

Powering AI from Grid to Chip

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Delta Electronics is a global leader in Power Electronics, Automation and Infrastructure. For more than 50 years, we have been providing the world with innovative, clean and energy-efficient solutions for a better tomorrow.

A global leader

GLOBAL FOOTPRINT

revenue:
\$ 17.889 M
in 2025

18,000+
patents



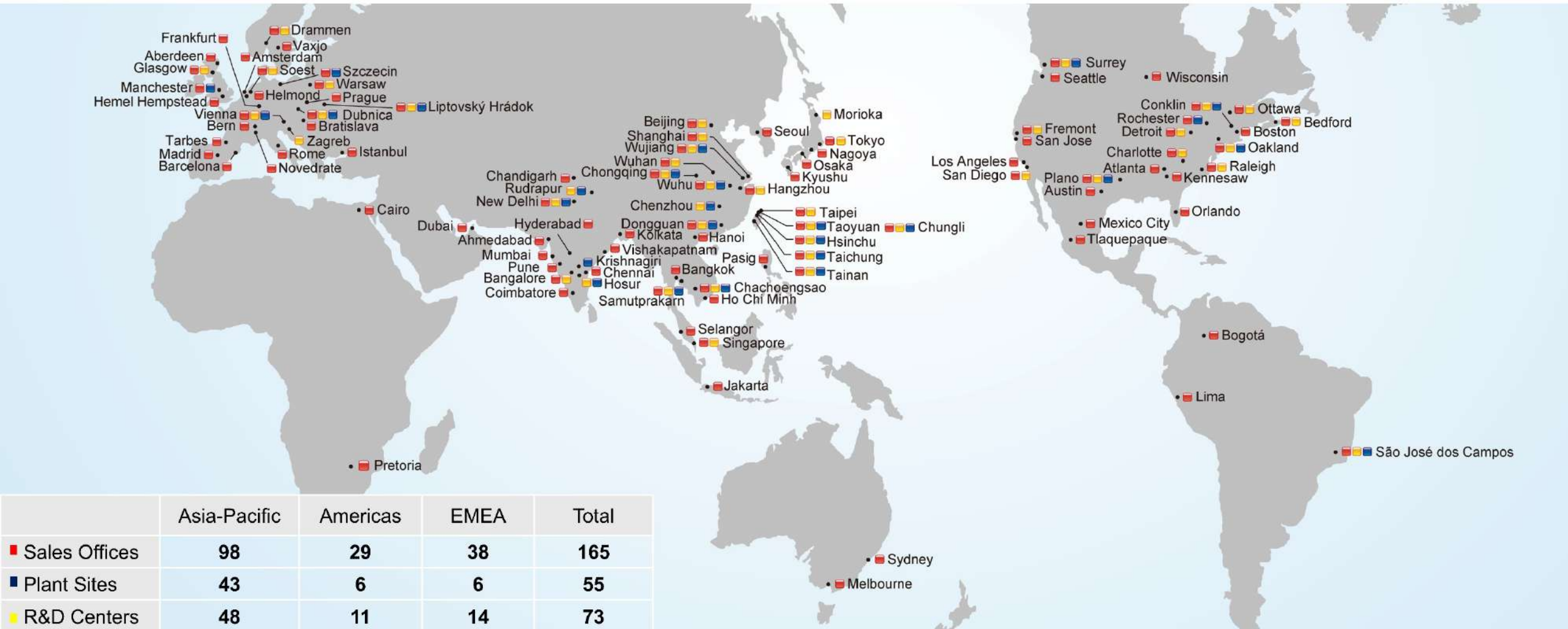
85 K +
Employees

12.000 +
R&D engineers

8% +
of revenue devoted
to R&D each year

21,05M TONS
of carbon emissions reduction
from 2010-2022

Global Operations

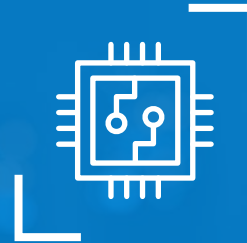


AI Demand Is Surging - An Executive Priority

47% say AI is important today; rising to 91% within 12 months

91%

GenAI market projected to grow strongly this decade



Executive focus shifts from pilots to platform-scale deployment



The Pressure for More Sustainable AI Accelerates

- Organizations move from pledges to measurable action
- Evaluation shifts to lifecycle and infrastructure metrics

Energy
efficiency
importance:

44%

today;

78%

within
12 months

Datacenter Growth is Hitting the Energy Wall

Global sites grew from 500 000 (2012) to more than

8 Million today

- Energy use doubling roughly every four years
- AI workloads further steepen the curve



Policy and Power Now Define the Build-speed Limit

- AI adoption outpaces grid and regulatory capacity
- Stable electricity identified as Europe's top barrier
- Most organizations expect AI sustainability policies within a year

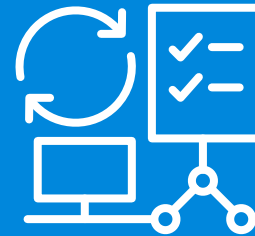


Cost isn't the Main Barrier

Cost ranks lowest
(≈10 %) in AI
sustainability
decisions



Lifecycle and
infrastructure metrics
lead evaluation



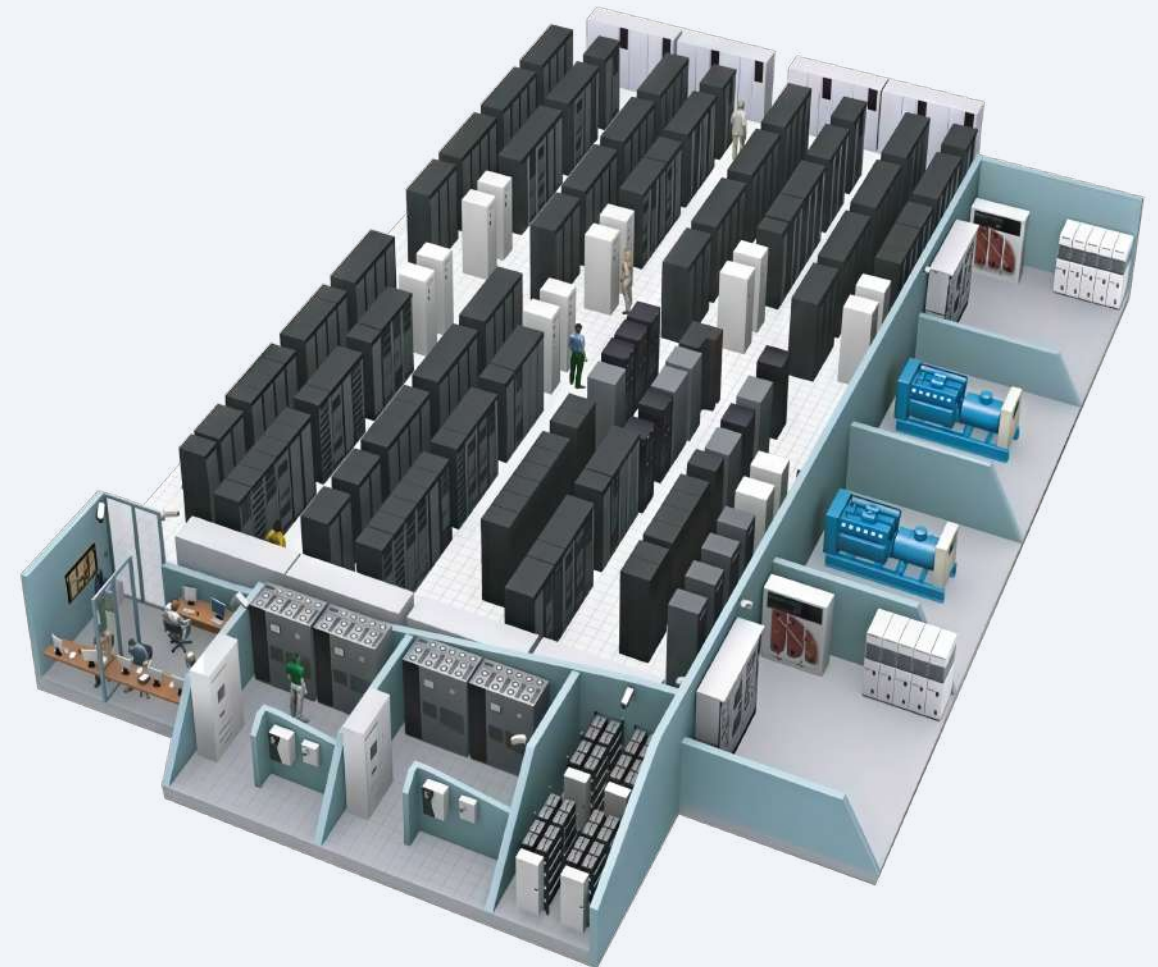
Real-time monitoring
increasingly
adopted



AI Sustainability

- It Takes More Than one Solution

- Energy audits and hardware optimization common practice
- Partnerships with efficiency organizations
- Edge computing adopted by 42% of suppliers



Beyond PUE

Measuring What Matters

From PUE to
carbon-per-compute
and power-per-token

Real-time energy
monitoring adoption
rising

Customers Demand Sustainability Targets Now

- 67% say supplier sustainability targets are important today
- Rising to 96% within 12 months
- Expectation gap drives vendor selection

The EU AI Act Creates Forward Momentum for Sustainable AI

- First comprehensive legal framework for AI risk and transparency
- Reporting obligations extend to energy and sustainability
- Implications for traceability in data-center design



Two Paths Forward: Retrofit and Greenfield

- **Retrofit:**
Staged DC segments around critical loads
- **Greenfield:**
End-to-end DC backbone
- **Both:**
Liquid-ready racks and manifolds

A photograph of a server room undergoing a retrofit. The image shows rows of server racks with some doors open, revealing internal components and a dense network of cables. A blue translucent box with the word 'Retrofit' is overlaid on the top left of the image.

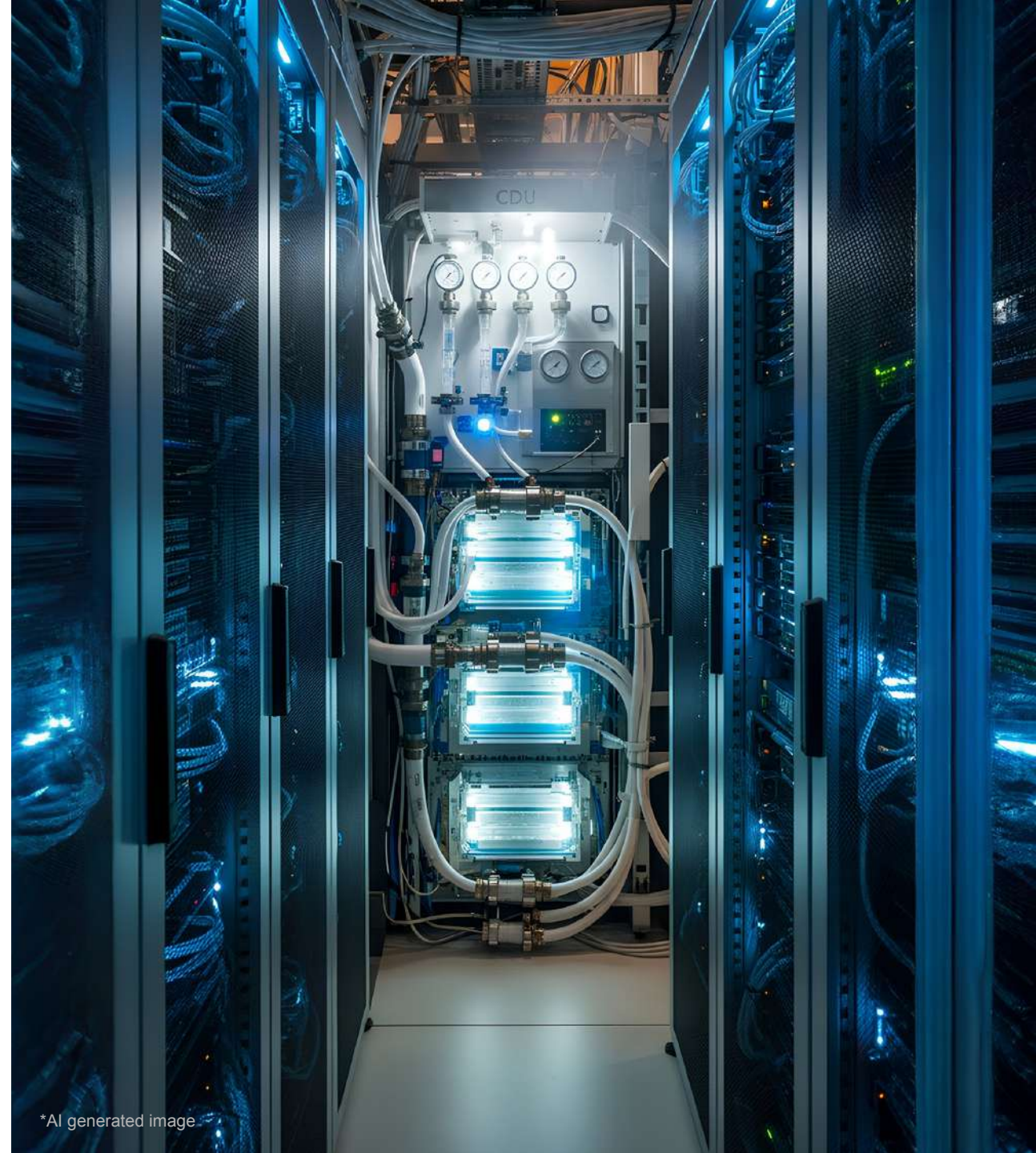
Retrofit

A photograph of a modern, greenfield server room. The room features long rows of server racks with glass doors, reflecting the ambient light. Large windows on the right side offer a view of a rooftop solar farm and a telecommunications tower. A blue translucent box with the word 'Greenfield' is overlaid on the top left of the image.

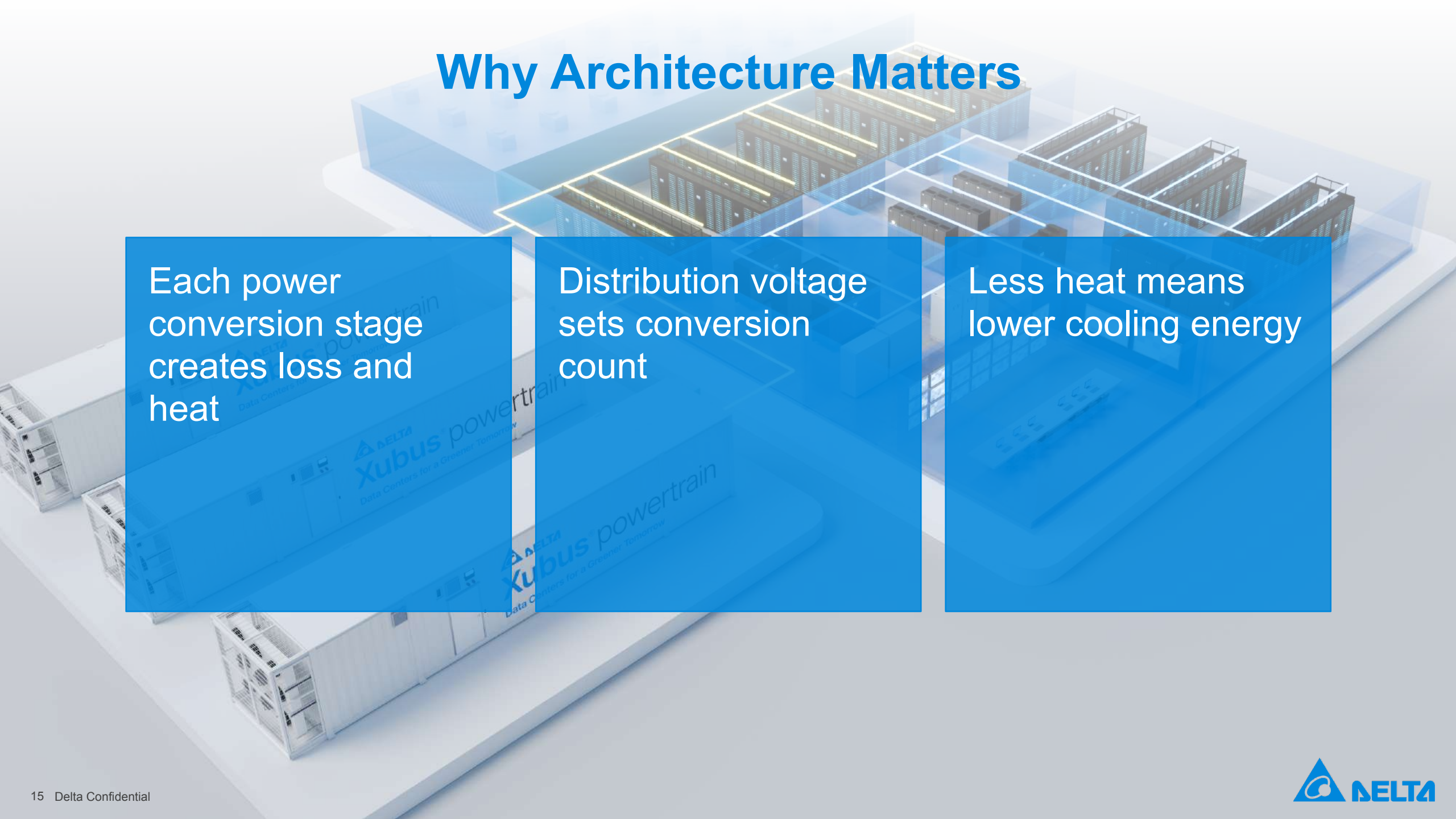
Greenfield

Rack Density Forces Liquid Cooling Adoption

- Liquid cooling enables sustained high-density AI racks
- Improves efficiency and thermal stability
- Supports accelerated-compute roadmaps



Why Architecture Matters

A 3D architectural rendering of a data center facility. The image shows several long, rectangular server racks arranged in a grid. Overlaid on this are three large, semi-transparent blue rectangular blocks, each containing white text. The background is a light blue gradient. In the bottom left corner, there is a small white box with the text '15 Delta Confidential'. In the bottom right corner, there is the Delta logo, which consists of a stylized blue triangle with a white 'D' inside, followed by the word 'DELTA' in blue capital letters.

Each power conversion stage creates loss and heat

Distribution voltage sets conversion count

Less heat means lower cooling energy

From traditional AC to DC-ready AI infrastructure

AI's fluctuating power and thermal loads are exposing the limits of traditional AC systems

DC-ready architectures cut conversions and energy loss for responsive, high-density AI infrastructure

Long before AI, Delta built mission-critical DC power infrastructure for telecom networks

Today, that expertise is helping shape the next generation of AI data centers



800VDC + Liquid Cooling

Unlocks Sustainable Performance

Higher-voltage DC
reduces conversion
loss



Liquid cooling
removes thermal
bottlenecks



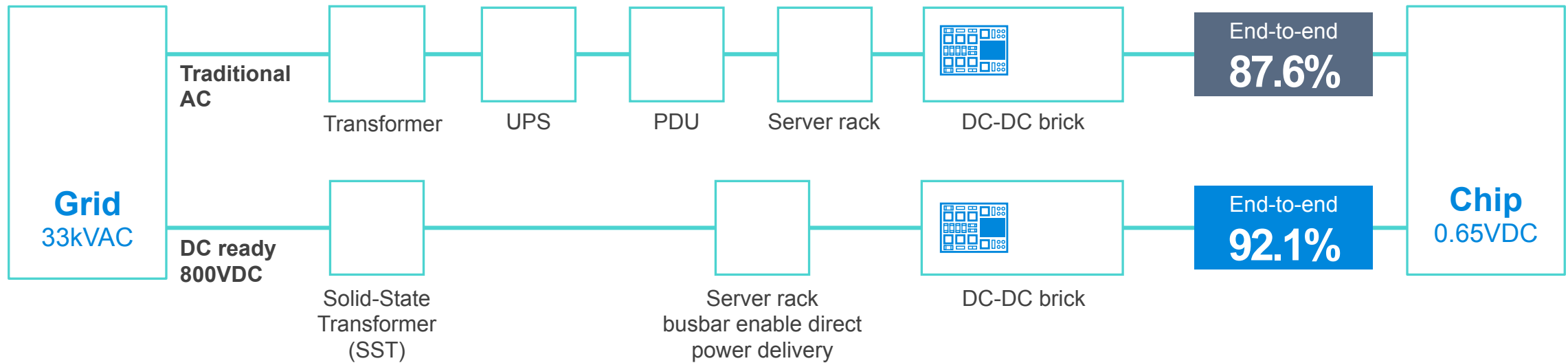
Together they enable
higher density at
lower energy



Less conversion stages, higher efficiency

HVDC power architecture

3~4 less conversion stages can enhance end-to-end efficiency by 4~5%



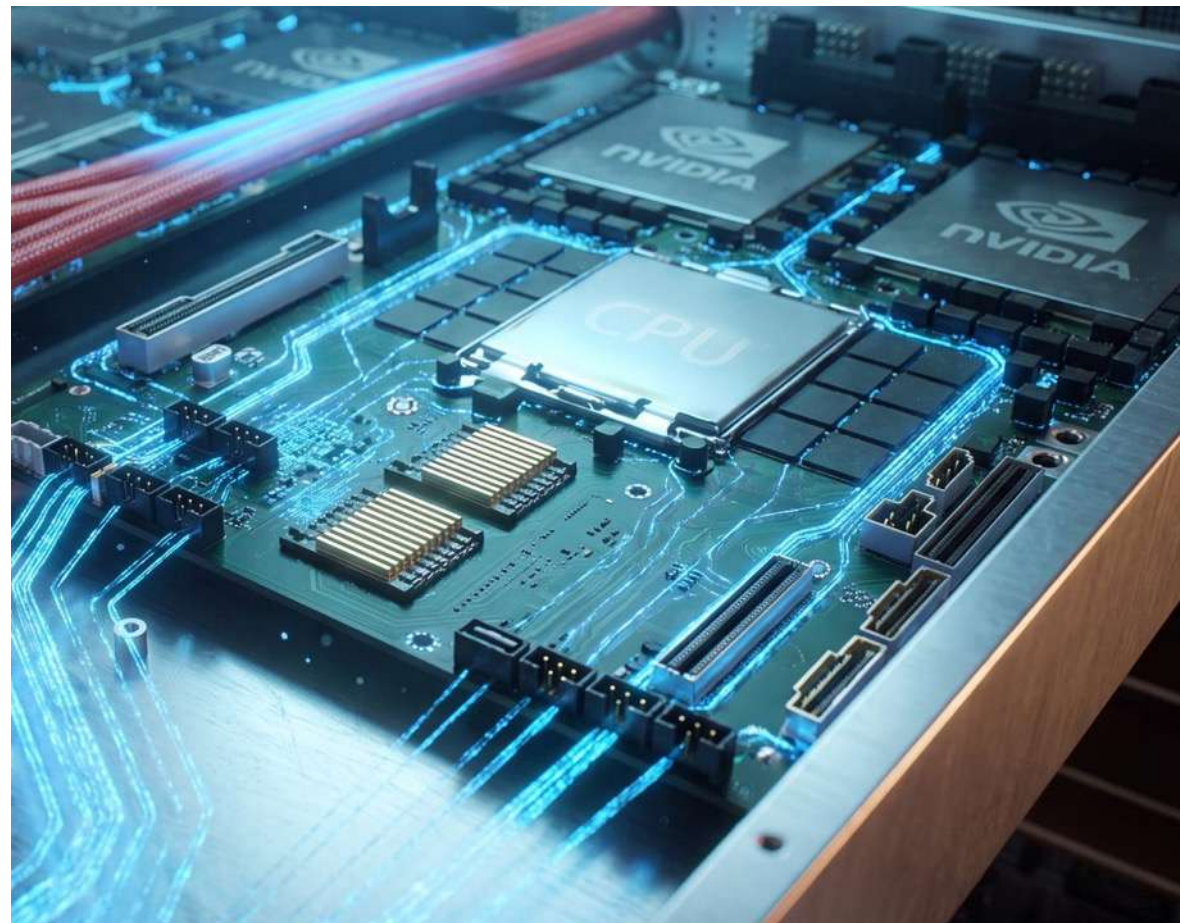
Developed with NVIDIA for AI workloads

Aligned with NVIDIA platforms and next-generation DC-ready power architectures

Delta aligns power, cooling, and infrastructure with next-generation NVIDIA GPU platforms.

Delta solutions support dynamic GPU loads, high-density power distribution and advanced cooling

- Compatibility with next-generation GPU platforms
- Stable power delivery under dynamic AI workloads
- DC-ready power architecture for higher rack densities
- Integrated power and cooling for thermal stability
- Scalable infrastructure for future AI factory expansion



Developed with NVIDIA for AI workloads

800VDC distribution supports much higher rack densities - fewer conversion stages mean higher efficiency, less heat, and less copper



From grid-level power management to rack-level integration

Delta helps data center operators transition to high-efficiency, DC-ready AI infrastructure

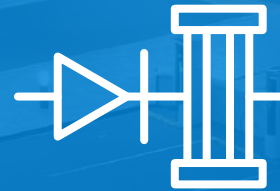
Delta 800VDC stack

A complete backbone

High-voltage DC
distribution
backbone



Solid-state
conversion and
protected busways



Integrated
monitoring and
controls





Efficiency Advantage

AC efficiency

≈ 87%

800VDC system

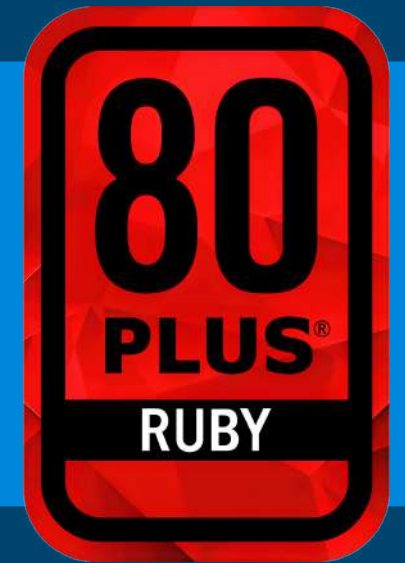
≈ 92%

4-5% gain

Each 1% gain saves ≈

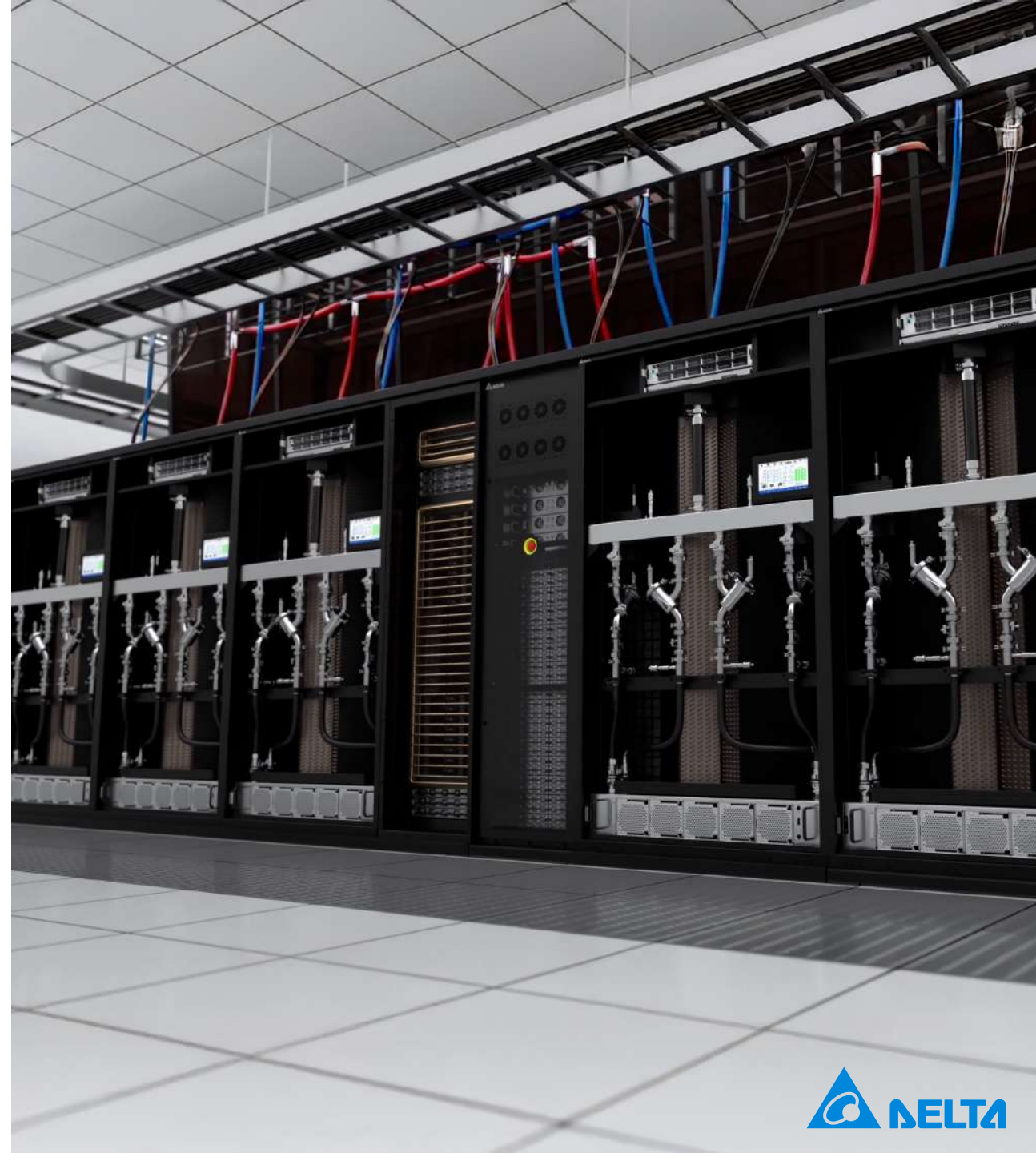
US\$ 500k

per 100 MW site



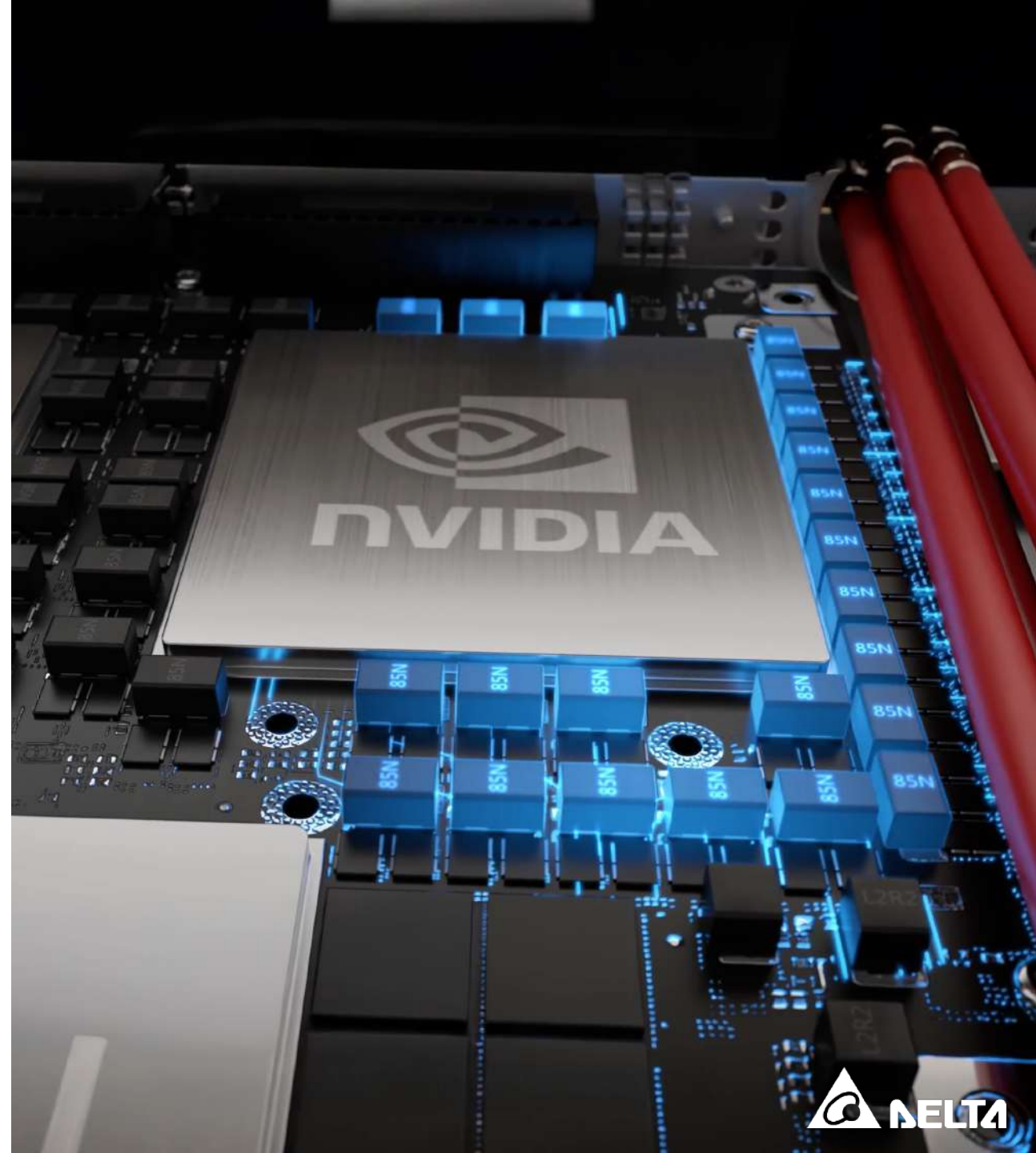
Delta Leadership Proven at Global Scale

- 1.6 GW liquid-cooling deployments worldwide
- Global PSU share $\approx$ 50%
- Proven pioneer of the 800VDC ecosystem



From Grid to Chip Powering Sustainable Intelligence at Scale

- AI growth is unstoppable
- efficiency is imperative
- 800VDC + liquid cooling is the scalable solution
- Partner with Delta to deliver sustainable AI





Intelligence that scales

