





Al in 2025: current initiatives and challenges in large enterprises







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This document is the result of a collective effort by seasoned professionals, in multiple countries and industries. It does not reflect the specific views of any individual or company.

Introduction



Alexandra André
Director, FrenchTech
Grand Paris



Chadi Hantouche
Partner, Wavestone

In the context of the international AI Action Summit hosted by France early 2025, Wavestone, in collaboration with French Tech Grand Paris and supported by Hub France IA and Vivatech, has proposed to author this whitepaper outlining the state of AI in large international enterprises.

The idea of writing such a document emerged from a twofold observation: on the one hand, the main voices that are usually heard about AI are those of large suppliers, innovative start-ups and policymakers. On the other hand, the focus is often on highlighting successes, without adequately addressing the underlying challenges, unresolved issues, ongoing work, and prospects.

We thought it was important to give a voice to those who make the daily use of Al possible within companies. Over the past several months, more than 30 professionals, each playing a key role in Al within their respective organizations, have contributed to this initiative.

The result is a document designed to be concise and accessible for non-experts while remaining precise and balanced for specialists. We hope this perspective will enrich the interactions, discussions, and debates during the Al Action Summit.

Thank you to all the contributors who made this work possible. We hope you enjoy reading it!

Executive summary

CHAPTER 1

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Al governance for business success and compliance

The rise of Generative AI has brought companies to review their AI governance, evolving from a purely tech-driven approach to one that strategically aligns AI use cases with overarching business goals. Integrating AI with existing practices in data governance, cybersecurity, HR, and legal processes is crucial for achieving both compliance and business success. The GenAI spotlight aids in addressing longstanding Data & AI challenges. AI compliance requires a multidisciplinary approach, involving various stakeholders. The EU AI Act leads global regulations, but companies call for consistent regulations to navigate the evolving landscape effectively.

CHAPTER 2



Al in action: use cases and adoption

Traditional AI technologies like Machine Learning and Computer Vision have been implemented for decades, while GenAI marks a new phase, enhancing productivity and personalization. Companies are moving from proofs of concept to large-scale deployments, focusing on aligning business and technology goals. Demonstrating ROI remains complex, requiring clear metrics. Change management is crucial for adoption, addressing barriers like tool usability and perceived reliability. Balancing innovation with strategic planning ensures technological advancements align with organizational goals.

CHAPTER 3



Technical aspects of traditional and Generative Al

Enterprises must balance traditional AI and GenAI solutions, tailoring mixes based on specific use cases. Centralized platforms connect company data, while separate pipelines address business-specific needs. MLOps and LLMOps streamline development of AI systems, for enhanced scalability and reliability. Companies face the «Make or Buy» decision for AI models, balancing cost and customization. The future of AI is multi-modal and multi-agent, integrating voice, image, video, and text interactions to tackle complex challenges, drive innovation, and enhance operational efficiency across various sectors, ensuring seamless integration and optimal performance.

CHAPTER 4



Trusting the future: AI risks and cybersecurity

Al intensifies existing risks and introduces new threats, requiring proactive measures. Companies must combine traditional security with innovative defenses to safeguard assets. Emerging frameworks, including the EU AI Act and the NIST AI RMF, guide organizations on cybersecurity and privacy. Ensuring an adequate security posture and managing incidents involving AI models are increasingly challenging and oftentimes outsourced for the time being. Adopting a risk-based management approach balances innovation with risk awareness, enabling companies to navigate the evolving landscape of trustworthy AI effectively.



Ethical and environmental responsibility

Al democratization raises ethical issues, especially with GenAl, impacting jobs and requiring ethical guidelines. Companies must address inclusion, bias, privacy, intellectual property among other topics. GenAl's environmental impact is significant due to energy and water consumption. Companies try to promote frugal practices and green engineering strategies, like SLM (Small Language Models) and environmental impact measurement. There is, nevertheless, a lack both of transparency from providers and of metrics to better measure impact. Balancing technological advancements with ethical and environmental considerations is essential for sustainable Al practices.

CHAPTER 6



Transforming the workforce with (Gen)AI

Traditional AI has already revolutionized business processes in the past decade, and GenAI is about to do the same with a broader workforce. Today, levels of adoption vary, with challenges in bridging knowledge gaps. Companies are deploying «Secure GPT» systems and scaling AI solutions across organizations, but the tech environment keeps changing at a rapid pace. HR must anticipate changes, redefine objectives, and address workforce impacts. Advanced training and secure AI solutions are crucial for transformation. GenAI is a catalyst for reimagining work, fostering innovation, and attracting talent, ensuring employees harness these technologies responsibly and effectively.

CHAPTER 7



The global AI talent race

Al drives a global competition for talent, with significant salary and availability differences across regions. Traditional sectors and startups compete with tech giants for Al professionals. The talent shortage is due to the rapid pace of Al innovation outstripping education and training programs. Upskilling and reskilling strategies are essential. Retention involves cutting-edge projects, top technologies, and links with academia. Enhancing Al literacy among decision-makers is also vital. Collaboration between academia and industry, along with governmental support, can foster a robust Al ecosystem.

CHAPTER 8



Strategic autonomy in the AI era

The 21st century's global competition in AI is led by the US and China, with tech giants extending national influence. Europe lags, risking technological dependence. Companies must pursue strategic autonomy, aligning public and private interests. A clear industrial AI policy is needed, fostering local ecosystems across key sectors. Open-source AI models are also a vector of innovation and inclusiveness, by making the latest tech available to everyone. A global AI governance might be difficult to enforce in a polarized world, but seems essential to balance national and private interests, ensuring technological advancements benefit the majority.



Al governance for business success and compliance

Shift from hype to strategic focus

The initial wave of enthusiasm for Generative AI (GenAI) in early to mid-2023 saw "techno-pushed" strategies, with business departments eagerly engaging with technology providers and exploring endless lists of potential use-cases. Artificial Intelligence (AI) and Data departments, that had often been working on the technology for more than a decade, were not always involved in this. Two years on, and as the dust settles, companies are now adopting a more rational perspective. By reassessing and identifying specific areas of value and impact, they are focusing on solving targeted business use-cases. The most successful strategies now concentrate on a selected number of AI/Data targets, including GenAI, that are aligned with core business goals. They prioritize use cases where the business is already mature in addressing their pain points.

Leveraging the GenAl spotlight

The current GenAl spotlight offers a unique opportunity for organizations to garner support, sponsorship, and incentives to address long-standing Data & Al challenges, such as governance, compliance, data quality and lineage. The heightened focus on GenAI has provided the momentum needed to tackle these persistent pain points, reinforcing the necessity of integrating technologies as part of a broader strategic vision. Therefore, GenAI cannot be addressed as a fully separate area but rather as an extension of existing Data & AI practices, while involving a wider diversity of stakeholders, such as Cybersecurity, Legal, HR and CSR officers. To address this, we see the rise of AI/GenAI corporate Centers of Excellence (CoE), intended to spread expertise, support adoption and empower the business entities. CoEs might wind down in the long term, when business departments will be mature enough to handle technical aspects and cross-organizational AI integration on their own.

"Data is the
lifeblood of Al. An
organization may have
implemented the best Al
solution, but if the data used isn't
up to the expected level of
quality, the outcome will be poor.
Al solutions are directly
proportional to the quality
the data they use."

Ram Kumar, Chief Data Officer, International Health, Cigna

Organizational and human challenges

Al governance is as much an organizational and human challenge as it is a technical one. In addition to effective governance, a true complexity lies in the diverse skillset required to address its multiple aspects. For the time being, companies are integrating this topic into their existing processes such as Cybersecurity, HR, IT, Legal, Ethics and Compliance. This integration underscores the necessity for a multi-disciplinary approach to AI governance, and the need for collaboration across business domains. In addition, Data governance and AI governance are increasingly being viewed as inseparable: this is also what we see in most AI standards and regulations, which emphasize the importance of trust and control over Data.

Compliance in a global landscape

Europe's AI Act stands at the forefront of global regulations, despite facing heavy criticism. Many of its requirements are already existing measures, designed to mitigate Al-related risks – some organizations even go further than these requirements in their internal policies. Similar regulations are emerging in several countries, but concerns are voiced about creating a two-tier regulated ecosystem, where companies competing in different geographies have variable levels of constraint. Large organizations are calling for consistency and non-contradictory directives in current and forthcoming regulations to navigate this evolving landscape effectively. Finally, the advancement of AI technologies often outpaces the development of Legal, Ethical, and HR considerations, highlighting the need for these areas to keep pace with rapid technological progress.



Al in action: use cases and adoption

Strategic integration of AI

Traditional AI technologies, such as Machine Learning, Deep Learning, and Computer Vision, have been successfully developed and implemented by large companies for years sometimes decades - showcasing varied levels of advancements. The emergence of GenAl marks a new phase in this evolution, promising a revolution in both consumer markets and the corporate world. Initially, its applications have been seen in improving individual productivity through assistants, developing hyper-personalization of customer experience, and enhancing document search and knowledge management. Leading companies are identifying truly disruptive use cases for GenAl, which necessitate a deep understanding of business processes and technological capabilities, alongside a readiness to adapt organizational structures and processes. This will continue to be particularly true with the rise of AI Agents-systems capable not only of searching for information but also of taking actions and even deciding which sequence of actions to undertake to achieve a desired outcome. It is now clear that the future is made of systems that mix several types of AI (traditional, generative, agentic) to tackle complex use cases.

Aligning business and technology

Many companies remain entrenched in proof of concepts (POCs), proofs of value (POVs), or minimum viable products (MVPs), with few large-scale deployments. An early understanding of the key success criteria, and anticipation of the technical integration with the existing architecture are often missing, which hinders efforts to realize GenAl's full potential. Objectives also often diverge over time, as business lines seek rapid leverage of the technology, while tech departments aim to address business issues with suitable levels of feasibility and standardization. To bridge this gap, we are observing the implementation of "Fail Fast" strategies that focus on defining key success criteria's during scoping phases, even if it means spending more time on it, in addition to provide clear decision-making timelines and insights to rapidly abandon projects that do not meet the set criteria. These strategies are established in mature companies, with strict Data & AI frameworks that accelerate scalability by fostering closer goals alignments between business and technology teams.

Demonstrating value and ROI

Embarking on AI/GenAI projects without appropriate measurement standards hinders the ability to fully comprehend success factors and evaluate the quality of delivery. Demonstrating ROI is complex, especially in the case of GenAI, that primarily addresses productivity optimization, and equating time saved with monetary value is not always straightforward. The lack of clear standards for "what good looks like" necessitates a "test & learn" approach, reminiscent of the early days of the Internet in the late '90s. A major difference with the rise of the Internet is that organizations already have governance and skills to tackle digital transformations. Mistakes are inevitable milestones, and additional technological breakthroughs will shape the future of AI, including stability, model reliability at scale, multimodality (see Chapter 3) and interaction with other fields such as robotics.

From testing to long-term adoption

Change management is a critical yet often overlooked aspect when adressing Al implementation. Projects rarely fail due to technical issues but frequently falter due to poor adoption. There are several barriers: difficulty to use the tools with inadequate User Experience/User Interface (UX/UI), misunderstanding of the limits, low perceived reliability or relevancy, and often the high cost. This transition requires time and effort to seamlessly incorporate new practices into users' daily work routines (see Chapter 6).

Understanding what constitutes "good" Al outcomes will develop over time as these factors become clearer. Al continues to mature, and it will be essential to balance innovative exploration with strategic planning, ensuring that technological advancements align with broader organizational goals – and even social expectations.

"Deutsche
Bahn uses Al in
a variety of ways:
to increase punctuality in
rail operations, optimize the
maintenance of its fleet and rail
infrastructure, and to increase
efficiency in construction projects.
Our next goal is to systematically
integrate Generative Al into
our business processes and
use it productively on
a large scale."

Dr. Nina Stumme, Head of Data Management, Analytics and Al, DB InfraGO AG



Technical aspects of traditional and Generative Al

Approaches to AI implementation

In the evolving landscape of AI, large enterprises must navigate between traditional Machine Learning (ML), AI and GenAI solutions. Rather than viewing it as a binary choice, it's essential to build a tailored mix based on the specific use case, or even combine both within individual use cases. GenAl is not a one-size-fits-all solution: in a number of cases, traditional AI is more costefficient, frugal and reliable than GenAl. Therefore, investing time in developing traditional AI models can be more advantageous, avoiding issues like hallucinations and per-use billing. A strategic approach to AI integration requires a wide understanding that success depends not only on the choice of model but also on factors such as data quality, governance, architecture, and change management, which are crucial for seamlessly embedding AI solutions into existing environments.

Centralized platforms vs. separate pipelines

Enterprises are frequently debating whether to centralize their AI/GenAI platforms or create distinct pipelines for each use case. Centralized platforms offer the advantage of connecting to most of a company's data, where separated pipelines facilitates the development of business-specific use cases that generic tools cannot address. This strategic choice is pivotal, as the burgeoning market for AI solutions is rapidly evolving, with standards yet to stabilize. At some point in time, most AI platforms are anticipated to become commodities too.

Operational efficiency through MLOps and LLMOps

The scalability of AI initiatives significantly hinges on the implementation of streamlined monitoring processes and operational methodologies such as Machine Learning Operations (MLOps) and Large Language Model Operations (LLMOps). As these are currently less mature areas, organizations that have embraced it are gaining a strong competitive advantage with reduced Time to Market, improved collaboration across the board and enhanced reliability. In addition to scientific metrics, companies are extending the focus beyond mere model accuracy to encompass the overall

"It is a challenge to make major technological and sourcing choices in such a fast-moving environment. We are focusing on flexibility, tech-neutrality and architectural choices, to ensure functional consistency across AI systems and channels, and avoid data duplication."

Julie Pozzi, Head of Data & AI, Air France-KLM

business impact, including value creation, cost savings, improved productivity and adoption rates. Successful Al Factories focus on how they can translate technology performance into tangible and understandable business outcomes.

Make or buy Al

In certain sectors, companies explore the opportunity to build AI models tailored to their industry-specific needs. In the specific case of GenAI, the commoditized use of available LLM models is widespread, but companies aren't abandoning the notion of building smaller, more specialized language models based on proprietary data. This approach is particularly appealing to industries driven by the dual need for data sovereignty (e.g. public sector, content creation) and to safeguard sensitive content from exposure. The "Make or Buy" choice hence becomes crucial for effectively leveraging AI and GenAI.

The future is multi-modal and multi-agent

Looking ahead, the future of AI is envisioned as a multi-modal, multi-agent, and multienvironment ecosystem. This integrated approach will encompass voice, image, video and text interactions, orchestrating specialized agents across various business data, open data, API, CRM, and HR systems. These combined Al "microservices" will enable enterprises to address more complex business challenges and unlock genuinely disruptive applications, driving innovation and enhancing operational efficiency across industries. Such promising perspectives should drive organizations into breaking down traditional silos, as separate departments (Research, Marketing, Legal, etc.) will need combined AI strategies.



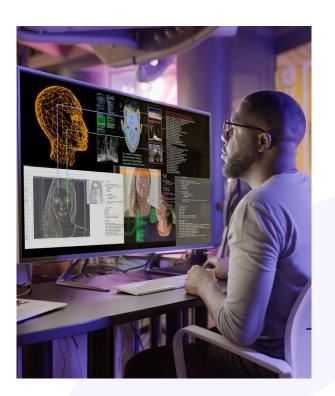
Trusting the future: Al risks and cybersecurity

Al-driven risks and new attack patterns

Al technologies are transforming the risk landscape by introducing new threats and attack patterns, while also intensifying preexisting risks such as poor access management and data classification. Moreover, Al can increase the efficiency of cyber attackers through advanced phishing techniques, deepfake creation, malicious code generation, data extraction via inference attacks, and adversarial attacks that manipulate results. These developments require a proactive approach to identify and mitigate emerging threats. Companies must combine traditional security measures with innovative defenses to safeguard their assets against Al-driven vulnerabilities.

Governance and emerging frameworks

Advancements in AI technologies raise the need for creating trustworthy AI—secure, transparent, fair, accountable, and developed in accordance with ethical and regulatory standards. This necessitates upgrading current governance and policies. Robust trustworthy AI frameworks such as the EU AI Act and the US NIST AI RMF are emerging to guide organizations on cybersecurity and privacy issues.





However, ensuring explainable and robust AI remains a significant technical challenge, underscoring the need for comprehensive governance. As generative AI becomes more prevalent, reliance on third-party platforms is growing and must be included in an organization's AI trustworthiness strategy. The most advanced organizations have established multi-stakeholder governance, updated their policies, and invested in specific protection tools to ensure trustworthy AI by design for both general and specialized use cases.

Ensuring an adequate security posture and managing future incidents

As Al applications grow in complexity, ensuring an adequate security posture — as well as detecting and responding to incidents involving Al models — becomes increasingly challenging. Many organizations rely on external providers for Al red teaming to validate the trustworthiness of their systems. Al applications are rarely monitored at the proper level, and only a few organizations worldwide possess the capabilities required for thorough forensic analysis. These measures are crucial for maintaining trust and ensuring the resilience of Al systems in the face of potential security incidents.

Adapting to ongoing challenges

Persistent risks, such as hallucination or prompt injection for GenAl, have led some companies to adopt a risk-based management approach. This method balances innovation and decision-making with an appropriate level of risk awareness, recognizing that waiting for a zero-risk scenario can stifle progress. By embracing risk-based management, organizations can continue to innovate while remaining vigilant against potential threats. The adaptability of this strategy enables companies to navigate the evolving landscape of trustworthy Al, ensuring they remain at the forefront of technological advancements without compromising their security posture.



Ethical and environmental responsibility

Human and ethical considerations in AI deployment

The democratization of AI systems raises several ethical issues, particularly with GenAI, which requires greater support for employees to better understand the impact of AI on their work. Companies recognize the importance of critical analysis of the results generated by AI and traceability between AI generated content, and human generated content.

The cognitive impact of delegating simple, repetitive tasks to AI might be significant: while the idea is to concentrate human effort on tasks with higher added value, these can also be more mentally draining.

Additionally, learning the basic tasks in one of the important skills newcomers are expected to learn: how will they learn the tricks of the trade, if they are delegated to an AI?

To secure their core values, companies are starting to address these considerations by developing Ethical Al guidelines, assessing impact on jobs, working on inclusion, bias and privacy.

Environmental challenges of Generative Al

Traditional AI applications can significantly contribute combating climate change through climate models, incident detection and prediction, and resource usage optimization. On the other hand, the widespread democratization of Generative AI in chatbots, agents, and search engines, both in professional and personal settings, poses a major environmental threat. One of the key challenges in the long term is the environmental cost of inferring responses (costly each time they are used) in addition to training models (very costly once). This includes both energy and water consumption, which will entail risks for sustainability and sovereignty. In the light of the climate crisis, every use of resource-intensive technology must be a balancing act. This will be a political, economic and societal question. A number of companies are already promoting frugal practices by selecting the lightest available technology for a given business objective - but they have low to no practical incentives to do so for the time being. However, some green engineering strategies are emerging, including the use of Small Language Models (SLM), systematic environmental impact measurement in early project phases,



or more practical awareness messages such as displaying a carbon footprint estimate for users to consider before triggering a GenAl request.

Transparency and accountability in AI systems

Al systems often act as "black boxes," making their chain of reasoning, based on statistics, difficult to explain or understand. Explainable Al proves a huge challenge for transparency of the outputs. From an accountability perspective, it exposes companies to legal risks, and can weaken confidence in the technology, in particular when it comes to GenAl. The topic of Intellectual Property of the generated content is going to be debated for years, and probably settled in courts.

Al systems have also put more emphasis on the need for transparency in decision-making, to explain why and how decisions are made using Al. Over-reliance on Al systems can create bias and lack of balance. This is why ethical Al frameworks address explainability and human oversight as key topics.

Moving towards ethical and sustainable Al practices

Understanding the distinct impacts of AI vs GenAI on sustainability is crucial for harnessing their potential while minimizing their environmental drawbacks. Frugality in the use of GenAI is becoming an obligation, as organizations need to opt for the most relevant and lightweight solution that meets specific business objectives to balance technological breakthroughs with environmental sustainability. To move forward, the industry will also need to advance on three fronts: adopt standardized metrics to measure the environmental footprint; obtain much more transparency from the technology providers; and significant hardware efficiency improvement, including for mobile devices.



Transforming the workforce with (Gen)Al

From tools to transformation

Over the last decade, traditional AI has already revolutionized specific business processes in some industries (e.g. Manufacturing, Finance, Supply Chain). Now that we transition into the GenAl era, the shift becomes even more pronounced, as the tech originated in mass-market and is accessible to a much broader, less expert segment of the workforce. Despite its groundbreaking potential, GenAl adoption in large companies has been uneven, with a struggle to bridge the knowledge and skill gaps. While many employees have grasped the basics, very often through their personal use, advanced competencies like «prompt engineering» remain elusive due to a lack of comprehensive training programs, particularly those targeting senior management. This variable maturity creates challenges, but also sets the stage for significant organizational transformations.

Overcoming the adoption hurdles

Companies have responded to the GenAl wave with pragmatic solutions. Many have rolled out internal «Secure GPT» systems to balance innovation with security, often favoring off-the-shelf or in-house tools to mitigate the risks of shadow IT. These initial efforts cater to early adopters and create a foundation for broader implementation. However, as technological breakthroughs continue to rapidly improve AI agents and capabilities, businesses are increasingly compelled to accelerate their adoption strategies. This urgency is driven not only by technology advancements but also by a-growing fear of being left behind (FOMO) in the competitive race.

Scaling AI across the organization

The next step in workforce transformation involves scaling AI solutions across the organization. Many companies are reassessing their Secure GPT tools to align with the latest advancements in AI agents, ensuring they remain competitive. At the same time, some of them are deploying general-purpose AI assistants like Microsoft Copilot and Google Gemini to enhance daily operations. In parallel, businesses are adopting specialized solutions tailored to specific needs, through off-the-shelf tools, custom platforms, or in-house developments. It marks a shift from isolated experiments to organization-wide integration, driving meaningful change across workflows. This is confirmed with the

rise of AI Agents (see Chapter 3), which might be a new game-changer by fully automating processes.

A future-ready workforce

As Al reshapes ways of working, Human Resources departments must anticipate and address the upcoming changes. While some HR teams have begun exploring new work models, tangible adjustments (such as redefining employee objectives and performance evaluations scheme), these initiatives are still in their infancy. Some organizations have opened early discussions on the impact on their workforce in the long term, but the topic remains sensitive, as it is often associated with staff reductions.

The journey to transform the workforce with AI is ongoing and requires a balanced approach that blends innovation with structured adaptation. By investing in advanced training, embracing secure and scalable AI solutions, and proactively addressing HR implications, companies can unlock the full potential of GenAI. This transformation is not just about adopting new tools; it's about equipping the workforce to thrive in an AI-driven future, ensuring that employees at all levels are empowered to harness these technologies responsibly and effectively.

Offering a robust GenAI toolkit is also becoming an asset to attract and retain talent, especially the younger generation. Without such tools, organizations risk not only losing a competitive edge but also expose themselves to the perils of infamous Shadow AI – uncontrolled and insecure use of external AI solutions by employees.

GenAl isn't just a technological advancement. It's a catalyst for reimagining how work gets done, fostering innovation, and redefining the future of work itself.



Source: Beamy - "Adoption of GenAI in large enterprises"



The global Al talent race

A worldwide competition

Al is driving a global competition for talent recruitment and retention in various fields engineering, mathematics, machine learning, and information technology - resulting in considerable differences in salaries and talent availability across various regions. Geographic boundaries no longer matter in the AI talent race; the immigration of skilled people and globalization have intensified the competition. Traditional sectors such as banking, retail, and industry, along with startups, are vying against tech giants that offer unmatched premium salaries and resources to secure Al talent. This competitive landscape underscores the importance of strategic talent management in large enterprises to attract and retain top Al professionals.

Tackling the AI talent shortage

As Al technology and innovation dynamics have outpaced education and training programs, there is today a global talent shortage with an insufficient number of trained professionals to properly match market needs and speed. Only a small fraction of the workforce possesses the expertise needed to tackle advanced Al projects, and most companies lack the capabilities to retain or develop talent. Upskilling current employees is an interesting response to the global Al talent deficit, but few companies have tailor-made Al training strategies that can address this reality for the time being. In some instances, reskilling strategies are also being implemented to focus on jobs that are most impacted by GenAl and Agentic Al.

Another angle to explore is the openness to different backgrounds. Similar to what has happened in the field of cybersecurity over the past years, it is crucial to enrich the pool of Al professionals with people who come from other fields, whether technical or not. It is well established that diversity ensures both better performance and greater resilience in the face of uncertain developments.

Retention Strategies

Retaining AI talent is not just a question of salary; it involves providing access to cutting-edge projects, the best technologies and tools on the market, making sense of and explaining the concrete impact, as well as establishing close links with research and academic fields. Companies must develop holistic retention strategies that address the diverse needs and aspirations of AI professionals. By fostering a stimulating

"Talent is
at the heart of our
Al journey:
collaboration with
renowned academic
institutions, upskilling and
reskilling our workforce, building
cutting-edge Al platforms, and
tackling diverse use cases are
the key ingredients to
winning the Al talent
race."
Stéphane Lannuzel,
Beauty Tech Program Director, L'Oréal

work environment and facilitating continuous professional development, large enterprises can significantly improve their ability to attract and retain top-tier AI talent.

Enhancing Alliteracy

In most companies, there is a low level of AI literacy among business decision-makers, with many leaders lacking a fundamental understanding of AI and its impacts. This gap leads them to engage in executive training, foster cross-functional task forces, participate in AI-focused workshops, and ensure alignment with ethical principles to drive informed decision-making and innovation. Due to the rapid evolution of AI technologies, company staff need to be trained more frequently to ensure continuous learning and adaptation to new AI methodologies. A comprehensive approach to enhancing AI literacy is vital for organizations aiming to leverage AI effectively and maintain a competitive edge.

Fostering the ecosystem

As tertiary level, universities and colleges will progressively offer specialized AI courses and degree programs, collaboration between academia and industry ensures that the curricula remain relevant and aligned both with the latest advancements in AI and the needs on the ground. Furthermore, providing scholarships, research grants, and internship opportunities help companies attract top-performing students and researchers from around the globe.

Governmental support is also a critical component in fostering an AI ecosystem that attracts talent. Several large enterprises expect policymakers must create an enabling environment through supportive policies and incentives that encourage investment in AI research and development. Tax incentives, grants, and subsidies can motivate companies to invest in AI initiatives and collaborate with academic institutions.



Strategic autonomy in the Al era

Al at the heart of global influence

The 21st century is defined by a global competition in digital technologies - with the United States and China leading the race for Artificial Intelligence supremacy. Dubbed the 'Sputnik moment' of AI, the release of the Chinese model DeepSeek-R1, just hours after the announcement of the colossal American initiative 'Stargate,' marks a significant milestone in this race. The two leading nations rely on their tech companies to extend their soft and hard power. Particularly, when AI promises to reshape the future across various industries. The AI market is now concentrated in the hands of a few tech companies – mostly American and Chinese – that not only extend their nations' influence but also shape the world's digital infrastructures.

The pivotal role of corporations in national sovereignty

Other regions, including Europe, are falling behind as they have failed to foster their own Tech giants. Companies in these geographies recognize the risk of technological dependence on a handful of foreign suppliers and they understand the need to diversify their investments in Al. Sovereignty is no longer the exclusive prerogative of states. Businesses too must pursue strategic autonomy and develop resilience strategies, while serving the interests of their own nations. Aligning public and private interests is a proven and successful strategy.

In 2023, private
Investments in AI have
reached

•62.5 billion
in the USA
•9 billion
in the EU and the UK
•7.3 billion
in China

Source: 2024 AI index report

Both the United States and China relied on private companies to consolidate their sovereignty on digital technologies and AI.

A long-term industrial AI plan

In a heavily connected world, national sovereignty requires a clear vision and a targeted public-private industrial policy outlining technologies to be mastered at national and regional levels. In the field of AI, this policy should foster the emergence and long-term support of local ecosystems across the data value chain, from semiconductors to applications, encompassing language models and cloud infrastructures in seven strategic areas: defense, industry, agriculture, energy transition and climate adaptation, health, and education. The success of this policy requires the coordination of national and regional scales, mobilization of substantial public and private funding and incentives for local solution adoption by public and private players.

While the debate among experts remains unresolved, open-source AI models are broadly seen as a catalyst for innovation and a means to strengthen sovereignty, while promoting transparency, openness and accessibility for everyone. Open-source AI supports a broader concept of AI as a "common infrastructure" to-democratize the technology.

Fostering competitive advantage with corporate data

Enterprises can explore new forms of cooperation to consolidate their competitive advantages and, in doing so, strengthen the sovereignty of their states. The concept of European Data Spaces is an example of industrial collaboration, allowing companies within the same sector, and in the same region, to exchange data in a harmonized and trustworthy framework, creating high-impact economic services. Deploying a Data Space requires alignment on common goals, sustainable economic models, and mixed public-private governance to ensure both general interest missions and economic viability in the medium and long term.

Towards a global AI governance?

While essential to safeguard citizens' and consumers' interests, regulation must not become a stumbling block for companies in the AI race. Regulations needs to be consistent and aligned with the short and medium-term vision underpinning industrial policy and national and economic interests. On the other hand, the relentless race for AI supremacy must not sacrifice humanity's common goods. Even if it might seem idealistic in a polarized world, the idea of a global AI governance often resurfaces. This governance could establish standards and mechanisms to address some of the key issues (see Chapter 5). If we have succeeded in governing electricity, the automotive industry, and finance, it should also be possible for AI!

Contributors

Contributors to this paper are Al leaders in large enterprises in France, Germany, the United Kingdom, the United States, Canada, Singapore and Hong Kong. Thank you for taking part in this.



Marcell Assan Group CIO. Traton



Pierre Etienne Bardin Group Chief Data Officer, La Poste



Jerome Berger Head of Group Strategy and VC, Orange



Nozha Boujemaa VP of Al Innovation & Trust. Decathlon



Kati Bremme Foresight & Méta-Media. France TV



Chafika Chettaoui Chief Data & Al Officer. **AXA France**



Pierre-Philippe Cormeraie Bruno Daunay Chief Digital Evangelist, Head of Al Program, BPCE



Leonard



Olivier Delaby Al & GenAl Program Manager, Air Liquide



Marcin Detyniecki Group Chief Data Scientist Data & Al Product and Head of Research and Advanced AI, AXA Group



Axel Droin Director, Danone



Jean Fauquembergue Group Head of Al, CMA CGM



Nadia Filali Head of Innovation & Development, Caisse des Dépôts



Tanvi Gadgil Head of Generative AI, Engie



Head of Al and Data business Insights, Stellantis



Annabelle Gerard Jean-François Guilmard Chief Data Officer, Accor



Maxime Havez Chief Data Officer, Crédit Mutuel Arkéa



Markus Kalkowski Head of Corporate Communications and Digital Customer Management, **DEVK Insurance**



Chief Data Officer, International Health, Cigna



Hélène Labaume **Group Innovation** & VC fund director, Carrefour



Stéphane Lannuzel **Beauty Tech** Program Director, L'Oréal



Ludovic Letort Head of IA, AG2R La Mondiale



Lim Shih Hsien Executive Vice President - Cyber, IT & OT, Seatrium



Michel Lutz Chief Data Officer & Digital Factory Head of Data+Al, TotalEnergies



Juliette Mattioli Senior Expert in AI, Thales



Phoram Mehta VP & CISO International Markets, Paypal



VP Digital, SNCF Group



Julien Nicolas Sabine Parnigi-Azoulay Head of Innovation & Transformation, **CNP Assurances Group**



Head of Data & AI, Air France-KLM



Altaf Rehmani Global Automation Lead, **HSBC**



Sébastien Rozanes Chief Digital, Data & Al Officer, Groupe FDJ



Dr. Nina Stumme Head of Data Management, Analytics & AI, DB InfraGO AG



Jon Thompson Head of Data & Al Security, Barclays



Aude Vinzerich Head of the « AI Ambition » Program, **Enedis**



Norbert Wirth Global VP Data, Payback



Aldrick Zappellini Data & Al Director and Group Chief Data Officer, Crédit Agricole



Gérôme Billois Partner, Wavestone



Ghislain De Pierrefeu Partner, Wavestone



Julien Floch Associate Partner, Wavestone



Chadi Hantouche Partner, Wavestone



Imène Kabouya Associate Partner, Wavestone



Associate Partner, Wavestone

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