Digital Cooperation Organization

AI-REAL TOOLKIT

AI READINESS TO EMPOWERMENT, ADOPTION, AND LEADERSHIP

AI READINESS ASSESSMENT GUIDE

GUIDING NATIONS FROM READINESS TO AI ADOPTION & LEADERSHIP

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Secretary-General
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Foreword

As we enter an era of rapid technological advancements, Artificial Intelligence (AI) has emerged as one of the most transformative forces shaping global economies and societies. The Digital Cooperation Organization (DCO) recognizes the critical need for responsible, ethical, inclusive and sustainable AI adoption to achieve digital prosperity for all. With countries around the world, especially our Member States representing diverse geographies and populations, we are uniquely positioned to foster an inclusive, human-centric approach to AI.

The development of this AI-REAL (AI Readiness to Empowerment, Adoption, and Leadership) Toolkit reflects our commitment to guiding governments through the complexities of AI readiness and adoption. It serves as a comprehensive resource for assessing AI capabilities, integrating AI into public and private sectors, and aligning AI initiatives with national development goals.

This toolkit is not merely a set of guidelines—it is a vision for a future where AI supports innovation, enhances governance, and enables economic growth across borders. By leveraging the expertise of stakeholders, this initiative underscores our shared mission to shape a digitally empowered global community.

We are grateful to our partners and contributors who have supported the creation of this toolkit, and we look forward to the transformative outcomes it will inspire in the years ahead.

1. EXECUTIVE SUMMARY

Artificial Intelligence (AI) is reshaping industries and economies by unlocking the immense value of data and addressing critical global challenges, such as climate change and the digital divide. By 2030, AI-driven technologies are expected to generate over $15.7 trillion* in economic impact worldwide. Recognizing AI's transformative potential, the Digital Cooperation Organization (DCO) is dedicated to accelerating AI adoption to boost competitiveness, spur innovation, and drive digital transformation for the countries globally, including its Member States.

To effectively achieve these goals, it is essential to assess the current AI readiness of the countries, allowing for tailored AI adoption strategies and roadmaps. As part of the AI-REAL Toolkit Initiative, DCO has developed AI readiness assessment and adoption portal, designed to evaluate a country's existing AI capabilities and provide a guidance on their journey toward successful AI adoption and integration in both public and private sectors.

The toolkit enables countries, including DCO Member States, to assess their preparedness across key pillars such as government strategy, policies and regulations, technological advancements, data & infrastructure, economic impact of AI, and talent development. Each pillar includes specific dimensions, with targeted questions designed to measure a country's AI readiness. These pillars and questions are developed through extensive literature review, benchmarking against leading and emerging AI nations, input from DCO Member States, and feedback from experts.

This assessment will provide countries with a clear understanding of their current AI readiness, offering valuable insights into both strengths and areas for improvement. By completing the assessment, countries not only gain clarity on their AI capabilities but can also benchmark themselves against global leaders, allowing them to refine their strategies and strengthen their AI potential for the future.

2. INTRODUCTION

The DCO is creating an AI-REAL Toolkit designed to expedite the assessment and adoption of AI by the countries, including its Member States. This toolkit will feature a structured AI readiness evaluation, adoption frameworks, AI artifacts, and a strategic roadmap aligned with international best practices. By leveraging insights from leading and emerging AI-driven nations, the toolkit will support the countries in efficiently advancing their AI maturity and adoption.

As part of the AI-REAL Toolkit Initiative, DCO has developed an AI Readiness Assessment Toolkit, designed to evaluate a country's existing AI capabilities and support to provide a guidance on their journey toward successful AI adoption and integration in both public and private sectors.

2.1 Need for the AI Readiness Assessment Toolkit

The AI Readiness and Adoption Toolkit is essential to help countries, including the DCO Member States, successfully navigate the complex landscape of AI adoption. The need for this tool arises from several critical factors:

- Assessing AI Readiness and Capabilities: Many countries are at different stages of AI readiness and may not fully understand their current capacity to adopt AI responsibly.
- Standardized Framework: The toolkit provides a standardized framework to assess a state's readiness across key pillars and dimensions such as governance, infrastructure, data, and talent, helping governments identify strengths and gaps.
- Guiding Responsible and Ethical AI Adoption: With the rapid advancement of AI technologies, it is crucial that AI is adopted in a responsible, ethical, and inclusive manner.

- Alignment with Global Best Practices: The toolkit ensures that countries can align their AI strategies with global best practices and ethical standards, especially in sectors like healthcare, education, and public administration.
- Overcoming Barriers to Adoption: Countries often face numerous challenges when integrating AI, such as lack of a supportive culture, limited access to quality data, a shortage of AI talent, and the absence of clear regulations. The toolkit helps address these barriers by providing a structured approach to AI adoption, including strategies for overcoming common obstacles.
- Creating Tailored National AI Strategies: A one-size-fits-all approach does not work for AI adoption. The toolkit helps countries develop customized AI strategies based on their unique needs, current capabilities, and sectoral priorities.
- Providing Practical Tools and Resources: The toolkit is not just theoretical—it offers a suite of practical resources such as templates, frameworks and guidelines to support the implementation of AI strategies. These tools are designed to facilitate the rapid testing, prototyping, and scaling of AI applications, ensuring that countries can quickly realize the benefits of AI.

This diagnostic tool is designed to offer a qualitative assessment, providing valuable insights into a country's unique AI readiness without being used for ranking or benchmarking against others. It focuses on evaluating strengths, weaknesses, and areas of improvement for strategic development rather than enforcing regulatory standards or measuring AI performance outcomes.

To ensure a comprehensive AI readiness assessment, a focus group of diverse experts and inputs from international fraternity is recommended. This group should include strategic knowledge stakeholders such as government officials and national AI committees, technical experts like AI specialists and infrastructure experts, and sector-specific representatives from key industries. Additionally, ethics and governance representatives will ensure that AI implementations align with ethical standards and legal regulations, providing a balanced approach to AI readiness. In summary, the toolkit is a critical resource for helping countries transition from understanding AI potential to actual implementation, driving ethical AI adoption while addressing both technical and social challenges.

2.2 Purpose of the Document

The "AI Readiness Assessment Toolkit Guide" document provides an in-depth guidance of using the AI readiness assessment toolkit. The document covers the following topics –

- AI Pillars: Provides an overview of the key pillars that form the backbone of AI readiness and how they were identified and shortlisted.
- Interconnected Dimensions & Indicators: Describes how each pillar is broken down into specific dimensions and further indicators.
- AI Readiness Levels: There are 5 AI Readiness levels defined, and these levels are described in detail for every pillar.
- Guidance for answering the assessment questions: The AI Readiness Assessment Guide provides a structured framework, details out guidance information including potential data sources and examples for answering the questions for each question.

The AI Readiness Assessment also serve as a groundwork for AI Adoption Toolkit and AI initiatives charter.

3. AI READINESS ASSESSMENT FRAMEWORK

Establishing pillars and associated dimensions is essential for building a robust foundation for the AI-REAL Toolkit. These pillars, which focus on critical areas to guide countries globally, including DCO Member States, in addressing local AI challenges such as lack of skilled talent limited access to high quality data, high compute infrastructure, weak AI governance and policies while incorporating global best practices. They offer a consistent structure for assessing AI preparedness and progress, helping to identify strengths, gaps, and opportunities for improvement.

3.1 Methodology of Identifying Pillars and Dimensions

The process of defining the final list of pillars for the AI readiness assessment toolkit involves several key steps:

1. Prepare a comprehensive list of AI pillars: An initial list is compiled through in-depth literature review & analysis of benchmarked countries, surveys responded through DCO Member States and subject matter expert inputs, refined by incorporating priority areas obtained from the Member States, reviewing relevant literature, and examining the approaches of global AI leaders and emerging countries.
2. Finalize the AI-REAL Toolkit Pillars: By analyzing this list, common themes surfaced, revealing key foundational elements critical for AI adoption. These recurring themes (indicators) were refined and organized into core dimensions, which were grouped into the essential pillars required for AI readiness assessment and adoption.

3.2 Research to Identify Key AI Pillars

Research was conducted from various sources, including AI readiness indices, official AI strategies states, industry reports, and academic papers. These sources also include inputs from surveys shared with the DCO Member States. The final AI pillars was derived by combining these sources, ensuring alignment with global best practices and local needs.

3.2.1 Literature Review

The selection of pillars for the AI Readiness Assessment Toolkit is primarily drawn from an extensive literature review. A comprehensive analysis of key government AI readiness indices was conducted, drawing on sources such as Oxford Insights, Tortoise, UNESCO, Salesforce, and the AI Readiness Benchmark by Capgemini. This literature review helped generate a broad list of potential pillars, covering critical areas such as upskilling, AI infrastructure, network connectivity, industry collaboration, AI ethics, and investment.

The broad list of pillars was then refined by identifying the common and significant AI pillars across these key sources, ensuring alignment with globally recognized best practices. In addition to the literature review, input from subject matter experts was considered to validate and prioritize the most relevant pillars. This process ensured that the final selection of pillars is both comprehensive and focused, addressing the critical components needed for assessing a country's AI readiness.

Literature Review Documents*

Key AI pillars as per the literature review

- **Talent**: Human capital and AI education
- **Infrastructure**: Network connectivity, computing capabilities, IT advancements
- **Development:** Innovation capacity, IT growth
- **Government Strategy:** AI governance, ethical AI, policy, and regulations
- **Operating Environment**: Well-being and culture
- **Commercial**: Investments and AI start-up support
- Investment in R&D

*Tortoise | *Oxford | *Salesforce | *UNESCO | *Capgemini *Refer Appendix for list of pillars from each source and mapping to final set of pillars*

3.2.2 Inputs from the DCO Member States

A comprehensive survey was conducted across the DCO Member States to gather insights into their specific AI pillars and focus areas within the AI domain. This survey aimed to capture the strategic areas that each country deems critical for their AI adoption. The primary data collected from this survey provided a valuable foundation for understanding the diverse AI pillars and dimensions across these nations. These findings were then used as an input to develop the AI Readiness Assessment toolkit.

The toolkit includes the most relevant pillars identified through this survey, ensuring that it reflects the priorities of the Member States while addressing global AI trends and best practices. This approach not only ensures the toolkit's relevance but also enables a more focused and strategic approach to AI adoption, aligned with the specific goals and challenges of the countries.

DCO Member States that took part in the survey


Cyprus


Ghana


Jordan


Kuwait


Morocco


Nigeria


Oman


Pakistan


Qatar


Rwanda


Saudi Arabia


The Gambia

Key AI pillars as per the survey

- **Research and Development**
- **Government and Policies**
- **Data**
- **Talent**
- **Innovation**
- **Infrastructure**
- **Collaboration and Partnership**
- **Economic Growth**

Refer Appendix for list of pillars from each source and mapping to final set of pillars

3.2.3 Benchmarking Global AI Leading and Emerging Countries

The key pillars of the AI Readiness Assessment Toolkit are also shaped by the outcomes of a benchmarking exercise conducted on global AI leaders and emerging countries. By analyzing the AI strategies, initiatives, and focus areas of countries such as the USA, Singapore, the UK, the UAE, and Benin, several critical themes emerged. While each of these countries has unique approaches to AI development, they share common foundational elements essential for AI success. These include robust investment in AI research and infrastructure, strong regulatory frameworks, a focus on upskilling the workforce, ethical AI development, and fostering industry collaboration.

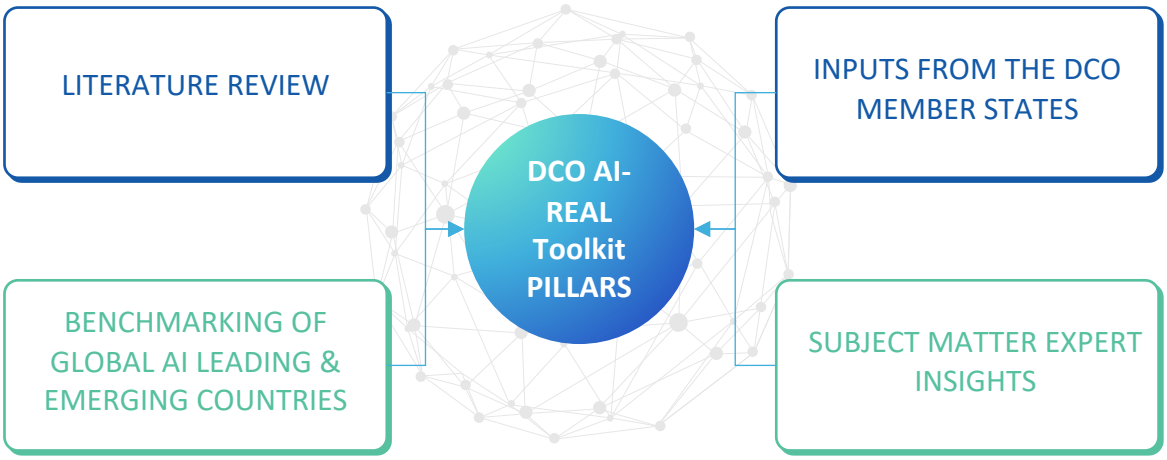
The insights gained from this benchmarking exercise helped to further refine the toolkit, ensuring that it addresses both the challenges and opportunities observed in leading and emerging AI nations.

*Tortoise Global AI Index

Refer Appendix for list of pillars from each source and mapping to final set of pillars

3.3 DCO AI-REAL Toolkit Pillars

The development of key pillars for the AI readiness assessment involved a multi-faceted approach, drawing insights from a variety of reliable sources to ensure that the framework is comprehensive, relevant, and adaptable. These sources included a thorough literature review of AI readiness indices, surveys conducted among the DCO Member States, benchmarking exercises focused on countries that are recognized as global leaders and emerging countries in AI, along with insights from the subject matter experts.



Through the analysis of these inputs, common themes emerged, offering a clear perspective on the foundational elements crucial for accelerating AI adoption. These recurring themes (indicators) were refined and organized into core dimensions, which were then established as the essential pillars for AI readiness assessment and adoption. This structured approach ensures that the pillars incorporate both global best practices and local priorities, effectively guiding countries toward successful AI integration in both public and private sectors.

This structured, multi-layered approach ensured that the selected pillars were not only reflective of global trends but also adaptable to the specific nations by aligning with developed vs developing nations. By incorporating the primary data from the DCO Member States, the toolkit is aligned with their unique AI priorities and challenges, making it a valuable tool for guiding countries toward successful AI adoption.

This approach resulted in the identification of an AI Readiness Assessment Framework consisting of 5 key AI pillars (as described in Figure 1) and 17 dimensions. Each pillar represents a major focus area critical to AI readiness assessment and adoption, while the 17 dimensions (as described in Figure 2) and 39 indicators (in section 6) provide a deeper, more granular assessment of a country's AI readiness. This approach ensures a thorough evaluation of AI readiness, helping countries pinpoint specific areas for improvement while aligning their strategies with global best practices and local priorities, ultimately leading to focused adoption of AI.

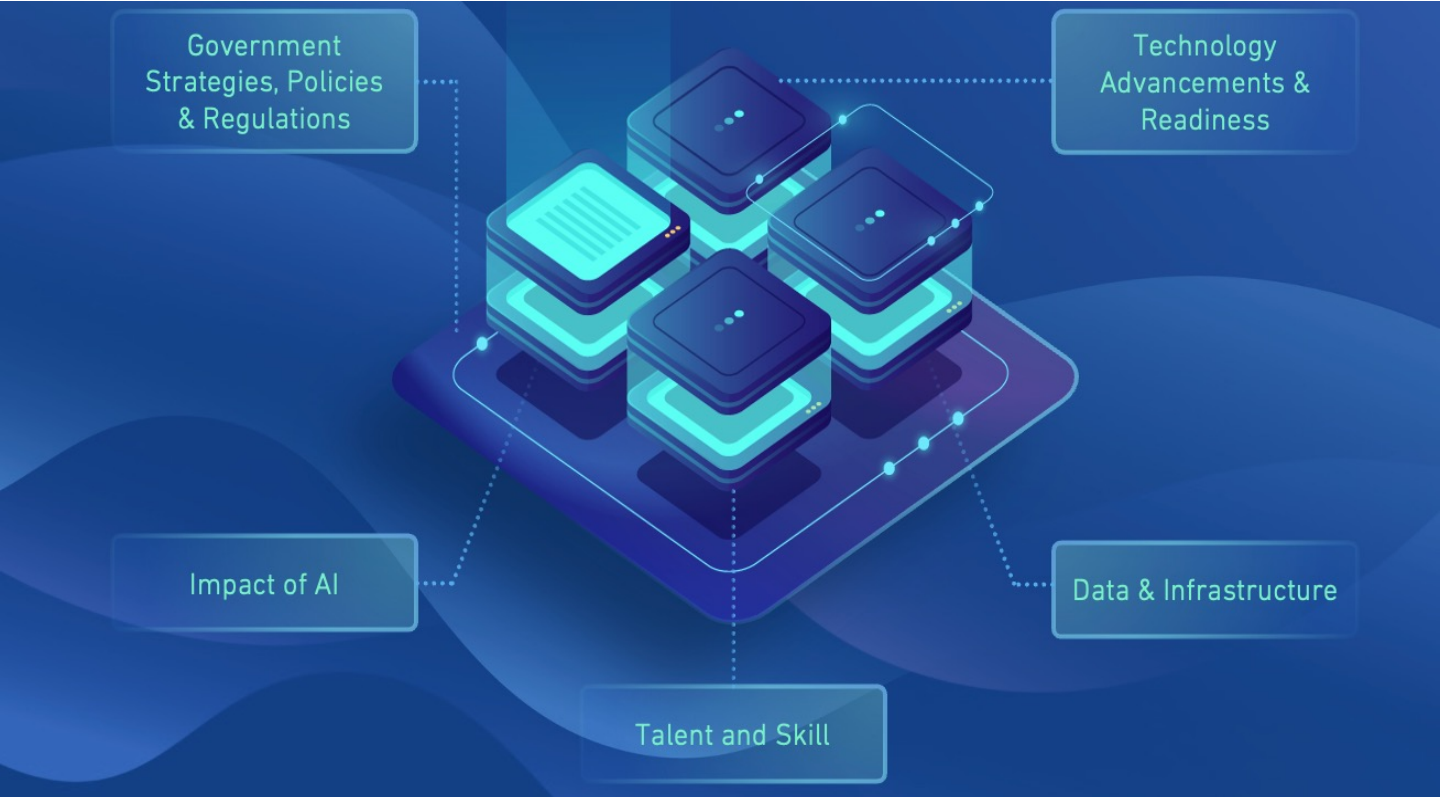


Figure 1 : DCO AI Readiness Assessment Framework

Framework Pillars	Description
Government Strategy, Policies & Regulations	Focuses on ethical AI adoption through clear strategies, policies, frameworks, and effective governance. It promotes sustainable, inclusive AI development while safeguarding societal interests and mitigating risks
Technology Advancements & Readiness	Ensures innovation through R&D and integration of AI technologies across sectors, while emphasizing the need for advanced technological infrastructure and readiness for scalable AI solutions
Data & Infrastructure	Emphasizes the importance of data availability, management, and protection, while ensuring high data quality for AI applications. It also focuses on building the necessary data infrastructure, to support scalable AI operations and innovation
Impact of AI on the Economy	Highlights the role of AI in fostering entrepreneurship, encouraging public-private partnerships, and promoting international collaborations. It emphasizes AI investments as key drivers to stimulate economic growth across sectors
Talent and Skill	Concentrates on cultivating AI expertise through education programs, upskilling initiatives, and continuous learning opportunities. It aims to build a robust and skilled workforce.

3.4 DCO AI-REAL Toolkit Dimensions

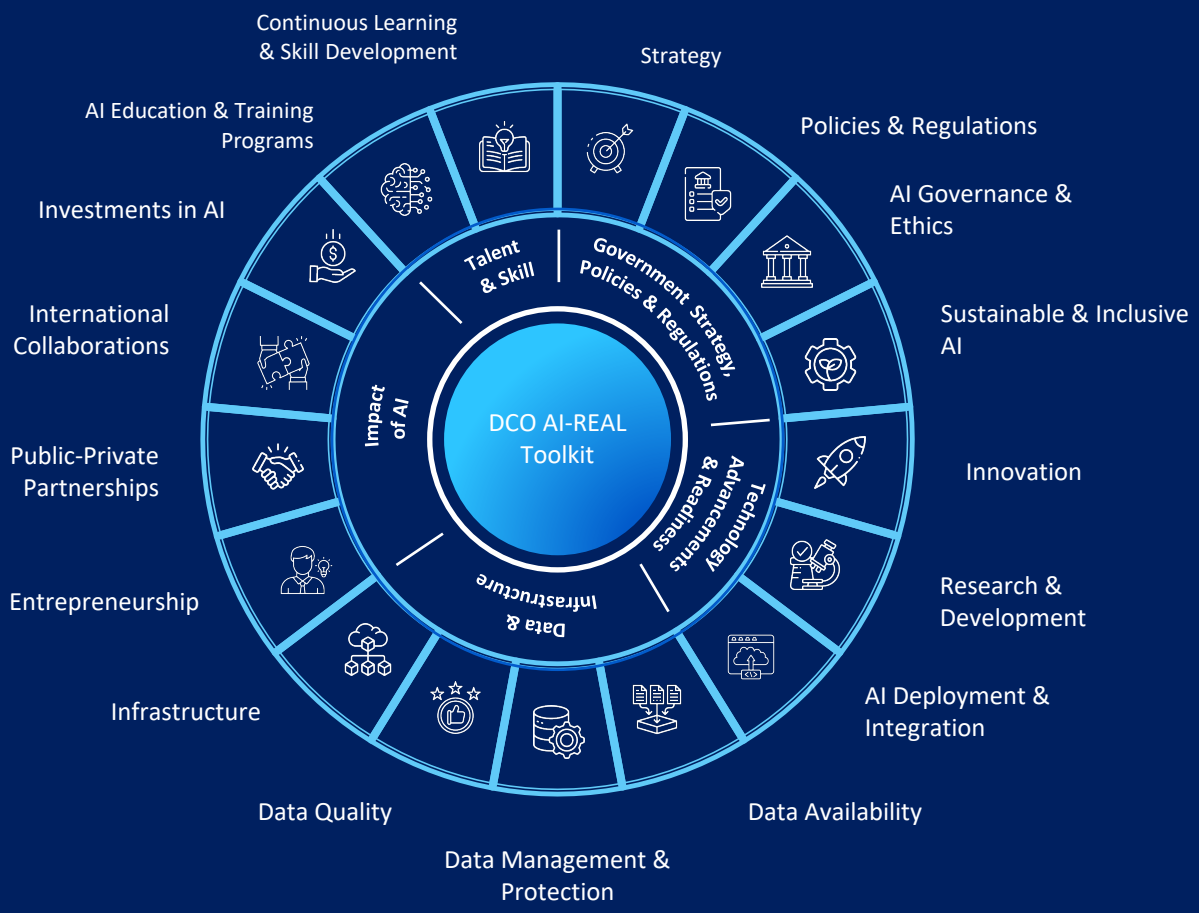


Figure 2 : DCO AI-REAL Toolkit Pillars & Dimensions

The development of DCO AI-REAL Toolkit involves key 17 dimensions that encompass both strategic and operational aspects of AI readiness. At the core are Strategy, Policies and Regulations, and AI Governance & Ethics, which ensure alignment with national goals, ethical standards, and regulatory frameworks. Additionally, dimensions like Sustainable & Inclusive AI emphasize the importance of AI's broader societal impact, ensuring its use benefits all segments of society without compromising its future.

On the operational side, the toolkit evaluates Innovation, Research and Development, and AI Deployment & Integration to assess a nation's or organization's capability to innovate and implement AI solutions. Data Availability, Data Management & Protection, and Data Quality are critical for ensuring reliable, secure, and high-quality inputs for AI systems. Infrastructure plays a key role in supporting AI's technical demands, while Entrepreneurship, Public-Private Partnerships, International Collaboration, and Investment focus on fostering AI growth and integration through collaboration, funding, and global engagement. Finally, AI Education & Training Programs and Continuous Learning & Skill Development ensure a skilled workforce capable of meeting the evolving demands of AI development and deployment.

These dimensions are further divided into 39 key indicators, providing a granular view of AI readiness. This ensures a comprehensive evaluation, that will enable a clear roadmap for scaling AI initiatives across different readiness levels.

Dimensions	Description
Strategy	Government's long-term AI plan focuses on aligning initiatives with national priorities, goals, and resource allocation
Policies and Regulations	Develop and enforce policies & laws to ensure ethical use of AI, promoting transparency, fairness, accountability, while supporting R&D and investment
AI Governance & Ethics	Establish AI governance frameworks to ensure ethical practices, fairness, reduction in bias , and human-centric design
Sustainable & Inclusive AI	Ensure AI technologies are developed and deployed for inclusivity and sustainability, minimize harm and promote equal access
Innovation	Foster AI innovation through research grants, innovation hubs, and public-private sector collaborations
Research & Development	Invest in R&D to advance AI technologies, including machine learning, robotics, and natural language processing
AI Deployment & Integration	Develop digital strategies for effective deployment of AI across various sectors, ensuring seamless integration with existing technologies
Data Availability	Ensure that large, high-quality datasets are available for training and developing AI models
Data Management & Protection	Implement robust data management practices and protection mechanisms throughout the data lifecycle to ensure effective data management
Data Quality	Focus on the accuracy, consistency, completeness and reliability of data used in AI applications
Infrastructure	Leverage safe and secure cloud infrastructure to provide scalable and flexible resources for AI development and deployment
Entrepreneurship	Promote AI-driven startups and entrepreneurship through funding, mentorship, and incubator programs
Public-Private Partnerships	Establish collaborations between public & private institutions, research organizations, and companies to accelerate AI adoption
International Collaborations	Engage in international partnerships to exchange knowledge, technologies, and best practices in AI
Investments in AI	Encourage investments in AI research, development, funding programs and commercialization to fuel economic growth
AI Education & Training Programs	Develop specialized education and training programs in AI to build a skilled workforce
Continuous learning & Skill Development	Encourage lifelong learning initiatives to ensure that professionals remain updated with the latest AI advancements

4. AI READINESS LEVELS

AI readiness assessment framework is designed to categorise countries based on their level of readiness and progress in adopting AI technologies (as described in Figure 3). The first stage, **Aware**, includes countries that are at the very beginning of their AI journey, with limited awareness and no established infrastructure or policies. These nations prioritize gaining an understanding of AI's potential and the necessary requirements to build a foundation for future growth and development. At this level, their goal is to initiate AI awareness and understand how it can drive productivity and innovation in the future. **Active** are those countries that have begun engaging with AI, drafting policies, and setting up initial regulatory frameworks, but have not yet fully scaled AI solutions. They are in the early stages of integrating AI into their systems, focusing on foundational development. The focus here is to start scaling AI adoption, fostering innovation, and enhancing productivity across early-stage industries.

Operational have progressed beyond the experimental phase, with established strategies, policies, and regulations in place. They are actively developing minimum viable products across key sectors such as healthcare, finance, and public services. These countries are implementing governance structures, enhancing infrastructure, and are now focused on expanding their AI capabilities. Their goal is to scale AI adoption more widely, driving productivity and fostering innovation across multiple industries. **Systemic** represent countries with advanced AI expertise and a mature ecosystem. AI is widely deployed in industries, especially in focus sectors, and there is significant investment in research and talent development. These countries continuously refine and optimize their AI strategies to stay competitive. The goal at this level is to fully scale AI across sectors, ensuring that innovation and productivity gains are maximized through continuous optimization.

At the top of the readiness level are the **Influencer**, who set standards and drive innovation on an international scale. These countries are not only at the forefront of AI adoption but are also shaping global policies, ethics, and regulations. Visionaries use AI to transform industries, drive economic growth, and address societal challenges, making them influential in both AI research and governance. Their goal is to lead the global AI landscape, using it to drive innovation, productivity, and societal transformation.

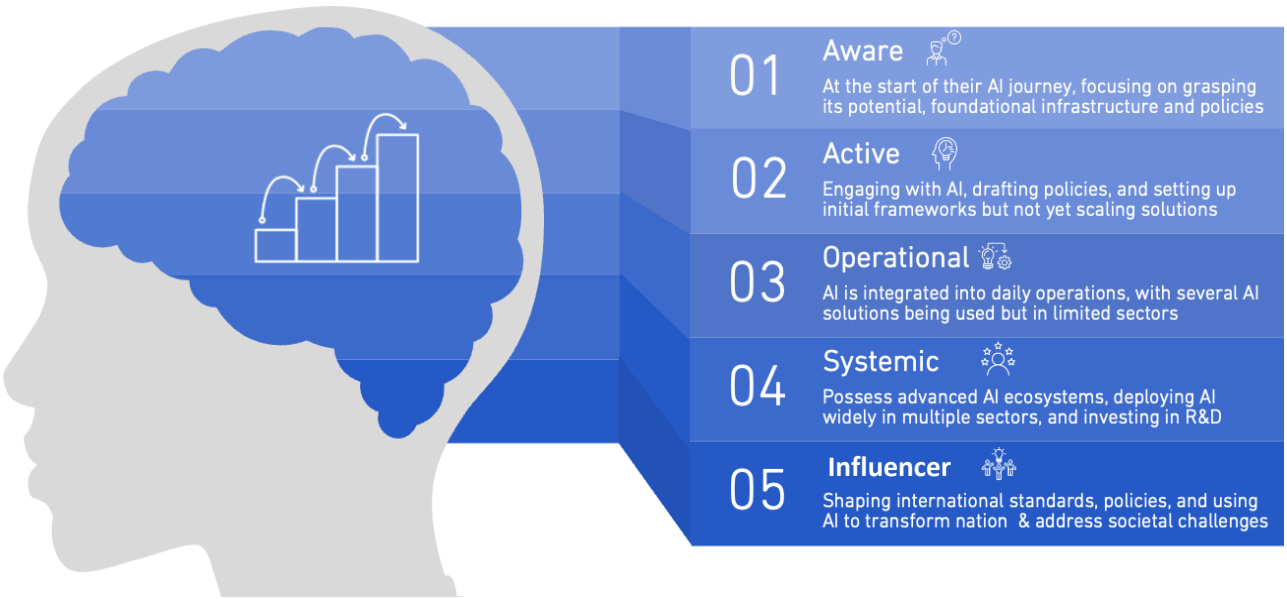


Figure 3 : AI Readiness Levels

The results of the AI readiness assessment will deliver a comprehensive, multi-layered evaluation of a country's AI preparedness, providing focused insights that highlight areas for improvement and opportunities for growth.

Overall Readiness	Provides a high-level evaluation of the country's ability to adopt and integrate AI technologies, giving a snapshot of its AI readiness and development potential.
Pillars	Analyzes five core areas—Government Strategies, Policies & Regulations, Technology Advancements & Readiness, Data & Infrastructure, Impact of AI on Economy, and Talent & Skill—enabling understanding of pinpoint foundational gaps and AI adoption priorities
Dimensions	Delves into specific aspects like Strategy, AI Governance & Ethics, Data Availability, and Infrastructure, providing detailed insights into critical areas for improvement and targeted interventions
Indicators	Includes 39 measurable metrics within the dimensions to offer detailed insights into the actual progress of AI adoption, highlighting both strengths and areas for improvement in AI development efforts

Readiness levels and inferences (based on scores 1 to 5, where 5 is highest)

Considering the overall scores, we can draw the following broader inferences:

Influencer (4.01 to 5)	Continuously update AI strategies and lead in setting global standards for ethical AI use. Leverage AI to address large-scale challenges and advance global AI governance
Systemic (3.01 to 4)	Refine AI strategies and optimize integration across sectors, with a focus on research and talent development. Expand international collaborations to maintain a competitive edge.
Operational (2.01 to 3)	Scale AI deployments across sectors and create MVPs to drive broader adoption. Strengthen partnerships and governance structures to ensure sustainable growth and innovation
Active (1.01 to 2)	Formalize AI policies and regulations while piloting projects in key sectors. Establish governance frameworks and enhance infrastructure to support early AI adoption
Aware (1)	Build foundational AI knowledge by drafting national policies, strategies, regulations and investing in basic infrastructure. Identify & priorities AI initiatives as per the national priorities

AI Readiness Assessment – Country Categorisation Methodology

The AI readiness assessment toolkit will present users with 39 questions, each corresponding to an indicator categorized under 17 dimensions and 5 pillars. Each question offers 5 answer options, with a single-selection scale ranging from 1 to 5.

The user's responses will be used to calculate a weighted average, determining the overall AI readiness score. Furthermore, weighted average scores will be calculated for both the pillar and dimension levels, offering a detailed breakdown of AI readiness across specific areas.

Based on the final scores (1 to 5), the country will be classified into one of the following categories: Aware, Active, Operational, Systemic, or Influencer. A similar logic will be applied to the pillars and dimensions to assess their current readiness.

5. AI READINESS ASSESSMENT TOOLKIT QUESTIONNAIRE

The DCO AI Readiness Assessment toolkit would helps the countries aiming to assess and enhance their AI capabilities by drawing on diverse data sources. These sources include official government reports, national AI strategies, academic publications, and sector-specific AI projects, which provide essential insights into key areas such as governance, infrastructure, talent development, and AI policies. To ensure a well-rounded and accurate assessment, it is recommended to form focus groups that bring together representatives from key sectors, such as technology, education, labor, and infrastructure. These multidisciplinary groups can offer a more comprehensive perspective by providing up-to-date and sector-specific data critical to assessing AI readiness. This section provides a list of potential data providers for each question, offering guidance on where countries can source the necessary information for an accurate AI Readiness Assessment.

A key feature of the toolkit is its structured 5-level response system, designed to help countries evaluate their AI readiness in a detailed and nuanced manner. Each question within the toolkit is accompanied by a set of possible answers, rated on a scale of 0 to 5, that allow countries to assess where they stand across multiple AI dimensions. This detailed scoring system provides a clear picture of the maturity level of AI initiatives and identifies specific areas where improvements are needed.

Additionally, this section provides examples from global AI leaders and emerging nations to guide countries through the assessment process, offering practical insights and best practices. These real-world examples demonstrate how other countries have addressed similar aspects and serve as a benchmark, helping the assessed countries refine their responses.

Government Strategies, Policies & Regulations Questions

Strategy | *Policies and Regulations* | *AI Governance & Ethics* | *Sustainable & Inclusive AI*

Q1: Does your country have a national AI strategy designed to facilitate and accelerate AI adoption?

Readiness Levels	1. There is no approved national AI strategy at present. 2. A national AI strategy is currently being drafted. 3. A national AI strategy has been published, and certain sectors are aligning with it. 4. The published national AI strategy aligns with best practices and prescribed frameworks, with multiple sectors adopting it. 5. The national AI strategy is actively monitored and updated to reflect evolving national priorities and international trends.
Response Selection Rationale	• **Response 1:** The country does not yet have an approved national AI strategy. • **Response 2:** The national AI strategy is currently in development, with initial drafts being prepared and reviewed. • **Response 3:** The national AI strategy has been officially published, and certain sectors are beginning to align with it based on insights from focus groups. • **Response 4:** The published national AI strategy follows best practices outlined in the DCO AI Adoption Playbook (Page 9) and is being adopted across multiple sectors. The national AI strategy should outline: o National goals and targets for: ✓ Capacity, ✓ Investment, ✓ Adoption, and ✓ Regulation. o Plans for key strategic elements such as: ✓ Regulation, ✓ Research, ✓ Skill development, ✓ Adoption, and ✓ International collaboration. o Implementation plan with: ✓ Clear timelines, ✓ Defined roles for stakeholders, ✓ Allocated budgets for initiatives and programs, and ✓ Clear administrative structure. • **Response 5:** A system is in place, as described in the DCO AI Adoption Playbook (Page 13), to regularly monitor and update the national AI strategy in response to evolving national priorities and global developments.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	The UK government has published its national AI strategy, which outlines the government's plan for turning the UK into a global AI powerhouse in the coming years.

Government Strategies, Policies & Regulations Questions

Strategy | *Policies and Regulations* | *AI Governance & Ethics* | *Sustainable & Inclusive AI*

Q1: Does your country have a national AI strategy designed to facilitate and accelerate AI adoption?

Recommendation	• **Level 1:** Begin discussions with relevant government bodies to initiate the drafting process of a national AI strategy. Engage key stakeholders and focus on gathering initial data and objectives that align with national priorities. For further guidance, refer to the DCO AI Adoption Playbook (Page 9) and consider using insights from the potential data sources mentioned. • **Level 2:** Ensure that the draft AI strategy aligns with national goals and international best practices. Validate the draft with key sectors and integrate their feedback to strengthen it. The DCO AI Adoption Playbook (Page 9) provides guidance on key considerations at this stage. Use data from national agencies and other potential data sources to support the drafting process. • **Level 3:** Ensure the published national AI strategy follows best practices and frameworks outlined in the DCO AI Adoption Playbook (Page 9). Focus on implementing sector-specific AI strategies in alignment with the national AI strategy. Coordinate with government ministries and the private sector to ensure effective adoption of the published strategy. Refer to the DCO AI Adoption Playbook (Page 57) for a structured approach to sector alignment. • **Level 4:** Ensure ongoing monitoring and evaluation of the national AI strategy. Utilize the key steps outlined in the DCO AI Adoption Playbook (Page 13) to track progress and ensure adherence to global best practices. Leverage data from relevant ministries to verify that sector-specific strategies are aligned with the national AI strategy. • **Level 5:** Continue refining and updating the national AI strategy as described in the DCO AI Adoption Playbook (Page 13), conducting regular reviews and incorporating feedback from diverse sectors, global best practices, and national priorities.

Government Strategies, Policies & Regulations Questions

Strategy | *Policies and Regulations* | *AI Governance & Ethics* | *Sustainable & Inclusive AI*

Q2: Is there a national program to rollout and execute the national AI strategy?

Readiness Levels	1. No approved program exists for executing the national AI strategy. 2. The country is in the early stages of defining a program to execute the national AI strategy. 3. A program for executing the national AI strategy has been approved and published. 4. The national AI strategy execution program is being implemented across certain sectors. 5. The national AI strategy execution program is fully implemented, monitored, and continuously updated based on feedback, in alignment with the national AI strategy.
Response Selection Rationale	• **Response 1:** The country currently does not have an approved national program. • **Response 2:** A national program is under development, with initial drafts being prepared and reviewed. • **Response 3:** The national program for executing AI has been approved and published by the authorized authority. • **Response 4:** The published national program follows best practices and frameworks as outlined in the DCO AI Adoption Playbook (Page 12), and multiple sectors are adopting it. The national program should include: ✓ Clarity on timelines ✓ Defined roles for the stakeholders ✓ Budget allocated for the program ✓ Established Administrative structure • **Response 5:** The national program is regularly reviewed and updated to reflect national priorities and feedback.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	• The government in Singapore initiated the AI Singapore program that leads the national effort to execute the national AI strategy focusing on key sectors ensuring that AI governance is priority (AISG). • The UK government establish the Office of Artificial Intelligence (OAI) who is responsible for overseeing the implementation of AI.

Government Strategies, Policies & Regulations Questions

Strategy | *Policies and Regulations* | *AI Governance & Ethics* | *Sustainable & Inclusive AI*

Q2: Is there a national program to rollout and execute the national AI strategy?

Recommendation	• **Level 1:** Form a focus group within key government entities to initiate the execution of the national AI strategy. This group should focus on laying the foundation for a national AI strategy execution program. Refer to the DCO AI Adoption Playbook (Page 12) for best practices related to executing such a program. • **Level 2:** Continue developing the execution program by defining its goals, scope, and key performance metrics. Engage national stakeholders to ensure the strategy aligns with sectoral needs and capabilities. Use the DCO AI Adoption Playbook (Page 12) as a guide for structuring the program. Collaborate with nodal agencies to draft clear timelines, objectives, and deliverables. • **Level 3:** Ensure the approved program includes specific timelines, roles, and clearly defined responsibilities. The program should also detail how the national AI strategy will be implemented across priority sectors. This is critical to ensure that all components are actionable and measurable. Utilize the DCO AI Adoption Playbook (Page 12) to ensure timelines and milestones align with global standards and engage relevant agencies for continuous monitoring. • **Level 4:** Expand the execution program to multiple sectors while ensuring alignment with the national AI strategy. Establish mechanisms to monitor progress and evaluate the effectiveness of implementations. Refer to the DCO AI Adoption Playbook (Page 13) to ensure continued alignment with national priorities & global benchmarks and ensure that administrative structures support the program's growth. • **Level 5:** Continuously refine the program based on feedback from stakeholders and shifting national priorities. This requires regular reviews and updates to ensure the program remains relevant and effective. Refer to the DCO AI Adoption Playbook (Page 13) for best practices.

Government Strategies, Policies & Regulations Questions

Strategy | *Policies and Regulations* | *AI Governance & Ethics* | *Sustainable & Inclusive AI*

Q3: Does your country have AI policies and regulations in place to enable the ethical and secure adoption of AI?

Readiness Levels	1. Approved AI policies and regulations do not currently exist. 2. AI policies and regulations are in the process of being drafted. 3. AI policies and regulations have been approved and published. 4. The published AI policies and regulations are comprehensive and align with best practices and prescribed frameworks. 5. AI policies and regulations are continuously monitored, updated, and refined to keep pace with evolving trends and global standards.
Response Selection Rationale	• Response 1: The country does not currently have any approved AI policies or regulations addressing security, ethical considerations, or responsible AI adoption. • Response 2: AI policies and regulations are under development, with drafts being prepared, and stakeholder consultations are underway. • Response 3: AI policies and regulations have been finalized, approved, and published by the relevant authority. • Response 4: The published AI policies are comprehensive, covering AI usage across sectors, and follow best practices as outlined in the DCO AI Adoption Playbook (Page 14). They include clear timelines, stakeholder roles, budget allocations, and an administrative framework. • **Response 5:** The AI policies and regulations are continuously reviewed and updated to reflect evolving trends, address security concerns, and align with global standards.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	The UK established a list of AI policies and regulations through its Office for Artificial Intelligence (OAI) with guidance and support from the Centre of Data Ethics and Innovation (CDEI) in advising the government on AI governance and ethical standards.
Recommend ation	• **Level 1:** Engage with relevant government agencies to initiate the drafting of AI policies and regulations, focusing on security, ethical AI adoption, and responsible governance. Refer to the regulatory framework for AI policies and regulations as mentioned in the DCO AI Adoption Playbook (Page 14), which provides guidelines for initiating this process. • **Level 2:** Continue drafting the AI policies and regulations, ensuring they are validated through stakeholder consultations and initial discussions on frameworks to guide their development as mentioned in the DCO AI Adoption Playbook (Page 14). • **Level 3:** Ensure that the published AI policies and regulations comprehensively cover the necessary aspects of AI governance and ensure they align with global standards and best practices. Refer to the Regulatory Framework for AI policies and regulations as mentioned in the DCO AI Adoption Playbook (Page 14). • **Level 4:** Establish mechanisms to monitor and evaluate the effectiveness of the published AI policies and regulations. Expand the areas to be covered under the AI policies and regulations Refer to the sample AI policies and regulations as mentioned in the DCO AI Adoption Playbook (Page 14). • **Level 5:** Regularly review and update the AI policies and regulations based on evolving trends, security concerns, and feedback from sectors, to ensure they remain aligned with both national priorities and global standards as mentioned in the DCO AI Adoption Playbook (Page 14).

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | **AI Governance & Ethics** | Sustainable & Inclusive AI

Q4: Is there a national AI governance framework in place to ensure the ethical use of AI technologies?

Readiness Levels	1. No approved national AI governance framework currently exists. 2. The country is in the initial stages of drafting an AI governance framework. 3. A formal AI governance framework has been published. 4. The published AI governance framework is mature and well-defined, with clear roles, responsibilities, policies, and controls. 5. The country's AI governance framework is fully operational, consistently enforced, and regularly updated to accommodate new developments in AI technology. Feedback mechanisms are in place to ensure its effectiveness and adaptability.
Response Selection Rationale	• **Response 1:** The country does not yet have an approved national AI governance framework in place. • **Response 2:** The country is in the early stages of discussing and drafting a national AI governance framework. • **Response 3:** A national AI governance framework has been published. • **Response 4:** The published AI governance framework is mature, well-defined, guiding AI use across multiple sectors, with mechanisms for monitoring and enforcement. DCO AI Adoption Playbook (Page 20) emphasizes the importance of establishing AI governance frameworks to ensure the ethical use of AI technologies globally. • **Response 5:** The AI governance framework is fully operational, consistently enforced, and regularly updated, with feedback mechanisms in place for continuous improvement and to ensure its effectiveness in managing AI risks.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	• Singapore Model AI Governance Framework (MAIGF) is a comprehensive framework that provides entities with guidelines on deployment of AI and aims to balance innovation with the ethical use of AI. • The UAE established a National AI Strategy 2031 that includes governance principles and guidelines for data privacy, security and transparency.
Recommendation	• **Level 1:** Initiate discussions on the development of a national AI governance framework, referring to the DCO AI Adoption Playbook (Page 20) for guidelines. • **Level 2:** Begin drafting the AI governance framework, ensuring it addresses key roles, policies, and controls by following the structure outlined in the DCO AI Adoption Playbook (Page 20). • **Level 3:** Ensure the AI governance framework is implemented and published. Focus on improving its comprehensiveness and sectoral applicability by referring to best practices in the DCO AI Adoption Playbook (Page 20). • **Level 4:** Assess the maturity and operational effectiveness of the AI governance framework and align it with the guidelines for enforcement and monitoring as described in the DCO AI Adoption Playbook (Page 20). • **Level 5:** Regularly update and enforce the AI governance framework, incorporating feedback mechanisms for continuous improvement. Refer DCO AI Adoption Playbook (Page 20) for the framework.

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | **AI Governance & Ethics** | Sustainable & Inclusive AI

Q5: To what degree has the government established an Ethical AI framework?

Readiness Levels	1. No approved Ethical AI framework or oversight mechanisms currently exist. 2. An Ethical AI framework is being drafted, with considerations for creating a corporate ethical review board at national and organizational levels to evaluate AI systems in alignment with fundamental ethical principles. 3. The Ethical AI framework has been published, with initial mechanisms to ensure fairness, non-discrimination, and accountability, including auditing procedures to identify and mitigate bias in AI systems. 4. The Ethical AI framework is established, with clear commitments, performance indicators, and the creation of a dedicated oversight agency to monitor AI product safety and fairness. Novel Agency established to evaluate defective AI systems are being setup. 5. Ethical AI is fully integrated across sectors, with robust standards, auditing mechanisms, and incentives in place. All AI systems undergo rigorous evaluation for fairness, safety, and compliance before release, with continuous feedback improving outcomes and addressing biases.
Response Selection Rationale	• **Response 1:** There is currently no established Ethical AI framework within the government. • **Response 2:** The Ethical AI framework is in the drafting or development phase. • **Response 3:** The Ethical AI framework has been officially published. • **Response 4:** The Ethical AI framework has been implemented across multiple sectors, with incentives and performance indicators in place to promote compliance and best practices. Refer to the Ethical AI Framework in the DCO AI Adoption Playbook (Page 31), which outlines key guidelines on fairness, transparency, accountability, and ethics, ensuring alignment with regulatory requirements and industry standards. • **Response 5:** Ethical AI practices are fully integrated across all sectors, with established standards and a system for ongoing monitoring and feedback to support continuous improvement.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	The UK government established a Responsible AI framework with the support of the Centre for Data Ethics and Innovation (CDEI) to advise on the deployment of Responsible AI.

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | **AI Governance & Ethics** | Sustainable & Inclusive AI

Q5: To what degree has the government established an Ethical AI framework?

Recommendation	• **Level 1:** Begin discussions to establish an Ethical AI framework, ensuring alignment with national AI governance goals. Consider the creation of a corporate ethical review board at both national and organizational levels to evaluate AI projects and deployments in line with fundamental ethical principles. (Refer to the Ethical AI Framework in the DCO AI Adoption Playbook on Page 31). • **Level 2:** Continue drafting the Ethical AI framework, incorporating stakeholder feedback and best practices. This phase should include the development of auditing mechanisms to assess fairness, non-discrimination, and the mitigation of unwanted biases, potentially in collaboration with sectors such as insurance. (Refer to the Ethical AI Framework in the DCO AI Adoption Playbook on Page 31). • **Level 3:** Promote the adoption of the published Ethical AI framework beyond initial focus areas, extending it to broader sectors. Establish oversight mechanisms to monitor AI systems and ensure accountability, such as a dedicated agency to supervise AI products and services. (Refer to the Ethical AI Framework in the DCO AI Adoption Playbook on Page 31). • **Level 4:** Incentivize sector-wide adoption of the Ethical AI framework, enforcing commitments with clear performance indicators. This stage should introduce mechanisms for producer liability for AI defective products, ensuring accountability and compliance. (Refer to the DCO AI Adoption Playbook for effective incentive guidance). • **Level 5:** Fully integrate the Ethical AI framework across all sectors, with continuous monitoring, feedback mechanisms, and oversight to ensure compliance and adaptability. Establishing a national oversight agency can help protect public welfare by supervising AI systems and ensuring their ethical deployment. (Refer to the Ethical AI Framework in the DCO AI Adoption Playbook on Page 31).

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | **AI Governance & Ethics** | Sustainable & Inclusive AI

Q6: Is there a dedicated governmental body responsible for overseeing AI governance, ethical compliance, and the enforcement of policies and regulations?

Readiness Levels	1. There is currently no dedicated governmental body for overseeing AI governance, ethical compliance, and enforcement across public and private sectors. 2. Initial discussions to establish a governmental AI governance body are in progress, but no official entity has been formed yet. 3. A governmental body has been established to oversee AI governance, ethical compliance, and enforcement in line with the Ethical AI Framework across public and private sectors. 4. A fully operational governmental body now exists, with clear roles, responsibilities, and a broad mandate to oversee AI governance, ethical compliance, and enforcement across various sectors, in alignment with the Ethical AI Framework. 5. The governmental body continuously updates its mandate to reflect evolving AI developments and plays a key role in shaping AI-related policies and enforcement.
Response Selection Rationale	• **Response 1:** No governmental body currently exists that is responsible for AI governance, ethical compliance and enforcement. • **Response 2:** Discussions are in progress to establish a governmental body for AI oversight, but no formal structures have been implemented yet. • **Response 3:** A governmental body has been established, though its responsibilities are limited to specific sectors or compliance areas. • **Response 4:** A dedicated governmental body has been created to oversee AI governance, ethical compliance and enforcement, across multiple sectors, aligned with best practices, and formally responsible for monitoring compliance and providing guidance. The DCO AI Adoption Playbook (Page 18 and 20) emphasizes the need for governance frameworks to ensure ethical AI use globally. • **Response 5:** The governmental AI governance body regularly updates its mandate to adapt to AI advancements, ensuring effective governance and compliance.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	• The Infocomm Media Development Authority (IMDA) in Singapore oversees the AI governance and compliance through the Model Governance Framework ensuring that the best ethical practices and guidelines of AI are followed (IMDA, AI Singapore). • The UAE assigned a Minister of State for Artificial Intelligence to oversee the governance and compliance of AI under the National Strategy 2031.

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | **AI Governance & Ethics** | Sustainable & Inclusive AI

Q6: Is there a dedicated governmental body responsible for overseeing AI governance and compliance of policies and regulations?

Recommendation	• **Level 1:** Initiate discussions to establish a governmental body responsible for overseeing AI governance, ethical compliance and enforcement. • **Level 2:** Continue formalizing the creation of the governmental body, ensuring it is structured based on best practices outlined in the DCO AI Adoption Playbook on Page 18 and 33. • **Level 3:** Ensure the established governmental body has clear roles and responsibilities, while working to expand its scope to cover additional sectors by referring to the DCO AI Adoption Playbook on Page 18 and 33. • **Level 4:** Evaluate whether the governmental body is fully operational and guiding AI governance across multiple sectors, using the DCO AI Adoption Playbook on Page 18 and 33 to ensure alignment with global frameworks. • **Level 5:** Regularly update the mandate of the governmental body to keep pace with AI advancements and ensure effective AI governance and compliance. Follow the DCO AI Adoption Playbook for continuous improvement and refer to the Governing AI for Humanity Report (as mentioned in the DCO AI Adoption Playbook, Page 146).

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | AI Governance & Ethics | **Sustainable & Inclusive AI**

Q7: How developed are the policies and guidelines for ensuring that AI systems and associated data are inclusive, ethical, free from bias, and represents all sections of society?

Readiness Levels	1. No formal policies or guidelines exist for AI inclusivity, ethics, or bias prevention. 2. Early-stage discussions and draft policies or guidelines are in place, but no formal laws or frameworks exist. 3. Policies or guidelines for AI inclusivity, ethics, or bias prevention have been officially published. 4. Published policies or laws ensure AI inclusivity, ethics, and bias prevention align with global best practices. 5. AI guidelines and laws are fully implemented, regularly updated, and enforced. AI inclusivity checker systems are established to monitor and ensure compliance.
Response Selection Rationale	• **Response 1:** No formal policies or guidelines currently exist regarding inclusivity, ethics, and bias in AI systems and associated data. • **Response 2:** Early-stage discussions or draft policies and guidelines on inclusivity, ethics, and bias prevention are underway but have not yet been formalized. • **Response 3:** Policies or guidelines addressing inclusivity, ethics, and bias in AI have been officially published. • **Response 4:** Formal policies are in place to ensure inclusivity, ethical AI development, and bias prevention, with enforcement mechanisms across multiple sectors. The DCO AI Adoption Playbook (Page 31) emphasizes inclusivity, fairness, and transparency, and ensures alignment with sector-specific AI ethics guidelines. • **Response 5:** These policies and guidelines are fully implemented, regularly updated based on emerging trends, and include robust compliance and monitoring systems to ensure ongoing accountability and continuous improvement, ensuring that AI systems remain inclusive and unbiased.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology, Legislation, Community Development (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Regulatory and Legislative Bodies, Ministry of Community Development, etc.)
Examples	The National AI Initiative act of 2020 in the US emphasizes on ethical AI and inclusivity with support from the Information Technology Laboratory through the AI Risk Management Framework which provides comprehensive guidelines to minimize bias in AI systems.

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | AI Governance & Ethics | **Sustainable & Inclusive AI**

Q7: How developed are the policies and guidelines for ensuring that AI systems and associated data are inclusive, ethical, free from bias, and represents all sections of society?

Recommendation	• **Level 1:** Begin by identifying gaps and initiating the development of policies or guidelines focused on AI inclusivity, ethics, and bias prevention, ensuring early discussions involve key stakeholders. (Refer to AI Policy Formulation in DCO AI Adoption Playbook on Page 14) • **Level 2:** Continue drafting inclusive AI policies and guidelines, formalizing them with stakeholder input and aligning with ethical standards outlined in the DCO AI Adoption Playbook. (refer to Ethical AI Framework in DCO AI Adoption Playbook on Page 31). • **Level 3:** Expand the scope of existing policies or guidelines by addressing sector-specific limitations and strengthening enforcement mechanisms to cover a broader range of AI applications. • **Level 4:** Ensure formal policies or guidelines are in place to ensure AI inclusivity, ethics, and bias prevention across sectors, with robust enforcement systems. Refer to the DCO AI Adoption Playbook (Page 31) for the Ethical AI Framework which incorporated global best practices. • **Level 5:** Regularly update the policies or guidelines based on new developments in the AI domain and establish compliance systems to monitor and ensure ongoing inclusivity, ethics, and fairness in AI systems.

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | AI Governance & Ethics | **Sustainable & Inclusive AI**

Q8: How actively are sustainability and green AI initiatives integrated into your government's AI strategy and practices?

Readiness Levels	1. No sustainability or green AI initiatives are part of the government's AI strategy / Sustainability Strategy for the ICT/digital technology sector. 2. Early discussions about integrating sustainability into the AI strategy are underway, with some proposals for green AI initiatives, but no formal implementation. 3. Sustainability and green AI initiatives are integrated into the government's AI strategy, with formal policies promoting energy-efficient AI practices across sectors. 4. Sustainability and green AI initiatives are being piloted with focus on energy efficiency and reducing environmental impact. Implementation is monitored, and results are reported. 5. The majority of AI projects are fully integrated, with ongoing monitoring, feedback, and updates to ensure alignment with sustainability and green AI goals.
Response Selection Rationale	• **Response** 1: Sustainability or green AI initiatives are not yet included in the national AI strategy. • **Response 2:** Discussions about integrating sustainability into AI practices are ongoing, but no formal implementation has been established. • **Response 3:** Formal policies promoting energy-efficient and environmentally conscious AI practices have been established, but they are currently limited to priority sectors. • **Response 4:** Sustainability initiatives, including green AI practices, are actively piloted, monitored, and reported across all sectors. The European Parliament's study on AI and sustainability, as mentioned in the DCO AI Adoption Playbook (Page 148), highlights reducing the carbon footprint of AI technologies. • **Response 5:** The majority of AI projects are fully aligned with sustainability initiatives, with continuous monitoring, updates, and performance metrics in place to ensure alignment with global green AI practices.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Energy, Sustainability (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Energy / Energy Transition, etc.)
Examples	• The UAE national AI strategy emphasizes on the use of AI to resolve challenges related to water conservation, energy efficiency and smart cities. The Dubai Clean Energy Strategy 2050 integrates AI to optimize energy use and reduce carbon emissions. • Singapore Green Plan 2030 integrates AI to enhance sustainability in energy efficient buildings, waste management and smart grids.

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | AI Governance & Ethics | **Sustainable & Inclusive AI**

Q8: How actively are sustainability and green AI initiatives integrated into your government's AI strategy and practices?

Recommendation	**Level 1:** Initiate discussions to include sustainability and green AI initiatives in the national AI strategy, engaging relevant ministries such as the Ministry of Energy and Sustainability Authorities. Refer to DCO AI Adoption Playbook (The role of AI in the European green deal on Page 148) **Level 2:** Establish formal policies that promote energy-efficient and environmentally conscious AI practices across key sectors, ensuring collaboration with ministries like Energy and Digital Technology to scale initiatives. Refer to DCO AI Adoption Playbook (The role of AI in the European green deal) **Level 3:** Actively pilot sustainability-focused AI initiatives, ensuring ongoing monitoring and reporting of results. Refer to studies such as the European Parliament's research on AI and sustainability and follow the guidelines in the DCO AI Adoption Playbook (page 148) for effective implementation. **Level 4:** Ensure the full integration of sustainability and green AI initiatives across all AI projects, with continuous monitoring and updates. Use feedback mechanisms from ministries like the Department of Energy and the Ministry of Technology to drive improvement and adherence to green AI goals. Refer to the European Parliament's study on AI and sustainability, which discusses integrating sustainability into AI and reducing the carbon footprint of AI technologies as mentioned in the DCO AI Adoption Playbook (The role of AI in the European green deal on page 148) **Level 5:** Continue monitoring performance metrics and updating initiatives to ensure alignment with global Green AI practices. Refer to AI-Powered Energy Consumption Forecasting initiative on Page 110 in the DCO AI Adoption Playbook

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | AI Governance & Ethics | **Sustainable & Inclusive AI**

Q9: How accessible are government AI technologies (including but not limited to sandboxes, environments) for startups, government agencies and private entities to test and develop inclusive and accessible AI solutions?

Readiness Levels	1. No government-supported AI technology is available to startups, government agencies, or private entities. 2. Government-supported AI technology exists but is limited to specific sectors or use cases, offering restricted access for entities. 3. Entities are beginning to access government-supported AI technologies, with a growing focus on testing inclusive and accessible solutions in select sectors. 4. Government-supported AI technologies are widely accessible to entities, with programs supporting the development of inclusive and accessible AI solutions across multiple sectors. 5. Continuous support, feedback, and monitoring are in place to ensure the development of equitable AI solutions.
Response Selection Rationale	• **Response 1:** The availability of government-supported AI technologies, such as sandboxes or development environments, for startups, government agencies, or private entities to test and develop AI solutions is being evaluated. • **Response 2:** It is necessary to clarify whether access to these technologies is restricted to specific sectors, industries, or use cases, limiting broader participation. • **Response 3:** Startups and other entities currently have access to government-supported AI technologies in select sectors, focusing on testing inclusive and accessible AI solutions. • Response 4: Government-supported AI technologies are accessible to entities across multiple sectors, fostering the development of inclusive and equitable AI solutions. The DCO AI Adoption Playbook (AI Regulatory Sandboxes Page 151) offers guidance to ensure these AI solutions are accessible for testing and development prior to their market release. • **Response 5:** Continuous support, guidance, and monitoring are provided to facilitate the development of inclusive, accessible, and equitable AI solutions.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation , Education, Finance (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Education, Innovation and Entrepreneurship Department, Ministry of Finance, etc.)
Examples	• The National AI Research Resource (NAIRR) in the US provide access to resources and datasets for startups, government agencies, and academic institutions to test and develop AI solutions. • The Financial Conduct Authority (FCA) in the UK offers an AI sandbox for fintech startups to test AI-driven solutions in a regulatory-compliant environment.

Government Strategies, Policies & Regulations Questions

Strategy | Policies and Regulations | AI Governance & Ethics | **Sustainable & Inclusive AI**

Q9: How accessible are government AI technologies (including but not limited to sandboxes, environments) for startups, government agencies and private entities to test and develop inclusive and accessible AI solutions?

Recommendation	• **Level 1:** Begin by exploring opportunities to make government-supported AI technologies, such as sandboxes and development environments, available to startups, government agencies, and private entities for AI testing and development. • **Level 2:** Expand the scope of available AI technologies beyond limited sectors or use cases to enable broader access, ensuring these resources support the development of inclusive and accessible AI solutions. • **Level 3:** Ensure that government-supported AI technologies are accessible across various sectors, promoting the development of inclusive and equitable AI solutions. Refer to the DCO AI Adoption Playbook for guidance on inclusivity-focused programs as given on Page 78. • **Level 4:** Fully integrate government-supported AI technologies for all sectors and entities, offering continuous support, monitoring, and feedback systems to ensure that AI solutions are inclusive, accessible, and equitable for all stakeholders. Refer to the DCO AI Adoption Playbook (AI Regulatory Sandboxes Page 151) for more details. • **Level 5:** Continue providing support and incorporating feedback to ensure that AI solutions remain inclusive, accessible, and equitable for all stakeholders. Refer to the AI Innovation sandbox for development initiative in DCO AI Adoption Playbook on Page 78.

Technology Advancements & Readiness

Innovation | Research and Development | AI Deployment & Integration

Q10: Is AI innovation and experimentation actively supported by the government entities?

Readiness Levels	1. There are no resources, approaches or strategic support for AI innovation or experimentation. 2. AI innovation has begun with the identification of priority use cases, secured funding, and necessary resources and approaches in place to initiate implementation. 3. Pilot use cases are being implemented, with allocated funding, approaches and resources supporting AI innovation and experimentation. 4. AI innovation is actively encouraged throughout the organization, with resources allocated for full-scale implementation. 5. Dedicated resources, approaches and strategic initiatives consistently promote AI innovation and experimentation across all sectors, with regular testing of emerging AI technologies and continuous improvement based on lessons learned, leading to clear outcomes.
Response Selection Rationale	• **Rationale 1:** The country currently lacks resources, approaches or strategic initiatives to promote AI innovation or experimentation. • **Rationale 2:** Priority AI use cases have not yet been identified, and initial funding, approaches and resources are still unsecured. • **Rationale 3:** Funding and active support for pilot AI projects are not consistently available. • **Rationale 4:** Resources for full-scale implementation of AI innovation are limited. The World Economic Forum AI Readiness Report highlights sectors like healthcare and manufacturing that have moved beyond pilot projects to full-scale AI deployment, supported by allocated resources. • **Rationale 5:** Continuous and dedicated support for AI innovation and experimentation across all sectors is not currently in place . PwC AI Insights how AI experimentation is continuously supported across all sectors, with dedicated resources, defined approaches, regular testing, and a feedback loop for innovation.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation , Education, R&D, Finance (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Education, Research & Development Authority, Ministry of Finance etc.)
Examples	• The US National AI Research Resource (NAIRR) provides computing power and data to foster AI experimentation. The Defense Advanced Research Projects Agency (DARPA) funds high-risk, high-reward AI projects through its AI Next Campaign. • The Dubai Future Foundation also runs an AI-driven initiative, Area 2071 providing collaborative space for AI experimentation and innovation.

Technology Advancements & Readiness

Innovation | Research and Development | AI Deployment & Integration

Q10: Is AI innovation and experimentation actively supported by the government entities?

Recommendation	• **Level 1:** Begin by allocating resources and identifying strategic initiatives that will promote AI innovation and experimentation, leveraging relevant government bodies such as the Ministry of Innovation and Technology. Refer to AI Center of Excellence, Innovation Hub and Incubation Center initiative in DCO AI Adoption Playbook on Page 78. • **Level 2:** Identify priority AI use cases, secure funding, and ensure that resources are in place for the initial stages of AI innovation. Refer to AI Center of Excellence, Innovation Hub and Incubation Center initiative in DCO AI Adoption Playbook on Page 78. • **Level 3:** Pilot AI use cases with adequate funding and support, ensuring that experimentation is actively implemented in select sectors to drive innovation forward. • **Level 4:** Encourage widespread AI innovation across multiple sectors, with full-scale implementation supported by allocated resources and strategic initiatives for continuous improvement. Refer to AI Center of Excellence, Innovation Hub and Incubation Center initiative in DCO AI Adoption Playbook on Page 78. • **Level 5:** Provide dedicated support for AI innovation and experimentation across all sectors, ensuring continuous testing, improvement, and feedback loops, guided by global best practices. Refer to AI Center of Excellence, Innovation Hub and Incubation Center initiative in DCO AI Adoption Playbook on Page 78.

Q11: What is the state of AI patents and academic publications in your country?

Readiness Levels	1. No AI-related patents or academic publications have been published. 2. The country has initiated AI research and development, with patents filed but still under review, and academic papers in the drafting stage. 3. The country has published some academic papers, and a few AI patents have been granted. 4. A strong and growing number of AI patents and publications are being produced regularly. 5. There is a continuous increase in the filing of AI patents and the publication of academic papers, showing a clear upward trend year over year.
Response Selection Rationale	• **Rationale 1:** No published AI-related patents or academic publications • **Rationale 2:** AI research and development are being currently initiated • **Rationale 3:** Data is being collected on the number of AI-related patents and all technology-related patents filed or granted in the last three years, and a ratio will be calculated. • **Rationale 4:** A growing number of AI patents and academic publications are being produced regularly, reflecting an increase in national focus on AI R&D. Refer HAI AI Index 2024 Report mentioned in the DCO AI Adoption Playbook on Page 152. • **Rationale 5:** The HAI AI Index 2024 Report highlights a 62.7% increase in global AI patent grants from 2021 to 2022 showing continuous growth in AI publications over the last decade and demonstrating the sustained increase in AI research and development. HAI AI Index 2024 Report is mentioned in the DCO AI Adoption Playbook (Page 152).
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation , Education, R&D (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Education, Research & Development Authority, etc.)
Examples	• The United States Patent and Trademark Office (USPTO) has seen a significant rise in AI-related patent filings, for IBM, Google, and Microsoft. • The Intellectual Property Office of Singapore (IPOS) has reported a steady increase in AI-related patent filings, driven by sectors. • AI Singapore (AISG) with collaboration with leading universities contribute to a growing body of AI research as an initiative under AISG.

Technology Advancements & Readiness

Innovation | **Research and Development** | AI Deployment & Integration

Q11: What is the state of AI patents and academic publications in your country?

Recommendation	• **Level 1:** Initiate efforts to support AI research and development, focusing on establishing a foundation for AI-related patents and academic publications by engaging national R&D agencies. Refer to HAI AI index 2024 Report on DCO AI Adoption Playbook on Page 152. • **Level 2:** Accelerate AI research initiatives, ensure that AI patents are filed, and draft academic papers, drawing on national innovation agencies and intellectual property bodies. Refer to HAI AI index 2024 Report on Page 152 on DCO AI Adoption Playbook • **Level 3:** Actively track the publication of AI academic papers and the granting of patents, ensuring that both continue to grow, and calculate the ratio of published papers to granted patents to monitor progress. Refer to HAI AI index 2024 Report on DCO AI Adoption Playbook on Page 152 • **Level 4:** Expand AI R&D by increasing the number of patents and publications regularly, ensuring they reflect national priorities in AI. Refer to HAI AI index 2024 Report on DCO AI Adoption Playbook on Page 152 • **Level 5:** Foster continuous growth in AI patent filings and academic publications by providing sustained support for AI research. Monitor trends over time to ensure upward momentum in AI R&D output. Refer to HAI AI index 2024 Report on DCO AI Adoption Playbook on Page 152

Technology Advancements & Readiness

Innovation | Research and Development | **AI Deployment & Integration**

Q12: Are there government-supported or funded platforms, tools, or software products available for developing, deploying, and monitoring AI solutions, including mechanisms for ensuring fairness, ethical review, and liability management?

Readiness Levels	1. There are no AI-specific platforms, tools, or software products currently available. There is no established framework for ethical reviews, fairness, or liability oversight. 2. AI-specific platforms, tools, and software products are being identified, and procurement is planned. Early discussions around establishing mechanisms for ethical review boards and auditing for fairness and bias are underway. 3. AI-specific platforms, tools, and processes have been procured and are available to support various initiatives and projects. Ethical review mechanisms are in place, and auditing frameworks for fairness and non-discrimination are being developed. 4. AI platforms are routinely monitored, capturing platform performance data and supporting technology refreshment. Ethical oversight boards at the national and organizational levels evaluate AI projects, and a mechanism for addressing producer liability for AI defective products is in progress. 5. Scalable AI platforms are fully integrated across the country, enabling the deployment of AI models and streamlining data access. These platforms are continuously enhanced based on performance data. Mechanisms for fairness audits, ethical reviews, and producer liability are established, with a dedicated oversight agency ensuring public welfare through the evaluation and supervision of AI systems, software, and services.
Response Selection Rationale	• **Rationale 1:** No AI-specific platforms or tools available for development or deployment. • **Rationale 2:** Plans for procuring AI-specific platforms, tools, or software products. AI-specific platforms, tools, and processes have been procured and are currently supporting initiatives. • **Rationale 3**: The performance of AI-specific platforms is being monitored and if this data is used to support technology updates. • **Rationale 4:** Scalable AI platforms are integrated nationwide, supporting deployment and data access, with ongoing improvements based on performance. According to AI Adoption Study, platforms and tools are being increasingly integrated into organizational operations with routine monitoring to ensure continuous improvements. Refer to AI Adoption Study as mentioned in the DCO AI Adoption Playbook (Page 153). • **Rationale 5:** Scalable AI platforms are fully integrated nationwide, enabling the streamlined deployment of AI models across various sectors. As stated in the to AI Adoption Study, organizations achieving full-scale AI integration benefit from streamlined deployment processes and continuous system improvements. These enhancements help scale AI solutions effectively, ensuring long-term sustainability and performance optimization.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation , Education, R&D, Finance (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Education, Research & Development Authority, Ministry of Finance, etc.)

Q12: Are there existing government supported or funded platforms, tools and software products available for developing and deploying AI?

Examples	• The UAE's National Program for Artificial Intelligence offers platforms like the AI Lab that support government entities in developing AI solutions. It provides access to data, computing resources, and software for AI model development and deployment. • The UK has platforms like AI for Good UK, which the government funds to support AI innovation focused on social impact. The UK Government Digital Service (GDS) also provides open-source tools and frameworks for digital transformation, which can be used for AI applications.
Recommendation	• **Level 1**: Begin by identifying the need for AI-specific platforms and tools, ensuring there are initial discussions and assessments of the necessary support for AI development and deployment. Refer to AI Adoption study on Page 153 in DCO AI Adoption Playbook. • **Level 2:** Move forward with plans to procure AI-specific platforms, tools, or software products that can support development initiatives, and confirm their alignment with national AI priorities. • **Level 3:** Ensure that AI-specific platforms, tools, and processes are procured and actively support current AI initiatives and projects, with performance monitoring in place to guide future updates. • **Level 4:** Regularly monitor the performance of AI-specific platforms and tools to capture data that supports ongoing technology updates and ensure these tools are integrated across sectors for maximum impact, as mentioned in the DCO AI Adoption Playbook (Page 153). • **Level 5:** Fully integrate scalable AI platforms nationwide to streamline AI model deployment, enhance data access, and ensure continuous performance improvements across sectors. Use insights from performance data to optimize platforms for long-term sustainability and scalability.

Technology Advancements & Readiness

Innovation | Research and Development | **AI Deployment & Integration**

Q13: How efficiently is AI adopted, especially across focus sectors?

Readiness Levels	1. No AI solutions or applications have been adopted in any focus sectors. 2. AI is being tested in a few focus sectors with Proof of Concept (PoC) projects, but nothing has been scaled or fully implemented. 3. AI has been adopted in at least one focus sector, with a Minimum Viable Product (MVP) solution being tested and deployed. 4. AI applications have been fully deployed in at least one focus sector, demonstrating proven functionality and measurable outcomes. 5. All focus sectors, and a few non-focus sectors, have deployed more than one AI application, demonstrating scalability and efficiency in integrating AI solutions across the country.
Response Selection Rationale	• **Rationale1:** No AI-specific platforms or tools are available or adopted in any focus sector. • **Rationale 2:** Plans for implementing few sectors and testing these sectors with PoC. • **Rationale 3:** One focus sector has been adopted, tested and deployed • **Rationale 4:** According to the Stanford AI Index Report (2024), AI deployment in sectors like healthcare and defense (security) has resulted in significant improvements in operational efficiency and decision-making. • **Rationale 5:** The Stanford AI Index Report (2024), highlights how AI adoption is scaled across various sectors, including healthcare, finance, and manufacturing, showcasing how AI solutions are efficiently integrated into operations demonstrating scalability and continuous improvements. Insights from Stanford AI Index Report 2024 as mentioned in the DCO AI Adoption Playbook (Page 154).
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation , Focus Sectors (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Education, Health, Energy, Finance, Defense, Transport, etc.)
Examples	In the United States, AI adoption is being integrated across multiple focus sectors with varying degrees of efficiency. The U.S. Department of Defense (DOD), for instance, has been at the forefront of AI deployment, particularly in defense applications, where AI aids in decision-making and operational efficiency.

Technology Advancements & Readiness

Innovation | Research and Development | **AI Deployment & Integration**

Q13: How efficiently is AI adopted, especially across focus sectors?

Recommendation	• **Level 1:** Begin by identifying the need for AI solutions in key focus sectors and explore opportunities to initiate AI projects in these areas to kick-start adoption. • **Level 2:** Test AI applications through Proof of Concept (PoC) projects in focus sectors, ensuring necessary resources and infrastructure are in place for future scaling and full implementation. • **Level 3:** Ensure AI adoption in at least one focus sector, deploying Minimum Viable Products (MVPs) for AI solutions and gathering feedback for refinement and broader implementation. • **Level 4:** Fully deploy AI applications in at least one focus sector, demonstrating measurable outcomes and improvements in functionality, while using data from ongoing monitoring to enhance performance, as suggested in the Stanford AI Index Report. Refer, as mentioned in the DCO AI Adoption Playbook (Page 154). • **Level 5:** Scale AI adoption across all focus and non-focus sectors, demonstrating operational efficiency and continuous improvements, with insights from the Stanford AI Index Report on Page 154 in DCO AI Adoption Playbook to guide the optimization of AI integration across various sectors like healthcare, finance, and manufacturing.

Data & Infrastructure

Data Availability | Data Management & Protection | Data Quality | Infrastructure

Q14: What is the extent of data availability and accessibility for AI initiatives across government and private entities?

Readiness Levels	1. No established framework for data accessibility, making it challenging to obtain the data necessary for AI initiatives. Open datasets are not shared by government or private entities. 2. Initial efforts are underway to enhance data accessibility. Some entities have started sharing basic datasets, but these datasets lack standardization and are not easily usable for AI development. 3. A framework for data sharing and accessibility has been implemented. Open datasets are available across various entities and are moderately suitable for AI development and production environments. 4. Data is highly accessible across entities, with open datasets widely shared. The data is standardized and readily usable for both AI development and production purposes. 5. Data accessibility is fully optimized across sectors. Open datasets are seamlessly shared and integrated, supported by a robust infrastructure that facilitates AI development. The data is highly usable in both development and production environments.
Response Selection Rationale	• **Response 1:** No framework exists that facilitates data accessibility across government departments. • **Response 2: I**nitial efforts to share basic datasets while identifying challenges related to standardization. • **Response 3:** A framework for data sharing has been implemented, ensuring that open datasets are moderately suitable for AI development across entities (using insights from data-sharing platforms or stakeholders). • **Response 4:** The framework provides high levels of data accessibility and standardization across government and private entities for AI development (using insights from focus groups), following best practices as mentioned in DCO AI Adoption Playbook on Page 144. • **Response 5:** Data accessibility is fully optimized, with a robust infrastructure supporting seamless data sharing and usability.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation , Focus Sectors (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Education, Health, Energy, Finance, Defense, Transport, etc.)
Examples	• The Open Data Institute (ODI) in the UK provides access to public sector datasets across domains like healthcare, transport, and education. These datasets are essential for developing AI solutions in various sectors (ODI). • The UAE has been enhancing AI development by making data more accessible through platforms like Bayanat.ae, which provides government datasets in sectors such as healthcare, energy, and transportation (Bayanat).

Data & Infrastructure

Data Availability | Data Management & Protection | Data Quality | Infrastructure

Q14: What is the extent of data availability and accessibility for AI initiatives across government and private entities?

Recommendation	• **Level 1:** Start an initiative to design a structured Open Data strategy that identifies benefits and addresses data accessibility challenges. • **Level 2:** Suggest focusing on standardizing datasets and aligning them with international best practices like the Open Data lifecycle for effective sharing • **Level 3:** Encourage enhancing interoperability of datasets, drawing from European practices of data sharing and re-use through common standards such as DCAT-AP • **Level 4:** Adopt robust data management protocols to ensure data is ready for both AI development and broader production purposes, promoting cross-sector collaboration • **Level 5:** Implement seamless data sharing infrastructure, aligned with the best practices as mentioned in the DCO AI Playbook (Page 144).

Data & Infrastructure

Data Availability | **Data Management & Protection** | Data Quality | Infrastructure

Q15: Are data management practices standardized and published on a National level?

Readiness Levels	1. No standardized data management practices at a national level. Data is managed in an ad-hoc manner across departments and sources. 2. Initial efforts are made to define data management practices, but they are not standardized or applied consistently across departments and sectors. 3. Standardized and published data management practices exist, ensuring consistency across sources and departments. 4. National data management practices are well-established, with comprehensive standards ensuring consistency across sectors and departments. Governance structures support adherence to these standards. 5. Data management practices are fully optimized, continuously updated, and ensure the highest consistency across all sources and departments, supported by robust governance.
Response Selection Rationale	• **Response 1:** No data management practices are present and standardized across departments and sources. • **Response 2:** Initial efforts are being made to define data management practices. • **Response 3:** Data management practices are standardized across departments and published • **Response 4:** The established standards ensure consistency across departments and are aligned with the Data Management Body of Knowledge published by the Global Data Management Community as detailed in (Page 136) in the DCO AI Adoption Playbook • **Response 5:** Practices are fully optimized with robust governance and continuous updates.
Potential Data Sources	Nodal Government Agency for Data Management / Artificial Intelligence / Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, National Data Offices etc.)
Examples	• In the USA, data management practices are standardized and published at a national level, particularly through the efforts of the National Institute of Standards and Technology (NIST). • In the UK, data management practices are standardized and published primarily through the Office for National Statistics (ONS), insuring consistency and quality in public sector data collection and sharing (ONS). • The UAE has developed national standards for data management through its UAE Government Data Management Framework (UAE Government Data Management).
Recommendation	• **Level 1:** Make initial efforts to establish national-level data management standards to promote more organized governance across departments and sources by referring to the *Data Management Body of Knowledge (DMBoK) as detailed on page 136 of the DCO AI Adoption Playbook*. • **Level 2:** Formalize and enhance data management practices across departments. • **Level 3:** Implement standardized and published data management practices using internationally recognized methodologies like *Data Management Body of Knowledge (DMBoK) as detailed on page 136 of the DCO AI Adoption Playbook* to ensure consistency across all departments. • **Level 4:** Strengthen governance structures to support well-established data management standards, ensuring national-level consistency aligned with best practices from the Global Data Management Community. • **Level 5:** Optimize national data management practices with continuous updates and robust governance, following *DMBoK* best practices to maintain consistency , page 136 in playbook.

Data & Infrastructure

Data Availability | **Data Management & Protection** | Data Quality | Infrastructure

Q16: How mature is the data management ecosystem to support AI use cases?

Readiness Levels	1. Data is stored haphazardly in local files or spreadsheets without governance, making AI deployment difficult due to poor structure and data inconsistency. 2. Basic, siloed systems exist with minimal governance, leading to limited data sharing and requiring significant manual intervention for AI integration. 3. Standardized formats and data governance policies allow moderate accessibility, but cross-departmental integration for AI is still manual and limited. 4. Sector-wide, standardized systems with automated data pipelines enable smooth access and governance, facilitating AI deployment across departments. 5. Fully integrated, real-time data management systems with automated governance and AI-driven analytics ensure seamless AI deployment across systems and sectors.
Response Selection Rationale	• Response 1: No data management ecosystem exists • Response 2: Datasets exist and are available to be loaded in a data management system • Response 3: A data management system is in place and can be leveraged as an input for AI Solutions • Response 4: The data management system has well-defined standardized processes across sectors and the processes are aligned with the Data Management Body of Knowledge, as referenced in page 136 of the DCO AI Adoption Framework. • Response 5: The data management supports seamless AI Deployment and is updated regularly in accordance with the Data Management Body of Knowledge published by the Global Data Management Community, as detailed in page 136 of the DCO AI Adoption Framework.
Potential Data Sources	Nodal Government Agency for Data Management / Artificial Intelligence / Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, National Data Offices etc.).
Examples	In Singapore the Infocomm Media Development Authority (IMDA) plays a central role in regulating and standardizing data management through frameworks like the Personal Data Protection Act (PDPA). The paper Big data and AI-enabled innovation in the public sector highlights how evolving data management frameworks are improving governance and accessibility, enabling more efficient AI deployment across governments.
Recommendation	• **Level 1:** Establish formal data management systems with clear policies and governance to avoid haphazard data storage and ensure data accessibility for AI initiatives, referring to the *Data Management Body of Knowledge* published by the Global Data Management Community as detailed in Page 136 of the DCO AI Adoption Playbook • **Level 2:** Develop basic data management systems and work towards breaking down silos, ensuring better accessibility of data for AI use, as recommended by the *Data Management Body of Knowledge* detailed in Page 136 of the DCO AI Adoption Playbook. • **Level 3:** Implement standardized data management systems with guidance from the *Data Management Body of Knowledge detailed on page 136 and 137 of DCO AI Adoption Playbook*, ensuring data is moderately accessible for AI deployments. • **Level 4:** Develop well-structured, standardized processes for data management across sectors, aligned with best practices from the *Data Management Body of Knowledge detailed on page 136 and 137 of DCO AI Adoption Playbook* , to support smooth AI deployment. • **Level 5:** Ensure advanced, fully integrated data management systems that support seamless AI deployment, real-time updates, governance, and automation, as outlined in the *Data Management Body of Knowledge*. (page 136 in DCO AI Adoption Playbook).

Q17: What is the maturity level of the current data security practices to safeguard sensitive data during AI development?

Readiness Levels	1. No AI-specific data security rights, approaches, and standards are in place. 2. Basic AI-specific data security policies, approaches, and standards exists, but they are not standardized or applied consistently across departments and sectors. 3. Standardized AI-specific data security rights, approaches, and standards defined and approved for individual control of safety, specificity, and exchange of digital information. 4. AI-specific data security laws, policies, and standards are actively managed and monitored at a national level. 5. The country's AI-specific data security laws, policies, and standards are continuously optimized based on data trends, ensuring robust individual control of safety, specificity, and secure digital data exchange across sectors.
Response Selection Rationale	• **Rationale 1:** No AI-specific security standards or policies are defined or implemented. • **Rationale 2:** Basic AI security policies exist but need more consistency. • **Rationale 3:** The policies are published so all the departments can be aligned with the security system. • **Rationale 4:** Data security practices should be aligned with the "Handbook on Data Privacy, Ethics and Protection: Guidance Note on Big Data for Achievement of the 2030 Agenda" by the UN Development Group (refer to page 156 in DCO AI Adoption Playbook), ensuring adherence to ethical and privacy standards while leveraging big data for sustainable development goals. Additionally, the "Data Protection and Privacy for Developers of Artificial Intelligence (AI) in India: July 2021 Practical Guidelines" can serve as a reference to embed Ethical AI development practices that protect privacy and ensure data quality across all development stages. These documents are referenced in page 157 in the DCO AI Adoption Playbook. • **Rationale 5:** Referring the standards now and again to refresh based on emerging trends
Potential Data Sources	Nodal Government Agency for Cyber Security / Artificial Intelligence / Technology / Data Management (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, National Cybersecurity Authority, National Data Offices etc.)
Examples	• The USA has a highly mature data security landscape for safeguarding sensitive data during AI development, driven by comprehensive frameworks like the National Institute of Standards and Technology (NIST) guidelines. • The UK National Cyber Security Centre (NCSC) provides cybersecurity standards to protect sensitive data, making the UK's practices highly mature for safeguarding AI-related data (NSCS).

Q17: What is the maturity level of the current data security practices to safeguard sensitive data during AI development?

Recommendation	• **Level 1:** Begin by defining and implementing AI-specific data security standards using frameworks such as the NIST guidelines from the USA and the UK's National Cyber Security Centre (NCSC) for safeguarding sensitive data during AI development. Engage the Nodal Government Agency for Cybersecurity and Data Management to ensure these standards are established and followed. • **Level 2:** Strengthen the consistency and application of existing data security policies by aligning them with global standards, such as the "Data Protection and Privacy for Developers of Artificial Intelligence" guidelines from India. Work with agencies such as the Ministry of Communications, National Data Offices, and Cybersecurity Authorities to implement these policies consistently across sectors. • **Level 3:** Formalize standardized data security policies to ensure individual control, safety, and secure digital information exchange. Utilize potential data sources such as the Ministry/Department of Technology and Innovation and the National Cybersecurity Authority for guidance on best practices and standards. • **Level 4:** Actively manage and monitor AI-specific data security laws at the national level, ensuring adherence to standardized protocols across sectors. Collaborate with national data offices and agencies for continuous improvement, referencing frameworks like the "Handbook on Data Privacy, Ethics, and Protection" by the UN Development Group as summarized on Page 156 in the DCO AI Adoption Playbook. • **Level 5:** Continuously optimize AI-specific data security laws and policies by analyzing emerging data trends and collaborating with organizations like the National Data Offices, ensuring long-term safety and secure digital data exchange. Refer regularly to frameworks like NIST and NCSC for updates and improvements. Refer to Data Protection and Privacy for Developers of Artificial Intelligence (AI) in Indias mentioned in the DCO AI Adoption Playbook (Page 157).

Q18: How well is the data organized within the country across sectors?

Readiness Levels	1. Data is poorly structured with major gaps and errors. Missing, inconsistent, or duplicated fields; outdated, incomplete, and invalid data. 2. Initial attempts to structure data, but gaps and errors persist. Missing data fields, inaccuracies, and outdated information. Sporadic validation, incomplete records, and data type mismatches. 3. Data is structured with fewer gaps and errors. Occasional outdated data and missing fields. Validation in place but not uniform. Inconsistencies or delayed updates. 4. Data is well-structured with minimal gaps or errors. Most data complete and up-to-date; rare discrepancies. Strong validation procedures to fix errors promptly. 5. Data is highly structured, with virtually no gaps or errors. All data is consistently complete, current, and validated. Immediate correction of any outdated entries or inconsistencies.
Response Selection Rationale	• **Response 1:** No major gaps and errors in the current datasets across sectors. • **Response 2: I**nitial attempts are being made for data cleaning and structuring • **Response 3:** The data is structured with fewer gaps, and the validation process has improved, reducing errors. • **Response 4:** The data is well-structured with minimal errors, and the validation process is robust, addressing most gaps. This should be aligned with the Data Quality framework outlined in page 159 of the DCO AI Adoption Framework. • **Response 5:** The data is highly structured and validated, with no noticeable gaps or errors across sectors and fully aligned with the Data Quality framework outlined in page 159 of the DCO AI Adoption Framework.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence / Technology / Data Management, Focus Sectors (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, National Data Offices, Ministry / Department of Education, Health, Energy, Finance, Defense, Transport etc.)
Examples	The UK promotes the development of data standards and encourages interoperability across systems.
Recommendation	• **Level 1**: Start by identifying major gaps and errors in the current datasets across sectors, focusing on issues such as missing, inconsistent, or outdated data, and engaging with the Nodal Government Agency for Technology and Data Management to initiate a data improvement plan. • **Level 2**: Review and implement initial data cleaning and structuring efforts, reducing errors such as missing fields and inconsistencies. Utilize resources from national data offices and the Ministry of Technology to guide this process. • **Level 3**: Confirm that data is becoming more structured, with fewer gaps and errors. Work with the Ministry/Department of Technology and Innovation to ensure validation processes are improving across sectors. • **Level 4**: Ensure that data is well-structured with minimal gaps and errors, and that robust validation procedures are in place. Align these improvements with the Data Quality framework outlined on Page 159 in the DCO AI Adoption Framework and use data from national sectors like Health, Energy, and Education to support this effort. • **Level 5**: Verify that data is highly structured, validated, and free of errors across sectors. Collaborate with the National Data Offices and follow the DCO AI Adoption Framework's Data Quality guidelines to ensure seamless data organization and immediate correction of any discrepancies. This should be aligned with the Data Quality framework outlined in page 159 of the DCO AI Adoption Framework.

Q19: How mature is the data quality validation process?

Readiness Levels	1. There is no formal data quality validation process in place. Data is used without any checks for accuracy, completeness, or consistency, leading to unreliable AI outcomes. 2. Initial efforts are made to implement data quality validation, but the process is manual and applied inconsistently across data sources. 3. A semi-automated data quality validation process is in place, covering key aspects of the data quality dimensions like completeness, consistency, and basic accuracy checks. 4. The data quality validation process is largely automated and standardized, ensuring that most data used in AI is validated across all data quality dimensions. Minimal Manual intervention. 5. A fully automated, real-time data quality validation process is in place which is continuously updated and ensure the highest consistency across all sources and departments, supported by robust governance.
Response Selection Rationale	• **Response 1:** No formal data validation process currently in place. • **Response 2:** The validation efforts are primarily manual and inconsistent across datasets. • **Response 3:** The validation process is semi-automated, covering key aspects of data quality • **Response 4:** The data validation process is largely automated, standardized, with minimal manual checks. Refer to the UNICEF Data Quality Framework for guidance of the data quality checks that need to be carried out. • **Response 5:** The validation process is fully automated, providing real-time validation, high consistency, and strong governance practices. Refer to the UNICEF Data Quality Framework for best practices as mentioned in the DCO AI Adoption Playbook (Page 159)
Potential Data Sources	Nodal Government Agency for Data Management / Artificial Intelligence / Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, National Data Offices etc.)
Examples	• Workforce Information Quality Activity (WDQI) - This initiative from the U.S. Department of Labor supports states in improving the collection and analysis of workforce data. It helps establish longitudinal databases that link education and workforce data, enabling better program evaluations and informed decision-making regarding education and employment outcomes • The UK AI Roadmap emphasizes the importance of data quality for AI development. To ensure AI systems make accurate and fair decisions, the UK is working on improving the quality of data used in AI models.

Q19: How mature is the data quality validation process?

Recommendation	• **Level 1:** Establish a formal data quality validation process to ensure accuracy, completeness, and consistency of data. Engage with the Nodal Government Agency for Data Management and follow examples like the UK AI Roadmap to prioritize data quality in AI development. • **Level 2:** Improve data validation efforts by making them more structured, though they may still be manual and inconsistent across datasets. Utilize guidance from initiatives like the Workforce Information Quality Activity (WDQI) to enhance data accuracy and consistency. • **Level 3:** Implement a semi-automated data quality validation process that covers key aspects of data quality, such as completeness and consistency. Collaborate with the Ministry/Department of Technology and Innovation to ensure that this process becomes more robust and standardized across sectors. • **Level 4:** Ensure that the data validation process is largely automated and standardized across sectors, with minimal manual intervention. Follow best practices from the UNICEF Data Quality Assessment Framework and ensure that AI data is validated across all necessary dimensions. • **Level 5:** Fully automate the real-time data quality validation process to ensure the highest level of accuracy, consistency, and completeness across all data sources. Implement strong governance mechanisms and refer to the UNICEF Data Quality Assessment Framework and the DCO AI Adoption Playbook (Page 159) for guidance on best practices.

Q20: Are high-quality datasets available for AI model training and deployment?

Readiness Levels	1. No structured, clean, or high-quality datasets are readily available. Data required for AI model training is disorganized and lacks proper labeling, leading to issues of accuracy and usability. 2. Not fully clean or consistently labeled data and meta-data. Data is somewhat structured but may still have gaps in completeness and relevance, limiting its use in training and deployment. 3. Readily available datasets exist, and they are structured, clean, and properly labeled. While suitable for AI model training, some gaps may remain in ensuring complete accuracy, consistency, and timeliness across sectors. 4. High-quality datasets are readily available, structured according to type of data, properly labeled, and clean. They are suitable for AI training and deployment, ensuring accuracy, relevance, and consistency across various industries and sectors. 5. Datasets are of the highest quality, meticulously structured, and continuously updated and optimized. They are rigorously maintained to be free from biases and errors, ensuring the utmost accuracy, completeness, and timeliness, thereby supporting the effective training and deployment of AI models.
Response Selection Rationale	• **Response 1:** No structured, high-quality datasets are available for AI model training. • **Response 2:** Some structure exists, but with noticeable gaps in accuracy or relevance of datasets. • **Response 3:** Structured, clean, and labeled datasets are available, though some gaps in quality may persist. Ensure some alignment with ISO/IEC 5259-1:2024 – Artificial Intelligence Data Quality for Analytics and Machine Learning (ML), as referenced in page 166 of the DCO AI Adoption Framework. • **Response 4: H**igh-quality datasets are consistently available across sectors, with full alignment to ISO/IEC 5259-1:2024, as referenced in page 166 of the DCO AI Adoption Framework. • **Response 5:** The top-quality datasets are continuously updated, optimized, and free of bias, in alignment with ISO/IEC 5259-1:2024, as referenced in page 166 of the DCO AI Adoption Framework.
Potential Data Sources	Nodal Government Agency for Data Management / Artificial Intelligence / Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, National Data Offices etc.)
Examples	To enhance the quality of data for AI, the UAE is promoting data labelling and annotation programs, particularly for critical sectors like healthcare, finance, and transportation. These programs ensure that datasets used to train AI models are well-organized, accurate, and free from bias, improving the performance and fairness of AI systems.

Q20: Are high-quality datasets available for AI model training and deployment?

Recommendation	• **Level 1:** Begin by assessing if there are structured, high-quality datasets available for AI model training, engaging with the Nodal Government Agency for Data Management and the Ministry/Department of Technology to initiate proper data collection and labeling processes. • **Level 2:** Confirm the existence of structured datasets, but address gaps in accuracy, completeness, and relevance. Consider implementing programs like the UAE's data labeling initiatives to enhance dataset quality and usability. • **Level 3:** Ensure that structured, clean, and properly labeled datasets are available, even if some gaps in quality remain. Align data management practices with standards such as ISO/IEC 5259-1:2024 as referenced in the DCO AI Adoption Framework to enhance data quality for AI model training. • **Level 4:** Ensure high-quality datasets are readily available, well-structured, properly labeled, and suitable for AI model training across sectors. These datasets should meet accuracy, relevance, and consistency requirements, and be fully aligned with ISO/IEC 5259-1:2024. • **Level 5:** Continuously update and optimize top-quality datasets to ensure they are free from biases, errors, and gaps. Rigorously maintain dataset completeness and timeliness, ensuring full compliance with international standards like ISO/IEC 5259-1:2024, as outlined in the DCO AI Adoption Framework, page 166.

Data & Infrastructure

Data Availability | Data Management & Protection | Data Quality | **Infrastructure**

Q21: What is the maturity level of your technology infrastructure to support automation, development, deployment, scaling, and monitoring AI solutions, and its role in fostering smart cities, inclusive systems, and redressal mechanisms?

Readiness Levels	1. The AI infrastructure is rudimentary, with minimal use of cloud services or government infrastructure. There are no systems in place for automation, deployment, or scaling AI solutions. The current infrastructure is insufficient to support initiatives like smart cities, AI-driven digital economy, or institutional readiness. 2. There is a basic integration of cloud platforms for pilot AI projects. Government infrastructure is in its early stages with limited efforts in monitoring and scaling. The infrastructure supports some initiatives like national startups and institutions but lacks comprehensive AI-specific readiness. 3. Cloud platforms are widely adopted, supported by established strategies for scaling and deployment. Monitoring systems are still developing. Government infrastructure is expanding to include AI initiatives like smart cities and digital economy strategies, and institutions are starting to adopt AI governance measures. 4. There is a well-established cloud infrastructure with clear governance for AI deployment and scaling. Government infrastructure is partially developed with automated scaling, secure monitoring, and growing support for AI in sectors like startups and smart cities. AI adoption strategies are also in place to foster digital transformation. 5. The technology infrastructure is fully integrated with advanced cloud and government systems, supporting continuous optimization in AI scaling, security, and resource management. Comprehensive AI platforms are deployed across sectors, including business units, enterprises, and national institutions, enabling the seamless development of smart cities and a robust digital economy.
Response Selection Rationale	• **Response 1:** No basic AI infrastructure or scaling capabilities are in place. • **Response 2:** There is basic cloud integration for pilot AI projects, with limited government support. Government support for scaling and monitoring is minimal, with early-stage efforts to incorporate AI in sectors like startups and national institutions. • **Response 3:** Established cloud platforms, scaling, and deployment strategies exist, with monitoring in the development phase. The infrastructure supports growing AI initiatives across sectors like smart cities and institutional AI governance. • **Response 4:** A well-established cloud and government infrastructure is in place, with automated scaling and monitoring. Refer to the ISO/IEC 23894:2023 AI – Guidance on risk management for alignment as mentioned in the DCO AI Adoption Playbook (Page 167) • **Response 5:** Advanced , integrated infrastructure is continuously optimized for scaling, security, and automation, aligning with the ISO/IEC 23894:2023 AI – Guidance on risk management for best practices.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence / Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	Singapore's GovTech agency has implemented advanced cloud platforms like Singapore Government Technology Stack (SGTS), which provides scalable infrastructure for deploying AI solutions. This supports real-time monitoring and automated scaling, ensuring seamless AI operations across government services and sectors .

Data & Infrastructure

Data Availability | Data Management & Protection | Data Quality | **Infrastructure**

Q21: What is the maturity level of your technology infrastructure to support automation, development, deployment, scaling, and monitoring AI solutions, and its role in fostering smart cities, inclusive systems, and redressal mechanisms?

Recommendation	• **Level 1:** Begin by assessing if there is any basic AI infrastructure in place, particularly the use of cloud services for scaling and deployment. Collaborate with the Nodal Government Agency for Artificial Intelligence and the Ministry of Technology to initiate infrastructure improvements. • **Level 2:** Integrate cloud platforms for pilot AI projects with basic monitoring and scaling capabilities, leveraging limited government infrastructure. Engage with technology agencies to support early-stage cloud integration. • **Level 3:** Ensure cloud platforms are widely utilized for AI scaling and deployment, and that monitoring processes are in the development phase. Collaborate with the Ministry/Department of Technology to further expand government infrastructure and monitoring capabilities. • **Level 4:** Establish a robust cloud infrastructure with automated scaling and secure monitoring in place. Align these efforts with the ISO/IEC 23894:2023 AI – Guidance on risk management, as referenced in the DCO AI Adoption Playbook (Page 167), to ensure infrastructure supports the scalability and security of AI operations. • **Level 5:** Fully integrate advanced cloud and government infrastructure, continuously optimizing it for scaling, security, and automation. Ensure alignment with ISO/IEC 23894:2023 AI – Guidance on risk management for best practices in AI infrastructure, using examples like Singapore's Government Technology Stack (SGTS) as a model for seamless monitoring and scaling. Refer to the ISO/IEC 23894:2023 AI – Guidance on risk management for alignment as mentioned in the DCO AI Adoption Playbook (Page 167)

Data & Infrastructure

Data Availability | Data Management & Protection | Data Quality | **Infrastructure**

Q22: What is the maturity level of your specialized technology infrastructure such as supercomputers, GPUs, cloud computing, and application development platforms, to support the development and integration of AI technologies?

Readiness Levels	1. No specialized infrastructure for AI development exists. Computing resources are insufficient for handling AI workloads, and systems are outdated or fragmented. 2. Basic computing infrastructure is available, but it lacks the capacity to handle large-scale AI development or integration. Limited access to specialized technology infrastructure. 3. Moderate computing infrastructure is in place, including access to GPUs, cloud platforms, and data storage solutions but not scalable yet. 4. Robust computing infrastructure exists, with high-performance computing (HPC), advanced GPUs, cloud services, and scalable storage solutions. 5. State-of-the-art computing infrastructure is fully available for AI, including advanced HPC, AI-specific accelerators, and scalable cloud infrastructure with real-time processing and AI model deployment capabilities.
Response Selection Rationale	• **Response 1:** No AI-supporting platforms, tools, or software products are currently in place, and no mechanisms for ethical reviews or fairness audits have been established. • **Response 2:** Basic AI platforms and tools are being identified, but the infrastructure lacks the capacity for large-scale AI tasks. Early efforts are underway to establish ethical review boards and mechanisms for auditing fairness and bias in AI systems. • **Response 3:** Moderate infrastructure is available, including access to GPUs and cloud platforms. AI-specific platforms and tools have been procured but are not fully scalable for heavy workloads. Ethical review processes are being established, with initial frameworks for fairness audits. Intel's Guide suggests this stage is suitable for organizations scaling AI systems beyond pilot phases, though resources like GPUs may not yet be fully optimized. • **Response 4:** Robust infrastructure is in place, featuring high-performance computing (HPC), advanced GPUs, and scalable storage solutions. AI platforms are routinely monitored, and ethical oversight boards review AI projects. There is ongoing work to establish mechanisms for producer liability in AI products. Intel's Guide emphasizes cloud-native strategies for scaling and automated management of AI workloads. Refer to the DCO AI Adoption Playbook (Page 38) for more details on Intel's Guide. • **Response 5:** A state-of-the-art infrastructure is fully integrated, featuring advanced HPC, real-time AI deployment, and seamless scalability. Ethical review boards are fully functional, fairness auditing is in place, and a dedicated oversight agency ensures liability management for AI products. Intel's Guide highlights the need for optimized, automated infrastructures that support continuous learning and AI workload optimization for real-time deployment. See the DCO AI Adoption Playbook (Page 38) for further insights into Intel's Guide.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence / Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	• The USA initiated the National AI Research Resource (NAIRR) pilot, a concept for a national infrastructure, seeks to make available the needed computational data, software, training, and educational resources required to fuel AI R&D. • Singapore has invested in the National Supercomputing Centre to provide the computational resources needed for AI research. • The UAE has invested heavily in AI infrastructure, including high-performance computing (HPC) and cloud platforms that support AI research and development.

Data & Infrastructure

Data Availability | Data Management & Protection | Data Quality | **Infrastructure**

Q22: What is the maturity level of your specialized technology infrastructure such as supercomputers, GPUs, cloud computing, and application development platforms, to support the development and integration of AI technologies?

Recommendation	• **Level 1:** Verify if there is any AI supporting infrastructure in place, such as basic computing resources for AI tasks, and begin discussions with the Nodal Government Agency for Artificial Intelligence and the Ministry of Technology to assess the current state. • **Level 2:** Confirm that basic computing infrastructure exists but lacks the capacity to handle large-scale AI tasks. Work with government agencies to explore expanding infrastructure capabilities to include more advanced solutions like GPUs and cloud services. • **Level 3:** Check if moderate infrastructure is in place, including access to GPUs and cloud platforms, but not yet scalable enough for intensive AI workloads. Engage with national supercomputing centers or agencies like Intel's Guide on cloud-native strategies to further develop infrastructure as detailed on Page 38 of the DCO AI Adoption Playbook • **Level 4:** Ensure robust infrastructure exists, featuring high-performance computing (HPC), advanced GPUs, and scalable cloud solutions. This infrastructure should emphasize real-time deployment and scaling, supported by guidance such as Intel's strategies for AI workload optimization. • **Level 5:** Confirm that a state-of-the-art infrastructure is available, including advanced HPC, AI-specific accelerators, and scalable cloud platforms for real-time AI model deployment and processing. Use best practices outlined in resources like Intel's Guide for seamless scalability and automated workload management. Refer to DCO AI Adoption Playbook (Page 38) for further details on Intel's Guide.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | Investment

Q23: What percentage of startups in your country are AI-focused compared to the total number of startups?

Readiness Levels	1. There are no AI-focused startups in the country. 2. Early-stage development of AI in the country, where under 5% of the total startups are AI focused. 3. Growing interest and implementation in AI in the country, where 5-10% of the total startups are AI focused. 4. AI-focused startups make up 10-25% of the total, indicating strong momentum in AI adoption across multiple industries. 5. AI startups constitute more than 25% of the total startup ecosystem, showcasing significant investment and widespread adoption of AI technologies across sectors.
Response Selection Rationale	• **Response 1:** There are no AI-focused startups in the country. • **Response 2:** The presence of early-stage AI startups, constituting to less than 5% of the total startup ecosystem. • **Response 3:** The growth of AI startups make up between 5-10% of the total number of startups. • **Response 4: S**trong momentum in AI startup adoption, where AI-focused startups constitute 10-25% of the ecosystem. • **Response 5:** A significant AI startup presence, where more than 25% of all startups are AI-focused and contribute actively to the ecosystem.
Potential Data Sources	Nodal Government Agency for Commerce, Artificial Intelligence, Innovation and Entrepreneurship, Incubation Centers, Accelerators, AI Center of Excellence (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Commerce or Industry, Ministry of Innovation and Entrepreneurship, etc.)
Examples	• The UAE has launched several AI-focused investment funds, such as the Mohammed Bin Rashid Innovation Fund, to provide financial support to AI startups. • In Benin, several startup incubators and innovation hubs have emerged in Cotonou and other cities, offering support to entrepreneurs working on AI applications.
Recommendation	• **Level 1**: Verify if there are any AI-focused startups in the country, working with government agencies such as the Ministry of Commerce and Innovation to identify emerging AI-driven businesses. • **Level 2**: Assess the presence of early-stage AI startups constituting less than 5% of the total startup ecosystem, collaborating with incubators and accelerators to foster their development. • **Level 3**: Review the growth of AI startups, which now represent between 5-10% of the total number of startups. Partner with innovation hubs and investment funds to further support their scaling and development. • **Level 4**: Evaluate the strong momentum in AI startup adoption, where AI-focused startups make up 10-25% of the ecosystem, and invest in additional accelerators and funding mechanisms to maintain this growth. • **Level 5**: Analyze the significant presence of AI startups, where more than 25% of the total startups are AI-focused. Work closely with public-private partnerships to further expand the AI startup ecosystem, leveraging programs like the Mohammed Bin Rashid Innovation Fund in the UAE for continued financial support.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | Investment

Q24: Are there government-supported programs to promote AI entrepreneurship?

Readiness Levels	1. No government-supported programs to promote AI entrepreneurship exists. 2. The government has initiated pilot programs to support AI entrepreneurship, but they are not fully developed. 3. There are some government-supported programs for AI entrepreneurship, but they are small in scale and focus on certain sectors. 4. The government has established a range of programs that actively support AI entrepreneurship across multiple sectors, offering resources and funding. 5. The government runs extensive, well-funded programs that promote AI entrepreneurship, with widespread participation and strong results in fostering innovation. The programs are improved based on continuous feedback and monitoring.
Response Selection Rationale	• **Response 1:** There are no government-supported programs aimed at promoting AI entrepreneurship. • **Response 2:** Pilot programs have been initiated, but are still in early development stages, without full-scale implementation. • **Response 3:** Small-scale government-supported programs that target specific sectors or industries in AI entrepreneurship exist. • **Response 4:** Broad government support programs for AI entrepreneurship that span multiple sectors, providing resources, mentorship, and funding exist. Refer to initiatives like the Startup India Initiative, (detailed in DCO AI Adoption Playbook page 160) which offers resources and incentives for AI-driven entrepreneurship in India to validate if there are any such initiatives inline. • **Response 5:** There are extensive and impactful government-supported programs that promote AI entrepreneurship, with continuous improvement, strong results, and feedback mechanisms in place.
Potential Data Sources	Nodal Government Agency for Commerce, Finance, Artificial Intelligence, Innovation and Entrepreneurship (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Finance, Ministry of Commerce or Industry, Ministry of Innovation and Entrepreneurship, etc.).
Examples	In Benin, entrepreneurship is promoted under the strategy, including support to Sèmè City, one of the anchor institutions for AI entrepreneurship. The Fonds d'Appui à l'Entrepreneuriat Numérique - FAEN has a goal to support the development of businesses using AI.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | Investment

Q24: Are there government-supported programs to promote AI entrepreneurship?

Recommendation	• **Level 1:** Establish government-supported programs to promote AI entrepreneurship by collaborating with key agencies and stakeholders, ensuring there are clear objectives for fostering AI-driven startups. • **Level 2:** Expand and refine pilot programs that support AI entrepreneurship, ensuring these initiatives move beyond early development stages and are prepared for wider implementation. Reference initiatives like Startup India (described on Page 160 of the DCO AI Adoption Playbook), which supports early-stage entrepreneurship with resources and incentives. • **Level 3:** Scale small government-supported AI entrepreneurship programs by providing additional funding, resources, and mentorship, targeting key sectors where AI can have a significant impact. Use models like the Mohammed Bin Rashid Innovation Fund from the UAE as inspiration for financial support mechanisms. • **Level 4:** Broaden government programs that support AI entrepreneurship across various sectors, offering comprehensive support such as financial incentives, training, and sector-specific mentorship to accelerate AI-driven business growth. Refer to programs like Startup India (detailed on Page 160 of the DCO AI Adoption Playbook), which provide extensive support for scaling AI businesses. • **Level 5:** Ensure the government's AI entrepreneurship programs are well-funded, highly impactful, and continuously improved through feedback and performance monitoring, allowing for the scaling of AI startups across the country. Draw from successful examples like the UAE's innovation funds and Benin's innovation hubs for ongoing improvements.

Q25: How often do government and private sector AI teams communicate?

Readiness Levels	1. No established communication channels or regular interactions between government and private sector AI teams. 2. Basic channels (e.g., periodic meetings, emails) exist, but communication is irregular and ad-hoc with no formal system for ongoing dialogue. 3. Regular communication occurs through established channels (e.g., quarterly meetings, reports). Some structured communication mechanisms are in place but are not comprehensive. 4. Continuous communication through frequent touchpoints (e.g., monthly meetings, workshops). Communication is structured with clear action points from discussions. 5. Fully integrated, real-time communication channels. Information is systematically gathered, processed, and acted upon, with digital tools supporting ongoing alignment and collaboration, showing demonstrated outcomes.
Response Selection Rationale	• **Response 1:** There are no communication channels between government and private sector AI teams. • **Response 2:** Basic channels that exist, but with irregular, ad-hoc communication, often without consistent follow-up. • **Response 3: T**here are regular communication channels and established mechanisms for collaboration, though limited to specific topics or events. • **Response 4: S**tructured and frequent communication with clearly defined actionable outcomes and collaborative efforts between the sectors exist. • **Response 5:** There is a fully integrated, real-time communication supported by digital tools (e.g., collaboration platforms) for ongoing, continuous collaboration, with demonstrated outcomes in AI projects or initiatives.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	The UAE has formed public-private partnerships with global tech companies such as Microsoft, Google, IBM, and Amazon. These collaborations focus on leveraging AI technologies to drive innovation in focus sectors.
Recommendation	• **Level 1**: Establish initial communication channels between government and private sector AI teams to promote collaboration. Look to public-private partnerships like those in the UAE with leading companies in the AI domain. • **Level 2**: Strengthen basic communication channels (e.g., periodic meetings or emails) between government and private sector AI teams, ensuring more regular and structured follow-up from discussions to foster ongoing dialogue. • **Level 3**: Formalize regular communication through established channels (e.g., quarterly meetings or reports), ensuring structured mechanisms for collaboration on specific AI projects or initiatives. Draw inspiration from successful partnerships in sectors like technology or defense. • **Level 4**: Develop continuous communication systems between government and private sector AI teams, with frequent touchpoints like monthly meetings or workshops. These should be structured with clear action points and measurable outcomes. • **Level 5**: Implement fully integrated, real-time communication channels supported by digital collaboration tools (e.g., platforms like Microsoft Teams or Slack) to enable seamless interaction between sectors. This will help in gathering, processing, and acting upon information, driving joint AI initiatives with demonstrated outcomes.

Impact of AI on Economy

Entrepreneurship | **Public – Private Partnerships** | International Collaboration | Investment

Q26: Are there collaborative AI initiatives between the government and private sector?

Readiness Levels	1. There are no collaborative AI initiatives between the government and the private sector. 2. Initial discussions or pilot projects have begun, but collaborative AI initiatives between the government and private sector are limited and not formalized. 3. Formal collaborations between the government and private sector have been established. Some AI initiatives are being jointly undertaken to address national challenges, but these are limited in scope and specific to a few sectors. 4. Collaborative AI initiatives between the government and private sector are well-structured and aligned with national goals. These initiatives are addressing multiple national challenges and include clear frameworks for partnership, resource sharing, and joint development across multiple sectors. 5. Robust, ongoing collaborations between the government and private sector. Outcomes are regularly assessed and improved, with joint initiatives demonstrating tangible impact and continuous improvement in AI deployment across sectors.
Response Selection Rationale	• **Response 1:** No collaborative AI initiatives exist between the government and the private sector. • **Response 2:** There are initial discussions or pilot projects with limited, informal collaboration between the two sectors. • **Response 3:** Formalized collaborations with joint initiatives addressing national challenges in specific sectors, such as healthcare or transportation exist. • **Response 4: S**tructured, multi-sector collaborations aligned with national goals, including established frameworks for partnership exist. Refer to the public-private partnership section highlighted in DCO AI Adoption Playbook page 172. • **Response 5:** There are robust, ongoing collaborations that involve regular assessments, result in tangible impacts, and incorporate continuous improvement mechanisms.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, National Data Offices etc.)
Examples	• The USA enables collaborations between government organizations, private industries, and the scholarly world to drive research and development in AI domain. Government financed activities, such as the CHIPS and Science Act, back semiconductor and microelectronics R&D for AI advancement. • Benin is working closely with technology companies, telecom providers, and financial institutions to accelerate the deployment of AI solutions. Collaborations between the government and private tech firms are driving AI applications in telecommunications, smart cities, and digital banking.

Impact of AI on Economy

Entrepreneurship | **Public – Private Partnerships** | International Collaboration | Investment

Q26: Are there collaborative AI initiatives between the government and private sector?

Recommendation	• **Level 1:** Identify if any collaborative AI initiatives exist between the government and private sector and initiate exploratory discussions to establish potential areas for collaboration. Use the USA's CHIPS and Science Act as a model for government-led collaborations. • **Level 2:** Check if there are any pilot projects or informal collaborative efforts between government and private sector AI teams, and work on formalizing these efforts into structured initiatives. • **Level 3:** Assess and formalize collaborations that address specific national challenges in sectors like healthcare, transportation, or finance. Leverage frameworks like the Bank of England's AI Public-Private Forum Final Report for insights on structured partnerships. • **Level 4:** Expand structured, multi-sector collaborations aligned with national AI goals, with clear frameworks for resource sharing, joint development, and addressing national AI challenges. Incorporate best practices from Benin's telecom and financial services collaborations. • **Level 5:** Analyze and continuously improve robust, ongoing collaborations between government and private sector AI teams. Regularly assess the outcomes of joint initiatives to ensure tangible impacts and improvement in AI deployment across sectors. Incorporate continuous improvement mechanisms to maximize effectiveness. Refer to the public-private partnership section highlighted in DCO AI Adoption Playbook page 172 .

Q27: What is the mechanism for knowledge transfer and skill development between public and private sector?

Readiness Levels	1. No mechanisms for knowledge transfer or skill development. Both sectors operate independently. 2. Some ad-hoc knowledge-sharing activities occur, like workshops or conferences, but no formal programs for skill development or consistent knowledge transfer. 3. Formal mechanisms such as training programs and joint research projects exist, but they are limited to certain sectors. 4. Structured programs for knowledge sharing and skill development, including internships, secondments, and joint initiatives, with continuous exchange benefiting public and private sectors. 5. Fully integrated knowledge transfer and skill development system with regular exchanges. AI talent development is prioritized with long-term investments and clear outcome tracking. Feedback on the knowledge transfer is collected and improved overtime.
Response Selection Rationale	• **Response 1:** No mechanisms for knowledge transfer exist between the public and private sectors. • **Response 2:** There are ad-hoc activities, such as workshops or events, without formalized programs for continuous knowledge transfer. • **Response 3:** There are formal mechanisms, such as training or research collaborations, that are limited to specific sectors or industries. • **Response 4:** There are structured programs, such as internships, secondments, or joint research initiatives, that facilitate ongoing exchange between public and private sector entities. • **Response 5: T**here is a fully integrated system in place that prioritizes AI talent development, tracks outcomes, and ensures continuous improvement through sustained knowledge exchange across sectors.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, etc.)
Examples	• To support workers in adapting to the AI-driven economy, the USA promotes reskilling initiatives that focus on AI and digital skills. Programs like Apprenticeship.gov provide AI-focused apprenticeships, helping workers learn AI-related skills while on the job. • Singapore is re-designing the AI Apprenticeship Program (AIAP) to significantly increase the number of apprentices they can train annually. They will also work with industry AI product development teams to expand the number of company attachments for their Continuing Education and Training programs.

Impact of AI on Economy

Entrepreneurship | **Public – Private Partnerships** | International Collaboration | Investment

Q27: What is the mechanism for knowledge transfer and skill development between public and private sector?

Recommendation	• **Level 1:** Establish basic mechanisms for knowledge transfer and skill development between public and private sectors. Leverage platforms like *Apprenticeship.gov* in the USA to introduce AI-focused apprenticeship programs. • **Level 2:** Formalize ad-hoc activities such as workshops or conferences into more structured programs that promote continuous knowledge exchange. Draw inspiration from Singapore's *AI Apprenticeship Program (AIAP)* for developing skill-oriented initiatives. • **Level 3:** Expand formal mechanisms such as training programs, joint research projects, and sector-specific initiatives to promote AI knowledge transfer between sectors. Utilize successful models like AI apprenticeships to scale up these efforts. • **Level 4:** Strengthen structured programs like internships, secondments, and joint AI initiatives that benefit both public and private sectors. Ensure continuous improvement by tracking skills developed and outcomes of knowledge transfer initiatives. • **Level 5:** Develop a fully integrated, long-term knowledge transfer and skill development system that prioritizes AI talent development. Focus on long-term investment in training and continuously collect feedback to enhance the system over time, as seen in initiatives like Singapore's re-designed *AI Apprenticeship Program (AIAP) as detailed on Page 172 in the DCO AI Adoption Playbook*.

Q28: Does your country collaborate with international organizations and other governments for AI talent development, training, and research , ensuring transparency and clarity in digital cooperation?

Readiness Levels	1. No collaboration with international organizations and other governments for AI talent development, training, or research, and no focus on transparency or clarity in digital cooperation. 2. Early-stage discussions or informal collaborations exist with international organizations and other governments, but no formal partnerships are in place. Efforts to ensure transparency and digital cooperation are minimal. 3. Some formal collaborations with international organizations and other governments for AI talent development, training, or research, but these are limited to specific programs or sectors. There is a basic focus on transparency and digital cooperation. 4. Established formal, structured collaborations with international organizations and other governments for AI talent development, training, and research, covering multiple sectors and areas of focus. Transparency and clarity in digital cooperation are emphasized. 5. Extensive, integrated collaboration with international organizations and other governments for AI talent development, training, and research. Continuous initiatives, comprehensive programs, and alignment with global best practices are in place, with clear impact tracking and ongoing improvement through feedback mechanisms. Transparency and clarity are central to all cooperation efforts.
Response Selection Rationale	• **Response 1**: There are no international collaborations for AI talent development, training, or research, and no focus on transparency or digital cooperation efforts. • **Response 2**: Early discussions or informal collaborations are in place with other countries or organizations, but without formal partnerships. There is limited emphasis on ensuring transparency and clarity in digital cooperation at this stage. • **Response 3**: Formal collaborations exist but are limited to specific programs or sectors in AI talent development, such as exchange programs or research initiatives. These efforts include some focus on transparent cooperation, though they remain isolated in scope. • **Response 4**: Structured collaborations are in place across multiple sectors, aimed at AI talent development and training. For example, the **Global Partnership on AI** (GPAI) fosters collaboration between multiple governments and organizations for AI research and talent exchange (DCO AI Adoption Playbook Page 162). Additionally, UNESCO's AI Capacity-Building Programs provide frameworks for transparent and cooperative public-private sector collaboration in AI education and development, as outlined in the DCO AI Adoption Playbook (Page 140). • **Response 5**: Comprehensive, ongoing collaborations exist, focusing on AI talent development, research, and training. These collaborations are part of long-term national strategies and are aligned with global best practices. Transparency and clarity in digital cooperation are central, with continuous feedback and improvement mechanisms integrated into the partnerships.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, UNESCO, World Bank foreign government agencies, etc.)

Q28: Does your country collaborate with international organizations and other governments for AI talent development, training, and research?

Examples	• The USA actively collaborates with global partners on AI through initiatives like the OECD AI Policy Observatory, G7 AI Initiatives, working with the European Union and other nations on cross-border collaboration. • Singapore participates actively in multi-stakeholder platforms, including the Global Partnership on AI (GPAI), the World Economic Forum (WEF) AI Governance Alliance, and the UN High-Level Advisory Body on AI.
Recommendation	• **Level 1:** Initiate collaboration with international organizations and governments for AI talent development and research. Start by exploring frameworks such as UNESCO's AI Capacity-Building Programs to establish connections. • **Level 2:** Build on early-stage discussions with international partners to formalize collaborations. Look at programs like the USA's partnerships through the *OECD AI Policy Observatory* and *G7 AI Initiatives* for potential models of collaboration. • **Level 3:** Expand formal collaborations to include more sectors and specific AI talent development initiatives, such as exchange programs and joint research initiatives. Leverage international agreements like the *Global Partnership on AI (GPAI)* for broader engagement. • **Level 4:** Strengthen structured collaborations across multiple sectors with international organizations for AI talent development, ensuring alignment with global best practices. Use platforms such as UNESCO's training frameworks and the *World Economic Forum's (WEF) AI Governance Alliance* to deepen partnerships. • **Level 5:** Foster extensive, ongoing collaboration with international bodies for AI talent development, research, and training. These collaborations should have clear impact tracking and feedback mechanisms to ensure long-term improvement and alignment with national AI strategies. Consider models like Singapore's participation in the *GPAI* and the *UN High-Level Advisory Body on AI* for continuous improvement and integration. Refer to DCO AI Adoption Playbook page 162 for details on Global Partnership for AI.

Q29: Are there international exchange programs or fellowships for cross-border AI knowledge sharing?

Readiness Levels	1. No international exchange programs or fellowships for AI knowledge sharing. 2. A few short-term programs or fellowships exist, but they are limited in scope. 3. Several programs are available but limited to select institutions or sectors, with growing cross-border sharing. 4. Well-established programs support extensive AI knowledge sharing across multiple sectors and disciplines. 5. Integrated into national strategies, these programs facilitate extensive cross-border sharing and collaboration, with regular assessments and demonstrated outcomes.
Response Selection Rationale	• **Response 1:** No international exchange programs or fellowships focused on AI knowledge sharing. • **Response 2:** There are limited short-term programs or fellowships that promote cross-border AI knowledge sharing. • **Response 3:** There is an availability of several programs that focus on AI knowledge sharing but are limited to select institutions or sectors. Refer to initiatives such as the Global Partnership on AI (GPAI) on Page 162 in the DCO AI Adoption Playbook, which brings together experts from multiple countries to collaborate on AI projects. • **Response 4:** There is a presence of well-established international programs supporting extensive AI knowledge sharing across multiple sectors. Programs like the Turing AI Fellowships encourage cross-border collaboration through fellowships in academia and industry as mentioned in the DCO AI Adoption Playbook (Page 163). • **Response 5:** Integrated programs are embedded within national strategies, promoting cross-border AI collaboration with regular assessments and long-term commitments to talent and knowledge exchange.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence or Technology, Education, Foreign Relations (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Education, Ministry of Foreign Affairs, etc.)
Examples	• UAE is developing a UAI brand and will use this to attract talent and business from across the globe to come to the UAE to test and develop AI. • Benin's AI strategy promotes subregional and international collaboration with African Institute for AI (AFRIA) and the Economic Community of West African States (ECOWAS).

Q29: Are there international exchange programs or fellowships for cross-border AI knowledge sharing?

Recommendation	• **Level 1:** Initiate efforts to explore international exchange programs or fellowships focused on AI knowledge sharing, beginning with collaborations through institutions like the *Global Partnership on AI (GPAI)* to bring international experts together. • **Level 2:** Look for short-term AI exchange programs or fellowships that promote cross-border knowledge sharing. Consider participation in initiatives like the *Turing AI Fellowships as described on Page 163 of the DCO AI Adoption Playbook*, which are designed to encourage AI knowledge exchange across regions. • **Level 3:** Evaluate several available AI knowledge-sharing programs, ensuring they cater to multiple institutions and regions. Review participation in initiatives such as GPAI for further collaboration and expanding cross-border exchanges in AI knowledge. • **Level 4:** Strengthen existing programs that support extensive AI knowledge sharing across multiple sectors. This should include programs like *GPAI* and initiatives mentioned in the *DCO AI Adoption Playbook on Page 162* to foster continuous collaboration across regions. • **Level 5:** Ensure exchange programs are fully embedded into national AI strategies, fostering continuous cross-border AI knowledge sharing, and track their long-term impact on talent development and collaboration. Leverage models such as the UAE's UAI brand to attract global AI talent and businesses for collaborative development.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q30: How is the government investing in AI-related research and development, and how are global, ethical, and societal factors being integrated into these efforts?

Readiness Levels	1. The government has not allocated any funding to AI research and development, and there is no focus on incorporating global, ethical, or societal considerations in AI research. 2. AI-related research and development receives less than 0.5% of the government's budget. Investment is limited, with little emphasis on coherent research efforts at global and regional levels or on ethical and social aspects of AI. 3. The government allocates between 0.5% and 1.0% of its budget to AI-related research and development. Moderate efforts are made to align research with global standards, and ethical, legal, and societal factors are beginning to be considered in AI research projects. 4. AI research and development funding accounts for 1.0% to 1.5% of the budget. This reflects a strong commitment to AI innovation, with growing emphasis on global collaboration, the integration of ethical frameworks, and public perception research. 5. More than 1.5% of the government's budget is dedicated to AI-related research and development. There is a high focus on global coherence, ethical and social factors, and active public consultation mechanisms, which are integrated into the design of AI strategies and regulations..
Response Selection Rationale	• **Response 1:** No budget allocated for AI-related research and development (R&D). • **Response 2:** AI R&D receives less than 0.5% of the total budget, indicating minimal investment in AI research. • **Response 3: B**etween 0.5% and 1.0% of the government's budget is allocated to AI R&D, showing moderate support for AI innovation. • **Response 4: Between** 1.0% to 1.5% of the budget is allocated to AI R&D, reflecting a strong commitment to advancing AI technologies. • **Response 5:** Greater than 1.5% of the government's budget is dedicated to AI R&D, indicating that AI is a high priority in the national strategy and a key area of focus for innovation and development. Please refer to the below potential data sources to get the above value
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation, R&D, Finance (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry / Department of Education, Research & Development Authority, Ministry of Finance, etc.)
Examples	• Singapore has committed more than S$500 million through AI Singapore (AISG) under the Research, Innovation and Enterprise (RIE) 2020 and 2025 plans • UAE has committed significant investments, projecting AED 335 billion in AI-driven growth by 2030. • In Benin, the estimated funding from 2023 to 2027 stands at approximately CFAF 4.68 billion, of which the public-private partnership is one of the most significant mechanisms of funding. • Since 2014, the UK government has invested over £2.3 billion in Artificial Intelligence (AI) initiatives across various sectors.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q30: How is the government investing in AI-related research and development, and how are global, ethical, and societal factors being integrated into these efforts?

Recommendation	• **Level 1:** Begin allocating a dedicated budget for AI R&D to raise awareness and support foundational initiatives. • **Level 2:** Increase AI R&D funding to 0.5%–1.0% and foster collaboration with industries and academia. • **Level 3:** Raise funding to at least 1.0% and encourage public-private partnerships and international collaborations. • **Level 4:** Expand funding and create targeted AI programs, focusing on key sectors and measuring impact regularly. • **Level 5:** Maintain AI as a national priority, focusing on innovation, talent development, and tracking sector-wide progress.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q31: How does the government prioritize investments in AI, and how is the ROI for these investments measured?

Readiness Levels	1. Government has not yet prioritized or invested in AI initiatives. 2. Government is considering prioritizing investment in AI and estimate ROI is calculated. 3. Established priorities with some standardized ROI measurement in a certain sectors. 4. Defined priorities with structured ROI measurement and regular reporting across multiple sectors. 5. Clear priorities, structured ROI measurement, and continuous improvement based on feedback.
Response Selection Rationale	• **Response 1:** There is an absence of government prioritization or investment in AI initiatives. • **Response 2:** The government is considering prioritizing investment in AI, with estimated ROI calculations in early stages. • **Response 3:** There are established investment priorities, with some standardized ROI measurements in specific sectors like healthcare, education, or public administration. • **Response 4:** There are clearly defined investment priorities in AI, accompanied by structured ROI measurements and regular reporting across multiple sectors. Refer to DCO AI Adoption Playbook Page 164. • **Response 5:** There are clear investment priorities with structured ROI measurement systems in place, allowing for continuous improvement and feedback mechanisms to adjust based on performance outcomes.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation, Finance, Commerce (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Finance, Ministry of Commerce, etc.)
Examples	• The U.S. government has significantly increased public investment in AI through agencies such as the National Science Foundation, which launched AI Research Institutes. • Singapore is targeting AI adoption in key sectors - Manufacturing, Financial Services, Transport & Logistics, and Biomedical Sciences, to drive economic transformation.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q31: How does the government prioritize investments in AI, and how is the ROI for these investments measured?

Recommendation	• **Level 1:** Initiate efforts to prioritize government investments in AI by assessing sectors that can benefit the most from AI integration, leveraging examples like the *National Science Foundation* in the U.S. to explore how public investment can drive AI research and development. • **Level 2:** Begin evaluating the potential ROI for prioritizing AI investments, using early-stage assessments of key sectors such as healthcare, transport, and public administration, with guidance from structured ROI frameworks to estimate benefits. • **Level 3:** Establish clear investment priorities in AI sectors like healthcare, education, and logistics, and develop standardized ROI measurements to ensure these investments lead to measurable outcomes, similar to *Singapore's sectoral targeting* of AI. • **Level 4:** Set up structured systems for tracking ROI on AI investments, ensuring reporting is consistent across multiple sectors. Leverage learnings from best practices in AI governance and apply regular updates to investment strategies based on ROI feedback. Refer to DCO AI Adoption Playbook Page 164. • **Level 5:** Implement a comprehensive, ongoing investment prioritization and ROI measurement framework for AI, allowing for continuous performance assessments and improvement. Establish feedback mechanisms to adjust strategies based on evolving technology performance outcomes, ensuring investments in AI yield long-term benefits.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q32: How has financial investment and incentives from the public and private sector in joint AI initiatives evolved to promote AI Adoption across the country?

Readiness Levels	1. No financial collaboration or incentives between the public and private sector on AI initiatives. 2. Initial joint investments are made, but collaboration is informal and limited in scope. 3. Joint investments are formalized and incentives are being provided, with structured programs that are limited to specific sectors or regions. 4. Strong joint investments and incentives across sectors to implement long-term strategies and create measurable impact. 5. Fully integrated long-term joint investment plan between public and private sector has been implemented along with incentives provided to promote AI exist with the provision to monitor impact and to re strategize future investments.
Response Selection Rationale	• **Response 1:** No financial collaboration or incentives for AI initiatives between the public and private sectors. • **Response 2:** Initial joint investments have been made and incentives are being considered, though these are informal and limited in scope, focusing on short-term projects or small-scale initiatives. • **Response 3:** There are joint investments that are formalized through structured programs, targeting specific sectors or regions including incentives to promote AI. • **Response 4:** There are strong joint investments and provision for incentives from both public and private sectors across multiple sectors, implementing long-term AI strategies with measurable impacts. Use the potential data sources to understand the investment from PPP in AI initiatives supported the growth of the economy • **Response 5:** There is a fully integrated, long-term investment plan and incentives are rolled out that involves continuous financial collaboration between the public and private sectors, with provisions for monitoring impacts and re-strategizing based on outcomes to ensure the sustainability and scalability of AI adoption.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation, Finance, Commerce (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Finance, Ministry of Commerce, etc.)
Examples	There are partnerships in Benin involving universities, research centres, and companies. Benin aims to strengthen AI research capabilities with international partners such as the ECOWAS and SMART Africa. The fact that investment in AI research is encouraged makes for various academic partnerships and structures possible such as FabLabs.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q32: How has financial investment from the public and private sector in joint AI initiatives evolved to promote AI Adoption across the country?

Recommendation	• **Level 1:** Begin exploring opportunities for joint financial collaboration between public and private sectors for AI initiatives. Consider informal investments as a starting point for small-scale projects, with an example of partnerships like those in Benin, involving universities and research centers. • **Level 2:** Evaluate the potential for scaling initial joint investments, focusing on structured short-term initiatives. Leveraging collaborations like those in *SMART Africa* and *ECOWAS* could offer early-stage learning for structured investment as detailed in the DCO AI Adoption Playbook on Page 171. • **Level 3:** Formalize joint investments with structured programs targeting specific regions or sectors. Use case examples such as Benin's AI partnerships to promote AI research capabilities across regions. • **Level 4:** Strengthen joint investment strategies, aiming to implement long-term AI adoption plans that create measurable impact across sectors. Utilize existing models like *FabLabs* to encourage growth through public-private collaboration. • **Level 5:** Establish fully integrated joint investment strategies between public and private sectors with continuous financial monitoring and re-strategizing based on performance outcomes. Ensure long-term sustainability by leveraging best practices from models such as *SMART Africa* and *ECOWAS* collaborations, with provisions for scaling across multiple regions.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q33: Is there a structure in place to build incubation centers and accelerators that promote AI adoption?

Readiness Levels	1. No formal framework or support exists for incubation centers or accelerators. 2. Basic frameworks or discussions around setting up incubation centers and accelerators exist, but no tangible structures have been established yet. Early-stage pilot programs may be in development. 3. Incubation centers and accelerators are being developed, with initial support from government programs, private investors, or universities. 4. A well-defined framework for incubation centers and accelerators exists. Multiple centers are operational, offering structured support, resources, mentorship, and funding for startups across various sectors. 5. A fully integrated and mature ecosystem with numerous incubation centers and accelerators. There is widespread government and private sector support, providing comprehensive resources, funding, and mentorship.
Response Selection Rationale	• **Response 1:** No formal framework or strategy for establishing incubation centers or accelerators to promote AI adoption. • **Response 2:** Basic discussions around building incubation centers and accelerators are happening, but without any tangible structures in place. • **Response 3:** The development of incubation centers has begun, supported by initial government or private sector involvement. • **Response 4:** A well-defined framework exists, with operational incubation centers offering support, resources, and mentorship for AI startups. Refer to the World Bank's Planning an Incubator guide for insights (World Bank Incubator Guide) as detailed in the DCO AI Adoption Playbook page 142. • **Response 5:** A fully integrated ecosystem is in place, offering extensive support for AI startups through incubation centers and accelerators, backed by both government and private sector investments.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Innovation and Entrepreneurship, Incubation Centers, Accelerators, AI Center of Excellence (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Commerce or Industry, Ministry of Innovation and Entrepreneurship, etc.)
Examples	The UAE has developed a robust ecosystem of incubation centers and accelerators through initiatives like Dubai Future Accelerators (DFA), Hub71 in Abu Dhabi, and Sharjah Entrepreneurship Center (Sheraa). These programs offer comprehensive support including funding, mentorship, and resources for startups across diverse sectors.

Impact of AI on Economy

Entrepreneurship | Public – Private Partnerships | International Collaboration | **Investment**

Q33:Is there a structure in place to build incubation centers and accelerators that promote AI adoption?

Recommendation	• **Level 1:** Begin by identifying whether a formal framework or strategy exists to establish incubation centers or accelerators that promote AI adoption. If no structure exists, explore options such as leveraging insights from *World Bank Incubator Guide(Page No. 142)* for initial discussions. • **Level 2:** Evaluate whether discussions around incubation centers and accelerators are taking place, focusing on developing a tangible framework. Reference examples such as *Dubai Future Accelerators (DFA)* for potential structures and strategies. • **Level 3:** Assess if the development of incubation centers has commenced, with support from government or private sector partnerships. Government involvement like *Hub71* in Abu Dhabi can be used as a model to formalize early-stage incubation efforts. • **Level 4:** Determine if a well-defined framework is operational, offering structured mentorship, funding, and support to AI startups. Established frameworks, like those implemented in *Sharjah Entrepreneurship Center (Sheraa),* can serve as examples to operationalize accelerators. • **Level 5:** Analyze whether a fully integrated and mature ecosystem of incubation centers and accelerators is in place, providing comprehensive support, funding, and resources for AI startups. This should involve robust government and private sector collaboration, offering sustained growth and mentorship for long-term AI adoption success. Refer to the World Bank's Planning an Incubator guide for insights (World Bank Incubator Guide) as detailed in the DCO AI Adoption Playbook page 142.

Talent and Skill

AI Education & Training Programs | Continuous Learning & Skill Development

Q34: To what extent has the national education system integrated an AI curriculum into its educational framework?

Readiness Levels	1. No AI subjects are part of the national education system, and no specialized AI degrees, certifications, or educational curricula addressing the societal, legal, technical, and ethical impact of AI are offered by universities. 2. AI is introduced in the education system through elective or optional courses, but there are limited formal AI degrees or certifications, and minimal focus on the societal, legal, technical, and ethical implications of AI. 3. AI courses are available in higher education, with a few universities offering specialized degrees or certifications in AI-related fields, including aspects of the societal, legal, technical, and ethical impact of AI. 4. AI subjects are widely integrated into curricula, and multiple universities offer specialized AI degrees and certifications that address the societal, legal, technical, and ethical implications of AI. 5. AI is fully integrated across all education levels, with widespread access to specialized AI degrees, certifications, and continuous learning programs, including comprehensive curricula on the societal, legal, technical, and ethical impact of AI, supported by government initiatives.
Response Selection Rationale	• **Response 1:** No AI subjects are included in the national education system, and no specialized AI degrees, certifications, or educational programs covering the societal, legal, technical, and ethical impacts of AI are offered by universities. • **Response 2:** AI is introduced through elective or optional courses in the education system, but formal AI degrees or certifications remain limited, with minimal emphasis on the societal, legal, technical, and ethical implications of AI. • **Response 3:** AI courses are available in higher education, with some universities offering specialized degrees or certifications in AI-related fields, including aspects of the societal, legal, technical, and ethical impact of AI. • **Response 4:** AI subjects are widely integrated into university curricula, and several universities offer specialized AI degrees and certifications, addressing the societal, legal, technical, and ethical implications of AI. • **Response 5:** AI is fully integrated across all education levels, offering widespread access to specialized AI degrees, certifications, and continuous learning programs, supported by government initiatives, with comprehensive curricula on the societal, legal, technical, and ethical impact of AI. Levels 3,4 and 5 may be aligned with the AI Competency Framework for Students and the K-12 AI Curricula as referenced in page 138 and 140 of the DCO AI Adoption Framework.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Education (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Education, Academic Institutions, University Boards, etc.)
Examples	• The USA are integrating AI education across all levels, from K-12 to higher education, aiming to build a robust talent pipeline. • Singapore developed specialized AI courses and training programs at various levels of education, from primary to higher education, aimed at building a strong AI talent pipeline. • Benin is making early efforts to integrate AI-related topics into the curricula of universities and technical institutions.

Talent and Skill

AI Education & Training Programs | Continuous Learning & Skill Development

Q34: To what extent has the national education system integrated an AI curriculum into its educational framework?

Recommendation	• **Level 1:** Check for any elective AI courses offered in universities. Encourage schools to introduce basic AI classes to help students grasp foundational AI concepts, while working with the Ministry of Technology and Innovation to integrate societal, legal, technical, and ethical implications into the curriculum. • **Level 2:** Expand the availability of AI courses and introduce specialized AI degrees or certifications at the university level, ensuring they include training on the societal, legal, technical, and ethical impact of AI. • **Level 3:** Broaden AI education across more schools and universities, ensuring that specialized AI degrees and certifications are offered, and that they comprehensively cover societal, legal, technical, and ethical aspects. • **Level 4:** Fully integrate AI education across all levels, from schools to universities. Collaborate with government initiatives to provide AI degrees, certifications, and continuous learning opportunities, with curricula emphasizing the societal, legal, technical, and ethical dimensions of AI. • **Level 5:** Ensure full integration of AI education across all levels, from schools to universities, with continuous updates and alignment of curricula to the latest AI advancements. Ensure that education remains relevant and future-proof in a rapidly changing AI landscape. Levels 3,4 and 5 may be aligned with the AI Competency Framework for Students and the K-12 AI Curricula as referenced in page 138 and 140 of the DCO AI Adoption Framework.

Talent and Skill

AI Education & Training Programs | Continuous Learning & Skill Development

Q35: What is the maturity level of university curricula in integrating AI-focused education to produce specialized AI graduates?

Readiness Levels	1. No AI-related courses or programs offered in universities. 2. Introduction of AI electives in existing programs. 3. Dedicated undergraduate or postgraduate AI degree programs introduced in select universities. 4. Expansion of AI degree programs across multiple universities, along with specialized AI courses, certifications, and collaboration opportunities. 5. Fully dedicated universities or institutions specializing in AI education, offering comprehensive programs, certifications, and advanced research opportunities.
Response Selection Rationale	• Response 1: No AI-focused courses or programs offered, based on data from relevant educational and governmental sources. • Response 2: Select if AI electives are introduced in existing degree programs, reflecting early adoption of AI-focused curricula. • Response 3: Choose if dedicated AI undergraduate or postgraduate degree programs are available in select universities, driven by institutional efforts and sector-specific growth. • Response 4: AI degree programs, certifications, and specialized courses are offered across multiple universities, demonstrating significant integration of AI education. • Response 5: Fully dedicated AI universities or institutions exist, offering comprehensive education and advanced research opportunities, indicating widespread educational maturity.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Human Resources, Education (Ministry of Education)
Examples	• UAE: The UAE-based Mohamed bin Zayed University of Artificial Intelligence provides fully funded postgraduate programs, aiming to produce world-class AI specialists through cutting-edge research and education initiatives.
Recommendation	• Level 1: Identify whether any universities currently offer AI-related programs. Engage with higher education institutions and ministries to initiate basic AI programs at select universities. • Level 2: Launch AI-specific undergraduate and postgraduate programs specializing in AI. • Level 3: Expand AI programs across multiple universities. Foster international collaborations for faculty exchange, research funding, and curriculum development. • Level 4: Scale up AI education to ensure university graduates specialize in AI through targeted government funding, scholarships, and incentives for students and institutions. Establish AI innovation hubs and research centers within universities to create a pipeline for advanced AI talent. • Level 5: Integrate AI into all major academic institutions, by offering advanced certifications, research opportunities, and access to industry mentors .Align AI education policies with national workforce strategies, focusing on global competitiveness in AI talent development.

Talent and Skill

AI Education & Training Programs | Continuous Learning & Skill Development

Q36: How developed are exchange programs between your government and other nations or institutions, especially in the focus sectors?

Readiness Levels	1. No established exchange programs currently exists, especially in the focus sectors. 2. There are some informal or pilot exchange programs. especially in the focus sectors. 3. The government has established formal exchange programs in certain focus sectors, with growing participation and some collaboration with foreign institutions or organizations. 4. The government actively supports well-structured exchange programs across multiple focus sectors. These programs are formalized, regularly executed, and involve strong collaboration with international partners. 5. The government runs extensive, fully institutionalized exchange programs across focus and non-focus sectors. These globally recognized programs are continuously monitored with feedback mechanisms to assess impact and improve outcomes based on participant experiences.
Response Selection Rationale	• Response 1: No exchange programs, especially in the focus sectors. • Response 2: There are informal or pilot exchange programs in specific sectors. • Response 3: There are formal exchange programs, especially in the focus sectors, with some international collaboration. • Response 4: Support for well-structured, multi-sector exchange programs with strong global partnerships exist. The government actively supports well-structured exchange programs across multiple focus sectors, which are formalized, regularly executed, and involve strong collaboration with international partners • Response 5: Extensive, institutionalized programs across sectors with continuous monitoring and feedback exist. The government runs fully institutionalized exchange programs across sectors, monitored and improved through feedback mechanisms.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Education, Innovation, R&D (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Education, Research & Development Authority, Academic Institutions, University Boards, etc.)
Examples	Singapore is highly involved in global AI initiatives and collaborates with countries like Japan, the US, and the UK through structured exchange programs. Institutions like AI Singapore (AISG) and SGInnovate actively collaborate with international organizations, universities, and governments, promoting AI research and knowledge exchange.
Recommendation	• **Level 1**: Identify if any exchange programs exist in focus sectors. Collaborate with relevant government agencies to explore possibilities for exchange programs. • **Level 2**: Review pilot exchange programs in specific sectors. Encourage the expansion of pilot initiatives and involve more focus sectors. • **Level 3**: Evaluate existing exchange programs, focusing on increasing collaboration with foreign institutions. • **Level 4**: Support exchange programs across multiple sectors and formalize programs while strengthening collaborations with international partners. • **Level 5**: Implement exchange programs across sectors. Continuously monitor programs and use feedback to improve outcomes and global collaboration.

Talent and Skill

AI Education & Training Programs | Continuous Learning & Skill Development

Q37: How often does your government host AI events such as community meetups, conferences, hackathons, and workshops annually, and assess stakeholder needs through AI awareness and literacy-building sessions?

Readiness Levels	1. No AI events are hosted by the government, and there are no efforts for AI awareness or literacy-building sessions to assess stakeholder needs. 2. Occasional events (1-2 per year) are hosted by the government with limited outreach, impact, and minimal focus on assessing stakeholder needs through AI awareness and literacy-building sessions. 3. AI events such as conferences, hackathons, and workshops are hosted multiple times a year, with moderate participation from the AI community, including some efforts to assess stakeholder needs through AI awareness and literacy-building sessions. 4. AI-related events are regularly organized throughout the year, including large-scale conferences and community-driven workshops, attracting strong participation from national and international audiences, with increasing efforts to assess stakeholder needs through AI awareness and literacy-building sessions. 5. The government consistently hosts and supports a wide range of AI events year-round, establishing the country as a leader in AI engagement, inviting international experts, fostering innovation, and regularly assessing stakeholder needs through dedicated AI awareness and literacy-building sessions.
Response Selection Rationale	**1. Response 1:** No AI-based events such as community meetups, conferences, hackathons, workshops, or efforts to build AI awareness and literacy to assess stakeholder needs. **2. Response 2:** There are occasional events (1-2 per year) hosted by the government, with limited outreach, impact, and minimal focus on building AI awareness and literacy to assess stakeholder needs. **3. Response 3:** AI events such as conferences, hackathons, and workshops are hosted multiple times a year, with moderate participation from the AI community, including some efforts to assess stakeholder needs through AI awareness and literacy-building sessions. **4. Response 4:** AI-related events are regularly organized throughout the year, including large-scale conferences and community-driven workshops, drawing strong national and international participation, with increasing emphasis on assessing stakeholder needs through AI awareness and literacy-building sessions. **5. Response 5:** The government consistently hosts and supports a wide range of AI events year-round, positioning the country as a leader in AI engagement by inviting international experts and fostering collaboration, while also regularly assessing stakeholder needs through AI awareness and literacy-building sessions. The country should aim to host AI events on a scale similar to those highlighted in the DCO AI Playbook (Page 170).
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Education, Innovation, R&D (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Education, Research & Development Authority, Academic Institutions, University Boards, etc.)
Examples	The UAE AI Summer Camp 6.0 is a large-scale event offering various training sessions, workshops, webinars, and talks about Artificial Intelligence. Participants can learn from experts on a wide range of topics, including AI's future, Data Science, AI applications in focus sectors, robotics, AI ethics, governance, and cybersecurity.

Talent and Skill

AI Education & Training Programs | Continuous Learning & Skill Development

Q37: How often does your government host AI events such as community meetups, conferences, hackathons, and workshops annually, and assess stakeholder needs through AI awareness and literacy-building sessions?

Recommendation	• **Level 1:** Encourage the government to host 1-2 AI events per year, focusing on hackathons, community meetups, or introductory workshops to increase outreach and begin assessing stakeholder needs through AI awareness and literacy-building sessions. • **Level 2:** Host multiple AI events throughout the year, such as conferences and hackathons, to encourage moderate participation from the AI community and universities, while incorporating efforts to assess stakeholder needs through AI literacy-building sessions. • **Level 3:** Regularly organize AI-related events with strong participation from national and international experts, boosting AI engagement and prioritizing the assessment of stakeholder needs through AI awareness and literacy-building sessions. • **Level 4:** Establish the government as a leader in AI by hosting a wide range of events year-round, inviting international experts, fostering collaboration and innovation, and consistently assessing stakeholder needs through comprehensive AI awareness and literacy-building sessions. • **Level 5:** Consistently host AI events year-round, inviting international experts and fostering innovation, while aligning with the latest AI developments. These events also focus on regularly assessing stakeholder needs through AI awareness and literacy-building sessions.

Talent and Skill

AI Education & Training Programs | **Continuous Learning & Skill Development**

Q38: How active are the learning & development programs to promote basic AI literacy among students, current government and private workforce?

Readiness Levels	1. No programs or initiatives to promote basic AI literacy for students or the current government and private workforce. 2. Initiating and drafting programs to promote basic AI literacy. 3. Limited programs to promote basic AI literacy are active for limited students/ current government and private workforce. 4. Comprehensive programs to promote basic AI literacy are active among all students/ current government and private workforce. 5. State of the art advanced AI programs are easily accessible and are regularly updated based on feedback.
Response Selection Rationale	• **Response 1:** No AI literacy programs available for students or the current government and private workforce. • **Response 2:** AI literacy initiatives in educational institutions or workplace training programs are being initiated. • **Response 3:** There is limited access to basic AI literacy programs, which might be available only to specific groups, such as select schools or workforce sectors. • **Response 4: C**omprehensive AI literacy programs are available for all students and the workforce. Programs at this level should align with the curriculum referenced in page 44 of the DCO AI Adoption Framework, which provides a structured approach to AI literacy development. • **Response 5:** Availability of advanced AI literacy programs that cater to both students and the workforce, with regular updates and alignment with international standards such as the AI Curriculum referenced in page 139 of the DCO AI Adoption Framework. These programs should also include feedback mechanisms and continuous improvements to adapt to evolving AI trends.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Education, Innovation, Human Resources (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Education, Ministry of Human Resources, Ministry of Labor, Academic Institutions, University Boards, etc.)
Examples	• In Singapore, Scaling up technology and AI talent pipelines, through Pre-Employment Training and by reskilling/upskilling workers through Continuing Education and Training. • The UAE offers continuous upskilling for professionals through specialized AI training, secondments, and international study tours, focusing on bridging skill gap. • Free courses are being run for UAE residents to raise awareness and understanding of AI technologies. Over 5000 UAE residents received specialized training on the fundamentals of AI with hands-on experience. • The government of Benin is investing in digital and AI skill development programs for civil servants and public sector workers

Talent and Skill

AI Education & Training Programs | Continuous Learning & Skill Development

Q38: How active are the learning & development programs to promote basic AI literacy among students or the current government and private workforce?

Recommendation	• **Level 1:** Identify if any AI literacy programs exist for students or the workforce and start working with relevant institutions to develop initial programs. • **Level 2:** Assess progress in activating AI literacy initiatives across schools and workplaces. Encourage the development of draft programs focused on basic AI skills. • **Level 3:** Expand access to basic AI literacy programs for selected schools or workforce groups. Collaborate with educational institutions to ensure programs reach more participants, check for alignment with the international standards, like AI Curriculum referenced in page 139 of the DCO AI Adoption Framework • **Level 4:** Support comprehensive AI literacy programs accessible to all students and the workforce, programs should be aligned with international standards, like AI Curriculum referenced in page 139 of the DCO AI Adoption Framework. • **Level 5:** Ensure advanced AI programs are available for continuous learning and regularly updated. Incorporate feedback mechanisms to adapt to evolving AI trends and technologies.

Talent and Skill

AI Education & Training Programs | **Continuous Learning & Skill Development**

Q39: Are there official AI skill certification programs endorsed by the government to promote awareness in AI?

Readiness Levels	1. No official AI skill certification programs endorsed by the government on AI. 2. Early stages of initiating an official AI skill certification programs by the government. 3. Limited offering of AI skill certification programs by the government have been implemented across limited sectors to bring awareness about AI. 4. Comprehensive AI skill certification programs by the government have been implemented across multiple sectors. 5. Official AI skill certification programs have been implemented across all sectors and monitored for regular updates based on emerging trends.
Response Selection Rationale	• **Response 1:** There are no government-endorsed AI certification programs. • **Response 2:** There are early-stage development and design of certification programs. • **Response 3:** Limited implementation of certification programs across specific sectors. • **Response 4:** Comprehensive programs are available in multiple sectors. • **Response 5:** Full implementation of certification programs across all sectors, with regular updates exist. Official AI skill certification programs have been fully implemented across all sectors and are regularly updated based on emerging trends. Please explore the UAE and Singapore's official websites to understand courses and programs related to AI domain.
Potential Data Sources	Nodal Government Agency for Artificial Intelligence, Education, Innovation, (Ministry of Communications and Information Technology, Artificial Intelligence Authority, Ministry/Department of Technology and Innovation, Ministry of Education, Academic Institutions, University Boards, etc.)
Examples	In UAE, the establishment of Mohamed bin Zayed University of Artificial Intelligence, the first graduate-level AI university. The certification system is based on the highest level of world-wide standards that will establish the core requirements in obtaining the UAE Seal of Approval.
Recommend ation	• **Level 1:** Initiate discussions to include AI-related subjects and certifications in higher education institutions. • **Level 2:** Expand AI elective courses into formal degree programs, encouraging universities to offer more structured certifications. • **Level 3:** Increase availability of specialized AI degrees and certifications, collaborating with academic institutions to strengthen AI education offerings. • **Level 4:** Standardize AI curricula across multiple institutions, ensuring alignment with international frameworks like the UNESCO AI Competency Framework on Page 140 in DCO AI Adoption Playbook. • **Level 5:** Strengthen government-supported AI integration across all education levels, fostering continuous learning and professional development initiatives. Refer sample certification programs as referred in DCO AI Adoption Playbook Page No. 169

6. APPENDIX

6.1. Frequently Asked Questions

Frequently Asked Questions	
1	**What is the purpose of the AI Readiness Assessment Toolkit?**
	The AI readiness assessment toolkit aims to evaluate a country's current ability to adopt AI in a responsible, ethical, sustainable, inclusive, and human-centered way. It identifies the readiness of the state across key pillars and priority sectors, assessing how well-prepared a country or organization is to integrate AI into their systems to foster innovation, enhance productivity, and improve service delivery.
2	**Who should fill out the AI readiness assessment?**
	To ensure a comprehensive and accurate AI readiness assessment, a focus group should be formed. This group should include the following key stakeholders with diverse expertise: 1.Strategic Knowledge Experts: 1. Government Officials: Policymakers and senior representatives from ministries or government bodies who have insights into national strategies, policy frameworks, and long-term AI objectives. 2. National AI Committees: Members responsible for formulating and implementing AI policies, ensuring alignment with the national agenda. 2.Technical Knowledge Experts: 1. AI Experts & Data Scientists: Professionals with deep knowledge of AI technologies, data availability, data management, AI systems architecture, and digital infrastructure. 2. Digital Infrastructure Specialists: Experts in IT infrastructure, cloud computing, cybersecurity, and AI platforms. 3.Sector-Specific Experts: 1. Sectoral Representatives: Key stakeholders from priority sectors like healthcare, education, agriculture, transportation, energy, and public administration. These representatives provide insights on AI integration within their respective sectors. 4.Ethics and Governance Representatives: 1. AI Ethics and Compliance Officers: Individuals responsible for ensuring that AI implementations are ethical, sustainable, and in line with regulations and societal values. 2. Legal and Regulatory Experts: Those with knowledge of AI policies and regulations, ensuring that AI deployments adhere to national and international standards. *Please refer to Section 6 for further details.*

Frequently Asked Questions

3	**What data or resources do I need to complete the assessment?**
	To complete the assessment, you'll need data on the country's AI strategy, governance, published statistics/ paper from private and public organizations and technical capabilities. Inputs from experts in the field is necessary to a more accurate assessment of the country's AI readiness level. *Please refer to Section 6 for further details.*
4	**How long does it take to complete the AI readiness assessment?**
	Once the necessary data is collected, the assessment process itself will only take about 15-20 minutes. However, gathering the data will take more time, as it involves coordinating with various departments and ensuring data availability.
5	**What are the key pillars and dimensions evaluated in the AI readiness assessment?**
	There are 5 pillars and 17 dimensions to be evaluated in the assessment. These pillars cover various aspects of AI readiness, please refer section 3.3 of this document for detailed information on AI readiness pillars and dimensions.
6	**How do I know if my country is ready for AI, and what happens after completing the assessment?**
	The assessment will provide an overall AI readiness score across key pillars and dimensions. Detailed results will be available in the AI Readiness Assessment Excel sheet, which will guide future AI strategies, policies, and investments to further enhance AI readiness. A country demonstrating strong performance across these pillars is considered to have high AI readiness, while identified gaps will highlight areas for improvement. *Please refer to Section 4 for further details.*

Frequently Asked Questions

7	**What should I do if I don't have the necessary data for certain sections?**

In the event of missing data:

- Focus groups and consultations with relevant ministries should be conducted to gather qualitative and quantitative insights.
- Collaboration with national statistical agencies or research institutions may help to acquire necessary data.
- In cases where data remains unavailable, estimations or proxy indicators may be used to fill gaps.

8	**How do I use the results of this assessment for strategic planning?**

The assessment results will serve as a critical input for national AI strategy and execution program development. The findings will:

- Identify Strengths and Weaknesses: Highlight areas of strength and those requiring attention.
- Guide Policy Development: Inform ministries on how to allocate resources and prioritize AI-related initiatives.
- Support Decision Making: Enable a data-driven approach for future AI policy and investment decisions.
- International Collaboration: Help identify areas for collaboration with other countries, international organizations, and private sectors to strengthen AI capacity-building and partnerships.
- Monitor Progress: The results serve as a baseline for tracking AI maturity improvements over time, allowing governments to adjust their strategies.

9	**How frequently should an AI readiness assessment be conducted?**

It is recommended that the AI readiness assessment be conducted every 6 months. This will allow countries to:

- Technological Advancements: Since AI is evolving, a 6-month review ensures that the strategy aligns with the latest developments of AI.
- Adoption of Policies: A 6-month review will allow governments to swiftly adjust policies and regulations with changes in AI trends.
- Monitor Progress: Monitoring progress of early stages will result in resolving issues and refining approach more efficient.
- Maintain Competitiveness: Regular assessments enable a country to remain competitive by proactively adjusting to changes in AI innovation and market dynamics.

Frequently Asked Questions

10	**Who can I contact for further assistance regarding the AI Readiness Assessment Toolkit?**
	Please contact DCO Representatives via email at info@dco.org
11	**Can we revisit this toolkit as our AI Readiness improves?**
	Yes, the assessment can be revisited every 6 months or at regular intervals as your AI readiness evolves. Regular updates with new data, progress, and developments ensure that the assessment accurately reflects current AI capabilities and readiness. This ongoing process ensures that the AI strategy remains responsive to advancements in the AI landscape, helping to maintain alignment with national priorities and global trends.
12	**Is it possible to go back and change results after submitting?**
	Yes, results can be modified post-submission if additional data or corrections are required. This ensures accuracy and completeness in the assessment.
13	**Can the assessment be circulated across different departments to fill in respective questions ?**
	Yes, the assessment can be shared across departments (based on your data policies) to leverage expertise from various teams. We support cross-functional collaboration to ensure all relevant areas contribute to a comprehensive evaluation. This approach ensures a more accurate and thorough AI readiness assessment.
14	**Is there guidance on improving areas with low readiness?**
	Areas with low readiness can be improved by implementing initiatives addressing specific gaps in the respective indicators. Such actions will strengthen key national capabilities, enhancing readiness and enabling the country to achieve its strategic development goals.

Frequently Asked Questions

15	**What are the specific limitations of this AI tool that users should be aware of?**
	The tool is not intended to rank countries globally. It focuses on assessing each country's AI readiness based on its unique context, rather than creating a competitive ranking or score. While the tool provides insights into AI readiness, it should not be used for direct benchmarking between countries. Results are designed to offer a structured evaluation for self-improvement, not to compare or rank countries against one another. The tool assesses AI readiness and capabilities but does not measure the actual performance or outcomes of AI initiatives. It evaluates the foundational elements in place for AI development rather than the effectiveness of AI implementations. This tool is not a regulatory or policy enforcement mechanism. It's a diagnostic tool for assessment and strategy development, rather than a guide for mandatory AI governance standards.

16	**Who is the target audience for this tool?**
	The target audience is countries that are interested in assessing their AI readiness, especially DCO Member States.

6.2. AI PILLARS AND DIMENSIONS – SUPPORTING DETAILS

6.2.1 Literature Review

The process for selecting pillars for the AI readiness assessment toolkit follows a structured, research-based approach that integrates multiple data sources and expert insights as inputs. Initially, government AI readiness indices, including those from Oxford Insights and Tortoise, in addition to UNESCO, Salesforce, AI Readiness Benchmark by Capgemini, are analyzed.

Based on this research, a comprehensive list of potential pillars is generated, addressing key areas such as upskilling, AI infrastructure, network connectivity, industry collaboration, AI ethics, and investment. This list is then refined through a prioritization process that considers alignment with the strategic priorities of Member States, supported by recommendations from subject matter experts, PwC, and the DCO, using a priority matrix.

The final step involves selecting the most relevant and impactful pillars, ensuring that the toolkit is tailored to help Member States enhance their AI capabilities while balancing global best practices with local needs.

The below table indicates the pillars considered from each of the literatures reviewed aligned row-wise across similar pillars.

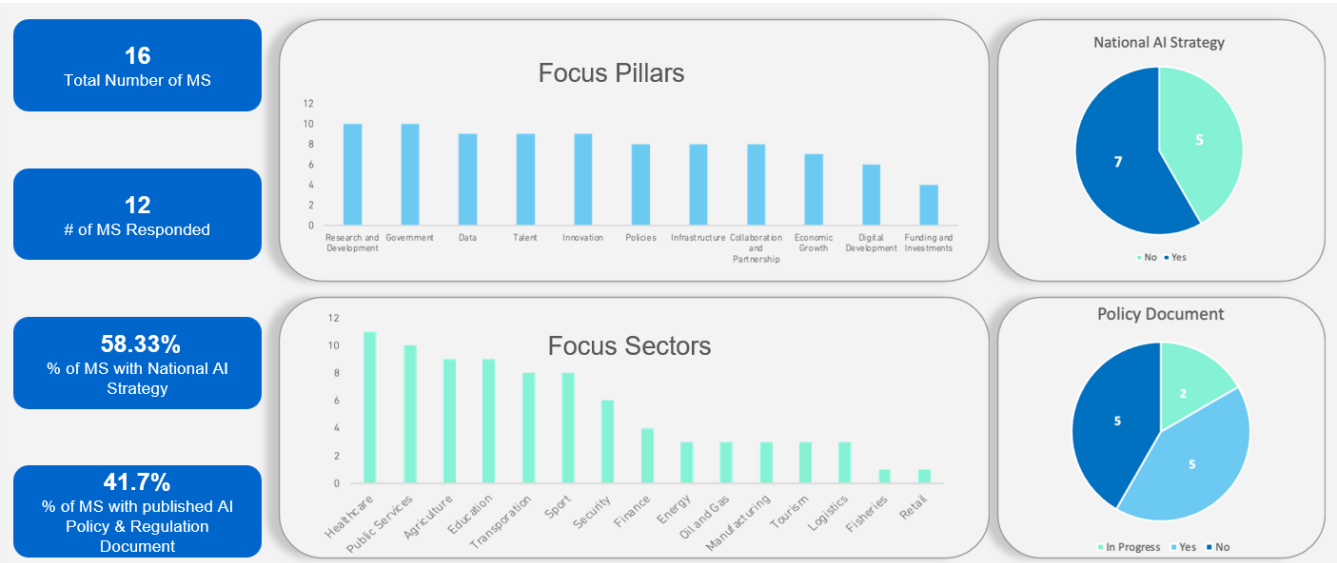
Literature Review				
Tortoise	**Oxford Insights**	**UNESCO**	**Salesforce**	**AI Readiness Benchmark** by Capgemini
Talent	Human Capital	AI Education	Human Capital Knowledge & Technology	Education
Infrastructure	Infrastructure Data Availability Data Representativeness	Infrastructure & Connectivity Computing Capabilities	Digital Readiness	IT Maturity & Advancements
Development	Innovation Capacity Maturity	Innovation Output	-	IT Developments
Government Strategy	Governance & Ethics Digital Capacity Adaptability Vision	AI Policy & Regulations	Digital Government	Policies & Regulations
Operating Environment	-	Health & Well-Being Culture	-	-
Research	-	Research Output Ethical AI Research	Research	Research
Commercial	-	Investments Consumption Labor Markets	AI Start-ups Investments	-

Table 6 : Literature Review

The table summarizes key AI readiness pillars derived from various literature sources, including Tortoise, Oxford Insights, UNESCO, Salesforce, and the AI Readiness Benchmark. Common themes across these sources include a focus on Talent through human capital and AI education, Infrastructure with an emphasis on connectivity, computing capabilities, and IT advancements, and Development centered around innovation capacity and IT growth. The Government Strategy pillar consistently highlights AI governance, ethics, policy, and regulations. Unique to UNESCO is the Operating Environment, which incorporates health, well-being, and culture.
Research emphasizes ethical AI and investment in research, while the Commercial pillar focuses on investments and AI start-up support.
Together, these pillars capture the essential dimensions of AI readiness, ensuring that global trends and local needs are addressed effectively.

6.2.2 Input from Member States Survey

The survey was distributed to 16 Member States, with 12 responding. Of those, 58% have a national AI strategy, and 41% have published AI policy and regulation documents. The top focus pillar identified was research and development and government, followed by data, talent, policies, and innovation, all sharing the same rank. Infrastructure, collaboration and partnership, and digital development were also highlighted, with funding and investments ranked last. In terms of sectors, healthcare was the top priority, with agriculture and public services also receiving notable attention. Among the respondents, 5 countries have no AI policy document, 5 have one in place, and 2 are in the process of developing it.



6.2.3 Pillars from Benchmarking AI Champion Countries

USA	Singapore	UK	UAE	Benin
Strategic vision, AI policies, governance, ethics	AI policies, regulations, and governance	Strategic vision, AI policies, governance, ethics	AI policies, regulations, and governance	Strategic vision, AI policies, governance, ethics
Innovation, research, development, deployment	Innovation, research, development, deployment	Innovation, research, development, deployment	Innovation, research, development, deployment	Innovation, research, development, deployment
Data availability, management & protection, cloud infrastructure	Data availability, quality, infrastructure for AI	Data availability, quality, infrastructure for AI	Secure data infrastructure and data sharing	Data availability, quality, infrastructure for AI
AI education & training programs, skill development	AI education and skill development	AI education and skill development	Attracting and training AI talent	
Entrepreneurship, public-private partnerships, investment	Entrepreneurship and economic growth through AI	Entrepreneurship and economic growth through AI	Entrepreneurship and economic growth through AI	Entrepreneurship and economic growth through AI
	Using AI to uplift human potential and address societal challenges			
	Investing in AI for science, business operations, & base technologies			
	Building robust AI infrastructure, fostering a trusted environment			
		Encouraging AI adoption in public services	Integrating AI into government services	
			Creating a supportive ecosystem for AI development	

Table 7 : Pillars from Benchmarking AI Champion Countries

- The above table illustrates how the key AI pillars were derived from benchmarking AI champion countries by analyzing their strategies, initiatives, and focus areas on AI development. The pillars represent recurring themes observed across these countries, which are crucial for driving AI success.
- Through this benchmarking process, the strategies of AI champion countries like the USA, Singapore, the UK, the UAE, and Benin were studied. Each country has established unique approaches, but several common pillars emerged, highlighting the foundational elements for AI progress.

- For example, all countries emphasize the importance of strategic vision and AI governance, reflecting a commitment to establishing ethical frameworks, policies, and regulatory environments that support Ethical AI use. Additionally, the emphasis on innovation, research, and deployment across countries showcases how they are fostering AI-driven innovation to enhance productivity and competitiveness.

- By identifying these recurring themes across countries, we distilled them into the core pillars that capture the key factors driving AI readiness, adoption, and overall success. These pillars serve as foundational areas that countries must focus on to fully harness the potential of AI technologies and ensure sustainable development.

7.2.4 Final Key AI Pillars and Dimensions of the Framework

The inputs came from four sources: a literature review, surveys of Member States, benchmarking AI champion countries, and DCO requests. DCO has specifically asked to look into Sustainability and Inclusive AI dimension. By analyzing these inputs, the common dimensions were identified, and from there, they were grouped into the final AI-REAL Toolkit pillars.

After gathering these inputs, the common dimensions, such as AI policies, governance, research, data quality, and infrastructure, were identified.

6.2.5 DCO AI-REAL Toolkit Pillars

These inputs were then consolidated into the final pillars, which include:

- Government Strategies, Policies & Regulations
- Technology Advancements & Readiness
- Data & Infrastructure
- Impact of AI on Economy
- Talent & Skill

These pillars will be the foundation of the AI readiness assessment tool, ensuring that the tool reflects both theoretical insights and practical applications from leading AI countries and Member States. The final pillars are designed to help assess the preparedness of countries to adopt and integrate AI across various sectors.

Literature Review	Member State Survey	AI Champion Countries	Common & Important Dimensions	Pillars
AI Policies and Regulations	Policies	AI Policies	**Strategy**	Government Strategies. Policies & Regulations
Government Strategy		Governance	**Policies & Regulations**	
Governance and Ethics		AI Ethics	**AI Governance & Ethics**	
			Sustainability & Inclusive AI	
Innovation Capacity & Innovation Output	Innovation	Innovation	**Innovation**	Technology Advancements & Readiness
Research Output	Research and Development Digital Development	Research & Development	**Research & Development**	
IT Maturity & Advancements		Deployment	**AI Deployment & Integration**	
Data Availability	Data	Data Availability	**Data Availability**	Data & Infrastructure
Governance & Ethics	Data	Data Management and Data Protection	**Data Management & Protection**	
Data Representativeness	Data	Data Quality	**Data Quality**	
Infrastructure	Infrastructure	Cloud Infrastructure	**Infrastructure**	
AI Start-ups		Entrepreneurship	**Entrepreneurship**	Impact of AI on Economy
AI Start-ups/ Investments	Partnership	Public-Private Partnerships	**Public-Private Partnerships**	
Investments/ Education	Collaboration	International Collaborations	**International Collaborations**	
Investments	Funding and Investments	Investments in AI	**Investments**	
Talent	Talent	AI Education & Training Program	**AI Education & Training Program**	Talent & Skill
Education	Talent	Continuous Learning and Skill Development	**Continuous Learning and Skill Development**	

Table 8 : Grouping Pillars and Dimensions

6.3 Key Indicators

6.3 Key Indicators		
Pillars	**Dimensions**	**Indicators**
Government Strategy, Policies, & Regulations	***Strategy***	*Does your country have a national AI strategy?*
		Is there a national program to roll out and execute the national AI strategy?
	Policies and Regulations	*Does your country have AI policies and regulations?*
	AI Governance & Ethics	*Is there a national AI governance framework in place?*
		Is there a dedicated governmental body responsible for overseeing AI governance and compliance?
		To what degree has the government established and enforced a Ethical AI framework?
	Sustainable & Inclusive AI	*How developed are the policies and guidelines for ensuring that AI systems are inclusive, ethical, free from bias, and represents all sections of society?*
		How actively are sustainability and green AI initiatives integrated into your government's AI strategy and practices?
		How accessible are government supported AI technologies (including but not limited to sandboxes, environments) for startups, government agencies, and private entities to test and develop inclusive and accessible AI solutions?
Technology Advancements & Readiness	***Innovation***	*Is AI innovation and experimentation actively supported?*
	Research and Development	*What is the status of AI patents and academic publications in your country?*
	AI Deployment & Integration	*Are there existing government-supported or funded platforms, tools, and software products available for developing and deploying AI?*
		How efficiently is AI adopted, especially across the focus sectors?

Table 9: Indicators

6.3 Key Indicators		
Pillars	**Dimensions**	**Indicators**
Data & Infrastructure	***Data Availability***	*What is the extent of data availability and accessibility for AI initiatives across government and private entities?*
	Data Management & Protection	*Are data management practices standardized and published on a national level?*
		How mature is the data management ecosystem to support AI use cases?
		What is the maturity level of the current data security practices to safeguard sensitive data during AI development?
	Data Quality	*How well is the data organized within the country across sectors?*
		How mature is the data quality validation process?
		Are high-quality datasets available for AI model training and deployment?
	Infrastructure	*What is the maturity level of your technology infrastructure to support automation, development, deployment, scaling, and monitoring AI solutions?*
		What is the maturity level of your specialized technology infrastructure such as supercomputers, GPUs, cloud computing, and application development platforms, to support the development and integration of AI technologies?
Impact of AI on Economy	***Entrepreneurship***	*What percentage of startups in your country are AI-focused compared to the total number of startups?*
		Are there government-supported programs to promote AI entrepreneurship?
	Public-Private Partnerships	*How often do government and private sector AI teams communicate?*
		Are there collaborative AI initiatives between the government and private sector?
		What is the mechanism for knowledge transfer and skill development between public and private sector?
	International Collaboration	*Does your country collaborate with international organizations and other governments for AI talent development, training, and research?*
		Are there international exchange programs or fellowships for cross-border AI knowledge sharing?
	Investment	*What percentage of the government's budget is allocated to AI-related research and development?*
		How does the government prioritize investments in AI, and how is the ROI for these investments measured?
		How has financial investment from the public and private sector in joint AI initiatives evolved?
		Is there a structure in place to build incubation centers and accelerators?

6.3 Key Indicators		
Pillars	**Dimensions**	**Indicators**
Talent and Skill	***AI Education & Training Programs***	*How integrated is AI curriculum within the national education system?*
		What percentage of the workforce currently works in AI-related roles?
		How developed are exchange programs between your government and other nations or institutions, especially in the focus sectors?
		How often does your government host AI events such as, community meetups, conferences, hackathons, and workshops?
	Continuous Learning & Skill Development	*How active are the learning & development programs to promote basic AI literacy among students or the current workforce?*
		Are there official AI skill certification programs endorsed by the government?

Table 10: Indicators

6.4. GLOSSARY

Glossary	
Term	**Description**
AI Adoption	The level at which AI technologies are implemented and utilized across various sectors, ranging from pilot projects to full-scale, cross-sector deployment of AI solutions.
AI Certifications	Government-endorsed certifications that validate a person's skills in AI technologies, ensuring a qualified workforce for AI development and deployment.
AI Collaboration Initiatives	Joint initiatives between the government and the private sector to co-develop AI solutions, share resources, and address national or industry-specific challenges using AI.
AI Curriculum	AI-related subjects integrated into the national education system, ranging from optional courses to specialized degrees and certifications at universities, aimed at building AI skills.
AI Execution Program	A structured initiative designed to implement the national AI strategy with defined timelines, milestones, and resource allocation for rolling out AI technologies across sectors.
AI Governance Body	A dedicated governmental organization responsible for overseeing AI governance and compliance, ensuring AI technologies are developed and used in line with ethical standards and national policies.
AI Governance Framework	A structured set of guidelines and policies that oversee the ethical, transparent, and responsible use of AI technologies, including accountability and decision-making processes.
AI Innovation	The development of new AI solutions and applications across industries, often supported by government incentives, funding, and resources to foster technological advancement.
AI Investment	The financial resources allocated by the government and private sector to AI research, development, and deployment, with a focus on return on investment (ROI) and economic impact.
AI Knowledge Exchange Programs	Government-supported programs that facilitate the sharing of AI knowledge between countries or institutions, including fellowships, research exchanges, and cross-border collaborations.
AI Patents and Publications	Intellectual property (patents) and research papers focused on AI technologies, indicating the country's progress in AI research and innovation.
AI Platform	A set of tools, software, and processes that support AI development and deployment, including data management, model training, and testing capabilities.
AI R&D Funding	The percentage of the government's total budget dedicated to AI research and development, reflecting the national priority placed on advancing AI technologies.
AI Sandbox	A controlled testing environment provided by the government where startups and researchers can experiment with AI technologies under real-world conditions without impacting live systems.
AI Startups	New businesses focused on the development and commercialization of AI technologies, supported by government policies, funding, or resources to foster innovation in AI.
AI-Specific Infrastructure	The specialized technology infrastructure required for AI development, such as supercomputers, cloud platforms, GPUs, and application development platforms.
AI Talent Development	Initiatives focused on developing AI skills and expertise, including government-endorsed certifications, educational programs, and international collaborations for AI training and research.

Glossary

Term	Description
AI Workforce	The proportion of workers engaged in AI-related roles, such as data scientists, machine learning engineers, and AI researchers, reflecting the country's AI talent base.
Data Accessibility	The availability and ease of access to datasets necessary for AI development, including open data and standardized sharing mechanisms across government agencies.
Data Governance	The framework that governs how data is handled, ensuring compliance with laws and policies regarding data privacy, security, and usage, particularly in AI applications.
Data Management Practices	The standardized processes and policies that govern how data is collected, stored, and maintained, ensuring it is structured, consistent, and accessible for AI use.
Data Quality Validation	The processes in place to ensure data used for AI training and deployment is accurate, complete, and consistent, allowing for reliable AI outcomes.
Data Security for AI	The measures and frameworks in place to protect sensitive data used in AI development, including privacy laws, data protection policies, and governance frameworks.
Green AI	A branch of AI focused on minimizing the environmental impact of AI systems, particularly in areas such as energy consumption during model training and deployment.
Incubation Centers	Facilities and programs funded by the government to support startups, providing the necessary resources, mentorship, and space for developing AI technologies and innovations.
National AI Strategy	A formal, comprehensive plan by the government outlining objectives, key areas of focus, and actions for the development, deployment, and regulation of AI technologies.
Responsible AI Framework	Policies that ensure AI systems are ethical, free from bias, transparent, and accountable, promoting fairness and inclusivity across all sectors.
Indicators	Measurable questions used to evaluate specific dimensions within the AI readiness framework. Each indicator is linked to a range of answers that correspond to different maturity levels, helping to assess the current state and progress of AI capabilities.
Framework	A structured system or set of guidelines that organizes concepts, principles, and components to facilitate understanding and implementation.
Pillars	The core categories or foundational elements within the AI readiness framework that structure the evaluation.
Dimensions	Specific aspects or categories within the AI Readiness Assessment Framework that provide a more detailed evaluation of the pillars. Each dimension breaks down the broader focus areas into manageable components, allowing for a granular assessment of a country's AI capabilities and readiness.
AI Readiness Toolkit	A comprehensive set of resources, guidelines, and assessment tools designed to help countries and Member Sat evaluate and enhance their readiness for AI adoption.
AI Ethical Standards	A set of principles and guidelines that govern the responsible development, deployment, and use of artificial intelligence technologies.
Proof of Concept (PoC)	A preliminary demonstration or pilot project used to validate the feasibility, functionality, and potential effectiveness of an idea, technology, or solution in real-world applications.

Glossary	
Term	Description
Qualitative Assessment	An evaluative approach that focuses on understanding a country's unique AI readiness through qualitative insights rather than quantitative ranking or benchmarking. This method assesses strengths, weaknesses, and areas for improvement.
Focus Group	A recommended group of diverse experts that includes government officials, AI specialists, industry representatives, and ethics and governance professionals.
Global Best Practices	Established standards and ethical guidelines recognized internationally that serve as benchmarks for developing and implementing AI strategies across various sectors.
Roadmap	A strategic plan that outlines the steps, milestones, and timelines required to achieve specific goals or objectives related to a project or initiative.

Table 11: Glossary

ACKNOWLEDGMENTS

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