



Public Policy Lifecycle Approach for AI Regulations

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Policy Brief: Public Policy Lifecycle Approach for AI Regulations

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Executive Summary

This policy brief introduces a practical framework for applying the public policy lifecycle in regulating Artificial Intelligence (AI). Designed initially for governmental contexts, this lifecycle framework also offers immense value to private enterprises seeking to address AI's challenges effectively. By utilizing its five-phase structure—Identification, Formulation, Adoption, Implementation, and Evaluation—organizations can develop comprehensive AI governance strategies that balance innovation with ethical responsibility.

Drawing from real-world examples, such as the European Union's AI Act and hypothetical case study of AfrilD's bias mitigation efforts, this brief demonstrates how adapting the public policy lifecycle can help both governments and enterprises navigate complex challenges, including cybersecurity, sustainable development, and AI regulation.

The Problem

Artificial Intelligence (AI) has grown exponentially, revolutionizing sectors such as healthcare and finance. However, this rapid development has introduced complex challenges. Ethical concerns, like algorithmic bias and a lack of transparency, have raised trust issues. AI-driven automation has created economic disruptions, leading to job displacement and unequal distribution of benefits. Security risks, including weaponization and advanced cyberattacks, compound the urgency of comprehensive AI regulation.

Existing regulatory frameworks often fail to keep up with AI's pace of innovation. Regulatory gaps and uncertainty hinder progress, raise ethical concerns, and pose risks to society. To navigate these challenges, a proactive and holistic policy approach is essential. By aligning with the public policy lifecycle, organizations can systematically address AI's risks and opportunities, such as:

Ethical Concerns: Issues such as algorithmic bias, lack of transparency, and the potential misuse of AI (e.g., autonomous weapons) challenge societal trust.

Economic Disruption: AI-driven automation has the potential to displace jobs, exacerbate economic inequality, and disrupt industries.

Social Impacts: Privacy concerns and an overreliance on AI systems can undermine human autonomy and agency.

Security Risks: AI may enable sophisticated cyberattacks and the weaponization of autonomous systems.

Stakeholder Participation

AI regulation is inherently multidisciplinary. It must involve diverse stakeholders, including government agencies, technology companies, civil society organizations, academia, industry associations, and end-users. Collaborative mechanisms such as public consultations, workshops, and online forums enable stakeholders to contribute insights, share concerns, and influence policy outcomes. This inclusivity fosters balanced, well-informed, and socially acceptable regulations.

The Public Policy Lifecycle Framework

The Public Policy Lifecycle as a Framework for AI Governance

The public policy lifecycle comprises five interconnected phases that guide the development and implementation of effective policies. This structured approach is especially relevant to AI governance, ensuring systematic and adaptable regulation.

1. Problem Identification

This initial phase involves defining the specific challenges posed by AI. It requires thorough research, data analysis, and consultations with experts to develop a comprehensive understanding of the issues. For instance, identifying algorithmic bias or privacy concerns can guide targeted solutions.

2. Policy Formulation

Once problems are clearly defined, policymakers develop evidence-based strategies to address them. This phase considers the economic, social, and ethical implications of proposed policies. Stakeholders collaborate to design policies that are practical, enforceable, and adaptable to future challenges.

3. Policy Adoption

During adoption, policymakers secure the necessary political and legal backing for the proposed policies. This phase may involve legislative processes, stakeholder negotiations,

and alignment with international standards to ensure coherence across borders.

4. Policy Implementation

Successful implementation requires clear guidelines, adequate resources, and enforcement mechanisms. This includes creating regulatory bodies, establishing compliance requirements, and providing organizations with practical tools to meet regulatory standards.

5. Policy Evaluation

Continuous evaluation ensures that policies remain effective and relevant. Policymakers monitor outcomes, assess performance metrics, and incorporate feedback to adapt regulations as technologies and societal needs evolve.

Real-World Applications

Case Study 1: European Union AI Act

1. Agenda Setting/Problem

Identification: Identifying the Problem:

The EU recognized the rapid advancement of AI and its potential to disrupt various sectors. Simultaneously, concerns arose about the ethical implications, such as bias, discrimination, and job displacement. Public Awareness and Debate: Public discussions, media coverage, and academic research highlighted the need for a regulatory framework to address these issues.

2. Policy Formulation Expert Input:

The EU consulted with AI experts, policymakers, industry representatives, and civil society organizations to gather input and identify potential policy options. Risk Assessment: The EU assessed the potential risks and benefits of AI applications, categorizing them based on their level of risk. Legal Framework Development: Policymakers drafted a comprehensive legal framework that would govern the development and deployment of AI systems.

3. Policy Adoption Legislative

Process: The proposed AI Act¹ went through the European Union's legislative process, involving debates, amendments, and votes in the European Parliament and the Council of the European Union. International

Cooperation: The EU engaged with other countries and international organizations to align its AI regulations with global standards.

4. Policy Implementation Regulatory

Authority: The European Commission, as the EU's executive body, is responsible for implementing the AI Act².

Enforcement Mechanisms: The Commission will have the power to investigate potential violations, impose fines, and take other enforcement actions.

Industry Compliance: Businesses operating within the EU must comply with the AI Act's requirements, such as conducting risk assessments, ensuring transparency, and implementing appropriate safeguards.

5. Policy Evaluation Monitoring and Assessment:

The European Commission will monitor the impact of the AI Act and assess its effectiveness in addressing the identified risks. **Adaptation:** The regulation may be amended or updated as needed to keep pace with technological advancements and emerging challenges. **Feedback Loop:** Feedback from stakeholders, including industry, civil society, and academia, will be considered to refine the regulatory framework.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:237:FIN>

² <https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence>

Case Study 2: AfrilD Bias Mitigation (Made-up company)

AfrilD, a leading digital ID provider in Africa, faces a significant challenge: algorithmic bias in its facial recognition system. This bias, stemming from a lack of diverse training data, can lead to inaccurate identification, particularly for individuals with darker skin tones or specific facial features.

Public Policy Lifecycle Application

Agenda Setting/Problem Identification

Internal Recognition: AfrilD's internal AI governance committee identifies the bias issue through regular audits and user feedback.

External Engagement: The company engages with civil society organizations, human rights groups, and regulators to discuss the problem and its potential impact.

Policy Formulation

Ethical Framework Development: AfrilD develops a comprehensive ethical framework for AI, emphasizing principles like fairness, accountability, and transparency.

Bias Mitigation Strategies: The company implements specific strategies to address bias, including:

Data Diversity: Sourcing diverse datasets to train the facial recognition algorithm.

Fairness Metrics: Using fairness metrics to measure and mitigate bias.

Regular Audits: Conducting regular audits to assess and improve the system's fairness.

Policy Adoption

Technical Implementation: AfrilD updates its facial recognition system with the new, bias-mitigated algorithm.

Transparency and Accountability: The company commits to transparency and accountability by disclosing its AI governance practices and providing information about the system's limitations.

Policy Implementation

User Education: AfrilD educates users about the potential limitations of facial recognition technology and encourages them to report any issues.

Continuous Monitoring: The company establishes a robust monitoring system to track the performance of the AI system and identify emerging issues.

Policy Evaluation

Performance Metrics: AfrilD tracks key performance indicators, such as accuracy rates, false positive rates, and user satisfaction, to assess the impact of the bias mitigation efforts.

External Audits: The company invites independent experts to audit its AI systems to ensure ongoing compliance with ethical standards and regulatory requirements.

Policy Recommendations

- 1. Identify and Prioritize AI Risks and Opportunities:** Conduct thorough risk assessments to identify potential negative impacts of AI, such as bias, discrimination, and job displacement. Prioritize areas where AI can have the most significant positive impact, such as healthcare, education, and climate change.
- 2. Develop a Comprehensive AI Governance Framework:** Establish clear guidelines, standards, and ethical principles for AI development and deployment. Create a dedicated AI governance body, to oversee the implementation of the framework. Ensure transparency and accountability in AI decision-making processes.
- 3. Foster Collaboration and Stakeholder Engagement:** Engage with a diverse range of stakeholders, including government agencies, industry leaders, academia, and civil society organizations. Collaborate with international partners to develop global standards and best practices for AI governance.
- 4. Invest in AI Research and Development:** Support research into AI safety, ethics, and social impact. Encourage innovation while prioritizing responsible AI development.
- 5. Develop a Skilled AI Workforce:** Invest in education and training programs to develop a skilled workforce capable of building and deploying AI systems responsibly. Promote diversity and inclusion in the AI workforce.
- 6. Implement Robust Monitoring and Evaluation Systems:** Regularly assess the impact of AI policies and regulations. Monitor the performance of AI systems and identify potential issues. Evaluate the effectiveness of AI governance mechanisms.
- 7. Adapt to Rapid Technological Change:** Stay informed about the latest AI advancements and emerging technologies. Be prepared to update AI governance frameworks and policies as needed. Encourage a culture of innovation and continuous learning.



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