Partnering for AI-ready Data Centers

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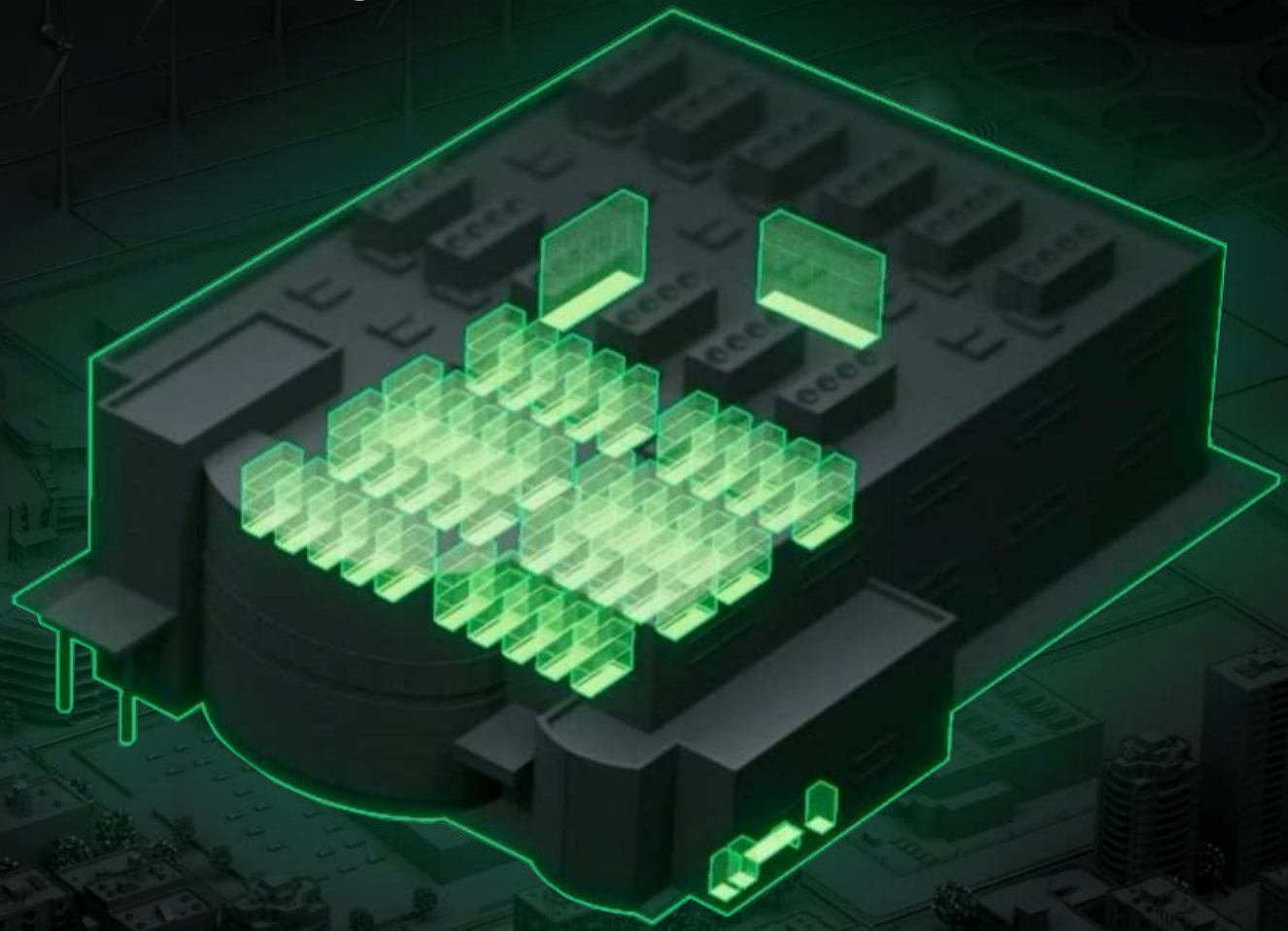

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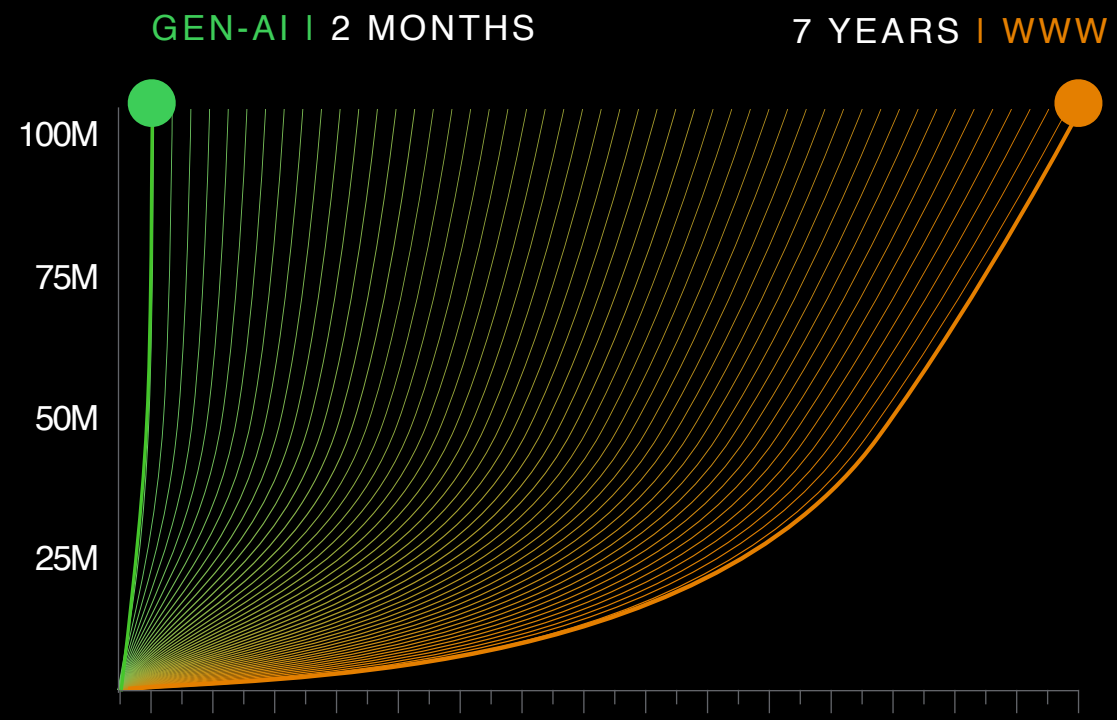
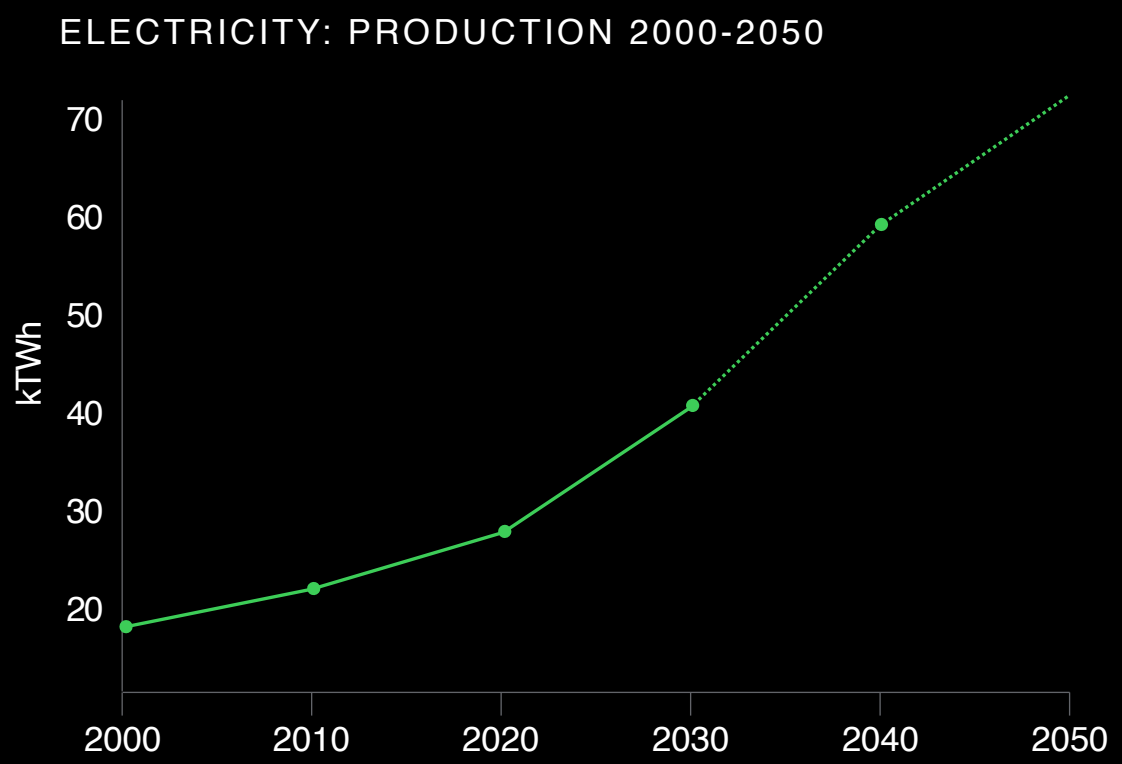
The pace of digital adoption and electrification is accelerating

Growing demand for Data Centers + 3bn more people needing access to electricity by 2050 + Electrification to meet Net Zero targets



Adoption rate: first 100M users



Sources: Citi Research, Similar Web, Open AI, Enerdata

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Our new digital economy is impossible without data

90% Internet Users

In 2030, 7.5 Billion people (Arcserve)

>100B IoT Devices

In 2050 vs around 25 Billion in 2022

61% Yearly Big Data Growth

Stored data from 50 ZBs 2022 to 175 ZBs by 2025 (*IDC)

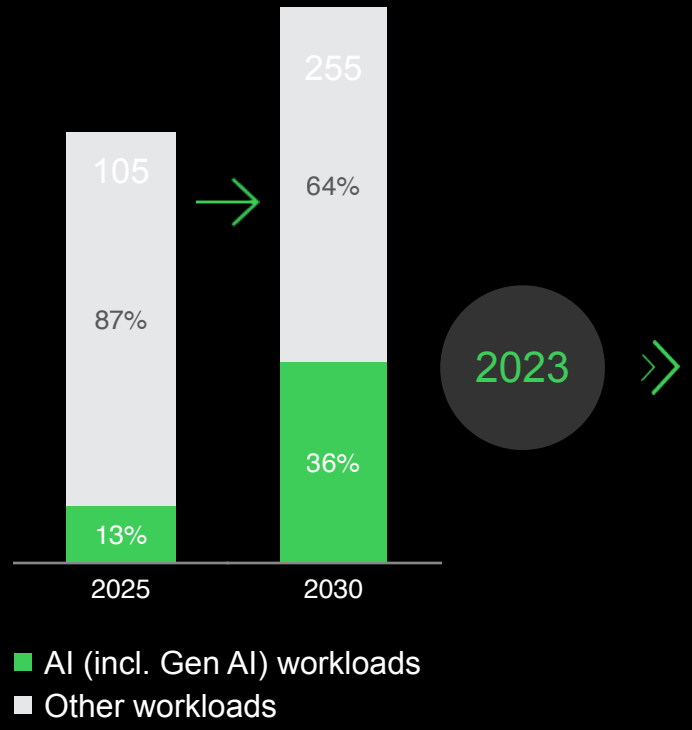
$16T From AI

14% increase in Global Economy by 2030 due to labor productivity and product enhancements (WEF)

AI is accelerating

Expected to reach 36% of all installed data center workloads by 2030 - raising several difficulties for data center providers

SHARE OF AI (INCL. GEN AI) WORKLOADS OVER TOTAL CAPACITY (2025-2030) [IN GW]



- AI (incl. Gen AI) workloads
- Other workloads

+150GW
Of capacity to be added in next 5 years

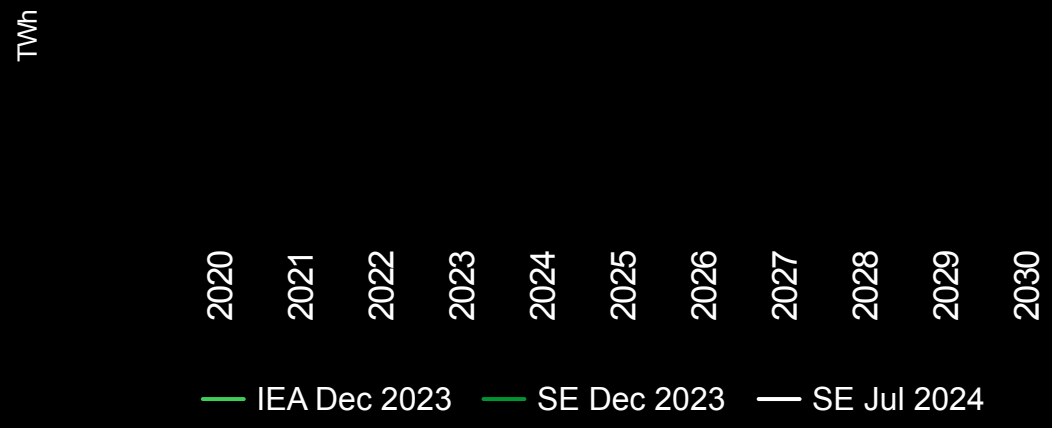
60%
Of new build allocated to AI

40 – 100kW
Average density, long tail towards high density

1. Implies about 15 to 30, "GW scale", deployed training factories on the planet by 2030

Higher density requires more power

GLOBAL ENERGY DEMAND FROM DATA CENTERS (2020-2030)

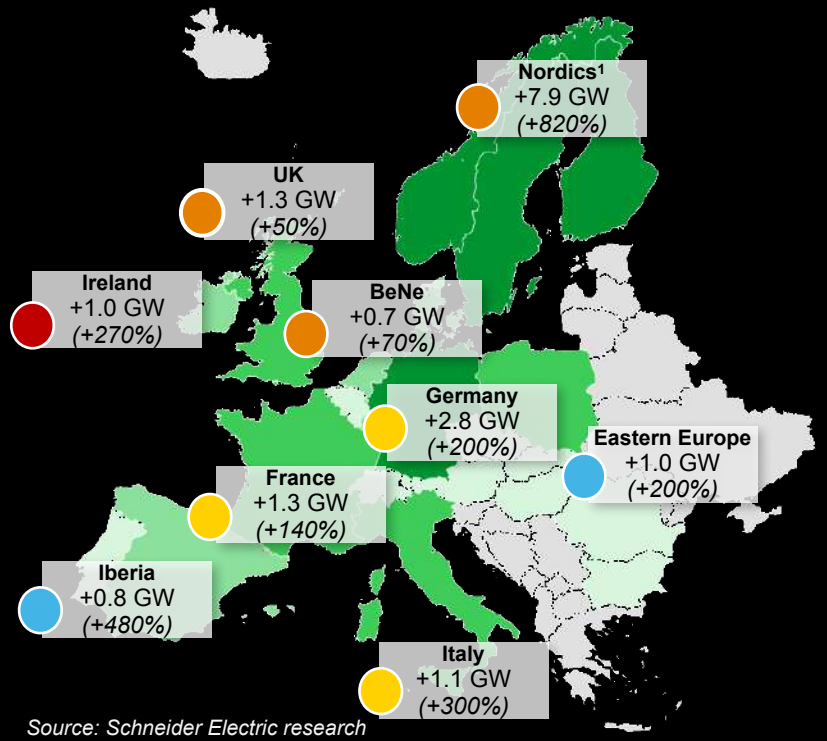


Sources: IEA (2023), Schneider Electric DCoF study (2024)

2023-2030 Data center New GW (*as % of 2022 installed base*)

Major upstream disruptions

…impacting market dynamics



AI / Gen AI impact on workload driving structural changes

Strong pressure on **Sustainability**

Power and grid connection access & reliability

Scale At Speed

Switch To Green

Increase Flexibility

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Development

Deployment

Training

PARAMETERS

CLOUD

DATA CENTER

SELF-DRIVING CARS

INTELLIGENT MACHINES

GENERATIVE

Augment / Inference

- Huge processing power
- Massive memory capacity
- Extended processing time
- Scalability
- Energy intensive

- Efficient resource usage
- Low latency
- Scalability
- Energy efficient

- Model optimization, tuning, customization
- Compressible and integrateable

FROM GRID TO CHIP AND
CHIP TO CHILLER

Welcome to the new era of data centers

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What's so special about AI data centers?

Rapid Compute evolutions

Data Center flexibility as owners and operators are planning with more uncertainty

Ultra Power Density

Need guaranteed and reliable operation near operational limits

Race to AI leadership

More than ever… need to build fast and ability at scale

Dynamic Power Profile

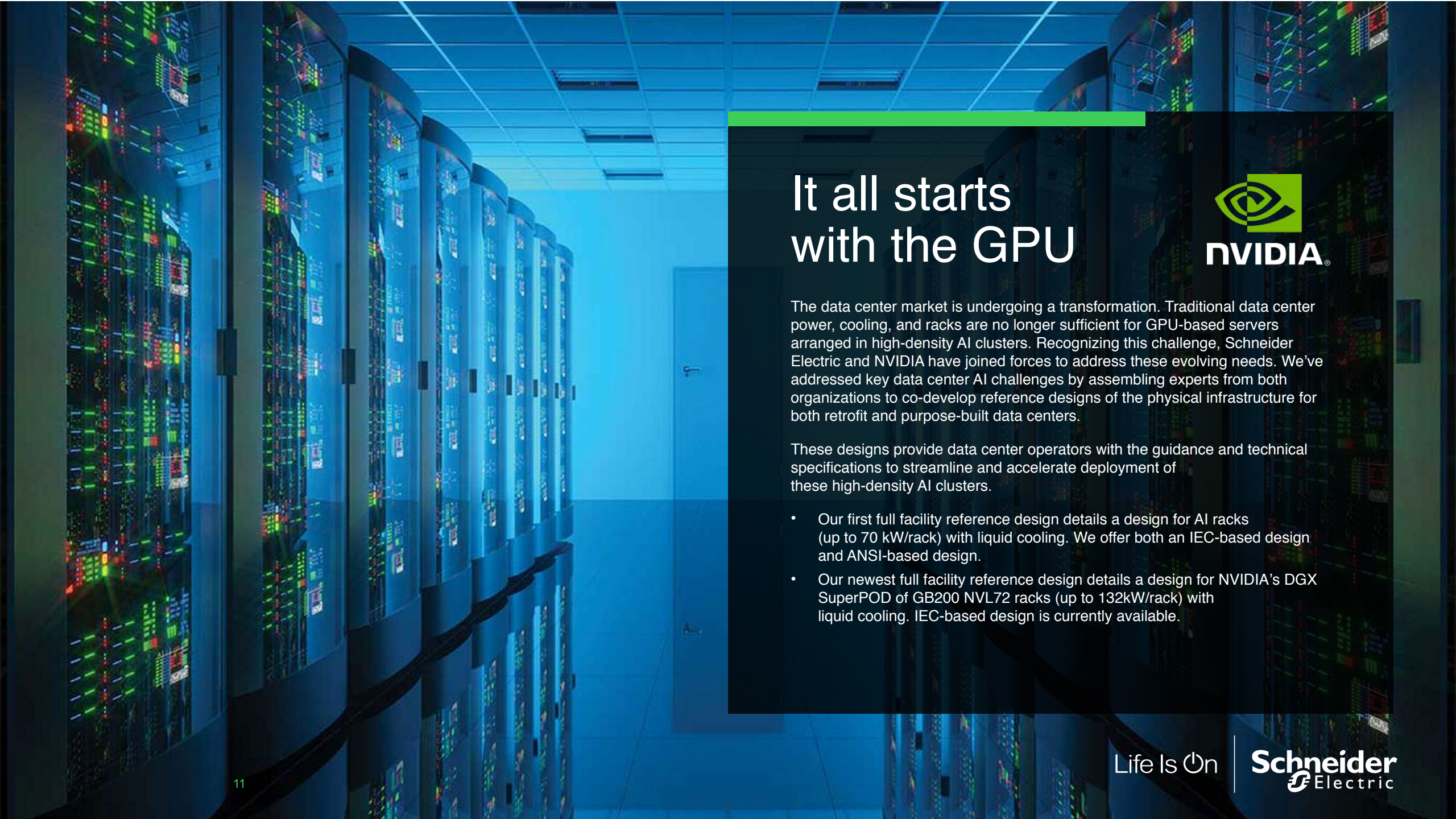
Ensure all elements in power training can both tolerate and possibly "smooth" power profile

Architecture variability

Wide range of innovation from zero resiliency to high availability

End-to-End for AI

- Sustainable AI-Ready Data Center Design
- AI-Ready High-Performance Power Trains
- Hybrid & High Efficiency Cooling Solutions for AI loads
- Safeguard your Operations



It all starts with the GPU

The data center market is undergoing a transformation. Traditional data center power, cooling, and racks are no longer sufficient for GPU-based servers arranged in high-density AI clusters. Recognizing this challenge, Schneider Electric and NVIDIA have joined forces to address these evolving needs. We've addressed key data center AI challenges by assembling experts from both organizations to co-develop reference designs of the physical infrastructure for both retrofit and purpose-built data centers.

These designs provide data center operators with the guidance and technical specifications to streamline and accelerate deployment of these high-density AI clusters.

- Our first full facility reference design details a design for AI racks (up to 70 kW/rack) with liquid cooling. We offer both an IEC-based design and ANSI-based design.
- Our newest full facility reference design details a design for NVIDIA's DGX SuperPOD of GB200 NVL72 racks (up to 132kW/rack) with liquid cooling. IEC-based design is currently available.

AI-Ready high-performance power trains

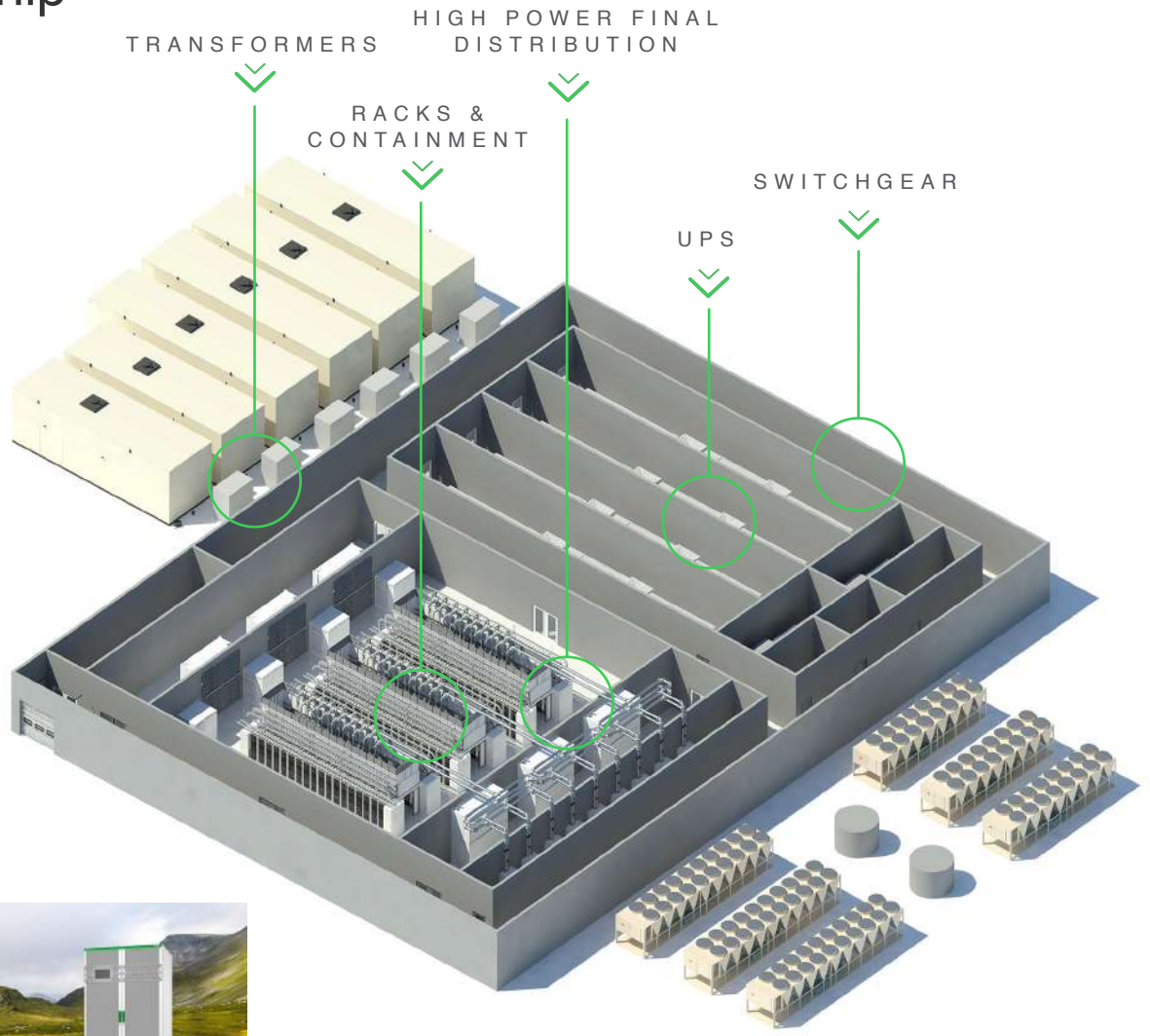
➢ Switchgear
Low & Medium Voltage Switchgear - Get high-performance functionality, compact installation footprints, and superior design with our LV/MV switchgear products.

➢ UPS
Highly efficient, scalable 10-1500kW range of UPSs featuring modular, redundant design and AI profile compatibility.

➢ High Power Final Distribution
Designed for efficient installation, the compartmental approach separates monitoring, distribution, and control.

➢ Racks and Containment
NetShelter rack systems and air containment systems are built to last, highly secure and simple to configure.

Grid to Chip



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Hybrid & high efficiency cooling solutions to run AI loads

- Liquid to Liquid Cooling Distribution Units (CDUs) and Technology Cooling Systems (TCS)

to ensure flow control, temperature control, pressure control on Technology Cooling System (TCS), as well as fluid treatment, filtration and quality.

- Liquid to Air CDUs,

as an alternative solution which allows to use liquid cooling servers in an air based white space

- High Temperature Chillers

Designed for flexibility and efficiency, using economization / free-cooling as primary heat rejection for the Liquid Cooled servers

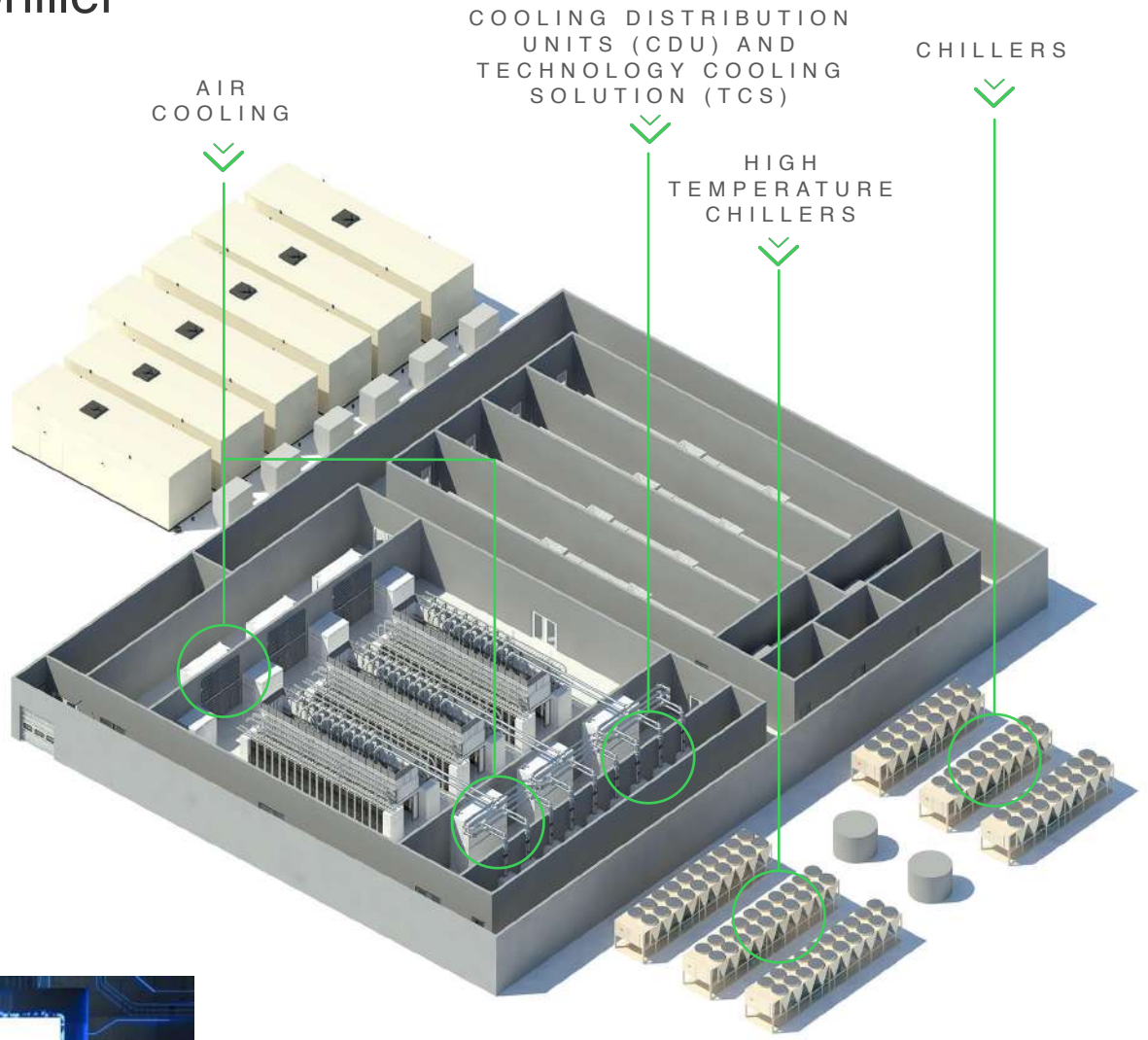
- Air Cooling

Chilled water and direct expansion solutions for supplementing liquid cooling systems or for auxiliary rooms, independently on the site's architecture

- Chillers

Reliable cooling solutions designed to enhance the performance and energy efficiency of your data center by removing heat from the facility to maintain optimal temperatures for efficient operation of air based heat rejection systems

Chip to Chiller



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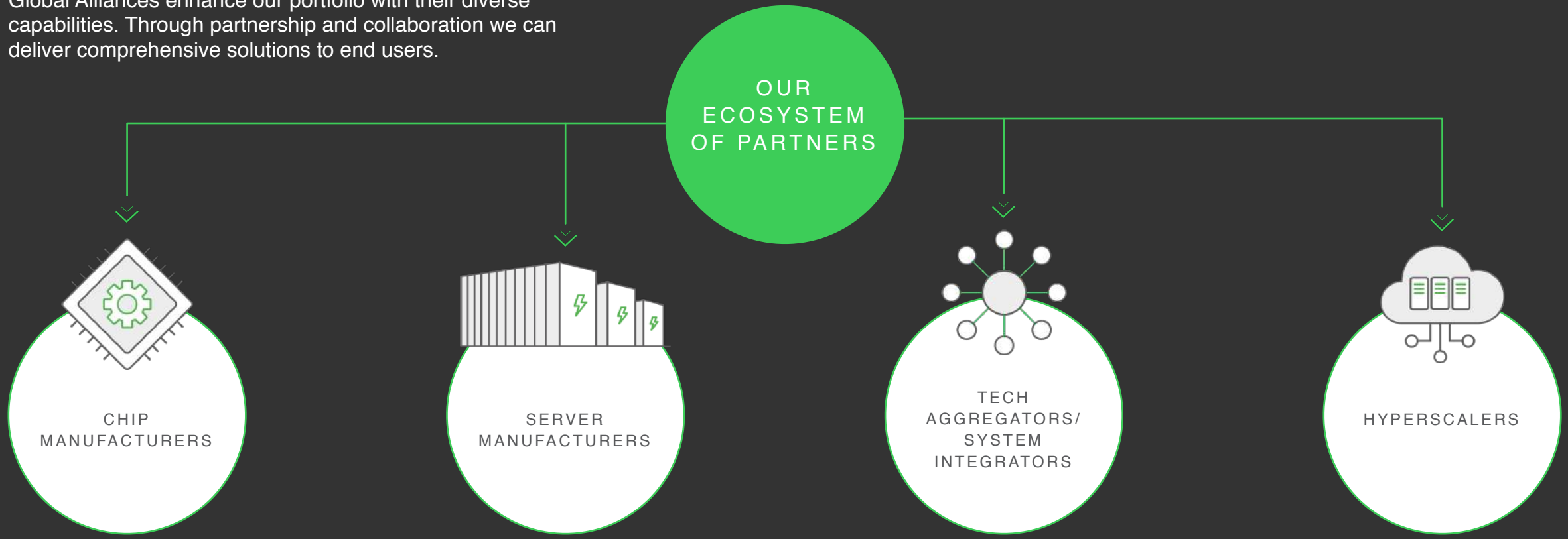
Partnerships for success

WWT, Schneider Electric and NVIDIA's strategic partnership enables Scott Data to launch GPU as a Service.

Schneider Electric's robust ecosystem of partners and Global Alliances enhance our portfolio with their diverse capabilities. Through partnership and collaboration we can deliver comprehensive solutions to end users.



How do we decouple AI data center growth from energy consumption?

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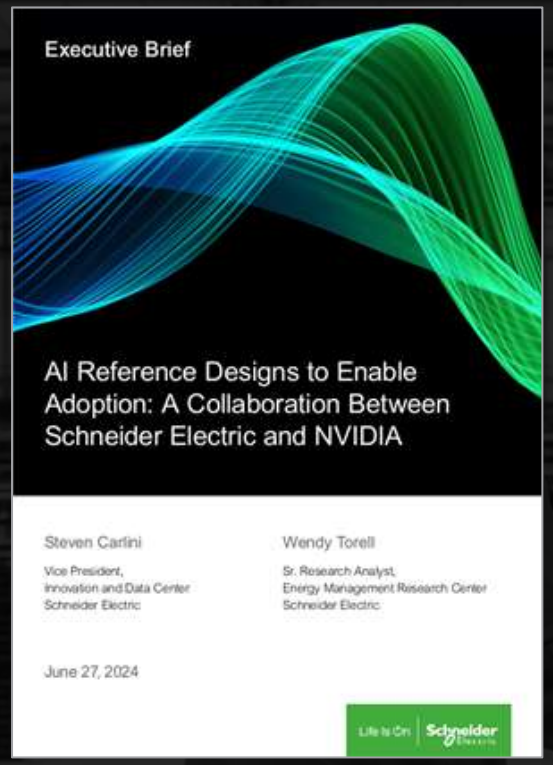
Resources and whitepapers

- Whitepaper: The AI Disruption: Challenges and Guidance for Data Center Design WP110
- Whitepaper: AI-Driven Data Centers: Revolutionizing Decarbonization Strategies WP106
- Whitepaper: Guide to Environmental Sustainability Metrics for Data Centers WP67
- Whitepaper: *Navigating Liquid Cooling Architectures for Data Centers with AI Workloads WP133*



AI Reference Designs to Enable Adoption: A Collaboration Between Schneider Electric and NVIDIA

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