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Sovereignty in the Age of AI: Strategic Choices, Structural Dependencies and the Long Game Ahead

Annex: Detailed Case-Study Postures

JAPAN

Layer	Posture	Subtype (if Depend)	Justification
Compute infrastructure	Steer	—	Japan has a strong domestic compute base, including TOP500-ranked systems and the AI Bridging Cloud Infrastructure (ABCI), supported by sustained public investment in national GPU clusters and semiconductor revitalisation. However, large-scale training and deployment still rely on foreign accelerators and hyperscale cloud services. While portability and fallback options are improving, full structural control remains out of reach, supporting a Steer posture.
Energy	Depend	Taker	Japan's AI expansion is constrained by high energy-import dependence and rising data centre and semiconductor electricity demand, limiting leverage over pricing and supply. Although renewable deployment and grid upgrades are advancing, these measures do not yet provide a sovereign energy fallback for AI workloads, placing Japan in a Depend–taker posture.
Data	Steer	—	Japan operates an open, trusted cross-border data regime under the Act on the Protection of Personal Information (APPI), complemented by sector-specific controls and significant domestic hosting capacity (e.g., NTT, Sakura). While there is no blanket localisation, initiatives such as the Generative AI Accelerator Challenge (GENIAC) and expanded open corpora aim to address persistent Japanese-language data gaps, supporting a Steer posture.
Models	Steer (primary), Control (niche secondary)	—	Domestic capability in Japanese-language and open-weight models is growing rapidly through public R&D and initiatives such as Fugaku-LLM, Rakuten and Takane, creating control-like capability in priority niches. However, frontier-scale development remains dependent on foreign chips, frameworks and partner roadmaps resulting in an overall Steer posture.

Applications	Steer	—	The government shapes AI adoption across health, public administration and industry through procurement, standards and public–private partnerships. The emphasis is on modular integration, assurance and interoperability rather than fully sovereign, state-built applications, reflecting strong direction-setting without full operational ownership.
Talent and skills	Depend	Maker	Japan has deep domestic education and research programmes (e.g., Ministry of Education, Culture, Sports, Science and Technology (MEXT) tracks, national research centres) and extensive international partnerships. However, demographic pressures and persistent shortages in specialised AI talent necessitate continued reliance on foreign expertise, indicating negotiated, capacity-building dependence.
Governance	Steer	—	Japan follows an innovation-first, promotion-centric governance approach layered on APPI and sectoral law, combined with active international norm-shaping through forums such as the G7 (including the Hiroshima AI Process). Governance is agile and consensus-driven, providing credible influence but limited binding control, consistent with Steer.

UAE

Layer	Posture	Subtype (if Depend)	Justification
Compute infrastructure	Steer	—	The UAE is rapidly expanding domestic data centre and HPC capacity through state-linked operators (Khazna, G42, Moro Hub) while partnering with US and global technology firms (Microsoft, Oracle, AWS, OpenAI). The state shapes outcomes through regulation, procurement and co-investment, but reliance on foreign accelerators and hyperscale platforms keeps ultimate control externally anchored, supporting a Steer posture.
Energy	Control	—	The UAE possesses one of the world's most strategically autonomous energy systems, with sovereign control over large hydrocarbon reserves and rapid expansion of nuclear and renewable capacity. Under Energy Strategy 2050 and plans for gas self-sufficiency by 2030, the state can guarantee secure, domestically governed power for AI infrastructure at scale, justifying Control.
Data	Control	—	The Personal Data Protection Law (PDPL), combined with sovereign data platforms (Bayanet) and regulated sovereign-cloud arrangements with e&, AWS and Microsoft, gives the UAE direct jurisdiction over personal and government data sets. Enforcement capacity is moderate but strengthening through the Data Office and Digital Dubai, supporting Control over data governance.
Models	Control	—	The UAE has established sovereign authority over model development through state-directed institutions such as MBZUAI and the Technology Innovation Institute (TII). Open-weight Arabic-language models (Falcon, Jais, K2 Think) are trained and deployed under Emirati jurisdiction, aligned to national linguistic and sectoral priorities, giving the state decisive control over its strategic model ecosystem.
Applications	Steer	—	AI is deeply embedded in government functions (smart cities, health care, digital administration), but delivery combines domestic systems with foreign platforms. The state sets standards, procurement rules and localisation requirements without

			mandating fully sovereign applications, reflecting strong directional influence rather than full operational ownership.
Talent and skills	Depend	Maker	The UAE invests heavily in domestic AI education and training (MBZUAI, National Skills Initiative) and maintains extensive international partnerships. However, the ecosystem remains reliant on imported expertise, with around 40% of firms reporting talent shortages. This reflects negotiated, capacity-building dependence rather than passive reliance.
Governance	Steer	—	Governance is centralised under the Office of AI and coordinated through AI Strategy 2031. The UAE favours agile, guidance-based instruments (AI Ethics Guide, Deepfake Guide) supported by sectoral rules. While enforcement is flexible rather than binding, the UAE exercises strong steering power and regional norm-setting influence.

KENYA

Layer	Posture	Subtype (if Depend)	Justification
Compute infrastructure	Depend	Taker	Domestic compute capacity remains nascent, and near-term access relies on foreign cloud providers and imported hardware. The Microsoft–G42 programme will deliver a geothermal-powered data-centre campus and an Azure cloud region for East Africa, but accelerators, cloud governance and control remain externally anchored, supporting a Depend–taker posture.
Energy	Depend	Maker	Kenya has one of the strongest geothermal bases globally, with geothermal contributing roughly 40–45% of national electricity generation and renewables accounting for more than 80% of total power supply. The country is integrated into regional power markets through active electricity imports from Ethiopia via the Ethiopia–Kenya Electricity Highway Project and Uganda, and through interconnection with Tanzania via the 400 kV Kenya–Tanzania line, enabling bilateral power exchange under the Eastern Africa Power Pool. While these arrangements enhance grid stability and support clean-power availability, overall energy autonomy remains constrained by transmission bottlenecks, capacity-expansion needs, and reliance on regional imports during peak demand. This places Kenya in a Depend–maker posture: strong domestic clean-energy foundations combined with active, but not yet fully sovereign, control over energy supply.
Data	Steer	—	The Data Protection Act (2019) and enforcement powers of the Office of the Data Commissioner provide Kenya with meaningful authority over data use, including penalties and investigations. While there is no blanket localisation, transfer controls and sectoral safeguards steer data flows, and the AI Strategy signals further strengthening of national data policy and quality domestic data sets.
Models	Steer	—	Kenya has limited national foundation models today, with early local SLMs emerging through academia–industry partnerships. The AI Strategy prioritises sovereign-relevant model development and national research centres, typically co-developed with global firms. Policy direction and coordination support Steer,

			but reliance on foreign compute and frameworks limits control.
Applications	Depend	Maker	Public-sector AI adoption is expanding in agriculture, climate and digital services, largely through co-built solutions with international partners (including GovTech components under the Microsoft–G42 package). Kenya shapes requirements and use cases but depends on foreign platforms and technical teams.
Talent and skills	Depend	Taker → Maker (in transition)	Kenya faces significant skills gaps and limited advanced AI-training capacity. New initiatives such as the national AI Skilling Centre and civil-service upskilling programmes aim to build domestic talent. However, short-term reliance on imported expertise persists, indicating a transition from taker towards maker.
Governance	Steer	—	The AI Strategy 2025–2030 establishes an enabling, adaptive governance framework with sandboxes, sectoral rules and oversight mechanisms, complemented by Kenya's engagement in multilateral forums. Binding AI-specific legislation and a mature assurance ecosystem are still under development, placing governance firmly in Steer.

FRANCE

Layer	Posture	Subtype (if Depend)	Justification
Compute infrastructure	Steer	—	France combines strong national HPC capacity (Jean Zay with H100 upgrades) with major new co-investments, including the MGX–Bpifrance–Mistral–NVIDIA ~1.4 GW AI campus and the sovereign-cloud Bleu initiative. The state shapes outcomes through regulation, procurement and co-investment, but reliance on foreign accelerators and hyperscale platforms limits full control, supporting a Steer posture.
Energy	Control	—	Its nuclear-anchored, low-carbon energy system provides a decisive sovereignty advantage. With record net electricity exports (≈89–103 TWh in 2024), government and EDF commitments to grid-ready sites and ~1 GW of dedicated nuclear capacity for AI training ensure stable, domestically governed power for AI infrastructure growth.
Data	Control	—	A GDPR-aligned regime with strong CNIL enforcement grants France robust legal authority over data governance. SecNumCloud / Cloud de Confiance pathways for public and sensitive data, alongside national open-data infrastructures (data.gouv.fr; Recherche Data Gouv), allow France to direct sensitive data flows while preserving openness where appropriate.
Models	Steer	—	Domestic model capability is expanding through Mistral and initiatives such as BLOOM (trained on Jean Zay), supported by public financing and policy signals. However, frontier-scale training and deployment remain dependent on NVIDIA stacks and partner clouds, and France lacks an independent fallback pipeline, placing it in a Steer rather than Control posture.
Applications	Steer	—	The state accelerates AI adoption in public services and defence primarily through standards, procurement and public–private partnerships, rather than direct state-built applications. This approach reflects strong direction-setting power without full operational ownership, consistent with Steer.

Talent and skills	Steer	—	France has sustained, long-term public investment in AI research and training, including doctoral pipelines, national research clusters and large-scale upskilling with industry partners. While national direction is strong, continued reliance on international talent flows keeps the posture at Steer rather than Control.
Governance	Steer	—	France exercises significant governance influence through strong CNIL enforcement and the creation of national assurance capacity (e.g., INESIA), while also shaping EU-level hard law such as the AI Act. This provides credible steering power within a shared European framework rather than fully autonomous rule-setting.

INDIA

Layer	Posture	Subtype (if Depend)	Justification
Compute infrastructure	Steer	—	India operates the AIRAWAT supercomputer and a growing national AI compute network under the IndiaAI Mission, overseen by the Ministry of Electronics and IT. While domestic capacity remains modest (≈34,000 GPUs), public–private partnerships with AWS, AMD and Microsoft aim to add 25,000+ GPUs. The state sets strategic priorities and allocates compute but remains dependent on foreign accelerators, supporting a strong Steer posture rather than Control.
Energy	Depend	Maker	Although around 50% of installed capacity is renewable, roughly 75% of electricity generation still comes from coal and ~36% of total energy is imported. India is investing heavily in renewables, grid expansion and critical minerals, indicating active capacity-building. This places India as a depend–maker, with a trajectory toward greater domestic energy control over time.
Data	Control	—	India's Digital Personal Data Protection Act (2023) establishes a localisation-first regime, allowing cross-border transfers only to government-approved jurisdictions. Combined with India Stack, which integrates digital ID, payments and data exchange, this gives the state decisive jurisdictional authority over sensitive datasets, consistent with Control.
Models	Steer	—	Government-backed initiatives such as Bharat Gen and Sarvam signal India's push toward sovereign-relevant foundation models. However, large-scale training still relies on foreign compute, frameworks and cloud platforms. The state steers the ecosystem through policy direction, funding and compute allocation, but lacks full operational autonomy, supporting a Steer posture.
Applications	Steer	—	Public-sector AI deployment across health care, policing, agriculture and climate follows a coordinated co-development model. The IndiaAI Application Development Initiative prioritises national use cases while combining domestic systems (e.g., MARVEL policing AI) with partnerships involving global firms

			(Google–Tata, Microsoft–NITI Aayog). This blend of public direction and private delivery reflects Steer.
Talent and skills	Control	—	India has one of the world's largest AI-skilled workforces, strong university pipelines and deep private-sector participation. The IndiaAI Mission commits to upskilling one million people and funding startups (~$230mn). High domestic capacity and retention justify Control at the talent layer.
Governance	Steer → Control (in transition)	—	India's governance-architecture framework combines voluntary instruments (Principles for Responsible AI, emerging AI-governance guidelines) with a coordinated regulatory roadmap under the National AI Strategy. While binding AI-specific enforcement is still developing, India actively shapes global norms through the G20, GPAI and AI Action Summit processes, placing it at Steer today with a clear trajectory toward Control.

BRAZIL

Layer	Posture	Subtype (if Depend)	Justification
Compute infrastructure	Steer	—	Brazil combines state planning (GENCI-style national HPC, Dataprev sovereign centres) with significant foreign investment (Microsoft US $2.7bn; AWS US $1.8bn; Scala AI City 4.75 GW). The state shapes outcomes through localisation and reinvestment requirements (8% revenue reinvestment or 10% domestic processing), but reliance on NVIDIA hardware and foreign hyperscalers prevents full control.
Energy	Control	—	Brazil's electricity mix is ~83% renewable, dominated by hydro with expanding solar and wind. The sector is governed nationally through ANEEL, and Brazil is a net electricity exporter. While vulnerabilities exist (drought, grid delays), legal, resource and technical authority remain firmly domestic.
Data	Control	—	The General Data Protection Law (LGPD), enforced by the ANPD with binding sanctions, gives Brazil strong jurisdiction over personal data. Sectoral localisation (health, finance) and national open-data platforms (dados.gov.br, INDA) balance sovereignty with accessibility, enabling direct control over data governance.
Models	Steer	—	Brazil is building domestic model capability (SoberanIA, Amazônia 360, GovBERT-BR) and pursuing joint initiatives such as the China–Brazil AI Lab. Public funding (~US $200mn) and mandated Portuguese-language coverage signal strong steering power, but dependence on imported GPUs and foreign cloud compute limits autonomous frontier capability.
Applications	Depend	Maker	Nearly three-quarters of public-sector AI tools are domestically built or co-developed with universities and research bodies, while private-sector deployment relies on US and global platforms and APIs. This reflects maker-dependence: active co-creation alongside reliance on external platforms.
Talent and skills	Steer	—	Significant public investment in AI training (>$100mn), Microsoft's plan to train 5mn people, 140,000 new technical-course seats and extensive scholarship programmes show strong state direction. Persistent skills gaps (~500,000 shortfall) maintain reliance on

			global talent flows, keeping posture at Steer rather than Control.
Governance	Control	—	Brazil's data-protection law, LGPD and the forthcoming risk-based AI Law grant regulators binding enforcement powers, including CNIL-style sanctions (fines up to 2% of turnover) and lifecycle obligations. Brazil's leadership in the G20 and BRICS reinforces its role as a rule-maker in the Global South.