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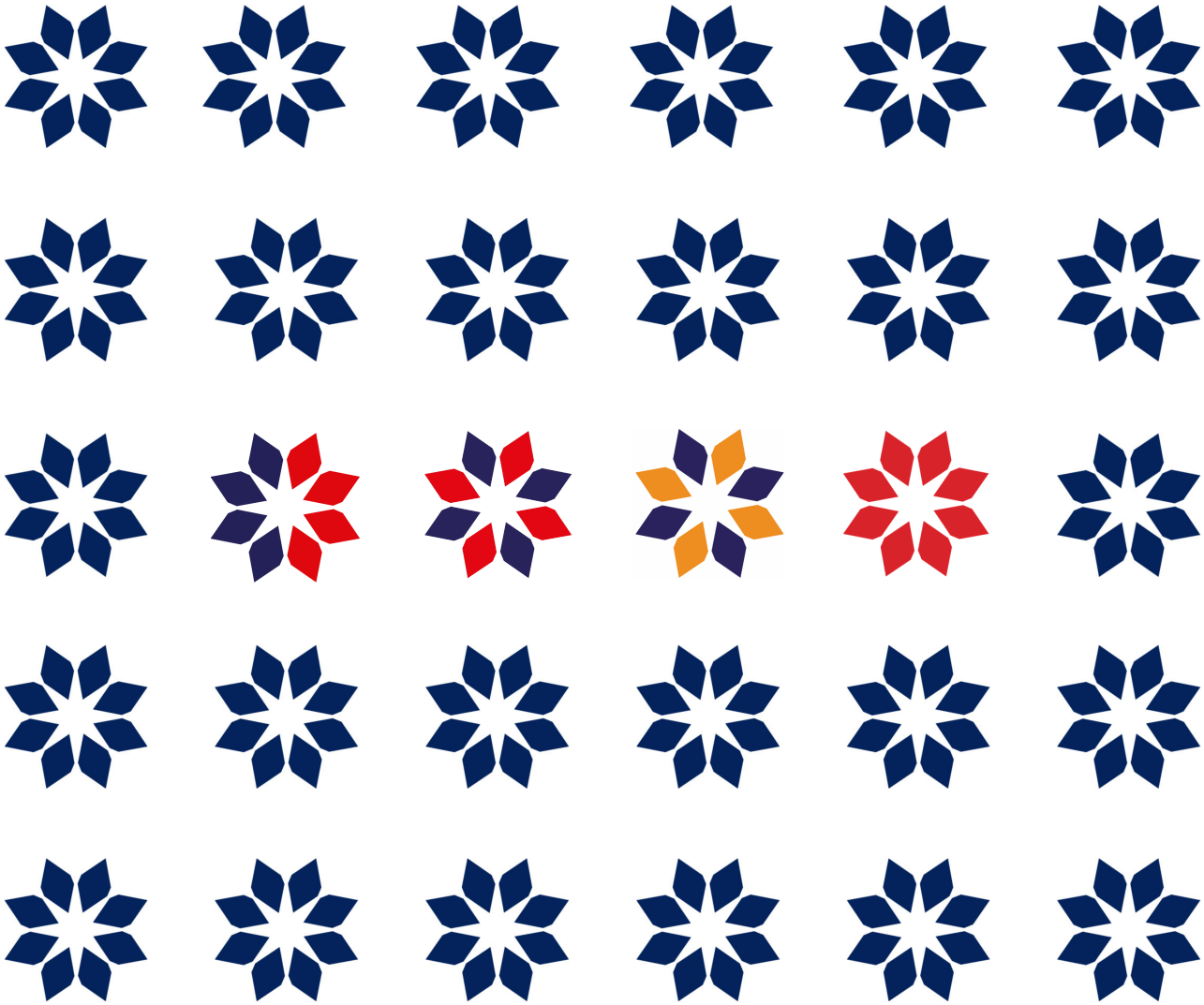
Artificial Intelligence Special Edition

NOUVEAUX REGARDS SUR L'ASIE



A new perspective on Asia and the diversity of its issues and cultures, combining the views of experts and high-level players.

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June 17
Gala Dinner of the Fondation France-Asie

Bibliothèque Richelieu (BnF)
5 rue Vivienne, 75002 Paris

July 2-5
Young Leaders Seminar France-India 2026

Paris & Provence

November 5-8
Young Leaders Seminar France-Japan 2026

More information is available on the Fondation France-Asie website
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Dear Readers,

Since its inception, "Nouveaux Regards sur l'Asie" has sought to provide you each month, in both French and English, with in-depth analysis and high-quality insights into the major issues shaping Asia, across their economic, political, strategic, cultural, and societal dimensions.

In order to further strengthen this editorial ambition, we have decided to change our publication schedule from a monthly to a quarterly format.

This new frequency will allow us to devote more time to the preparation of each issue and, above all, to involve more closely the nearly 400 Young Leaders who represent one of the greatest assets of the Fondation France-Asie.

Their expertise, field experience, and innovative perspectives will enrich our publication with ever more insightful and forward-looking contributions, as you will already discover in this first quarterly issue of June, dedicated to artificial intelligence.

We hope that this new format will meet your expectations and further enhance your understanding of the dynamics shaping Asia, its societies, its economies, and its growing influence around the world.

We wish you an enjoyable read and look forward to welcoming you back in September for our next issue, which will focus on a topic of critical strategic importance worldwide: rare earths.

Thank you for your continued loyalty and trust.

Jean-Raphaël Peytregnet
Editorial Director

Jean-Raphaël Peytregnet
Editorial Director and former diplomat

EDITORIAL

Artificial intelligence (AI) is no longer just an engine of innovation: it has become an instrument of power. While the United States retains a dominant position in certain segments, data centers, AI semiconductors, cloud and advanced language models (Large Language Models or LLM), Asia is asserting itself as a central space for experimentation, deployment and diffusion of these technologies. From China to India, passing through Japan, South Korea and Singapore, the region concentrates between 20 and 30% of global investments in AI in 2025 (approximately 1,500 billion dollars), reflecting a progressive shift of the technological center of gravity.

But beyond financial volumes, it is its capacity to integrate AI into concrete uses, and at large scale, that distinguishes Asia today.

By pursuing national strategies that are certainly differentiated but nevertheless convergent.

The development of AI in Asia rests on varied models, but oriented toward a common objective: technological mastery.

China embodies the most integrated and most ambitious model. Its national plan for AI explicitly targets global leadership by the horizon of 2030.

Its cumulative investments are estimated at approximately 120 billion dollars since the early 2010s (compared to 470 billion dollars for the United States), and the country represents approximately one third of global scientific publications in AI, making it the principal contributor in this matter.

But beyond the figures, it is the systemic integration of AI that distinguishes China. In its large southern metropolises such as Hangzhou or Shenzhen, traffic management systems piloted by AI make it possible to reduce traffic jams by 10 to 15% (City Brain developed by Alibaba).

In the financial sector, mobile payments (Alipay, WeChat Pay), used by approximately 90% of Chinese city dwellers, rest on algorithms for fraud detection, risk scoring, authentication, and behavioral analysis. In logistics, a player like JD.com, principal rival of Alibaba in e-commerce, automates its warehouses thanks to intelligent systems capable of optimizing in real time the flows of merchandise.

This capacity to rapidly deploy solutions at very large scale rests on a triptych: abundance of data, state support (bank loans and subsidies) and the power of private platforms. It reflects above all a fundamental difference of tempo with Western democracies when China excels, unlike the latter, in massive and rapid scaling on the market once the technology has been validated.

Japan adopts a distinct approach, centered on the integration of artificial intelligence in robotics, industry and personal services.

This orientation is explained in large part by a major demographic constraint, as nearly 30% of the Japanese population is over 65 years old.

In this context, AI is conceived as a tool of structural support. Japan invests nearly 8 billion dollars per year in AI and a consequent share in robotics (45% of world production). In industry, companies like Fanuc (Fuji Automatic Numerical Control) use AI for predictive maintenance and automation of production lines.

In services, social robots interacting with humans such as Pepper, developed by SoftBank Robotics, are deployed in shops, banks, airports, hospitals, retirement homes and educational establishments.

The medical sector particularly illustrates this orientation: assistance robots help elderly people, while AI systems facilitate diagnosis.

The concept of "Society 5.0" (intelligent), introduced by the Japanese government and the employers' federation Keidanren, aims to integrate these technologies into a society centered on human well-being, while maintaining a high level of trust in human-machine cooperation.

South Korea, a technological production power, and Singapore, a platform of innovation and intelligent deployment, complete this landscape with respectively industrial and normative strategies, while India develops a model founded on scale and accessibility.

India: a power of scale and frugal innovation (doing better with less).

India distinguishes itself by a pragmatic and inclusive approach to AI. With nearly 1 billion internet users (2nd largest market after China) and more than 20 million software developers (2nd largest pool worldwide after the United States), it possesses considerable human potential.

Its public digital infrastructure constitutes a decisive lever. The largest biometric digital identity system in the world, Aadhaar, covers more than 1.3 billion individuals, and the UPI interface (Unified Payments Interface) developed by the National Payments Corporation of India processes more than 20 billion monthly transactions. This base allows the rapid deployment of AI applications in the sectors of health, agriculture and education.

For example, assisted diagnostic tools are used to screen for tuberculosis in rural areas, while agricultural platforms optimize yields thanks to the analysis of climatic data.

The AI market in India could reach 40 to 50 billion dollars by 2030, and approximately 100 billion dollars of economic impact linked to AI, confirming an important and rapid growth dynamic.

A structuring industrial domination.

Asia (Taiwan, South Korea) represents approximately 75% of world semiconductor production, a key element for the development of AI.

This industrial domination confers on the region a decisive strategic advantage in the technological value chain.

Between innovation and normative tensions.

The expansion of AI in Asia is accompanied by growing tensions between innovation and regulation.

In China, approximately 700 to 800 million surveillance cameras installed (that is 1 camera for every 2 inhabitants on average) illustrate a model where AI is integrated into governance devices. Conversely, Japan and Singapore are developing more structured ethical frameworks.

India, for its part, attempts to reconcile innovation and data protection, notably with the adoption of the Digital Personal Data Protection Act in 2023.

A progressive recomposition of technological power.

Asia is no longer content with adopting technologies: it now defines their uses.

More than one third of large AI companies are today Asian (Alibaba, Tencent, Baidu, ByteDance for China; Samsung Electronics and SK Hynix for South Korea; TSMC for Taiwan; SoftBank Group, Fujitsu, NEC Corporation for Japan; Tata Consultancy Services and Infosys for India), against approximately one quarter ten years ago.

Convergence of models, divergence of purposes.

The rise of artificial intelligence in Asia does not reduce to either a catch-up dynamic or a simple technological competition. It reveals a deeper transformation: that of the very conditions of production, diffusion and framing of technology.

On one side, national trajectories converge toward a generalized integration of AI. On the other, the purposes diverge: economic optimization, social control, inclusion or frugal innovation.

In this landscape, Asia acts both as an accelerator and as a revealer. An accelerator, because it deploys AI at an unprecedented scale; a revealer, because it brings to light a fundamental reality: artificial intelligence is not neutral. It carries political, social and cultural choices.

From this point on, the issue is no longer solely technological. It resides in the capacity to understand, anticipate and eventually frame models that are already imposing themselves through their uses.

Because in matters of AI, influence is not decreed, it imposes itself through use — often even before having been fully debated, which is also not without risk with regard to machines capable of simulating certain capacities of human intelligence, or even at a longer horizon of surpassing them.

Jean-Raphaël Peytregnet

A career diplomat who studied Chinese studies in France and then worked in development aid as an international expert for UNESCO in Laos (1988-1991), Jean-Raphaël PEYTREGNET has held positions including Consul General of France in Guangzhou (2007-2011) and Beijing (2015-2018), as well as in Mumbai/Bombay from 2011 to 2015. He was responsible for Asia at the Center for Analysis, Forecasting, and Strategy (CAPS) attached to the office of the Minister for Europe and Foreign Affairs (2018-2021) and finally Special Advisor to the Director for Asia-Oceania (2021-2023).

Pierre Haski
Journalist

Asian news

Géopolitique, a podcast offering a perspective on international affairs.

By Pierre Haski on France Inter

May 13 - Donald Trump facing a China that now considers itself the equal of the United States

Donald Trump arrives today in Beijing in a China that has changed: Beijing now assumes itself as a superpower, equal to the United States, and considers that America is in decline.

Listen to the podcast

May 14 - Taiwan fears becoming collateral damage in Donald Trump's desire to strike a deal with Beijing.

Taiwan is concerned about Donald Trump's unpredictability toward Beijing: no one knows exactly what the U.S. president thinks about the democratic island claimed by China. Chinese leader Xi Jinping would like Washington to halt its arms sales to Taiwan and commit itself to opposing Taiwanese independence.

Listen to the podcast

15 mai - Why Xi Jinping cites Thucydides to warn Donald Trump.

Xi Jinping has invoked the ancient Greek historian Thucydides, who lived 2,400 years ago, to warn Donald Trump against trying to contain China's rise as the world's other superpower.

Listen to the podcast

19 mai - Putin in Beijing, three days after Trump: the club of "strongmen".

Vladimir Putin arrived in Beijing today, just days after Donald Trump's visit. China takes a certain pride in hosting both leaders, although the nature of the relationships is quite different. Putin is accompanied by leading energy oligarchs, reflecting the central role that energy issues will play during the visit.

Listen to the podcast

Pierre Haski

French journalist, former correspondent in South Africa, the Middle East, and China for Agence France Presse (AFP) and then for the newspaper Libération, co-founder of the news website Rue89, Pierre HASKI has been president of Reporters Without Borders since 2017. Since 2018, he has been providing insight into international politics through his morning show "Géopolitique" broadcast on France Inter.

Clara Chappaz

Ambassador for Digital Affairs and Artificial Intelligence

Interview Nouveaux Regards

Interview: reflections on the New Delhi AI Impact Summit.

Interviewed by the Fondation France-Asie

Fondation France-Asie : In your view, what are the main lessons to be drawn from the AI Impact Summit in New Delhi, particularly for France and Europe?

Artificial intelligence is the geopolitical challenge of our generation. At the New Delhi summit, organized by India as a direct follow-up to the Paris summit that we co-chaired, this conviction has ceased to be a matter of debate and has become a shared reality. A global power struggle pits a handful of states and companies that hold the keys to this technology against the rest of the world.

The question raised in New Delhi was a simple one: who will write the rules governing AI, which already shapes access to information, structures public services, and influences the online behavior of our children?

France and India achieved a concrete result: thirteen leading model developers committed to publishing data on the real-world use of their systems and to testing their models in underrepresented languages. States acting together can influence private-sector actors.

To what extent did the summit help establish a more concrete and operational vision of international cooperation in artificial intelligence?

New Delhi moved the debate forward on three fronts.

First, capabilities: a Franco-Indian research centre for health and AI was inaugurated at AIIMS Delhi as part of the Franco-Indian Year of Innovation. Researchers from both countries are now working together on concrete projects using real-world infrastructure.

Second, transparency: major platforms committed to documenting their training data and taking multilingualism into account. A user in Hindi or French should be able to trust a model that has been tested in their own language.

Third, the protection of minors: France and India share a common approach to regulating recommendation systems targeting adolescents. France promotes this issue during all of its engagements in Asia and will continue to do so at the G7 Summit in Évian this June. We have also launched an international call for contributions from scientists worldwide on the protection of minors in the age of AI.

What are currently the main challenges and opportunities of Franco-Indian cooperation in artificial intelligence?

The Franco-Indian relationship has been elevated to the status of a special comprehensive strategic partnership. No other Western country has developed such a strategic relationship with India. This achievement is the result of long-term cooperation. AI lies at the heart of this partnership, itself rooted in a shared conviction: technological independence is a prerequisite for sovereignty.

In Delhi, more than 200 universities and research institutes from both countries came together, and around twenty universities signed partnership agreements. A joint centre of excellence for AI in healthcare was inaugurated. These are the building blocks of a common architecture.

India brings world-class digital talent and the legitimacy of a market of 1.4 billion people. France contributes academic excellence and decarbonized energy. Both countries share a vision of technology serving citizens.

What specific strengths can France and India combine to build an ambitious partnership in research, innovation, talent development, regulation, and large-scale deployment?

France possesses outstanding capabilities in fundamental research in AI and quantum technologies through institutions such as CNRS, Inria, and CEA. India benefits from an unparalleled engineering ecosystem and the ability to deploy innovations at continental scale. Together, we cover the entire value chain, from research to application.

A concrete example is Current AI, the initiative launched at the Paris Summit to develop AI models adapted to underrepresented languages and cultures. India, with its exceptional linguistic diversity, is a natural partner for this endeavour.

How do you assess France's position in the global race for technological leadership, particularly in artificial intelligence?

France has been Europe's leading destination for foreign investment for seven consecutive years. In AI specifically, it hosts the largest number of AI startups in Europe—more than 1,000 companies—with record levels of fundraising. Mistral AI is valued at more than €11 billion. France is home to world-class AI clusters, notably in the Paris region, Grenoble, and Toulouse.

This position is the direct result of policies initiated by the President of the Republic since 2018, beginning with the first national AI strategy, followed by France 2030 and the Paris Summit. Each step has reinforced the ecosystem through decarbonized energy, research infrastructure, a clear regulatory framework, and talent attraction.

Our diplomacy also allows us to project influence and rally partners. The Paris AI Action Summit generated €109 billion in commitments. Choose France 2026 confirms this momentum with massive investments in AI infrastructure on French soil.

At a time when some European countries appear to be reducing or slowing investment in research and development, how can France preserve and strengthen its competitive advantage?

By investing heavily to build our technological sovereignty. Europe is now affirming the need to control its own infrastructures. In AI and quantum technologies, France is mobilizing all available resources to build competitive and sustainable industrial ecosystems.

The President recently announced an additional €1.55 billion for quantum technologies and semiconductors. A consortium of 28 French companies has unveiled plans for an AI gigafactory worth more than €10 billion. At Choose France, SoftBank announced €75 billion in investments in the Hauts-de-France region. Schneider Electric is building a factory in Dunkirk, while Foxconn and Bull have signed a semiconductor partnership in Angers. Every foreign investment helps strengthen a French actor.

The strategy is clear: public investment initiates momentum, private capital amplifies it. This synergy is visible at every edition of Choose France. The next challenge lies at the European level: completing the Capital Markets Union to ensure European companies have access to the financing required to scale up.

Which levers should be prioritized to make France not only a country of scientific excellence, but also one capable of transforming that excellence into industrial and technological champions?

Financing comes first. French startups must be able to secure funding in Europe at every stage of their growth. Too many promising companies still seek funding in the United States or Asia because equivalent resources are unavailable here.

Public procurement comes next. When European administrations choose solutions developed by European companies for critical functions, they

send a strong market signal and strengthen the credibility of the ecosystem.

Finally, simplification. Companies need the ability to grow quickly. Faster authorization procedures, easier access to land for data centres and factories, and accelerated energy permitting are all essential. Foreign investors repeatedly tell us that France has strong fundamentals, but administrative simplification often determines the final investment decision.

Beyond India, how do you envision France's cooperation with major Asian countries such as Japan, China, and South Korea in artificial intelligence and digital technologies?

The principle guiding our digital diplomacy is simple: together, we are less dependent on a handful of actors. And less dependence means less vulnerability.

Japan is our oldest scientific partner in Asia. CNRS and the University of Tokyo have shared a joint laboratory for decades. During the President's State Visit in March 2026, the relationship reached a new level with a bilateral declaration on AI and direct industrial agreements between French startups and major Japanese corporations.

South Korea established a comprehensive strategic partnership with France in April 2026. Korea brings exceptional industrial execution capabilities, while France contributes world-leading fundamental research. The Federation of Korean Industries forum demonstrated the potential of this complementarity, particularly in photonic quantum technologies.

With China, dialogue is both necessary and demanding. China is simultaneously a partner and a competitor in AI. Discussions focus on technical standards, system security, and model governance. France protects its critical assets and remains clear-eyed about the balance of power. Yet dialogue must continue, because challenges ranging from AI governance to climate change and digital disarmament require all major powers to be at the table.

Can France act as a bridge between Europe and Asia to promote an artificial intelligence that is innovative, sovereign, open, and responsible?

France is conducting intensive, high-level diplomatic engagement on digital and AI issues. Recent visits to Japan, South Korea, and India are direct illustrations of this effort: our objective is to build concrete industrial partnerships on the ground.
Faced with the Sino-American technological duopoly, we are building a third path together with our Asian and international partners—one based on open alliances, reciprocity, and shared sovereignty.
To achieve this, France's strategy rests on three complementary pillars: a political vision, a regulatory framework, and concrete industrial agreements capable of turning ambitions into reality.

You accompanied the presidential delegation to Japan and South Korea. What concrete examples of bilateral cooperation in AI and digital technologies can you share following these visits?

In Japan, LIMMS—the CNRS Franco-Japanese laboratory in Tokyo—demonstrates what research can achieve when given time and trust: the encryption of a message using synthetic DNA between Paris and Tokyo, a world first. Alain Aspect was present. That moment alone encapsulates thirty years of joint work.

On the industrial side, Mistral AI signed an agreement with NTT Data to deploy its models in Japan. Current AI, the initiative launched at the Paris Summit, concluded a partnership with Sakana AI. Exotrail joined forces with Astroscale in the field of space logistics. In the course of a single State Visit, three agreements were signed directly connecting our ecosystems.

In South Korea, the deep-tech session of the FKI forum brought together the leaders of Quandela and Pasqal with their Korean counterparts in quantum technologies. Discussions were frank, technical, and operational. Quandela is opening a photonic quantum research hub at KAIST. Twelve agreements were signed overall, ranging from AI to semiconductors.

More broadly, how do you see French digital diplomacy evolving in the coming years, particularly with regard to Asia's major technological powers?

Digital diplomacy is now becoming a pillar of France's foreign policy, alongside economic and climate diplomacy. Artificial intelligence is reshaping global balances of power.

Asia concentrates much of the industrial capacity, talent, and markets that will shape tomorrow's AI. With each Asian partner, our approach is to diversify alliances and build together by deploying researchers and businesses on the ground.

In the years ahead, this diplomacy will intensify around two priorities. First, the democratic imperative: protecting minors and combating disinformation in the age of generative AI are urgent challenges that transcend borders. We

must build these safeguards together with our Asian partners now. Second, industry: the goal is to establish permanent innovation corridors between France and Asia so that agreements signed during State Visits evolve into sustainable and sovereign industrial projects.

Being a technological power requires making clear-eyed choices about dependencies and investing in alliances that strengthen us. France is building this path every week alongside its partners.

Clara Chappaz

Clara Chappaz has served as France's Ambassador for Digital Affairs and Artificial Intelligence since December 2025, attached to the Ministry for Europe and Foreign Affairs. Between September 2024 and September 2025, she served as Minister Delegate and subsequently as Secretary of State for Artificial Intelligence and Digital Affairs in the Bayrou and Barnier governments. It was the first time that artificial intelligence appeared in the title of a ministerial portfolio in France.

From 2021 to 2024, she led the French Tech Mission, supporting the growth and international expansion of the French startup ecosystem. During this period, she developed a Gender Equality Pact signed by more than 700 startups.

Her career was built within the international technology startup ecosystem: Chief Business Officer at Vestiaire Collective, head of international expansion at Lyst in London (backed by LVMH), and senior leadership positions at Zalora in Southeast Asia. During her MBA at Harvard, she co-founded Lullaby, a marketplace dedicated to second-hand children's products.She graduated from ESSEC Business School, holds an MBA from Harvard Business School, and is an auditor of the Institute for Advanced Studies in National Defence (IHEDN).

Analysis Nouveaux Regards

Why artificial intelligence struggles to reach patients?

By Rahul Gaurav, Raphaël Vialle and Antoine Tesnière

Reflections from the Indo-French White Paper on AI in Health, presented during the inauguration of the Indo-French Centre for AI in Health at AIIMS Delhi by French President Emmanuel Macron and India's Health Minister Jagat Prakash Nadda.

Artificial Intelligence Is Advancing Faster Than Healthcare Systems

Artificial intelligence (AI) can now detect diseases, analyze medical images and support clinical decisions with remarkable accuracy. Yet for millions of patients, the experience of healthcare has barely changed. Waiting times remain long, access to specialists remains unequal, and many hospitals continue to struggle under growing pressure.

The paradox is striking; AI is advancing rapidly, while healthcare systems often struggle to absorb innovation. This challenge appears across very different healthcare systems, including in France and India. France and India approach healthcare from very different realities.

France contributes highly structured hospitals and research systems, while India brings unmatched population scale, diversity, and experience delivering care across highly heterogeneous environments.

Together they offer a unique opportunity to understand whether AI can truly function across real-world healthcare systems.

The reason is simple. Technologies do not enter empty laboratories. They enter overcrowded emergency rooms, busy hospital corridors, exhausted healthcare professionals, and healthcare systems already operating under constant pressure.

In healthcare, even an excellent algorithm can fail if clinicians do not trust it, if workflows become more complicated, or if hospitals lack the infrastructure needed to use it safely.This is why the future of AI in health may depend less on technological performance alone and more on whether these tools can become genuinely useful for patients and healthcare professionals in the real world.

The Indo-French Dialogue Behind the White Paper on AI

Over the past year, discussions between French and Indian researchers, clinicians, policymakers, entrepreneurs, and Young Leaders increasingly focused on a shared concern: why do so many promising AI systems fail to become part of routine healthcare?

These exchanges contributed to the Indo-French White Paper on AI in Health, coordinated through the France India Foundation and the Fondation France-Asie network.

Because healthcare is not only a technological system but also a human system, the discussions increasingly returned to practical questions surrounding hospitals, access to care, medical training, and trust. This reflection gained further visibility during the AI Action Summit in Paris in 2025 and later at the AI Impact Summit held in New Delhi in 2026.

Across these discussions, the conversation around AI gradually shifted from technological promises toward the realities of implementation. One question repeatedly emerged: can AI move beyond highly specialized centers and become useful in the environments where most patients actually receive care?

From Paris to Delhi: Bringing AI Closer to Patients

A central question is whether AI can help bring better brain care closer to patients, not only to those treated in major specialist hospitals.For many neurological disorders, diagnosis still depends heavily on imaging and expert interpretation. Yet access to these resources remains uneven.

For many patients, the problem is not that medical expertise does not exist. It is that expertise remains physically too far away.

In rural regions or underserved areas, patients may wait weeks for specialized imaging or neurological evaluation simply because the right equipment or specialists are not available nearby. Portable low-field magnetic resonance imaging (MRI) systems are attracting growing interest in this context.

While they are not intended to replace advanced hospital MRI systems, they could help make brain imaging available in more settings and closer to patients. Combined with AI tools, they may also help clinicians obtain and interpret images more easily.

This is where AI becomes more than a technical achievement.

Used responsibly, it could help reduce barriers to diagnosis and support earlier access to care for patients who remain far from specialized services.

When AI Meets Real Hospitals

AI often performs impressively in controlled environments. Real hospitals are far more complicated. A tool that works well in one institution may perform very differently in another because of differences in equipment, organization, patient populations, or clinical routines.

Creating an algorithm is only the beginning.

The real challenge is making it useful inside real hospitals. It also requires systems that healthcare professionals can trust and realistically use within everyday clinical practice.

Acute stroke care illustrates this challenge clearly. In stroke medicine, every minute of delay can mean the loss of brain cells. Faster image interpretation can determine whether a patient walks again, speaks again or remains permanently disabled. AI may help accelerate this, but only if the technology fits naturally into the reality of emergency care. This is why implementation may become just as important as innovation in the future of AI in health.

Why Brain Health Is a Difficult Test Case

Brain health, encompassing neurological and mental health disorders, is emerging as one of the major global health challenges of the twenty-first century. It also presents some of the most demanding challenges for AI in healthcare.

Neurological and psychiatric disorders often require complex imaging, multidisciplinary interpretation, and long-term follow-up.

Clinical decisions are rarely based on a single test and frequently depend on combining imaging, biological, and clinical information.

At the same time, access to brain imaging and neurological expertise remains highly uneven across healthcare systems.

For many patients, expertise remains geographically out of reach.

This makes brain health an important area for testing whether AI tools can function reliably across different populations and healthcare environments. If AI can be integrated safely and meaningfully in brain health, many of the lessons will likely extend well beyond neurology.

The Indo-French Centre for AI in Health

On February 18, 2026, during the RUSH 2026 meetings (Rencontres Universitaires et Scientifiques de Haut Niveau), held alongside the AI Impact Summit in New Delhi within the context of the India-France Year of Innovation 2026, the Indo-French Centre for AI in Health was inaugurated at AIIMS Delhi by the President of France, Emmanuel Macron and the Union Health Minister of India, Jagat Prakash Nadda, in the presence of both countries' ambassadors.

During the event, the Indo-French White Paper on AI in Health was officially handed to President

Macron as part of broader discussions on the future of AI cooperation between France and India.

The discussions highlighted a shared objective: ensuring that advances in AI translate into tangible improvements in healthcare delivery, including for populations that remain underserved by existing medical infrastructures.

The Indo-French Centre for AI in Health reflects a broader transformation already underway in AI for healthcare.

For years, many AI projects remain confined to conferences, laboratories, or highly specialized institutions.

Presentation of the White Paper by Antoine Tesnière, Rahul Gaurav, and Raphaël Vialle to President Emmanuel Macron.

The challenge now is different: making AI useful for ordinary patients in ordinary hospitals.
The Centre is intended as a collaborative platform connecting scientific, clinical, technological, and public-health expertise across India and France, while remaining open to broader partnerships.

Rather than focusing only on developing new algorithms, the objective is also to understand how AI systems can function meaningfully across different healthcare settings, populations, and infrastructures.

Beyond Algorithms

The future of AI in healthcare will not be decided by algorithm alone.

It will depend on whether these technologies can function safely, reliably, and meaningfully in the reality of everyday patient care.

This requires more than computing power. It requires trust, training, infrastructure, collaboration, and a realistic understanding of how healthcare actually operates.

In healthcare, innovation fails when it ignores reality.

The recent Indo-French discussions around AI in health reflect a broader international transition already underway.

The question is no longer only whether AI can impress specialists in controlled environments.

The real question is whether it can improve care for patients living far from expertise, inside healthcare systems already under pressure.

That is where the future of AI in health will truly be decided.

[1] White Paper Indo-French Perspectives on Artificial Intelligence of the France-India AI Initiative, led by the Fondation France-Asie and the France-India Foundation.

Rahul Gaurav

Dr. Rahul Gaurav is a neuroscientist at the Paris Brain Institute, Sorbonne University, working at the intersection of neuroimaging, artificial intelligence, and brain health. His research focuses on MRI and AI-based biomarkers for neurodegenerative diseases, including Parkinson's disease.

Beyond his research, he advances science diplomacy and international scientific cooperation between France, Asia, and Latin America in brain health, AI, and healthcare innovation. He played a leading role in the creation of the Indo-French Centre for AI in Health at AIIMS Delhi, was instrumental in developing the Indo-French White Paper on the First Recommendations for AI. He also serves on the Integrated Health Steering Committee of the Indo-French Campus for Life Sciences and Health.

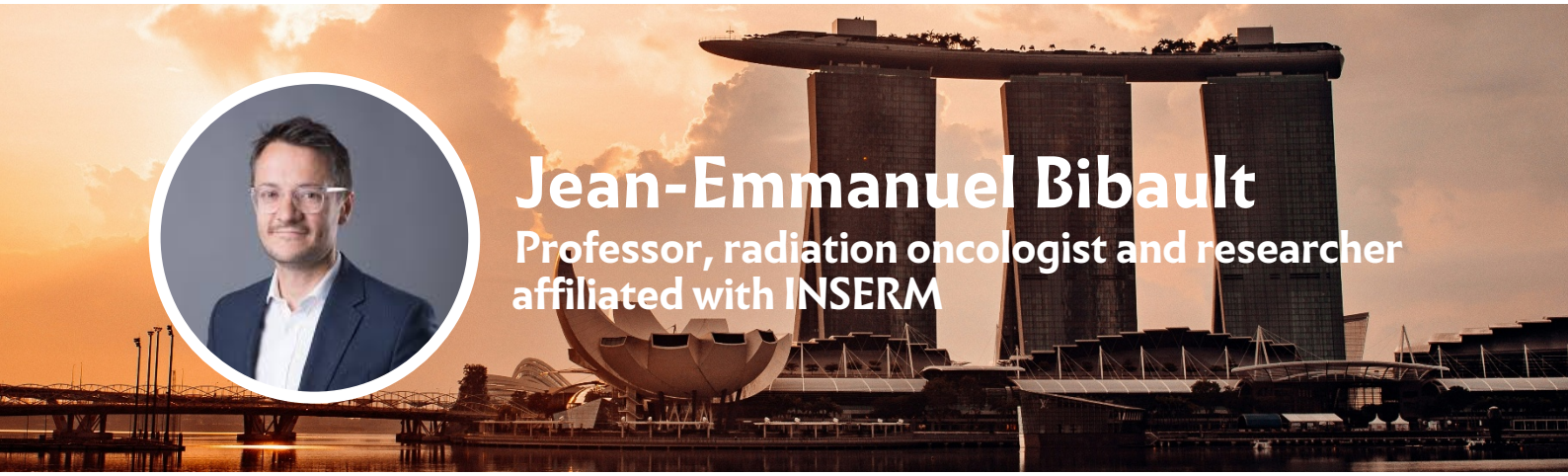
His work connects neuroscience, AI, healthcare innovation, and science diplomacy to address global brain health challenges. He is also France India Young Leader, 2026 cohort.

Raphaël Vialle

Raphaël Vialle is Professor of Pediatric Orthopaedic Surgery, Head of the Pediatric Orthopaedics Department at Armand-Trousseau Hospital (AP-HP), and Vice Dean for International Relations at the Faculty of Health of Sorbonne University. Long committed to fostering academic cooperation between Europe and Asia, he develops international projects in healthcare, surgical innovation, and artificial intelligence, while maintaining a leading clinical and research practice in the field of complex pediatric spinal deformities. He was also a Young Leader of the Fondation France-Asie as part of the France–China 2018 cohort.

Antoine Tesnière

Antoine Tesnière is a French physician, professor, researcher, and entrepreneur specializing in crisis management and public policies for healthcare innovation. A Professor of Medicine with a specialization in anesthesiology and intensive care at Georges Pompidou European Hospital, he has long been deeply involved in research and education, fields in which he enjoys internationally recognized expertise. He successively served as President of the Educational Council of the Paris Descartes Faculty of Medicine and Vice-President of the University of Paris.
Driven by a longstanding interest in innovation, entrepreneurship, and digital technologies, he co-founded and led iLumens, the first innovative healthcare simulation department developed in France, within the University of Paris. From 2016 onwards, alongside his academic and hospital responsibilities, he became actively involved in public policy. He first served as Health and Scientific Advisor at the Ministry of Higher Education and Research, before joining the office of the Minister of Health in March 2020. He was also appointed Deputy Director of the Interministerial Crisis Centre under the Prime Minister, where he helped coordinate France's response to the COVID-19 pandemic. In April 2021, he was appointed Director of PariSanté Campus upon the joint recommendation of the Ministers for Higher Education, Research and Innovation, and for Solidarity and Health. More recently, he co-founded French Care with Bpifrance, with the aim of bringing together all stakeholders in the healthcare sector, fostering synergies, and accelerating innovation to improve the healthcare system. He is a member of the France–China 2016 Young Leaders cohort of the Fondation France-Asie.



Jean-Emmanuel Bibault
Professor, radiation oncologist and researcher affiliated with INSERM

Analysis Nouveaux Regards

Healing in the age of algorithms: what Asia teaches us about adapting healthcare systems to artificial intelligence.

By Jean-Emmanuel Bibault

Introduction: the clash of temporalities

There is something vertiginous about observing, from a Parisian radiotherapy oncology department, the speed at which certain Asian healthcare systems have integrated artificial intelligence into their daily practices. Not as a pilot project confined to a research laboratory, nor as a promise waved about at a conference, but as a real infrastructure, anchored in clinical workflows, patient records, triage protocols. In Seoul, in Shenzhen, in Singapore, diagnostic AI is no longer a subject of prospective thinking: it is a tool that the radiologist consults before signing their report, that the nurse sees activate when a patient signals an unusual pain from their home.

This observation does not aim to fuel a discourse on the European "delay," whose rhetorical mechanics are as lazy as they are ineffective. It is rather a matter of questioning a more fundamental asymmetry: that of the speeds of systemic adaptation. Because the question that arises today is not so much whether AI is technically capable of transforming medicine (the evidence is accumulating) as understanding why certain healthcare systems manage to absorb this transformation when others seem to undergo it or defer it.

Asia offers in this regard an exceptional observation terrain, precisely because it is not monolithic. Between Chinese industrial voluntarism, Singaporean governance founded on algorithmic trust, the Japanese response to demographic constraint and Korean pragmatism in matters of regulatory approval, the continent presents a diversity of models that invalidates any simplistic reading. What these experiences share, on the other hand, is a disposition to think of AI not as a tool that one grafts onto an existing system, but as an opportunity to reorganize it in depth.

This article does not claim to be exhaustive. It seeks, from a cross-reading of Asian transformations and a clinical field experience in oncology, to identify the conditions of this

adaptation (organizational, regulatory, cultural) and to identify what France and Europe would have an interest in looking at with greater attention, without naivety but without condescension.

1. Asia as a global laboratory of AI in health

1.1 China: The Power of Data Elevated to the Rank of State Strategy

China did not wait for AI to be mature before deciding that it would be one of its global leaders. As early as 2017, the State Council published its New Generation AI Development Plan, setting the horizon of 2030 as the deadline to reach the first place worldwide. What strikes, with hindsight, is less the displayed ambition (the rhetoric of Chinese five-year plans is accustomed to spectacular objectives) than the continuity and acceleration of their execution. The 15th Five-Year Plan, adopted in March 2026 by the National People's Congress, marks a new stage: it is the first to place artificial intelligence explicitly at the heart of the national economic strategy, mentioning it more than fifty times against eleven in the previous one, with the objective of an AI industry valued at 10,000 billion yuan and a 90% adoption rate in the economy by 2030. Health features prominently, alongside energy, biotechnology and quantum computing.

In the medical sector, this ambition translates into deployments of a scale without equivalent in the West. Companies like Infervision, DeepWise or Shukun Technology have developed medical imaging analysis solutions (detection of pulmonary nodules, triage of thoracic scans during epidemic periods, analysis of histological slides) now deployed in hundreds of hospitals. By mid-2024, 92 class III AI-powered medical devices had been approved by the National Medical Products Administration (NMPA), testifying to clear regulatory support for clinical deployment. The AI health market, valued at 1.59 billion dollars in 2023, is projected at nearly 19 billion by 2030, reflecting an annual growth rate of around 42%.

This dynamism rests on an asset that China has managed to transform into a decisive competitive advantage: the volume and centralization of its health data. With 1.4 billion inhabitants, a system of medical records progressively unified under the "Healthy China 2030" initiative, and a digital culture integrated into daily uses (WeChat is simultaneously a messaging service, payment system and health interface), the country possesses a mass of longitudinal data that no European system can approach in scale. To train deep learning models in oncology or cardiology, this abundance is a structural condition, not a technical detail.

1.2. Singapore: Governance as Competitive Advantage

At the opposite end of Chinese gigantism, Singapore illustrates what a state of five million inhabitants, endowed with solid institutions and a coherent strategic vision, can accomplish when it decides to make algorithmic trust a national advantage. The National AI Strategy, published in 2019 then revised in 2023, explicitly positions Singapore as a global hub of trustworthy AI (trustworthy AI in official terminology) by articulating technological innovation and ethical frameworks from the design of systems.

In the health domain, the Ministry of Health has engaged in a progressive integration of clinical decision support tools in public polyclinics, those primary care structures that constitute the first level of contact with the healthcare system. Risk stratification algorithms for chronic diseases (diabetes, renal insufficiency, cardiovascular risk) are today operational there, with decision traceability and human supervision mechanisms explicitly integrated into protocols. What is remarkable in the Singaporean model is not so much the technical sophistication of the tools as the rigor of the deployment framework: prior clinical validation, mandatory training of practitioners, regular algorithmic audit devices.

This model benefits from an exceptional facilitating context: a homogeneous healthcare system, a digitally educated population, a unique national identifier (MyInfo) that allows native interoperability of data across all health actors. These conditions are not reproducible identically in France or Europe, but they designate targets toward which to tend.

1.3. Japan and South Korea: two responses to demographic constraint

Japan and South Korea share a common demographic challenge (accelerated aging, foreseeable shortage of caregivers) but have responded to it with distinct strategies, equally instructive.

Japan has engaged for several years in an ambitious program of robotics and AI in the service of home maintenance and care for the elderly. From physical assistance robots to early fall detection systems, passing through conversational interfaces for the monitoring of isolated patients, Japanese innovation in e-health is profoundly marked by this geriatric urgency. On the diagnostic front, the Japan Radiological Society has integrated AI into its practice recommendations for thoracic imaging analysis, and the PMDA (Pharmaceuticals and Medical Devices Agency) has put in place an accelerated approval pathway for AI-based medical

devices, recognizing the necessity of adapting the regulatory tempo to the rhythm of innovation.
South Korea has opted for a different strategy, more driven by a dynamic startup ecosystem and a strong cultural appetite for medical technology. The MFDS (Ministry of Food and Drug Safety) has developed specific approval procedures for artificial intelligence medical software, allowing faster market launches than in most European countries.

Companies like Lunit or Vuno have developed oncological and cardiological imaging analysis solutions recognized internationally, sometimes approved in the United States via the FDA before even having completed their domestic deployment. Korea also understood very early the soft power dimension of e-health: K-health, in the image of K-pop or K-drama, has become a vector of influence and technological export in its own right.

1.4. India: AI as a lever of health equity

India occupies a singular place in this panorama, not for the sophistication of its urban hospital systems (comparable to those of high-income countries) but for the way in which it uses AI as a tool for reducing inequalities in access to care. In a country where the doctor-patient ratio remains dramatically insufficient in rural areas, AI is not an instrument of marginal optimization: it is a condition of possibility for universal health coverage.

AI-assisted cervical cancer screening programs, deployed with community health workers equipped with smartphones, have shown results comparable to those of an expert gynecologist in contexts where the latter is simply absent. More broadly, China and India share this characteristic of facing a massive epidemiological transition (chronic diseases, cancers, cardiovascular pathologies) for which traditional public health models are manifestly insufficient, and where AI represents a scalable response to a public health emergency. It is a lesson in pragmatism that high-income healthcare systems, inclined to think of AI as a technological luxury, would be wrong to neglect.

2. The structural conditions of adaptation

2.1. Data interoperability: a sine qua non condition

There exists a recurring temptation in debates on AI in health: that of placing the performance of algorithms at the center of the conversation, as if the quality of a model were sufficient to guarantee its clinical utility. This is an error of perspective. The most sophisticated algorithm in the world produces no medical value if it cannot access, in real time and in a structured manner, the data it needs to function. Before being a question of artificial intelligence, the adaptation of healthcare systems is a question of data infrastructure.

It is precisely on this terrain that the gap between the most advanced Asian systems and the majority of European systems is most significant. In China, the "Healthy China 2030" initiative has imposed a progressive standardization of electronic medical records at the national scale, backed by a unique patient identifier allowing continuity of follow-up across levels of care. In Singapore, the MyInfo system constitutes a digital backbone from which health data can circulate between authorized actors without a break in the chain. In South Korea, interoperability between university hospitals, city clinics and national health insurance systems is ensured by exchange standards imposed regulatorily since the late 2010s.

The French situation is neither desperate nor satisfactory. Mon Espace Santé, the Shared Medical Record in its renovated version, the Digital Health Space constitute real advances, carried by political will and substantial investments. But their adoption remains partial, their population uneven according to establishments and specialties, and their effective interoperability with hospital information systems (often aging and heterogeneous) remains an open construction site. The national AI and health data strategy, whose artificial intelligence component was presented in November 2025, explicitly recognizes this priority, articulating four structuring axes: clarifying regulation, strengthening the evaluation of AI solutions, supporting professionals, and building a sustainable economic framework for innovation. The intention is right. The speed of execution will be determining.

This point is not technical: it is political. Building an interoperable health data infrastructure supposes resolving conflicts of interest between actors that are not resolved by the sole virtue of technical standards. The Asian countries that have achieved this have done so through a combination of strong state will, financial incentives and, often, a cultural tolerance with regard to the centralization of data that European societies do not have and are not destined to adopt. The European path will have to be different (more negotiated, more distributed, more protective of individual rights) but it cannot afford to be indefinitely slower.

2.2. Training and acculturation of professionals

The second condition of adaptation is human, and it is often underestimated in national strategies that privilege infrastructures and regulations. Deploying a decision support tool in a hospital department without having prepared

caregivers to use it critically amounts to installing high-precision equipment in a room without training its operators. The result is not neutral: it can be actively harmful.

Two symmetrical risks lurk for the practitioner confronted with an AI system. The first is excessive mistrust, which leads to ignoring relevant alerts in the name of a clinical intuition that the tool, statistically, surpasses on certain tasks. The second (and it is more insidious) is what the literature in cognitive psychology calls automation bias: the tendency to delegate one's judgment to the machine, to validate without questioning, to substitute trust in the algorithm for clinical thinking. Both pathologies have been documented in studies on AI systems deployed in radiology, intensive care and oncology. They are not inevitable, but they do not prevent themselves spontaneously.

What the most successful experiences in Asia show is that training in AI tools cannot be reduced to an interface familiarization session. It supposes a minimal understanding of the functioning of models (their strengths, their blind spots, the potential biases linked to training data) and an explicit reflection on human supervision protocols. In Singapore, continuing education programs for doctors now integrate mandatory modules on clinical AI literacy. In South Korea, several medical faculties have restructured part of their curriculum around the understanding of health data and the interpretation of algorithmic outputs.

In France, the question is beginning to be raised (timidly in medical faculties, more directly in a few DESC and specialized training programs) but remains largely treated as an option rather than a priority. Training caregivers to work with AI also means training them to resist its errors, to identify its limits, to maintain the primacy of clinical judgment in the decision loop. It is, in other words, a condition of patient safety, not just a professional competitiveness issue.

2.3. Organizational architectures: who Pilots, who validates?

The third condition of adaptation is organizational. The integration of AI into a healthcare system does not reduce to the acquisition of software or the deployment of a model in a hospital server. It supposes a reconfiguration of responsibilities, validation circuits and decision chains, a transformation that traditional hospital organizational charts, designed for stable and hierarchical care flows, are not naturally equipped to absorb.

The central question is that of governance: who, in an establishment, is responsible for the selection of AI tools, their clinical validation, their post-deployment surveillance and the management of their failures?

In most French hospitals, this responsibility is diffuse, shared between IT departments, medical establishment commissions and user departments, without clear attribution or formalized process. This is a configuration that exposes to two risks: under-deployment through excess of bureaucratic caution, or conversely the precipitous deployment of insufficiently validated tools.

The most advanced Asian healthcare systems have begun to respond to this question through the emergence of new roles and new structures. Positions of Clinical AI Lead or Chief Medical AI Officer are appearing in major hospitals in Seoul, Tokyo and Singapore, embodying a translation function between medical culture and data culture, and carrying the responsibility of algorithmic governance at the management level. Algorithmic ethics committees, distinct from traditional research ethics committees, are being put in place to evaluate the implications of deployments at the scale of patient populations.

This movement sketches in negative what the hospital of tomorrow could be: no longer a place where AI is one tool among others, managed at the margins by IT teams, but an organization where artificial intelligence is treated as a critical infrastructure, subject to the same requirements of reliability, traceability and responsibility as any other biomedical equipment. This change of status (from tool to infrastructure) is perhaps the most important conceptual transformation that European healthcare systems still have to accomplish.

3. The regulatory battlefield: between the EU AI act and asian pragmatism

3.1. The European framework: ambitious, but whose complexity is a risk in tself

The European Union has made the choice to be the first region in the world to equip itself with a comprehensive legislative framework on artificial intelligence. The EU AI Act entered into force in August 2024 and applies progressively, establishing a classification by risk level and prohibiting systems presenting an unacceptable risk, while imposing specific obligations on high-risk systems to guarantee their safety, performance, transparency and accountability.

For medical devices, the implications are considerable. Any AI system used for diagnosis,

therapeutic planning or patient monitoring is automatically classified as high risk, which includes AI-based medical software, deep learning models and decision support tools influencing clinical outcomes. Manufacturers of medical devices integrating AI must now comply with both the MDR/IVDR regulation and the EU AI Act, the latter adding specific requirements in terms of data quality, algorithmic governance, traceability, transparency and human supervision.

The EU AI Act has been in force since August 1, 2024, but its most constraining obligations for high-risk AI systems will not apply before August 2, 2027. Within the framework of the Digital Omnibus Package presented by the European Commission in November 2025, this deadline could be pushed back to 2028, in order to give manufacturers more time to prepare.

This delay reveals in negative the real difficulty of the exercise. In October 2025, no notified body had yet been designated under the AI Act, which means concretely that there is still no accredited body to evaluate the conformity of high-risk AI systems in Europe. The framework is in place; the infrastructure of its implementation is showing a worrying delay. For companies developing medical AI tools intended for the European market, this uncertainty is not neutral: it slows investments, complicates regulatory roadmaps and can, in certain cases, orient market launch priorities toward geographic areas with more legible governance.

It would however be reductive to see in this only an obstacle to innovation. The requirements for human supervision, algorithmic traceability and data governance that the EU AI Act imposes correspond to real clinical and ethical necessities. What the Asian experiences underline is that these requirements are better absorbed when they are integrated from the design of systems, in a logic of "compliance by design," rather than plastered at the end of the chain onto tools developed without them.

3.2. Asian Models: Regulatory Agility and Variable Maturity

Faced with this complex European landscape, Asian regulatory approaches offer a striking contrast, not because they would be less demanding on substance, but because they have made different choices on the sequence between innovation and framing.

China has opted for a voluntarist regulatory approval, allowing companies to deploy their solutions in partner hospitals for validation in real conditions, within the framework of a NMPA approval process that has allowed reaching 92 approved class III devices by mid-2024. This rapidity has a counterpart: post-marketing surveillance requirements remain less structured than in Europe, and algorithmic pharmacovigilance mechanisms (the equivalent, for medical software, of the monitoring of adverse drug effects) are still insufficiently developed.

South Korea and Japan have found a more subtle balance. The Japanese PMDA and the Korean MFDS have both developed specific approval pathways for artificial intelligence medical software, recognizing that learning software has properties (notably its capacity to evolve after deployment) that render traditional procedures inadequate. This regulatory specificity is an important conceptual advance that Europe is beginning to integrate, but with a delay that has been measured in years of deployment.

Singapore has opted for a regulatory sandbox type approach: controlled experimentation environments in which AI tools can be tested in real clinical conditions, before the definitive regulatory framework is finalized. The European AI Proposal of November 2025 foresees moreover widening the use of regulatory sandboxes and real-condition testing, signaling a welcome methodological convergence, even if belated.

3.3. Toward a necessary convergence, without naivety

The temptation, faced with this picture, is to conclude that Europe over-regulates and that Asia innovates better. This is a reading as seductive as it is inaccurate. The systems that have deployed most rapidly have not necessarily deployed best: speed without evaluative rigor produces tools whose real performance in populations remains poorly characterized, whose potential biases remain undocumented, and whose responsibility in case of failure remains legally undetermined.

What Europe has to bring to this international conversation is therefore not negligible. Its framework for the protection of patient rights, its requirements for algorithmic transparency, its culture of independent medico-economic evaluation constitute a body of exportable values, that several Asian countries are beginning to look at with interest, precisely because the limits of unregulated deployment are becoming visible.

The prospect of international regulatory convergence (within the framework of the IMDRF, the G7 health discussions, or the multilateral arenas where France is active) is both necessary and realistic. It does not mean uniformization, but the definition of shared minimum standards (on the quality of training data, on clinical validation requirements, on post-deployment surveillance mechanisms)

without which the risk of permanent regulatory arbitrage will remain structural.

4. Oncology as a Paradigmatic Experimentation Terrain

4.1. Why cancer?

If oncology has become the most active laboratory of medical AI, this is not by chance nor by fashion effect. It is because cancer management concentrates, in an exceptional density, the entirety of conditions that make artificial intelligence both useful and necessary: massive volumes of imaging to analyze, biological and genomic data of growing complexity, therapeutic decisions whose window of opportunity is narrow, and a longitudinal follow-up that extends over years.

Radiotherapy illustrates this potential particularly well. The segmentation of target volumes and organs at risk (an indispensable step in the planning of any treatment) is a long, repetitive task, whose inter-operator variability is documented and clinically significant.

Automatic segmentation AI systems, trained on tens of thousands of expert-annotated scans, today reach performances comparable to those of an experienced radiologist on many tumor localizations. Their deployment does not suppress the practitioner's expertise (who validates, corrects and assumes the final decision) but frees up time for tasks of higher added value. It is precisely in this logic of augmentation of human competence, rather than substitution, that the most lasting contribution of AI in oncology resides.

In Asia, this logic has been grasped with particular acuity. The major oncological centers of Seoul, Tokyo and Shanghai have invested massively in integrated platforms combining imaging analysis, natural language processing for the extraction of information from clinical reports, and predictive models of treatment response. Their comparative advantage is not only technical: it lies in the capacity of these institutions to construct annotated data cohorts at a scale that most European establishments cannot reach individually.

4.2. Active patient monitoring: when AI enters daily life

The most profound innovation in oncology is perhaps not where one expects it. If diagnostic AI captures most of the media attention (the algorithm that detects a pulmonary nodule better than a radiologist), the most structurally significant transformation for patients plays out in ambulatory follow-up, between consultations, in the clinical silences where complications develop without being detected.

Cancer, indeed, is no longer treated exclusively in the hospital. Oral chemotherapy, targeted therapies, immunotherapy, hypofractionated radiotherapy have profoundly modified the geography of oncological care: the patient now spends the majority of their therapeutic journey at home, exposed to adverse effects that the caregiving teams do not see in real time. Silent hematological toxicity, progressive dehydration, febrile neutropenia that sets in at night: these situations that lead to unplanned hospitalizations (costly for the system, trying for the patient) are precisely those for which continuous monitoring, assisted by AI, offers the most added value.

It is in this context that the development of Patient-Reported Outcomes (PRO) platforms coupled with intelligent alert engines fits. The principle is simple in its formulation, complex in its execution: collect daily the symptoms reported by the patient from their home, analyze them in real time by a model trained to distinguish benign signals from alert signals, and trigger an escalation toward caregivers when the clinical profile reaches a critical threshold. The international literature has demonstrated, in several randomized controlled studies, that this type of monitoring improves not only the quality of life of patients but reduces mortality, a result of sufficient strength to be rare in oncology to merit being underlined.

In South Korea, integrated ambulatory oncological monitoring platforms are deployed in several major university centers, with automated alert systems allowing coordination nurses to identify in real time patients requiring an intervention.

4.3. What Asian systems understood first

There exists a temptation, in the evaluation of AI systems in health, to reduce the question of their value to their technical performance: sensitivity rate, specificity, area under the ROC curve. These indicators are necessary but insufficient.

An algorithm that achieves 95% sensitivity on a test dataset and that is never used by caregivers in their real practice has no clinical impact. A technically less performant tool but perfectly integrated into work routines, understood and adopted by teams, can significantly transform the management of thousands of patients.

The Asian healthcare systems that have obtained the most probative results have understood this distinction earlier than most. They have invested as much in implementation engineering as in algorithmic engineering: user training, workflow redesign, feedback mechanisms allowing clinicians to signal system errors and feed its continuous correction.

This maturity is accompanied by a growing requirement for rigorous medico-economic evaluation. The demonstration of the clinical value of an AI tool is no longer sufficient to justify its sustainable financing: it is also necessary to demonstrate that its deployment cost is justified by a reduction in avoidable hospitalizations, an improvement in survival or an optimization of the allocation of caregiving resources. This requirement, that European health insurance systems are beginning to formulate (in France through the work of the HAS on digital medical devices), is structuring for the future of the sector.

Oncology, in this sense, is more than one domain of application among others. It is the mirror in which reflects, with particular clarity, what the adaptation of healthcare systems to AI really requires: not the sophistication of algorithms, but the maturity of the organizations that deploy them.

5. For a France-Asia dialogue on AI governance in health

5.1. What France and Europe have to learn

There is in the relationship that Europe maintains with Asian technological innovation a persistent ambivalence, oscillating between fascination and condescension, between competitive fear and a feeling of ethical superiority. This ambivalence is an obstacle to lucidity. It prevents one from looking squarely at what Asian experiences really teach, in their complexity, without reducing them either to models to imitate or to convenient counter-examples.

The most immediately useful lesson is perhaps the simplest: the speed of systemic adaptation is itself a competence that is organized, financed and governed. The Asian healthcare systems that have best integrated AI have done so because explicit political decisions have allocated resources to the construction of data infrastructures, to the training of professionals and to the putting in place of the necessary governance architectures. This strategic deliberation (its clarity, its continuity, its carrying at the highest level of the State) is what France lacks most, not for lack of intelligence nor of will, but for lack of temporal coherence in its commitments.

The second lesson is organizational. The most advanced systems have understood that the hospital of the algorithmic era is not the traditional hospital augmented by a few software programs: it is a profoundly different organization in its decision circuits, its competence profiles and its relationship to data. Preparing this transformation supposes acting simultaneously on several levers (initial and continuing training, recruitment of new hybrid profiles, revision of clinical protocols, overhaul of information systems) with a coherence that fragmented reforms struggle to produce.

The third lesson is perhaps the most counter-intuitive for systems accustomed to valuing regulatory caution as a cardinal virtue: the absence of deployment is not a neutral position. An AI tool that is not deployed does not generate algorithmic risks, but it generates risks of another nature, less visible but just as real: diagnoses made later, complications detected less early, caregiving resources mobilized on tasks for which they have less added value. The evaluation of AI risk in health cannot stop at the risks of commission; it must integrate the risks of omission.

5.2. What Europe has to contribute

The reciprocity of this dialogue is not a diplomatic politeness: it reflects a substantial reality. Europe, and France in particular, possesses a body of ethical, legal and epistemological reflection on AI in health that has no equivalent in most Asian countries, and whose practical value is beginning to be recognized by interlocutors who have measured, to their cost, the limits of unregulated deployment.

The question of human supervision in the medical decision loop (that the CCNE, European learned societies and the ESTRO-AAPM recommendations on AI in radiotherapy have contributed to theorizing and operationalizing) is precisely one of those on which several Asian systems are today seeking to consolidate their framework. The definition of what it means concretely to "maintain a doctor responsible for the decision" in an environment where AI has produced the diagnosis, structured the therapeutic options and calculated the treatment plan is not a trivial question. The European response constitutes an exportable intellectual contribution.

Similarly, the European requirement of rigorous clinical validation (prospective studies,

comparisons to the state of the art, measurement of impact in real populations) is a standard whose international diffusion is in the interest of all patients. An AI diagnostic tool validated on a retrospective homogeneous cohort of a single Asian country is not necessarily performant on European or African populations with different genetic, epidemiological and socio-economic profiles.

Finally, France possesses a specific institutional asset: its capacity to articulate, in the same space of reflection, medical, scientific, ethical, industrial and citizen voices. The Health Data Hub, the CCNE, evaluation agencies, learned societies and patient associations constitute, when they function in synergy, a digital health governance ecosystem whose sophistication is rare at the global scale. Mobilizing it explicitly within the framework of an active digital health diplomacy (in the direction of Asian partners, in the arenas of the WHO, in the European Union-ASEAN discussions) would be both coherent with the values that France defends and strategically pertinent for its international influence.

5.3. The irreplaceable role of dialogue spaces

The transformations described in this article will not occur by the sole virtue of public policies nor by the sole dynamic of markets. They suppose spaces of encounter between actors who, left to their sole institutional logics, would have few occasions to speak to one another: an oncologist clinician from Tokyo and an AI ethics researcher from Lyon, a hospital director from Singapore and a digital policy official from the French Ministry of Health, a Korean healthtech entrepreneur and a representative of French patient associations. This is precisely the function fulfilled by the foundations and Young Leader networks that have irrigated this Franco-Asian dialogue for years: creating the conditions for encounters that, without them, would not take place, and in which the mutual understandings from which concrete cooperations become possible are forged. At a time when AI is reshaping the balances of global health power (where the capacity of a country to care effectively for its population is also becoming a question of digital sovereignty and industrial competitiveness), these dialogue spaces are not a cultural luxury. They are a strategic infrastructure.

Conclusion: adaptation as a collective competence

Artificial intelligence will not transform healthcare systems by the sole force of its algorithms. It will transform them (or will not transform them) according to the capacity of the organizations that compose them to learn, to adjust, to maintain the trust of those who care as well as those who are cared for.

What the observation of Asian experiences reveals, at bottom, is that adaptation is not a state that one reaches: it is a competence that one cultivates. A competence that is built in the data infrastructures that one chooses to finance, in the training programs that one decides to make mandatory, in the governance architectures that one takes the trouble to design, in the international dialogues that one takes seriously rather than treating them as communication exercises.

Asia does not offer a model to copy. It offers a set of experiences to read with care, in their diversity and in their contradictions, to extract from them what is transposable, to criticize what is not, and to identify what Europe (strong in its own values and its own achievements) can bring to a conversation whose stakes, in fine, are universal: using artificial intelligence to care better, to care more equitably, and to care while preserving what makes the heart of medicine, that is to say the relationship between a human being who suffers and another who commits to helping them.

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Analysis Nouveaux Regards

Towards a Franco-Indian alliance based on shared principles for artificial intelligence, a strategic imperative to shape global AI governance.

By Laurie-Anne Ancenys and Ahmed Baladi

Introduction

In 2025, 73% of foundation AI models originated in the United States and 15% in China, leaving the rest of the world with little more than the role of spectator or captive market. For France and India, this imbalance is not merely technological—it is normative. Those who design the models effectively set the rules of the game, as the pace of technological development far exceeds that of the law. Yet in both India and France, artificial intelligence (AI) is already deployed across numerous critical sectors, participating in or guiding decision-making processes that affect fundamental rights and strategic interests. No state can address this technological and legal challenge alone.

It is precisely to contribute to this reflection that the France India AI Initiative undertook an in-depth analytical effort, bringing together more than sixty French and Indian experts from the legal, academic, industrial, healthcare, and public sectors.

As part of the White Paper developed by the France India AI Initiative, led by the France-Asia Foundation, our working group produced a comprehensive analysis of the regulatory and technical challenges surrounding AI governance. The findings reveal that states regulate AI in highly contrasting ways and according to fundamentally different philosophies. The European Union, through Regulation (EU) 2024/1689 of 13 June 2024 (the "AI Act") [1], has chosen a horizontal regulatory framework based on a risk-based approach. However, its complexity and regulatory density have raised concerns regarding competitiveness and innovation.

India has adopted a principles-based approach, explicitly prioritizing innovation and adoption over prescriptive ex ante regulation. The United Kingdom relies on agile, sector-specific, and

non-statutory regulation. Singapore, for its part, has developed a voluntary governance framework structured around nine dimensions.

The United States presents a fragmented landscape, characterized by the absence of a coherent federal framework and the emergence of heterogeneous state-level regulations [2]. Finally, China has adopted a targeted approach focused on specific technologies, including generative AI, deepfakes, and algorithmic recommendation systems. The result is a fragmented AI regulatory landscape composed of overlapping and complex frameworks that remain far from harmonized.

Presentation of the AI & Regulation section of the White Paper by Laurie-Anne Ancenys at the India AI Impact Summit on 18 February 2026.

Against this backdrop of regulatory fragmentation, Franco-Indian cooperation on AI—formalized through the Horizon 2047 Roadmap [3], the Joint Declaration on Artificial Intelligence of 12 February 2025, and now concretized through the France India AI Initiative White Paper of February 2026 [4]—appears as a strategic alignment with considerable potential.

France contributes recognized expertise in research, regulation, evaluation, and ethics, as well as high-value industrial sectors such as healthcare, mobility, and energy. India stands out through its capacity for large-scale deployment, an unparalleled pool of engineering and technical talent, and a public digital infrastructure dynamic that is profoundly transforming the conditions for technological adoption. Stanford University ranked India third globally in its 2024 AI Vibrancy Index, behind only the United States and China. These complementarities create a natural space for cooperation, bridging innovation and implementation, trusted frameworks and measurable impact.

I. Franco-Indian governance as a driver of intergovernmental normative convergence in AI

The implementation of Franco-Indian governance mechanisms in AI can foster normative convergence in this field. This observation is grounded in the complementarity of both countries' strengths and in their shared diplomatic leadership. From the creation of the Global Partnership on AI to the co-chairing of the AI Action Summit in 2025, France and India have worked hand in hand to build more robust, inclusive, and effective AI governance.

This moment is all the more strategic as France holds the G7 Presidency in 2026 while India chairs the BRICS. Both countries are also pioneers, each in its own way, in deploying AI technologies for the public good.

Through the PM-Kisan [5] programme, India has used AI since 2019 to automate the allocation of agricultural support to millions of farmers, demonstrating how AI can improve administrative efficiency, reduce errors, and strengthen social equity. France, through the Current AI initiative [6]—an international €400 million programme dedicated to AI for the public good—has emphasized the need to align AI innovation with societal benefit and international cooperation.

In this context, France and India have every interest in joining forces as co-architects of international AI governance and promoting a coherent set of shared principles. Such an alliance would not seek to impose regulatory uniformity but rather to encourage convergence based on the compatibility of legal frameworks.

As highlighted in the White Paper, successful cooperation does not require regulatory uniformity. It can instead be grounded in shared principles, mutual recognition of ethical imperatives, and a common commitment to harnessing AI for the benefit of society.

Such convergence offers immediate strategic value. By aligning their systems around principles recognized as essential to trustworthy AI, states

can reduce regulatory friction and facilitate their companies' access to foreign markets.

This approach could also accelerate the cross-border deployment of technologies while enhancing attractiveness for international investment.

At a time when companies within the European Union capture only 6% of global AI funding, such an alliance represents a tangible pathway toward a credible strategic alternative to Sino-American dominance.

The work conducted with the France-Asia Foundation enabled us to identify a set of common principles upon which Franco-Indian governance could be built.

The White Paper identifies several fundamental ethical pillars upon which such a grammar could rest: non-discrimination and fairness; proportionality and responsible use; privacy protection and data governance; security and cyber resilience; transparency and explainability; human oversight and accountability; and sustainable and responsible innovation.

It is noteworthy that these dimensions reflect principles highlighted both in the 2024 Joint Declaration issued during President Macron's State Visit and in the 2025 Franco-Indian Declaration on Artificial Intelligence.
A grammar built upon these foundational principles would serve as a common reference framework designed to guide the responsible design and deployment of AI systems.

Presentation of the AI & Regulation section of the White Paper by Ahmed Baladi at the India AI Impact Summit on 18 February 2026.

II. Towards the adoption of a common grammar for trustworthy AI

This Franco-Indian cooperation could lead to the development and publication of a "common grammar for trustworthy AI," intended to promote a shared foundation of core ethical principles governing the development and use of AI.

The advantage of such a system lies in its high degree of flexibility. It can be readily articulated with existing legal systems while remaining sufficiently adaptable to different levels of economic and technological development.

Based on voluntary adherence by public and private actors, such a body of principles could establish a non-binding yet structuring framework, encouraging adoption through practical examples and demonstrated benefits.

The mobilization of the research community nevertheless remains essential to ensuring the effective technical implementation of these principles.

The White Paper demonstrates that this process is already underway through concrete use cases in high-impact sectors.

In healthcare, France and India are in a position to translate trustworthy medical AI into clinical practice within the next twelve to thirty-six months.

In the automotive sector, both countries are already collaborating on software-defined mobility, autonomous vehicles, and semiconductor sovereignty for AI applications.

The adoption of a common grammar for trustworthy AI is fully consistent with the Joint Declaration of 12 February 2025, adopted in the context of the AI Action Summit co-chaired by France and India, which announced the launch of a Franco-Indian roadmap for AI that is "safe, secure, open and trustworthy." [7]

This Franco-Indian alliance cannot remain purely theoretical.

It should be translated into tangible measures, foremost among them regulatory sandboxes.

III. Establishing joint regulatory sandboxes for experimentation

A shared governance framework could lead to the creation of joint AI regulatory sandboxes. Establishing such mechanisms would constitute a concrete first step toward greater international alignment.

This approach reflects a broader global trend. The EU AI Act requires Member States to establish at least one regulatory sandbox by 2 August 2026. India, in its 2025 White Paper *Shaping the AI Sandbox Ecosystem for the Intelligent Age*, advocates the creation of secure environments for agile experimentation.

The United Kingdom has launched AI Growth Labs as cross-sectoral regulatory sandboxes, while Singapore introduced a Global AI Assurance Sandbox for generative AI applications in 2025.

A joint Franco-Indian sandbox would provide researchers and developers with a secure framework capable of supporting cross-border innovation.

Much like a flight simulator, these mechanisms would enable AI solutions to be tested within a controlled and secure environment, preventing risks rather than dealing with their consequences once systems are deployed on the market.

In the automotive sector, the White Paper already proposes a concrete model: the "Setu-Pont" project, a Franco-Indian data corridor based on federated learning.

This would allow French manufacturers to train algorithms using Indian road data while enabling Indian start-ups to access French synthetic datasets, all without compromising data sovereignty. Such mechanisms would provide a shared framework for transnational experimentation, open to a broad range of public and private stakeholders, including researchers, and would facilitate joint testing aligned with the ethical principles set out in the proposed common grammar.

Conclusion

The current AI regulatory landscape is characterized by the absence of effective convergence mechanisms—a gap that Franco-Indian cooperation is particularly well positioned to address.

As emphasized in the France India AI Initiative White Paper [8], France and India should not merely follow the trajectory of artificial intelligence; they should shape it together through a partnership that is both strategic in vision and practical in implementation.

Together with the legal practitioners of the France-Asia Foundation, we engage daily with companies operating internationally.

Based on the practices we observe, such an alliance—grounded in shared principles, tangible pilot projects, and mechanisms enabling scalability—would provide a practical means of ensuring the implementation and observance of AI standards capable of being effectively applied and adapted by market actors worldwide.

The India AI Impact Summit provided an ideal platform to consolidate this momentum and launch the next phase of collective work.

[1] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence ("AI Act") – Source.

[2] Despite an attempt to harmonise AI regulation at the national level through the Executive Order on Safe, Secure, and Trustworthy AI (14110), adopted by the Biden Administration in 2023, this executive order was repealed in 2025 – Source.

[3] Horizon 2047 : Towards a century of India-France relations – Source.

[4] Franco-Indian Joint Declaration on Artificial Intelligence, adopted in Paris on 12 February 2025 – Source.

[5] PM-KISAN, Ministry of Agriculture & Farmers Welfare of India – Source.

[6] Current AI, initiative internationale lancée lors du Sommet pour l'action sur l'intelligence artificielle de Paris, 2025 – Source.

[7] Joint Statement issued on the occasion of Prime Minister Narendra Modi's visit to France – Source

[8] White Paper Indo-French Perspectives on Artificial Intelligence produced by the France India AI Initiative, led by the Fondation France-Asie and the France India Foundation.

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Analysis Nouveaux Regards

Sovereign intelligence: architecting the France-India AI stack for the automotive future.

By Neha Arolkar and Sarita Kaloya

At the recent India AI Impact Summit, as panellists, we both presented the Whitepaper – Indo-French Perspectives on Artificial Intelligence, focusing on the AI & Automotive segment which we co-authored.

We highlighted that AI is already delivering measurable impact in parts of the automotive value chain while the industry works on scaling successful proofs of concepts and identifies new use-cases.

At the same time, this technological shift is unfolding within a broader context of geopolitical uncertainty, energy transition and the growing need for industrial resilience.

AI is becoming a strategic asset, central to how nations and enterprises secure competitiveness and maintain control over critical industrial capabilities.

This strategic imperative is particularly relevant for France and India, whose complementary strengths in engineering excellence, AI research and scalable digital capabilities position them uniquely in this landscape.

Building further on the Whitepaper, this article explores emerging applications of AI in automotive engineering alongside examining the implications pertaining to the current energy crisis, global supply chain shocks and industrial sovereignty. We also propose a sovereign industry-driven AI fund underlining Indo-French collaboration for the development of resilient, autonomous and future-ready automotive ecosystems.

AI Sovereignty, Industrial Resilience and the Indo-French Strategic Mandate

From Globalized Efficiency to Regional Resilience

The traditional global manufacturing model, which was once grounded in borderless efficiency and lean integration, has been rendered near-obsolete in the VUCA world.

As we navigate the Horizon 2047 Roadmap, we recognize that geopolitical uncertainty is no longer a peripheral risk but the primary determinant of industrial strategy.

The Engineering and R&D Pulse 2026 identifies geopolitical uncertainty as a macro-disruption for which only a third of organizations are prepared [1].

Presentation of the AI & Automotive section of the White Paper by Neha Arolkar and Sarita Kaloya at the India AI Impact Summit on 18 February 2026.

This instability is deeply linked to the energy-sovereignty nexus. Ongoing tensions in West Asia have catalyzed energy crises that threaten the foundations of industrial capacity.

For France and India, it's essential to secure these foundations by shifting to industrial sovereignty and regional resilience. This shift is particularly critical in the automotive sector, where Electric Vehicles (EVs) are trending upward in light of the fuel crisis while self-driving is redefining the competitive landscape. To maintain strategic autonomy, our nations must transition from being mere consumers of globalized supply chains and AI stacks to becoming architects of sovereign industrial ecosystems [3, 5].

AI in Software-defined Mobility and Vehicle Engineering: Speed and Efficiency without compromising Quality to retain Market Share

AI for Supply Chain Resilience

The mobility industry remains highly vulnerable to disruptions in semiconductors, raw materials and fuel.

AI-based forecasting models already enable supplier risk intelligence by integrating external signals (geopolitical, financial, operational) to predict disruptions, thereby helping organizations achieve 15-25% reduction in inventory holding costs and improved service levels. However, there is still limited visibility across tier-2 and tier-3 suppliers.

Generative Design and AI-powered Product Engineering

AI is fundamentally transforming vehicle engineering by shifting from manual iteration to algorithm-driven design exploration.

Generative design and AI-assisted simulation allow engineers to explore thousands of design permutations in hours versus weeks, significantly reducing design cycle times. AI-led CAD/CAE automation enables up to 60–80% reduction in engineering effort on repetitive modelling and validation tasks.

Quality Automation

Constrained by strict regulations, consumer expectations and brand value, most OEMs have already been using computer vision models to improve their defect detection accuracy and reduce maintenance downtime.

However, to expedite further using AI and automation, OEMs run into a data challenge – most data is a mix of current and outdated information, scattered across ERP, PLM, MES, QMS systems. Low AI adoption and legacy systems are additional blockers.

Software-defined Mobility

AI is becoming critical to enhancing vehicle performance and lifecycle value – for example, AI-driven battery management systems can improve EV range and energy efficiency through real-time optimization. OTA (over-the-

air) updates via AI models can allow continuous performance improvement post vehicle launch.

However, it still takes a significantly long time to bring a new vehicle from concept to road, while AI models are rapidly evolving. New Chinese OEMs that use state-of-the-art Product Lifecycle Management systems have been able to launch new models much faster.

Research from the Capgemini Research Institute mandates that automotive executives must reduce costs by at least 10% and development time by at least 9% over the next two to three years to compete with low-cost innovators, especially from Chinese OEMs [1].

Failure to meet these metrics risks the loss of significant market share, making AI-driven engineering the essential solution to bridge the gap between technical complexity and industrial reality.

Therefore, we observe that the industry is shifting from hardware-centric engineering to an AI-accelerated, process-focused model. To be future-ready in an agentic world, engineers are no longer expected to just design a component, rather they seek to reimagine the workflow that generates the component.

Low-code platforms have facilitated the democratization of AI since quite some time now.

By wiring together visual nodes to create workflows, even engineers who are not professional programmers can leverage complex AI scripts for tasks such as topology optimization and generative design.

Up to 80% of code or workflow logic can be reused in subsequent projects, effectively turning engineering expertise into a scalable digital asset [2].

Furthermore, AI agents do not merely assist but autonomously execute complex engineering workflows [2]. These agents can orchestrate the industrial value chain by connecting CAx tools and data into a unified system. Unlike traditional manual iterations, platforms like Synera and Dessia allow engineers to program design "rules," enabling AI to handle repetitive CAD/CAE execution [2, 4].

For example, ROI of AI-driven engineering as evidenced by Dessia Technologies is transformative [4]:

Solution Exploration: Exploring 1,000 design alternatives in just 6 hours.

Development Speed: Reducing total development time by 80%.

Process Reliability: Automating verification and validation to eliminate rework and reduce technical debt [4].

The Evolution of Partnerships: From Services to Sovereign Platforms

The transformation of the traditional IT service provider and OEM relationship is central to our bilateral vision.

We are moving beyond vendor-client transactions toward synergetic ecosystems built on performance-based outcomes.

Utilizing the Core-Context framework, leading OEMs are rethinking their partnership strategies. Until recently they were offloading 'Context' (typically legacy maintenance and repetitive tasks) to technology partners through predictable billing models while focusing internal talent on 'Core' engineering tasks with a competitive advantage.

However, this situation is changing – OEMs are now increasingly open to outcome-based/performance-based partnerships with leading technology providers, system integrators and frontier AI companies to expedite their 'Core' work.

This could take the form of an end-to-end AI-powered orchestrated engineering platform housing various AI agents and tools.

The goal is increasing OEMs' speed-to-market and cost efficiency to retain business in an increasingly competitive market. [1, 5]

As an example of the agentic orchestration approach to engineering platforms, the Synera platform acts as an automation meta-layer over existing CAx tools like Siemens, Catia, Abaqus, and Anza.

Engineers can access different specialized tools or agents from different ecosystem players on a single platform on-demand, ensuring they can pick the best-fit solutions for a given problem [2].

For France and India, owning the orchestration layer of these ecosystems is a significant way to control their industrial intellectual property.

Within the ecosystem, French deep engineering and simulation expertise combined with India's automation and platform engineering can enable scaling these capabilities across global programs.

The France-India Strategic Mandate: Owning the Sovereign AI Stack and Proposal for an Industry-driven Sovereign AI Fund

Under the Special Global Strategic Partnership established in the India-France Joint Statement (2026), both nations have designated 2026 as the Year of Innovation [3].

Our mandate is clear: we must develop and own specialized AI models rather than remaining dependent on foreign tech stacks.

Just as we prioritize sovereign access to space, we must prioritize sovereign access to AI to bridge the global AI divide and ensure decision-making autonomy [3].

Therefore, we propose the establishment of an IT & Automotive/Mobility Sector Collaborative Fund, explicitly linked to the Joint Advanced Technology Development Group established in the Joint Statement (Section I, Para 12) [3].

This fund could focus on co-developing specialized models for automotive engineering, ensuring the data and knowledge bases of our respective industries are secured on-premise and protected from external volatility.

Existing collaborations serve as blueprints for bilateral success:

Dessia x Capgemini: AI-driven design verification and cost estimation that reduces time-to-market and enhances precision [4].

Synera (backed by Capgemini via ISAI Cap Venture): Agentic AI platforms already deployed at scale by global leaders, including BMW, Airbus, Volvo Trucks, Hyundai and the NASA Goddard Space Flight Center [2].

These partnerships exemplify shared commitment to the Horizon 2047 vision—co-developing solutions for a smarter, more sustainable and sovereign future [3].

Conclusion

A Blueprint for Strategic Autonomy

In a world reshaped by geopolitical disruption and energy transitions, the Indo-French axis has a strategic opportunity to move from collaboration to co-creation by building sovereign, AI-driven engineering capabilities that power the next wave of mobility.

By combining France's deep engineering pedigree and frontier AI research with India's growing AI talent pool and IT scale, while anchoring this in outcome-based, platform-led partnerships, both nations can shift from being technology consumers to owners of critical AI stacks.

A jointly backed sovereign AI fund nurturing specialized industrial models and ecosystems (with proven early examples) can catalyze this vision.

Thus we position Indo-French collaboration not just as a response to global shifts, but as a blueprint for resilient, innovation-led industrial leadership.

[1] Engineering and R&D Pulse 2026 – Capgemini Research Institute, 2025.

[2]Synera: Agentic AI Engineering Platform – Press Materials, Case Studies, & Transcript: "Connected Engineering - Moritz Maier | Podcast #1".

[3] India-France Joint Statement (February 17, 2026) – Ministry of External Affairs, Government of India.

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[5] Intelligent Manufacturing for Automotive: How to Accelerate – Capgemini Engineering, 2025.

[6] White Paper Indo-French Perspectives on Artificial Intelligence produced by the France India AI Initiative, led by the Fondation France-Asie and the France India Foundation

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Sarita Kaloya is a Senior Director at Capgemini, leading AI and Data initiatives for global automotive and industrial clients. With extensive experience across North America, Europe and Asia, she specializes in scaling enterprise AI from strategy to industrialized deployment, with a focus on cloud, data platforms, and applied AI use cases across engineering, manufacturing, and connected ecosystems. She has led multiple large-scale AI transformation programs, helping organizations transition from pilots to production by building robust data foundations and AI-led operating models. Her work emphasizes responsible AI, platform-led delivery, and measurable business outcomes. Sarita actively contributes to Indo-French collaboration initiatives, bringing together research, engineering excellence, and execution capabilities to accelerate innovation and value realization. She is a strong advocate for scalable, trustworthy AI that enables industrial resilience and competitiveness in the evolving mobility landscape. Sarita Kaloya is also France India Young Leader of the 2023 cohort.

Joël Naoki Christoph

Economist and researcher specializing in artificial intelligence governance

Analysis Nouveaux Regards

Regulating artificial intelligence: Japan between pragmatism and international ambition.

By Joël Naoki Christoph

Japan occupies a singular position in the global landscape of artificial intelligence regulation. A major economic and technological power, a founding member of the G7, and the architect of the Hiroshima AI Process, the country has made a deliberate choice to adopt a flexible regulatory approach based on sector-specific guidelines rather than binding legislation. This choice, often misunderstood in Europe, deserves careful examination. It is not a regulatory lag, nor an assumed permissiveness, but a coherent strategy rooted in Japanese institutional culture and in a precise reading of the economic and geopolitical stakes of AI.

For France, understanding this approach is all the more important given that the two countries share converging interests on AI governance, while adopting different methods. It is precisely in this productive gap that the most promising opportunities for cooperation lie.

The Japanese approach: guidelines rather than a framework law

Unlike the European Union, which adopted the Artificial Intelligence Act (AI Act) in 2024, Japan has no horizontal legislation dedicated to AI. The Japanese framework rests on three main pillars: the Social Principles for Human-Centred AI, published in 2019 by the Prime Minister's Cabinet; sector-specific guidelines issued by the relevant ministries, in particular the Ministry of Economy, Trade and Industry (METI) and the Ministry of Internal Affairs and Communications (MIC); and self-regulatory mechanisms adopted by companies, often in consultation with government agencies.

This architecture reflects a deep conviction: in a rapidly evolving technological field, overly rigid regulation risks locking in categories that will become obsolete before they are even applied. Japan therefore favours an adaptive framework, capable of evolving at the pace of technology without requiring formal legislative revision.

This approach is not unique to AI. It is part of a Japanese tradition of governance by consensus and administrative guidance

(*gyousei shidou*), in which ministries play a coordinating role between public and private actors. The AI governance guidelines, consolidated by METI and MIC into a unified document published in April 2024, function as a reference framework that companies are strongly incentivised to follow, without being legally bound to do so. In practice, failure to comply with these guidelines exposes companies to informal regulatory pressure, difficulties in obtaining public contracts, and reputational risks in a market where institutional trust is a strategic asset.

The role of the AI Strategy Council, created in May 2023 within the Prime Minister's Cabinet in response to the rise of generative AI, deserves emphasis. This body brings together representatives from academia, industry, and the administration to formulate recommendations on national AI policy. As early as December 2023, the Council published draft guidelines aligned with the Hiroshima Process, then oversaw the publication of the unified guidelines for companies in April 2024. The Council plays an inter-ministerial coordination role that is all the more important given that Japanese AI governance is distributed across several ministries with sometimes overlapping competences.

It should be noted that this flexibility does not exclude targeted legislative interventions. Japan has a robust personal data protection law (APPI), strengthened in 2022, whose scope covers many AI applications involving personal data. The Telecommunications Act, the Act on Specified Commercial Transactions, and the provisions of the Civil Code on tortious liability also apply to AI systems within their respective domains. The absence of a framework law on AI therefore does not mean the absence of a legal framework. It means that Japan has chosen to mobilise existing instruments rather than create new ones.

The Hiroshima Process: An International Ambition

Japan's G7 presidency in 2023 gave rise to the Hiroshima AI Process, which to date represents Japan's most visible contribution to international AI governance. This process produced two main outcomes: an international code of conduct for developers of advanced AI systems, and a set of guiding principles for organisations that develop, deploy, or use such systems.

The choice of Hiroshima as a symbolic setting was not incidental. By associating AI governance with a place that embodies the consequences of a poorly governed technology, Japan framed AI regulation within a perspective of preventing major risks, while maintaining a pragmatic and action-oriented tone. The Hiroshima Process also allowed Japan to position itself as a mediator between the divergent regulatory approaches of G7 members, proposing a framework flexible enough to accommodate both European regulation and the American preference for self-regulation.

This mediating role reflects a diplomatic expertise that Japan has cultivated for decades. In trade, environmental, and security negotiations, Japan has often occupied an intermediary position between blocs with diverging interests. The Hiroshima Process extends this tradition into the digital domain, drawing on the credibility Japan has earned as a technologically advanced democracy, a G7 member, and a reliable partner for both the United States and European countries.

However, the process has structural limitations. The code of conduct is voluntary. It has no verification or enforcement mechanism. Its implementation depends entirely on the goodwill of the signatory companies. Since 2024, several observers have noted that major technology companies' commitment to these principles remains uneven, in the absence of concrete incentives for compliance. Japan is working to strengthen monitoring mechanisms, notably through the framework of the Global Partnership on Artificial Intelligence (GPAI), but the question of enforceability remains open. This is, moreover, a challenge shared by most international initiatives in this field: the difficulty of reconciling the flexibility needed to achieve broad consensus with the rigour needed to produce concrete effects.

Society 5.0 and the Japanese Perception of AI

To understand Japan's regulatory posture, it is essential to situate it within the broader framework of the Society 5.0 vision, which the government has been advancing since 2016. This vision imagines a society in which digital technologies, and AI in particular, are integrated into all aspects of social life in order to address the country's demographic, economic, and environmental challenges.

Japan faces unprecedented demographic ageing. The working-age population decreases every year. Labour shortages affect sectors as varied as healthcare, transport, agriculture, and construction. In this context, AI is not perceived as a threat to employment, but as an economic and social necessity. This reading of the stakes colours the regulatory posture: the Japanese government considers that excessive regulation of AI could slow the adoption of technologies that the country structurally needs. The regulatory framework is therefore designed to accompany the deployment of AI rather than to constrain it. This is an explicit calculation: the cost of too slow an adoption of

AI is judged to be greater than the cost of the risks that such adoption entails.

The concrete applications of AI within the Society 5.0 framework illustrate this orientation. In the healthcare sector, AI systems are already being used for the early detection of cancers, the analysis of medical images, and the management of hospital patient flows. In transport, experiments with autonomous driving are multiplying in rural areas where public transport services are insufficient for an ageing population. In agriculture, AI systems help farmers optimise irrigation, fertilisation, and harvesting in a context of continuous reduction in agricultural labour. These deployments take place within a framework of trust that rests more on the relationship between regulator and company than on formal legal obligations.

It is worth noting that public perception of AI in Japan differs markedly from what is observed in France and more broadly in Europe. Japanese popular culture — through manga, animation, and literature — has for decades maintained a relationship with technology and machines that is less marked by suspicion than by curiosity and familiarity. Robots and artificial intelligences are not systematically portrayed as threats in the Japanese imagination. This cultural factor, while not determinative on its own, contributes to a social climate more favourable to AI deployment and less conducive to defensive regulatory mobilisation. This orientation does not mean that Japan ignores the risks. METI's guidelines explicitly cover issues of transparency, fairness, privacy protection, security, and accountability. But the approach remains fundamentally different from that of the European Union: whereas the European regulation classifies AI systems by risk levels and imposes proportionate obligations, Japan prefers to allow each sector to define its own standards according to its operational realities.

Tensions and Recent Developments

The Japanese approach is facing growing pressures, both internal and external.

On the domestic front, the rise of generative AI has exposed gaps in the existing framework, particularly on questions of copyright. The Japanese Copyright Act, which permits the use of protected works for training AI models without the explicit consent of rights holders (Article 30-4), has drawn fierce criticism from Japanese creative industries. Manga, animation, video games, and music represent a considerable economic sector and a major vehicle for international cultural influence. Japanese creators and publishers fear that insufficient protection against generative AI models will devalue their work and erode the economic models that sustain these industries. The government has initiated consultations on this matter but has not yet amended the legislative framework. This is a case that illustrates the fundamental tension inherent in the Japanese approach: the regulatory flexibility that facilitates innovation can also leave legitimate interests insufficiently protected.

On the external front, the adoption of the European AI regulation creates indirect but real pressure. Japanese companies operating in the European market will need to comply with the requirements of the AI Act, which could progressively align certain Japanese practices with European standards. This regulatory convergence effect is comparable to what has been observed in the area of data protection since the GDPR came into force. Several major Japanese companies, including NEC, Fujitsu, and NTT, have already begun adapting their internal processes in anticipation of these requirements — not only for their European compliance but also for their domestic operations, out of a desire for organisational consistency.

Furthermore, the geopolitical competition around AI, in particular between the United States and China, places Japan in a position that requires delicate balancing. A strategic ally of the United States and a partner in restrictions on the export of advanced semiconductors to China, Japan must at the same time contend with the fact that China remains a leading trade partner and an inescapable actor in the Asian AI ecosystem. Japan seeks to preserve its own technological autonomy and industrial interests while honouring its commitments within existing alliances. Navigating this course requires diplomatic finesse whose regulatory implications are often underestimated in Europe.

These converging pressures have led the Japanese government to take a significant step forward. In May 2025, the Diet adopted the Act on the Promotion of Research, Development, and Utilisation of Technologies Related to Artificial Intelligence. This text, often referred to as the Basic AI Act, is not an equivalent of the European regulation: it contains neither detailed obligations nor financial penalties. It is a principles-based law that establishes a national strategic seat for AI within the Cabinet, coordinates inter-ministerial action, and affirms Japan's commitment to transparency, the protection of rights, and international cooperation. The choice of a basic law rather than a prescriptive regulation confirms Japan's orientation: to frame AI through promotion and coordination rather than prohibition. This development opens new opportunities for

dialogue with Europe, and with France in particular.

Prospects for Franco-Japanese Cooperation

France and Japan possess complementary assets for cooperating on AI governance. France, through its leading role in developing the European regulation and in organising the AI Action Summit in February 2025, has acquired recognised expertise in normative regulation and diplomatic mobilisation. Japan, thanks to the Hiroshima Process and its experience of flexible governance, brings a different but equally legitimate perspective, grounded in sectoral consultation and continuous adaptation.

Three axes of cooperation deserve particular attention.

The first concerns regulatory interoperability. As the European regulation comes into force and Japanese guidelines are strengthened, it becomes crucial to ensure that companies can comply with both frameworks without excessive costs or practical contradictions. A technical dialogue between French and Japanese regulators on mutual recognition of conformity assessments and certifications would help reduce regulatory friction and facilitate trade in the digital sector. Japan and the European Union have already established a mutual recognition framework for data protection (the adequacy decision of 2019). An analogous arrangement for AI, even a partial one, would constitute a useful precedent.

The second axis concerns the governance of computing resources. The computing capacities required for the development of advanced AI models are concentrated among a small number of actors, predominantly American. France and Japan, both of which are investing in the development of their national computing infrastructures, share a common interest in diversifying semiconductor supply chains and in developing governance frameworks for the allocation and oversight of computing resources used for AI. Recent work on market mechanisms for compute governance, inspired by carbon emissions trading markets, opens avenues that both countries could explore jointly. Japan, which hosts key actors in the semiconductor value chain and has launched an ambitious programme to revive its advanced chip manufacturing capacity, is a natural partner for France on these questions.

The third axis concerns the cultural and creative dimension of AI regulation. France and Japan are two major cultural powers, with creative industries that contribute significantly to their economies and their international influence. The questions raised by generative AI with regard to copyright, the protection of creative works, and the remuneration of creators affect both countries in comparable ways. A common position on these issues, advanced in international forums, would carry considerable weight and could influence the development of norms that protect creators without hindering technological development.

Beyond these three axes, mention should be made of the potential for Franco-Japanese cooperation in multilateral settings. France and Japan are both members of the G7, the G20, and the OECD. They actively participate in the Global Partnership on Artificial Intelligence (GPAI) and in the work of the International Organisation for Standardisation (ISO) on technical standards relating to AI. In these forums, close coordination between Paris and Tokyo would allow them to advance positions that reflect a balance between regulatory ambition and operational pragmatism — a combination that is often lacking in international debates where European and American positions tend to occupy most of the spectrum.

The Fondation France-Asie, through its programmes and networks, is well placed to contribute to building this dialogue. Relations between France and Japan in the digital domain do not lack institutional relays, but they sometimes suffer from a lack of continuity and follow-through over time. The networks of young professionals and decision-makers being built around the Foundation can serve as a transmission belt between high-level diplomatic exchanges and concrete cooperation on the ground — whether in the form of joint research projects, business missions, or cross-training programmes.

Conclusion

Regulating artificial intelligence cannot be reduced to a binary choice between binding regulation and laissez-faire. The Japanese experience shows that intermediate paths exist, founded on institutional trust, sectoral consultation, and continuous adaptation.

These approaches are not without weaknesses, particularly on questions of enforceability and the protection of fundamental rights. But they offer valuable lessons for the design of durable governance frameworks in a rapidly evolving field.

For France and Japan, the complementarity of their approaches is not an obstacle to cooperation. On the contrary, it is what makes cooperation both necessary and fruitful. Both countries have the opportunity to build a regulatory dialogue that aims not at uniformisation, but at interoperability and mutual learning. In a domain where governance failures can have lasting consequences, this ambition is commensurate with the responsibilities that France and Japan bear.

This dialogue cannot be confined to official forums. It must also draw on exchanges between researchers, engineers, legal experts, entrepreneurs, and creators from both countries. AI regulation is too important and too complex to be left to governments alone. It is a collective undertaking — and one in which the relationship between France and Japan has much to offer.

Joël Naoki Christoph

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