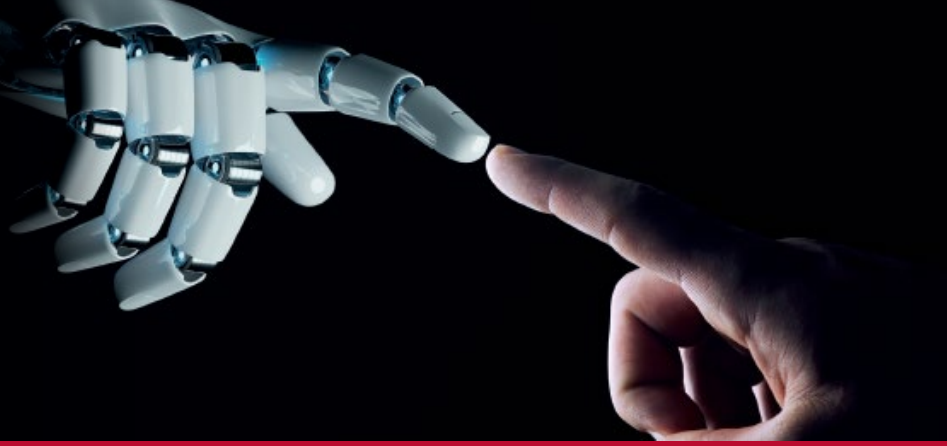# CHECKLIST FOR AI DEPLOYMENT

This AI Checklist is designed for policymakers and technical teams preparing to deploy or already deploying AI systems for government use. The document also seeks to inform policymakers striving to find a starting point to adopt AI systems responsibly or identify the most and least developed areas of AI adoption.

HOW TO USE THIS CHECKLIST

This AI Checklist is a questionnaire designed to help assess and mitigate the potentially harmful impacts associated with deploying an AI system.

It is best to complete the AI Checklist with a multi-disciplinary team that brings expertise in the areas of:
- Regulatory frameworks
- Risk assessment and mitigation
- Communications with consultants, and
- Procurement

The AI Checklist should be completed at the beginning of the design phase of a project. The questionnaire contains 30 questions related to regulations, business processes, data, system design and decision-making relevant to your situation and context.

> **In order to complete the questionnaire**, one should assign 1 "yes" or 0 "no" score to each featured blank box against the questions. The sum of the scores will help assess the readiness of an AI system to deploy. If the result for the score of each step is less than 5 it is an opportunity to step back and consider the feasibility or design of the AI use case.

There are some questions that consist of sub-questions. If you answer "yes" to half or more of the sub-questions, then the overall score for this step will be 1. These specific questions are marked "**SUB-SCORE**."

The questionnaire takes approximately 15 minutes to complete. Each section of the questionnaire contains five questions and sub-questions as specified above; the responses to the questions contribute to a maximum score of 5 for the section and 30 for the questionnaire.

This document is supported by a spreadsheet version in which one can generate a spider diagram for better illustration of the most/less developed areas.

This scoring system is intended to help one think through the various elements of responsible design and deployment of AI systems, and one's readiness to adopt these systems with minimal risk to impacted users and communities. If your total score is high, one might still need to revisit these questions throughout one's AI project to continue to monitor and address risk.

STEP 1: REGULATORY FRAMEWORK

This section highlights whether there are relevant regulatory safeguards to guide the use of AI technology in your country or context

	SCORE
1. There are relevant AI or data-related strategies, programs, plans or provisions adopted or considered by the government.	
2. Data protection and privacy is officially recognized by statements/announcements/policies.	
3. There is a procurement policy in place specific to AI technology.	
4. Ethical principles specific to AI technology have been enumerated, recognized, or adopted.	
5. An AI council/committee or similar structure is established within the institution responsible for oversight and/or regulation.	
TOTAL SCORE (out of 5)	

STEP 2: DECISIONS

This section focuses on processes to enable ethical and enhanced decision-making through the use of AI technology.

		SCORE
1. **SUB-SCORE:** Decision-makers use digital data and technologies to make policy decisions: *If you answer "yes" to half or more of the sub-questions below, then the overall score for this step will be 1.*		
	There are existing datasets, documents, or project reports that have not been strategically used to inform decision making.	
	There are dashboards or equivalent analytical instruments to use data for decision-making.	
	Raw datasets are available (by request) for decision-makers that are good-quality and representative.	
	Training on the use of data and/or AI for decision-makers are available.	
2. A Chief Data Officer (or similar position) is present in the institution responsible for regulation/oversight and this person has authority to initiate and manage decision-making automatization processes.		
3. Cybersecurity measures are provided for decision-making processes by internal or external teams.		
4. A diverse, multidisciplinary and qualified team (including data scientists and representatives of different sectors, gender experts, and professionals of varied technical expertise) has been formed to participate in the decision-making processes.		
5. An independent AI ethics team has been formed, or AI ethics themes are specifically covered by the multidisciplinary team for decision-making.		
TOTAL SCORE (out of 5)		

STEP 3: RISK ASSESSMENT AND MITIGATION

This section focuses on systems for ensuring AI is adopted in a secure and ethical manner and transparency is provided for all engaged stakeholders, communities, researchers, and observers.

	SCORE
1. **SUB-SCORE:** A risk assessment framework for algorithms and datasets has been developed (or identified) and operationalized.	
2. **SUB-SCORE:** Data Quality is ensured: : *If you answer "yes" to half or more of the sub-questions below, then the overall score for this step will be 1.*	
A documented process is in place to test datasets for biases and other unexpected outcomes from AI algorithms via experience in applying relevant frameworks, methods, guidelines or other assessment tools.	
Gender-sensitive analysis of the data is periodically conducted and information about this analysis is publicly available.	
Accountability for the design, development, maintenance, and improvement of the AI system is ensured.	
Datasets are available on an Open Government Portal (Open Data) (e.g., https://datos.gob.mx/busca/organization/estado-de-guanajuato).	
3. **SUB-SCORE:** Procedural Fairness is upheld: *If you answer "yes" to half or more of the sub-questions below, then the overall score for this step will be 1.*	
A Fairness Tool is used to assess and address data bias (e.g., AI Fairness 360 toolkit from IBM, Google's PAIR, Datasheets for Datasets from Microsoft).	
A system to audit AI technology has been established that includes access to the audit trail, logged details of all changes made to the model and the system, and logged details of the system's reasons for its decisions or recommendations.	
A process is in place to develop and approve a project concept case description for internal management based on risk and fairness assessment (i.e., AI council/committee).	
4. **SUB-SCORE:** Privacy is ensured: *If you answer "yes" to half or more of the sub-questions below, then the overall score for this step will be 1.*	
Security and privacy principles are built into all systems by default (e.g., from the concept stage forward).	
There are established agreements or arrangements with appropriate safeguards when personal information sharing is involved.	
5. **SUB-SCORE:** Transparency and accountability are ensured. *If you answer "yes" to half or more of the sub-questions below, then the overall score for this step will be 1.*	
Transparency is ensured. The methodological description of AI algorithms, tools, datasets, and risk assessment frameworks is clear and available to those who will be impacted by the AI system.	
Accountability is ensured. Roles and responsibilities for system compliance and errors are clear (e.g., a redress mechanism in place, Responsible AI Official is appointed, etc.) .	
TOTAL SCORE (out of 5)	

STEP 4: PROJECT-BASED CONSULTATIONS

This section focuses on maximizing transparency in AI decision-making to give users confidence that an AI system functions well.

	SCORE
1. A process for consultations with internal stakeholders (e.g., Strategic Policy and Planning, Data Governance, Program Policy, etc.) is established.	
2. A process for consultations with external stakeholders (e.g., Civil Society, Academia, Industry, external groups relevant for each specific project, etc.) is established.	
3. Consultations on the application of AI tools are provided at the initial stages of the project.	
4. A feedback system for gathering opinions after consultation is provided in multiple forms (e.g., by email, on the specialized portal).	
5. External stakeholders can monitor and evaluate the system once the project is implemented.	
TOTAL SCORE (out of 5)	

STEP 5: PROCUREMENT

This section focuses on processes related to the procurement, maintenance and change of AI technologies.

		SCORE
1. **SUB-SCORE:** Local AI technology suppliers are invited and engaged at early stages within the planning phase of any AI project: *If you answer "yes" to half or more of the sub-questions below, then the overall score for this step will be 1.*		
	Multiple, diverse channels are used to identify AI suppliers.	
	An open environment supporting competition in the AI ecosystem exists.	
	Public, open and blind procurement procedures are established.	
2. **SUB-SCORE:** Procurement documentation focuses on a clear problem statement, rather than details or specifications for a solution: *If you answer "yes" to half or more of the sub-questions below, then the overall score for this step will be 1.*		
	All invitations to tender include outcome-based requirements that focus on describing both challenges and opportunities.	
	The invitation to tender includes an iterative approach to product development.	
	The procurement problem statement requires both the explanation of process and interpretation of results from algorithms.	
	The procurement document includes the requirement of periodic testing for the life of the technology and project.	
	The procurement document includes the requirement of AI risk assessment by an AI supplier stipulated at different stages of the project implementation.	
	The procurement document includes a requirement for transferring knowledge and training.	

3. The evaluation process of submitted tenders is multidisciplinary to ensure there is a broad expertise conducting the tender evaluation.	
4. Procurement requirements include explanations of AI technology, algorithms and systems for non-specialists.	
5. Appropriate support and hosting arrangements are in place for the procurement team.	
TOTAL SCORE (out of 5)	

STEP 6: END-OF-LIFE

This section asks about the future functioning and sustainability of investments in AI system.

	SCORE
1. End-of-life processes for any procured AI system, the data used and results created are considered and expectations are agreed to by all parties (e.g., decision-makers, vendors, users).	
2. There is a documented list of ethical implications associated with the future AI system.	
3. There is a list of technical risks and flowcharts on how to mitigate identified risks.	
4. Monitoring and evaluation of technical processes of the AI system are established.	
5. A transparent, publicly available dialogue with the developers about the sustainability of the AI system is established.	
TOTAL SCORE (out of 5)	

FURTHER READING:
- https://www.gov.uk/government/publications/guidelines-for-ai-procurement/guidelines-for-ai-procurement
- https://open.canada.ca/aia-eia-js/?lang=en
- https://www.gov.uk/government/publications/ethics-transparency-and-accountability-framework-for-automated-decision-making/ethics-transparency-and-accountability-framework-for-automated-decision-making
- https://medium.com/@prasannalaldas/speaking-in-tongues-teaching-local-languages-to-machines-1793f88cf496