

Driving Optimisation and Development in a Regulatory Era





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Situation Background

Global adoption of Al stands at a turning point.

According to IBM's Global AI Adoption Index 2022 (2022)¹—which provides insights into overall artificial intelligence ("AI") adoption around the globe, the barriers and challenges that are hindering AI from reaching its potential; the use cases, industries and countries where AI is most likely to thrive; offers a playbook for 42% of enterprises that report exploring the use of AI today; and a window into the AI trends and challenges that are likely to come —compared with 2021, 13% of organisations are more likely to have adopted AI in 2022. Moreover, according to the WEF, the growth of the global AI market is valued at US\$136 billion in 2022 and is estimated to expand at a compound annual growth rate ("CAGR") of 37.3% from 2023 to 2030².

It is imperative to note that the AI market is more impermeable to the current macroeconomic events than other technologies. AI technologies and software are assisting enterprises innovate, transform experiences, build efficiency through automation, and contribute to the improved top line, bottom line, and green line across industries.

A large proportion of enterprises interested in or deploying AI are seeking to automate but what, exactly, they are trying to automate varies from sector to sector. Just under half of enterprises that have applied AI-based automation have done so to drive greater IT efficiency, but they are also using automation to give time back to employees (49%) and address skills gaps. There are also large regional disparities with certain techniques like robotic process automation (RPA).

As we see, Al brings a wealth of opportunities to enterprises, but also an incredible responsibility. Its tangible impact on people's lives has given rise to considerable questions around Al ethics, data governance, trust, legality, and unintended negative consequences. Enterprises are confronted with potential negative business impact (e.g., damage to brand reputation, reduced public trust, revenue loss) if the Al/machine learning ("ML") business risks (e.g., data privacy) are mitigated insufficiently.

² https://www3.weforum.org/docs/WEF_Adopting_Al_Responsibly_Guidelines_for_Procurement_of_Al_Solutions_by_the_Private_Sector_2023.pdf



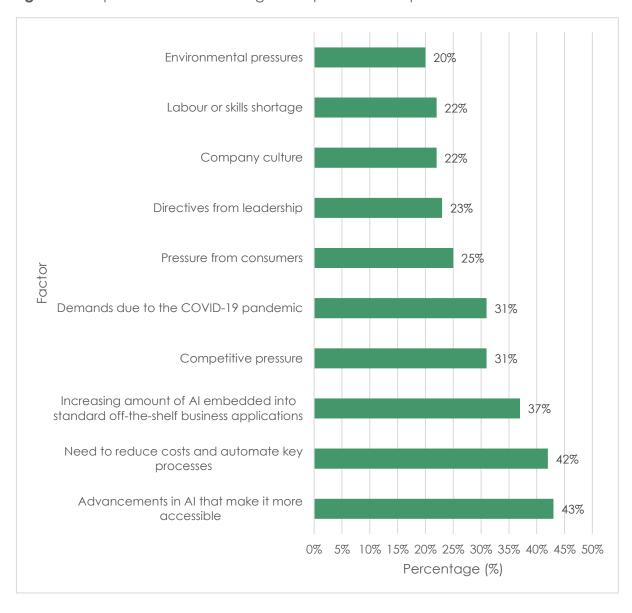


https://www.ibm.com/downloads/cas/GVAGA3JP



According to the IBM study¹ (an online survey of 7,502 enterprises across the world to gain insights on overall adoption conducted through Morning Consult's proprietary network of online providers from 30 March 2022 through to 12 April 2022), "advancements in AI that make it more accessible" is one of the top reasons driving enterprise AI adoption (see Figure 1).

Figure 1: Top ten factors driving enterprise Al adoption



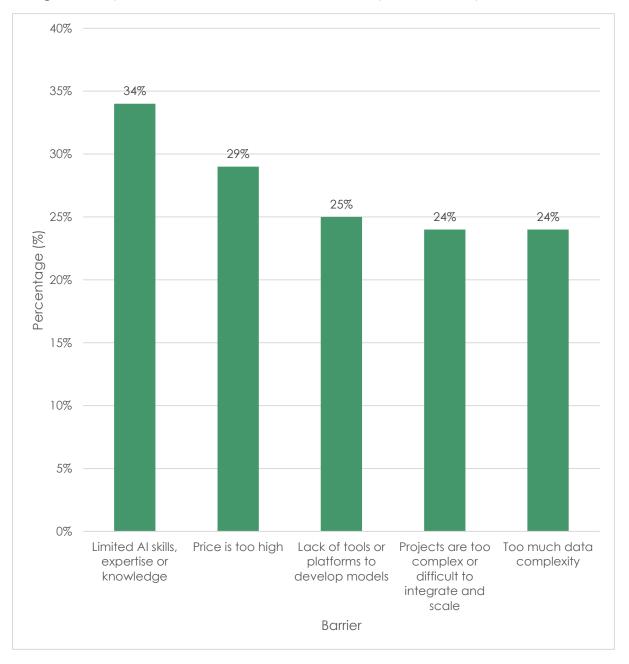






Conversely, the IBM study¹ also shows that a "lack of tools or platforms to develop models" is a key barrier to successful enterprise AI adoption (see Figure 2).

Figure 2: Top five barriers to successful enterprise Al adoption







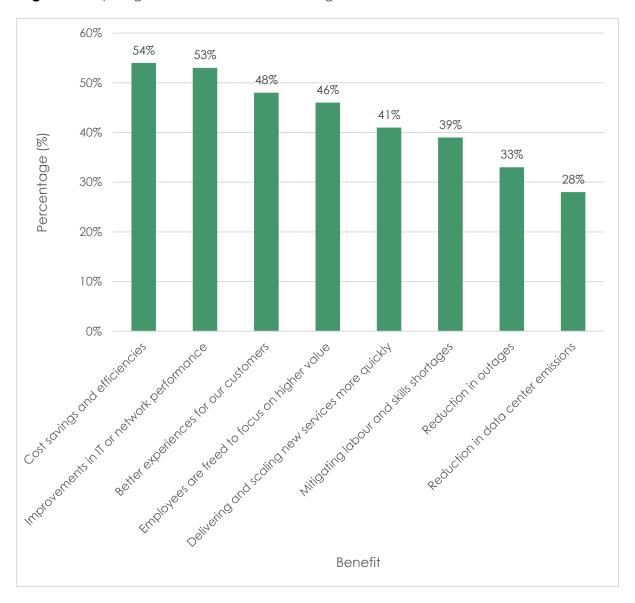
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In the IBM study¹, they asked respondents to identify the benefits that they gain from using AI to automate information technology ("IT"), business or network processes. When these were examined 54% of respondents chose "Cost savings and efficiencies", whereas only 28% of respondents selected "Reduction in data center emissions" (see Figure 3).

Figure 3: Top eight benefits from AI usage for automation







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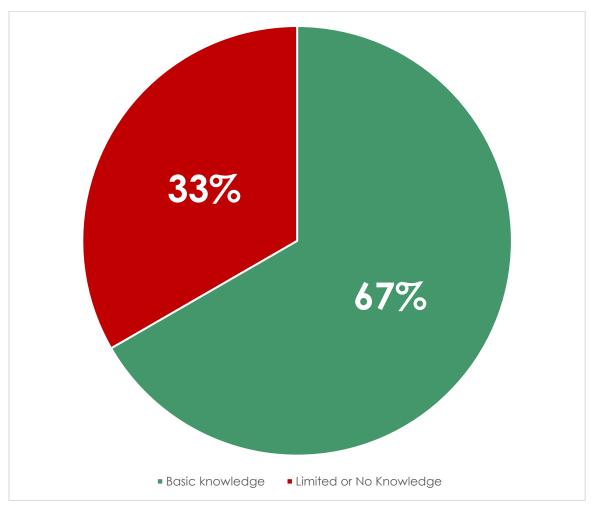
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In a report from DIGITALEUROPE³, which summarises the findings from a pre-regulatory sandbox with 9 European start-ups and small medium enterprises ("SMEs"), 67% of respondents only have basic knowledge of the requirements and cannot fully understand their market implications. Moreover, many participants lament a lack of clarity as to which risk category their product falls into, the applicable technical standards, and their liability exposure (see Figure 4).

Figure 4: Knowledge of the EU AI Act



³ https://cdn.digitaleurope.org/uploads/2023/06/DIGITAL-EUROPE-SANDBOXING-THE-Al-ACT FINAL WEB SPREADS.pdf

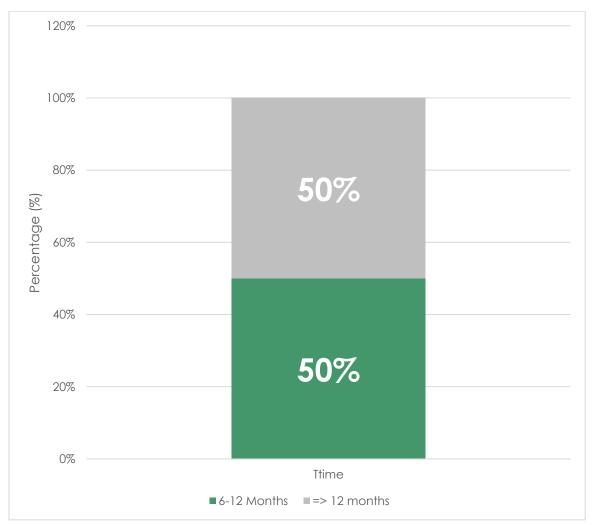






Additionally, DIGITALEUROPE's report³ highlighted that the current lack of existing standards and resources for many participants to get involved in formal standardisation activities generates uncertainty as to the expected benefits that harmonised standards will bring. In this context, the resultant uncertainty gives rise to different opinions by firms over how long it will take for them to achieve compliance. The DIGITALEUROPE's report³ shows that 50% s expect compliance to take 6-12 months, while others expect more than 12 months once all the aspects, including the applicable technical standards, are finalised (See Figure 5).

Figure 5: Expected Timeframe to achieve EU AI Act Compliance



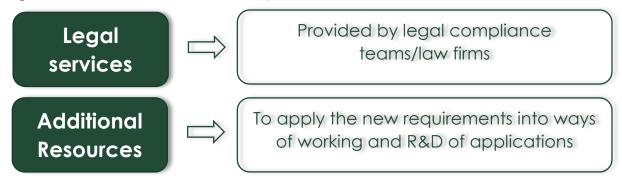






In terms of the compliance impact, DIGITALEUROPE's report³ revealed that companies foresee the need of assistance with two key areas related to compliance with the AI Act (see Figure 6).

Figure 6: Areas of assistance for compliance with the EU AI Act



Participants made clear that any internal resources dedicated to compliance are perceived as leading to time delays in research and development, and as having a negative impact on innovation driven by SMEs and start-ups in Europe. One participant suggested the most important area will be technical assistance in terms of interpreting and implementing the requirements. Two participants discussed the need for hiring people with a profile between compliance and data who will be able to decipher some of these regulations for software engineers. Additionally, some participants also foresaw the creation of middle layer companies/consulting firms who will offer certification support services.

In terms of the financial impact, DIGITALEUROPE's report³ showed that participants remain unclear. However, the cost of compliance is expected to be the key driver of financial impact, with some indirect costs potentially affecting supply chains and overall market distribution.

In the DIGITALEUROPE report³ it made clear that participants' anticipated different outcomes depending on their company's nature, perceived level of risk, sub-sector and products, among other factors. For example, participants who believe they will unlikely be classified as high risk view the Al Act as a necessary cost that may even present business opportunities in the future. They expect the Al Act to present a competitive advantage when entering into international markets. Conversely, high-risk companies foresee substantial costs that could hinder their innovation potential.

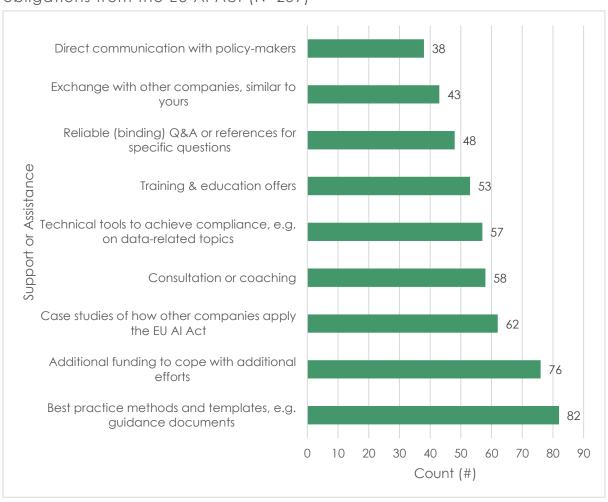






In appliedAl's survey⁴ entitled, 'Al Act Impact Survey', which surveyed 113-EU based Al start-ups, they found that most Startups are looking for expert knowledge through practical guidance, case studies or consultation. 57 startups have a need for technical tools to achieve compliance, such as risk categorisation. While this data reflects only a small fraction of the European Industry, it is the one driving innovation. in addition, feedback from established SMEs as well as larger European companies indicates similar challenges (See Figure 7).

Figure 7: Support or assistance required for meeting the requirements or obligations from the EU AI Act (N=239)



⁴ https://aai.frb.io/assets/files/Al-Act-Impact-Survey Report Dec12.2022.pdf





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In the PwC study⁵, they identified the sectors where AI would have the largest impact. Meeting the requirements matters since AI is set to be the key source of transformation, disruption and competitive advantage in today's fast changing economy. The scores are based on PwC's AI impact index evaluation with potential scores range from 1-5, with 5 indicating the highest potential impact due to AI, and 1 being the lowest (see Figure 8).

Figure 8: Potential impacts of Al across eight sectors



⁵ https://www.pwc.com/gx/en/issues/analytics/assets/pwc-ai-analysis-sizing-the-prize-report.pdf





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Responsible AI Under the EU AI Act

The exponential growth of the global AI market highlights the need for establishing standards and frameworks to ensure responsible AI practices.

According to the WEF², a responsible AI system "upholds ethical standards of fairness, transparency, inclusivity and accountability while being environmentally sustainable and balancing profit with social responsibility."

In this sense, responsible AI ("RAI") is AI that aligns with human-centred values and focuses on reducing the unintended consequences of AI by ensuring that the system's intent and use is aligned with the norms and values of the users it aims to serve. RAI has the objective of empowering employees and businesses and fairly impacting customers and society—enabling enterprises to engender trust and scale AI with confidence.









Al Trust and Explainability – Role and Importance

Trust remains a priority for enterprises, even if they haven't taken steps to ensure AI is trustworthy.

Trust in AI is essential to deriving value from this technology and even more critical in recent advances like generative AI. But many enterprises hit hurdles when overcoming the perceived risks associated with it. To generate trust in AI, enterprises must move beyond defining RAI principles and put those principles into practice, such as reducing bias, tracking performance variations and model drift, and making sure they can explain AI-powered decisions.

A majority of enterprises acknowledge the imperative need of instilling consumer trust in the way an enterprise's AI is developed, deployed and used, but relatively few enterprises have embedded these principles into official rules and policies. One of the main challenges is that the field of applied AI ethics is still relatively new, and most enterprises cite a lack of skills and training.

To this end, Al governance is paramount in realizing RAI under the European Union Artificial Intelligence Act (the "EU AI Act") – particularly on the elements of transparency and accountability - and plays a vital role in accelerating the business value of AI.

Al governance is, in essence, refers to the system and processes through which individuals, enterprises, or institutions make and implement decisions, exercise authority, and manage resources. It involves the structures, rules, and practices that guide and regulate the actions and behaviour of individuals or groups in positions of authority or influence. Read more in our <u>Al Governance Guide</u>.

Al governance under the EU Al Act requires enterprises to align their Al systems with the following aspects throughout every stage of the Al system life cycle:

- **Accountability**. Be accountable to internal and external stakeholders in accordance with the EU AI Act.
- **Independence**. Act independently when carrying out tasks or exercising powers.
- **Transparency**. Ensure a high level of transparency concerning activities and develop good administrative practices in that regard.

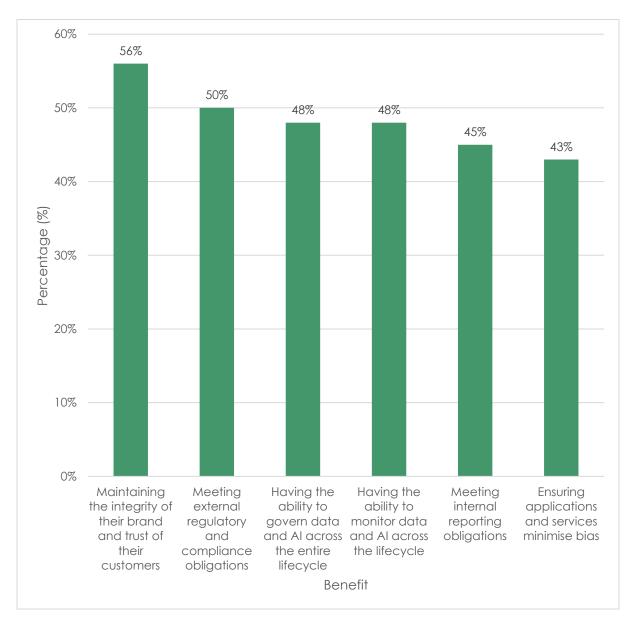






According to IBM study¹, maintaining the "integrity of their brand and trust of their customers ranks" highest on enterprises" aspects of trust and explainability (56%); whereas, "Meeting external regulatory and compliance obligations" followed closely behind (50%) (see Figure 9).

Figure 9: Top six aspects of trust and explainability in firms



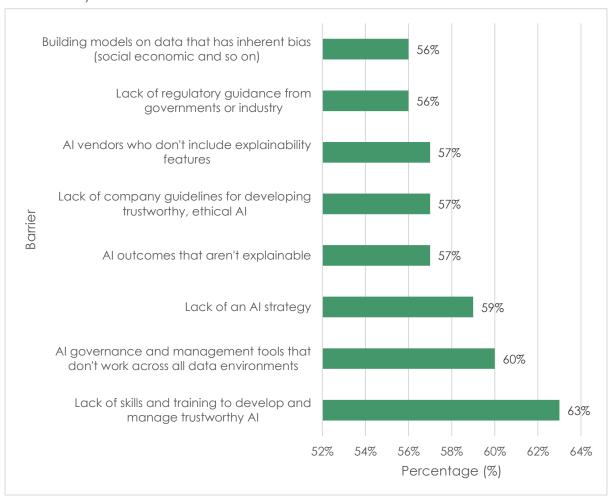






Lack of skills and training to develop and manage trustworthy AI, compliance and management tools that don't work across all data environments, and lack of an AI strategy are the top 3 barriers to enterprise development of explainable and trustworthy AI (see Figure 10). AI governance and management tools have gone from legal issues to business issues. The issues have gone from compliance to business because they are impacting revenue, reputation and credibility with external stakeholders. With headlines featuring potential monetary penalties under the EU AI Act and multiple compliance obligations, regulators are looking to the C-suite and to evidence leadership that will both promote innovation and consumer trust.

Figure 10: Top eight barriers to enterprise development of explainable and trustworthy Al







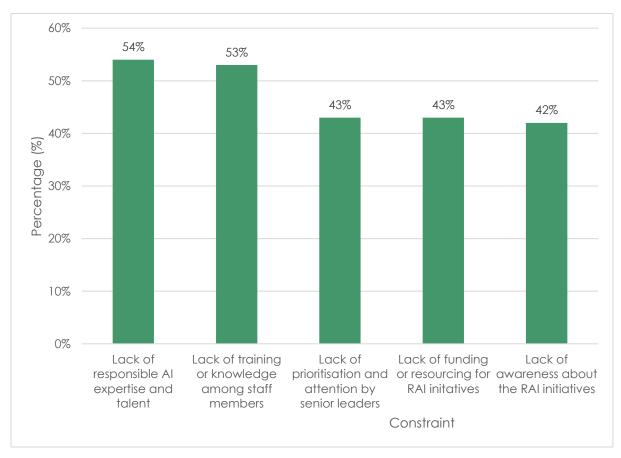
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One factor that contributes to RAI's limited implementation is confusion over the term itself. Given that RAI is a relatively new field, it is hardly surprising that there is a lack of consensus on the meaning of responsible AI. Other factors that contribute to the limited implementation of RAI have less to do with the technical complexities of AI than with more typical organizational challenges. According to a BCG study⁶, when respondents were asked which factors were preventing their firms from beginning, sustaining, or scaling RAI initiatives, the most common factors were shortcomings related to expertise and talent, training or knowledge among staff members, senior leadership prioritization, funding, and awareness (see Figure 11).





⁶ https://web-assets.bcg.com/37/87/33f2ee9d4e2281e792472f4ec1bf/to-be-a-responsible-ai-leader-focus-on-being-responsible.pdf





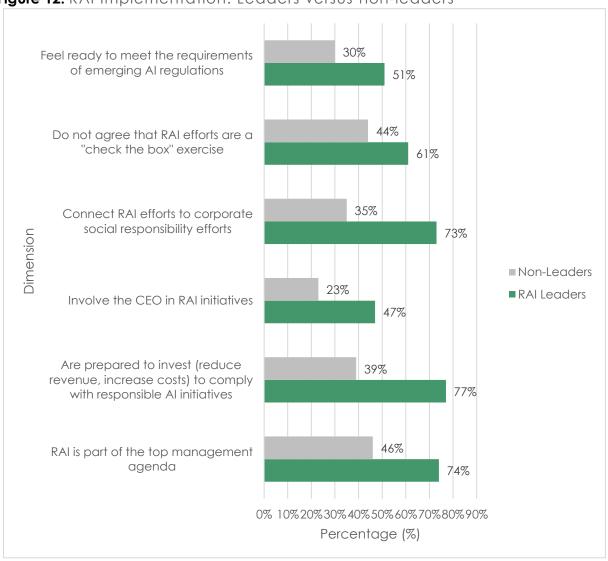
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According to the BCG study⁶, a small cohort of organizations, representing 16% of their survey respondents, has managed to bridge the gap between aspirations and reality by taking a more strategic approach to RAI. These RAI Leaders have distinct characteristics compared with the remainder of the survey population (84%). In addition to investing in their RAI efforts, Leaders also include a broader range of participants in those efforts. Leaders notably feel more ready to meet the requirements of emerging AI regulations, such as the EU AI Act (see Figure 12).

Figure 12: RAI Implementation: Leaders versus non-leaders



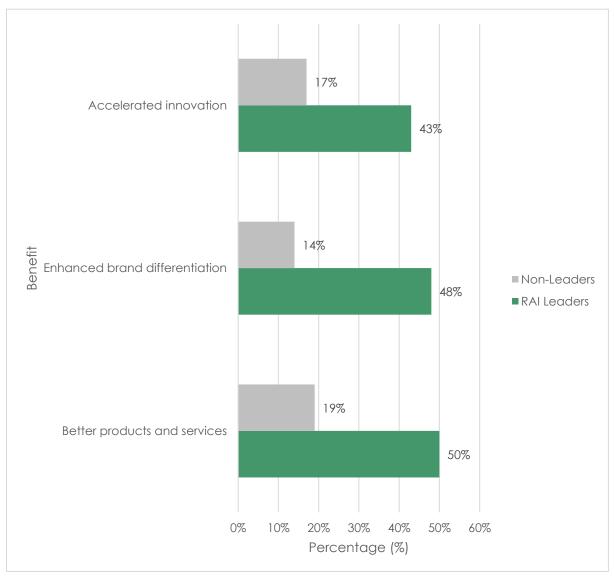






As noted in the BCG study⁶, RAI Leaders are able to realise measurable business benefits from their RAI efforts even if they are not primarily motivated by the promise of such benefits. Benefits include better products and services, improved brand differentiation, accelerated innovation, enhanced recruiting and retention, increased customer loyalty, and improved long-term profitability, as well as a better sense of preparedness for emerging regulations, such as the EU AI Act (see Figure 13).

Figure 13: Business benefits realised from RAI iniitiatives









Compliance-Focused, Innovation-Driven Firm

Due to current market sentiment around RAI and increasing regulatory pressures under the EU AI Act, compliance-focused innovation-driven firms set the precedent for how to operationalise RAI.

A firm with AI governance at its core manages the successful intersection between three elements (see Figure 6):

People and Objectives

To implement AI properly, firms require a strong cross-functional team. AI continues to be a strategic imperative for many leaders, and it can feel like the list of stakeholders grows longer by the day. Some of these people are new to the AI lifecycle concept, while others have new reasons to be involved in AI efforts.

Process

Al governance traces and documents the provenance of data, linked models and metadata, and overall data pipelines for audit. Firms' documentation should include the techniques that trained each model, the hyperparameters that were used, and the metrics from testing phases.

Technology

The establishment of well-planned, well-executed, and well-controlled AI requires specific technological building blocks. Firms should identify for a solution that governs the end-to-end AI lifecycle and has the following capabilities:

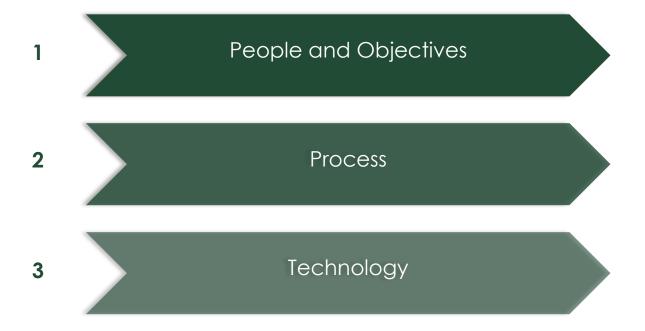
- integrates data of many types and sources across diverse deployments.
- is open, flexible and works with your existing tools of choice.
- offers self-service access with privacy controls and a way to track lineage.
- automates model building, deployment, scaling, training, and monitoring.
- connects multiple stakeholders through a customizable workflow.
- provides support to build customized workflows for different personas using governance metadata.







Figure 14: Foundational elements of successful Al governance



Becoming an 'AI governance-oriented firm' means that firms understand the importance of incorporating RAI into their AI strategy from the beginning, right from the planning of an AI initiative, as shown in data from PwC⁷ (see Figure 15).

They oversee an RAI approach and ensure it with AI governance across the complete life cycle of all their models (in-house or third party), permitting firms to build trust and scale AI with confidence while better mitigating risks, meeting regulatory requirements under the EU AI Act, and creating sustainable value for themselves and their stakeholders.

To be an 'Al governance-oriented firm', we are of the view that firms must move from a reactive compliance strategy to the proactive development of mature, RAI capabilities. By having the foundations in place to support the responsible use of AI across the firm, it becomes easier to adapt to the EU AI Act. That way, firms can focus more on performance and competitive advantage.

⁷ https://www.pwc.com/us/en/tech-effect/ai-analytics/ai-business-survey.html



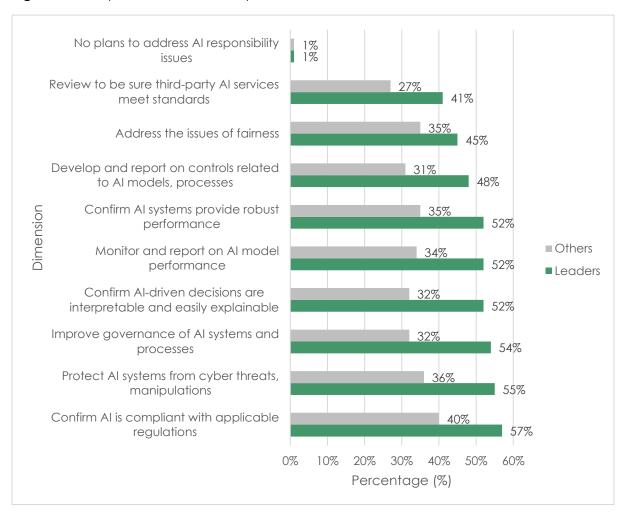


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Figure 15: Responsible AI actions planned for 2022



Al governance-oriented firms have a universal Al governance framework that will ensure that the right processes and technologies are employed to address governance issues preventing further use of Al, as shown by Delotte⁸. (see Figure 16). Having a culture for continuously striving for innovation workforce on Al governance is a critical component. Other than strategy, there are also talent, process, data and technology-related issues.

⁸ https://www2.deloitte.com/content/dam/Deloitte/global/Documents/gx-risk-ai-governance-survey.pdf



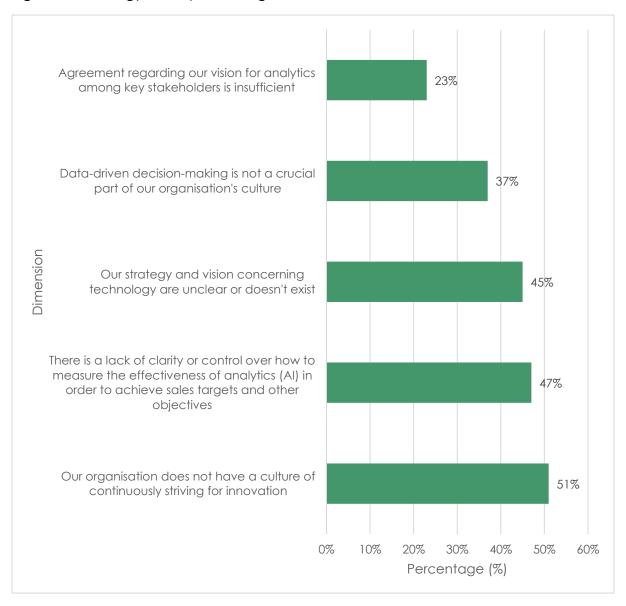


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Figure 16: Strategy issues preventing further use of Al



To address one of the biggest barriers in scaling AI responsibly (i.e., compliance) — and an initiative that involves multiple stakeholders and cuts across the entire firm and ecosystem—AI governance-oriented firms assess and benchmark solutions to ensure its AI investment is responsible, ethical and aligned to larger business goals.







The core of RAI acquisition rests in a holistic framework with ethics and sustainability at the centre, driving business goals, commercial objectives and data strategy, all strongly supported by an ongoing governance, compliance and risk strategy. There are underlying interconnections among these elements, nuances that should be factored in during implementation.

The purpose of a RAI framework is to ensure that the acquisition of AI systems by commercial enterprises is grounded in ethical principles with strong governance to ensure those principles are applied, thereby mitigating bias and driving resilience. The Al procurement framework provides comprehensive directional guidelines rather than prescriptive rules, as the degree to which these factors apply to an Al solution or an enterprise can vary significantly. Five pillars form part of a RAI acquisition strategy (see Figure 17), according to the WEF9.

Figure 17: Five pillars of RAI acquisition



Business Strategy. Evaluate ways AI can create a competitive advantage through enhanced business decision-making, leading to positive changes in business outcomes.

Commercial Strategy. How does the AI solution align with the broader commercial strategy?

Data Strategy. Evaluate the effectiveness of the AI solution in terms of analysing valuable data in support of enterprise objectives.

Ethics and Sustainability. Evaluate if the AI solution creates a net positive impact from an ethical and sustainability perspective.

Governance, Risk and Compliance. Build and integrate risk management plans with the AI solution and improve business resilience, especially to AI-related cyber risks.

https://www3.weforum.org/docs/WEF_Adopting_AI_Responsibly_Guidelines_for_Procurement of Al Solutions by the Private Sector 2023.pdf





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RAI or AI governance platforms assist firms with operationalising governance, reduce overhead burden, ensure EU AI Act regulatory compliance, and increase stakeholders and customer trust through transparency. They align diverse stakeholders involved in developing, deploying and using AI systems, using the right tools to collect the right data, and making better decisions about how these systems should be built, deployed, used, and managed to leverage the benefits and prevent harm.

Specifically, they help to achieve AI success. To support multi-stakeholder collaboration, firms are looking for a standardised dashboard that can help them identify, categorise, assess, monitor, and drive timely actions. With the EU AI Act fast approaching, dedicated support in the platform is critical so that they can exercise appropriate due diligence from the start (prior to initiating an AI project) and at every stage of the life cycle. AI governance platforms should easily integrate with a firm's standard governance, risk, and compliance (GRC) and enterprise risk management (ERM) solutions.

"With the EU AI Act fast approaching, dedicated support in the platform is critical so that they can exercise appropriate due diligence from the start (prior to initiating an AI project) and at every stage of the life cycle."





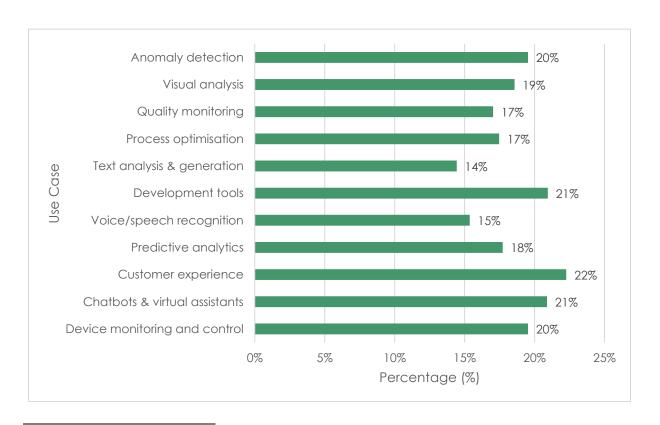


RAI/AI Governance Spend and Budget

Substantive, dedicated AI budgets are becoming a trend.

According to a study by OMDIA¹⁰, 55% of companies have a dedicated AI budget while 38% said that spending on AI is supported by other budgets. Only 5% do not have a budget while 2% did not know. This commitment reflects continued AI market maturity and indicates that many firms have progressed beyond proofs of concept ("PoC")) and pilots into live, operationalized AI initiatives. Of these, no use case dominates. Customer experience came in at 22.27%, followed by development tools at 20.95% and chatbots and virtual assistants at 20.89% (see Figure 18).

Figure 18: Division of AI budget by use case



¹⁰ https://aibusiness.com/verticals/ai-is-top-spending-priority-for-half-of-companies-surveyed





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Conclusion and Recommended Guidance

We have developed a risk assessment tool for enterprises' EU AI Act readiness journey.

Al is being heralded as a key enabler of firms' strategic priorities. Scaling Al can drive high performance for customers, shareholders, and employees, but enterprises must overcome common hurdles to apply Al responsibly and sustainably. Al adoption can deliver new, dynamic, ethical, and social issues. An inability to manage these issues can have a significant impact at a human and societal level, leaving enterprises vulnerable to financial, legal, and reputational repercussions.

While many enterprises have taken the first step and defined AI principles, operationalising these is difficult, especially with few standards under the EU AI Act to guide them. Successful enterprises understand the importance of adopting a systematic approach from the beginning, addressing these challenges in parallel, while others underestimate the scale and complexity of change required. A systematic approach necessitates proven tools, frameworks, and methodologies, permitting enterprises to move from principles to practice with confidence and supporting the professionalization of AI. Establishing an RAI commensurate with the EU AI Act that is robust, fair, and maintained on an ongoing basis can also permit enterprises to communicate and collaborate with confidence.

Being responsible at the heart is becoming more beneficial, especially as the European legislative bodies hone in on the EU AI Act and consider appropriate standards for the development and deployment of AI. One of the biggest barriers lies in the complexity of scaling AI responsibly—an undertaking that requires input from multiple stakeholders and cuts across the entire enterprise and ecosystem. IBM study¹ reveals that 60% of respondents face barriers because AI governance and management tools don't work across all data environments. As the EU AI Act enactment date approaches the must be embedded into product development processes and connected to other regulatory areas, such as privacy, data security, and content. As seen with the "Brussels effect" of the European Union's General Data Protection Regulation ("GDPR"), where the GDPR quickly became the de facto global privacy standard, reactive companies have little choice but to be compliance focused, prioritizing the specific requirements rather than the underlying risk, which can lead to problems down the road and value left on the table. Be intentional with compliance by taking action today.





 Table 1: Al & Partners' framework to become an 'Al governance-oriented firm'

	Operationalise without concern	Oversee risk and reputation	Bolster compliance	Satisfy stakeholder demands
Strategise	Define specific, measurable, achievable, realistic and time-bound performance metrics for Al usage across your firm	Review current processes that monitor fairness and explainability	Conduct gap analysis against the EU AI Act	Review existing skills and demand for responsible AI, and align with business objectives
Assemble	Establish traceability and auditability of existing processes	Operationalise updated processes and checkpoints throughout the Al lifecycle	documentation is	Specify the new roles, skills and learning agendas necessary to implement RAI
Generate	Construct automatic documentation of model lineage and metadata	Enable Al models that are fair, explainable, high-quality, minimise drift and conduct regular policy reviews	Act to bolster regulatory compliance for data science teams without overhead	Establish a repeatable, end-to-end workflow with built-in stakeholder approvals to lower risk and increase scale