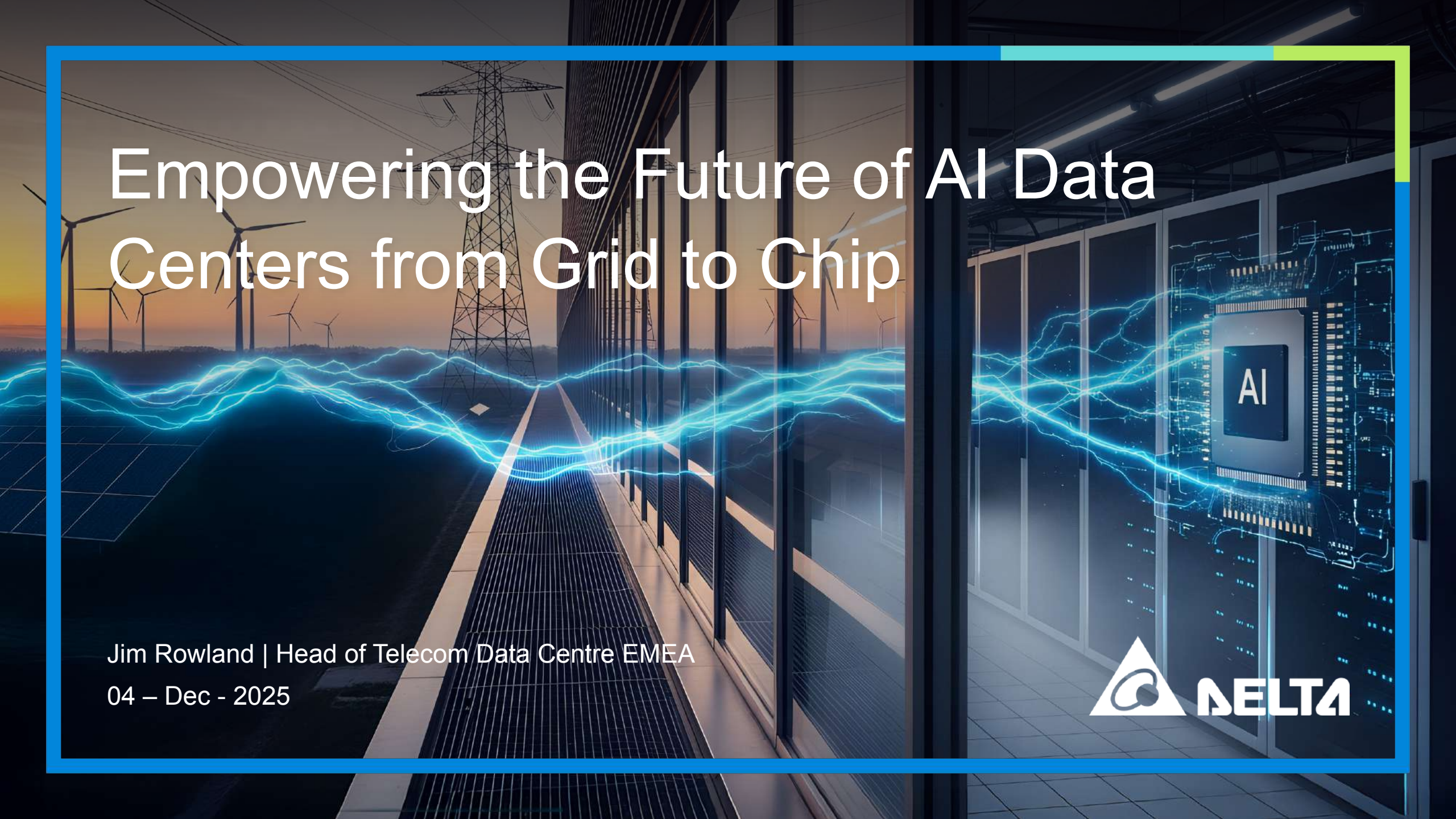
Empowering the Future of AI Data Centers from Grid to Chip



Jim Rowland | Head of Telecom Data Centre EMEA

04 – Dec - 2025

DELTA

Overview

Founded: 1971

World's Leader in Switching Power Supplies and DC Brushless Fans

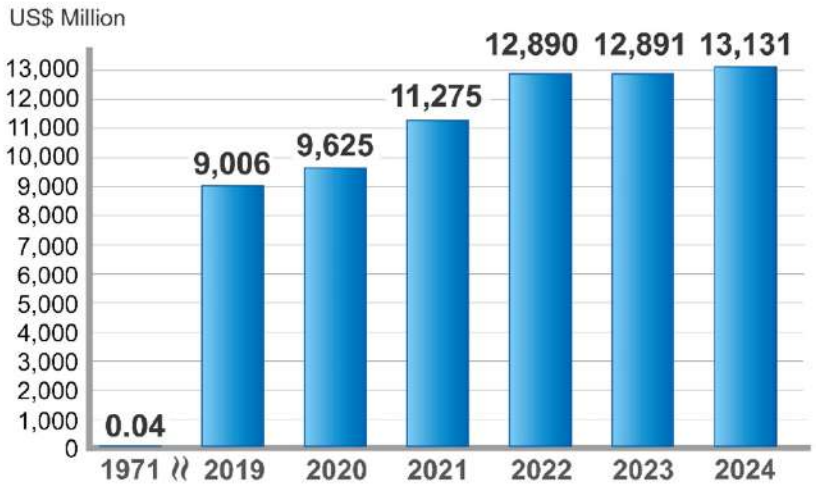
Dedicated to Providing:

- Telecom Power Systems
- EV Powertrain Systems
- Industrial Automation
- Passive and Magnetic Components
- Networking Products
- Visual Displays
- Building Automation
- Datacenter Infrastructure
- Renewable Energy and Energy Storage
- EV Charging Infrastructure

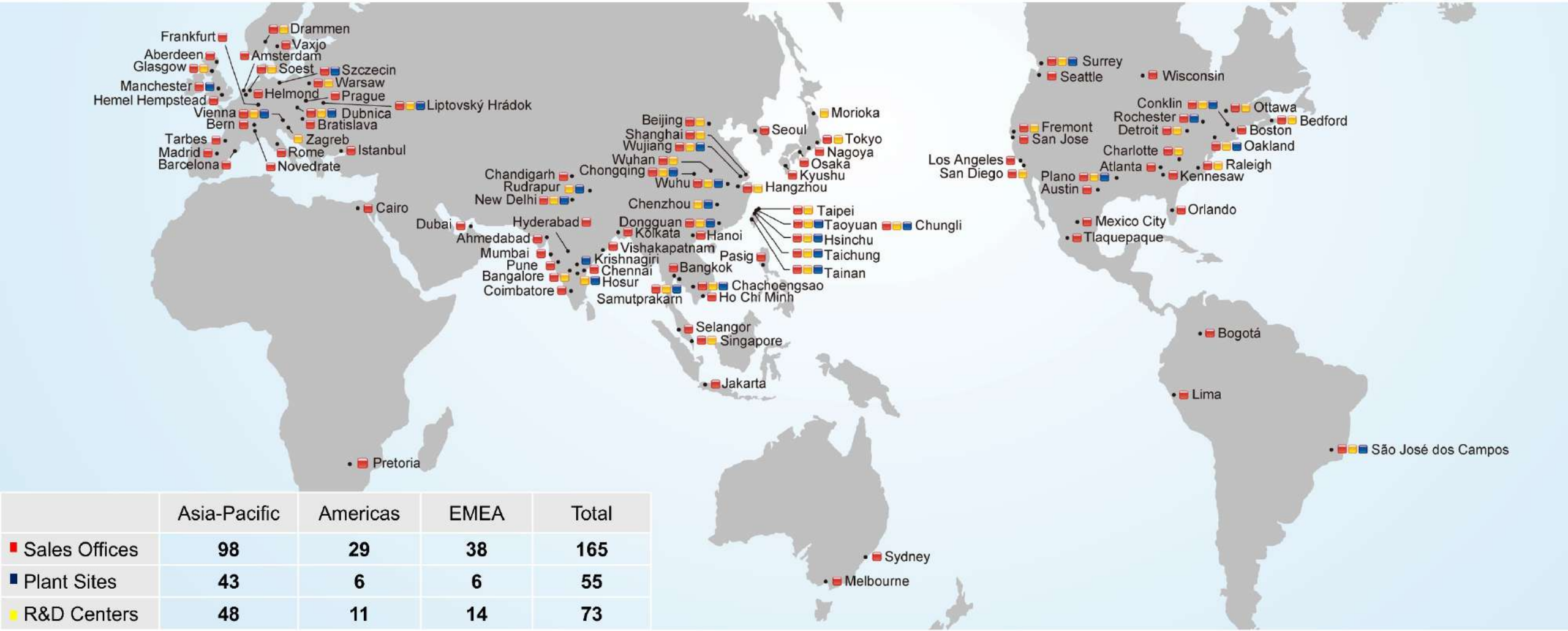
Bruce Cheng
Founder and Honorary Chairman

Ping Cheng
Chairman and CEO

Worldwide Revenues



Global Operations



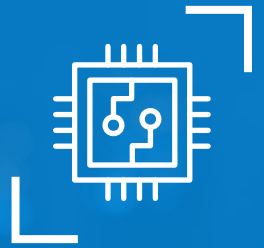
	Asia-Pacific	Americas	EMEA	Total
Sales Offices	98	29	38	165
Plant Sites	43	6	6	55
R&D Centers	48	11	14	73

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

Source: Economist Impact 2025

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

*AI generated image

Source: Economist Impact 2025

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

Source: UNEP 2024, (quoted in Economist Impact 2025)

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

*AI generated image

Source: Economist Impact 2025

Cost isn’t the Main Barrier

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

Lifecycle and infrastructure metrics lead evaluation

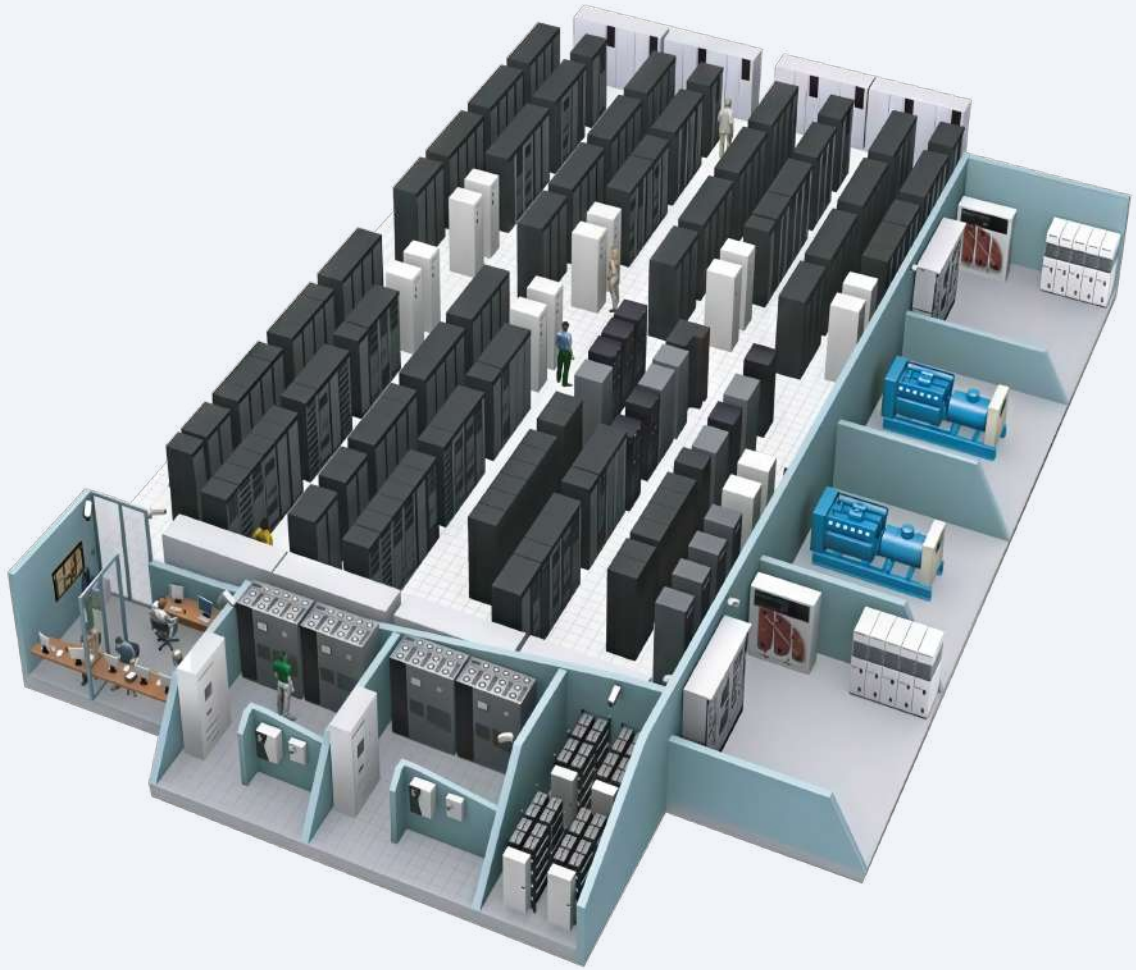
Real-time monitoring increasingly adopted

Source: Economist Impact 2025

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



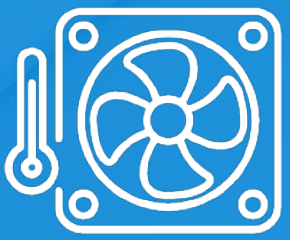
Source: Economist Impact 2025

Why Architecture Matters

Each power conversion stage creates loss and heat

Distribution voltage sets conversion count

Less heat means lower cooling energy



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

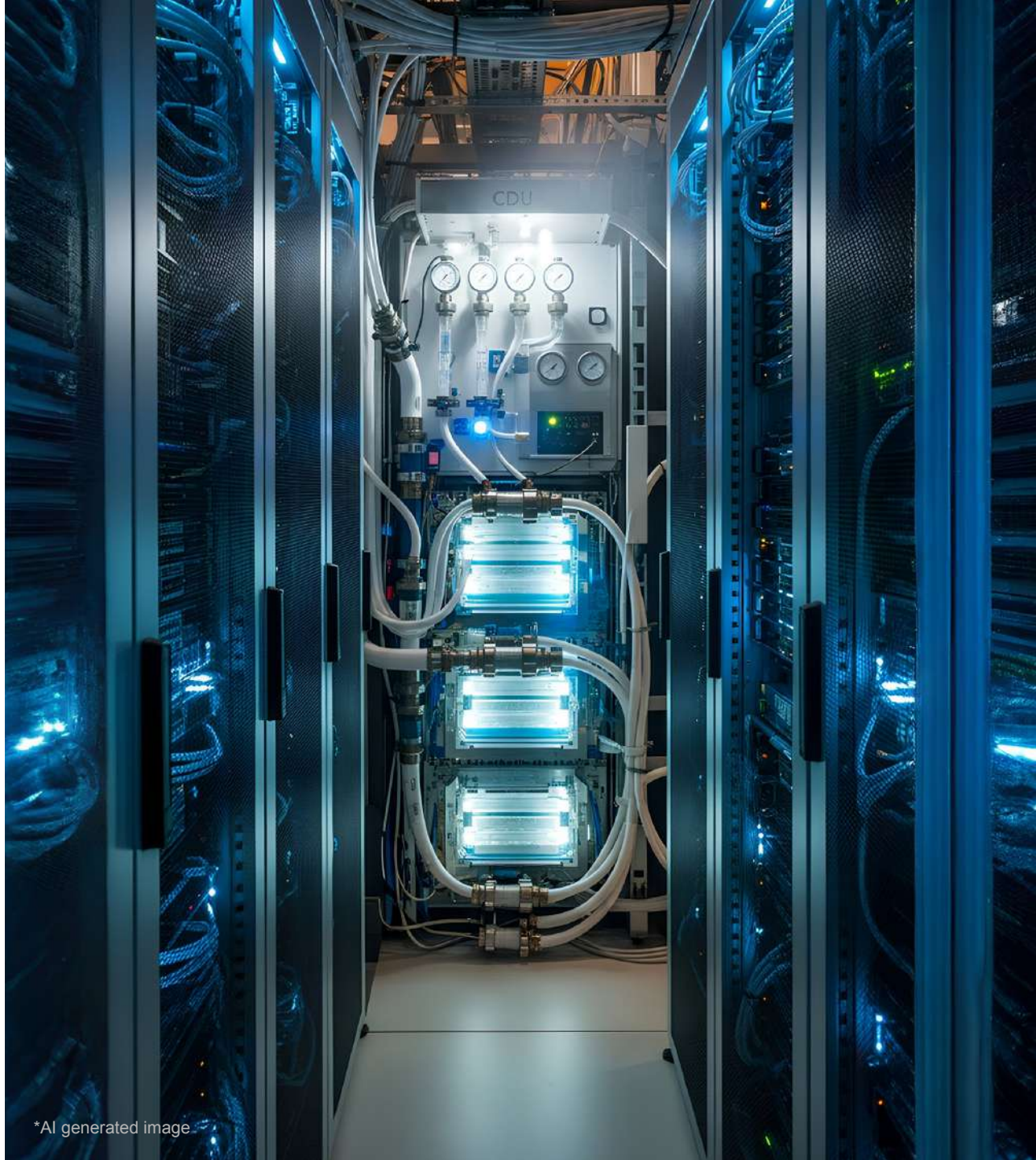
*AI generated image

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

Rack Density Forces Liquid Cooling Adoption

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



*AI generated image

Source: Economist Impact 2025

Beyond PUE

Measuring What Matters

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

Real-time energy monitoring adoption rising

Source: Economist Impact 2025

*AI generated image

Customers Demand Sustainability Targets Now

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

Source: Economist Impact 2025

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

*AI generated image

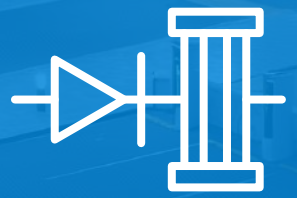
Source: European Commission AI Act 2024 (Economist Impact 2025)

Delta 800VDC stack

A complete backbone

High-voltage DC distribution backbone

Solid-state conversion and protected busways



Integrated monitoring and controls

Source: Delta product datasheets (required)

*AI generated image

Efficiency Advantage

AC efficiency

≈ 87%

800VDC system

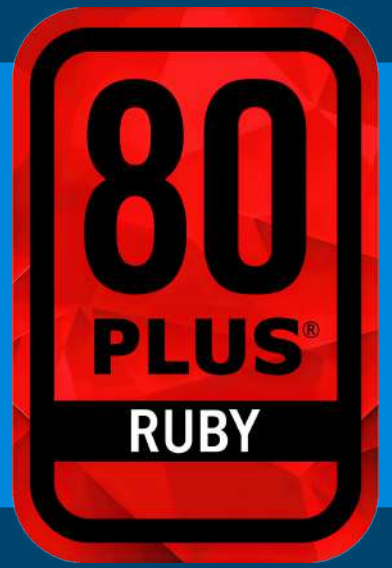
≈ 92%

4-5% gain

Each 1% gain saves ≈

US$ 500k

per 100 MW site

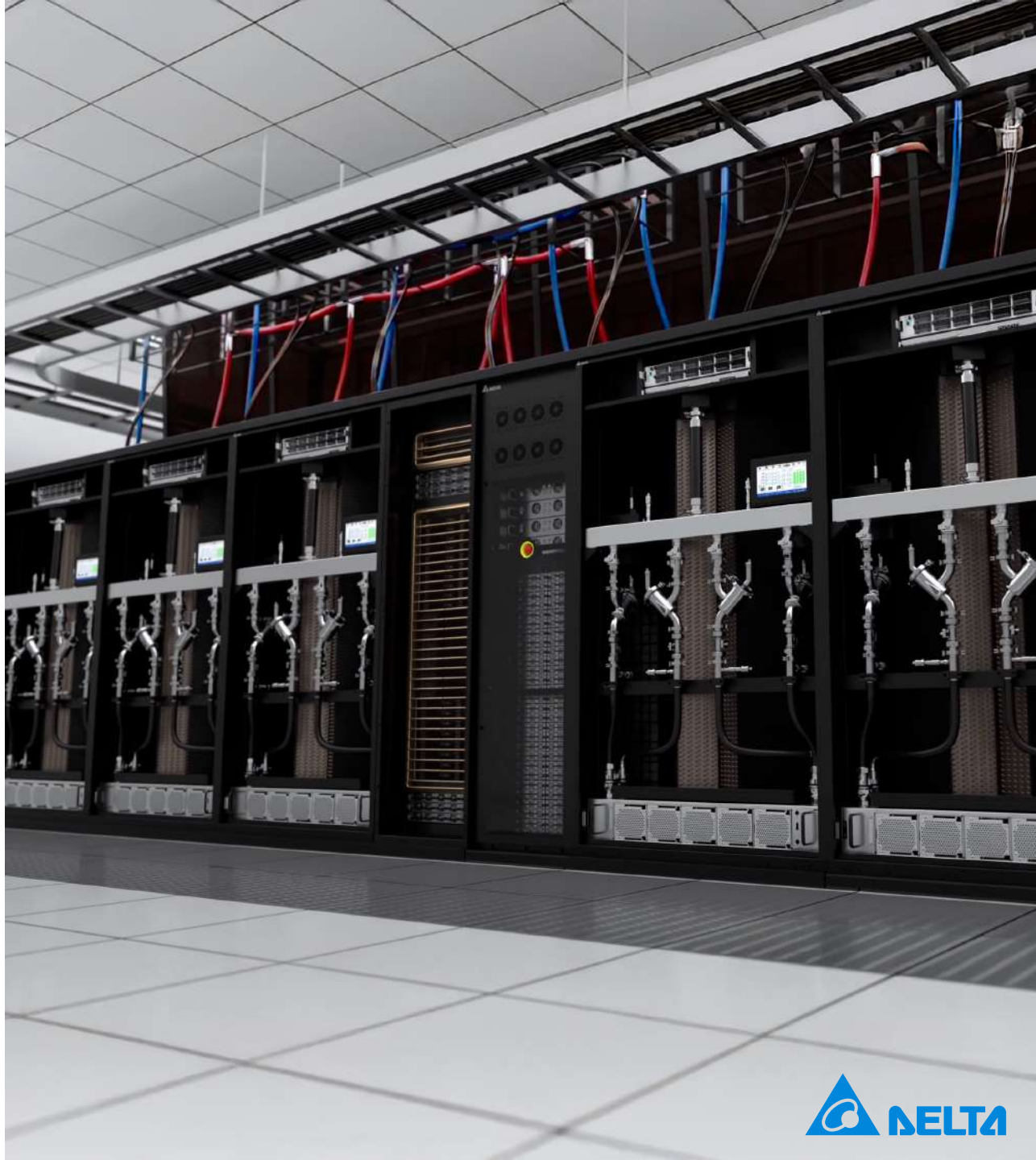


Source: Yole Power Electronics for Data Centers 2025

DELTA

Delta Leadership Proven at Global Scale

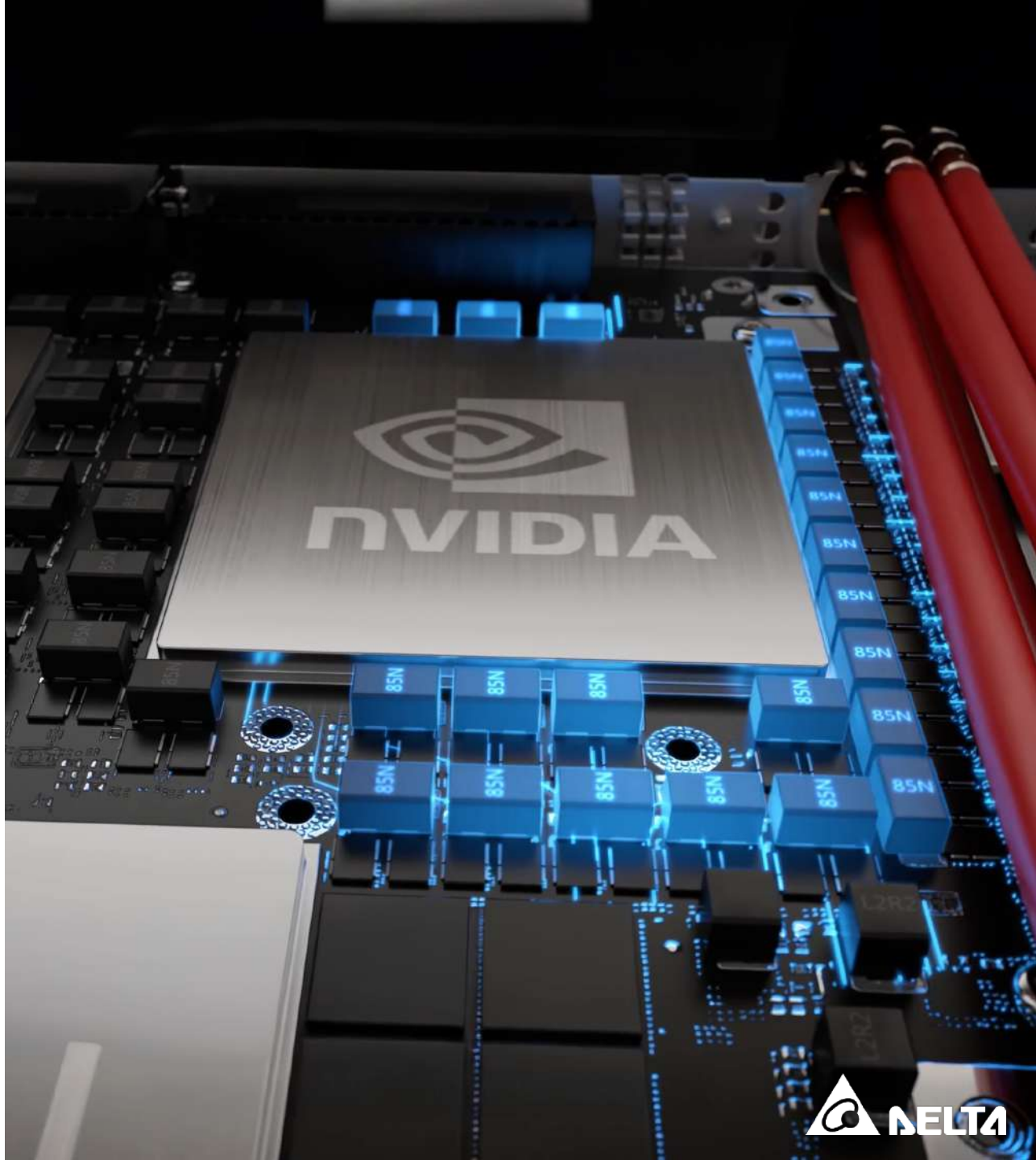
- 1.6 GW liquid-cooling deployments worldwide
- Global PSU share ≈ 50%
- Proven pioneer of the 800VDC ecosystem



Source: Yole Supply Chain Database 2025

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



Source: Economist Impact 2025 synthesis

Intelligence that scales