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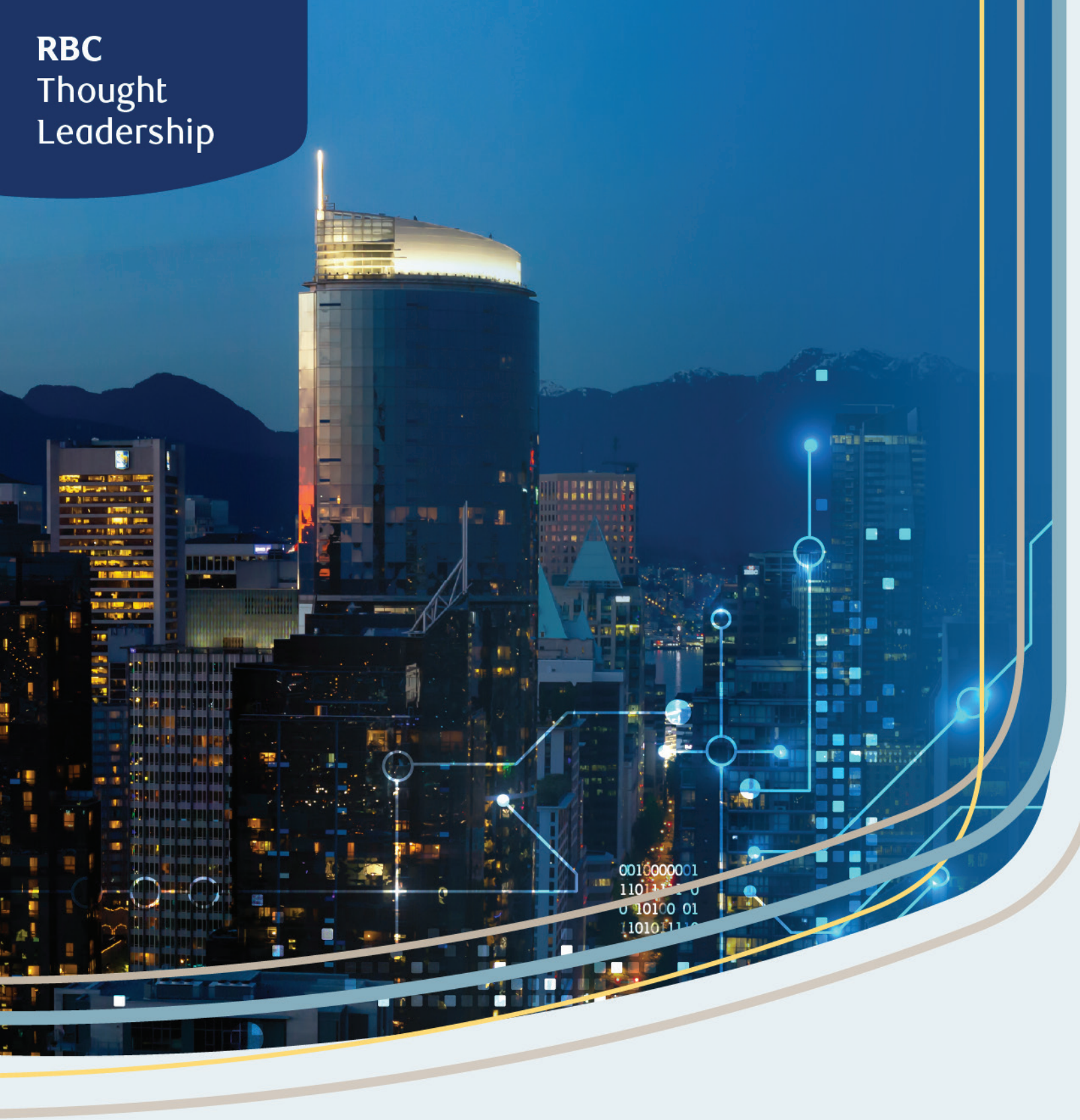


AI CASE STUDY

Trust, Scale, and Strategy

How to build a 350-person AI hub

Artificial intelligence is poised to reshape how value is created across Canada's economy. To understand that shift, RBC Thought Leadership interviewed more than two dozen firms that are on the front lines of building or deploying AI for our report, *Bridging the Imagination Gap: How Canadian Companies Can Become Global Leaders in AI Adoption*.

Building on that report, our series of case study go a level deeper. Here we follow how Schneider Electric, a global leader in an energy management and industrial automation firm, turned pandemic-era supply chain disruption into an opportunity to reinvent its operations with AI. The French company's experience shows that scaling AI requires more than pilots or isolated wins—it demands structure, governance, and integration into the business model.

Summary

Internal validation matters. Schneider Electric proved AI's value both internally and in customer offers. Starting with supply chain projects that freed up millions to invest in predictive tools that reduced downtime. This internal credibility gave the company the confidence to embed AI directly into products and services.

Governance can be an advantage. By treating the EU AI Act as a design specification rather than red tape, Schneider built compliance into its MLOps machine-learning pipeline. This not only eased adoption internally but also created a "trust premium" with customers.

Centralization drives scale. A 350-person AI Hub concentrated scarce expertise, standardized tools, and linked directly to executive decision-making, turning AI into a repeatable capability rather than scattered experiments.

Future readiness requires sovereignty and edge leadership. Focusing on trust and compliance, Schneider is positioning itself to thrive in a world where data localization and sovereignty increasingly shape industrial competition.

When most people picture electronics manufacturing, they think of smart chips, GPUs, CPUs and capacitors. But it's the hidden circuitry under the hoods that makes our world hum efficiently : a lattice of switches, sensors, drives, control panels, and interconnected IoT systems that silently, safely and reliably switch on lights, move elevators and keep servers cool.

Schneider Electric, the 189-year-old French manufacturing group, is the giant behind that invisible architecture. With €38.2 billion in annual revenue,[1] 177,000 employees, and operations in more than 100 countries, it manufactures the circuitry and control systems that power buildings, factories, grids and data-centres.

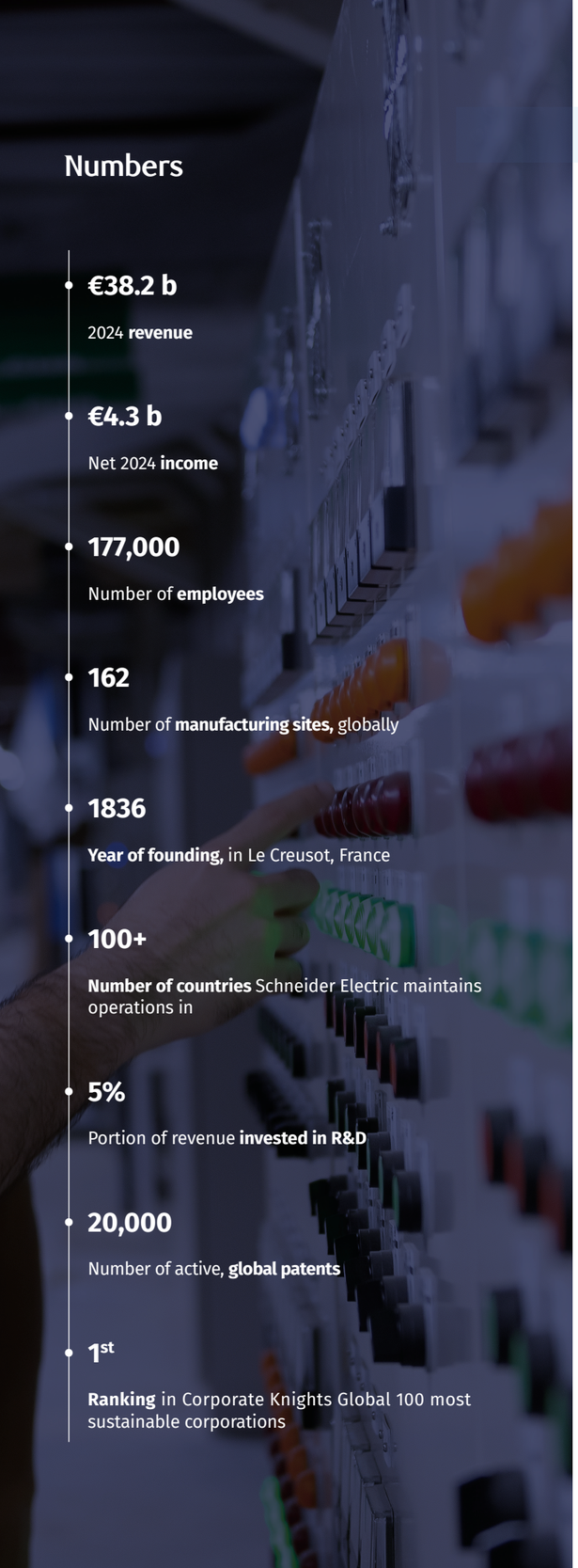
[2]Schneider has maintained operations in Canada[3] for more than 100 years, with roughly 3,000 individuals across 10 provinces. Its products are featured in 40% of residences and 50% of commercial buildings in Canada.[4]

Schneider's value to the global economy is twofold: it supplies[5] the hardware and software that makes modern life possible and shepherds one of the world's most distributed industrial supply chains[6].

Yet even Schneider was not immune to the pandemic's shock waves. By late 2020, COVID-19's stop-start demand swings left warehouses bulging with unsold stock while plants struggled for parts. Across a network of 162 factories[7], roughly 300,000 stock-keeping units (SKUs)[8] and around revenues fell 6.4% organically[9] in the first quarter of 2020, year-on-year, putting billions at risk.

Faced with this disruption, Schneider had to decide whether to keep tweaking legacy systems or take a chance on machine learning. They chose the latter. Starting small, at one its North American switch gear plants, Scheider's AI team trained a gradient boost model on three years of order history, macro indicators and pandemic mobility data. Six weeks later, there were double digit gains in forecast accuracy, safety stock days fell by a third, and the pilot resulted in considerable savings. The result became the catalyst for further exploring AI capabilities, that delivered great results in the energy management space. The strategic move to scaling AI initiatives globally resulted in creating Schneider's centralized AI Hub.

How did Schneider Electric transform multiple AI pilots into a global capability, and lead in enterprise AI deployment? To find out, RBC Thought Leadership sat down with Cédric Bureau, Senior Principal Product Manager for Artificial Intelligence at Schneider Electric, to unpack four key strategies the company implemented while scaling its AI capabilities, and the insights they offer today.



Numbers

€38.2 b

2024 **revenue**

€4.3 b

Net 2024 **income**

177,000

Number of **employees**

162

Number of **manufacturing sites,** globally

1836

Year of founding, in Le Creusot, France

100+

Number of countries Schneider Electric maintains operations in

5%

Portion of revenue **invested in R&D**

20,000

Number of active, **global patents**

1st

Ranking in Corporate Knights Global 100 most sustainable corporations

Insight 1 → Dual-Track AI

"It clicked when we saw an internal AI pilot's results. We weren't just solving problems—we were building something that offered new opportunities for us and our customers" — Cédric Bureau

Internally, under Schneider's AI-at-scale program, the company rolled out machine-learning models across supply-chain planning and the factory floor; computer-vision and vibration analytics began feeding AI information and predicting failures, lifting throughput and uptime, and enhancing energy efficiency. In parallel, Schneider put AI into everyday enterprise support tools—HR and engineering chatbots and copilots, and enhanced energy-efficiency software—so teams had working tools, not just pilots.

The step-change came when those capabilities moved into customer offers. An anomaly-detection model first used to monitor building thermal performance and detect abnormal energy use now powers Schneider's bespoke EcoStruxure Building Advisor[10], which flags abnormal consumption and tunes HVAC automatically. By shifting from manual, Excel-based reporting to AI-powered building energy modelling, customers have achieved measurable benefits—including considerable operating cost savings across 50 sites and 2–5% reductions in energy consumption.

The two tracks now reinforce each other. Schneider's AI-at-scale strategy sets the playbook—how pilots move to shop floor, enterprise tools and into products—and a centralized AI Hub runs it, rotating experts across projects, standardizing tooling and governance, and building enterprise-wide AI know-how. That pairing makes the hand-off between AI development and the factory floor routine: models that prove themselves are industrialized, documented and shipped into offers, while product telemetry feeds fresh data back for the next round. Internal efficiencies realized fuel further R&D, with every factory win becoming a candidate feature in a future product.

Takeaway: Use the enterprise as a live test bed and consistently build both technology and human capabilities to innovate with AI. When an AI solution delivers value inside the business, it provides credibility and de-risks similar use cases. Being able to claim "we run this at scale ourselves" improves sales prospects with cautious customers.

Insight 2 → 350 Experts Feeding One Big Brain

"AI is now past the hype cycle inside the company—it's part of daily work habits" — Cédric Bureau

Scattered pilots could never keep pace with a network of 162 factories across five continents. So, in late 2021, Schneider launched a global AI Hub[11]—across three locations: Boston, Paris and Bangalore. Within 12 months the hub grew to around 350 data scientists, machine learning operations (ML Ops) engineers, product managers and an in house compliance squad. To ensure the hub can move at pace with technology development trends, it's headed by a **Chief AI Officer who reports to the executive committee**, ensuring strategic bets on AI are scrutinized at the C suite level.

By elevating AI initiatives into a standalone enterprise function, Schneider pulled them out of isolated IT corners and gave them the strategic visibility needed to reach production. This centralized, AI-first organizational design enabled four key advantages:

1. **Hub-and-spoke coordination:** The centralized AI Hub supplies the technical backbone—algorithms, data infrastructure, compliance tools and features a team of AI product managers, each dedicated to a set of business units to work with marketing managers with clear understanding of local and/or industry specific challenges. This split of roles prevents duplication, ensures solutions are tailored to operational needs, and speeds up the rollout of AI projects across the enterprise.

2. **Paved-road development:** All AI projects share the same basic set of tools and processes—like standard methods to gather data, store and organize models, and perform quality checks. Think of it like using a standard recipe: following it takes some extra work at the start, but once you've done that, making adjustments or improvements becomes simpler and faster. Because as these processes are consistent across Schneider, teams don't have to constantly reinvent the wheel. Netflix and Spotify use a similar concept, calling it a 'paved road', meaning a clear, straightforward path that makes developing technology quicker, safer, and easier.

3. **Talent attraction and retention:** The AI Hub offers a compelling career path and collaborative environment. Schneider can recruit top AI talent from Big Tech companies and retain skilled experts significantly longer than comparable industrial organizations.

4. **Built-in compliance capability:** Schneider's compliance experts are integrated within the AI Hub. Every AI project undergoes a standardized risk assessment and bias testing before deployment, ensuring adherence to regulations such as the EU AI Act and laying the groundwork for the 'compliance-by-design' approach detailed further in the case.

Schneider is not alone in this architecture. Bosch's Center for AI and the Siemens AI Lab follow a similar hub and platform pattern

Takeaway: Success comes from treating AI as a core enterprise function—appointing clear leadership, concentrating expertise, and serving business units as internal clients.

Insight 3 → Turning Regulation into a Feature

"While talent solved capacity; trust solved adoption. When Brussels drafted the world's first horizontal AI law, Schneider decided regulation would be a design spec, not a hand-brake." — Cédric Bureau

When the draft EU AI Act first circulated, many industrial peers froze projects, waiting to see how onerous the rules would become. In contrast, Schneider's AI Hub embedded a 'compliance squad'—lawyers, data privacy officers, risk engineers—directly into ideation and sprint teams. Every new use case begins with a 10 question risk rating questionnaire that maps potential AI applications to the Act's taxonomy (minimal, limited or high risk). Proposals assessed as high risk trigger up front data anonymization, mandatory human oversight[12] plans and bias test requirements before development begins.

Schneider's AI deployment pipeline itself enforces the law. Schneider's AI policy requires that all use cases undergo a two-stage compliance review. First, use cases are scanned for risks across ethics, design, IP, data security, and governance. Then, those risks are mapped into a treatment plan—identifying owners, setting mitigation actions, and tracking accountability—so that compliance is not just a checklist but a living process. This AI Policy ensures alignment with EU AI Act Articles 10[13] (data & bias), 11 (technical documentation) and 14 (human oversight). Once a model is live, the platform's monitoring dashboard logs performance drift and automatically opens an incident ticket if thresholds are breached, satisfying Articles 72 73 of the act on post market surveillance.

By having compliance experts on the team, Schneider's engineers treat concerns like bias mitigation, data anonymization, and cybersecurity—as design inputs, not obstacles. This is an organizational cultural shift—developers are guided to think about ethical/legal constraints from the start rather than scramble to retrofit fixes later.

These extra steps yielded three commercial dividends:

1. **Faster sales cycles:**
   Clients in heavily regulated industries often demand proof of AI governance; handing them an 'AI Act ready' dossier trims procurement reviews.

2. **Trust premium:**
   Positioning Schneider's solutions as 'regulation ready' differentiates them against rivals who still treat compliance as paperwork to be done later.

3. **Build once, comply everywhere**
   Treating EU standards as the floor cuts duplication across markets and future proofs the portfolio against new laws—Canada's Bill C 27 included. As it stands, Schneider maintains compliance with standards across the world, including the Institute of Electrical and Electronics Engineers (IEEE[14]), International Electrotechnical Commission (IEC[15]) and the Organisation for Economic Co-operation and Development (OECD[16]).

Takeaway: By baking the rulebook into the codebase and deployment processes, Schneider converts the cost of compliance into a strategic advantage.

> **Being able to claim "we run this at scale ourselves" improves sales prospects with cautious customers.**

Insight 4 → Transparent deployment review process

"We knew we'd succeeded when operators started asking us for AI models, not because management pushed them, but because workers saw firsthand how they improved their jobs." — Cédric Bureau

With Schneider's talent (AI Hub) and compliance guardrails (compliance by design) in place, it established the four-gate funnel to **manage ideas**. Every AI use case, from factory forecasting to customer-facing microgrid control, flows through the same four stages. At each gate, a go/no-go decision is made based on business case and feasibility. Pet projects without ROI, or projects deemed too high-risk are stopped early. Winners move quickly, because approval chains, tooling, and documentation are built in from the start.

Gate 1: Data owners co-develop a one-page problem brief with the AI Hub—qualifying return on investment (ROI), carbon impact, and passing a 10-question risk scan. Key technical challenges are identified, and sandbox phase on masked data with built-in bias and robustness testing is done to evaluate feasibility and to assess the best technology to overcome such challenges.

Gate 2: A Minimum Viable Product development and real-life deployment. Plant operators co-design dashboards and evaluate the solution in as-close to real-life-conditions as possible. Critically, the funnel separates trying from scaling—preventing the common trap of endless proof-of-concepts.

Gate 3: Solutions are hardened for production: user interfaces, documentation, and business integration. Models are migrated onto the Hub's MLOps platform, and the compliance team completes the EU AI Act technical dossier.

Gate 4: Live dashboards track ROI, drift, and incident logs. Red flags auto-escalate to both the site lead and AI product team. Some models retrain automatically based on performance thresholds.

Takeaway: Human-centric design extends through the development, implementation, and operational phases of AI applications—Schneider doesn't treat business stakeholders as merely AI end-users. They're co-owners of AI solutions.

This cultural strategy scales, too. As small tools proved helpful, trust grew. Engineers adopted AI as naturally as any other tool. Plant managers began expecting data-driven insights in meetings. Executives used AI dashboards to spot margin opportunities. The result wasn't just tech fluency—it was a mindset shift. People no longer see AI as opaque or threatening—they understood where it fits, and how it can help them do better work.

Internally, Schneider backed this shift with a firm-wide initiative to elevate the AI knowledge of all employees through awareness/training programs, regular data & AI webinars, and the publicly available AI at Scale podcast.

Choosing the Next Play

Schneider Electric has thrived under Europe's regulation-first approach, aligning early with the EU AI Act and embedding compliance into its operating model. This strategy has given it a competitive edge: customers see its solutions as "regulation-ready," and regulators view the company as a trusted partner.

But the future of regulation may expose the company to competing paradigms, in which the EU resides in the middle. In the United States, a market-led approach prioritizes rapid innovation, with looser rules and fewer documentation burdens. China, meanwhile, pursues a state-steered model, demanding tight government oversight and strict localization of data. Each system pulls global players in different directions, and supply chains are increasingly split along regulatory lines.

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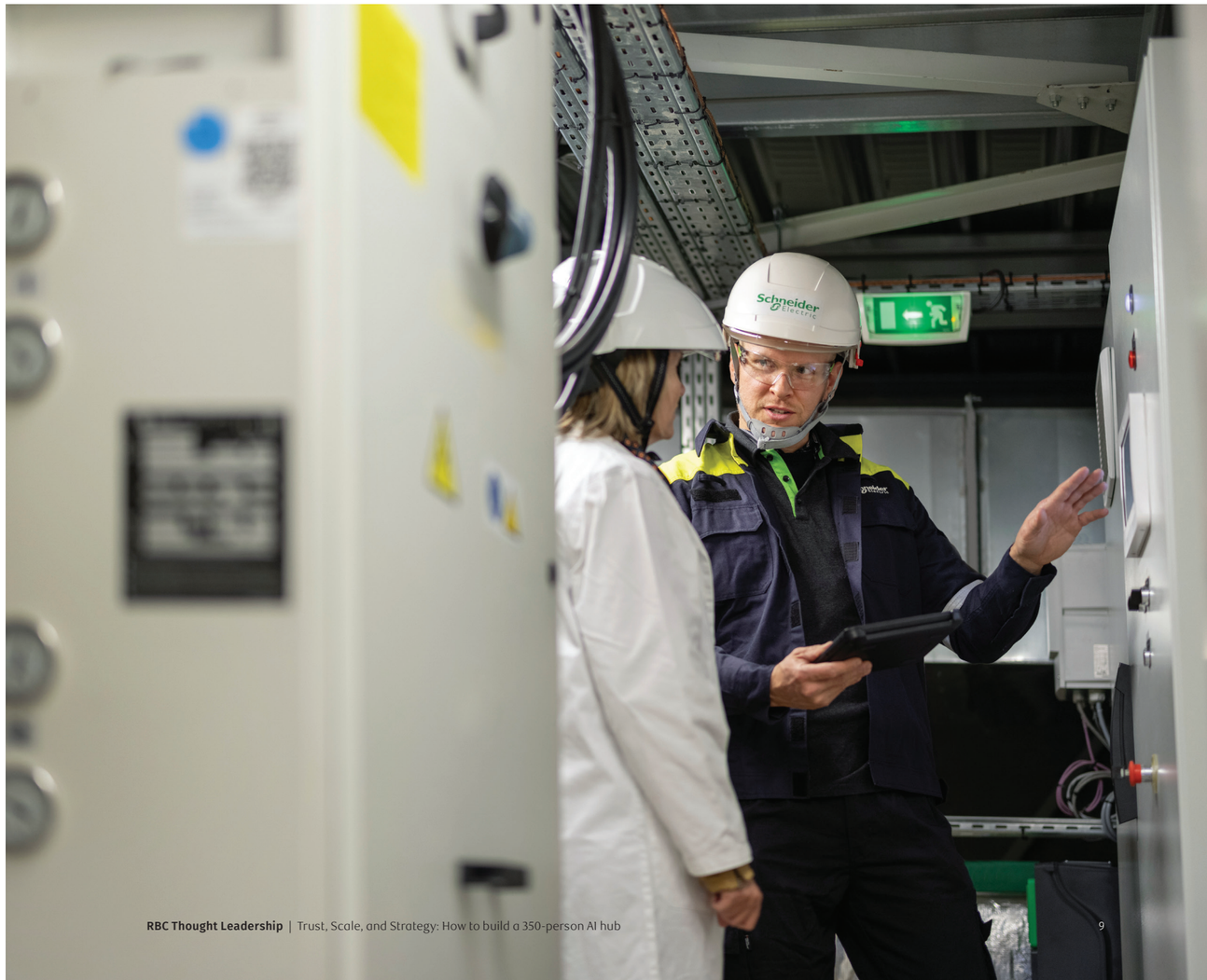

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