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AI regulation: new world, new rules

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Executive summary

We knew that artificial intelligence (AI) systems would evolve. What we had not expected was how rapidly they would evolve. Concerns are now being expressed about risks from AI that could affect virtually every aspect of our lives – from the economy, politics and our social life to security and human rights. Many countries feel they need to decide whether regulatory action is required – and quickly. The international AI regulatory landscape is already becoming complex.

This report attempts to manage at least some of that complexity – to provide a summary of emerging international regulatory responses to the potential risks of AI. It also proposes next steps for the development of safe and effective AI regulation.

Ironically, the only thing that is clear in AI regulation is the lack of clarity. There is a divergence in approaches (see Table 0-1), with no international best practices agreed or in place for countries to follow. This divergence is evident from the very start of the regulatory process, where there is already a split between proposals that favour binding rules and those that propose non-binding rules. And yet there is some consistency in the areas of focus. Even non-binding frameworks try to address topics such as ethics, security, transparency, non-discrimination, privacy and accountability.

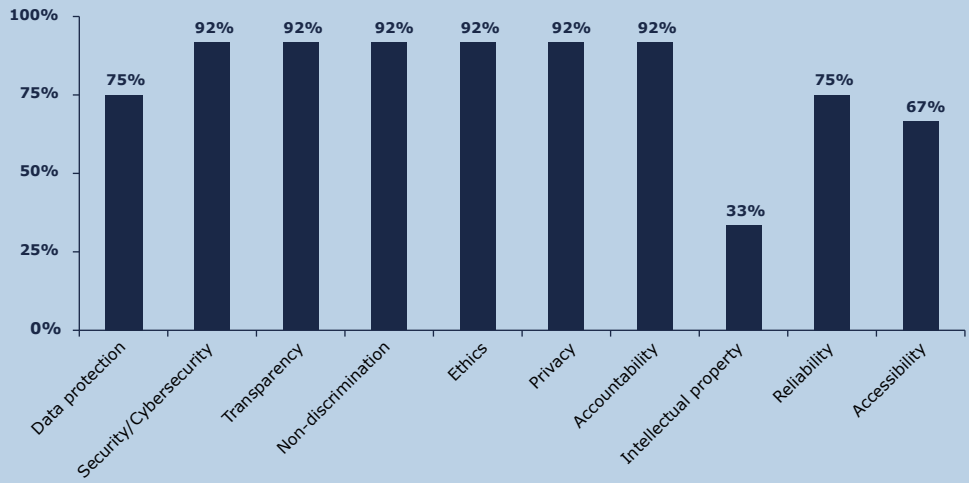
Binding framework	Non-binding, exploring binding	Non-binding framework
Penalties in place	**No penalties**	
Published guidelines	**No guidelines**	
Risk categorisation in place	**No risk categorisation**	
National scope	**Regional/state scope**	**Both national and regional**
Cross-sectoral scope only	**Sector-specific measures addressed**	
Neutral technological scope	**Specific technological scope**	
Topics covered		
		
Pursued/desired international coordination and alignment	**International coordination and alignment are omitted**	

Table 0-1: AI regulation: an overview

Which approach is more effective? It's too early to say and, if your country is still exploring regulation of AI, there are no tried and trusted systems to work from. Perhaps, therefore, such countries should start by asking some basic questions.

- What are other jurisdictions doing so far?
- What are our real domestic needs?
- How do we tailor a regulatory approach that fits our country's needs and objectives?
- Can a regulatory impact assessment exercise evaluating relevant potential options help?

This paper attempts to address all these questions. But first, let's start with a basic one: what is AI regulation?

Contents

1.
What is AI regulation?

1.1.
Where AI is today

AI is a way of describing systems or machines designed to perform tasks that typically require human intelligence. These include pattern recognition, data learning, decision-making, and problem-solving.

AI has evolved at amazing speed in areas such as natural language, machine learning, and computer vision. We are already seeing AI systems capable not just of executing specific tasks such as analyses, classifications, and predictions based on existing data (typically referred to as non-generative AI), but also of generating new content and ideas. To do this AI systems are using patterns learned through training processes with large datasets (a subset of AI referred to as generative AI).

The evolution of AI systems brings about risks with a significant potential socioeconomic impact

Based on these developments and their potential for future growth, three different stages of AI technology have been defined: artificial narrow intelligence ('ANI'), artificial general intelligence ('AGI') and artificial super intelligence ('ASI') (see Figure below).

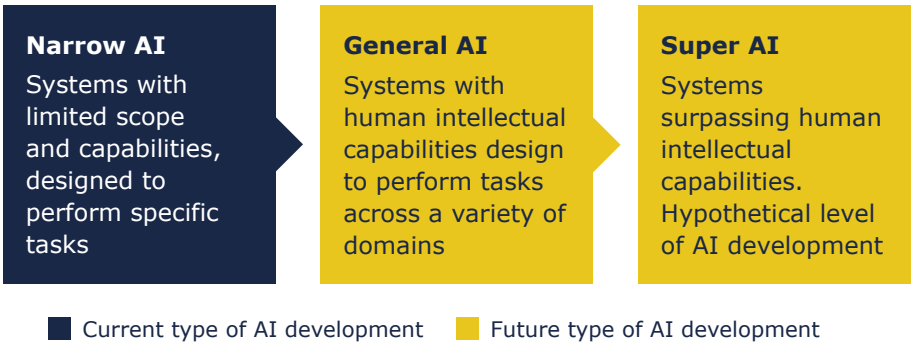


Figure 1-1: General classification and stages of AI systems

All of which is impressive – and potentially beneficial. However, there are also risks. These include:

- **Ethical risks**
  AI systems may unintentionally perpetuate biases and discrimination, depending on the quality of the dataset used for training.

- **Security risks**
  AI systems with flawed designs could pose safety risks, especially in critical sectors such as transport, communications, healthcare and public infrastructure.

- **Transparency risks**
  When, how and how much are AI systems being used? It is not always clear that people affected by them understand how they work, and the risks their use may entail.

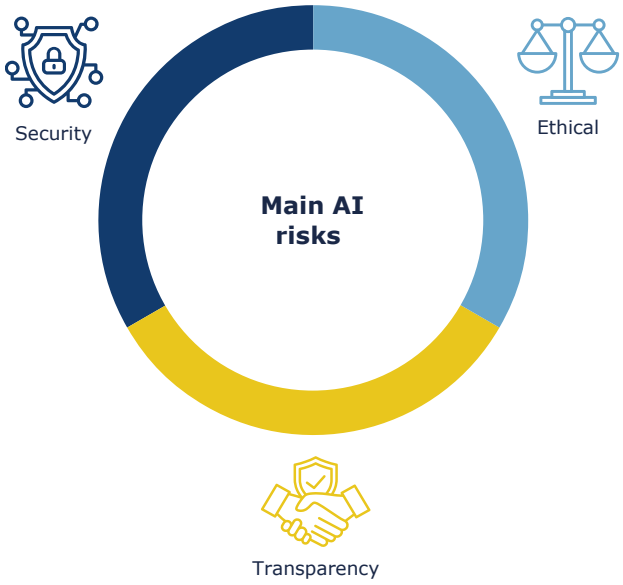


Figure 1-2: Main risks of AI systems

The inherent risks of AI-related services raise questions on the regulatory measures, if any, required to mitigate them

Regulatory frameworks or guidelines may be able to address such risks. Ideally, everyone can then enjoy the numerous benefits offered by AI systems while also controlling and mitigating the risks these may entail. But is this realistic? To answer this let's see where we are with regulations at the moment.

1.2.
Current regulatory landscape

In recent years, several countries have begun introducing legislative frameworks and policy guidelines addressing the main opportunities and risks of AI. However, no two regulatory initiatives are exactly alike. This makes cross-border cooperation and international compliance difficult.

That said, two distinct trends have emerged. Some jurisdictions are moving towards binding AI legislation. Others have limited themselves to broader policy guidelines, voluntary codes of conduct, and similar non-binding measures.

Binding regulatory frameworks usually involve laws and regulations that require mandatory compliance by defined classes of AI stakeholders, such as AI system providers or deployers. Countries opting for binding regulation consider that clear rules will offer legal certainty and a framework for responsible innovation while also ensuring the protection of human rights. The idea is to build trust in AI systems.

Other countries prefer to limit themselves to voluntary guidelines, recommendations and similar measures: non-binding regulatory frameworks, in other words. In these cases, compliance is usually expected but it is also voluntary and there are no legal sanctions.

The thinking behind this approach is that more flexible regulation will reduce unnecessary barriers for AI providers and other stakeholders, encouraging innovation and competitiveness. Its proponents see this approach as generally better suited to the fast evolution of AI ecosystems.

All this is a recent and ongoing process. It is still too early to see whether a chosen regulatory approach works and to judge its effectiveness or suitability for AI growth. Terms like 'effectiveness' and 'suitability' are themselves hard to measure in this context, given the many different social, economic, political and other criteria they are likely to be based on across a variety of jurisdictions.

AI technologies are still developing rapidly; both mandatory and voluntary measures can quickly become outdated. This means that any basis used for discussions on AI governance, ethical principles and management of risks is always shifting. This adds to the complexity of the policymaking process for governments and the compliance process for industry.

There is, thus far, no direct correlation between the mandatory nature of a regulatory approach and its effectiveness or suitability

However, we can highlight emerging trends, gaps, and areas of convergence – and that is what this report aims to do: to provide a benchmark analysis of AI regulation across key jurisdictions. How the international regulatory landscape is evolving, how different regions are shaping the future of AI regulation and what this means for stakeholders navigating an increasingly complex regulatory and policy environment are the main focus of this report.

We believe this will be extremely helpful – though it is always important to remember the speed at which AI is changing. This benchmark report/whitepaper was carried out in February 2025. The findings presented here will change over time.

2. International AI regulation: What in the world is happening?

What regulatory approaches are being adopted for AI governance by key national and regional jurisdictions around the world? Before diving into the question, we explain our approach below.

2.1. Methodology of the assessment

The methodology followed in our benchmark overview of the global AI regulatory landscape focuses on 12, strategically selected jurisdictions and their response to nine features of AI regulation – or its absence. These are shown in Table 2-1.

Jurisdictions	Features of AI regulation
▪ Australia ▪ Brazil ▪ Canada ▪ Chile ▪ China ▪ European Union ▪ India ▪ Israel ▪ Singapore ▪ South Korea ▪ United Kingdom ▪ United States	▪ General regulatory approaches ▪ Penalties for non-compliance ▪ Publication of guidelines ▪ Risk categorisation ▪ Geographic scope ▪ Sectoral scope ▪ Technological scope ▪ Topics addressed by regulation ▪ International coordination and alignment

Table 2-1: List of jurisdictions and features defined for this benchmark analysis

2.2.
Overview of international AI regulation

2.2.1. General regulatory approaches

We found no common definable approach to regulatory measures and the degree of policy enforcement in these 12 countries. However, three, more general approaches do predominate:

- **Binding framework**
  This applies to countries or regions that have defined a regulatory framework containing specific measures, compliance with which is mandatory.
- **Non-binding framework**
  This applies to countries or regions that have adopted a 'soft law' approach, establishing guidelines, recommendations or similar voluntary measures.
- **Non-binding, exploring binding**
  This applies to countries or regions that currently do not have binding regulations but are exploring such an approach.

Options	Jurisdiction
Binding framework	
Non-binding, exploring binding	
Non-binding framework	

Table 2-2: Overview of general regulatory approaches

A key insight from our comparative assessment of these approaches is that the overall AI strategy of most of the jurisdictions reviewed also includes the adoption of legally binding measures. However, among these jurisdictions, the EU stands out with the most comprehensive set of binding legal rules. These are aimed at promoting the uptake of human-centric and trustworthy AI and ensuring a high level of protection of health, safety, and fundamental rights from any harmful effects of AI systems in the EU while supporting innovation.

EU AI rules are set out in the AI Act, a complex – and controversial – set of rules. Its first provisions came into effect on February 2, 2025. The rest will follow in phases over the coming years.

China was a pioneer in the adoption of AI laws and texts to regulate specific aspects of AI such as generative AI services, algorithmic recommendations and ethics. However, it does not have a legal framework covering all types of AI.

The US, by contrast, has adopted a fragmented approach, with states developing their initiatives on AI without a unified and comprehensive national (or federal) regulatory framework. President Trump has recently revoked the previous administration's Executive Order on safe and secure AI and has issued a new AI order, under which a plan will be developed for a new policy position.

Another important point is that the adoption of binding regulatory frameworks entails complex legislative steps (and sometimes heated political debate). That may be why AI frameworks developed by Brazil, Canada and Chile are still going through the legislative processes before their enactment.

This does not seem to apply to the USA (at the federal level), India, Australia Israel, Singapore and the UK. All these territories have thus far opted for a non-binding approach involving guidelines and recommendations but non-binding regulatory measures. However, the US, India and Australia are currently exploring the adoption of binding regulatory frameworks for which public consultations with relevant stakeholders are also being considered.

2.2.2. Penalties for non-compliance

What, if any, penalties are likely for non-compliance with existing AI rules? This, again, largely depends on whether the rules are mandatory or voluntary.

Options	Jurisdiction
Penalties in place	
No penalties	

Table 2-3: Overview of penalties for non-compliance

Table 2-3 shows that that all countries imposing binding regulatory frameworks, as expected, enforce some kind of penalties for non-compliance. The rest of the countries do not.

2.2.3. Publication of guidelines

Have the jurisdictions reviewed published AI guidelines (with or without separate, legally binding, measures)? Table 2-4 shows that many have.

Options	Jurisdiction
Published guidelines	
No guidelines	

Table 2-4: Overview of publication of guidelines

In fact, all countries or regions adopting binding regulatory frameworks (except South Korea[1]) have also published general AI guidelines to help AI developers and users comply with the existing regulations.

Moreover, some of these countries have issued sector-specific guidelines to support the adoption of regulatory measures and tailor them to the unique characteristics of each economic sector.

As for countries that have opted for non-binding regulatory frameworks, some have issued guidelines to help AI developers and users voluntarily comply with recommendations. However, there is no clear trend. The USA and India have yet to publish national-level guidelines despite adopting non-binding frameworks.

2.2.4. Risk categorisation

It's worth bearing in mind that mandatory measures, guidelines and recommendations may deal with all AI systems or only specific systems. Some countries are applying different regulations or recommendations to various systems, but the criteria to differentiate those systems vary among countries. However, risk categorisation seems to be the most common criteria to date. Under this approach, AI systems are classified depending on the risk they entail, and then specific regulations or recommendations are defined for each risk level.

1 South Korea has published some guidelines for the safe use of personal information when using AI, addressing how to minimize the risk of privacy and data infringements. However, so far, there are no published guidelines covering all the implications of the arrival of AI. This is probably caused by the particular legal regulatory framework existing in South Korea, that combines minimal regulation with AI promotion.

We will not deal here with every one of the risk categorisation criteria; these vary among the jurisdictions examined. We will limit ourselves to whether such a risk categorisation is followed in principle (see Table 2-5).

Options	Jurisdiction
Risk categorisation in place	
No risk categorisation	

Table 2-5: Overview of risk categorisation

A key finding of the benchmark assessment of risk categorisation is that all of the jurisdictions analysed that have binding regulatory frameworks in place have also adopted a risk categorisation.

The EU and Chile define four tiers of risk (unacceptable, high, limited, and minimal). Brazil and Canada follow a two-tiered approach (excessive and high). The classification criteria of China and South Korea are not 'horizontal' but focus on specific types of AI or AI-related activities.

By contrast, countries with no binding regulation do not follow a risk categorisation either; they rely on case-by-case assessment to establish the applicable measures. In this group, Australia is the only country currently studying the adoption of a risk categorisation for the classification of AI systems as part of plans to develop binding regulations. The USA and India have not introduced a risk categorisation.

Countries with no binding regulation do not follow a risk categorisation either; they rely on case-by-case assessment to establish the applicable measures

2.2.5. Geographic scope

What is the jurisdictional reach of existing AI rules or guidelines in each of the analysed regions? There appear to be three approaches:

- **National**
  Rules/guidelines in place apply at the national level only. No separate regional or province/state (for federal countries) regulation is available.
- **Regional/province/state**
  The rules/guidelines apply on a regional or state level.
- **Both**
  National AI rules/guidelines are available and complemented by state-level or regional AI regulation.

Options	Jurisdiction
National scope	
Regional/state scope	
Both	

Table 2-6: Overview of geographical scope of rules and guidelines

Table 2-6 shows a general trend towards the adoption of national mandatory frameworks or guidelines. This is not surprising; most countries do not follow a federal vs state regulatory model. However, some countries and regions complement national frameworks with regional or state-specific regulations designed to address local nuances while remaining aligned with the broader national framework.

The USA has adopted AI legislation in a few states, but not at a federal level. The Trump administration has dropped Federal measures established by the previous administration.

2.2.6. Sectoral scope

The next question we address involves scope. How applicable are AI regulations across each of the analysed jurisdictions' economies? Here we have defined two approaches:

- **Cross-sectoral only**
  Measures are applicable across all sectors. No sector-specific measures are applied or expected.

- **Sector-specific measures**
  Regulatory measures govern the design, deployment and implementation of AI systems in specific sectors, such as cybersecurity, healthcare, education, and critical infrastructure. These measures are implemented by the corresponding sector-specific regulatory agencies. The term 'sector-specific' here also includes countries whose regulation comprises cross-sectoral and sector-specific measures.

Options	Jurisdiction
Cross-sectoral scope only	
Sector-specific measures addressed	

Table 2-7: Overview of sectoral scope

Sector-specific measures are either in place or expected to be part of regulations in a small majority of jurisdictions. However, the EU, China, Brazil and the UK support cross-sectoral and sector-specific measures.

What does this mean? Possibly, regardless of the level of regulatory enforcement, most countries prefer unified measures applicable across all sectors. The idea here is, presumably, to ensure legal certainty and avoid measures that might contradict. With this in mind, some countries are also relying on their sectoral regulators to address sector-specific AI issues.

2.2.7. Technological scope

Are the guidelines and/or rules in the jurisdictions concerned adapted to different AI technologies? Here we have highlighted two approaches:

- **Neutral**
  The rules/guidelines apply generally to all AI systems, with no measures specific to a certain technology.

- **Specific**
  The existing rules or guidelines are tailored to different AI technologies (for example generative and non-generative AI), typically in combination with a body of rules that is technology neutral.

Options	Jurisdiction
Neutral technological scope	
Specific technological scope	

Table 2-8: Overview of technological scope

We can derive two insights from the comparison in Table 2-8. Firstly technology-specific approaches are generally adopted by countries or regions with binding regulatory frameworks. Only Singapore is an exception. In these cases, regulations distinguish between generative AI (often referred to as general-purpose AI systems) and non-generative AI. For example, China broadly addresses generative AI-related risks through stringent control over algorithms, data usage, and cybersecurity.

Secondly, neutral approaches are typically adopted by countries or regions with non-binding regulatory frameworks. Countries relying on voluntary guidelines take a more agnostic stance concerning different AI technologies.

2.2.8. Issues addressed by regulation

Table 2-9 lists the common issues in AI rules and guidelines. But which of these are prioritised by the jurisdictions examined?

Issues	
▪ Data protection	▪ Privacy
▪ Security/cybersecurity	▪ Accountability
▪ Transparency	▪ Intellectual property
▪ Non-discrimination	▪ Reliability
▪ Ethics	▪ Accessibility

Table 2-9: Issues addressed by regulation

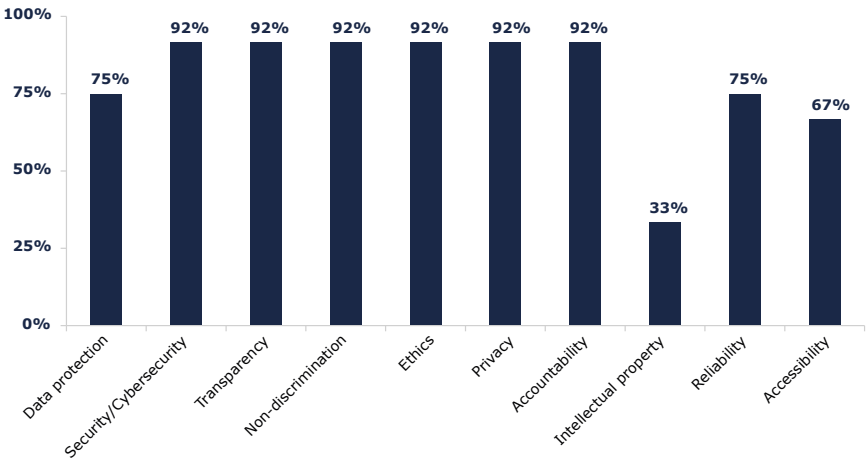


Figure 2-1: Most popular topics in AI regulations for analysed jurisdictions

Figure 2-1 suggests that the highest-priority areas in AI frameworks are security, transparency, non-discrimination, ethics, privacy and accountability. These are followed by data protection, reliability, and accessibility. Intellectual property is less commonly addressed – presumably because it is linked to a very developed set of separate rules (some of them based on international treaties). Whether these rules are appropriate for the new challenges AI brings is debatable.

2.2.9. International coordination and alignment

Are international coordination and collaboration being sought by the jurisdictions examined for the development of AI systems? How about best practices facilitating regulatory and technological interoperability? There are two ways to look at this:

- **Pursued/desired**
  International coordination is pursued and/or desired through national rules or guidelines, participation in international organisations and multilateral forums or definition of standards.

- **Omitted**
  International coordination is not explicitly mentioned in any regulatory AI document published at a national level.

Options	Jurisdiction
Pursued/desired international coordination and alignment	
International coordination and alignment are omitted	

Table 2-10: Overview of international coordination and alignment

Table 2-10 shows an almost unanimous trend favouring international coordination and alignment among countries for the development of AI.

Despite this declared interest in international coordination, none of the countries or regions examined have actively pursued alignment or coordination by enacting official bilateral guidelines or rules.

3.
Factors for policymakers to consider

Governments worldwide are actively working to establish AI frameworks that balance innovation with risk management and individual protection. But AI evolution isn't going to slow down. Nor will AI suddenly pose fewer problems. What factors should policymakers consider when addressing AI governance?

3.1.
Approaches still differ

First, we should remind ourselves of where we are now. Right now, as we said earlier, it's hard to avoid the fact that there are diverse approaches to AI regulation. Our analysis of key global players demonstrates that, while all countries recognise the need for some form of AI governance, their approaches differ significantly based on policy priorities, technological strategies and historical context, to name only a few factors.

Some regions, such as the EU and China, are adopting binding legal frameworks that impose strict requirements on AI developers and deployers. Others, like the USA and UK, prefer a more flexible approach, relying on non-binding guidelines, industry self-regulation, and sector-specific laws.

The presence and level of penalties for non-compliance is another differentiator. While the EU has established significant penalties under the AI Act, other countries like India and Australia are still in an exploratory phase, drafting guidelines without immediate enforcement mechanisms.

Then there's AI risk-tier categorisation – arguably a key regulatory tool to ensure proportionate oversight, and one that is embraced in some cases (such as the EU, China and Canada) but absent in others.

Our analysis of key global players demonstrates that, while all countries recognise the need for some form of AI governance, their approaches differ significantly based on policy priorities, technological strategies and historical context, to name only a few factors

3.2.
Which frameworks work?

The short answer would be, of course, it depends.

As we have shown, implementing a binding legal framework is not always seen as inherently necessary for effective AI governance. Some countries, such as the UK and the USA, seem committed to the idea of adequate AI governance and a flourishing market can emerge from a combination of voluntary industry standards, ethical guidelines, and targeted sectoral and industry-specific regulations. This flexibility allows regulators to adapt quickly to the rapid pace of AI evolution. By contrast, binding 'horizontal' and technology-agnostic laws may struggle to keep up with emerging technologies.

Binding 'horizontal' and technology-agnostic laws may struggle to keep up with emerging technologies

That said, binding regulations offer the advantages of legal certainty and enforcement mechanisms. This approach is particularly relevant when controlling high-risk AI applications such as those applied to facial recognition, healthcare systems, and critical infrastructure. It could be argued that the decision to pursue binding regulation should be informed by variables such as structure, innovation goals, societal concerns, and risk appetite in the economies concerned.

3.3.
A question of strategy

Which brings us to some of the strategic considerations. For policymakers and regulators looking to introduce AI rules and/or guidelines a comprehensive assessment of domestic needs and international trends should be conducted. This process should include:

- **Benchmarking global AI strategies**
  Understanding where equivalent countries or industries stand on key regulatory aspects, including legal enforcement, risk categorization, penalties and scope.

- **Self-assessment of domestic needs**
  Evaluating the country's AI landscape, innovation ecosystem, and specific risks. This should identify gaps in AI governance, where clashing principles must be carefully balanced (such as flexibility vs. robust enforcement). This process is complex, challenging, and often politically sensitive.

- **Tailored regulatory design**
  Drawing on the results of the benchmark and self-assessment phases, policymakers should conduct a Regulatory Impact Assessment (RIA) to evaluate the potential impacts of various AI regulatory strategies within their jurisdiction. This analysis will inform the development of optimal AI governance decisions. This, in turn, will ensure that regulations are balanced between mandatory and voluntary measures and ideally promote, rather than impede, innovation. Policymakers should also determine which regulatory topics to emphasise (data protection, security, transparency, non-discrimination or ethics), aligning these choices with the country's specific needs and preferences.

Figure 3-1: Steps to introduce an AI governance framework

4.
Conclusion

As we said at the start of this report, we all knew that artificial intelligence (AI) systems would evolve, but not how rapidly they would evolve. AI regulation is not a one-size-fits-all solution. There is, however, an ideal we can aim for. A successful regulatory approach should align with national priorities while ensuring interoperability with global AI governance frameworks. Countries that proactively engage in AI regulation, whether through laws, guidelines, or cross-border collaboration, will be better positioned to shape the ethical and economic future of artificial intelligence.

AXON CONSULTING

About
Axon Consulting

Axon is an international firm founded in 2006 that provides investment and advisory services to a broad client base in the ICT and digital space in more than 70 countries across the world.

Axon's emerging technologies practice is at the core of our work and a growing priority for clients. We focus on strategy, policy, and market intelligence around a broad spectrum of next-generation technologies, engaging both private and governmental stakeholders. By partnering closely with decision-makers, Axon helps them anticipate trends, address critical challenges, and develop actionable roadmaps to harness the full potential of emerging technologies.

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