

AI ECONOMY AND INFRA PLAY

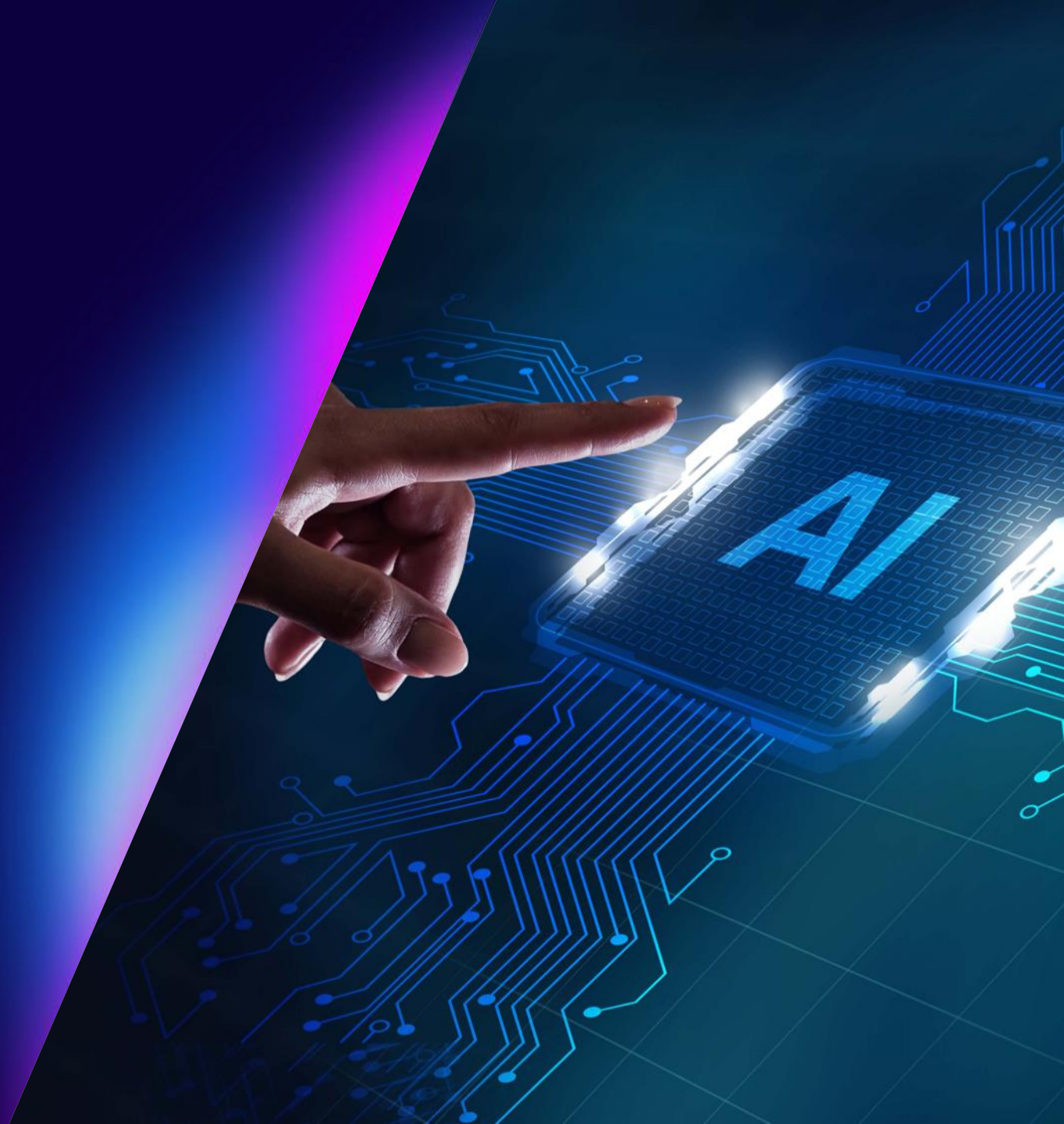
Keynote Speech, Karim Taga

NOVEMBER 5, 2025

ESZTERGOM

HTE 2025. november 4-5.
Esztergom
INFOKOM 2025

ARTHUR  LITTLE



AI ECONOMY AND INFRA PLAY

01

Transition from the Digital to the AI Economy

AI is the new national infrastructure: compute and sovereignty choices now decide where value accrues across the stack

02

Opportunity for the ICT Sector – Why own AI?

Own, don't just consume: SLM-first, data-controlled stacks beat generic LLM/APIs with lower TCO at scale and less exposure to lock-in

03

Opportunity for the ICT Sector – How to build your AI Factory?

Win with an AI Factory: align purpose, model, capability and infrastructure, pick the right route (hyperscaler, neo-cloud, sovereign/ on-prem) and industrialize

1

**TRANSITION FROM THE DIGITAL TO THE AI ECONOMY
– GLOBAL AND HUNGARIAN PERSPECTIVES**

1 Transition from the Digital to the AI Economy – Global And Hungarian Perspectives

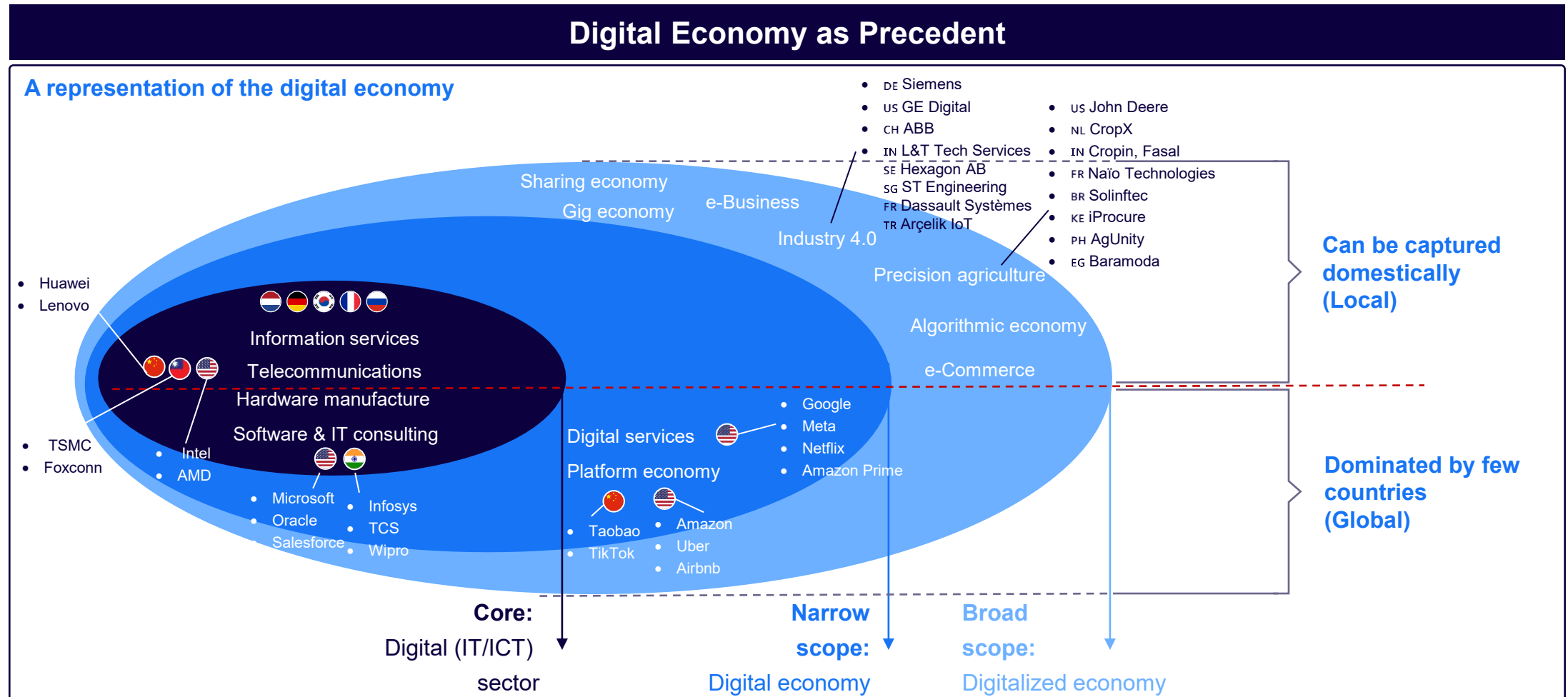
1.1 AI Economy

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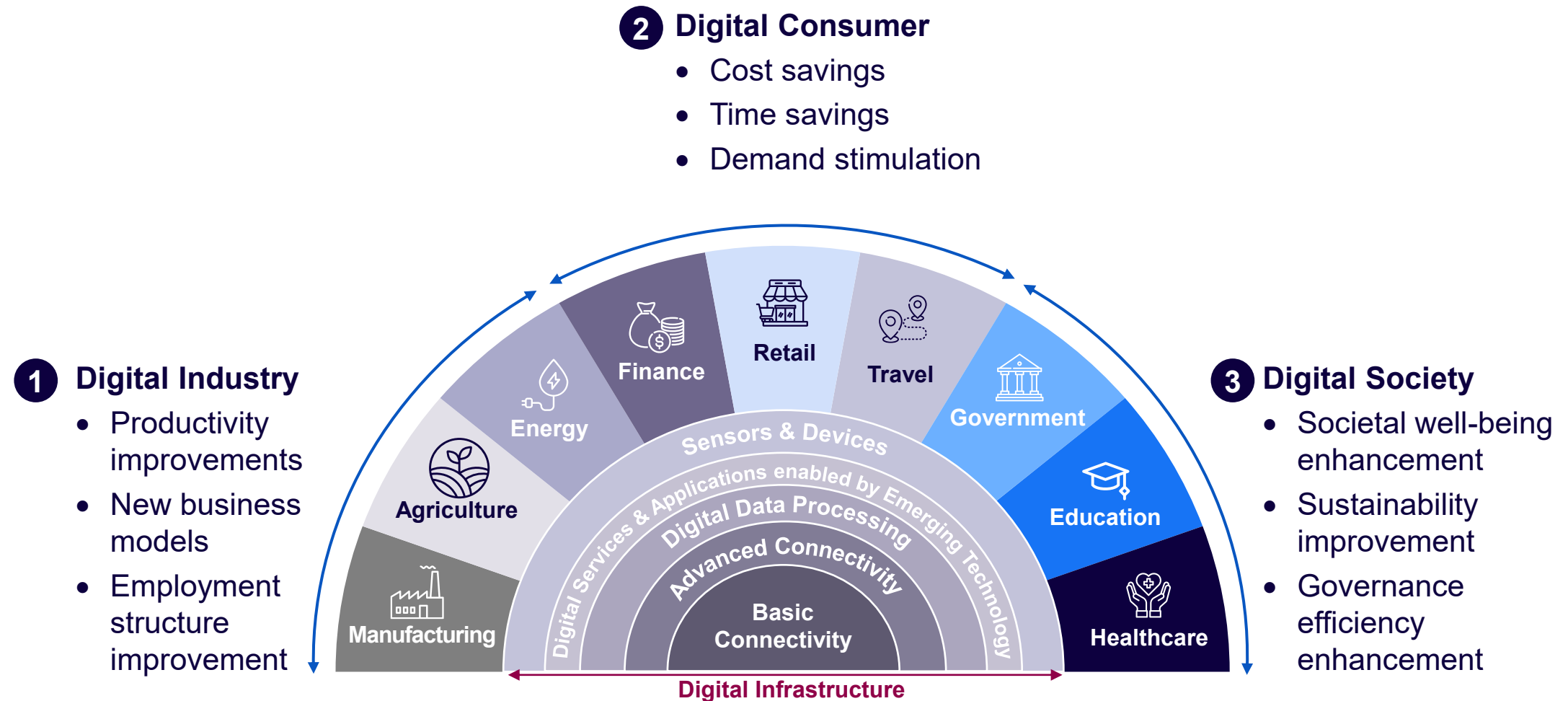
1.2 Strategic Options for Hungary

16

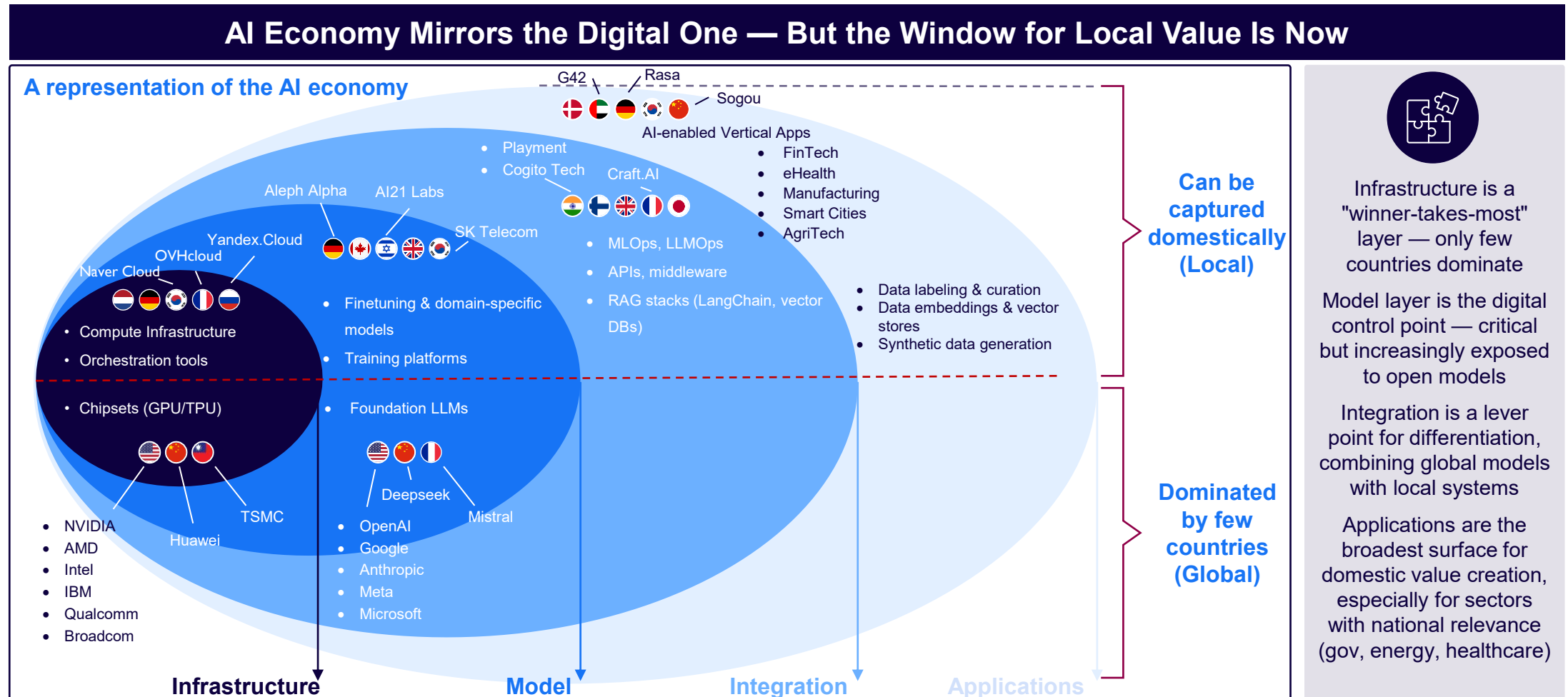
In Digital Economy, although few countries dominate in certain core areas, there is significant opportunity to add value in the rest of the value chain



Full digital potential is being realized only when digital infrastructure is leveraged by the industry, consumer and society at large

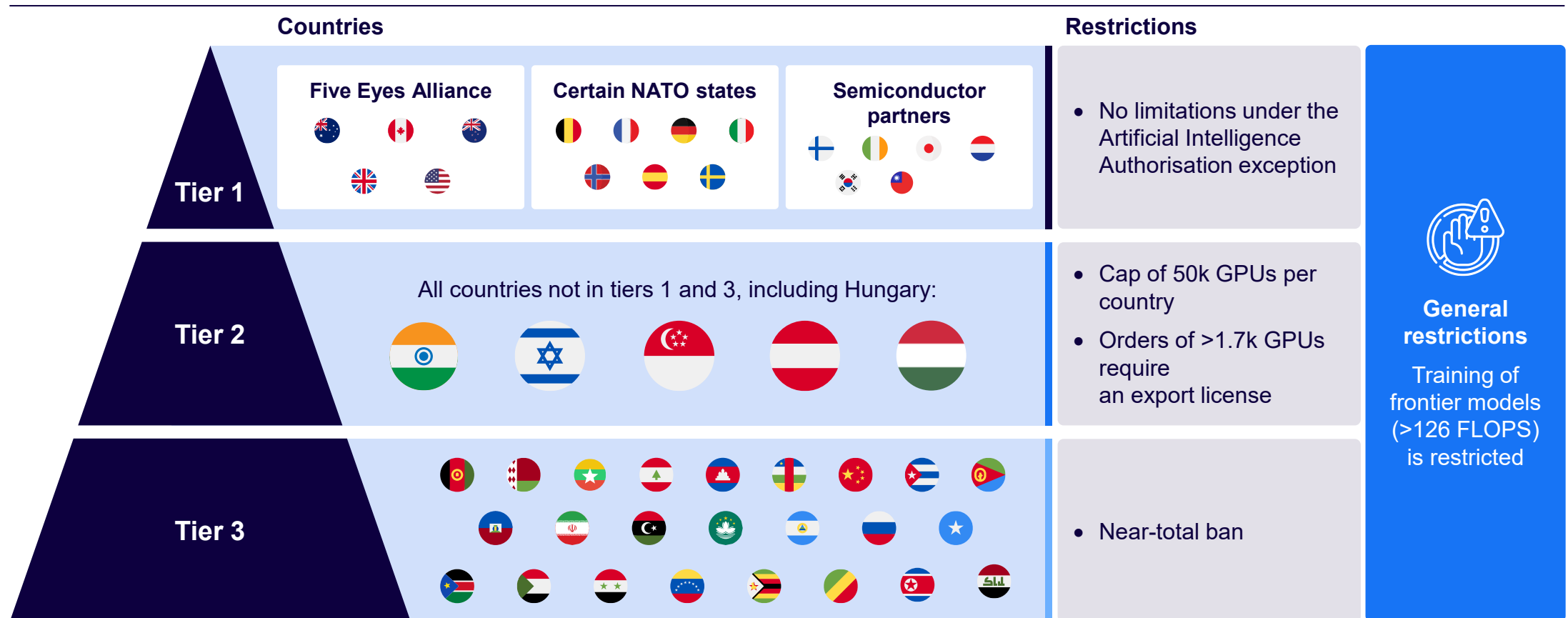


Similar situation is starting to emerge also in AI economy – but there is significant opportunity for local/ domestic value addition across specific AI layers



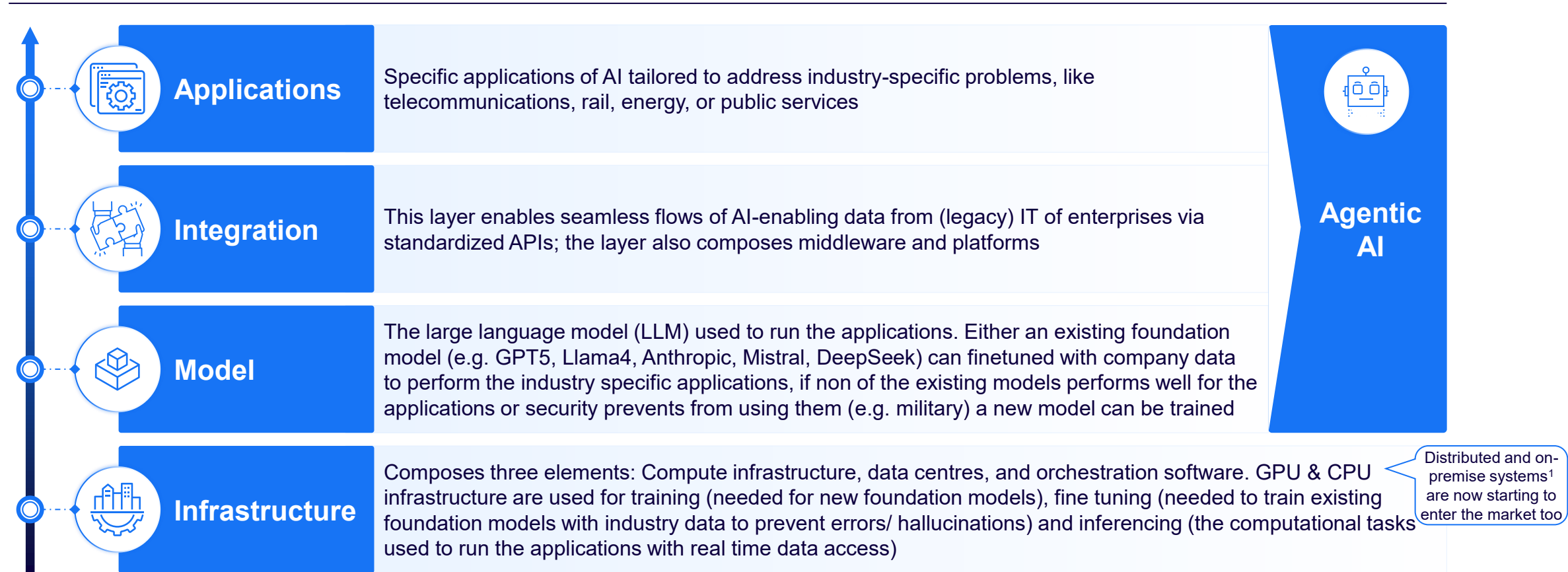
The US' AI Diffusion Framework places restrictions on the export of high-end GPUs, while many countries are not part of the list

NVIDIA high-end GPU export controls



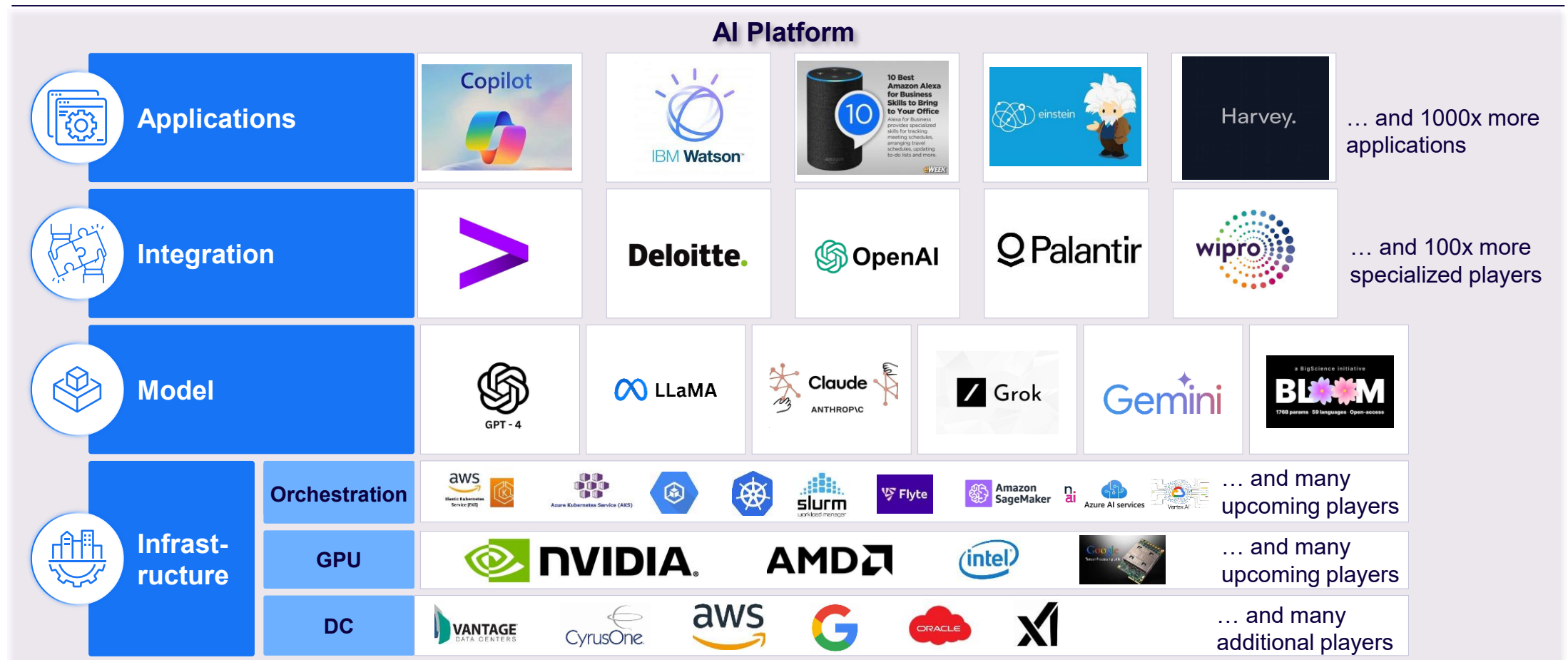
The AI ecosystem composes four mutually dependent layers: application, model, integration, and infrastructure – with agentic AI integrating multiple layers

The four layer model



The US has already built a very powerful ecosystem present globally ...

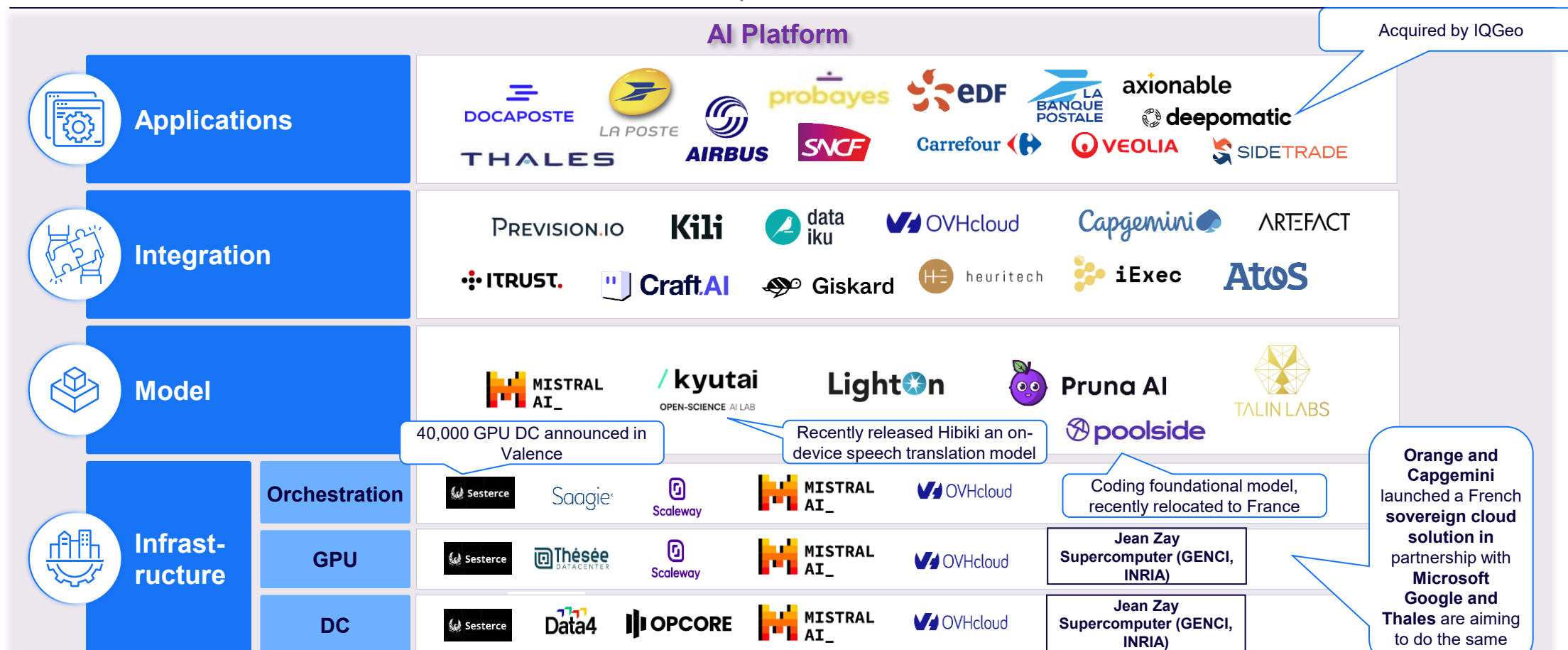
US-Players dominating the global across the AI ecosystem



Local play is possible across layers as evidenced by example of France ...

Players across the AI ecosystem

Example of France



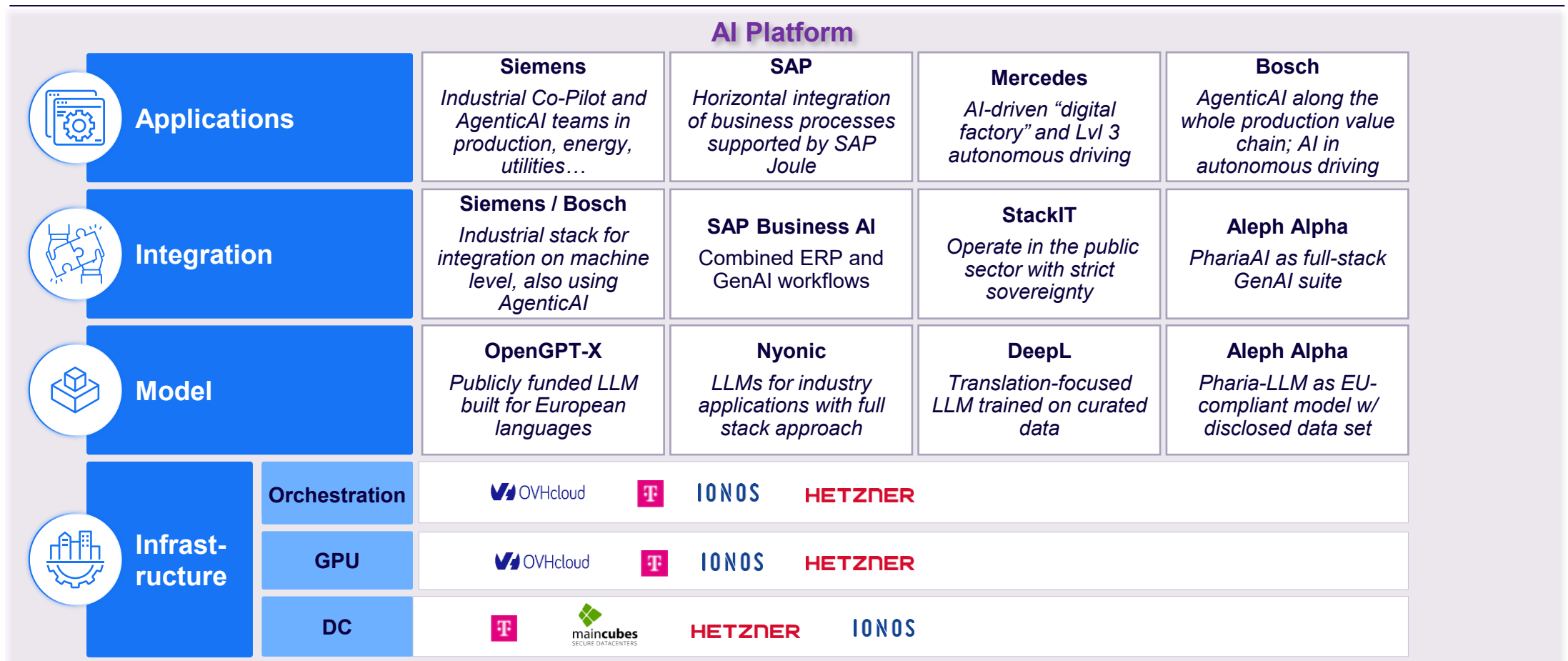
Notes: 1) selected models; hyperscalers run multiple model projects; 2) orchestration layer functions are typically carried out by the DC operator

Source: Arthur D. Little based on publicly available information

... and Germany

Players across the AI ecosystem

Example of Germany



1 Transition from the Digital to the AI Economy – Global And Hungarian Perspectives

1.1 AI Economy

4

1.2 **Strategic Options for Hungary**

16

The transition from digital to AI economy offers Hungary a unique opportunity - success depends on gov. action across 6 policy levers



AI is becoming essential infrastructure, every country should build it, and every industry will depend on it

EXAMPLE

“

“AI is now essential infrastructure... just like the internet, just like electricity,” and every country will need its own “AI factories,” not yesterday’s data centers”

- NVIDIA’s Jensen Huang

What different countries are doing



France

- **€109bn AI investment plan** (compute clusters, energy-efficient data centers) and backed domestic champions
- Partnerships with Mistral and NVIDIA (AI Campus) to strengthen **technological sovereignty**
- **Scaling AI training programs** (to 100k people/year)
- €400m for **AI hubs, skills programs, research center**
- France **subsidizes** AI roll-out of other countries (e.g. Serbia) if they utilize the French AI ecosystem.
E.g. Serbia Deal (April 2025):
 - €50m agreement with Eviden (Atos subsidiary): €36m for BullSequana XH3000 supercomputer (25 PFLOPS)
 - €14m for applied AI projects
 - Use of Mistral model
 - Including a national AI factory



Singapore

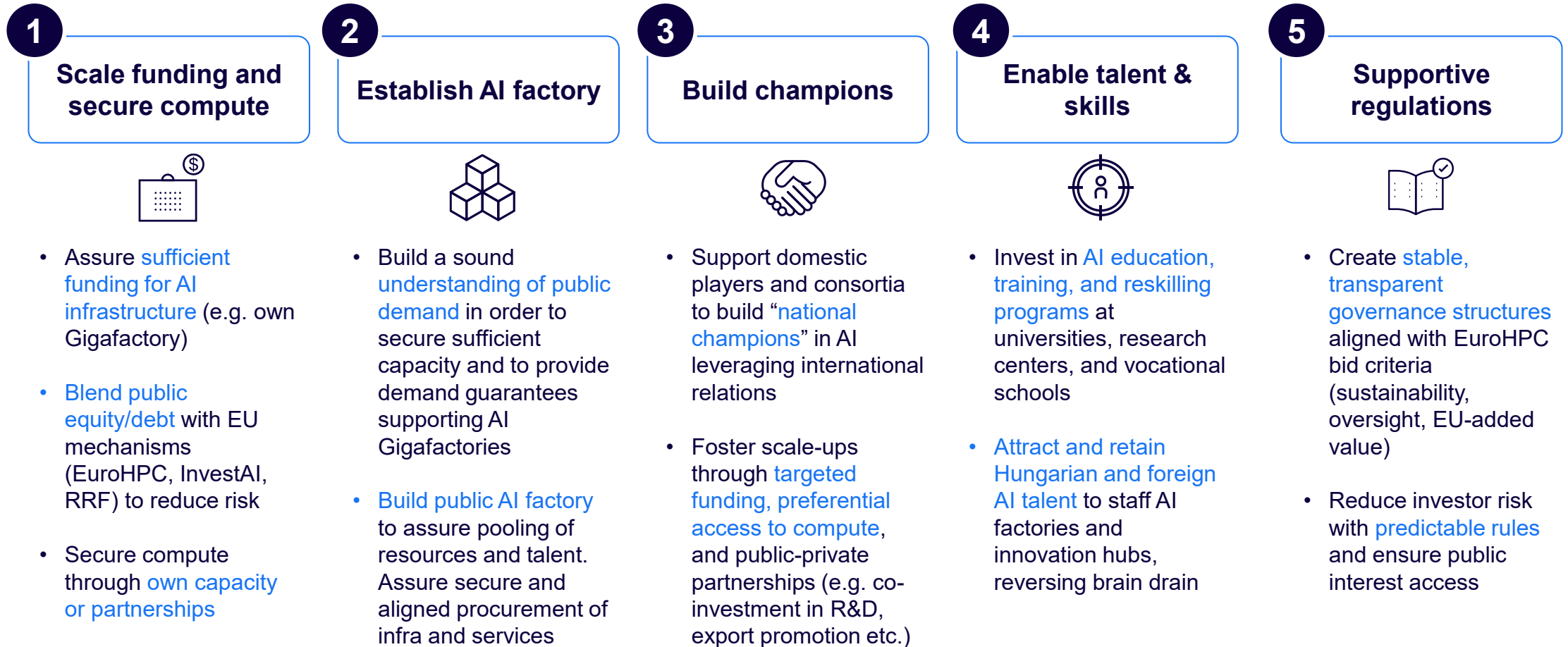
- AI Singapore (S\$500m+): **national program funding** AI R&D, talent development, and the “100 Experiments” scheme for SME adoption pilots
- Enterprise Compute Initiative (S\$150m, 2025): **provides AI cloud credits** (up to S\$555k per firm) and consultancy to **help enterprises build AI MVPs**
- **National Supercomputing Centre (NSCC)**: S\$270m expansion, upgrading HPC systems to support research and industry
- NAIS 2.0 (2023): long-term strategy with **10 enablers** (compute, data, skills, global collaboration)
- Goal: position Singapore as a **trusted AI hub** with strong ethics frameworks, international AI safety leadership, and global connectivity



United Kingdom

- **£2 billion through 2030** to transform public compute infrastructure, including scaling the **AI Research Resource (AIRR)**, funded with £300m already for Isambard-AI, and a planned £750m supercomputer
- AIRR comprises Isambard-AI (Bristol) with 5,448 NVIDIA GH200 chips and Dawn (Cambridge) GPU cluster;
- **National Supercomputing Centres**, to curate data, build software assets, deliver training pipelines, and anchor AI Growth Zones (AIGZs)
- **Allocation model** targeting highest-priority national missions, e.g. **reserves compute** for the Sovereign AI Unit and AI Security Institute

Hungary can build its AI future through adequate funding, compute, AI factories, building own AI champions, regulation and talent



2

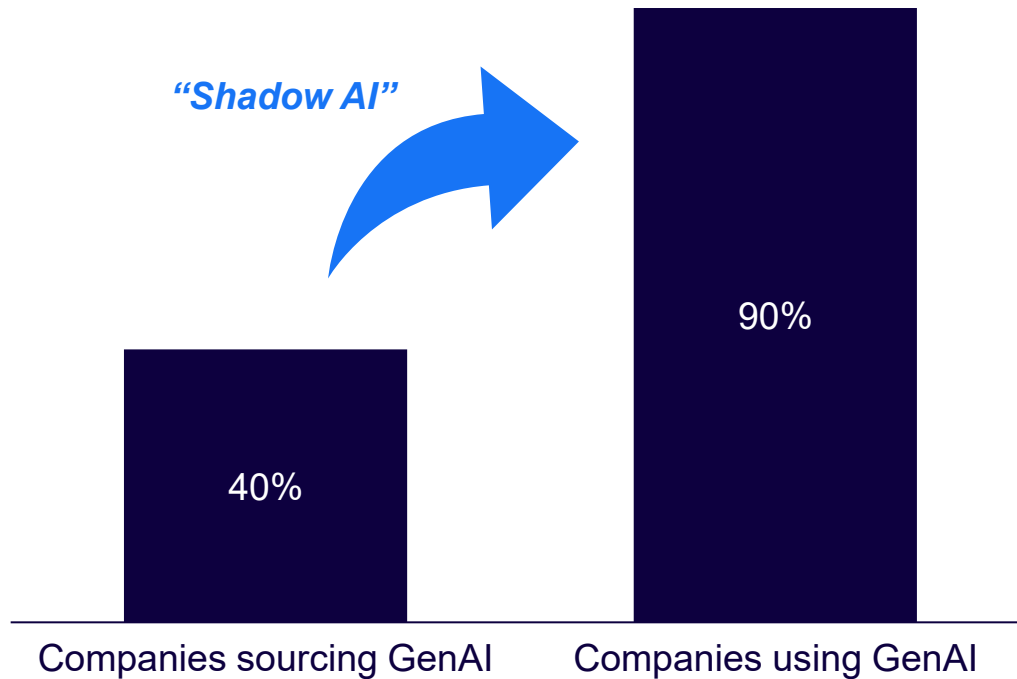
THE OPPORTUNITY FOR THE ICT SECTOR – WHY OWN AI?

**AI will “infiltrate” all parts of your organization.
Unless steered proactively, “Shadow AI” will fill the gaps, resulting in significant risk.**



SHADOW AI FILLS THE GAPS

Companies in the western, developed, markets



WITHOUT AI GOVERNANCE, ORGANIZATIONS RISK



▶ Private data exposure



▶ Compliance and risk failures



▶ Contaminated data quality



▶ Loss of institutional knowledge



▶ ...their reputation

Across every industry, players small and big are deploying their “own AI”

Energy  Shell: Builds proprietary AI for reservoir simulation and emissions forecasting ExxonMobil: Trains HPC-based AI models for drilling analytics and predictions EDF: Builds in-house AI – applies digital-twin simulations for grid engineering Enel: Trains AI forecasting models for wind and solar energy 	Financial services  Finanz Informatik: Develops on-premise AI infrastructure for banking automation Capital One: Builds proprietary multi-agent AI by fine-tuning foundation models on internal data Bank of America: Operates one of the world's largest private clouds and builds in-house AI 	Automotive  Bosch: Invests in AI for autonomous driving and industrial automation ACPS Automotive: Builds AI for manufacturing quality control with on-prem GPUs Tula: Develops AI models for engine efficiency on proprietary AI clusters 	Telecom  C Spire: Operates AI clusters for customer analytics and chatbot training GTT: Builds AI models for network anomaly detection on sensitive data Deutsche Telekom, Vodafone and Orange: Use the AI Factory to build AI products and services for business and consumer customers Singtel: Runs an AI Factory to provide infrastructure, tools, and models “as a service” for other telcos and MNCs 
Retail  Markant (Retail.ai): Builds generative AI pipelines for FMCG content and data solutions Temple & Webster: Develops in-house AI for product content, customer service, and logistics Ocado Group: Builds in-house AI & robotics for online grocery to automate on-grid robotic picking and optimize fulfillment centers 	Pharma  Merck KGaA: Builds AIDDISON™, an AI platform for drug discovery and synthesis BioNTech: Develops proprietary AI lab assistants following InstaDeep acquisition Corcept Therapeutics: Trains AI models for clinical trial optimization with patient data Catalyst Pharmaceuticals: Builds AI for drug discovery using sensitive patient data 	Industrial  Siemens: Builds Industrial Copilot tools and Industrial Foundation Model for automation Fraunhofer Institute: Develops AI to enhance grid security, efficiency, and sustainability Continental: Operates AI Lab Berlin developing autonomous mobile robotics models 	Public  Nextcloud & Schleswig-Holstein: Building an open-source sovereign AI platform for government BharatGen (IndiaAI Mission): Government-led development of India's open-source multilingual LLM Bürokratt (Estonia): National virtual-assistant platform to access government e-services across agencies 

“Own AI” – custom applications / fine-tuned models / dedicated infra

Our experience shows that enterprises derive benefits from AI in 4 categories

Revenue from B2C services

- **AI embedded / augmenting B2C** services and devices (consumer electronics, gardening, glasses, cars, toys, etc.)

Revenue f. B2B services (beyond AI services):

- **Intelligence:** prediction, assessment, etc.
- **Agents:** care, documents, etc.
- **Performance** improvement, energy efficiency, machine learning, etc.



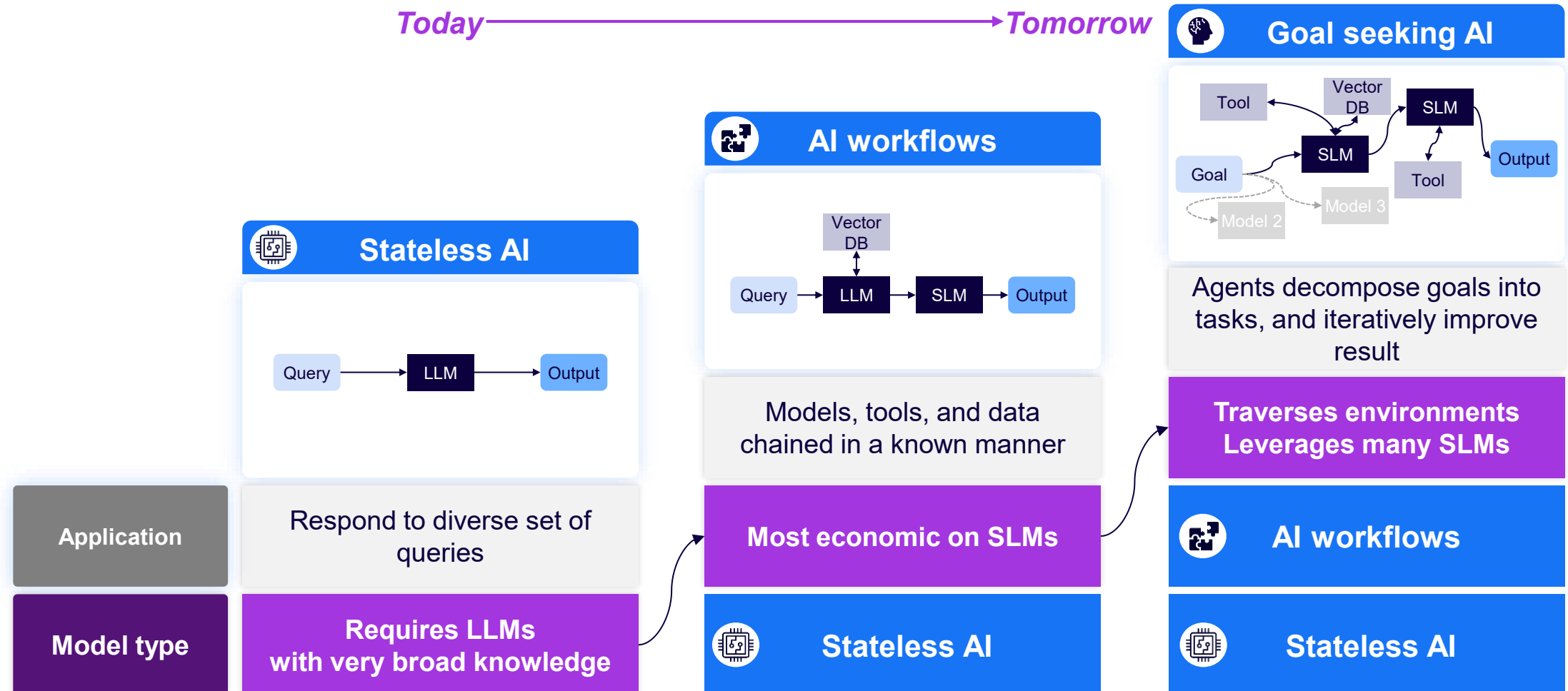
- **AI infrastructure** (access and monetization)
- **AI-aaS** (faster RoI, scaling ...)
- **Data related services** (add rev.)
- **Model training** (add rev.)
- **Establishing a new channel**, catering to agents / assistants



- **Backoffice automation** and optimization across domains (FIN, HR, customer service, network mgt, etc.)
- **IT / Cyber:** integrate AI into tool landscape to increase people productivity / effectivity)

- **Channel:** targeting, X/U selling, etc.
- **Communication:** tailored messaging, social media positioning, etc.
- **Portfolio optimization:** pricing, next best action design, demand estimations, etc.
- **Micro-segmentation:** identify and target microsegments with their specific demands

With agentic AI, the landscape of models and tools needed will grow exponentially



Note: 1) Agentic and agents are not the same – AI “agents” are logic used to interface with models and can be simple rule-based systems or can be autonomous agentic systems capable of breaking down or even generating complex goals and adapting dynamically to their environment

Source: Arthur D. Little

...leading to an increasing demand for custom AI solutions. Small, not large models will be the foundation of enterprise AI, due to their “unfair” cost advantage.



Companies and governments begin to build their own models...

“We are definitely going in the **direction of proprietary LLMs**...and every business unit will have their own vertical SLMs and AI agents...**Right now we are 60% in the cloud, but that will go down** as we secure H100s and scale colocation and data center strategy”

CTO, Tier 1 Bank

“**Building our own models** and **post-training open-source** models led to **much better results** than working with providers to pre-configure general models”

Sr. Director Enterprise AI, CVS Health

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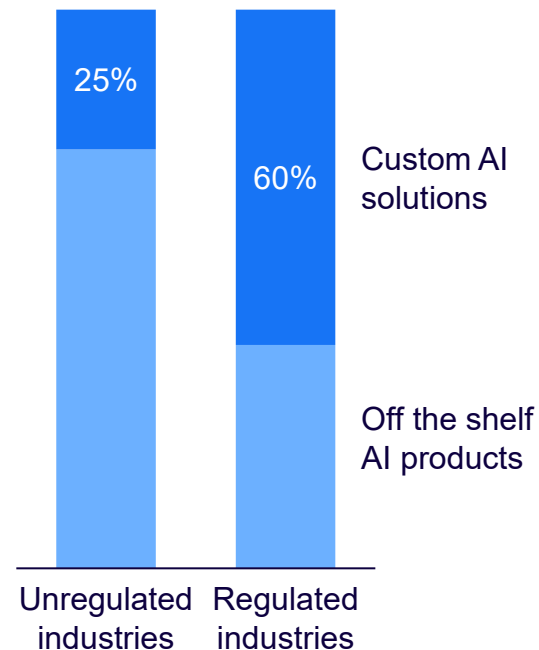
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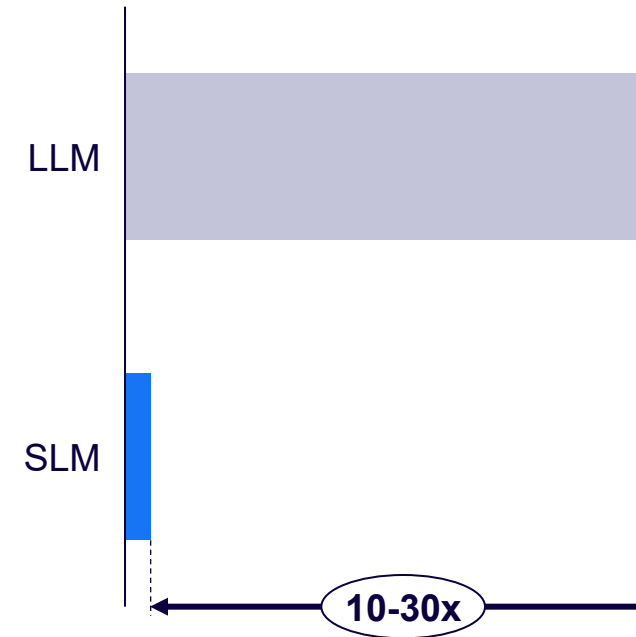


...signifying that self-built AI will begin to grow substantially

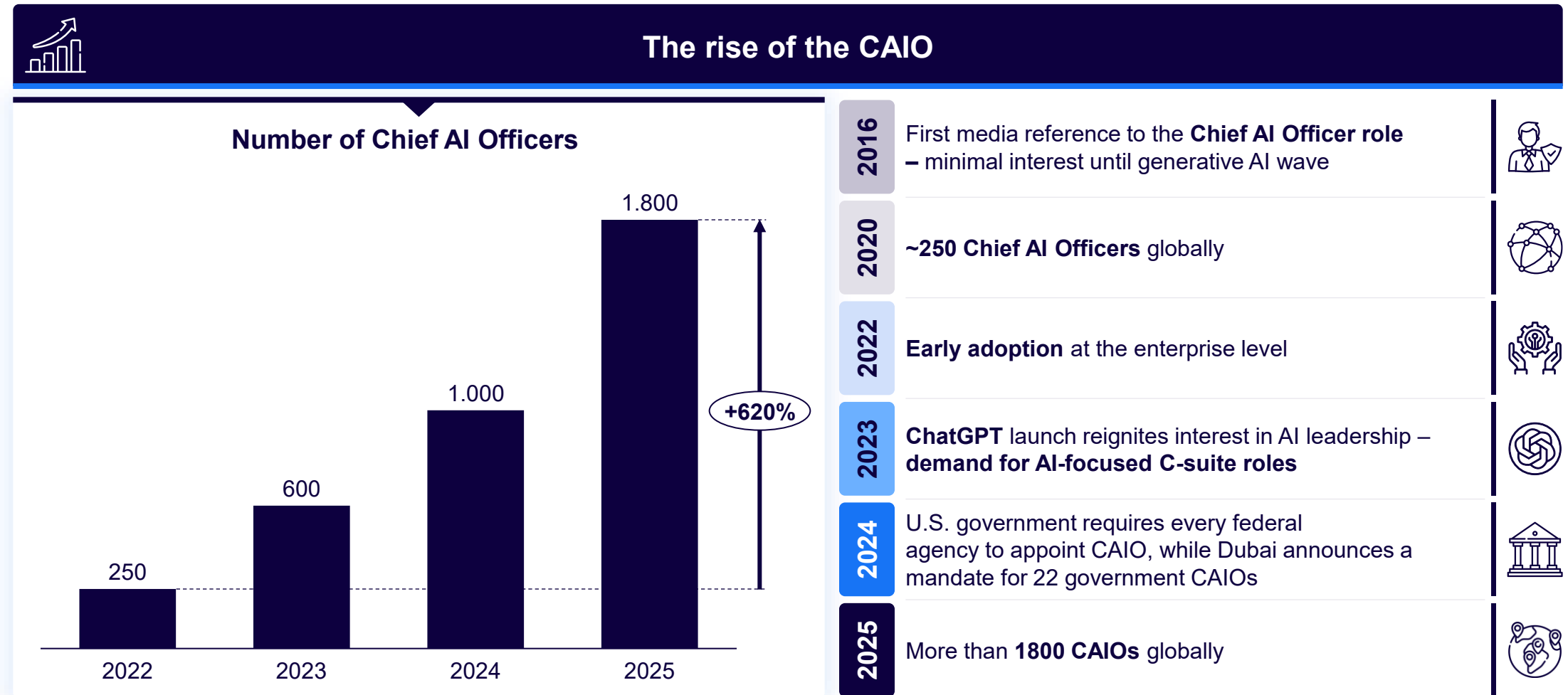
Self made AI
(’25)



LLM & SLM running cost per token
(’25)



C-level seats for Chief AI Officers are one marker of enterprises recognizing the need to adjust corporate organization for AI





Enterprises have a choice: Either produce AI or consume AI.



Self-built AI is a new asset class. It is not an expense.



Companies that build AI, create assets. Others do not.

Arthur D. Little has been at the forefront of innovation since 1886. We are an acknowledged thought leader in linking strategy, innovation and transformation in technology-intensive and converging industries. We navigate our clients through changing business ecosystems to uncover new growth opportunities. We enable our clients to build innovation capabilities and transform their organizations.

Our consultants have strong practical industry experience combined with excellent knowledge of key trends and dynamics. ADL is present in the most important business centers around the world. We are proud to serve most of the Fortune 1000 companies, in addition to other leading firms and public sector organizations.

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THE DIFFERENCE