

# Powering AI factories

Building resilient, scalable, and **intelligent infrastructure** from grid-to-chip.

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Advancing  
Energy Tech



**Schneider**  
Electric

# 01

## The **AI factory shift**

AI is transforming traditional data centers into AI factories, redefining requirements.



# 02

## Powering the **AI factory lifecycle**

From design and simulation to operation and maintenance, Schneider Electric are powering the future of AI factories.



# 03

## One partner from **grid-to-chip**

Schneider Electric delivers prefabricated power architectures, integrated powertrains, digital intelligence, and global expertise to help organizations build and scale AI factories with confidence.



# The AI factory shift

The AI factory shift

Powering the AI  
factory lifecycle

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# AI has transformed data centers into **AI factories**

We're not just talking about another data center.  
We're talking about the most **demanding system ever built**.

As AI workloads scale, infrastructure must evolve to support unprecedented compute density and continuous high-load operation.

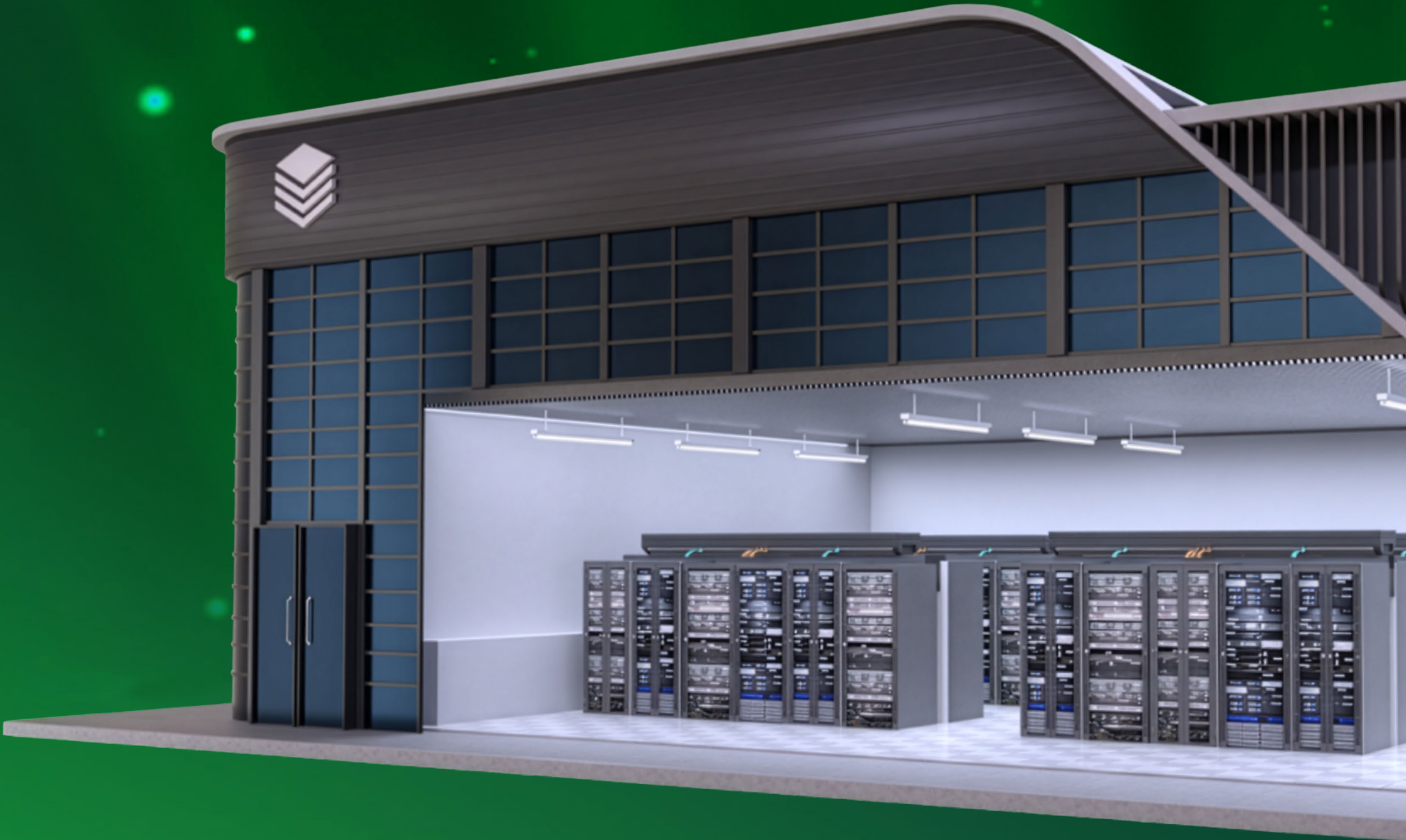
AI factories **demand a new approach** to power, one that supports resilient power systems from initial design through to **long-term operation** and **maintenance**.

 Rapid GPU density increases

 Multi-megawatt AI clusters

 Accelerated deployment timelines

 Rising sustainability expectations



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# Designing **resilient power** across the AI factory lifecycle

At Schneider Electric, we connect every stage, from design and simulation through build, operation and maintenance, to create a **resilient power infrastructure that evolves with AI.**



## Design

Executing at speed while integrating entirely new physical architectures.



## Simulation

Modelling extreme, continuous loads before deployment.



## Build

Balancing deployment speed with supply chain realities.



## Operate

Managing exponential telemetry and real-time performance demands.



## Maintain

Delivering continuous lifecycle execution at unprecedented scale.

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# The future of the AI factory **starts with design**

Design is where the future is committed.

That's why Schneider Electric partners with key AI Ecosystem players to co-develop AI factory reference architectures designed to accelerate deployment, reduce construction risk, and support next-generation accelerated computing.

Together, we are building repeatable, scalable blueprints that integrate:

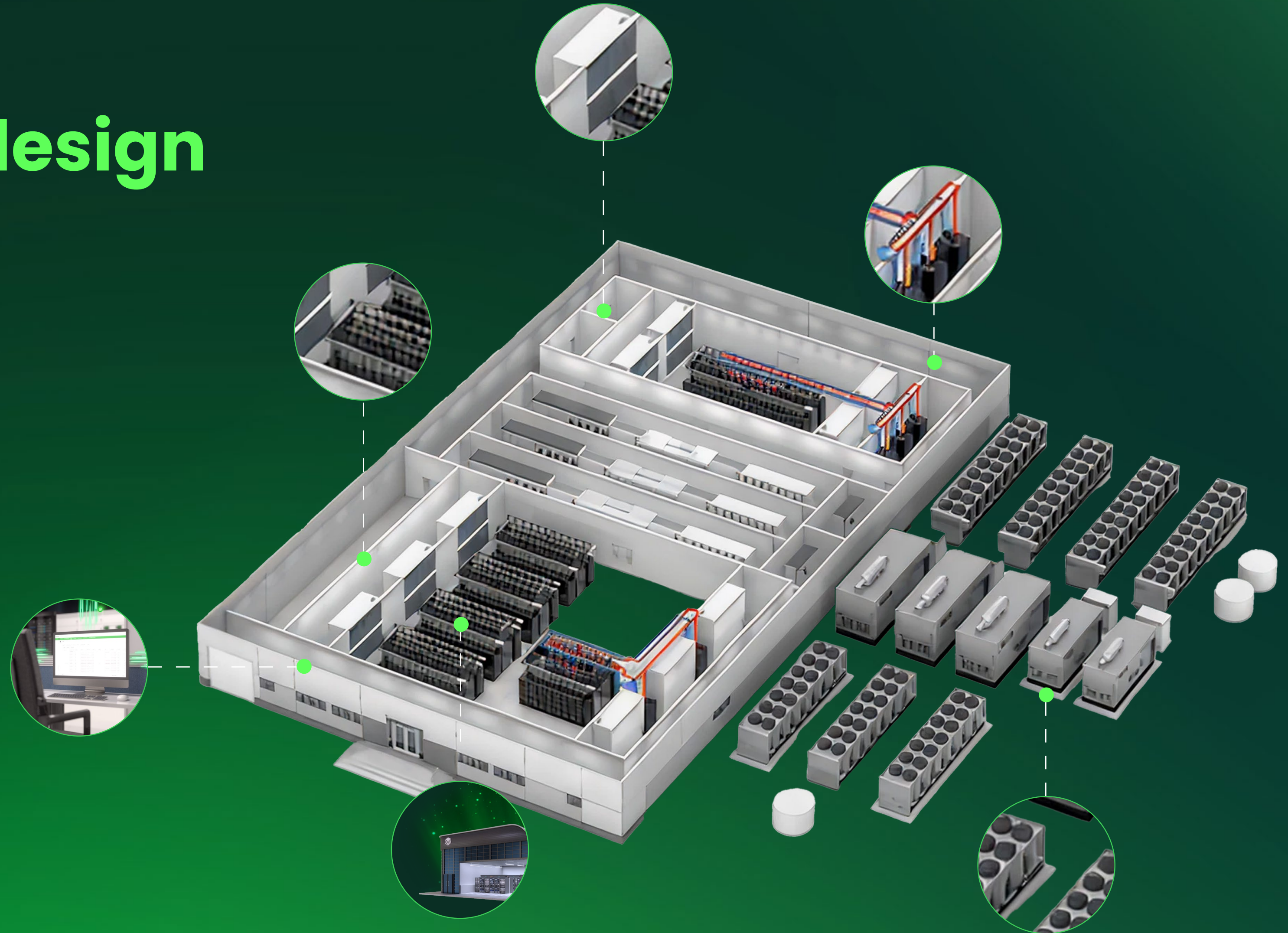
- Power infrastructure
- Cooling systems
- Intelligence and orchestration
- Facility power
- IT room architecture
- Facility piping

[Explore our designs](#)

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# Simulate the AI factory before it exists

AI factories are software-defined from the start, acting as one **synchronized digital environment**.

Using AVEVA engineering and operations software inside the NVIDIA Omniverse DSX Blueprint, Schneider Electric helps create fully aligned, engineering-accurate digital twins of the AI factory.



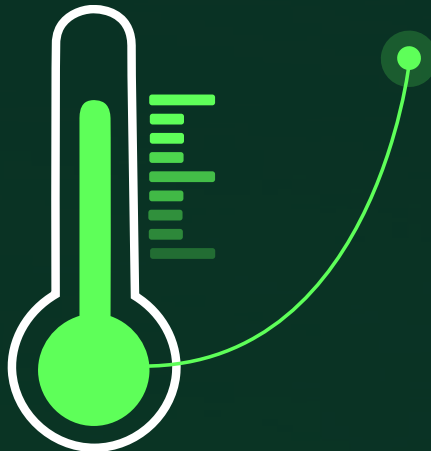
Together, these technologies **enable organizations** to:

**Predict**  
multi-domain interactions



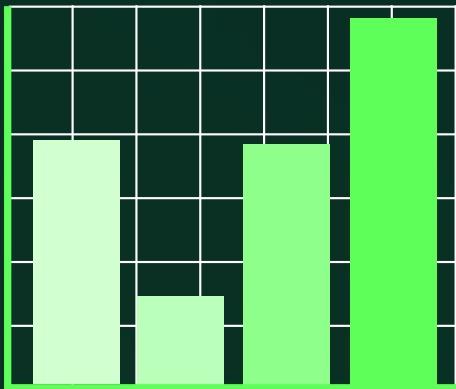
**Validate**  
switching operations before execution

**Optimize**  
performance at gigawatt scale



**Simulate**  
thermal and airflow performance

**Run**  
high-fidelity what-if scenarios



**Analyze**  
load flow and rapid GPU ramp-ups

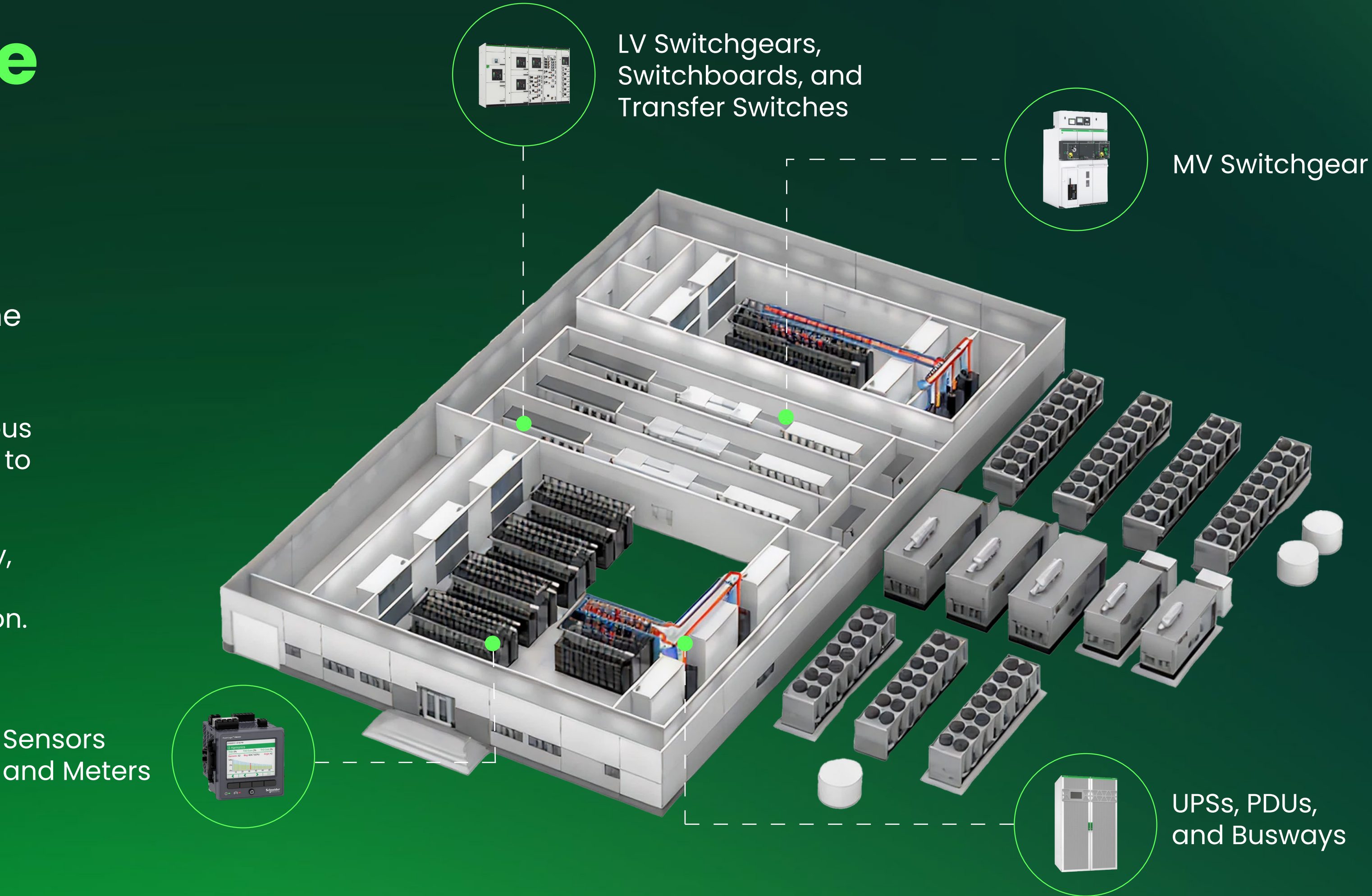
# Delivering AI infrastructure at **speed and scale**

Once the AI factory is perfected digitally,  
simulation becomes reality.

This is where resilient power designs become  
**operational AI factories.**

Engineered for rapid GPU ramp-ups and continuous  
high-load operation, these systems are designed to  
support the most demanding AI environments.

To accelerate deployment and reduce complexity,  
we also provide prefabricated, factory-tested  
solutions engineered for plug-and-play integration.



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# Powering the AI factory lifecycle

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# Powering **intelligent** AI factory operations

Continuous visibility across the powertrain enables AI factories to **operate with greater resilience, efficiency, and confidence.**

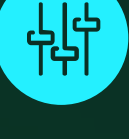
Schneider Electric helps organizations transform millions of data points into contextual intelligence and real-time action.



Once consolidated into a unified operational data layer, intelligence systems can:

-  Predict and avoid failures
-  Detect and correct hotspots
-  Optimize power flows
-  Improve operational efficiency
-  Reduce unplanned downtime

Our powertrain systems are built with **native sensors that monitor:**

-  Thermal and fire risk
-  Partial discharge
-  Circuit breaker health
-  Environmental conditions
-  Equipment performance

# Maintaining **resilient power** throughout the AI factory lifecycle

AI factories continue to evolve long after commissioning.

As workloads grow and infrastructure expands, maintaining resilient power becomes an ongoing lifecycle challenge.

We combine connected infrastructure, digital intelligence and lifecycle expertise to help organisations maintain performance, improve resilience and prepare for future growth.

Through continuous visibility provided by EcoCare, predictive insights, and lifecycle expertise, we help customers:



Reduce unnecessary maintenance interventions



Extend maintenance intervals



Reduce intrusive onsite maintenance



Increase operational continuity



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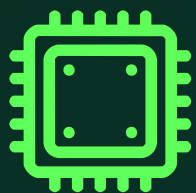
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# One partner for the complete AI factory lifecycle

With 190 years of innovation in power infrastructure, Schneider Electric provides:



Grid-to-chip expertise



Advanced digital intelligence



Design-to-maintain lifecycle support



Deep AI ecosystem partnerships



Global scale with local execution



Prefabricated power architectures

190

YEARS OF INNOVATION

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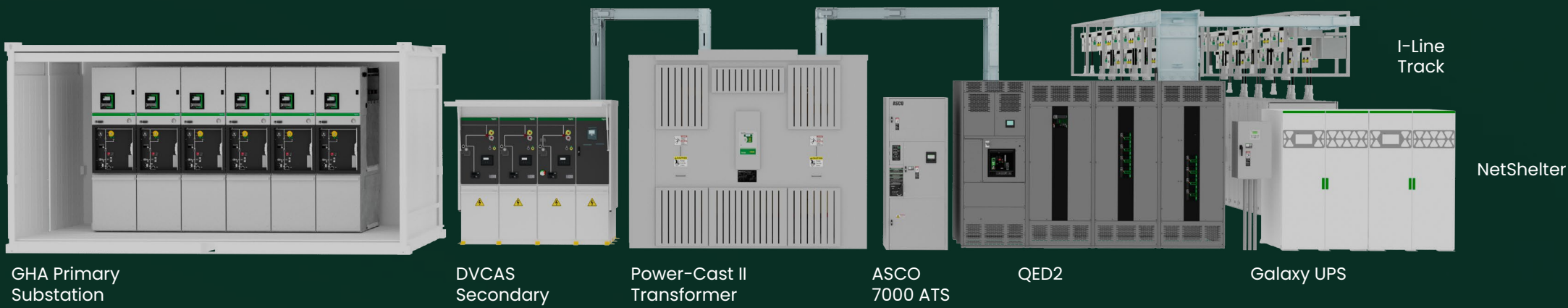
# When AI demands more, we deliver

From **grid to chip**.  
From **design to maintain**.  
From **simulation to operation**.

Schneider Electric is the only global provider able to deliver a fully integrated, worldwide grid-to-chip solution, combining global consistency with the local expertise, standards, and regional infrastructure knowledge required to power AI factories at scale.

We are helping power the next generation of AI factories.

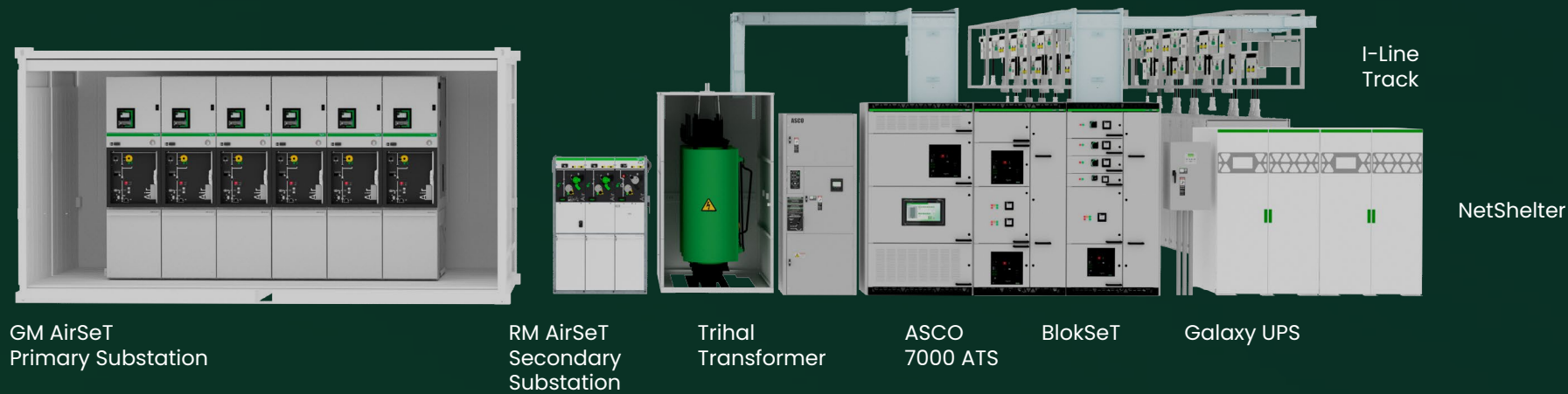
## North America power train



## Europe and International power train



## Asia power train

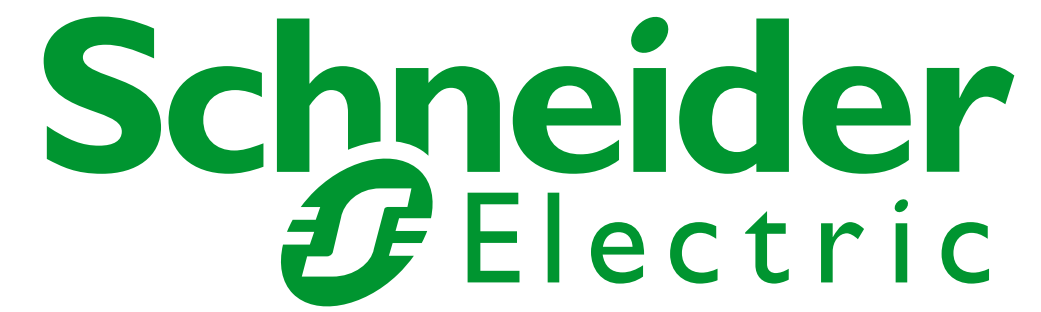


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To learn more information about our power train architecture for **AI factories**, visit

[www.se.com/ww/en/work/solutions/ai-factory/power/](http://www.se.com/ww/en/work/solutions/ai-factory/power/)



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