A Comparative Framework for AI Regulatory Policy

	USA	UK	Canada	EU	China
Definition of AI	Regulatory policies refer to either "automated systems" or "AI systems." The BOR defines the former as "any system, software, or process that uses computation as whole or part of a system to determine outcomes, make or aid decisions, inform policy implementation, collect data or observations, or otherwise interact with indivudials or communities." The RMF defines the latter as "an engineered or machine-based system that can, for a given set of objectives, generate outputs such as predictions, recommendations, or decisions influencing real or virtual environments."	The UK sets out the core characteristics of AI (adaptiveness and autonomy) which inform the scope of the AI regulatory framework, while allowing regulators to set out and evolve more detailed definitions of AI according to their specific domains or sectors.	AIDA defines "AI systems" as "a technological system that, autonomously or partly autonomously, processes data related to human activities through the use of a genetic algorithm, a neural network, machine learning or another technique in order to generate content or make decisions, recommendations or predictions". The Directive on ADM defines "automated decision systems" as what "includes any technology that either assists or replaces the judgement of human decision-makers. These systems... use techniques such as rules-based systems, regression, predictive analytics, machine learning, deep learning, and neural nets".	In the draft AI Act "[AI system] means software that is developed with one or more of the techniques and approaches listed in Annex I (currently cites ML, logic- and knowledge-based, and statistical approaches) and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with".	No authoritative definition provided.
Key aims	Soft approach characterised by voluntary guidance to maximise innovation whilst protecting rights as well as emphasis on contextual governance of AI risks and impacts.	A proportionate, adaptable, and pro-innovation regulatory approach that centres on the contextual risks.	Regulate trade, avoid harm and reduce risks related to AI while making more efficient, accurate, consistent and interpretable decisions pursuant Canadian Law.	Avoiding harms, respect human rights and European values, without constraining innovation.	Preserve national safety/security, the public interest, and the interests of citizens, while stimulating the healthy development of AI technologies.
Scope and Focal Areas	Soft approach combines overarching principles with an emphasis on contextual governance of potential harms. The BOR makes a national values statement about five core protections for the American public and sets out how they can be enforced, e.g. sectoral legislation and federal agency-led initiatives, while the RMF will be a voluntary resource for different stakeholders to manage risks throughout the entire lifecycle of AI systems regardless of sector, size, or level of familiarity with a specific type of technology.	The UK's context-specific approach will be underpinned by a set of cross-sectoral principles that regulators will develop into sector or domain-specific AI regulatory policies. Devolution means that some regulatory powers related to AI are reserved for the Scottish, Welsh, and Northern Irish governments.	It introduces one regulation for the private sector and trade (AIDA) and one for the public sector (Directive on Automated Decisiom Making). AIDA covers AI systems, with specific focus on high-impact systems, biased outputs and the processing of data (e.g. anonymization). The Directive covers ADM systems with specific focus on algorithmic impact assessment, transparency, quality assurance, recourse and reporting. It excludes systems used for National Security.	The draft AI Act has a major focus on risk-thresholds (unacceptable risks, high risks, limited risk, low or minimal risk), with specific requirements and proportionate obligations according to the classification. It would apply to providers and users in the public and private sector across the AI value chain. It would exclude AI developed for military aims.	The Chinese approach has mixed soft law initiatives for AI in general and hard law policies for specific AI technologies. The MIST has introduced cross-cutting soft law AI ethics principles and norms to guide the whole AI lifecycle. The CAC has introduced secondary legislation for specific AI technologies (e.g., recommender systems). Regulatory policies for science and technology research are being developed which will likely apply to AI.
Approach to risk	Proportionate approach to AI risks. The RMF provides a framework to maximise positive impacts and minimise negative impacts; while the BOR states that the application of the five core protections should be proportionate to the extent and nature of potential harms.	The UK seeks to take a "proportionate" approach to risk that focuses on the impact of the technologies within a specific context.	Flexible and proportional to impact. Specific definition of "high-impact systems" and risk assessment is defered to future regulations for private sector, while four different levels of impact, from lower to higher, are defined for the public sector. Algorithmic Impact Assessment Tool is used to determine them.	Mostly horizontal approach to risk with thresholds (unacceptable, high, limited, low or minimal risk) prescribing different regulations and obligations according to each level. Strong focus on high-risk systems, classified according to a set of areas (e.g. biometrics, critical infrastructure, education and vocational training, and law enforcement) and criteria (e.g. the likelihood of the use of the AI system, the potential extent of the harm, and the reversibility of its outcome).	Societal safety/ security is foregrounded in the Chinese approach to AI risk. The country is developing a general risk framework for science and technology, as well as a specific risk framework for recommender systems.

Requirements	Emphasis on lighter touch options, e.g. ethical principles and voluntary guidance, and the application of sectoral regulation. The BOR and RMF were made for voluntary use and do not require compliance. However, BOR explains how principles can be enforced through federal- and state-level legislation within particular sectors.	There is an overarching emphasis on a "light touch" approach to regulation. There is some existing guidance, including on conducting AI impact assessments for data protection and AI audits, but most future requirements will be developed by sectoral regulators. An AI Standards Hub has been established to support AI standards making.	Bifurcated hard-law approach for the private (AIDA) and public (Directive on ADM) sector. AIDA lists a series of requirements about anonymized data, risk-assessment and mitigation, record keeping and reporting obligations, and the publishing of a publicly available AI statement. The Directive includes an algorithmic impact assessment prior to production which introduces four levels of impact. Each level comes with its own requirements, varying in stringency of review, notice, human-in-the-loop, explanation, training documentation, contingency planning and approval for the system to operate.	The draft EU AI Act would introduce a hard-law approach. Most requirements focus on high-risk systems and are in relation to risk-assessment, data and data governance, documentation and record keeping, transparency and provision of information to users, human oversight, robustness, accuracy and security. The precise technical solutions to achieve compliance with those requirements may be provided by standards, which will be handled by CEN and CENELEC.	Non-binding AI ethical principles and norms for companies that cover the whole AI lifecycle. Prohibitions, transparency requirements, and consumer rights provisions related to recommender systems and generative algorithms. Standards will play a central role in AI governance, with international alignment and the promotion of Chinese standards pursued.
Monitoring and Enforcement	Given non-bindingness, compliance with BOR and RMF will not be monitored or enforced. The BOR provides guidance on sectoral regulaton which is enforced by regulatory authorities who have authority over their specific remits.	Monitoring and enforcement is delegated to regulators who will have authority over their specific remits, in line with their regulatory powers.	Quite centralised but bifurcated between private and public sectors. The AI & Data Commissioner, nominated by the Ministry of Industry, is responsible for private sector, while the Treasury Board for the public sector.	De-centralised enforcement through a web of AI-focused EU & National authorities, among which national supervisory authorities, notified bodies and the European AI Board.	The MIST is the coordinative body for AI governance in China, but it has focused its efforts on soft law initiatives. The CAC has been most active in introducing and enforcing hard law measures related to online algorithms. These are secondary legislation based on its powers from primary data protection legislation.
Flexibility & Revisions	Soft law approach ensures flexibility. NIST will set up a Trustworthy and Responsible AI Resource Center which will be responsible for keeping the RMF up to date, based on collection of multistakeholder feedback and in-house monitoring of AI trends.	The UK is focused on light touch measures (e.g. voluntary guidance or secondary legislation) meaning it will be relatively easy to adapt over time.	Neither the AIDA for the private sector nor the Directive on ADM for the public sector include a flexibility clause. However, AIDA is still under discussion and open to amendments, and the Directive entails an automatic review process every six months.	The Commission can adopt delegated acts to further specify and update the list of AI techniques and approaches in Annex I. Additionally, possibility to add as well as remove high-risk use cases in Annex III.	Measures directly regulating AI are either secondary instruments or voluntary guidance, so there is significant scope for these policies to be revised.
Acronyms	BOR = Blueprint for an AI Bill of Rights				
	RMF = NIST AI Risk Management Framework				
	EO13960 = Executive Order 13960: Promoting Use of Trustworthy Artificial Intelligence in the Federal Government				
	ADM = Automated Decision-making				
	MIST = Ministry of Science and Technology				
	CAC = Cyberspace Administration of China				