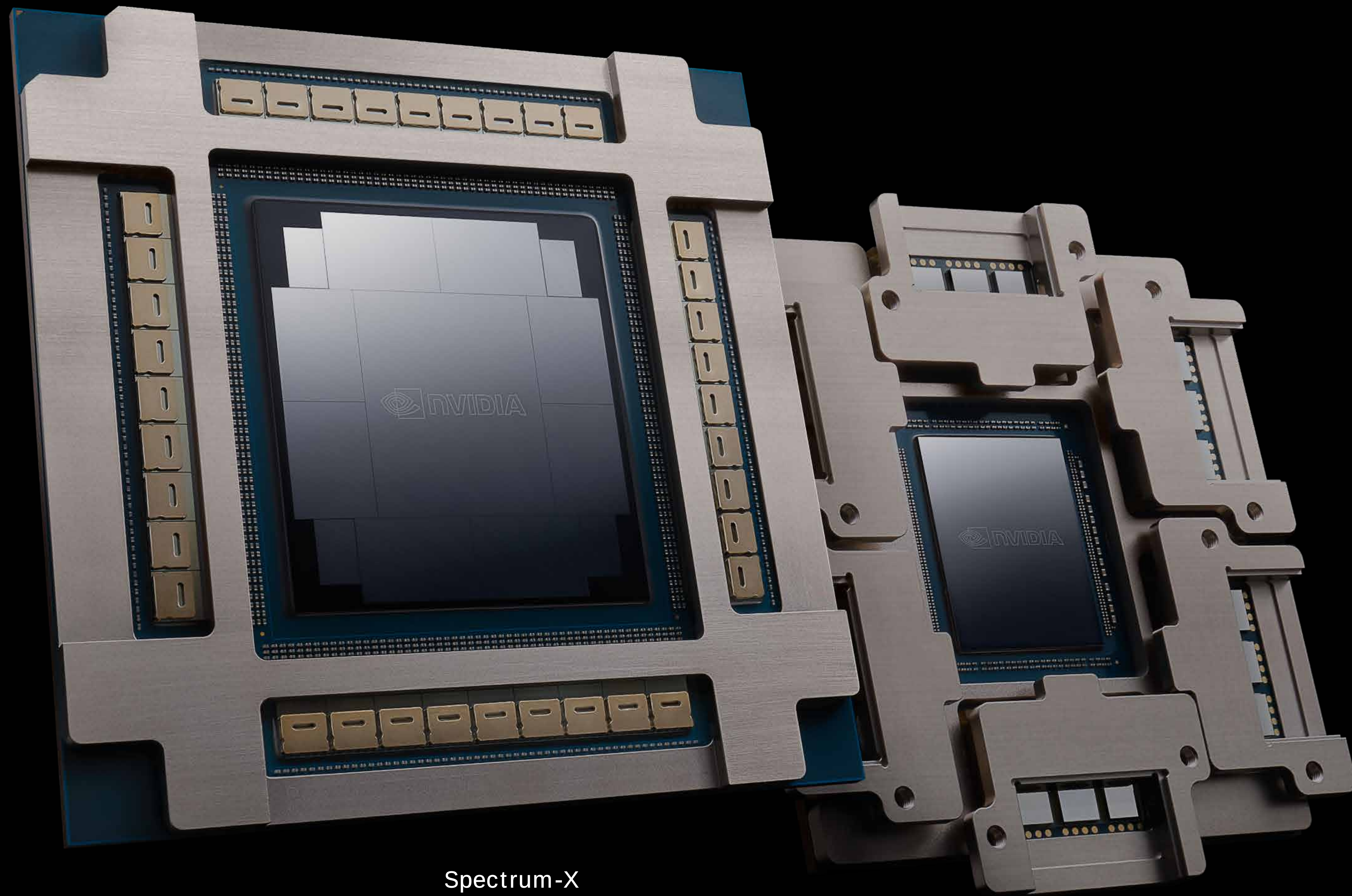
Powering the World’s Most Advanced AI Clouds and Factories



Spectrum-X SuperNIC

Spectrum-X Ethernet Switch





Spectrum-X
Integrated Silicon Photonics
2nd Half 2026

Quantum-X
Integrated Silicon Photonics
2nd Half 2025

NVIDIA Photonics

CPO Co-Invention With Ecosystem Partners

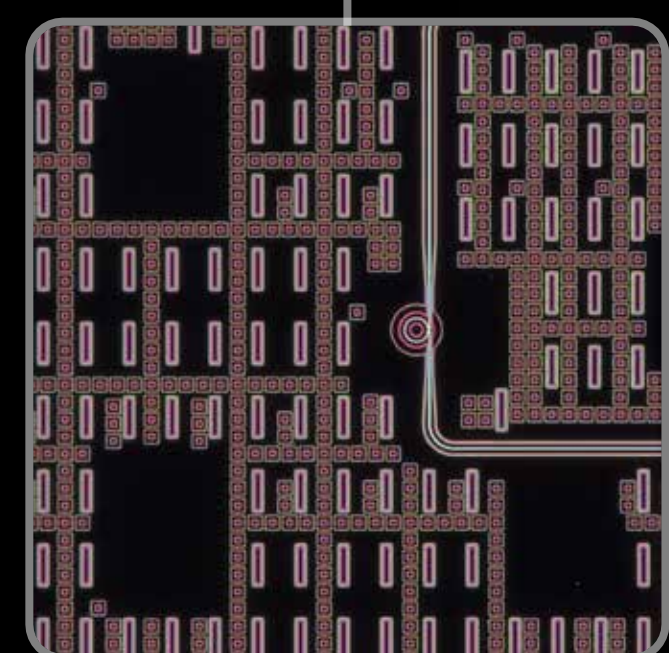
- 1st 1.6T Silicon Photonics CPO Chip - New Micro Ring Modulators (MRM)
- 1st 3D-Stacked Silicon Photonics Engine with TSMC Process
- High-Power, High-Efficiency Lasers
- Detachable Fiber Connectors
- 100's of Patents, Licensed to Partners



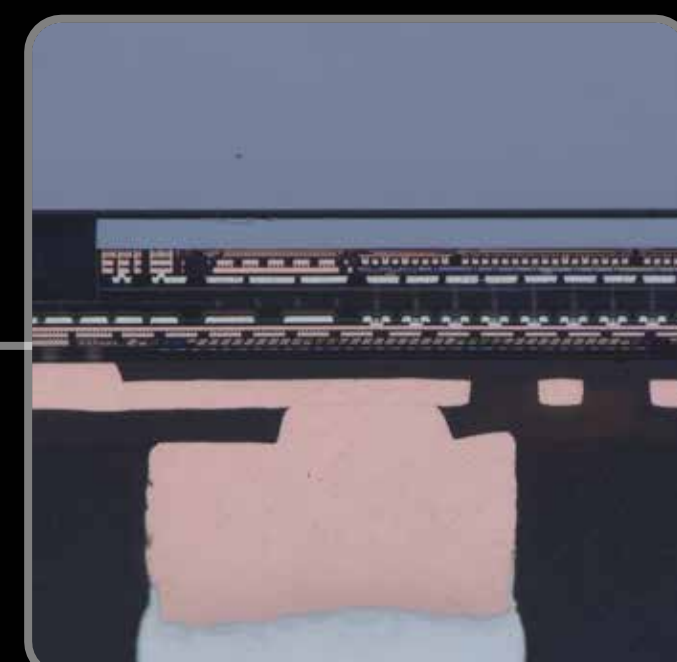
Electronic IC



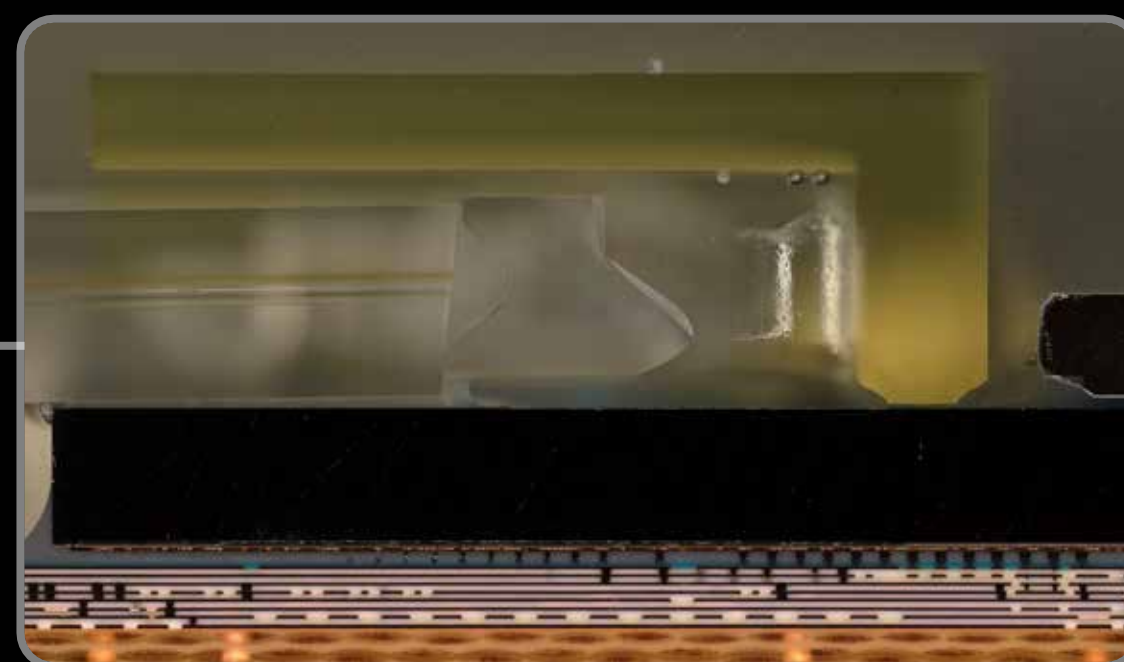
Photonic IC



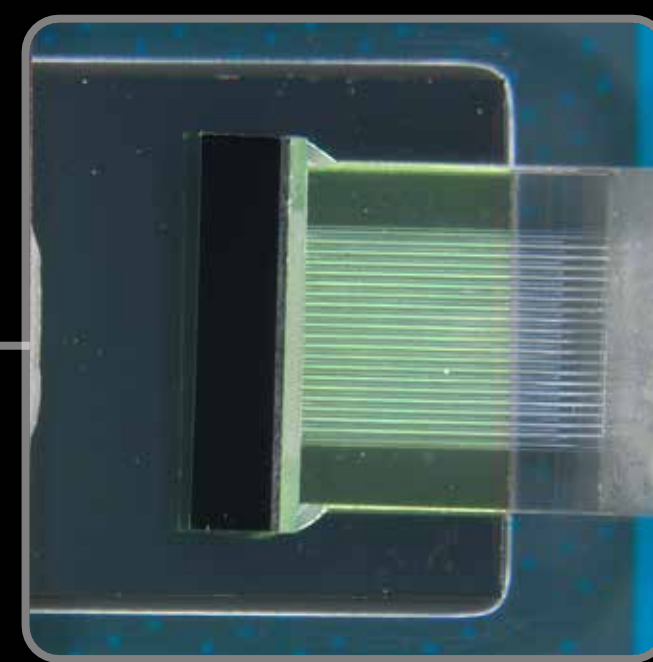
3D Stacked Electronic and Photonic ICs



COUPE uLens with surface coupling



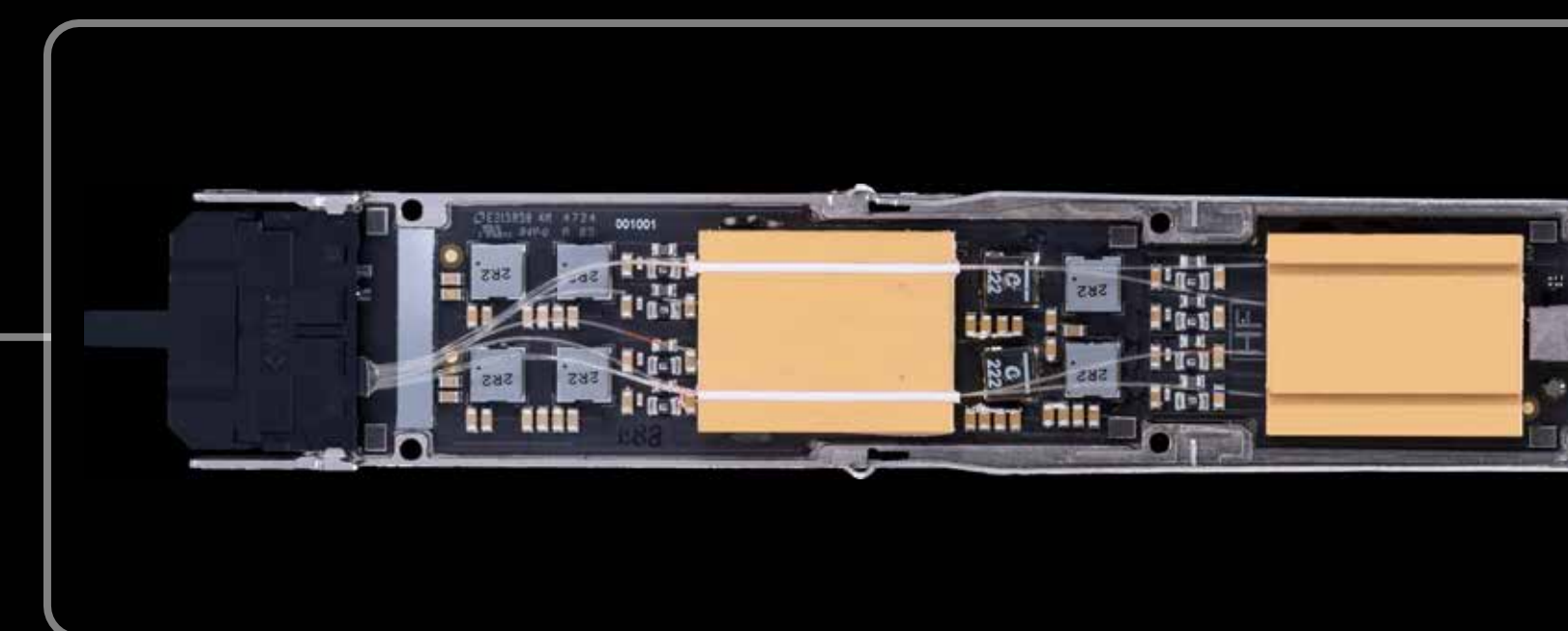
Fiber Connector



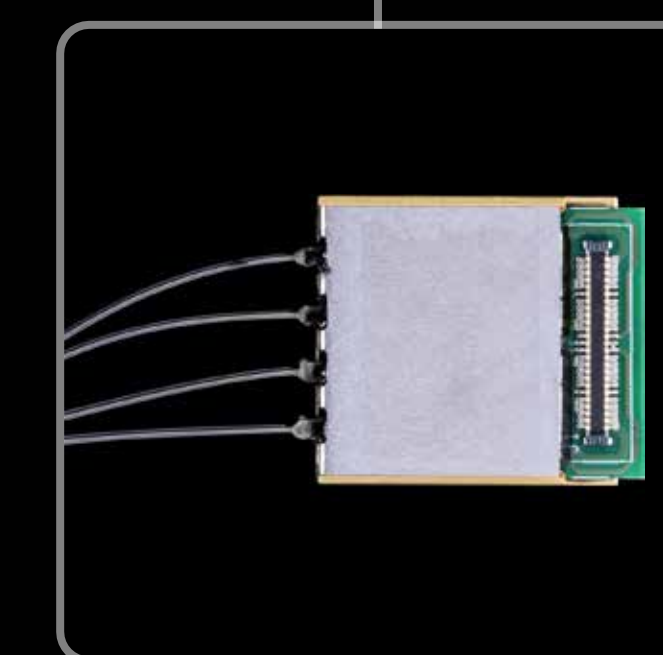
Optical Sub-Assembly



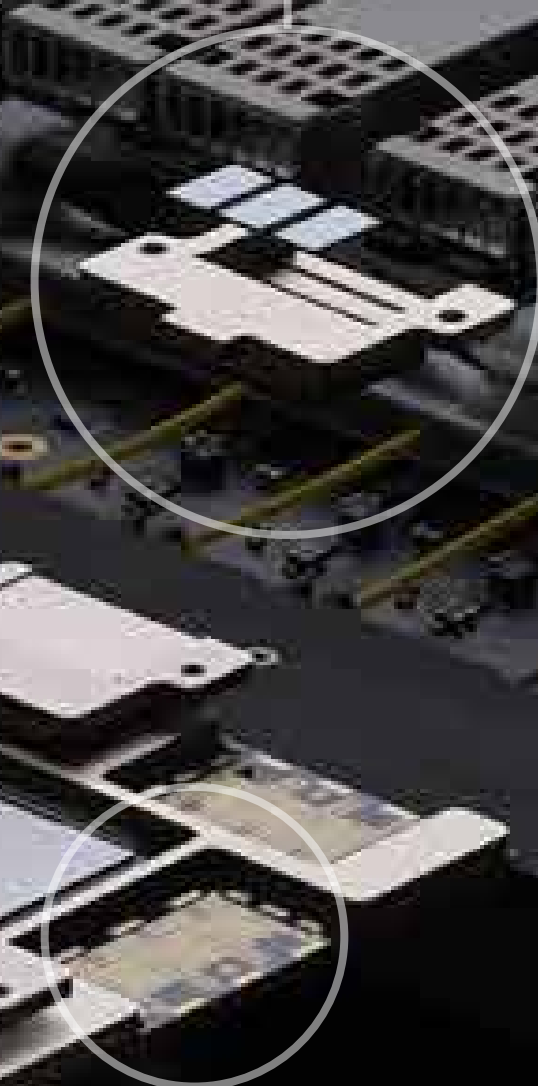
External Laser Source Module



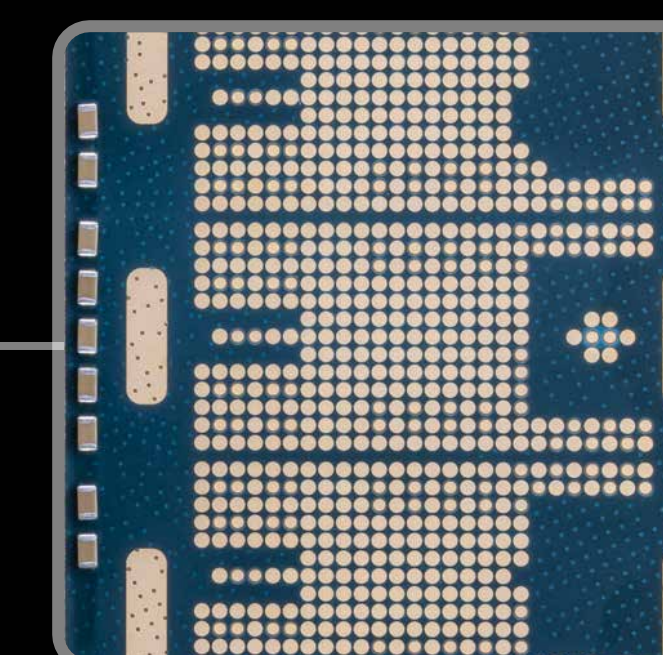
Laser Source Package

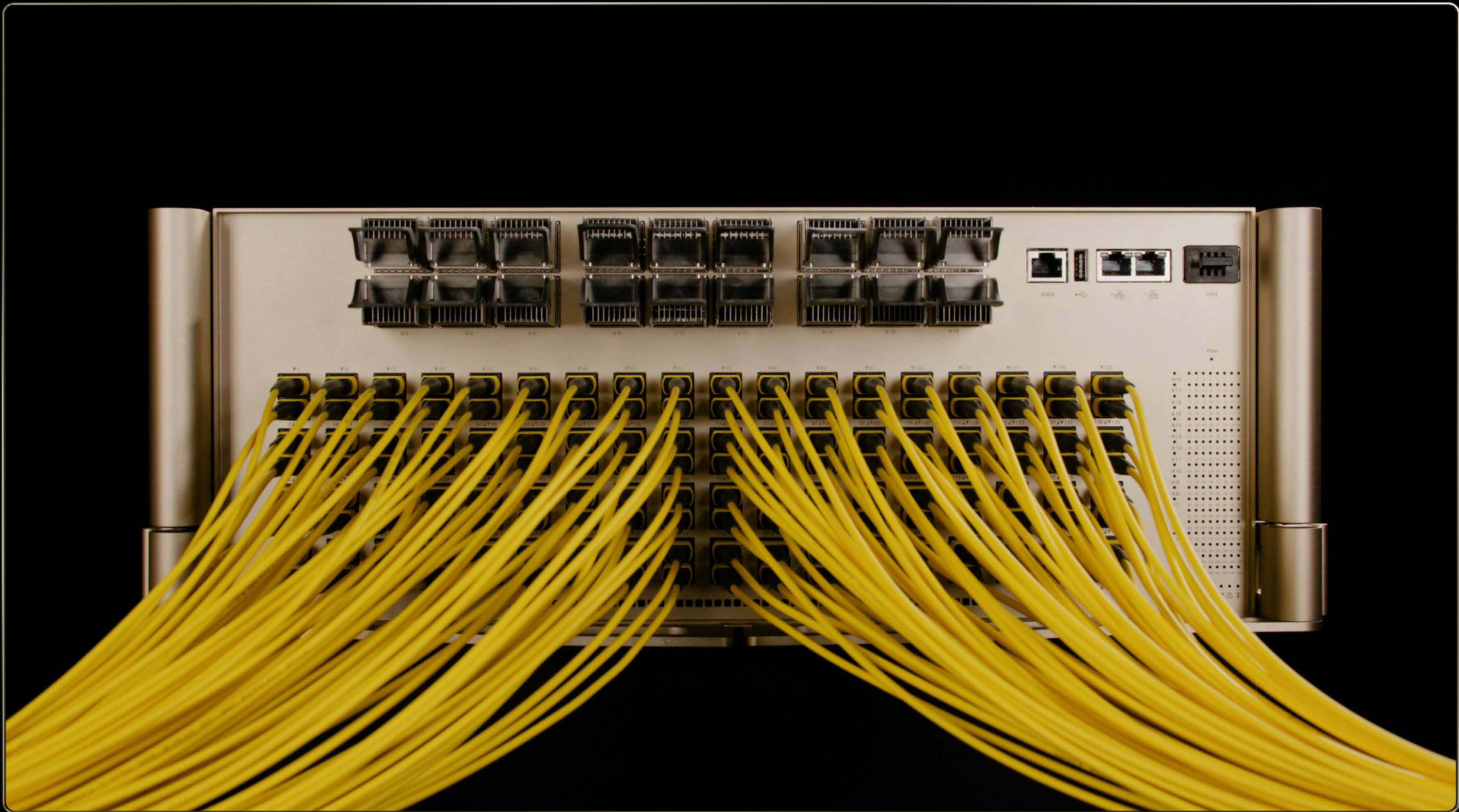


Co-Packaged Optics
Quantum-X Photonic Switch



Interposer

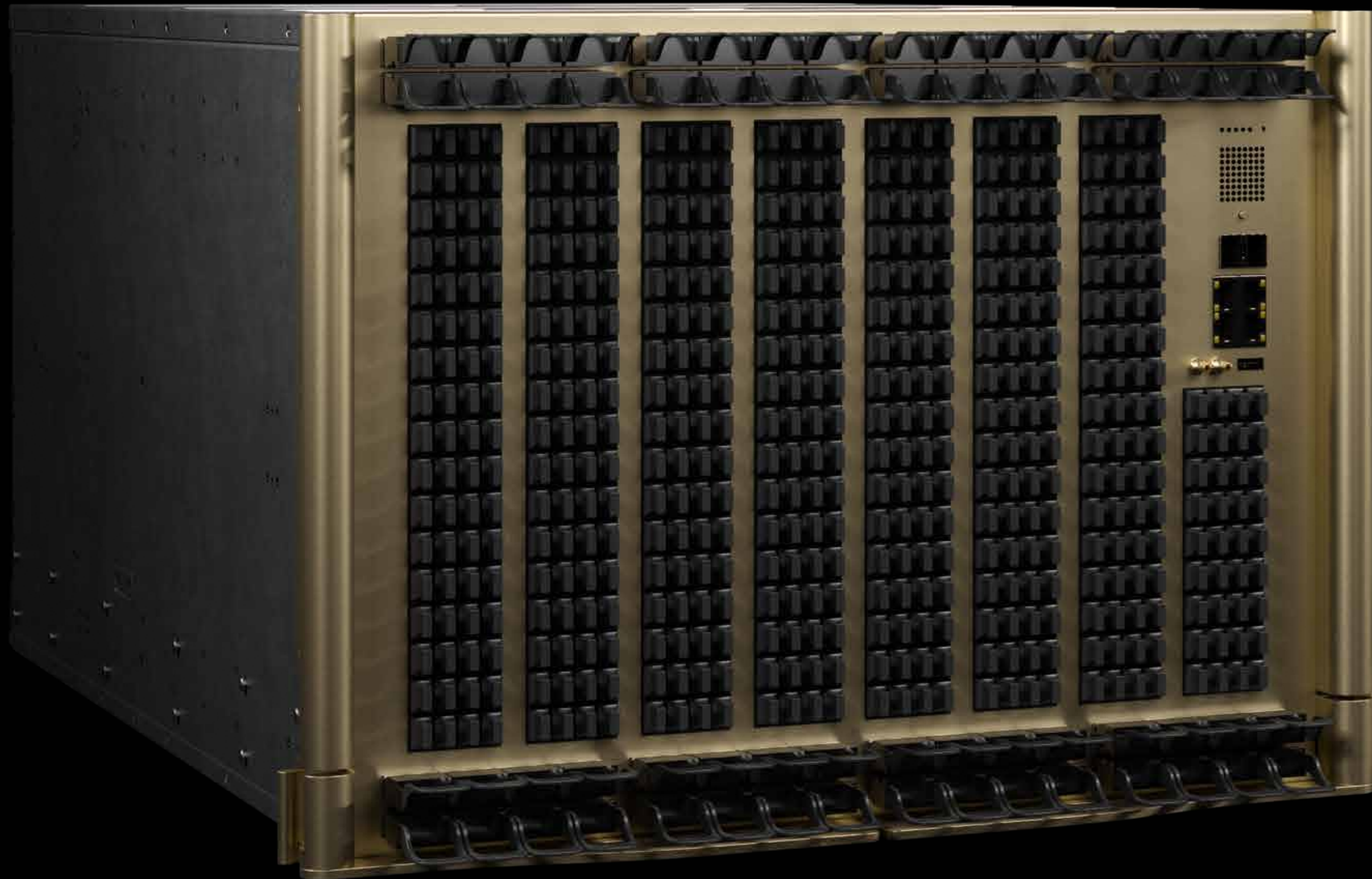




Announcing NVIDIA Photonics Switch Systems

World's Most Advanced Co-Packaged Optical Switches

Spectrum-X Photonics
2nd Half 2026



512 Ports of 800G | 2K x 200G



128 Ports of 800G | 512 x 200G

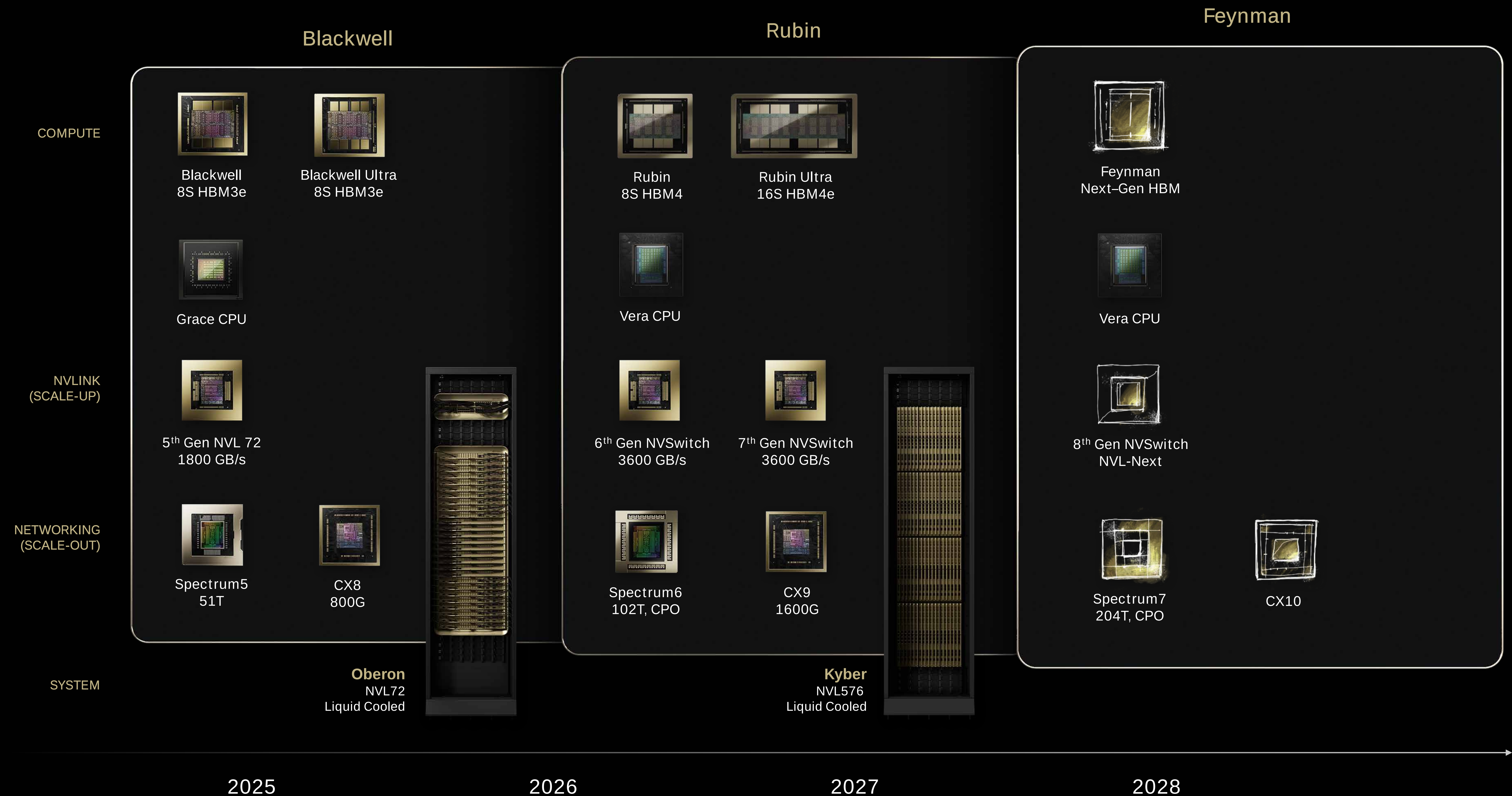
Quantum-X Photonics
2nd Half 2025



144 Ports of 800G | 576 x 200G

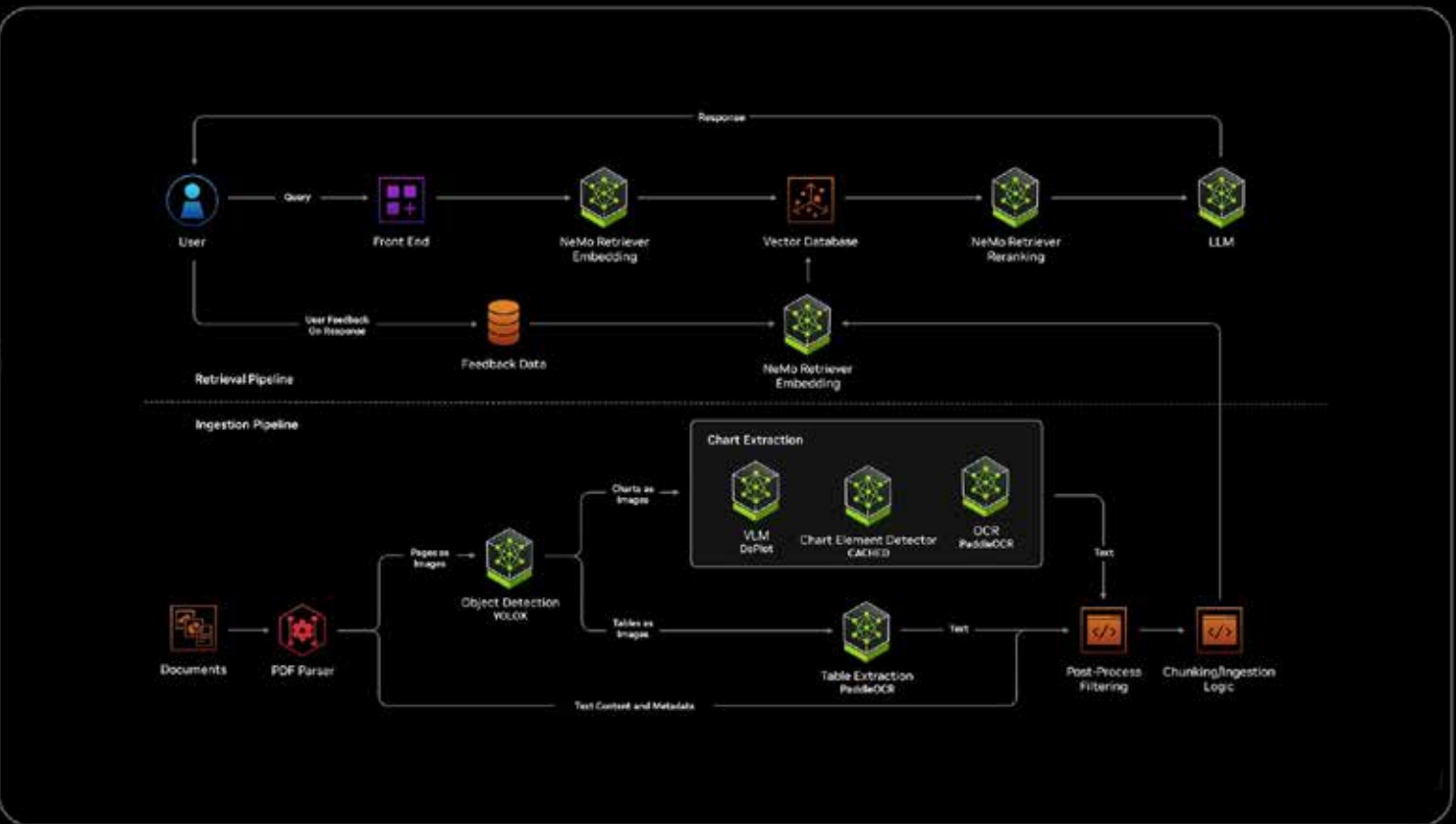
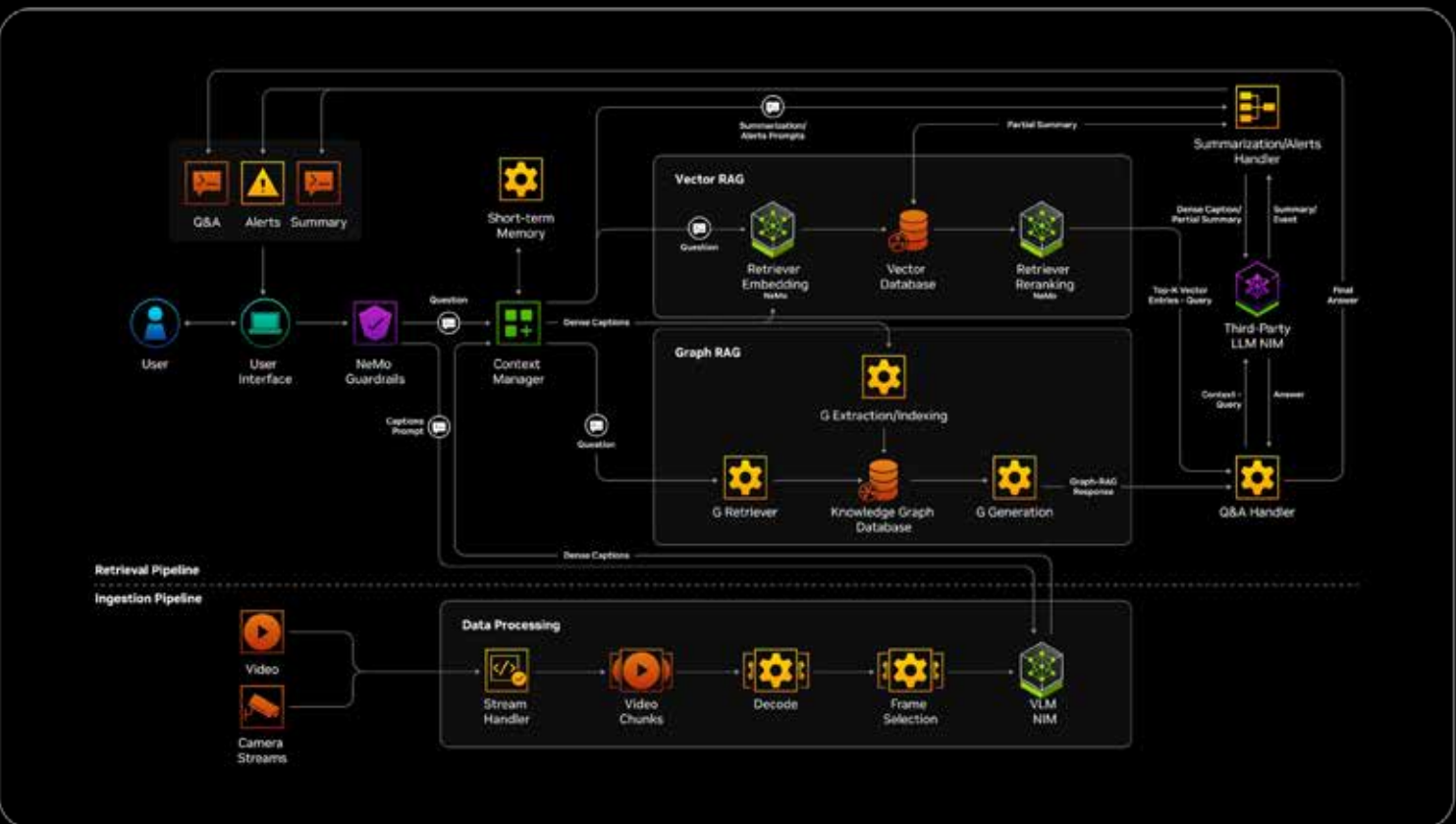
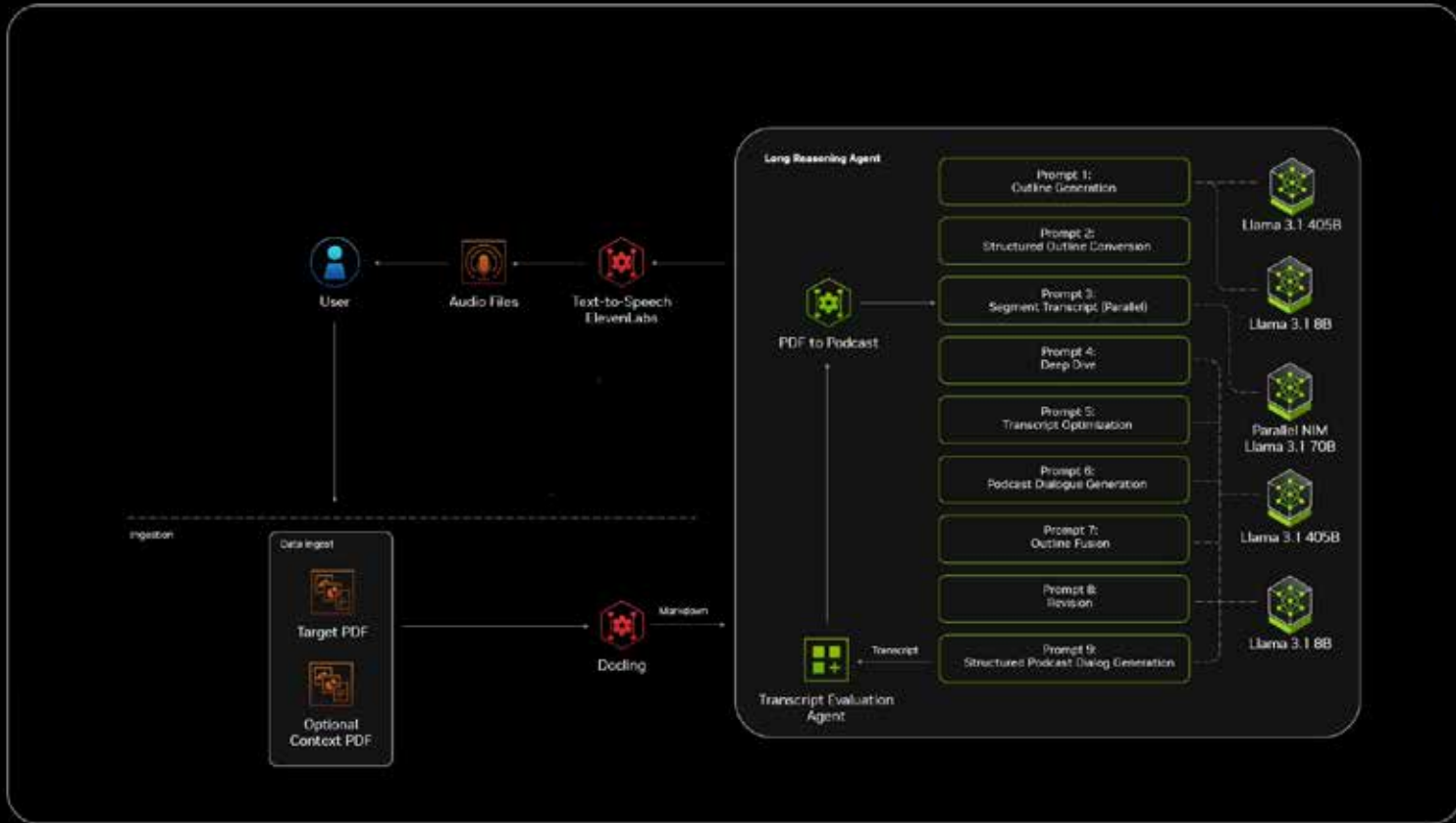
NVIDIA Paves Road to Gigawatt AI Factories

One-Year Rhythm | Full-Stack | One Architecture | CUDA Everywhere

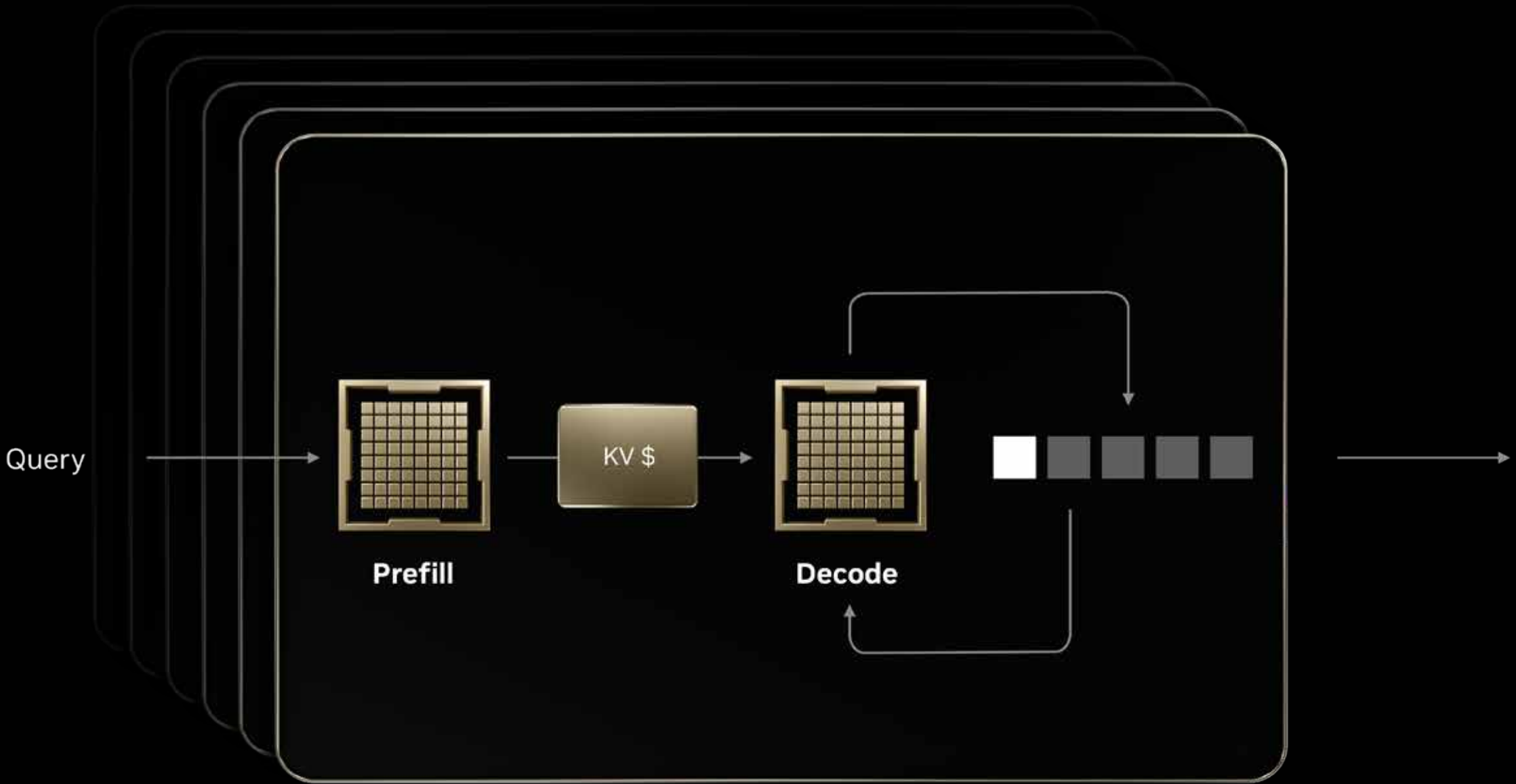


Reinventing \$500B Enterprise IT For the Age of AI

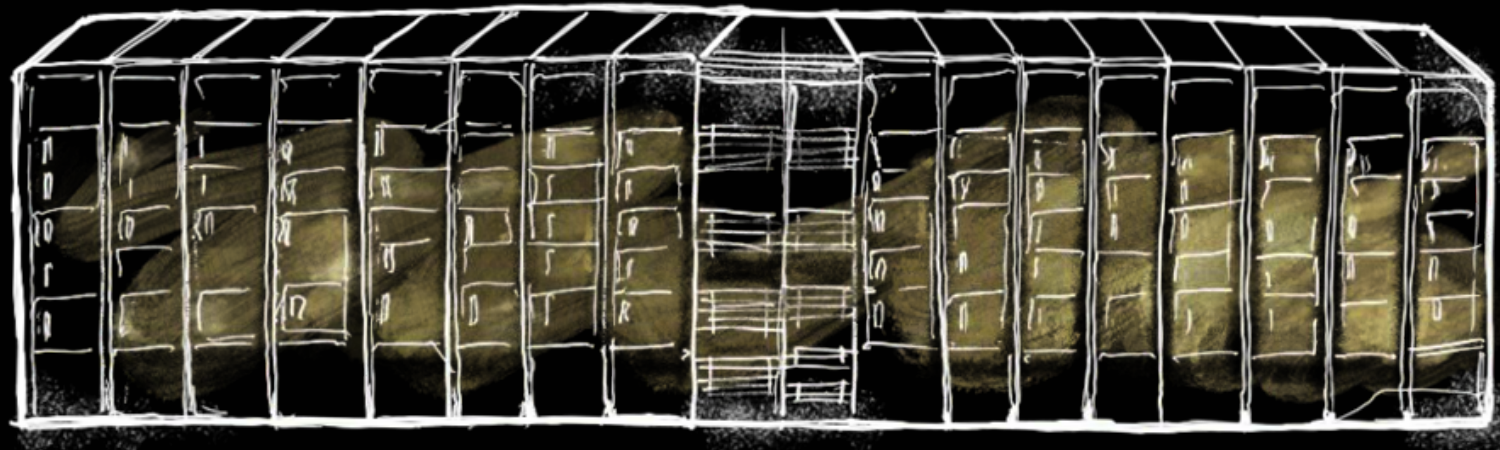
AI



OS



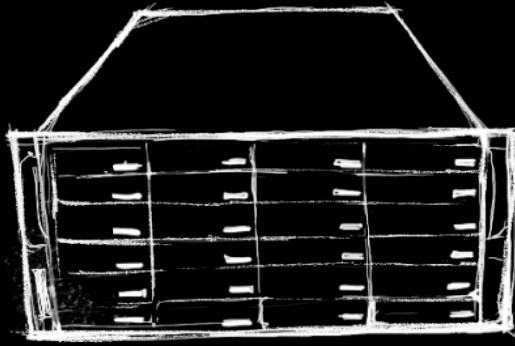
INFRASTRUCTURE



Compute

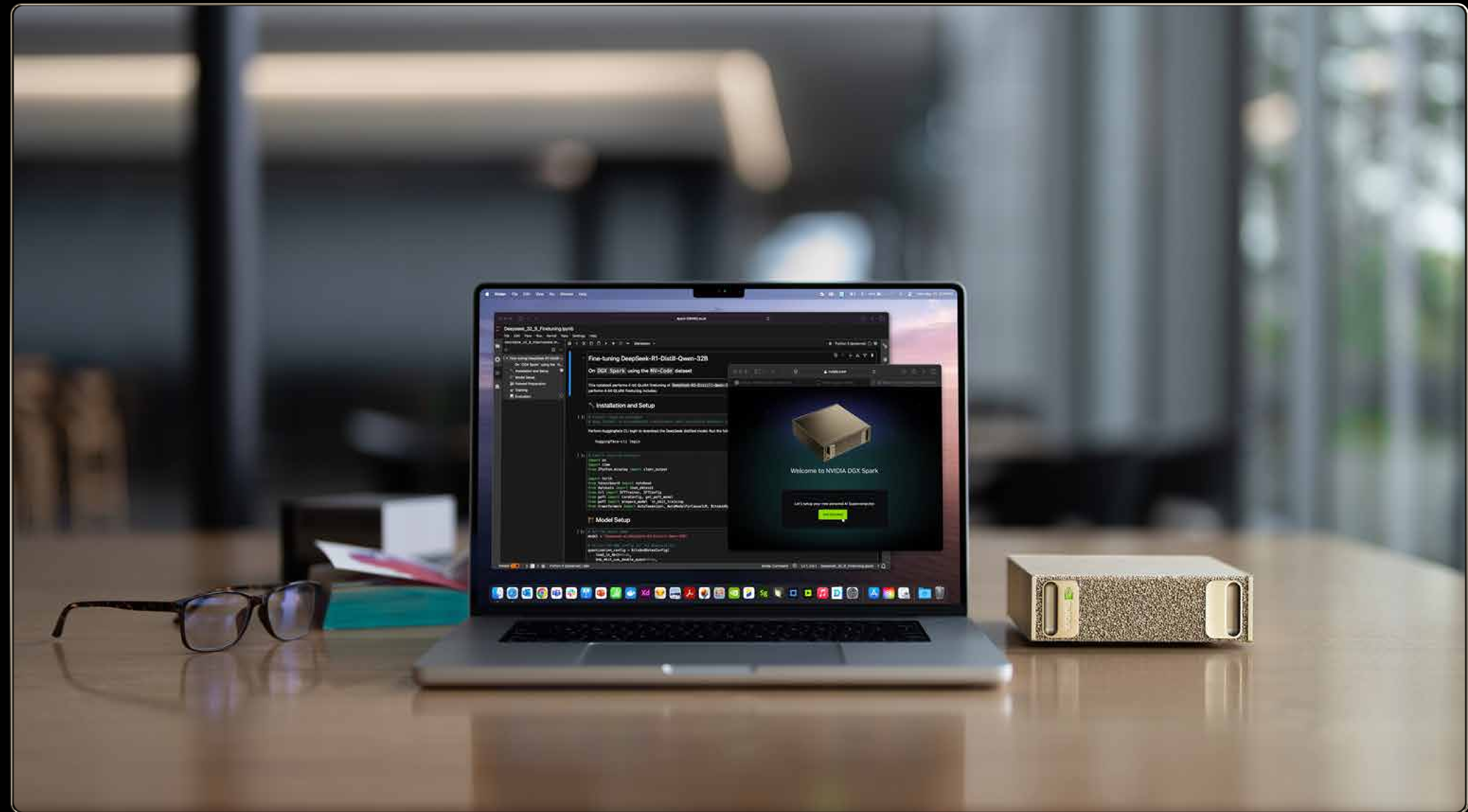


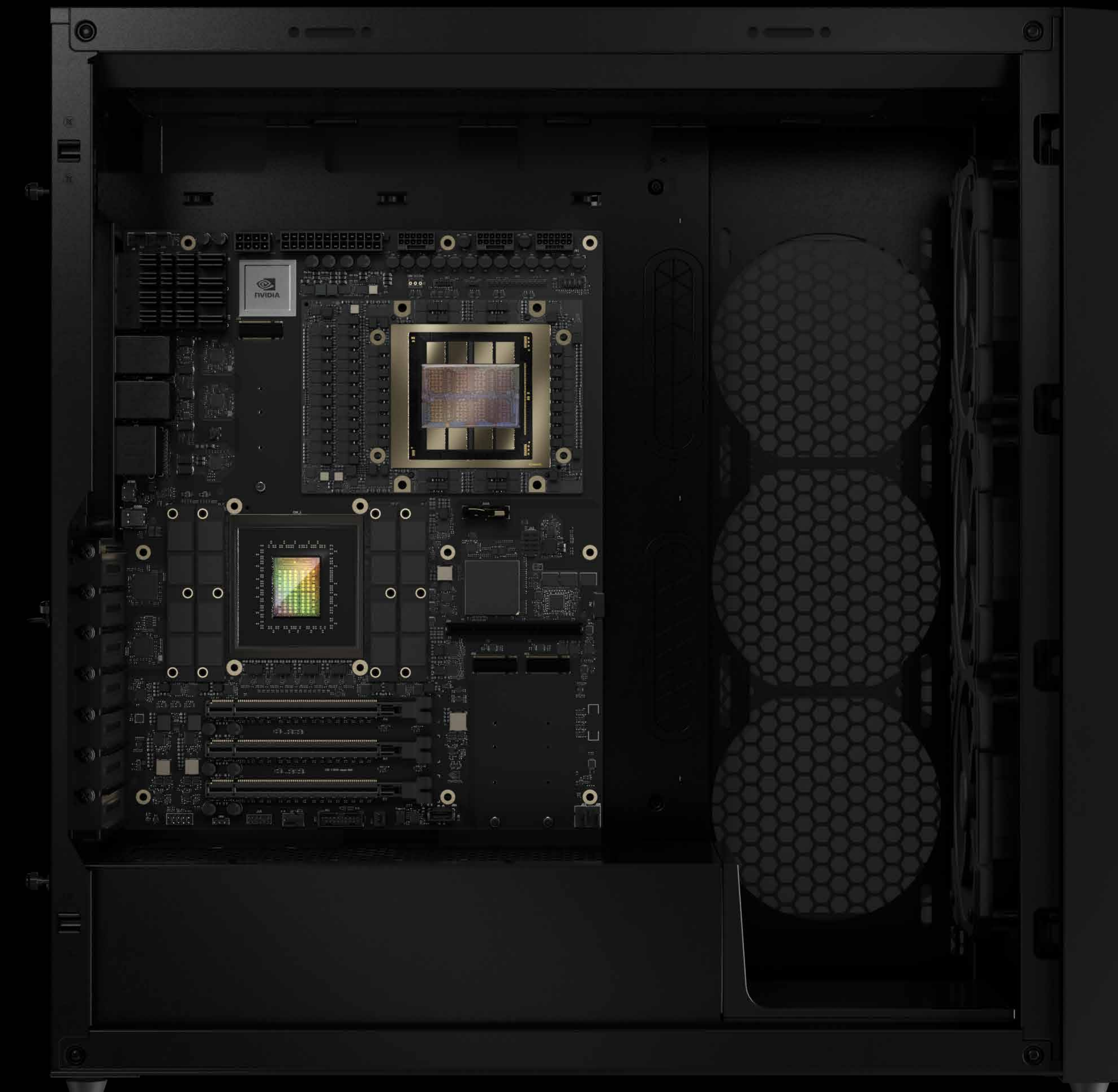
Networking



Storage







DGX Station

The Ultimate Workstation
for AI and Data Science

- GB300 Superchip
- 784 GB Unified System Memory
- 20,000 AI TFLOPS
- ConnectX-8 SuperNIC

ASUS

BOX

DELL Technologies

hp

Lambda

SUPERMICRO

NVIDIA AI Infrastructure for Enterprise Computing

DGX Spark
1 PFLOPS



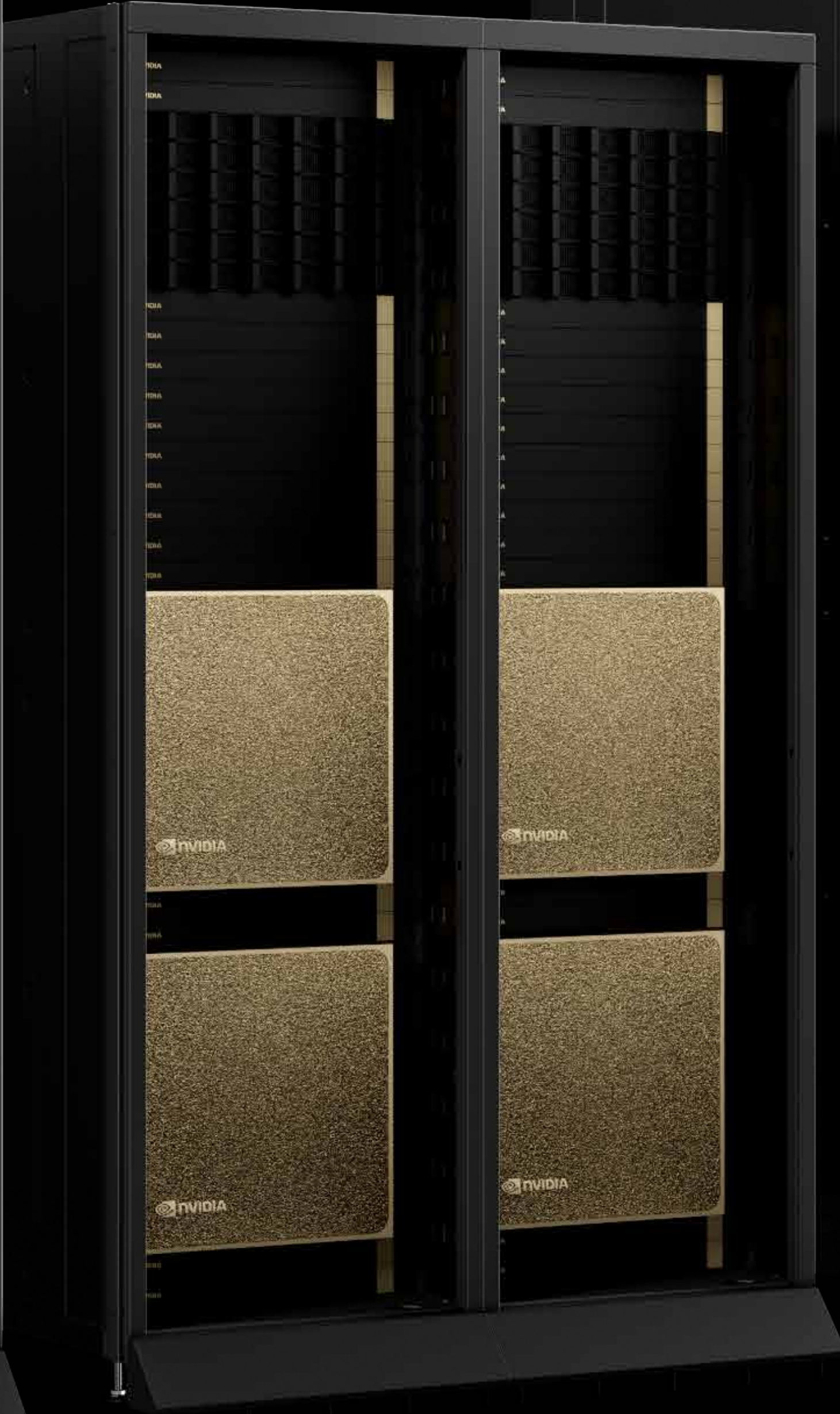
RTX PRO Workstation



DGX Station
20 PFLOPS



RTX PRO Enterprise Server

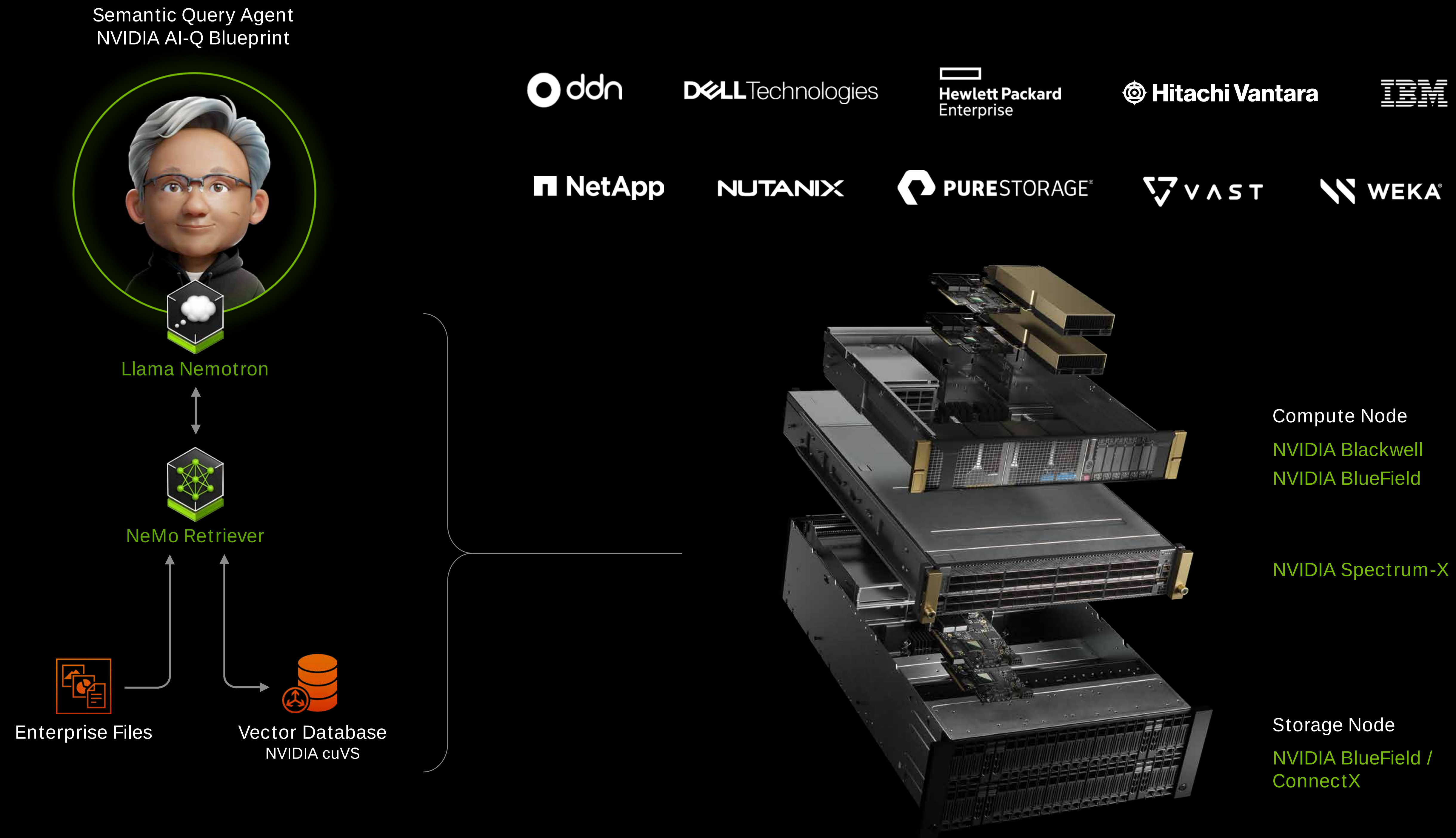


DGX B200



DGX GB300
15 EFLOPS

Announcing Storage Leaders Build AI Data Platforms for Enterprise AI





INDUSTRY'S BROADEST END-TO-END NVIDIA AI ENTERPRISE INFRASTRUCTURE



AI PCs



Spark



Station



Compute



Networking



Storage



Blackwell Compute Racks

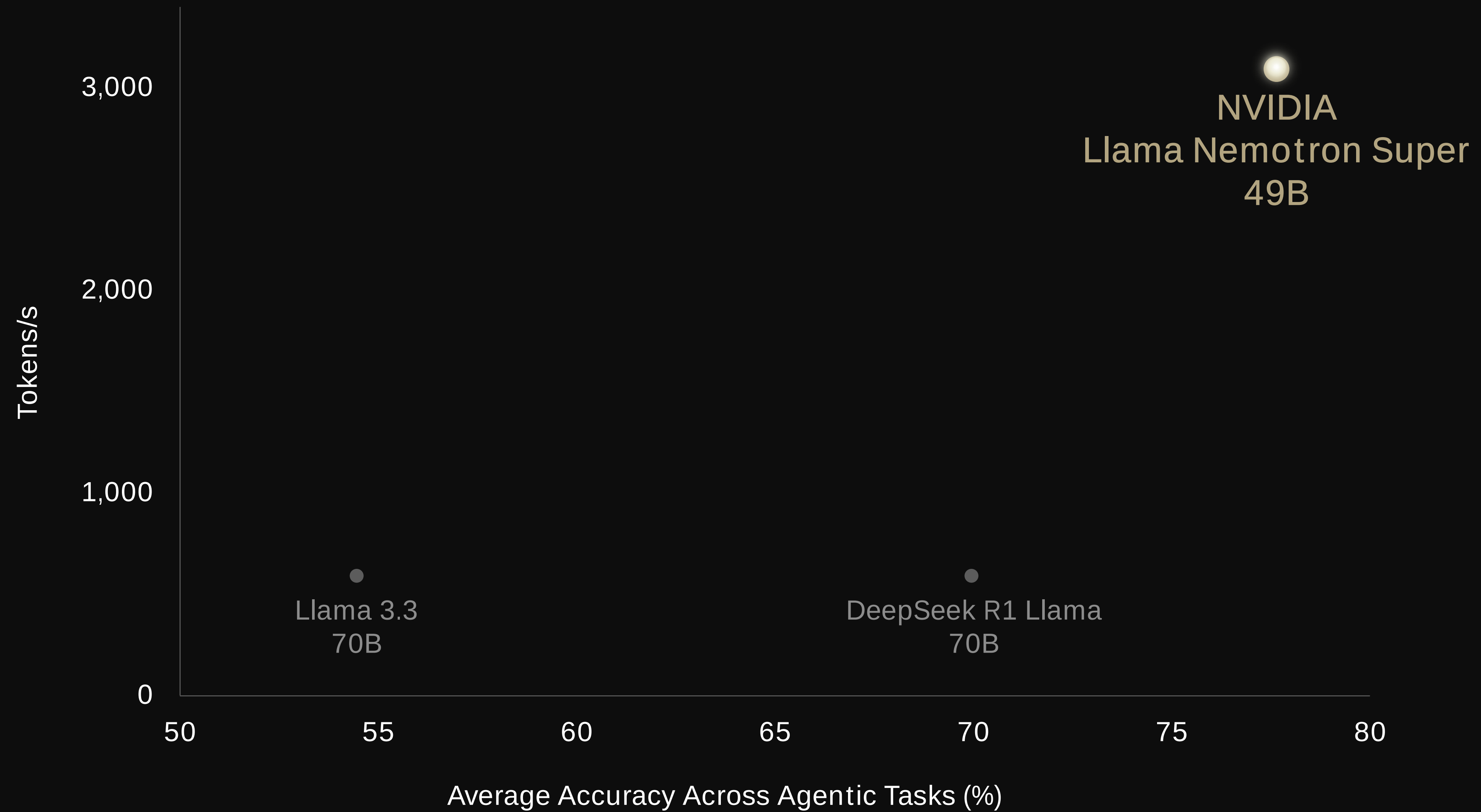
2,000+ Customers

100+ New releases

49+ Exaflops

Announcing NVIDIA Llama Nemotron Reasoning

Distilled, Quantized, Aligned, and Optimized by NVIDIA



Nano



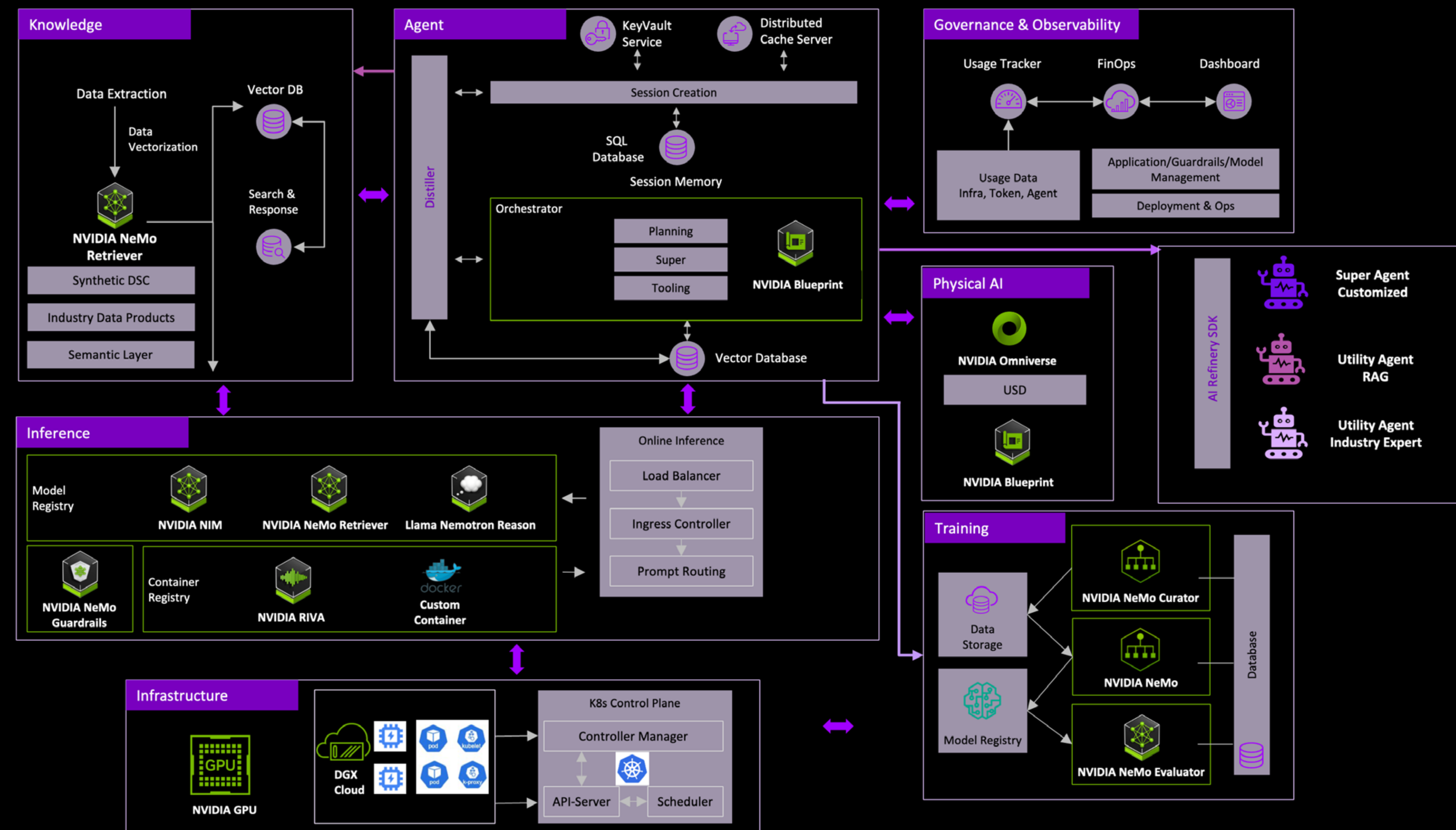
Super

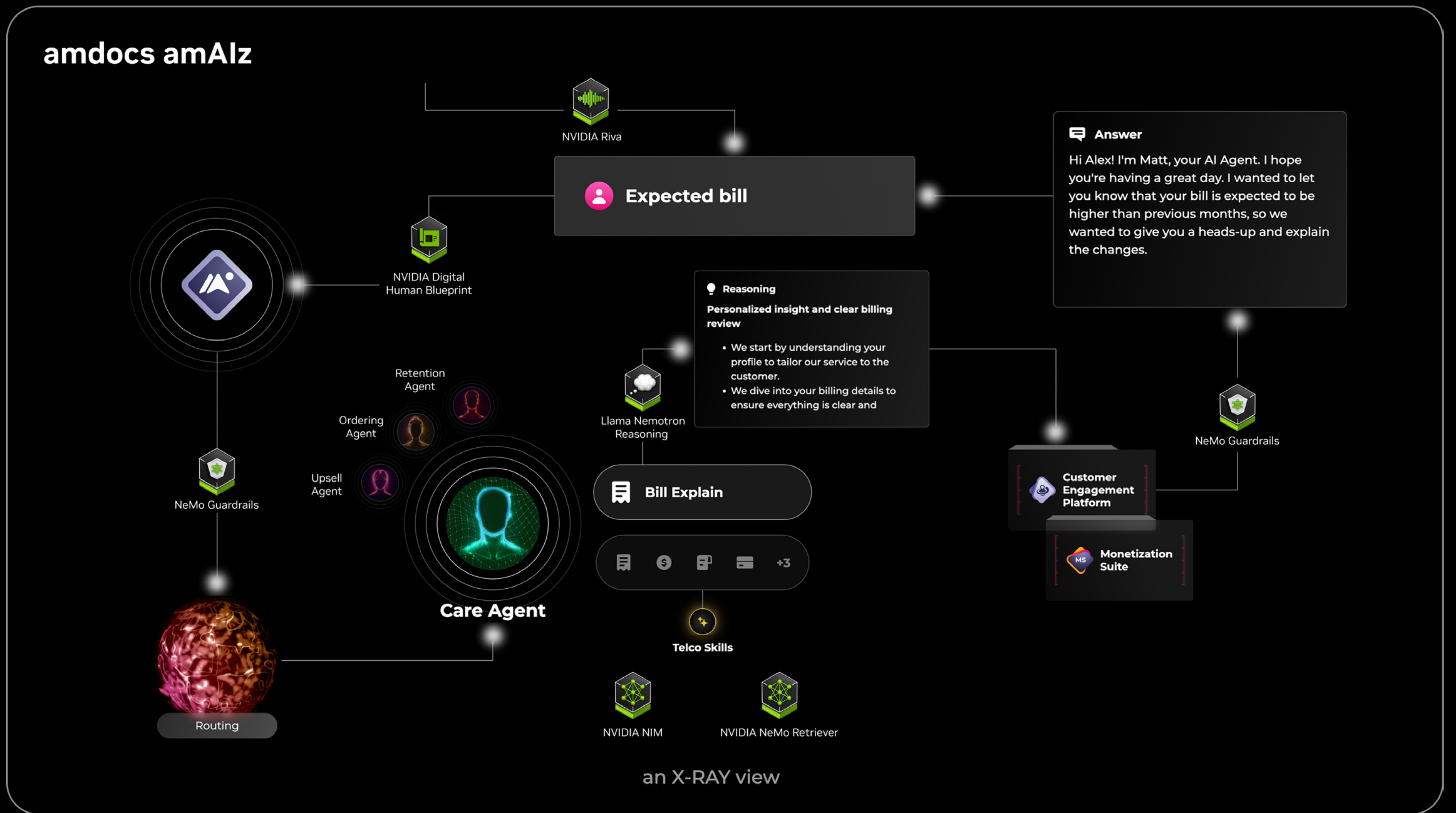


Ultra



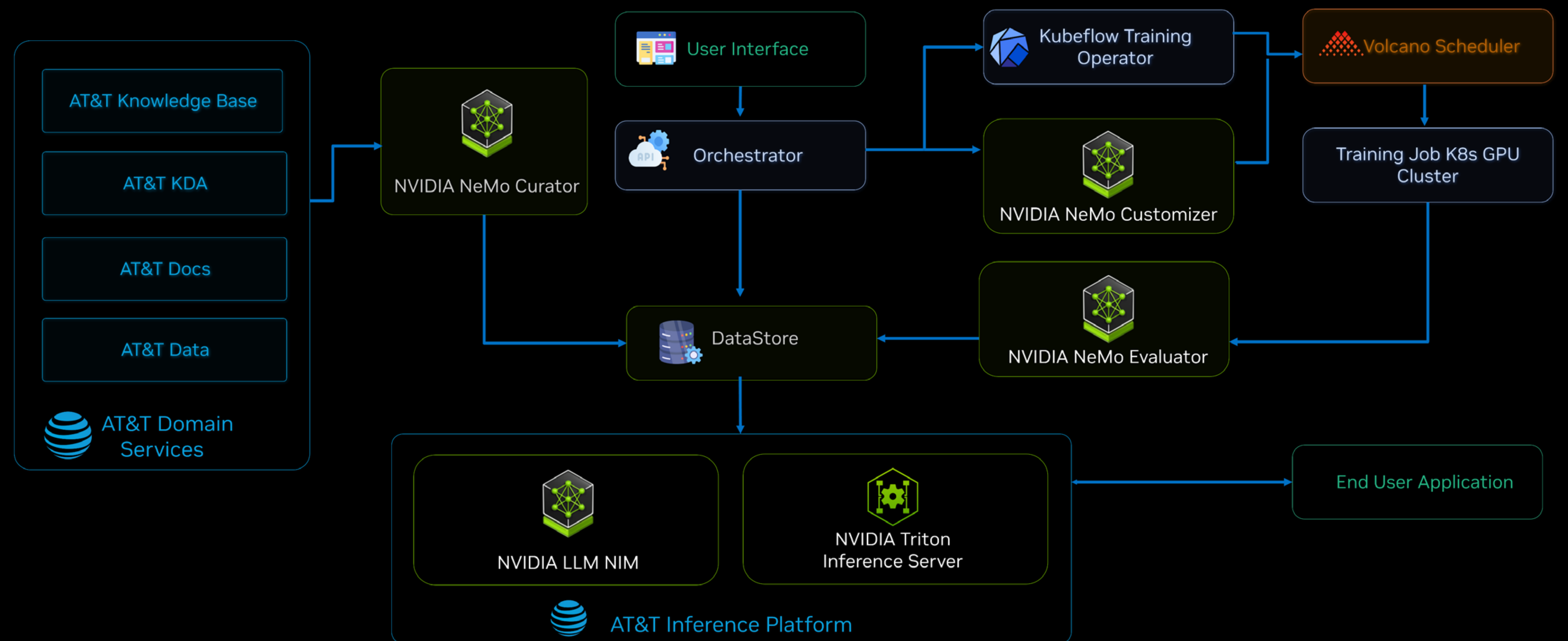
Accenture AI Refinery





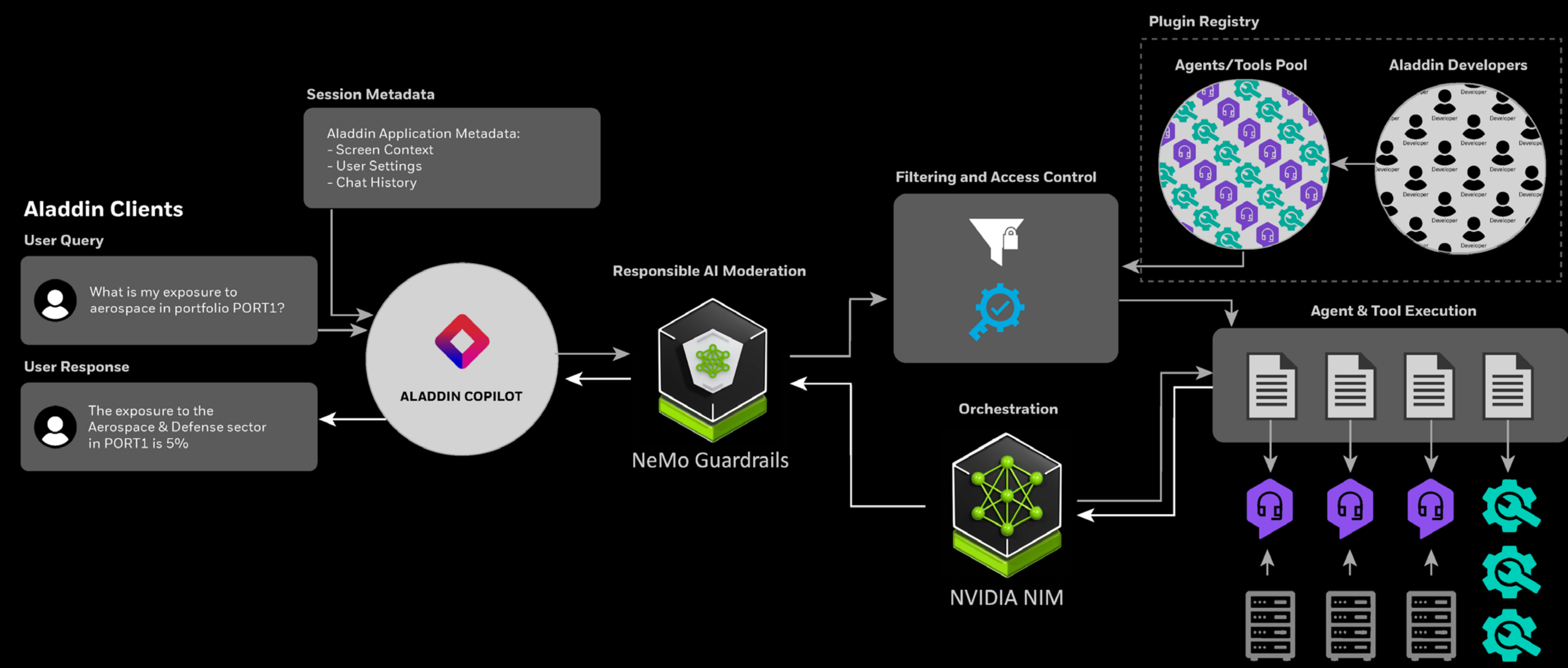


Ask AT&T Gen AI Platform





BlackRock’s Aladdin Platform

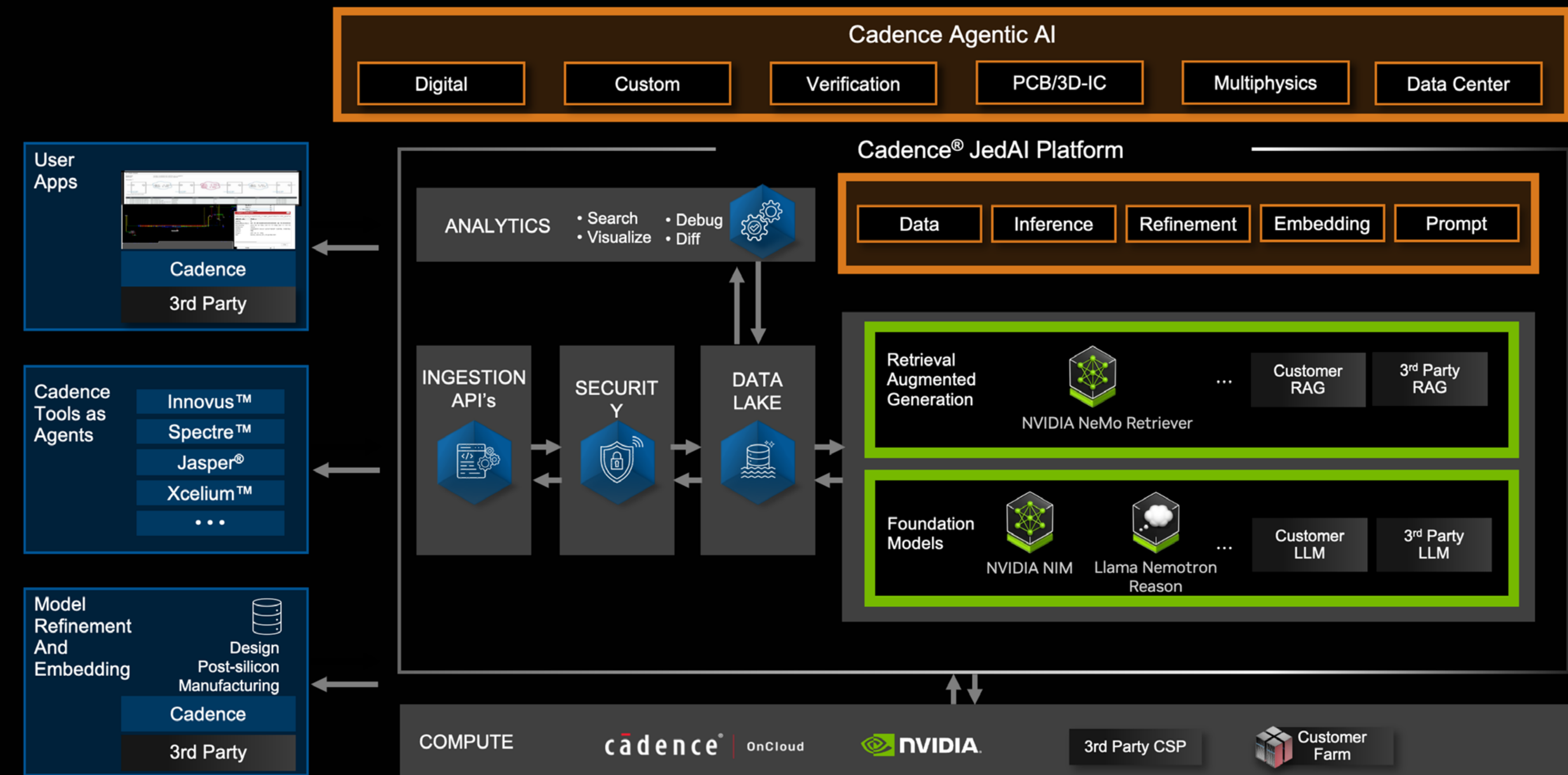


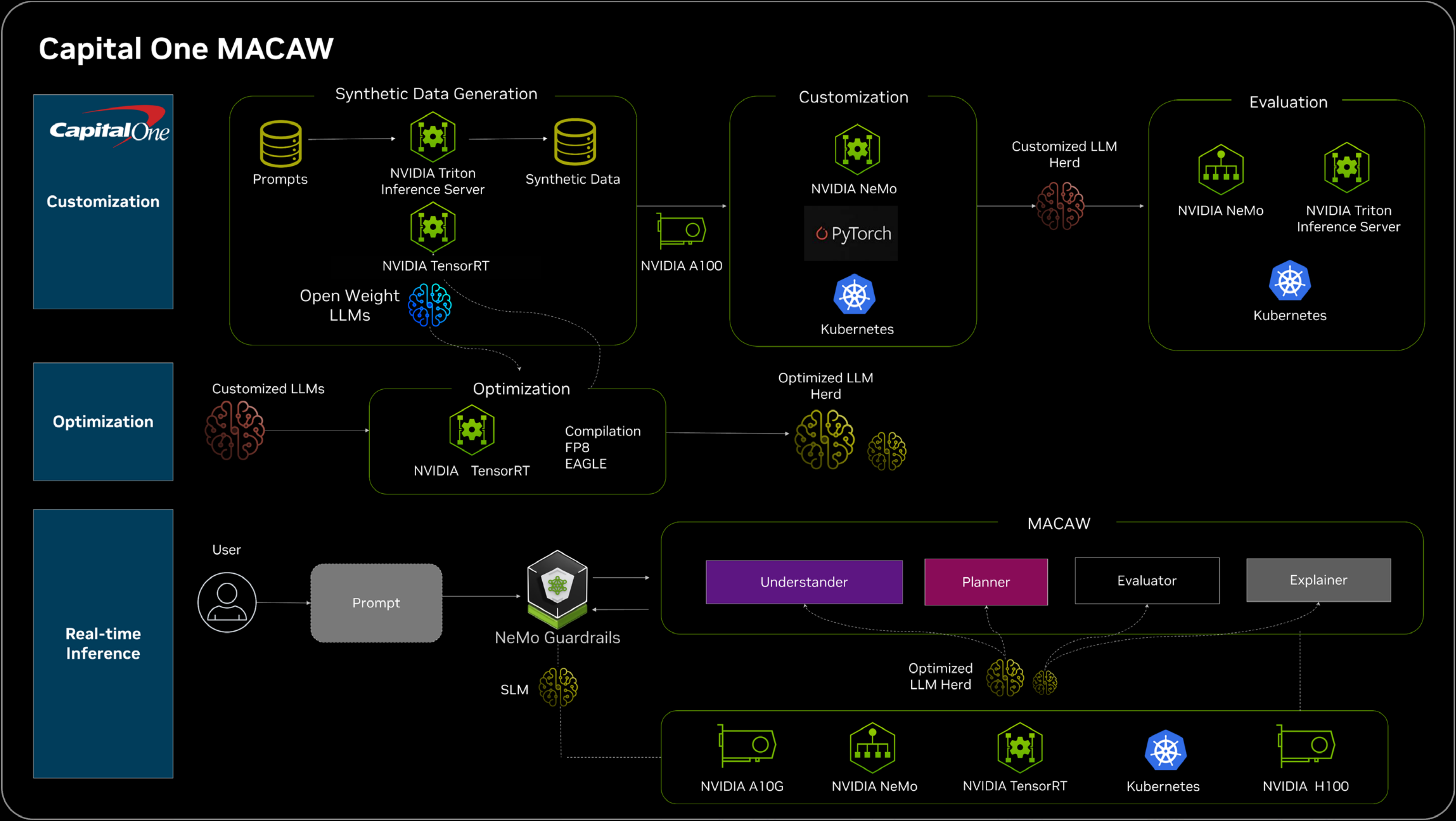
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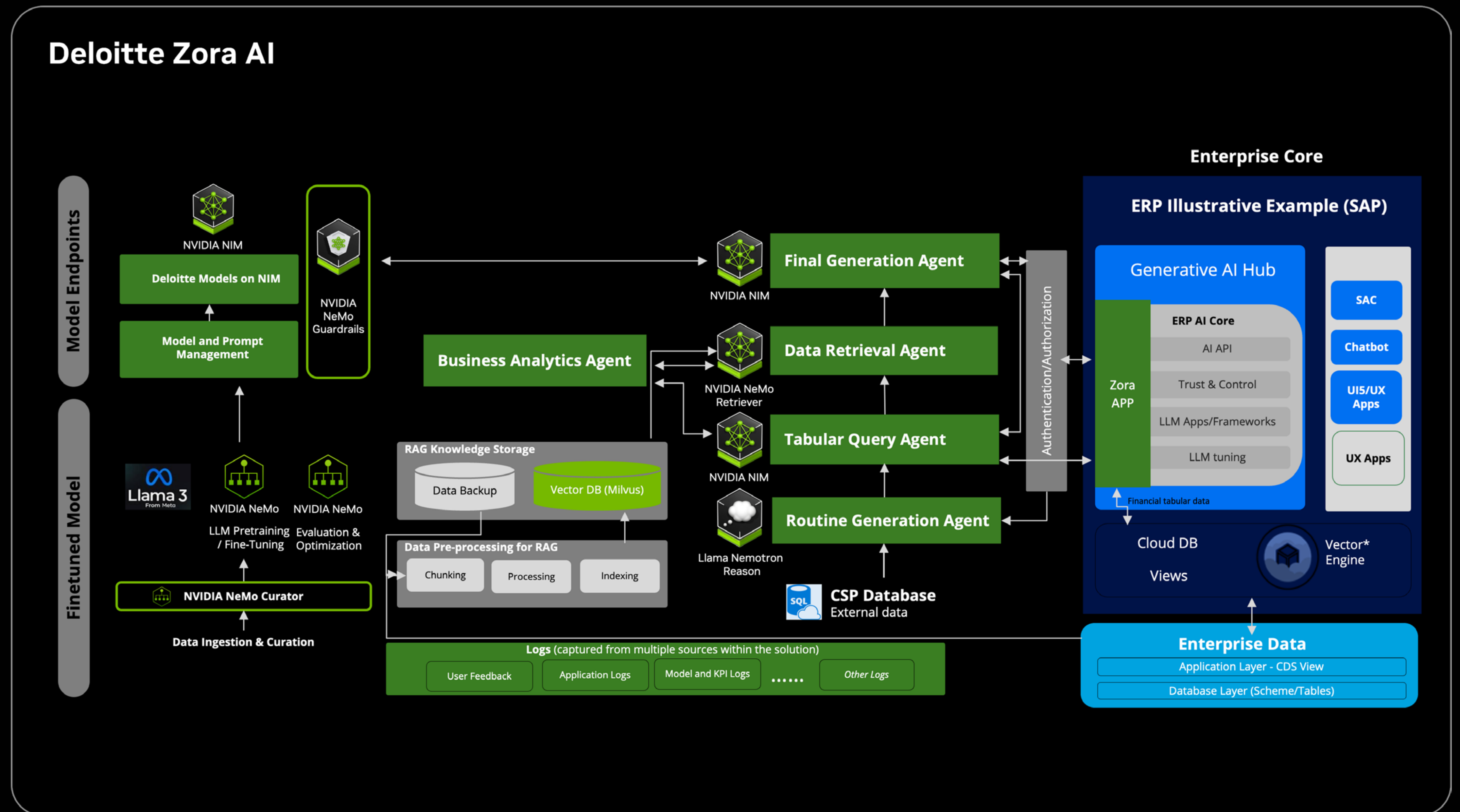
cādence®

Cadence® JedAI Platform



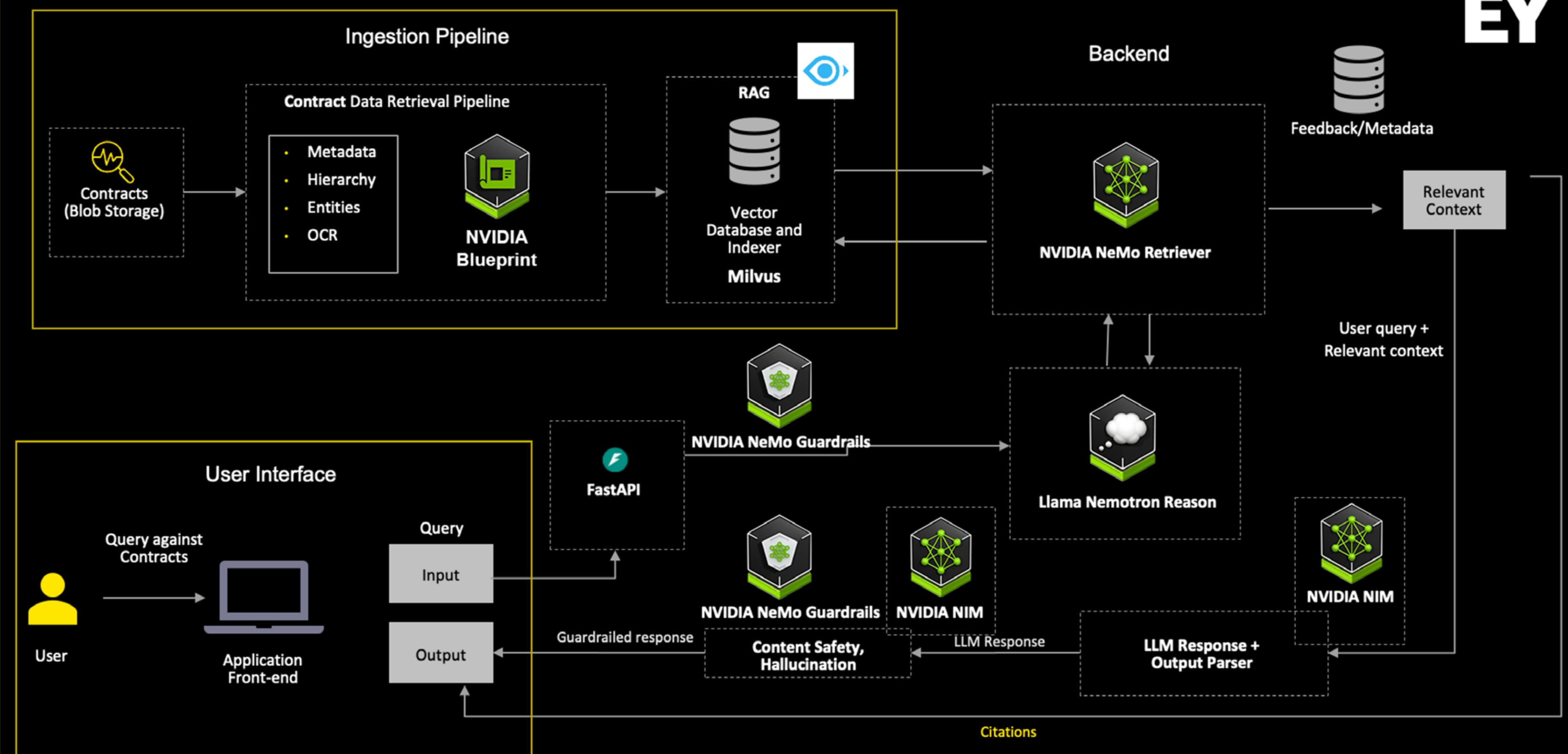


Deloitte.



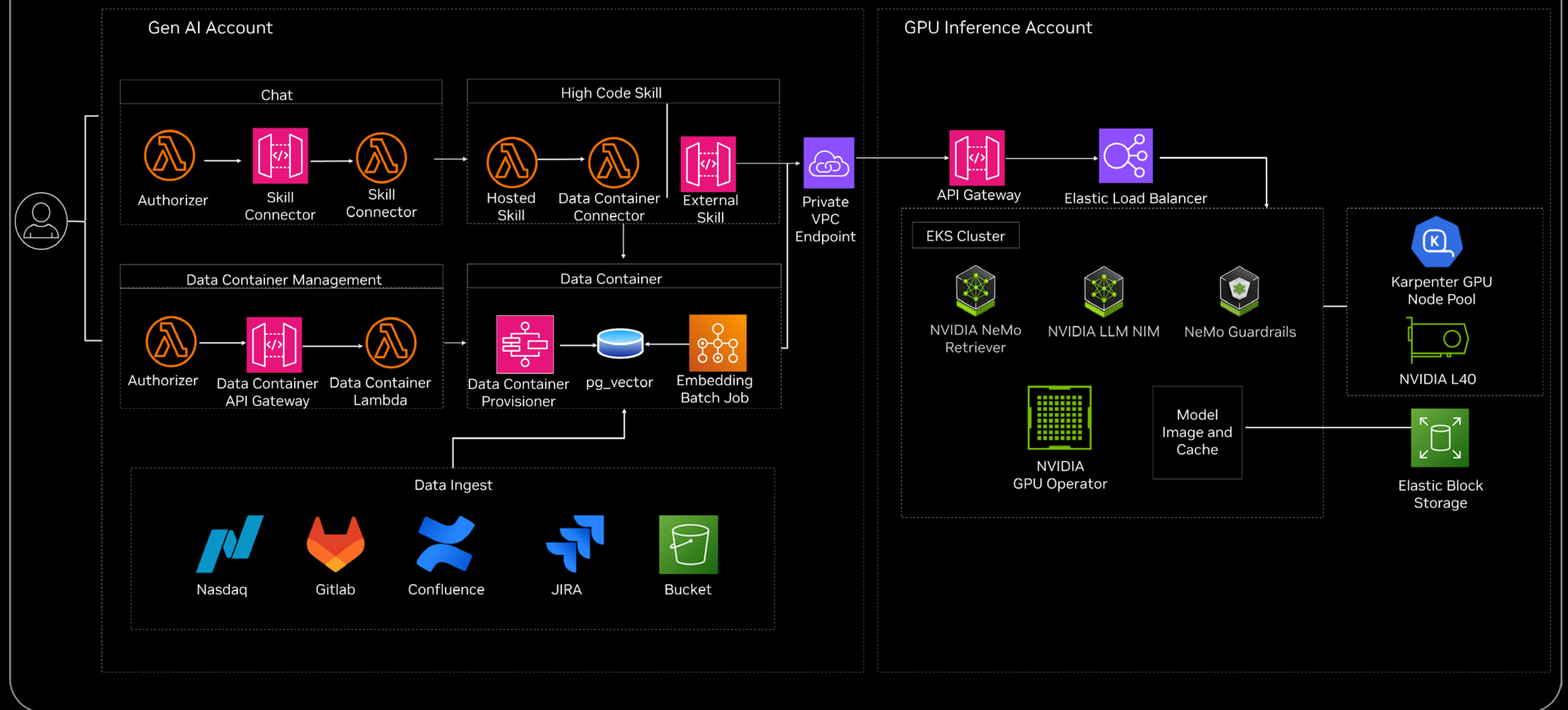


EY.ai Agent Platform



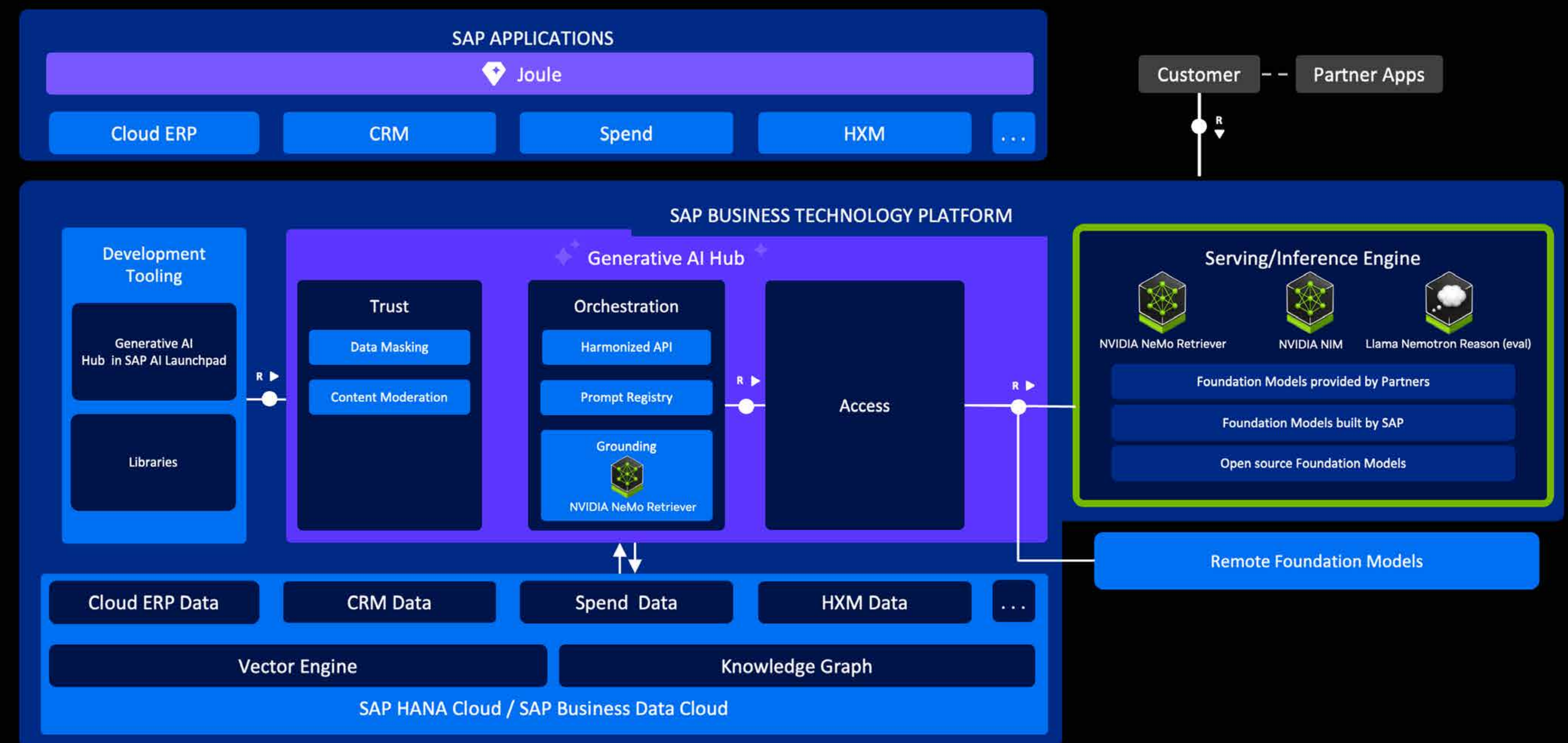


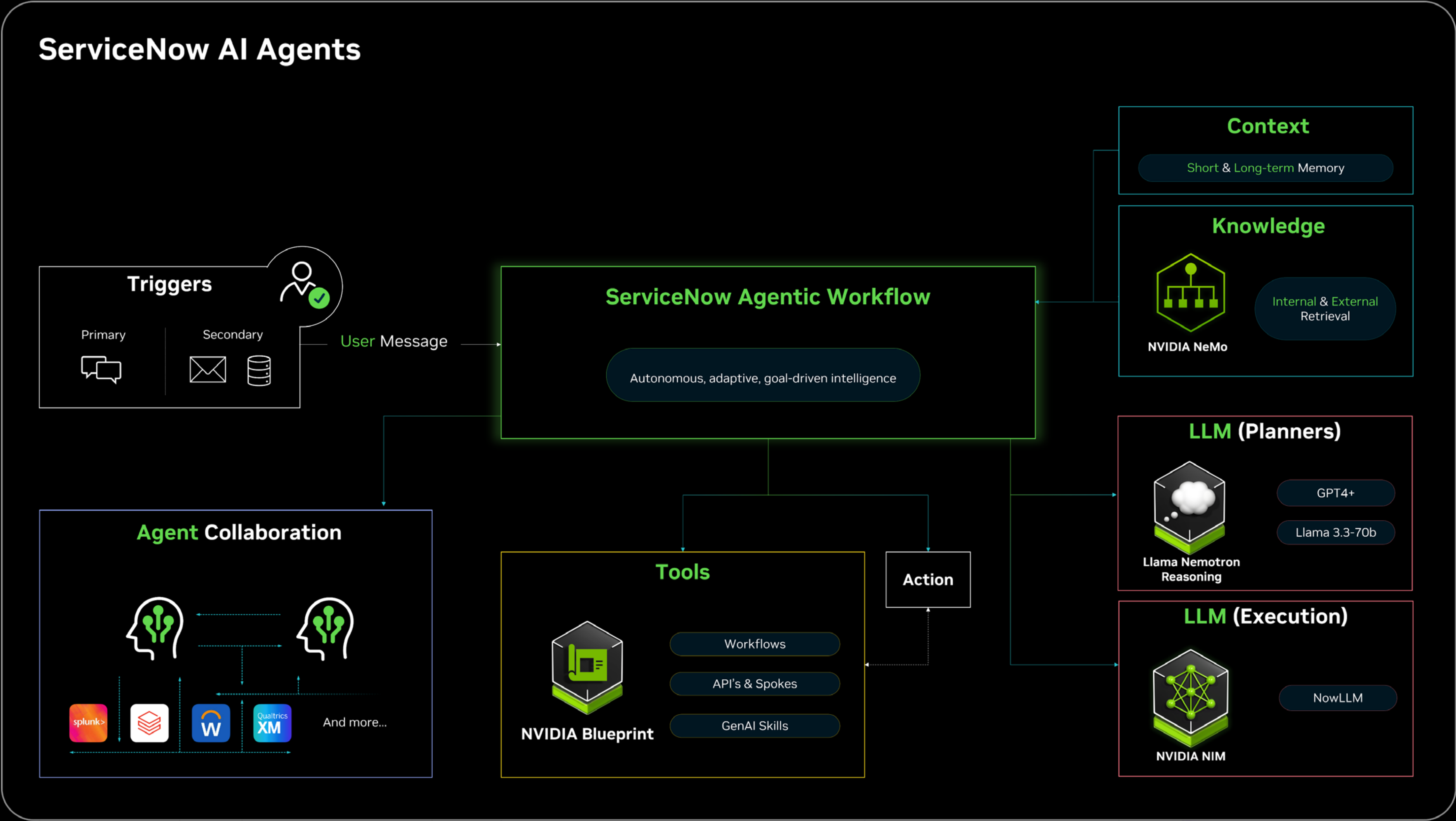
Nasdaq Generative AI Platform



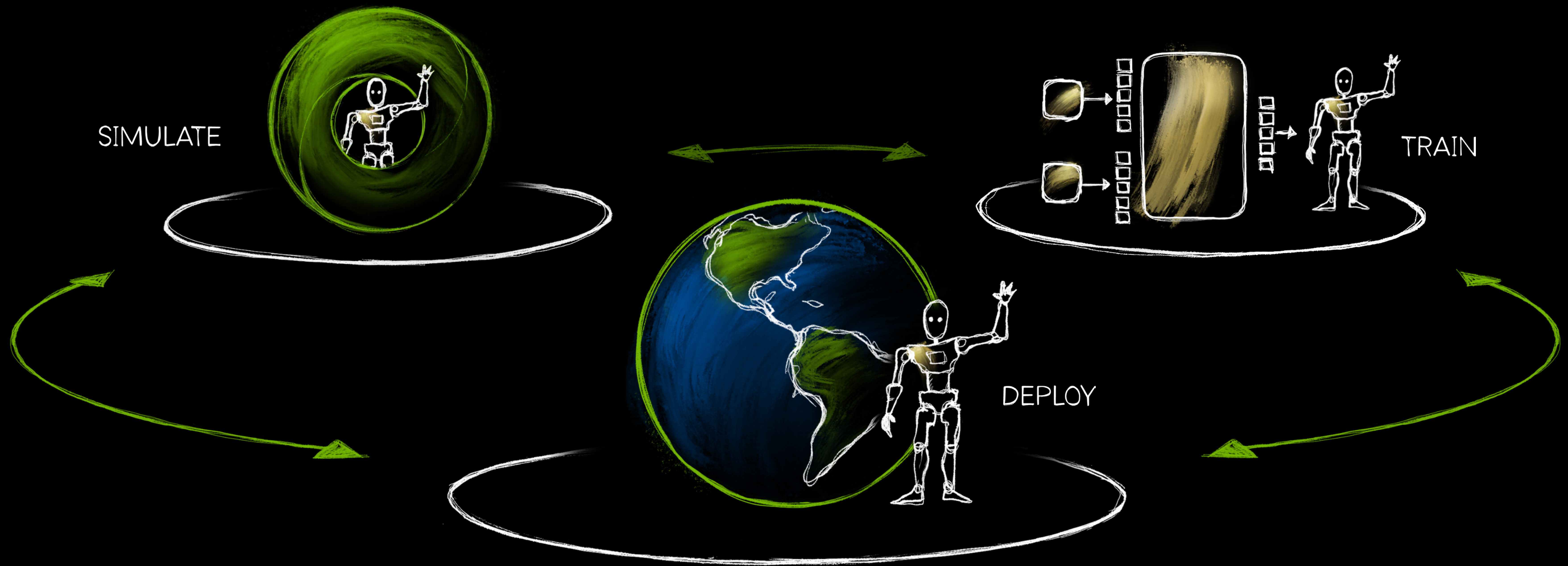


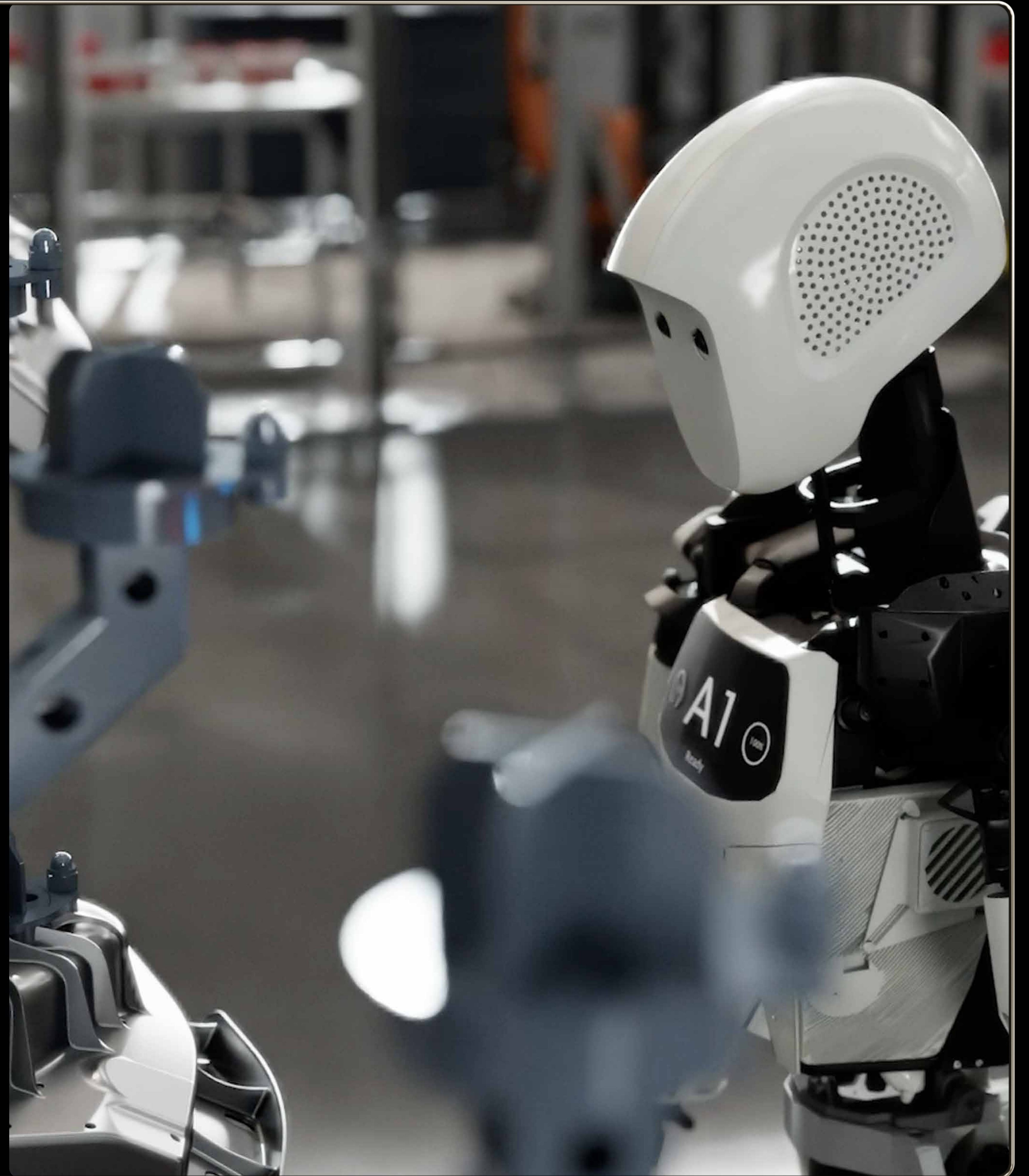
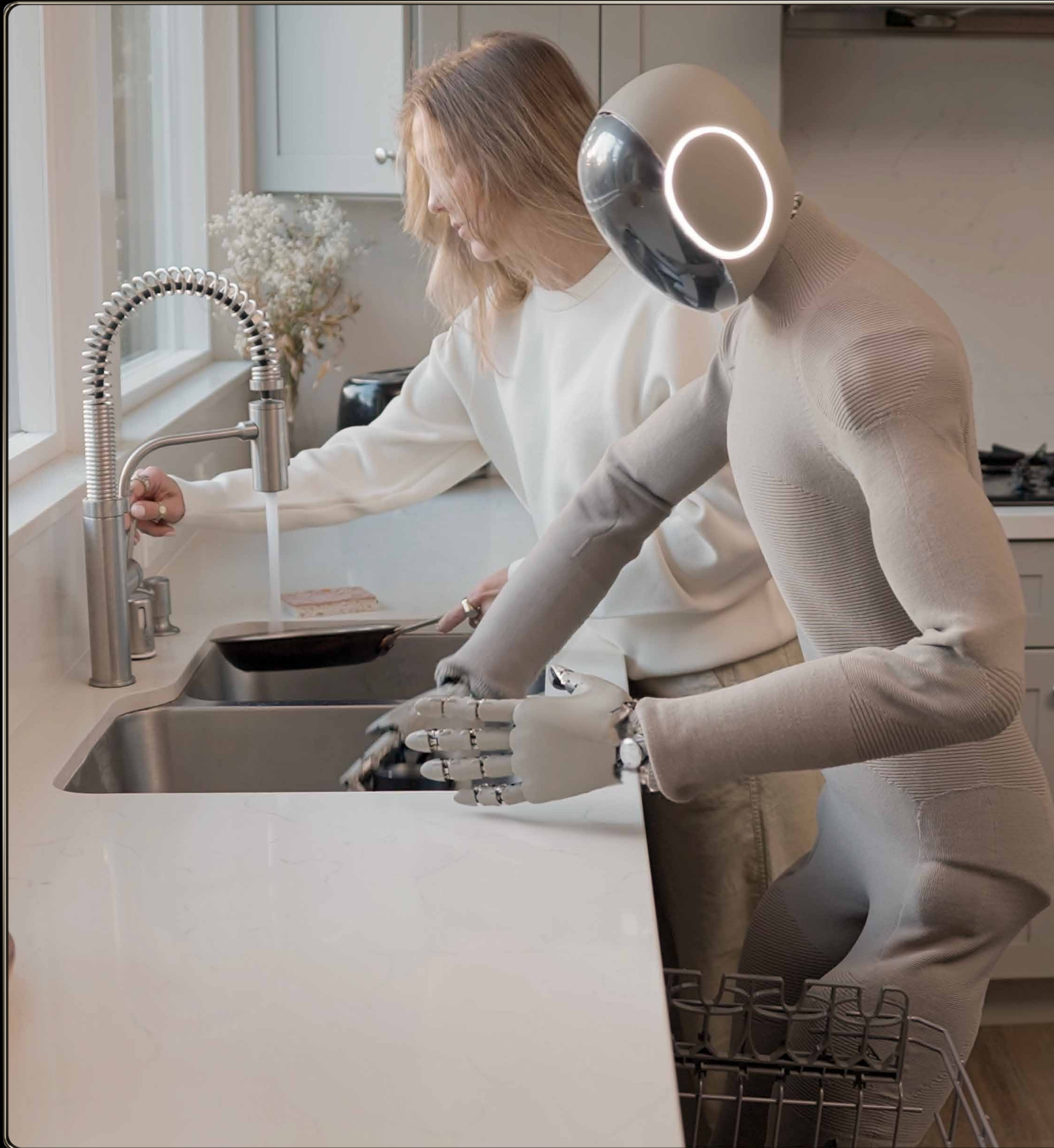
SAP Business AI

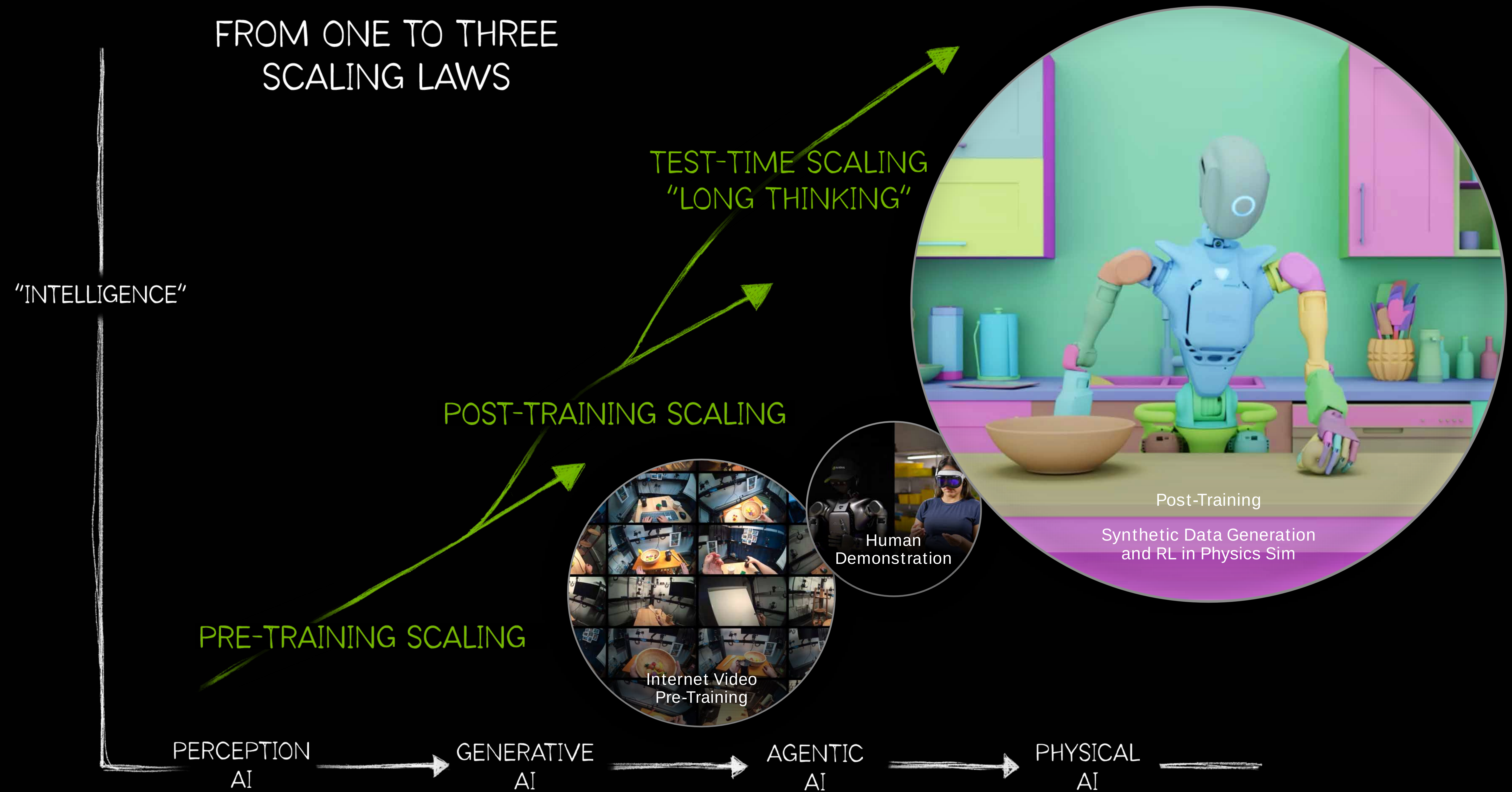




ROBOTS – THE NEXT MULTI-TRILLION DOLLAR INDUSTRY

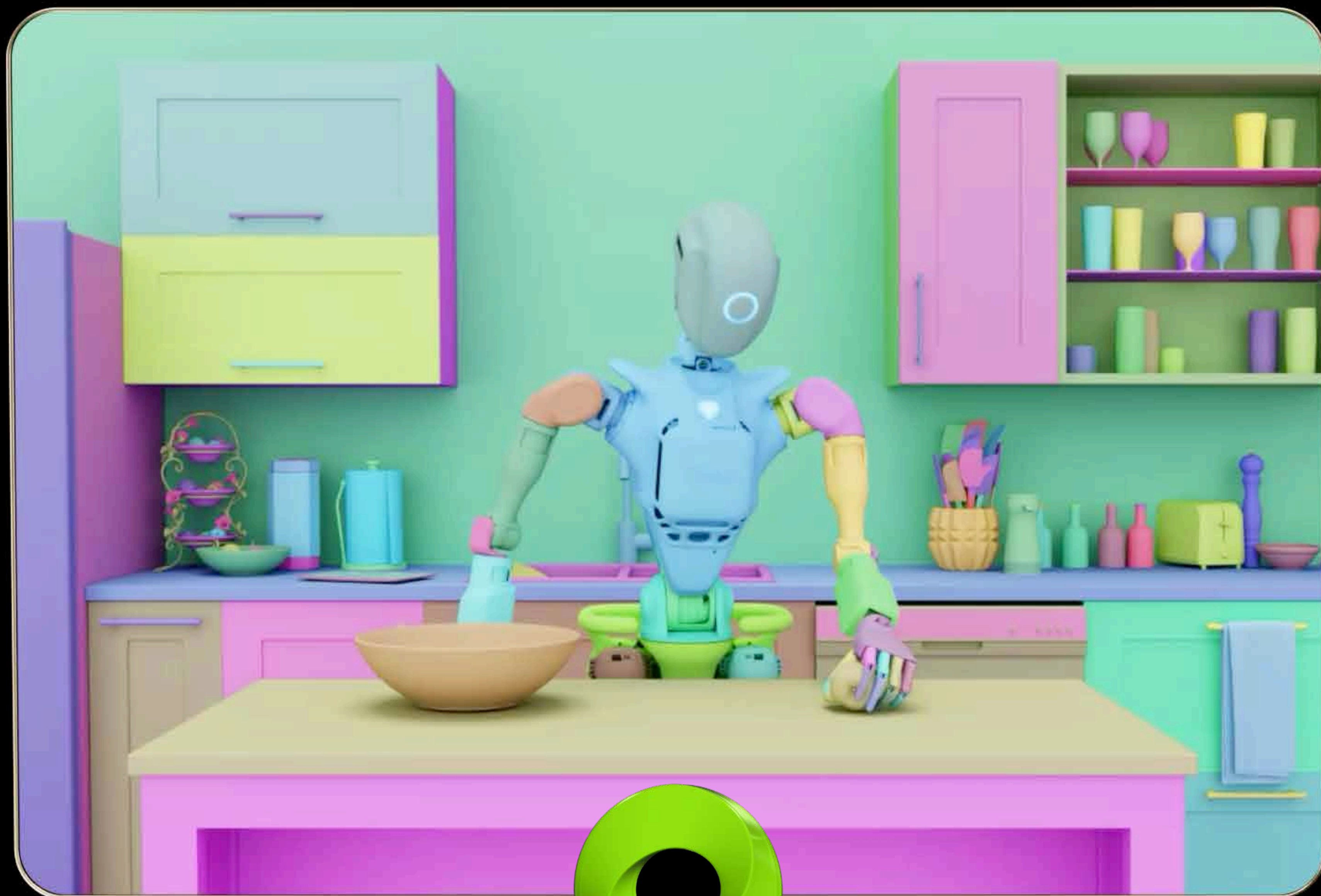




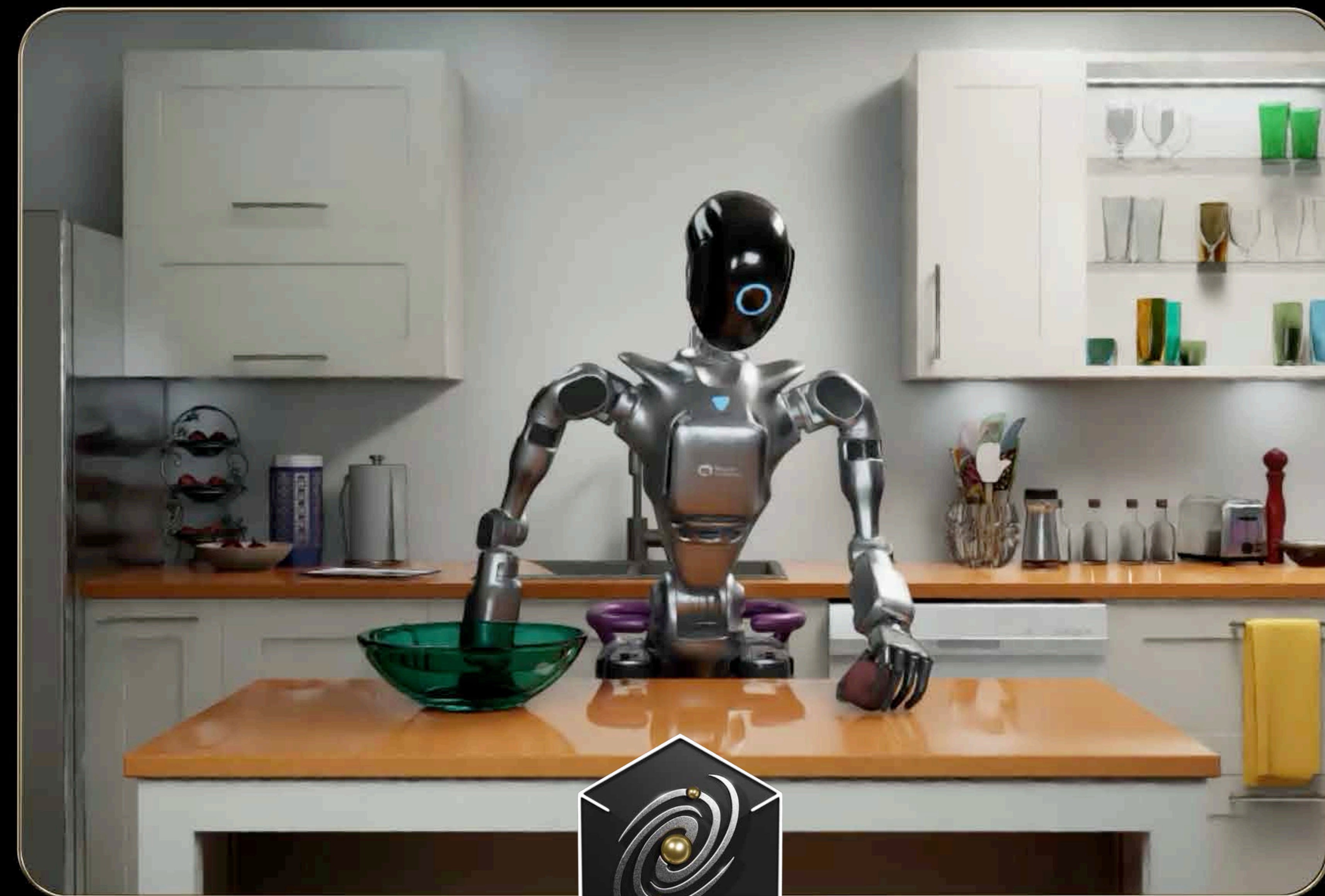


NVIDIA Omniverse With Cosmos

Physical AI Digital Twin Operating System



NVIDIA Omniverse



Cosmos

Disney Research

NVIDIA

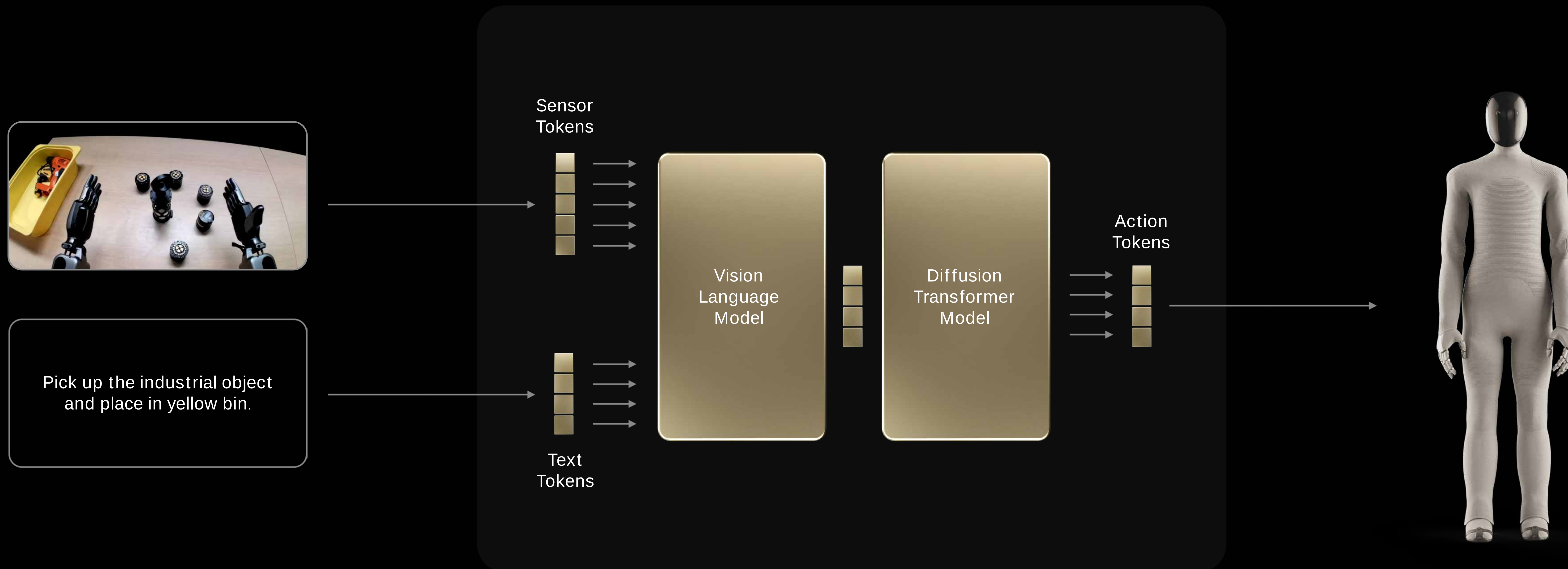
Google DeepMind



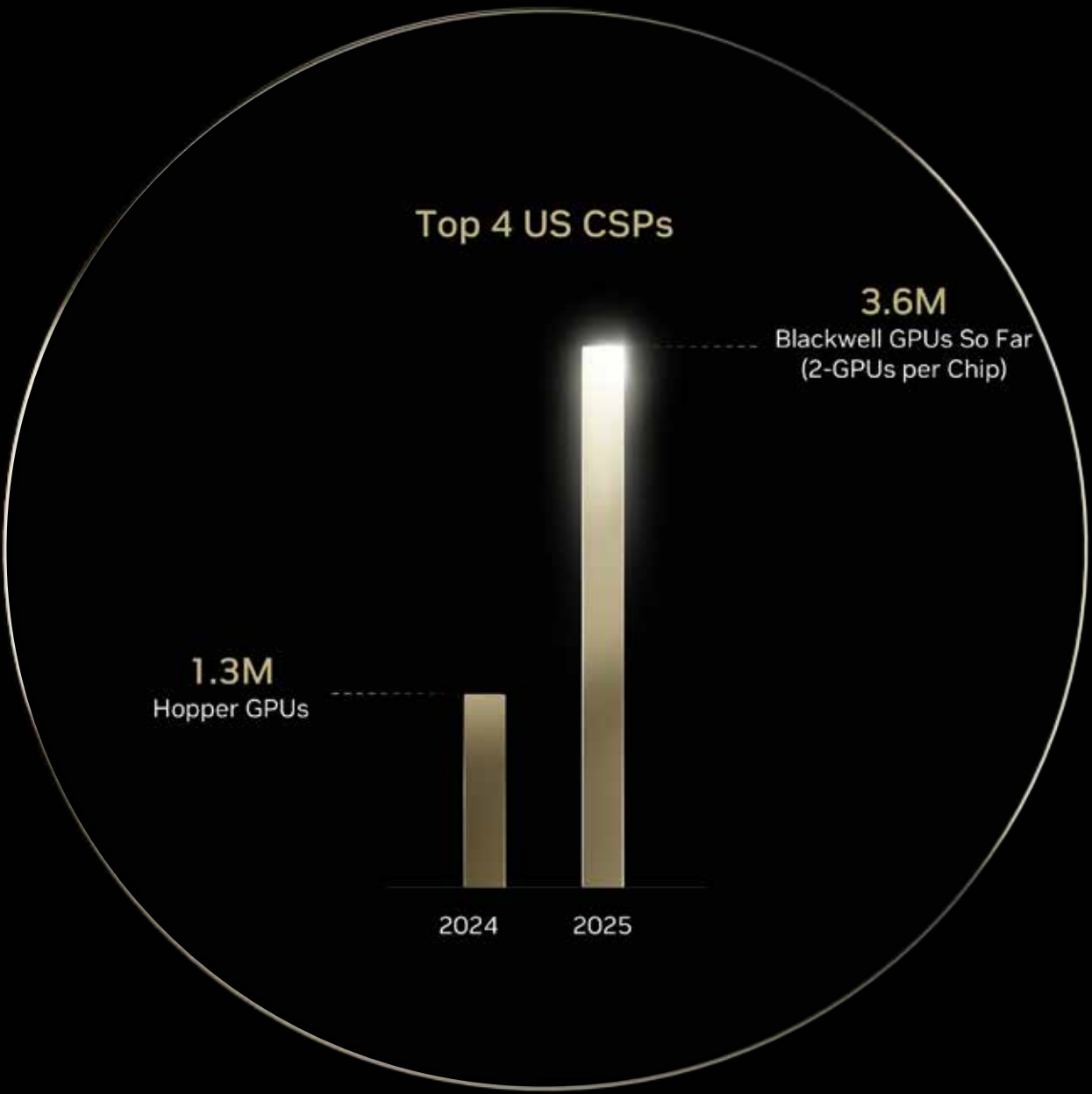
Isaac Lab



Announcing NVIDIA Isaac GR00T N1 Humanoid Foundation Model

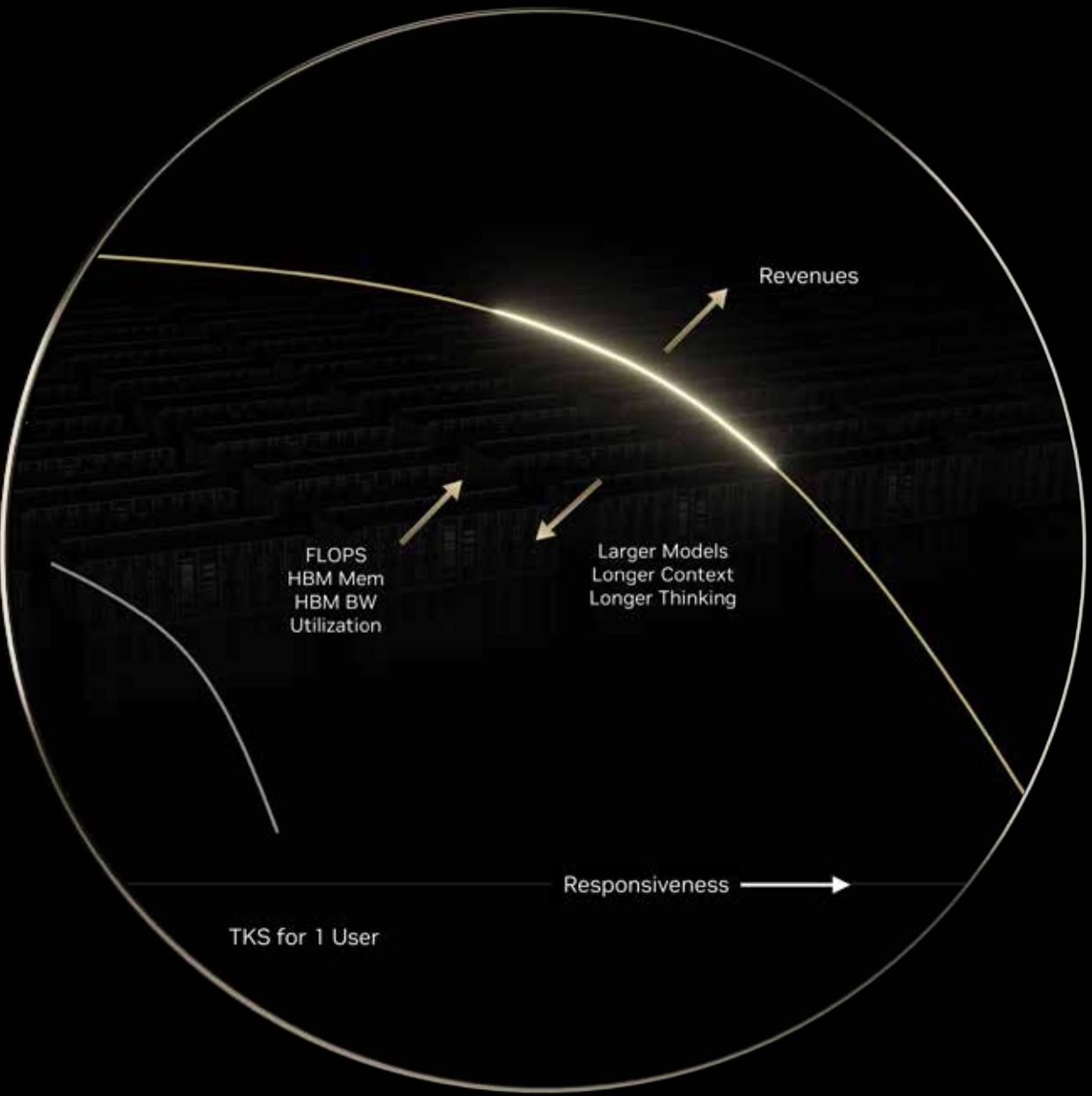


NVIDIA GTC 2025



BLACKWELL IN
FULL PRODUCTION

\$1T Computing
Inflection Point



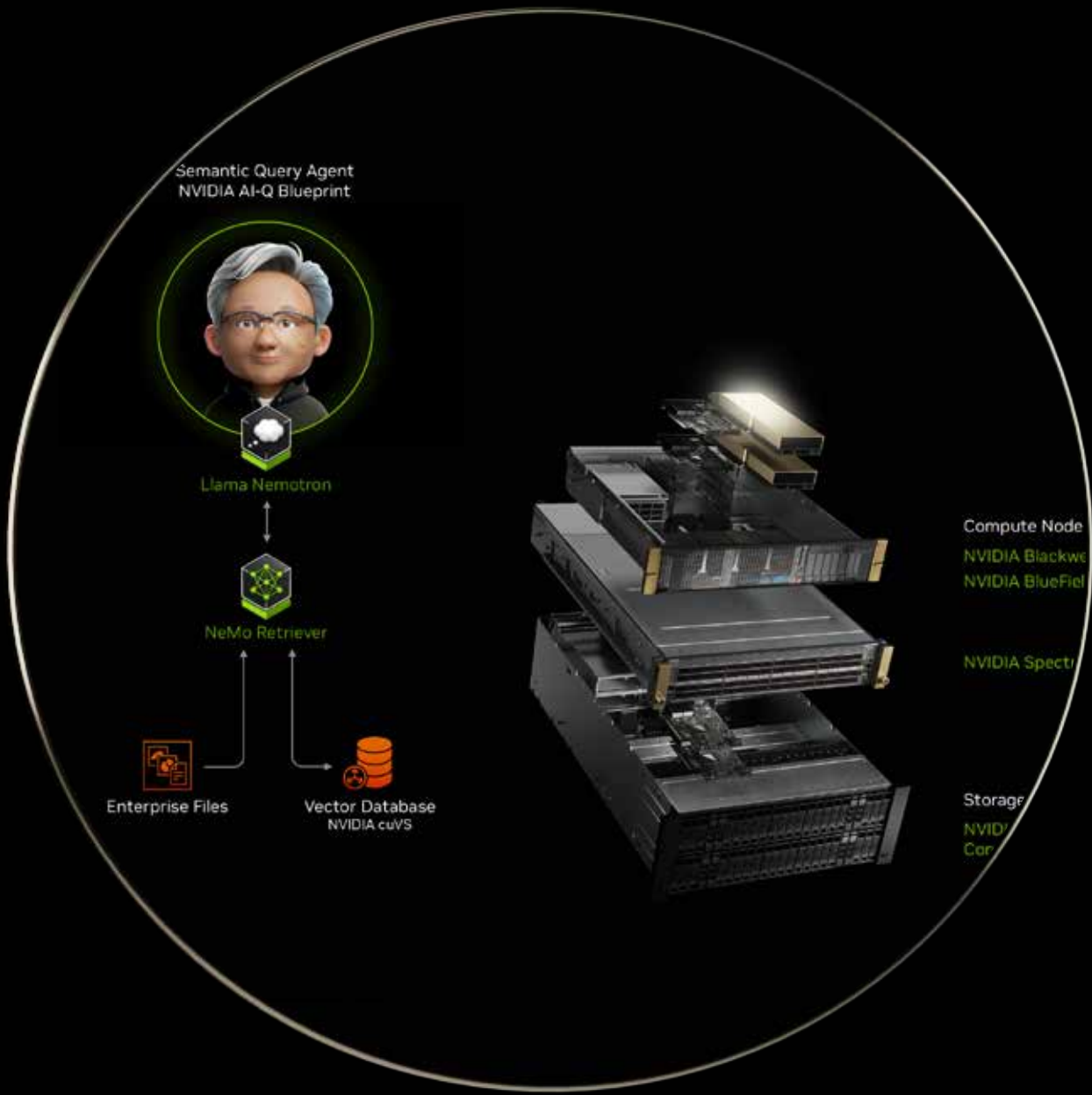
BLACKWELL NVL72 AND
DYNAMO 40X FOR INFERENCE

Reasoning 100X One-Shot
Blackwell 40X Hopper



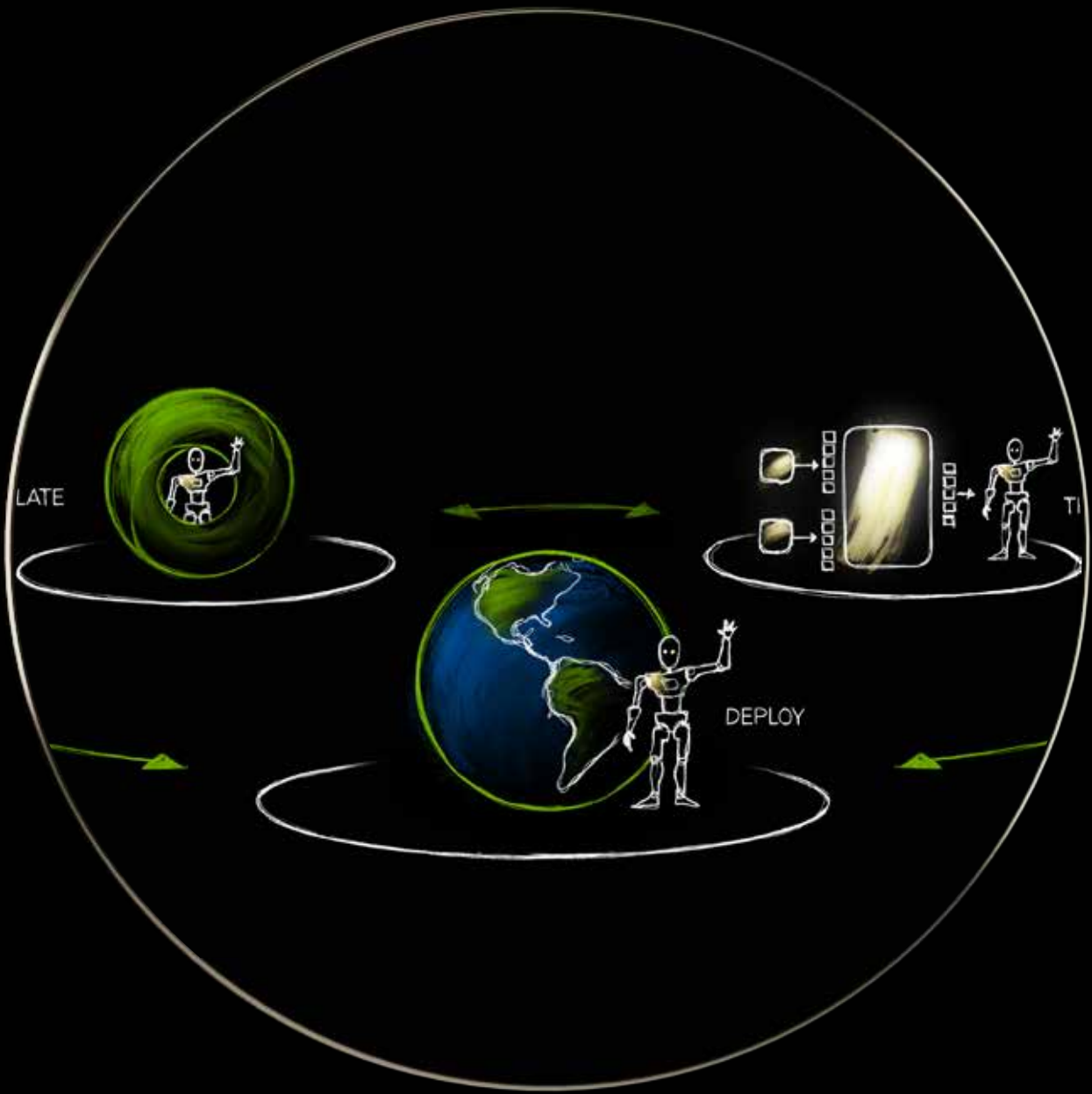
VERA RUBIN
NVIDIA PHOTONICS
AI INFRASTRUCTURE
FOR AI CLOUDS

Annual Rhythm for the
World to Build-Out
AI Infrastructure



AI INFRASTRUCTURE
FOR \$500B ENTERPRISE IT

New Compute, Networking,
Storage, Software



AI INFRASTRUCTURE
FOR ROBOTS

Physical AI For
\$50T Industrial and Robotics

