Annexes

Sri Lanka's National Strategy on AI

Draft Strategy for Public Consultation
July 2024

AI Sri Lanka 2024-2028

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Contents

Annex 1:

Indicative Implementation Plan

This Indicative Implementation Plan outlines a preliminary set of suggested initiatives for realizing Sri Lanka's AI vision, as detailed in *AI Sri Lanka 2024-2028: Sri Lanka's National Strategy on AI*. The National Center for AI (NCAI), as the primary entity responsible for owning and overseeing the execution of the National AI Strategy, will be responsible for refining and implementing this plan.

To do so, NCAI will:

1. Carefully consider the proposed initiatives, conduct thorough consultations with relevant stakeholders from government, private sector, academia, and civil society, and subsequently finalize the plan. This process will incorporate necessary additions or modifications, and critically, establish a prioritization and sequencing for these activities based on an assessment of Sri Lanka's current capacity and resources.
2. Ensure that all initiatives are closely aligned with national priorities and designed to advance Sri Lanka's overall development goals. The NCAI will work to integrate AI initiatives with existing national plans and strategies across various sectors.
3. Ensure that the core principles of the National AI Strategy are reflected in the design and implementation of the initiatives.
4. Develop a comprehensive yearly action plan, detailing specific timelines for each initiative. This plan should set clear targets (refer to Annex 2 for a preliminary list of targets) and establish associated timeframes, all while maintaining alignment with national priorities and core principles.
5. Review and update the yearly plan annually, considering progress made, emerging priorities, and input from stakeholders. This review will be informed by rigorous monitoring and evaluation activities conducted throughout the implementation process.
6. Periodically review and update the National AI Strategy itself, based on learnings from implementation and monitoring activities, to ensure its continued relevance and effectiveness in a dynamic AI landscape and its ongoing alignment with evolving national priorities.

By adopting this collaborative, adaptive, and comprehensive approach, the NCAI will ensure the effective and responsive implementation of the National AI Strategy. This approach will drive Sri Lanka towards its vision of becoming a regional leader in ethical and inclusive AI innovation and adoption, while simultaneously advancing the country's broader development objectives.

1. Enabling our AI ambitions through strong foundations

1.1. Data

Area	Action/ Initiative	Responsibility	KPI	Timeline	Comments
Data Governance & Management	1.1.1 Develop and implement a comprehensive data governance framework that operationalizes the SLPDPA for government and ensures data availability, integrity, and protection while promoting ethical use, including processes for data collection, storage, access, quality assessment, and safeguarding sensitive information.	NCAI, DTA, MoT	• Framework developed and adopted by government agencies	Short Term	
	1.1.2 Update, finalize and adopt Government Information Classification Framework ensuring alignment with the data governance framework and after careful review by relevant stakeholders and ensuring elimination of duplication.	NCAI, DTA, MoT	• Government Information Classification Framework adopted. • Data exchange operationalized.	Short Term	Preceded by 1.1.1 Might require alignment with Action 2.1.2 in Digital Strategy 2030 on a government data sharing policy.
	1.1.3 Update Government Data Sharing Policy that covers data governance, management and sharing, in line with the Lanka Interoperability framework (LIFe) or its replacement intended as part of the establishment of the National Data Exchange, and personal data protection laws and regulations, and including the implementation of the "Ask Once" principle whereby user data can be pre-populated on user sign-in. Ensuring sharing is limited as appropriate based on sensitivity of data (as per Government Information Classification Framework).	NCAI, DTA, MoT, DPA	• Government Data Sharing Policy adopted.	Short Term	Preceded by 1.1.2 Action 2.1.2 in Digital Strategy 2030 on a government data sharing policy, should be aligned with this activity.

	1.1.4 Update, finalize and adopt the Government Cloud Policy to facilitate mixed government-commercial usage as needed but in alignment with SLPDPA.		• Government Cloud Policy adopted.		Preceded by 1.1.1
Data Sharing, Data Exchange, & Open Data	1.1.5 Develop a data exchange platform with API gateway so that government organizations can access and exchange trusted user information for purposes of delivering digital services to citizens and businesses.	NCAI, DTA, MoT, DPA	• National Data Exchange (NDX) operationalized and in use. • Number of datasets accessible • Number of API Calls	Short to Medium Term	Preceded by 1.1.3 Same as Action 2.1.5 of Digital Strategy 2030 on government data exchange platform.
	1.1.6 Develop a customizable data sharing template for government agencies to share data with each other, as may be required, that is compliant with SLPDPA and internal government data governance standards and facilitates access via the NDX.	NCAI, DTA, MoT, DPA	• Standardized agreements adopted	Medium to Long Term	Preceded by 1.1.1 and alignment would be required with 1.1.5 as needed. Should ensure this finalized only after trialling on a few use case projects.
	1.1.7 Develop a customizable data sharing template facilitate data sharing between public sector and private sector organizations, that is compliant with SLPDPA and internal government data governance standards and facilitates access via the NDX where feasible.	NCAI, DTA, MoT, DPA	• Standardized agreements adopted	Long Term	Preceded by 1.1.1 and alignment would be required with 1.1.5 as needed. Should ensure this finalized only after trialling on a few use case projects.

	1.1.8 Reactivate and update the Government's Open Data Portal to provide more curated, open and high-quality datasets in standardized formats and APIs, boosting transparency and empowering the private sector and researchers with data for innovation and service development	NCAI, DTA, MoT, DCSSL	• Revamped Open Data Portal operational and in use. • Number of datasets available • Number of API calls	Short Term	Preceded by 1.1.1. Would require alignment with 1.1.2 and 1.1.3
	1.1.9 Reactivate and update the Government's National Spatial Data Infrastructure (NSDI) to provide more curated open datasets and APIs, supporting various AI applications	NCAI, DTA, MoT	• Revamped NSDI operationalized and in use. • Number of datasets available • Number of API calls	Short to Medium Term	Preceded by 1.1.1. Would require alignment with 1.1.2 and 1.1.3
Data Needs Assessment and Maturity	1.1.10 Develop a guided Data Needs Assessment Framework to identify and catalogue decisions undertaken by government organizations that can be augmented with data.	NCAI, government organizations	• Data Needs Assessment Framework established. • Number of government organizations conducting data needs assessments.	Short to Medium Term	Framework should be finalized only after trialling on a few use case projects
	1.1.11 Develop a Data Maturity Framework (DMF) aligned with the existing the existing Digital Maturity Model (DMM) for Government with a focus on data for government agencies, to help identify data gaps and develop recommendations to address these gaps	NCAI, DTA, MoT, Government organizations.	• DMF framework developed and in use. • Number of government organizations/ departments conducting DMF assessments. • Number of government organizations/ departments initiating	Short to Medium Term	Framework should be finalized only after trialling on a few use case projects

			improvements to address identified gaps. • Improvement in data maturity scores.		
	1.1.12 Develop regulations to ensure each government organization/ department conducts periodic DMF assessments.	NCAI, DTA, MoT, Government organizations.	• Regulation established.	Long Term	Preceded by 1.1.11
Data Roles and Competencies	1.1.13 Update the Digital Government Competency Framework to include functional job profile for a Data Officer to be introduced in every Government organization to oversee data collection, management, and sharing in compliance with the requisite laws and governance standards.	NCAI, DTA, MoT	• Data Officer functional job profile developed. • Number of government organizations with a data officer.	Medium Term	

1.2 Skills Development

Area	Action/ Initiative	Responsibility	KPI	Timeline	Comments
Public Sector Training and Competency Development	Develop a range of introductory courses/ training programs related to AI for public sector: 1.2.1 Short AI Awareness and Education courses on responsible public sector transformation through AI for public sector officials including senior officials. 1.2.2 Training courses on AI project design and management for senior public officials.	NCAI, DTA, MoT, Ministry of Public Administration, SLIDA	• Number of public sector officials trained. • Level of AI awareness among participants. • Number of AI projects initiated in the public sector.	Short to Medium Term	
	Modify the existing Digital Government Competency Framework (DGCF) as needed to:	NCAI, DTA, MoT, Ministry of Public Administration	• Updated DGCF	Medium Term	

	1.2.3 Define and include skills and competencies required for the role of a Data Officer who would be responsible for operationalizing the data related frameworks developed by the NCAI and DTA, identifying data needs and data-driven use-cases, drive data driven decision making in government, and implementing best practices on data collection/ management/ sharing. 1.2.4 Define and include skills and competencies related to AI proficiency and AI driven public sector transformation based on a study of needs and learnings from initial AI projects/ solutions implemented via NCAI.				
	1.2.5 Develop a Data and AI skills roadmap to guide the implementation of skills development initiatives for the public sector on data driven decision making and responsible public sector transformation through AI.	NCAI, DTA, MoT, Ministry of Public Administration, SLIDA	• Completion of the Data and AI Skills Roadmap • Alignment of skills development initiatives with the roadmap.	Medium Term	Preceded by 1.2.3 and 1.2.4
	1.2.6 Develop a training program for the judiciary and relevant regulatory agencies on Responsible AI Regulation and Governance, leveraging existing online resources (including MOOCs) as much as possible.	NCAI, MoT, DTA, DPA, Ministry of Justice, SLIDA, Ministry of Public Administration	• Training plans developed	Medium to Long Term	
Education Initiatives	1.2.7 Update the Common Digital Skills Framework (part of National Digital Skills and Inclusion Strategy) intended as part of implementation of Digital Strategy 2030, to include Artificial intelligence, as well as to establish a formal measurable definition of "AI literacy" that can characterize different levels of AI skills.	MoE, SLASSCOMM, DTA, NCAI	• Measurable AI Literacy definition established. • Integration of definition into education and training programs.	Short Term	Refer to Action area 6.1.2 of the Implementation plan of Digital Strategy 2030 &

	1.2.8 Design, develop, and implement an AI Engineering Training Program in partnership with academia and private sector to meet the needs of the industry. Leverage existing global MOOCs as much as possible.	NCAI, MoT, Universities, Private sector	• Number of AI Engineers produced. • Employability of AI engineers.	Short Term	
	1.2.9 Design, develop, and implement an AI Apprenticeship Program in partnership with academia and private sector to meet the needs of the industry. Leverage existing global MOOCs as much as possible.		• Number of apprenticeships offered. • Completion rate. • Post-apprenticeship employment rate.	Short Term	See *Annex 10: Draft Concept Note on AI Hubs & AI Apprenticeship Programs*
	1.2.10 Integrate AI and data literacy into school curriculums from primary to tertiary levels.	NCAI, MoT, DTA, Ministry of Education, National Institute of Education	• Number of schools implementing AI and data literacy programs • Student performance in AI and data literacy assessments	Medium to Long Term	In alignment with Policy Statements 6.9 of the revised National Education Policy Framework.
	1.2.11 Develop and implement targeted AI literacy programs for underrepresented groups, including girls, minorities, and rural populations, to ensure inclusive participation in the AI ecosystem.	NCAI, MoT, DTA, Ministry of Education, National Institute of Education	• Number of program's initiated for each underrepresented group • Number of people (by underrepresented group category) who have undertaken the literacy program.	Medium to Long Term	
	1.2.12 Develop AI specialization within existing computer science/ IT degrees, which, amongst others, covers AI Engineering, AI Ethics, AI Governance.	NCAI, MoT, Ministry of Education, Universities, UGC	• Number of universities/ institutes offering AI specializations within existing computer science/ IT degrees • Graduate employability in AI-related jobs	Medium Term	

	1.2.13 Develop AI Business Planning courses for business graduates, MBAs, and executives.	NCAI, NCAI, MoT, Ministry of Education, Universities/ Education Institutes	• Number of participants in AI Business Planning courses • Number of AI projects initiated by course graduates	Medium Term	
	1.2.14 Develop accreditation standards for AI degree programs (both Bachelors and Masters).	NCAI, MoT, Ministry of Education, University Grants Commission.	• AI degree program accreditation standards established	Long Term	
	1.2.15 Design and implement an AI Ethics certification program for public and private sector professionals.	NCAI, MoT, Minsitry of Education	• AI Ethics certification program established.	Long Term	
Upskilling & Reskilling	1.2.16 Launch a Data and AI Skills Development Fund to support upskilling and reskilling initiatives.	NCAI, MoT, Ministry of Finance, Industry partners.	• Amount of funding allocated. • Number of individuals and organizations benefiting from the fund.	Long Term	
	1.2.17 Introduce a Data and AI-focused vocational training programs for professionals at risk of job displacement	NCAI, Ministry of Skills Development, vocational training institutes, industry partners	• Number of AI-focused vocational training programs introduced. • Number of participants, • Post-training employment rates.	Long Term	
International Partnerships and Knowledge Transfer	1.2.18 Establish partnerships with international AI education providers and universities to facilitate knowledge transfer and capacity building.	NCAI, MoT, Ministry of Higher Education	• Number of partnerships established. • Number of students and professionals benefiting from these partnerships.	Medium Term	

1.3 Infrastructure

Area	Action/ Initiative	Responsibility	KPI	Timeline	Comments
Connectivity	Implement the actions outlined in the Digital Strategy 2030 to support the development of High-speed and Resilient Broadband Infrastructure to Support AI Development. Actions include: 1.3.1 Reform the authorization regime to promote investment and innovation. 1.3.2 Establish rules to increase competition and reduce the cost of infrastructure roll-out. 1.3.3 Improve spectrum assignment and management procedures. 1.3.4 Define rules and create initiatives to sustainably expand access to affordable broadband.	MoT, TRCSL	• >99% wireless broadband coverage across both urban rural areas • High-speed broadband of at least 20 Mbps nationwide • Adoption of infrastructure sharing rules and regulations	Short to Medium Term	Actions, stakeholders and timeline are outlined in detail in the Digital Strategy 2030 (1. Infrastructure, Connectivity and Access)
Cloud Infrastructure	Clarify use of international commercial cloud for Government. Actions include: 1.3.5 Develop guidelines clarifying conditions under which government organizations may be permitted to process personal data in a third country, including identification of third countries in which they may be processed based on one or more adequacy decisions as per SLPDPA. 1.3.6 Develop a guideline for approved government organizations on how to leverage international commercial cloud in compliance with SLPDPA.	MoT, DPA	• Regulation on use of international cloud platforms by government organizations published. • Guideline for leveraging international cloud platforms by government organizations published.	Short Term	
	1.3.7 Negotiate bulk credits for cloud compute from international providers for use by Sri Lankan government, academia, and startups to lower barriers to AI innovation and enable the advancement of technological capabilities.	NCAI	• Bulk credits negotiated and allocated transparently	Short Term	

	Conduct a comprehensive assessment of existing government IT infrastructure in relation to AI. Actions include: 1.3.8 Evaluate the capabilities, capacity & expandability of government IT infrastructure to run AI workloads. 1.3.9 Assess feasibility of providing high speed, low latency & virtual private network connectivity between local data centers & public cloud for potential hybrid AI deployment models. 1.3.10 Develop an inventory of government owned IT infrastructure with recommendations on the short, medium & long-term expansions needed to facilitate potential AI workloads. 1.3.11 Identify areas for optimization/ modernization within existing infrastructure to support AI applications.	NCAI, DTA, MoT	• Assessment of government IT infrastructure for AI completed. • AI infrastructure optimization/ expansion plans developed.	Short to Medium Term	
	1.3.12 Develop a decision framework to guide infrastructure choices for AI solutions development and deployment: • The framework should consider regulatory compliance (SLPDPA, Cloud Policy, etc.), the completed government infrastructure assessment, cost efficiencies, timelines, and the type of AI solution. • It should have specific defined criteria for choosing between on-premises, public cloud, or hybrid cloud solutions based on AI use cases. • The framework is able to set & determine capacity (cloud, data center or network connectivity) required for potential upcoming AI use cases.		• Framework developed for guiding AI infrastructure choices.	Short to Medium Term	Preceded by 1.3.11
	1.3.13 Develop a reference design blueprint for a compute cloud infrastructure for Sri Lanka as part of the Digital Strategy 2030's expansion plans for	NCAI, DTA, MoT	• Blueprint developed .	Medium Term	Preceded by 1.3.12

	the Government Cloud, to support the needs of government, academia, and startups, ensuring that infrastructure will be built out modularly and systematically and sustainably (considering net-zero, green data centers powered by renewable energy).				
	1.3.14 Develop an investment strategy for building out a compute cloud, identifying PPP funding strategies and opportunities for external/international investment.	NCAI, DTA, MoT	• Investment strategy developed and funding secured	Medium Term	Preceded by 1.3.13
	1.3.15 Build a compute cloud infrastructure as part of expansion plans of the Government Cloud. This will be built via a PPP mechanism to support the needs of government, academia, and startups with a multi-stakeholder governance model to oversee its operations.	NCAI, DTA, MoT	• Compute Cloud Infrastructure operational.	Medium Term	Preceded by 1.3.14
	1.3.16 Develop incentives for cloud compute platforms to be set up in Sri Lanka to increase competition, choice, and standardization.	NCAI, DTA, MoT	• Incentives developed and cloud compute platforms established	Long Term	
Digital Public Infrastructure (DPI)	1.3.17 Implement the actions outlined in the Digital Strategy 2030 to build an Inclusive and Resilient Digital Public infrastructure for AI Development. 1.3.18 Develop a reference high-level blueprint for a DPI for AI in Sri Lanka, assessing feasibility and relevance in the Sri Lankan context with preference for Open Source & Open Standards	MoT, MoF, CERT and other Government Departments	• Adoption of Policy on DPI and data sharing	Medium to Long Term	Actions, stakeholders and timeline are outlined in detail in the Digital Strategy 2030 (2. Connected Digital Government)

1.4 Research and Development

Area	Action/ Initiative	Responsibility	KPI	Timeline	Comments

AI R&D Priority Setting and Policy Development	1.4.1 Undertake a rapid consultative review to identify priority areas for research in AI: • Fundamental research areas such as local language NLP. • Applied research areas tied to national priority sectors	NCAI, MoT, Universities, industry bodies	• Priority areas identified for fundamental and applied research.	Short Term	
	1.4.2 Assess global AI technology advancements, current local AI technology demands, and provide recommendations for updating AI curricula across educational levels.	NCAI, MoT, Ministry of Education, Universities, University Grants Commission	• Recommendations developed for curricula updates	Short, Medium, and Long Term	To be conducted once every two years.
	1.4.3 Develop an AI R&D Policy for Sri Lanka based on ongoing learnings	NCAI, MoT	• AI R&D policy established	Long Term	
Targeted AI R&D Funding Programs	1.4.4 Design and launch a grant program for AI R&D in identified priority areas targeting universities and researchers to stimulate localized innovation. The program will encourage collaboration with other local institutions including the public sector and private sectors.	NCAI, MoT	• Amount of funding allocated. • Number of grants awarded. • Number of local collaborations created. • Number of international collaborations created.	Short Term	Preceded by 1.4.1
	1.4.5 Design and launch an AI R&D grant program to encourage academic collaborations in AI, responsible AI, AI governance with reputed international scholars and institutions.	NCAI, MoT	• Amount of funding allocated. • Number of grants awarded. . • Number of international collaborations created.	Medium term	
	1.4.6 Provide innovation grants for AI startups for the development of AI solutions for government public service delivery in	NCAI, MoT	• Number of grants awarded.	Short Term	Preceded by 1.4.1

	priority areas. The program should encourage women entrepreneurs.		• Number of women awarded grants. • Number of AI solutions developed.		
	1.4.7 Work with international funders and development partners to channel funding for AI and responsible AI related R&D.	NCAI, MoT, relevant ministries	• Amount of money raised. •	Medium Term	
AI Innovation Ecosystem Development	1.4.8 Design and launch the AI Innovation Hub program to accelerate digital transformation and enhance AI capabilities across various sectors and tied to national priorities. Leverage existing AI communities through hackathons, hubs, and other community-building opportunities.	NCAI, industry partners, universities	• Number of hubs launched. • Number of projects initiated via the hubs	Short Term	See *Annex 10: Draft Concept Note on AI Hubs & AI Apprenticeship Programs*
	1.4.9 Organize bootcamps, hackathons & competitions which promote innovations in the development of responsible AI solutions for social good applications.	NCAI, DTA, SLASSCOM, MoT	• Number of events organized	Medium to Long Term	
	1.4.10 Establish AI Centres of Excellence in universities to foster AI research and innovation	NCAI, Ministry of Higher Education, universities, industry partners	• Number of AI Centers of Excellence established. • Number of research outputs. • Number of industry collaborations.	Medium to Long Term	
	1.4.11 Attract international AI companies to set up R&D centers and innovation hubs in Sri Lanka.	NCAI, MoT, Board of Investment, Ministry of Foreign Affairs	• Number of international AI companies attracted. • Investment generated. • Jobs created.	Long Term	

	1.4.12 Establish an AI Experts Exchange Program to facilitate knowledge sharing between Sri Lankan and international AI professionals.	NCAI, MoT, Ministry of Foreign Affairs, professional associations.	• Number of experts participating. • Knowledge exchange sessions conducted. • Collaborations initiated	Long Term	

1.5 Public Awareness

Area	Action/ Initiative	Responsibility	KPI	Timeline
Public Outreach and Engagement	1.5.1 Collaborate with local social media influencers and content creators to develop and disseminate informative and engaging content that highlights the potential benefits and addresses the possible risks associated with AI technologies.	NCAI, DTA	• Number of collaborations/partnerships	Short to Medium Term
	1.5.2 Collaborate with existing educational programs in local TV channels (in all 3 languages) to introduce AI-related content to their programs.	NCAI, Ministry of Media, MoT	• Number of AI-related programs conducted	Short, Medium and Long Term
	1.5.3 Engage the public with AI workshops/sessions at public-facing events like book & technology fairs, education expos, university expos etc.	NCAI, DTA,	• Number of programs conducted at relevant events	Medium to Long Term
Youth Engagement and Education	1.5.4 Set up of AI clubs in secondary schools	NCAI, Ministry of Education	• Number of clubs set up	Short term
	1.5.5 Awareness campaigns on AI targeting school children through the National Future Talent Initiative (NFTI	NCAI, Ministry of Education, SLASSCOM	• Number of campaigns run	Short Term

2. Accelerating the Realization of Sri Lanka's AI Vision

Area	Action/ Initiative	Responsibility	KPI	Timeline	
Institutional Framework and Governance	2.1 Design and initiate the National Center for Artificial Intelligence (NCAI) under the Digital Transformation Agency (DTA) that will spearhead the implementation of the AI Strategy.	MoT	• NCAI Established	Short Term	See *Annex 3: Design of the National Center for Artificial Intelligence (NCAI).*
	2.2 Develop an Artificial Intelligence (AI) Playbook for the Public Sector, to drive the adoption of AI in the government. Amongst others, the playbook should cover: • Procurement guidelines that favour open-source and open standards technology while also limiting vendor lock-in. • Methodology for accurately scoping and developing the business case for AI projects in government including identification of resources, cost-benefit analyses. • How to conduct risk, and impact assessments of AI projects, including ethics assessments. • Developing an M&E framework for AI projects in government. • An agile development methodology for AI projects in government. • Scalability and sustainability of AI projects.	NCAI, DTA, MoT	• Playbook published.	Short Term	See *Annex 4: Draft AI Strategy Playbook*. The procurement guidelines will be informed by the AI Governance framework developed under 3.4

	2.3	Modify the existing Digital Maturity Model to also assesses AI maturity in government organizations	NCAI, DTA, MoT	• Modified DMM published. • Number of government organizations/ departments assessed on their AI maturity	Medium Term	
Public Sector AI Adoption and Collaboration	2.4	Develop a public sector secondment program for academics and private sector volunteers to contribute to public sector digital and AI transformation	NCAI, DTA, MoT	• Program established. • Number of private sector personnel & academia seconded on public sector projects	Medium Term	
	2.5	Scope and identify 10 high impact AI use cases targeted towards priority sectors (e.g. public service delivery, public administration, health, agriculture, education, environment, etc.)	NCAI, MoT, Sectoral Ministries/ agencies/ departments.	• Develop and pilot 3 AI applications by June 2025. • Minimum of 3 new applications per year following.	Short & Medium Term	
	2.6	Create a Government AI Solutions Repository to share and reuse successful AI implementations across agencies	NCAI, DTA, MoT	• Number of solutions in the repository • Frequency of reuse across agencies	Medium Term	
Private Sector AI Development and Support	2.7	Develop financial incentives (e.g. tax breaks, grants, subsidies) for private sector AI research and development	NCAI, MoT, Ministry of Finance,	• Number and value of incentives provided. • Increase in private sector AI R&D investment.	Long Term	
	2.8	Leverage the SME digitalization programs in the Digital Strategy 2030 to provide SMEs with access to AI tools, training, and support services.	NCAI, DTA, MoT, Ministry of Industry and Commerce	• Number of SMEs supported. • AI tools and training provided. • Impact on SME productivity and growth	Medium Term	
	2.9	Create a business-friendly regulatory environment with incentives for AI companies to establish a presence in Sri Lanka to attract and retain AI talent.	Board of Investment, Ministry of Technology, Ministry of Finance	• Number of AI companies established. • Investment generated, • AI talent attracted and retained	Medium to Long Term	

International Collaboration and Knowledge Transfer	2.10	Facilitate partnerships with leading AI companies to enable knowledge transfer and skills development.	MoT, Board of Investment	• Number of partnerships established, • Knowledge transfer and skill development initiatives • Joint AI solutions development initiated.	Medium to Long Term	
	2.11	Establish bilateral and multilateral partnerships with countries leading in AI to facilitate knowledge exchange and collaboration.	NCAI, MoT, Ministry of Foreign Affairs	• Number of partnerships established. • Joint initiatives undertaken. • Knowledge exchange programs.	Short to Medium Term	
	2.12	Launch an AI Global Challenge to attract global talent and solutions to address Sri Lanka's unique challenges	NCAI, MoT	• Number of participants. • Solutions generated. • Successful implementations.	Medium Term	
	2.13	Develop an AI Investment Promotion Strategy to attract foreign direct investment in Sri Lanka's AI sector	NCAI, MoT, Board of Investment, Ministry of Foreign Affairs	• Completion of the strategy. • Investment attracted. • Jobs created	Medium to Long Term	
	2.14	Develop targeted promotional campaigns in priority countries to highlight Sri Lanka’s AI potential and encourage collaboration and investment and to be run by Sri Lankan embassies	NCAI, MoFA, BOI,	• Number of awareness campaigns run. • Number of countries targeted.	Medium to Long Term	

3. Creating a Safe and Trustworthy AI Ecosystem for Sri Lanka

Area	Action/ Initiative	Responsibility	KPI	Timeline	Comments
Laying the foundations	3.1 Establish a *Responsible AI Advisory Council* comprising experts from diverse backgrounds to provide guidance on responsible AI development & governance.	NCAI, MoT, DTA, DPA, Ministry of Justice	• Responsible AI Advisory Council established.	Short term	
	3.2 Develop a comprehensive *Responsible AI Framework for Sri Lanka* that identifies ethical & governance issues related to AI and lays down principles, guidelines & best practices for responsible AI development & use.	NCAI, MoT, DTA, DPA, Ministry of Justice	• Responsible AI Framework published and endorsed by stakeholders	Short term	Preceded by 3.1. Will be developed via a multi-stakeholder consultative process.
AI Governance	3.3 Conduct a comprehensive study of existing laws and regulations (e.g., Sri Lanka Personal Data Protection Act, forthcoming Cyber Security Bill) to identify gaps and required amendments for AI governance.	NCAI, DPA	• Legal and regulatory landscape study completed.	Short to Medium Term	Preceded by 3.2
	3.4 Develop an *AI Governance Framework* which lays out Sri Lanka's approach to AI governance and considerations related to (but are not limited to) types of harm, disclosure, impact assessments, transparency, risk mitigation, human oversight, and measures for remedy & redress.	NCAI, MoT, DTA, DPA, Ministry of Justice	• AI Governance Framework published	Short to Medium Term	Preceded by 3.3
	3.5 Develop an "Implementation Roadmap" to roll out governance and regulatory measures. This will prioritize key governance issues and provide a staged implementation plan. The roadmap will: • Be guided by an AI Governance Readiness assessment which lays out the requirements, compliance capacities in companies, resources, and governance necessity based on AI adoption and use.	NCAI, MoT, DTA, DPA, Ministry of Justice	• AI Governance Readiness Assessment Conducted. • AI Governance and Regulatory Implementation Roadmap published.	Short to Medium Term	Preceded by 3.4

		• Identify amendments required to existing laws and policies with suggested timelines. • Be updated periodically following the review of the state of AI governance identified in Action 3.9.				
	3.6	Review and update existing laws and regulations to address considerations that can be handled by existing regulations.	NCAI, MoT, DTA, DPA, Ministry of Justice	• Number of laws and regulations reviewed and updated.	Medium to Long Term	Preceded by 3.5
	3.7	Stemming from the RAI Framework & the AI Governance Framework, further develop specific national frameworks & policies to provide additional clarity & guidance on key areas.	NCAI, MoT, DTA, SL CERT, Ministry of Defense, Ministry of Justice	• Number of new policies and regulations created. • Number of new laws enacted.	Medium to Long Term	Preceded by 3.5
	3.8	Starting with the priority sectors earmarked for AI-driven innovation, develop sector-specific responsible AI guidelines in collaboration with relevant industry associations and regulatory bodies.	NCAI, MoT, DTA, DPA, sectoral regulators, industry bodies	• Number of sectors with responsible AI guidelines. • Number of companies in each sector adopting the guidelines.	Medium Term	
	3.9	Conduct a periodic review of the State of AI Governance in Sri Lanka to identify emerging challenges, assess progress, and prioritize additional measures/guidelines. The findings from these reviews will inform the continuous updating and refinement of the AI governance framework.	NCAI, MoT, DTA, DPA	• Annual review of State of AI Governance conducted	Medium to Long Term	Conducted every 2 years
	3.10	Develop & implement a comprehensive communication strategy to raise awareness about Sri Lanka's AI governance approach among diverse stakeholders. Areas covered include: • Updates outlining AI strategies, steps taken to implement AI principles, and future plans. • How AI applies within regulatory responsibilities.	NCAI, MoT, DTA, DPA	• Communications strategy developed and implemented	Short, Medium, and Long Term	

		• Concrete examples of actions taken to adopt AI principles. • Summaries of guidance issued or planned. • Current capability to address AI risks and plans to address gaps. • Summary of plans and intended activities for the coming year.				
	3.11	Proactively engage in international collaboration and knowledge-sharing to align with global standards and best practices related to AI Governance.	NCAI, MoT, DPA, Ministry of Justice	• Number of engagements. • Number of International Collaborations.	Short, Medium, and Long Term	
	3.12	Develop a training program for the judiciary and relevant regulatory agencies on Responsible AI Regulation and Governance, leveraging existing online resources (including MOOCs) as much as possible.	NCAI, MoT, DTA, DPA, Ministry of Justice, SLIDA, Ministry of Public Administration	• Training plans developed	Medium to Long Term	Same as 1.2.6 under Initiatives related to Skills Development
Responsible AI Development & Adoption	3.13	Develop and continuously update, a Responsible AI Resource Toolkit, in partnership with industry, academic and civil society partners, that includes sector-agnostic tools and guidance to enable businesses to leverage AI to grow and scale with confidence by prioritising user trust and safety. This can include risk assessment tools, management & reporting tools, developer & testing tools, guidance on audits and certifications.	NCAI, MoT, DTA, DPA	• Resource toolkit published and annual updated	Medium to Long Term	
	3.14	Adapt Singapore's open-source AI Verify governance framework and software toolkit and deploy for use in Sri Lanka.	NCAI, MoT, DTA, DPA	• AI Verify deployed for use in Sri Lanka	Short to Medium Term	
	3.15	Via a consultative process, develop a Model Private Sector Data Sharing Framework compliant with SLPDPA and relevant AI regulations and guidelines to facilitate responsible data sharing (both personal and non-personal	NCAI, DTA, MoT, DPA, Ministry of Justice	• Model Private Sector Data Sharing Framework published.	Medium Term	

		data) amongst private sector companies. Ensure this is updated as regulations/ laws/ guidelines evolve.				
	3.16	Proactively identify and implement mechanisms to ease the cost of compliance for AI entrepreneurs. This could include, amongst others, dedicated guides for entrepreneurs, support services, etc.	NCAI, MoT	• Mechanisms established and leveraged by entrepreneurs	Medium to Long term	
	3.17	Work with partners in industry (across different industries and company sizes) and academia to develop case studies that demonstrate how to put AI ethics & responsible AI into practice.	NCAI, MoT, DTA, DPA	• Number of case studies published. • Number of sectors represented in the case studies	Medium to Long Term	
	3.18	Guide and encourage the development and publication of voluntary internal AI ethics codes and guidelines, especially for companies of a certain scale.	NCAI, MoT, DTA, DPA	• Number of companies publishing internal AI ethics codes and guidelines	Medium to Long Term	
	3.19	Promote awareness and improve technical capacity for Responsible AI in the private sector by organizing seminars, workshops, and training programs on topics such as privacy, impact assessments, explainability & fairness.	NCAI, MoT, DTA, DPA, Ministry of Technology	• Number of capacity building sessions conducted.	Medium to Long Term	
	3.20	Establish a pilot regulatory sandbox to provide a controlled testing environment for AI innovations while ensuring compliance with ethical and legal requirements.	NCAI, MoT, DTA, DPA	• AI Regulatory sandbox established. • Number of AI sandbox projects.	Medium Term	
	3.21	Promote awareness and technical skills of new graduates in key areas of responsible AI by: • Sponsoring graduate and undergraduate research in these areas. • Working with universities to update relevant curriculums and degree of programs. • Organizing awareness sessions and hackathons around responsible AI.	NCAI, DTA, DPA, Ministry of Higher Education, Ministry of Technology	• Number of research projects sponsored. • Number of hackathons organized. • Number of updates done to curriculums and degree programs.	Medium to Long Term	

	3.22 Develop recognition and reward mechanisms to incentivize and celebrate organizations demonstrating ethical AI leadership	NCAI	• Number of organizations publicly recognized for ethical AI Leaderships	Medium to Long term	
Public Participation	3.23 Undertake targeted campaigns, educational programs, and media outreach efforts to raise awareness about the impact, risks, and rights associated with AI design, development, adoption, and use.	NCAI, MoT, DTA	• Number of Responsible AI awareness initiatives conducted		
	3.24 Organize consultations, workshops, and public forums to gather input and feedback on AI related initiatives policies and regulations from various stakeholders.	NCAI, MoT, DTA, DPA	• Number public events/consultations to gather input and feedback.	Short, Medium, and Long Term	
	3.25 Promote accountability by establishing mechanisms for public scrutiny, such as regular reporting on AI initiatives and impact assessments, and by providing regular channels for citizens to voice concerns and seek redress.	NCAI, DTA	• Number of periodic reviews published. • Number of clear communication channels established for public feedback. • Number of instances that directly led to changes in policy and implementation plans.		

Annex 2:

Key Targets and Milestones

This document outlines a preliminary set of targets for realizing Sri Lanka's AI vision, as articulated in the *National AI Strategy 2024-2028*. These targets have been developed for each of the five enabling pillars, two accelerators, and for creating a safe and trustworthy AI ecosystem in Sri Lanka. They are informed by the strategic initiatives proposed in the National AI Strategy, the indicative implementation plan, and best practices from other countries, while being contextualized to Sri Lanka's unique needs and aspirations. The National Center for AI (NCAI) should carefully consider these targets, refine them through stakeholder consultations, and integrate them into a comprehensive action plan with clear timelines and responsibilities. As Sri Lanka embarks on its transformative AI journey, these targets will serve as important milestones to track progress, drive implementation, and ensure the country realizes the full potential of AI for inclusive development and growth.

1. Data

1.1. Comprehensive data governance framework for government compliant with SLPDPA developed within 2024.

1.2. Develop a sector-specific data governance guideline for two priority sectors (e.g., agriculture and healthcare), and operationalize these guidelines in at least 2 related government agencies per sector within 2024. Expand this to all sectors in 2025 with agency specific guidelines all government agencies developed and operationalized by 2026.

1.3. The revamped Open Data Portal (with API access) operational in 2024, containing at least 100 new datasets in standardized, machine-readable formats. Ensure that the data repository grows at least 10% with each subsequent year.

1.4. Run at least one national-level open data challenge in 2025 that brings together academia, industry, and government.

1.5. Establish 2 Government-Private sector data sharing pilots by 2026 to leverage private sector data for government decision making related to public sector service delivery.

1.6. Operationalize a revamped and up-to-date National Spatial Data Infrastructure (NSDI) by 2025.

1.7. Operationalize a National Data Exchange platform for government with API access by 2026.

1.8. Create and operationalize a generalized data needs and availability assessment in atleast 3 government agencies a year starting from 2024.

1.9. Develop and operationalize a generalized Data Maturity Framework in atleast 3 government agencies a year starting from 2024.

2. Skills Development

2.1. 50% of the population and at least 50% of women AI literate by 2026, with gender parity by 2028.

2.2. Launch a national "Introduction to AI" program by within 2024, enrolling 500+ diverse participants and partnering with local institutions.

2.3. Establish 100 AI clubs in schools by 2025.

2.4. Train 1000 schoolteachers on use and integration of AI in education by 2025, with an additional 100 per year from 2026 onwards.

2.5. Train 10,000 educators, health professionals, and administrative officers through GenAI Capacity Development Bootcamp by 2025.

2.6. Train 5000 primary and high school students on basic AI skills including AI ethics by 2025.

2.7. Train 1000 public officials in AI awareness and business case development by 2025, with an additional 100 per year from 2026.

2.8. Introduce 2 new AI degree programs at state universities by 2025.

2.9. Introduce AI Ethics and Governance courses in at least 2 state universities by 2025.

2.10. Introduce AI business case development courses in at least 2 state universities by 2025.

2.11. Award 100 AI/data science scholarships by 2025 with increased focus on women, with an additional 50 annually from 2026 onwards.

2.12. Produce 100 new AI engineers per year from 2025, with a 2000-strong AI workforce by 2028.

3. Infrastructure

3.1. Ensure connectivity targets from Digital strategy are met, including:

- >99% wireless broadband coverage across both urban and rural areas
- High-speed broadband of at least 20 Mbps nationwide
- Adoption of infrastructure sharing rules and regulations

3.2. Ensure cloud compute infrastructure for research is available to academia and entrepreneurs by 2026.

3.3. Conduct a comprehensive assessment of existing government IT infrastructure by 2024.

3.4. Develop the compute and data infrastructure decision framework by 2025.

3.5. Develop an interoperable and scalable Digital Public Infrastructure to support AI development by 2026.

4. Research and Development

4.1. At least 100 ongoing AI/applied AI PhDs by 2027.

4.2. At least 1 large AI research conferences with international participation in Sri Lanka yearly by 2027.

4.3. Publish X AI research papers in top-tier journals yearly by XXX.

4.4. File X AI patents by 2028.

4.5. Establish X AI startups by 2028.

5. Public Awareness

5.1. Launch at least one trilingual online basic introductory course on AI for the public within 2024.

5.2. Conduct X Public TV discussions on AI by 2025.

5.3. Air X Programs on AI on all public TV channels by 2025.

6. Responsible Public Sector Transformation through AI

6.1. Increase Sri Lanka's ranking in Oxford Insights' Government AI Readiness Index to 85 from the current 95 by 2026 and to 65 by 2028.

6.2. Pilot 10 AI solutions in high impact areas by 2026.

7. Stimulating AI Adoption in the Private Sector

7.1. Establish 3 AI innovation hubs and 2 AI start-up incubator programs by 2025.

7.2. Support the establishment of 30 new AI start-ups by 2025.

7.3. Initiate 5 new tri-partite collaborations (Government, Private sector, Academia) by 2025 to develop AI solutions in high impact areas.

7.4. Ensure top enterprises spend a minimum of 15% of IT expenditures on AI by 2026.

7.5. Increase the number of SMEs using AI to X by 20XX.

7.6. Increase the number of AI professionals recruited by the private sector to X by 20XX.

7.7. Upskill X employees in the private sector in AI by 20XX.

8. Creating a Safe and Trustworthy AI Ecosystem for Sri Lanka

8.1. Develop clear guidelines and processes for government organizations on the use of international commercial cloud platforms in compliance with SLPDPA by 2024.

8.2. Develop a Responsible AI Framework for Sri Lanka and ensure it is endorsed by stakeholders by 2024.

8.3. Conduct a comprehensive study of existing laws and regulations to identify gaps and required amendments for AI governance by 2024.

8.4. Develop an AI Governance Framework and publish it by 2025.

8.5. Conduct an AI Governance Readiness Assessment and publish an AI Governance and Regulatory Implementation Roadmap by 2025.

8.6. Review and update existing laws and regulations related to AI governance by 2026.

8.7. Develop responsible AI guidelines for at least 2 priority sectors in collaboration with industry associations and regulatory bodies by 2025.

8.8. Conduct an annual review of the State of AI Governance in Sri Lanka starting from 2025.

8.9. Develop and implement a comprehensive communication strategy to raise awareness about Sri Lanka's AI governance approach among diverse stakeholders by 2024.

8.10. Engage in at least X international collaborations and knowledge-sharing initiatives related to AI Governance best practices by 2025.

These targets provide a balanced approach to enabling AI development and adoption in Sri Lanka while ensuring it is done in a responsible and trustworthy manner. The targets are time-bound and measurable, allowing for effective monitoring and evaluation of progress. They also align with the vision and objectives outlined in Sri Lanka's AI Strategy.

Annex 3:

Design of the National Center for Artificial Intelligence (NCAI)

Executive Summary

The National Center for Artificial Intelligence (NCAI) is a groundbreaking initiative designed to harness the transformative power of Artificial Intelligence (AI) for national development in Sri Lanka. The establishment of the NCAI is a proactive step to position the country at the forefront of the AI-driven global economy, and to integrate AI across critical sectors for societal and economic benefit.

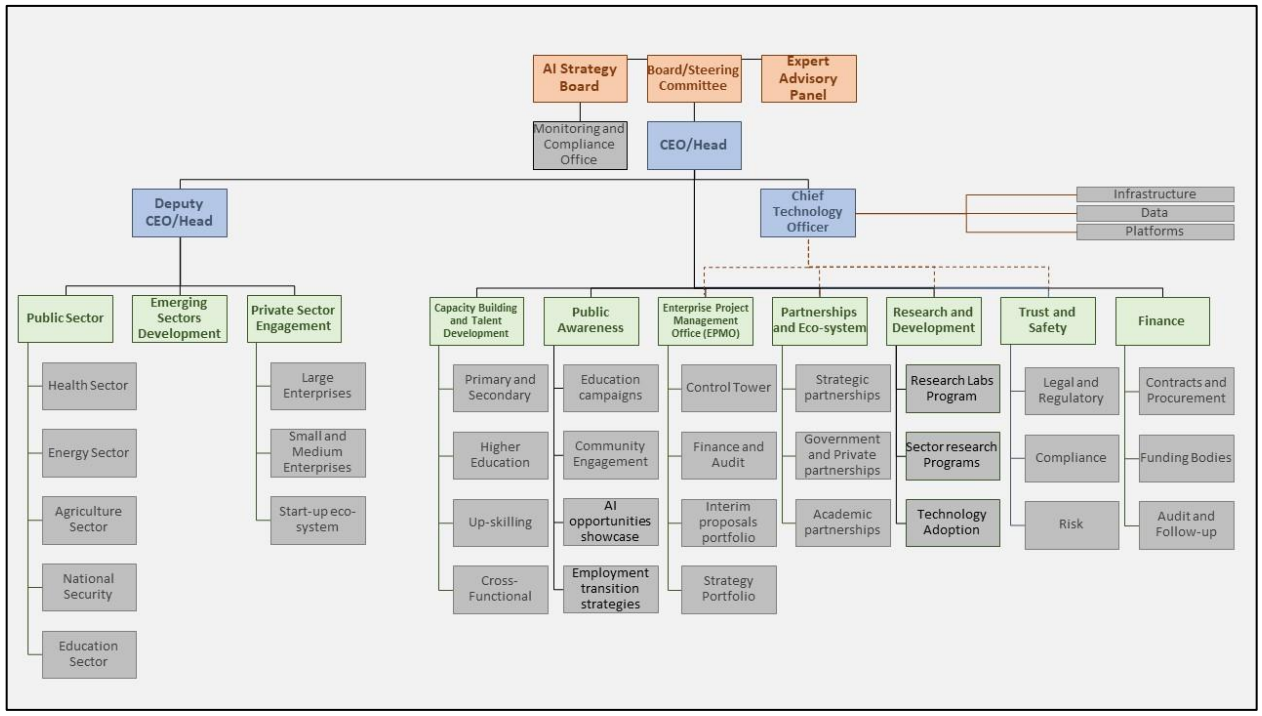

Figure 1: Organizational Model for NCAI

Strategic Objectives and Interim Budget Alignment

The NCAI is strategically aligned with Sri Lanka's interim budget proposals and the broader national AI strategy. The initial phase focuses on implementing quick wins and leveraging budget allocations to lay the foundation for AI development, including:

- Revitalizing the Open Data Portal to facilitate innovation.
- Establishing AI Hubs to stimulate AI growth and training AI engineers.
- Introducing foundational AI skill-building programs to develop a knowledgeable workforce.

Phase I - Initial Steps

The immediate action plan under Phase I, leading up to May 2024, includes drafting and consulting on the National AI Strategy, ensuring the NCAI begins with a solid strategic base. A minimal operational structure will be set up to oversee these initiatives, ensuring that the budget proposals translate effectively into action.

Phase II - Full Operational Launch

June 2024 marks the transition to Phase II, where the NCAI evolves into a fully operational entity. This phase entails:

- The completion and implementation of the National AI Strategy.
- A robust structural development for the NCAI, with clearly defined roles and responsibilities.
- Detailed planning for long-term operational sustainability, including comprehensive resource and talent acquisition strategies.

Operational Model

The NCAI's operational model emphasizes robust governance, clear processes for strategy formulation, and diligent project management. Key components of the operational model include:

- Detailed workflows and management approaches for each core process.
- A resource allocation framework that maximizes the impact of human, financial, and technological assets.
- A governance structure that fosters transparency and accountability.

Funding and Budgeting Strategies

Funding strategies for the NCAI involve a mix of government allocations, private sector partnerships, and international grants. A comprehensive budgeting outline includes start-up costs, capital investments, operational expenses, and contingency planning to ensure financial viability.

Conclusion

The NCAI represents a strategic commitment by Sri Lanka to embed AI across its national infrastructure, enhancing public service delivery, and driving economic growth. The Center's phased approach—from initial setup to full-scale launch—is designed to adapt and evolve, ensuring Sri Lanka reaps the full benefits of AI innovation while mitigating associated risks. This executive summary encapsulates the vision, the strategic framework, and the actionable steps towards actualizing the NCAI, inviting stakeholders to contribute to this pivotal journey.

1. Introduction

In an era where digital innovation is fundamentally reshaping economies, Sri Lanka recognizes the pivotal role of Artificial Intelligence (AI) in fostering economic vitality and societal well-being. Positioned within the broader context of global digital transformation, Sri Lanka's National AI Strategy emerges from a confluence of governmental foresight, regional aspirations, and the dynamic currents of the technological age. Through this strategy, encapsulated in the March 2024 White Paper developed by the Committee on Formulating a Strategy for Artificial Intelligence (CFSAI), Sri Lanka endeavors to harness the transformative power of AI to catalyze national progress and bolster its comparative advantage on the world stage.

The strategy unfolds against a backdrop of the nation's burgeoning digital ecosystem, underpinned by the government's Digital Strategy 2030. It is in this vibrant setting that the National AI Center is conceived—envisioned as the architect of Sri Lanka's AI-driven future. With an allocation of LKR 1.5 billion from the 2024 National Budget, the foundation is set not only to propel AI advancement but also to weave the threads of innovation into the socio-economic fabric of the nation.

Tackling inherent challenges—ranging from a nascent digital infrastructure to a talent pool in need of upskilling—the National AI Strategy sets forth an ambitious agenda. It is a comprehensive blueprint for building a robust data governance structure, empowering a technically adept workforce, and nurturing an innovative research landscape through synergistic public-private-academic partnerships.

The interim proposals for Budget 2024 act as the cornerstone for initiating Sri Lanka's AI narrative. These are pragmatic, targeted steps designed to embed AI into national consciousness and stimulate societal benefit. Amongst these, the creation of the National Center Artificial Intelligence (NCAI) and the introduction of the "AI Sri Lanka" Program are pivotal. Each initiative is aimed at creating an ecosystem conducive to AI research and application, public awareness and education, and comprehensive engagement across all sectors of society.

As Sri Lanka stands at the threshold of this digital revolution, the National AI Strategy is not simply a framework—it is a strategic commitment to transformation. It seeks to interlace the potential of AI with the nation's developmental aspirations, charting a course towards a future where digital empowerment is not a distant goal but an accessible reality. The NCAI, with its strategic initiatives and broad mandates, is the nexus for this transformative journey, marking Sri Lanka's emergence as a forerunner in the responsible and inclusive adoption of AI.

2. Vision, Mission, and Strategic Advancement of the National AI Center

Sri Lanka, in its pursuit to become a forerunner in the field of Artificial Intelligence (AI), has embarked on a journey to establish the National AI Center—a beacon of innovation and a catalyst for economic and societal transformation. This chapter delves into the Center's vision and mission, its alignment with national strategies, and the strategic approach toward ensuring that the AI advancements propel the nation to global competitiveness. Furthermore, it will discuss the Center's commitment to adaptability, the importance of selecting AI projects with precision, and the emphasis on sectors of national interest, along with the development of strategic partnerships and robust project management for the realization of its goals.

Vision and Mission of the National AI Center

Vision

The National AI Center of Sri Lanka envisions a future where Artificial Intelligence acts as a cornerstone for sustainable growth, driving innovation and efficiency across all sectors of society. It sees Sri Lanka as a regional beacon of AI excellence, pioneering ethical AI frameworks, and leveraging the power of AI to enrich the lives of its citizens and bolster the nation’s global economic standing.

Mission

The mission of the National AI Center is to orchestrate the strategic development and deployment of AI technologies across public and private sectors. This will be achieved by fostering collaborative research, building AI talent pools, facilitating public engagement and awareness, and ensuring that AI development aligns with the nation’s ethical, legal, and economic frameworks. The Center is dedicated to transforming Sri Lanka into a digitally empowered society and knowledge economy, underpinned by the innovative use of AI.

Alignment with National Strategies and Goals

The National AI Center is strategically designed to align with Sri Lanka's national vision as outlined in the Digital Strategy 2030. It acts as a central hub for implementing the National AI Strategy, dovetailing with the nation's broader objectives of digital transformation and economic revitalization. The Center is integral to realizing the government’s ambition of creating a knowledge-based economy, enhancing digital infrastructure, and ensuring digital literacy for all citizens.

In its role, the Center will implement policies and practices to optimize the value derived from AI technologies. It will address critical challenges identified in the white paper, such as enhancing digital infrastructure and nurturing an AI-ready workforce, which are vital for the success of the Digital Strategy 2030. By ensuring that AI initiatives are in step with national and global technological trends, the Center will facilitate Sri Lanka's agile adaptation to the evolving digital landscape.

Advancing Sri Lanka's Global Competitiveness

The National AI Center's value proposition lies in its ability to foster an environment where AI can flourish and propel Sri Lanka towards a position of global competitiveness. It aims to:

- **Drive Innovation**: By supporting research and development, the Center will promote the creation of cutting-edge AI solutions tailored to local and global market needs.
- **Cultivate Talent**: Through partnerships with educational institutions and industries, the Center will develop a talent pipeline skilled in AI and ready to meet the demands of the digital economy.
- **Facilitate AI Adoption**: The Center will play a pivotal role in integrating AI across sectors, demonstrating how AI can enhance efficiency, decision-making, and service delivery.
- **Promote Ethical AI**: By establishing a framework for the ethical use of AI, the Center will ensure that AI advancements contribute positively to society, bolstering international confidence in Sri Lanka's AI initiatives.
- **Foster International Collaboration**: The Center will seek partnerships with global tech leaders, inviting investment, knowledge transfer, and positioning Sri Lanka as an attractive destination for AI development.

In summary, the National AI Center is more than an institution; it is the embodiment of Sri Lanka's commitment to embracing AI as a force for good. By aligning with national strategies and providing a clear value proposition, the Center is set to catapult Sri Lanka onto the global stage as an AI-savvy, innovative, and competitive nation.

Strategic Focus and Evolution of the Center

Adaptive Design

The National AI Center of Sri Lanka is envisioned to be a dynamic entity, crafted with the flexibility to adapt to the rapidly evolving field of AI. In recognition of the ever-changing scope and impact of AI, the Center is designed to be agile, capable of quick responsiveness to technological

advancements and shifts in the global AI landscape. This adaptability is crucial in maintaining the relevance and effectiveness of AI initiatives, ensuring that they continue to propel Sri Lanka towards its development goals and adjust in real-time to the fast-paced evolution of AI technologies.

Scoping and Selection of AI Projects

A core principle guiding the National AI Center is the meticulous scoping and selection of AI projects. Unlike traditional software development, AI systems development is characterized by its complexities, uncertainties, and heavy reliance on data. It demands a comprehensive understanding of machine learning models, data science, and algorithmic innovation. Therefore, it's imperative that the Center employs a discerning approach to project selection, prioritizing initiatives that are not only technically feasible but also ethically aligned and socially beneficial. This involves distinguishing projects that can deliver tangible value from those that are not yet viable due to current technological or data limitations.

Focus on Sectors of National Interest

The Center's strategic orientation includes a special emphasis on sectors of national interest, such as healthcare, education, agriculture, and public safety. By targeting these areas, the Center aims to foster significant improvements in quality of life and to drive economic development. The application of AI in these priority sectors promises to bring about transformative change, whether through precision agriculture, personalized education, predictive healthcare, or efficient public administration.

Development of Strategic Partnerships and Ecosystem

Crucial to the success of the Center is the development of strategic partnerships and a robust AI ecosystem. These partnerships—with academia, industry, and international AI hubs—will bring a wealth of knowledge, resources, and collaborative opportunities. They will enable the Center to tap into global AI networks, facilitating the exchange of ideas, talent, and innovation. Furthermore, a thriving AI ecosystem nurtured by the Center will create a conducive environment for startups, attract investments, and encourage the private sector to undertake ambitious AI projects.

Enterprise-Grade Project Management

Enterprise-grade project management will be the bedrock of the Center's operations, ensuring that AI projects are delivered efficiently, meet quality standards, and achieve intended outcomes. The Center will adopt best practices in project management, with a clear governance structure, risk management processes, and performance metrics. This approach will ensure accountability, transparency, and the successful execution of complex AI projects.

Evolution of the Center

Initially, the Center will be established with a streamlined structure focused on executing the interim proposals. This lean approach is designed to enable immediate action and rapid deployment of initial AI initiatives. As the National AI Strategy is finalized and released, the Center will undergo a strategic evolution, expanding its structure and capabilities to encompass the broader strategy's scope. The provided diagrams illustrate this anticipated growth—from an entity poised to kickstart foundational AI efforts to an extensive organization capable of steering Sri Lanka toward a future where AI is integral to national progress and competitiveness.

To actualize the transformative potential of AI, the National AI Center champions an adoption-centric approach in all its initiatives. Recognizing that the true value of AI is realized through its widespread adoption and integration into everyday life, the Center prioritizes the implementation of AI solutions that can demonstrate broad and significant value across various sectors. By focusing on the practical applications of AI, the Center aims to catalyze the permeation of AI benefits throughout society, ensuring that its initiatives are not only innovative but also tangible and impactful for the nation's populace. This commitment underscores the Center's role not only as a driver of technological advancement but as an enabler of inclusive and sustainable development, ensuring that AI technologies are aligned with the national interest and deliver meaningful improvements in the quality of life for all Sri Lankans.

The National AI Center, thus, embodies the agility and foresight required for Sri Lanka to harness AI's transformative power responsibly and inclusively, ensuring that these technologies serve as a cornerstone for sustainable growth and enhanced global competitiveness.

3. Strategic Alignment

The establishment of the National AI Center is a strategic initiative designed to synchronize with Sri Lanka's overarching development policies, particularly the National AI Strategy and the Digital Strategy 2030. This alignment is central to the Center's mission, ensuring that its objectives are harmoniously integrated with the nation's broader digital transformation and economic growth plans.

Alignment with the National AI Strategy

The Center is the operational embodiment of the National AI Strategy's goals, working to translate its strategic vision into actionable outcomes. The strategy emphasizes building an AI-driven economy, fostering public-private partnerships, and promoting inclusive growth through AI. In line with these goals, the Center will spearhead the strategic development of AI, focusing on critical sectors such as healthcare, education, and agriculture to address specific needs and leverage opportunities for innovation.

The National AI Strategy also stresses the importance of ethical AI development, public engagement, and the establishment of international standards for AI implementation. The Center will ensure these principles are at the core of its operations, integrating ethical considerations into every AI project and fostering a transparent dialogue with the public to build trust and confidence in AI technologies.

Integration with Digital Strategy 2030

The Center's activities will also align with the Digital Strategy 2030, which sets forth a blueprint for digitizing the economy and enhancing connectivity across the country. As the Digital Strategy 2030 seeks to create a digital government, economy, and society, the National AI Center will contribute by developing digital solutions powered by AI, facilitating digital literacy, and driving the adoption of digital technologies in government services and the broader economy.

Synergy with Existing and Forthcoming Policies

The Center will actively integrate existing and forthcoming policies into its operational framework. This includes adherence to the Sri Lanka Personal Data Protection Act (SLPDPA) for ensuring privacy and data protection, and compliance with international standards and best practices in data governance and cybersecurity.

Moreover, the Center will collaborate with key policymakers to support the formulation of new AI-related policies. By offering expert insights and recommendations, the Center will play a pivotal role in shaping a regulatory environment that is conducive to AI innovation yet mindful of safety, security, and ethical considerations.

As new policies and regulations are developed, the Center will serve as a model for AI policy implementation, demonstrating best practices in AI governance. It will function as a think tank, providing policy recommendations based on technological advancements and societal needs, thereby ensuring that Sri Lanka's AI initiatives remain cutting-edge and aligned with global developments.

4. Organizational Structure and Operational Model for the National AI Center

Introduction

The National AI Center (NCAI) of Sri Lanka is envisaged as the driving force behind the nation's AI initiatives. Integral to its design is the synchronization of effective governance, strategic prioritization, and agile execution, which collectively expedite the integration of AI technologies into a multitude of sectors, fueling Sri Lanka's ascent in global competitiveness and societal advancement.

This foundational structure, depicted as the inaugural version within this evolving operational model, mirrors the fluidity and dynamic progression of AI itself. As AI technologies evolve, so too will the operational model of the NCAI, ensuring its perennial relevance and efficacy in steering AI to serve as a vector for national development. Herein, we lay out an operational framework not as a static blueprint but as a springboard, ready to evolve and redefine itself as the landscape of AI and national needs transform.

The model outlined in this chapter represents a commitment to immediate action and strategic growth. It is an operational schema devised to propel initial endeavors while also providing a flexible foundation for the future diversification and maturation of the AI strategy. We present an operational model that is not only responsive but anticipatory, positioning the NCAI to lead with vision and adapt with purpose.

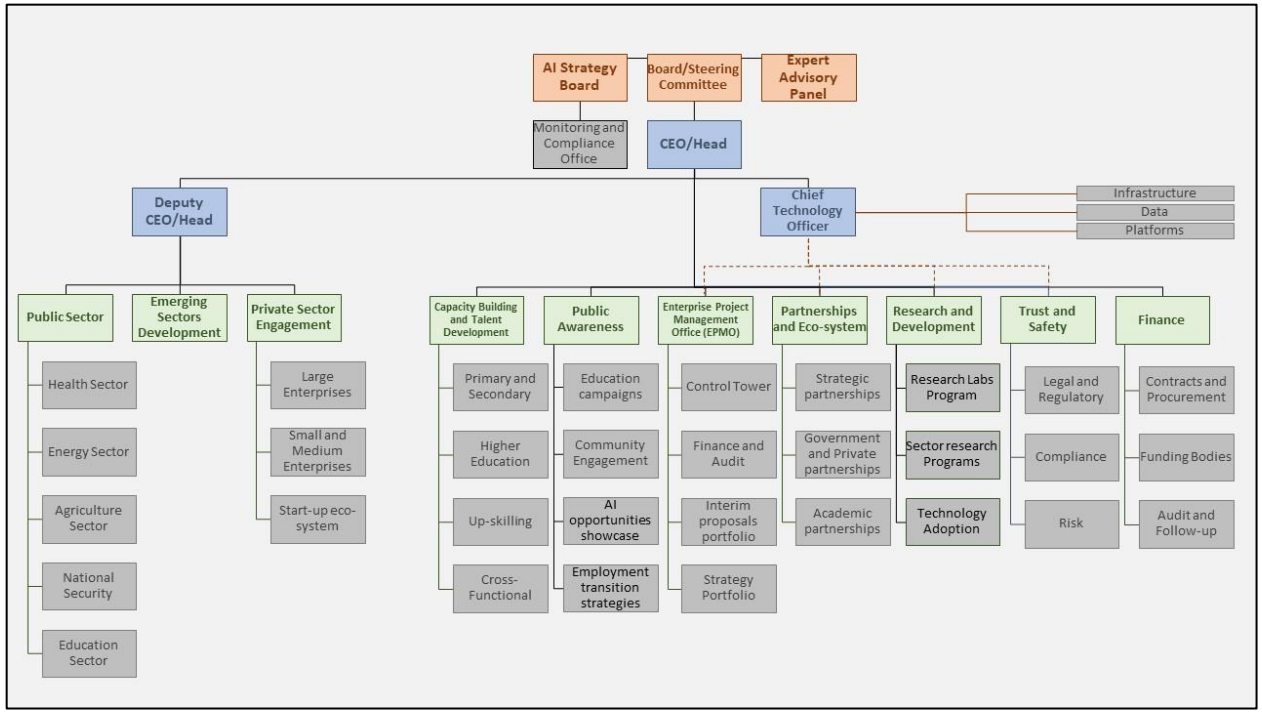

Figure 1: Organizational Structure for the NCAI

Organizational Structure

Leadership and Governance

The National AI Center (NCAI) is to be helmed by a CEO who embodies a unique blend of expertise in both artificial intelligence and operational management. This role is not merely administrative; it is one of visionary leadership, requiring a deep understanding of the current AI landscape and an ability to foresee and adapt to its rapid changes. The CEO is tasked with navigating the complexities of integrating AI into national development, aligning the Center's objectives with the broader economic and societal goals of Sri Lanka. The detailed roles and responsibilities of the CEO are outlined in ***Appendix A1***.

Reporting to a strategically assembled Board/Steering Committee, the CEO will be the linchpin in translating the National AI Strategy into action. The committee, comprising esteemed figures from government, industry, and academia, brings a plethora of experiences and insights, forming a robust governance body that reflects the multi-sectoral impact of AI. The Board's strategic oversight is foundational to the NCAI's adherence to its mission, ensuring that operations are consistent with national interests and global best practices. The full scope of the Board's roles and TOR can be found in ***Appendix A2***.

With the CEO's expertise and the Board's guidance, the NCAI is positioned to cultivate the partnerships and alliances necessary for Sri Lanka to thrive in the age of AI. The stature and recognition of the CEO play a pivotal role in this aspect, opening channels for international cooperation and fostering a collaborative spirit across diverse sectors.

The Board's responsibilities are multifaceted, extending from setting strategic direction to financial oversight, from risk management to policy guidance, and from performance evaluation to public communication. Its members serve as the guardians of the NCAI's mission, ensuring that every initiative undertaken is measured against the highest standards of ethical practice and contributes positively to the nation's progress.

In summary, the organizational structure of the NCAI is designed with a clear recognition of the importance of leadership caliber and governance excellence. With the CEO's operational acumen and the Board's strategic acuity, the NCAI is fully equipped to lead Sri Lanka's journey towards becoming a globally recognized hub for AI innovation and adoption.

AI Strategy Board

The AI Strategy Board, functioning autonomously in close alignment with the main Board, plays a critical role in the strategic orientation of the National AI Center (NCAI). It is responsible for the ongoing development and refinement of the National AI Strategy, ensuring the strategy's alignment with rapid global AI evolution and best practices. Integral to its function is the Monitoring and Compliance Office, a body that ensures initiatives adhere to legal and ethical standards. It will be responsible for:

- Continuously refining the National AI Strategy through an annual AI Strategy update proposal.
- Ensuring that the strategy is responsive to the rapid evolution of AI and global best practices.

The AI Strategy Board's function within the NCAI architecture is not just about maintaining a course but dynamically recalibrating it to ensure Sri Lanka's AI initiatives are innovative, ethically grounded, and internationally competitive. The roles and responsibilities, along with the Terms of Reference for the AI Strategy Board, are detailed in ***Appendix A3***.

Expert Advisory Panel

The Expert Advisory Panel acts as a strategic advisory body, leveraging the collective expertise of global and local AI experts. Its role is to provide high-level insights and guidance on the adoption and implementation of AI technologies. The panel fosters knowledge exchange and ethical AI framework development, ensuring the NCAI's strategies are informed by the latest scientific advancements and international best practices. It also plays a crucial role in facilitating strategic partnerships.

The Expert Advisory Panel is pivotal in ensuring the NCAI remains at the vanguard of global AI innovation. It helps navigate the rapid advancements in AI, addresses ethical and societal concerns, and opens pathways for meaningful international collaborations. The operational guidelines and responsibilities for the Expert Advisory Panel are expounded in ***Appendix A4***.

Deputy CEO

The Deputy CEO/Head of the National AI Center (NCAI) plays a critical role in the operationalization and sector-specific implementation of AI initiatives. Acting as a strategic executor, the Deputy CEO ensures that the Center's diverse array of AI projects are effectively managed and closely aligned with the nation's priorities across key sectors.

The Deputy CEO/Head of the National AI Center (NCAI) serves as a key facilitator and integrator of AI strategies across public sector pillars. This role is instrumental in harmonizing the Center's AI initiatives with the national agenda, ensuring that sector-specific projects not only align with but also amplify the government's strategic priorities in key areas.

Given the comprehensive responsibilities, the Deputy CEO's role is pivotal to the NCAI's success in driving AI innovation within the public sector. Their deep understanding of both the technological aspects of AI and the nuances of governmental operations will be crucial in establishing productive partnerships and achieving strategic coherence. The Deputy CEO's interaction with government ministries is key to securing the

requisite alignment, resources, and support necessary for the successful implementation of AI projects that will drive national development and digital transformation.

The Deputy CEO's robust understanding of AI, combined with an astute approach to business and operational dynamics, is essential for guiding sector-specific projects to fruition. The role's importance in steering the NCAI's efforts towards impactful AI adoption across industries and sectors cannot be overstated. The detailed roles, responsibilities, and guidelines for the Deputy CEO's office will be encompassed in ***Appendix A5***, serving as a comprehensive operational manual for this key leadership position.

Chief Technology Officer (CTO)

The CTO is a crucial addition to the leadership team, tasked with overseeing the technological, infrastructural, data, and platform strategies of the NCAI. With the responsibility for the execution and provision of necessary tools and infrastructure, the CTO ensures that both developing and deployed systems are adequately supported. Key roles include:

- **Technology Strategy Execution:** Develop and implement the technological vision and strategy of the NCAI, ensuring that infrastructure and tools are in place to support AI initiatives.
- **Infrastructure and Tool Provision:** Coordinate the delivery of essential infrastructure and tools required for AI systems, collaborating closely with internal teams and external partners.
- **Liaison with Digital Transformation Agency (DTA):** Work in tandem with the DTA's infrastructure division, coordinating efforts related to the technological needs of the NCAI.
- **Data Requirements Coordination:** Partner with the National Data Office to define and secure the data necessary for AI programs.

In addition to the primary responsibilities, the CTO will provide strategic oversight and technological guidance to the EPMO, Capacity Building, and Partnerships offices, ensuring that all initiatives are backed by state-of-the-art technology and robust infrastructure. This oversight is crucial for the scalability and success of the NCAI’s programs, and it facilitates a seamless flow of information and resources between the technology division and other operational pillars.

In their role, the CTO will conduct thorough scoping and identify the requirements for the technological backbone of all NCAI projects. The CTO's detailed roles, responsibilities, and Terms of Reference will be documented in ***Appendix A6***, providing a blueprint for the technology strategy that underpins the operational success of the NCAI's AI initiatives.

Operational Pillars

Public Sector Pillar

The Public Sector Pillar of the NCAI, under the Deputy CEO's stewardship, will spearhead AI integration within key national priority sectors: Education, Health, Energy, Agriculture, and National Security. Each division within the pillar will host dedicated teams to collaboratively work with respective ministries and institutions to:

- Develop sector-specific AI strategies.
- Identify and prioritize AI use cases.
- Coordinate with the Enterprise Project Management Office to ensure the development, delivery, and operationalization of AI systems.

These divisions will focus on the adoption of AI solutions that can deliver tangible benefits to society, ensuring that the impact is substantial and measurable. By fostering an adoption-centric approach, the Public Sector Pillar will aim to bring the transformative power of AI into daily governance and public service delivery, enhancing efficiency, accuracy, and citizen engagement.

The Terms of Reference for the Public Sector pillar can be found in ***Appendix B1***.

Emerging Sectors Pillar

The Emerging Sectors Pillar is the NCAI's proactive response to the evolving landscape of AI opportunities. It serves as an incubator for AI applications in new and developing sectors that hold potential for future national significance. This pillar will:

- Identify pioneering AI use cases in emerging sectors.
- Gather data requirements and build foundational datasets for AI applications.
- Prepare sectors for their transition to the public sector pillar once they achieve national prominence.

By monitoring the progression and maturity of AI applications within these sectors, the Emerging Sectors Pillar will ensure that as sectors grow in relevance and scale, they are seamlessly integrated into the national AI strategy, contributing to Sri Lanka's advancement and preparedness for future AI-driven transformations. The Terms of Reference for the Emerging Sectors pillar can be found in ***Appendix B2***.

Private Sector Engagement Pillar

The Private Sector Engagement Pillar plays a crucial role in catalyzing the adoption of AI within the business community. Its mission is to stimulate the private sector, fostering a conducive environment for AI innovation that can lead to increased efficiency, new business models, and job creation. The pillar will:

- Develop tailored strategies for AI adoption among large enterprises, SMEs, and startups.
- Implement initiatives to boost AI knowledge, funding access, and market opportunities for private sector players.
- Facilitate partnerships between the private sector and other stakeholders to encourage knowledge sharing and collaborative development.

Recognizing the pivotal role of the private sector in driving broad-based economic growth, this pillar is dedicated to establishing Sri Lanka as an AI innovation hub, encouraging enterprises to leverage AI for competitive advantage, and generating social benefits through increased employment and economic activity. The Terms of Reference for the Private Sector Engagement pillar can be found in ***Appendix B3***.

Capacity Building and Talent Development Pillar

This pillar serves as the cornerstone for cultivating AI fluency across all levels of Sri Lankan society. It focuses on fostering essential AI skills through dedicated tracks in primary and secondary education, higher education, and specialized training programs aimed at up-skilling the general population and professionals across diverse sectors such as medicine and agriculture. The pillar will also ensure technical planning, demand management, enablement services, and the establishment of dynamic platforms for learning. Central to its mission is the design, development, and accreditation of contemporary AI curriculum, supported by robust operations and assistance frameworks to ensure sustainable talent development and empowerment in the AI domain.

- **Curriculum Development**: Design and implement AI education programs for primary, secondary, and higher education, as well as specialized upskilling courses for professionals.

- **Platform Enablement**: Create and manage platforms for AI learning and development that cater to diverse learning needs and promote widespread AI fluency.
- **Accreditation and Quality Assurance**: Develop accreditation standards for AI curriculum and training programs, ensuring they meet high-quality educational benchmarks.

The Terms of Reference for the capacity building and Talend Development pillar can be found in ***Appendix B4***.

Awareness Pillar

The Public Awareness Pillar strives to embed AI literacy within the fabric of Sri Lankan society. By orchestrating comprehensive educational campaigns, community engagement programs, and collaborative initiatives, it aims to inform the public about the rapidly changing technological landscape, highlighting opportunities and preparing them for shifts in the employment market. Additionally, it advocates for ethical considerations and engages in public discourse to build a society that is informed and conscious about AI advancements. Showcasing AI opportunities and potential societal benefits lies at the heart of its mandate, ensuring AI technology is perceived as a lever for progress and innovation.

- **Educational Campaigns**: Launch comprehensive campaigns to raise public awareness about the benefits and implications of AI technologies.
- **Community and Ethical Engagement**: Foster a community-inclusive approach that encompasses ethical considerations and promotes public discourse on AI.
- **Opportunity Showcasing**: Highlight AI success stories and potential opportunities to encourage public support and participation in AI initiatives.

The Terms of Reference for the Awareness Engagement pillar can be found in ***Appendix B5***.

Enterprise Project Management Office (EPMO) Pillar

The EPMO Pillar stands as the operational backbone for AI initiatives within the National AI Center. Tasked with the meticulous planning and management of AI projects, it facilitates the Deputy CEO's oversight on new and ongoing projects by offering a comprehensive control tower view. This includes monitoring key performance indicators, return on investment, and portfolio performance analytics. Through rigorous finance and audit protocols, interim project assessments, and governance adherence, the EPMO ensures the strategic alignment and efficient execution of AI endeavors across the nation's spectrum of AI applications.

- **Project Coordination**: Manage and oversee the entire lifecycle of AI projects, ensuring alignment with strategic objectives and efficient resource utilization.
- **Performance Monitoring**: Implement a control tower to provide real-time monitoring and analysis of project KPIs, ensuring transparency and accountability.
- **Financial Governance**: Conduct finance and audit operations for AI projects, including managing interim proposals and strategic initiative portfolios.

The Terms of Reference for the EPMO pillar can be found in ***Appendix B6***.

Partnerships and Eco-system Pillar

The Partnerships and Eco-system pillar focuses on cultivating a robust network of strategic alliances crucial for the growth and adoption of AI in Sri Lanka. By engaging with government, private sector entities, academic institutions, and leading technology companies such as Amazon and Microsoft, this pillar aims to foster collaboration opportunities, technology transfer, and a supportive environment for AI innovation.

- Develop strategic partnerships with local and international tech giants, fostering technology transfer and AI capacity building.
- Coordinate government and private sector alliances to ensure a collaborative approach toward national AI integration.
- Create academic partnerships to bridge the gap between AI research and practical, scalable applications.

The Terms of Reference for the Partnerships and Eco-Systems pillar can be found in ***Appendix B7***

Research and Development Pillar

This pillar is tasked with strategizing and propelling R&D in AI across Sri Lanka. It supports the establishment and operation of specialized research centers at premier universities with a focus on sectors like agriculture and health and dedicated research units for advancing technologies like generative AI, deep learning, and robotics. It aims to provide leadership in emerging technologies and trends.

- Formulate a national research agenda that aligns with global advancements and local expertise in AI.
- Spearhead the establishment of AI research centers across academic institutions, focusing on high-impact sectors and technologies.
- Drive technology adoption by nurturing innovation, providing resources, and establishing clear paths for technology commercialization.

The Terms of Reference for the Research and Development pillar can be in ***Appendix B8***

Trust and Safety Office

The Trust and Safety Office establishes the legal and regulatory framework for AI, ensuring compliance and managing risks associated with AI deployment. This office is responsible for maintaining trust and safety platforms that uphold ethical AI use, privacy, and public welfare.

- Develop a comprehensive framework for AI ethics, privacy, and security that meets international standards.
- Oversee the formulation and implementation of AI legal and regulatory policies to navigate the complex AI governance landscape.
- Establish risk management practices to safeguard against potential misuses and threats inherent in AI systems.

The Terms of Reference for the Trust and Safety Office can be found in ***Appendix B9***

Finance Pillar

The Finance pillar manages financial aspects related to AI initiatives, including contract placement, identification of funding sources, partnerships with financial bodies, and overseeing audits and financial monitoring of AI projects.

- Manage AI project finances, including budgeting, contracting, and procurement, aligning with strategic objectives and transparency standards.
- Identify and engage with potential funding bodies to secure financial support for AI initiatives.
- Ensure rigorous financial monitoring, auditing, and reporting to maintain fiscal responsibility and effectiveness of AI projects.

The Terms of Reference for the Finance Pillar can be found in ***Appendix B10***

As we chart the course for the National AI Center, the blueprints laid out in this chapter stand testament to our commitment to a thoughtful and proactive approach in harnessing AI for the prosperity of Sri Lanka. Our organizational structure and operational model are crafted not just to initiate but to sustain and expand our AI capabilities, reflecting our dedication to innovation, inclusivity, and excellence. Moving forward, we anticipate iterative advancements, guided by the principles and frameworks established herein, while remaining nimble to adapt to the technological and socio-economic shifts on the horizon. The NCAI, therefore, is poised to be a beacon of progress—enabling Sri Lanka to navigate the uncharted waters of the AI era with confidence and to emerge as a leader on the global stage.

5. Operational Blueprint for Establishing the National Center for AI

In the burgeoning landscape of global technological advancement, the strategic implementation of Artificial Intelligence (AI) stands as a critical factor for national development. The National AI Center (NCAI) of Sri Lanka is envisioned to be at the forefront of this revolution, transforming the nation's AI capabilities into tangible societal and economic benefits. To realize this vision, a phased approach (See Figure 2) is both strategic and pragmatic, providing a structured framework for the center's inception and growth. This approach allows for immediate action on critical initiatives, aligned with the agility to refine and scale operations in response to the evolving AI landscape and the National AI Strategy's maturation.

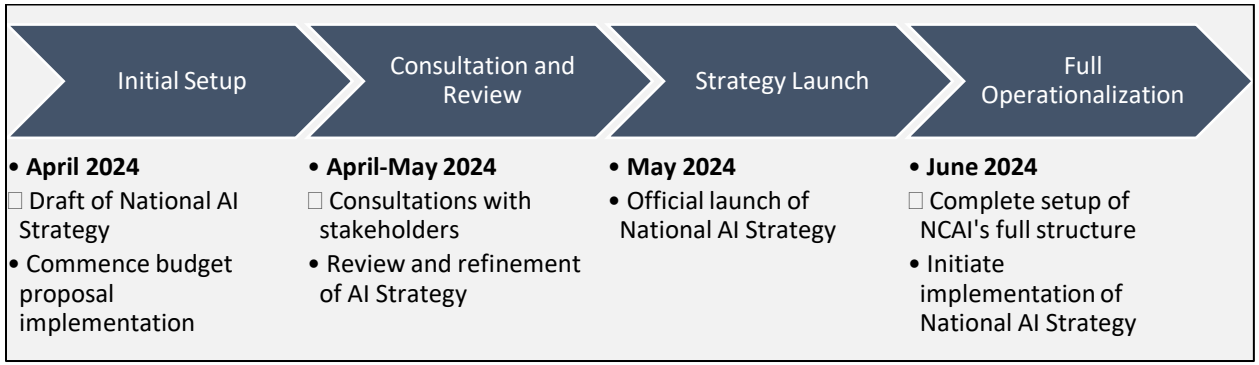

Figure 2: Operational Blueprint for establishing the National Center for AI

Phase I (Table 1) of the NCAI's rollout is designed as an immediate landing pad, directed at implementing the proposals contained within the 2024 interim budget—a foundational step in solidifying the nation's commitment to AI. This phase is critical for establishing the groundwork, allowing the NCAI to begin operations, foster partnerships, and set in motion the initiatives that will pave the way for broader, more comprehensive efforts in the subsequent phase.

As we segue into Phase II (Table 1), the focus shifts to the full-scale operationalization of the NCAI, aligning with the launch of the National AI Strategy. This phase is characterized by a deepened commitment to structural development, talent acquisition, and the integration of strategic initiatives into a cohesive national framework. The interim budget proposals serve as a blueprint for this phase, translating financial resources into strategic action areas that support the NCAI's overarching objectives.

Table 1: Phased Operational Plan for setting up the National Center for Artificial Intelligence

Phase	Timeframe	Milestones	Objectives	Expected Outcomes
Initial Setup	April 2024	• Draft of National AI Strategy • Commence budget proposal implementation with minimal NCAI	• To lay the foundational framework for NCAI operations • To initiate interim budget proposal activities	• Established administrative and operational structure • Initial budget proposal projects underway
Consultation and Review	April-May 2024	• Consultations with stakeholders • Review and refinement of AI Strategy	• To integrate feedback and insights from key stakeholders • To fine-tune the AI strategy for national alignment	• Refined National AI Strategy ready for launch • Incorporation of diverse perspectives into strategy
Strategy Launch	End of May 2024	• Official launch of National AI Strategy	• To publicly present the strategic direction for AI in Sri Lanka • To rally national support and engagement	• Public endorsement and awareness of AI strategic vision • Alignment of initiatives with the national development agenda
Full Operationalization	June 2024 onwards	• Complete setup of NCAI's full structure • Initiate implementation of National AI Strategy	• To build the NCAI into a fully functional entity • To begin executing the long-term strategic AI initiatives	• NCAI operating at full capacity • Progressive implementation of AI strategy across sectors

The connection between these interim proposals and the operational plan is symbiotic. The proposals provide both the financial impetus and strategic directives that inform the operational plan's structure and priorities. The phased approach ensures that the NCAI progresses from a foundational base, building momentum as it moves towards the ambitious goal of positioning Sri Lanka as a leader in AI innovation and application. This introduction outlines the rationale behind the phased operational blueprint, setting the stage for a comprehensive overview of the immediate initiatives and the strategic planning that will define the NCAI's trajectory.

Initial Setup

In the nascent stage of establishing the National AI Center (NCAI), a minimal operational setup is proposed to act as a landing pad for executing the interim budget proposals. This initial phase is an expedited approach aimed at laying the foundational groundwork for the Center, ensuring that the momentum of progress aligns with the urgency of AI adoption and strategy execution.

The Figure 1 diagram provides an overview of the full operational model of the NCAI, designed to be a comprehensive hub for AI innovation, collaboration, and implementation. The complete structure envisages a broad spectrum of pillars, including Public Sector, Emerging Sectors Development, Private Sector Engagement, Capacity Building and Talent Development, Public Awareness, Partnerships and Eco-system, Research and Development, Trust and Safety, and Finance.

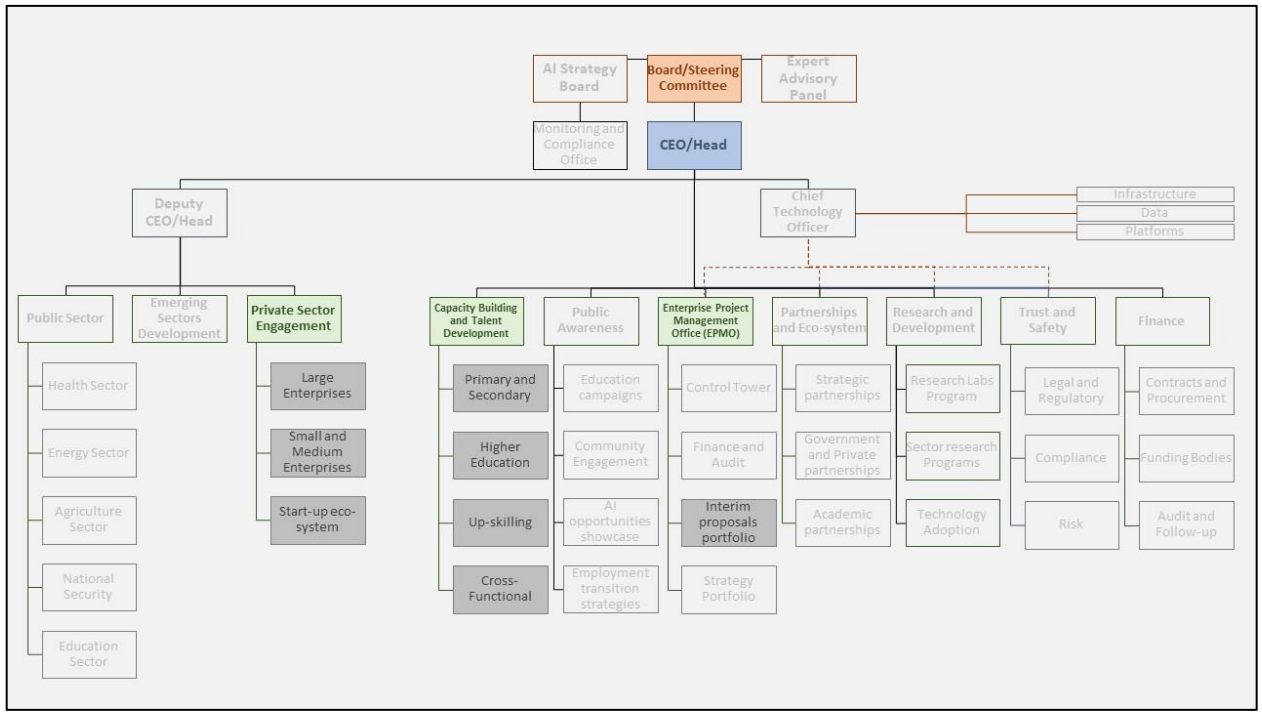

Figure 3: Organization Structure for Initial setup of the NCAI

However, for Phase I, as delineated in the Figure 3, the focus will be narrowed down to the most essential functions. The shaded boxes in the second diagram represent the operational aspects that will be deferred for the full-scale setup in Phase II. These include certain specialized areas within Research and Development, detailed aspects of Partnerships and Eco-system, and the full breadth of the Trust and Safety and Finance pillars.

Immediate Setup and Functions:

- **Public Sector Engagement**: This will be the primary focus, with an aim to leverage AI for enhancing public service delivery. The core team will initiate discussions with various ministries to identify impactful AI use cases.
- **Private Sector Engagement**: A streamlined effort will be made to engage with large enterprises, SMEs, and startups to foster early AI adoption and set the stage for vibrant AI-driven economic activity.
- **Capacity Building and Talent Development**: Immediate efforts will be channeled towards establishing AI learning pathways, particularly focusing on up-skilling the current workforce and integrating AI modules into higher education.
- **Public Awareness**: Initiating AI literacy and awareness programs to prepare the public for the upcoming digital transformation is key. This will include introductory campaigns and engagements.
- **Enterprise Project Management Office (EPMO)**: A foundational structure for the EPMO will be set up to ensure the governance, finance, and audit processes for AI projects are established from the onset.

This pragmatic approach ensures that while the strategic, long-term vision is kept intact, the immediate action items outlined in the budget proposals are quickly set into motion. The minimal structure will be agile, adaptable, and driven by a core leadership team capable of making rapid decisions to respond to the evolving needs of the AI landscape in Sri Lanka.

As this phase progresses, the NCAI will prepare for a seamless transition to its full operational capacity, with the insights gained during this initial period informing the scaling and refinement of strategies and functions. This is a critical step in positioning Sri Lanka at the forefront of AI technology adoption and ensuring the country's readiness for the benefits that AI can bring to society and the economy at large.

Overview of the Interim Budget Proposals

As the National AI Center (NCAI) pivots from concept to reality, the interim budget proposals (Table 2) provide both a runway and a blueprint for the immediate steps ahead. These proposals represent targeted investments into the foundational pillars of AI development, aimed at stirring innovation, enhancing capacity, and seeding AI integration across critical sectors. By laying out these proposals, the NCAI delineates a clear path forward, ensuring that the strategy unfolds cohesively with its mandate to elevate the AI ecosystem within the country.

Table 2: Overview of Interim Budget Proposals for AI

Pillar	NCAI's Role	Activity	Goals
1. Revitalizing Data Accessibility	Facilitate cross-sector data sharing, support data standardization, and endorse open data practices that will fuel AI research and development.	Reviving the Open Data Portal	• Revive the **Open data portal** and update it with **100 data sets** with open access by the end of 2024.
2. Nurturing AI Innovation	Create ecosystems that propel startup growth, connect entrepreneurs with AI resources, and launch AI applications that demonstrate tangible societal and economic benefits.	AI Hubs	• **03 AI Innovation hubs** to be established • **10 AI startups** at each AI hub by 2025 • **3 AI applications** to be developed and **20 AI engineers** trained at each AI Hub
		Startup incubator Program	• **02 startup incubator programs** by the second quarter of 2025
3. Introductory AI Skill-Building Program:	Design and deploy education modules across multiple demographics, foster a national upskilling movement, and calibrate the workforce for an AI-driven future.	Build foundational AI skills through curated programs and modules	• **National "Introduction to AI" program** by June 2024, enrolling **500+** participants from diverse backgrounds and partnering with local institutions for wider reach.
		Capacity Building and Training Programs	• **1000 public officials** • **1,000 school teachers** • **5,000 students** • **2,000 employees in the private sector** • **50,000 public** trained through awareness campaigns and public outreach programs

		Establish AI Clubs in schools	• **100 AI clubs** in schools by Q1 2025
		AI-REACH	• **10000 educators and health professionals and administrative officers** trained through GenAI capacity Development Bootcamp
4. Bridging the AI Talent Gap	Partner with educational institutions to infuse AI learning into curricula, establish scholarship schemes to increase student enrollment in AI/data science degrees, and integrate AI modules into priority subjects.	Degree Program Development and Implementation	• **2 new AI degree programs** to be established at state Universities
		Scholarship Schemes for Increased Enrollment	• **100 scholarships for AI/data science degrees**
		Integration of AI Modules into Priority Subjects	• Degrees in **non-technical fields** to be infused with AI modules • Introduce AI as a core subject in all IT-related courses in state universities by 2025/2026
5. Enhancing Public Sector Efficiency Through AI	Collaborate with government agencies to pinpoint and deploy AI use-cases, ensuring improved public services and governance.	AI Applications	• Identify **10 high-impact areas across various government institutions** (e.g., healthcare, agriculture, environment, education, citizen services) where AI can significantly improve **efficiency, accuracy, and accessibility** of services by July 2024 • **Develop and pilot at least 3 AI applications** by June 2025

Each interim budget proposal is meticulously crafted to interlock with the strategic objectives of the NCAI, acting as catalysts for the Centre's long-term vision. Reviving the Open Data Portal aligns with the NCAI's drive for transparency and open innovation. The establishment of AI Hubs and promotion of AI startups mirror the NCAI's commitment to economic growth through technology. The skill-building programs underpin the Centre's dedication to education as a vehicle for AI proficiency, while efforts to bridge the talent gap support the Centre's strategy to build a sustainable AI workforce. Together, these proposals form a cohesive framework that not only supports the immediate operationalization of the NCAI but also lays the groundwork for its expansion and maturation. They are not standalone ventures but integrated elements of a grander schema to position Sri Lanka at the forefront of AI excellence.

6. Operational Guidelines

Operational Model

The success of the National Center for Artificial Intelligence (NCAI) hinges on an operational model that is robust, adaptive, and seamlessly integrated with its strategic goals. It is this model that will ensure the translation of strategic visions into practical, impactful actions and outcomes. Aligned with the overarching ambitions of the NCAI, the operational model serves as the blueprint for day-to-day functions and long-term operational planning.

The NCAI's operational model is built on four pillars: strategy formulation, project management, stakeholder engagement, and impact assessment. For each process, the Center will adopt a systematic approach involving state-of-the-art workflows, digital tools, and dedicated personnel. This ensures that each AI initiative is strategically conceived, expertly managed, thoroughly communicated, and meticulously evaluated.

Resources, be it human, financial, or technological, will be allocated through a framework designed to maximize efficiency and effectiveness. The governance mechanism of the Center, including various committees and the roles of chief officers, will provide oversight, direction, and accountability. This ensures that each investment and decision aligns with the Center's objectives and the ethical principles guiding AI development.

The Center's budgeting will encompass all aspects from start-up costs to operational expenses, accounting for capital investments and ensuring provisions for contingencies. The budgeting process will be transparent, requiring approval at multiple levels to maintain financial accountability and facilitate periodic reviews.

Identifying diverse funding sources is essential for the Center's sustainability. This includes government funding, private sector partnerships, and international grants. The Center will explore innovative funding avenues such as public-private partnerships and global innovation grants to secure a long-term financial base.

Budgeting

The Center’s budgeting will encompass all aspects from start-up costs to operational expenses, accounting for capital investments and ensuring provisions for contingencies. The budgeting process will be transparent, requiring approval at multiple levels to maintain financial accountability and facilitate periodic reviews.

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Monitoring and Evaluation

Continuous monitoring and evaluation are vital for the NCAI to ensure its initiatives remain aligned with strategic objectives and yield the intended impact. This involves setting up feedback mechanisms, data collection systems, and performance analytics to assess the progress and effectiveness of AI projects.

The NCAI will implement an iterative approach to its operations, utilizing the data and feedback collected to refine and improve its activities. Regular reviews will be conducted to adjust strategies, address any shortcomings, and capitalize on new opportunities, ensuring the Center remains responsive to technological and societal shifts.

Identifying potential risks and implementing mitigation strategies is critical for safeguarding the Center's objectives. The NCAI will develop a comprehensive risk management plan that encompasses operational, financial, and reputational risks, detailing measures to prevent, respond to, and recover from potential threats.

Each chapter of this document builds on the strategic foundations laid in previous sections, ensuring that the operational blueprint, risk management, and monitoring and evaluation strategies all coalesce to support the NCAI's overarching mission of harnessing AI for the benefit of Sri Lanka's society and economy. The information for writing these sections can be derived from the operational details and strategic planning outlined in the provided documents.

7. Conclusion

The journey to establish the National AI Center (NCAI) in Sri Lanka is both ambitious and necessary. This proposal presents a comprehensive plan that underscores the potential of Artificial Intelligence as a transformative force across multiple facets of society. The NCAI is envisioned not just as an institute of technology, but as a crucible of innovation, a catalyst for development, and a platform for Sri Lanka to assert its stance as an AI thought leader in the region.

Recapping the Strategic Vision

At its core, the NCAI's mandate is to integrate Artificial Intelligence into the national fabric—boosting efficiency, enhancing service delivery, and driving economic growth. By focusing on key sectors such as education, healthcare, agriculture, and national security, the NCAI aims to leverage AI to solve complex challenges, improve the quality of life for citizens, and foster a knowledge-based economy. The strategic objectives, as outlined, focus on developing homegrown AI solutions that are globally competitive yet locally relevant.

Overcoming Challenges with Opportunities

This proposal recognizes the hurdles in implementing such a wide-reaching initiative: the need for skilled talent, the demand for substantial investment, and the imperative for robust legal and ethical frameworks. However, these challenges are met with a landscape ripe with opportunity—Sri Lanka's vibrant academic community, burgeoning private sector, and progressive government policies provide fertile ground for the NCAI's ambitions to take root and flourish.

A Deep Dive into the Operational Strategy

The NCAI's operational model is the result of meticulous planning, focusing on creating a nimble and responsive organization capable of adapting to the rapid evolution of AI technology. Key operational processes have been designed to support strategic formulation, project management, stakeholder engagement, and impact assessment.

Resource allocation is predicated on a governance mechanism that ensures transparency, accountability, and agility. The governance structure delineates clear roles, empowering leadership while encouraging collaboration and innovation at all levels.

Budgeting outlines encompass not only the immediate financial needs for start-up and operational costs but also long-term investments that will sustain the NCAI's growth. Funding strategies are multifold, tapping into government allocations, private partnerships, and international grants to establish a diverse financial foundation that can weather the uncertainties of technological evolution.

Pathways to Monitoring and Continuous Evaluation

The proposal details a dynamic framework for continuous monitoring and evaluation, essential for tracking progress, gauging effectiveness, and iterating strategies as needed. This live feedback mechanism will guide the NCAI in refining its operations and redirecting its course as required by the shifting landscapes of AI and global innovation.

Risks and Forward-Thinking Mitigation Strategies

Anticipating potential risks is a cornerstone of the NCAI's strategic planning. The proposal outlines a proactive approach to risk management, with mitigation strategies spanning from operational redundancies to comprehensive legal reviews, ensuring that the NCAI not only anticipates but is prepared for various contingencies.

The Anticipated Impact and the Future

The NCAI is projected to have a profound impact on Sri Lanka’s socio-economic landscape. By fostering AI literacy and competencies across all sectors, it aims to democratize the benefits of AI, ensuring that technological advances translate into tangible benefits for all strata of society. The ripple effects of such a transformation are expected to be manifold—spurring innovation, creating high-value jobs, and positioning Sri Lanka as a hub of AI excellence.

In conclusion, the NCAI stands as a testament to Sri Lanka's commitment to the future—a future that is digital, intelligent, and inclusive. The document herein closes with a note of optimism and a call to action. The blueprint for the NCAI is more than a plan; it is a pledge—a pledge to the

people of Sri Lanka that their future is bright, empowered by AI, and forged with the indomitable spirit of innovation that has always been the country's hallmark. The next chapters of this narrative will be written by the collective efforts of individuals, institutions, and the nation as a whole, as they embark on this exhilarating journey towards a smarter, more resilient, and prosperous Sri Lanka.

Appendix A1: CEO Roles & Responsibilities

1. Strategic Leadership:

- Serve as the principal executive officer, setting the overall strategic direction for the National AI Center in alignment with the national priorities for AI.
- Lead the development and execution of the long-term strategy with a clear vision for AI's role in national development.

2. Operational Management:

- Oversee the daily operations of the NCAI, ensuring efficient and effective management of resources.
- Implement the Center's strategic plan and initiatives, ensuring milestones and objectives are achieved.

3. Board Liaison:

- Act as the primary liaison between the NCAI and the Board/Steering Committee.
- Communicate and report on operational progress, challenges, and strategic outcomes to the Board.

4. Policy Implementation:

- Ensure that the NCAI's actions comply with legal and regulatory requirements, and operational activities reflect the strategic objectives set out by the AI Strategy Board.
- Collaborate with the Board to guide policy and regulatory development for AI.

5. Stakeholder Engagement:

- Engage with key stakeholders, including government, industry, academia, and civil society, to promote AI initiatives and partnerships.
- Represent the NCAI at public events, conferences, and other forums to elevate the Center's profile and mission.

6. Team Leadership:

- Recruit, manage, and mentor the NCAI's senior management team and staff.
- Foster a culture of high performance, innovation, and continuous improvement within the NCAI.

7. Financial Oversight:

- Oversee budgeting, financial forecasting, and cash flow for operational needs and projects.
- Work with the Finance Pillar to secure funding and ensure responsible fiscal management.

8. Risk Management:

- Identify and assess risks to the organization and implement measures to control risks.
- Oversee the Trust and Safety Pillar to ensure that AI deployments are secure and adhere to ethical guidelines.

9. Project Supervision:

- Ensure the success of AI projects through the Enterprise Project Management Office.
- Oversee the Control Tower for governance and monitoring of ongoing and completed AI projects.

10. Collaboration and Integration:

- Ensure that the NCAI works synergistically with the National Digital Transformation Agency (DTA) for infrastructure support and data coordination.
- Facilitate integration and alignment with national digital and AI strategies.

11. Reporting and Compliance:

- Ensure that all activities and projects are compliant with the Monitoring and Compliance Office's standards and procedures.
- Regularly report on NCAI's progress, obstacles, and achievements in relation to the execution of the National AI Strategy and interim proposals.

12. Public Advocacy:

- Advocate for AI adoption and awareness, highlighting the role and impact of the NCAI's work in advancing the public's understanding and engagement with AI.

13. Advisory Panel Coordination:

- Work closely with the Expert Advisory Panel to ensure that the NCAI benefits from global and diverse expertise, translating advice into actionable strategies.

Appendix A2: NCAI Board Responsibilities & TOR

The Board overseeing the National AI Center (NCAI) will comprise a mix of government officials, industry leaders, and academic experts. This diverse composition ensures a wealth of experience and perspectives, guiding the NCAI's strategic direction.

Roles and Responsibilities of the Board

1. Strategic Oversight:
    - Establish the NCAI's strategic objectives and ensure alignment with the national interest.
    - Approve annual goals and monitor the progress of the NCAI towards these goals.
2. Policy and Regulation Guidance:
    - Ensure that the NCAI's activities comply with national and international AI policies and regulations.
    - Guide the development and implementation of new policies that emerge due to the evolving AI landscape.
3. Financial Supervision:
    - Oversee budgeting, financial planning, and financial reporting.
    - Approve major expenditures and investments, ensuring they align with strategic priorities.
4. Risk Management:
    - Identify potential risks to the NCAI's operations and strategic goals.
    - Ensure the implementation of robust risk mitigation strategies.
5. Governance:
    - Establish governance protocols and ensure adherence to the highest standards of ethics and corporate governance.
    - Address stakeholder concerns and manage relationships between the NCAI, government, and other key partners.
6. Performance Evaluation:

- Evaluate the performance of the CEO and provide feedback.
- Review the effectiveness of the NCAI's programs and initiatives against set benchmarks and KPIs.

7. Reporting and Communication:

- Communicate effectively with stakeholders about the progress and achievements of the NCAI.
- Ensure transparency and regular reporting to the public and other stakeholders.

8. Expert Advisory Panel Collaboration:

- Engage with the Expert Advisory Panel to gain insights and recommendations on AI trends and strategic decisions.
- Facilitate the transfer of international best practices into the NCAI's operations.

9. Liaison with AI Strategy Board:

- Coordinate with the AI Strategy Board to ensure the NCAI's activities are in line with the national AI strategy.
- Support the Monitoring and Compliance Office in evaluating the performance of the NCAI and strategy initiatives.

Terms of Reference (TOR) for the Board

The TOR for the Board will be detailed documents that outline the specific functions and operational procedures of the Board, including:

- The Board's structure, including the roles and responsibilities of each member.
- The frequency and protocols for Board meetings, including decision-making processes and quorum requirements.
- Procedures for the induction and training of new Board members.
- The process for setting the strategic direction and reviewing the performance of the NCAI.
- Policies for conflict of interest, confidentiality, and other ethical considerations.
- The mechanism for stakeholder engagement and reporting.

Appendix A3: Strategy Board Responsibilities & TOR

The AI Strategy Board operates as an independent yet interconnected entity, designed to ensure that the National AI Center (NCAI) remains at the forefront of innovation and best practices. Its creation signifies a commitment to strategic agility and foresight, critical for steering Sri Lanka's AI initiatives.

Roles and Responsibilities

1. Strategic Formulation:

- Develop and continuously refine the National AI Strategy with forward-looking annual proposals that reflect the latest advancements and challenges in the field of AI.

2. Responsiveness to AI Evolution:

- Monitor global trends and breakthroughs in AI to ensure that the National AI Strategy remains relevant, effective, and competitive on an international scale.

3. Coordination with Main Board:

- Engage with the NCAI's main Board/Steering Committee to align the evolving strategy with the broader goals and objectives of the NCAI.

4. Oversight of Monitoring and Compliance:

- Supervise the Monitoring and Compliance Office, ensuring that NCAI initiatives are effective and adhere to the highest legal and ethical standards.

Terms of Reference (TOR)

The TOR for the AI Strategy Board will encapsulate the operational blueprint for its functions and responsibilities. These include:

A. Strategic Development:

- Detailed processes for the annual review and amendment of the National AI Strategy.

- Guidelines for integrating international best practices and advancements into the local context.

B. Coordination Mechanisms:

- Procedures for effective communication and decision-making between the AI Strategy Board and the main Board.
- Frameworks for collaboration with government, industry, and academia to inform strategic direction.

C. Monitoring and Compliance:

- Establishment of a subcommittee or office with a clear mandate for the regular assessment of the NCAI's adherence to strategic initiatives.
- Protocols for the ethical review of AI projects and compliance with national and international standards.

D. Reporting Structures:

- Regular reporting intervals to the main Board and relevant stakeholders.
- Transparency and disclosure guidelines for strategy proposals and evaluations.

E. Stakeholder Engagement:

- Engagement strategies to incorporate diverse perspectives into the strategic planning process.
- Public and private sector collaboration models that leverage stakeholder expertise in refining the AI Strategy.

F. Review and Adaptation:

- Regular assessments of the Strategy Board's effectiveness and adaptability to changes in the AI domain.
- Iterative process models to facilitate quick response to new information or global AI events.

Appendix A4: Expert Advisory Panel Responsibilities & TOR

The Expert Advisory Panel serves as a compass for the National AI Center (NCAI), guiding it through the complex and evolving landscape of Artificial Intelligence. This panel comprises international and local experts, whose insights and expertise are paramount in informing the strategic direction and operational efficacy of the NCAI.

Roles and Responsibilities

1. High-Level Consultation:

- Provide expert insights on global AI trends, technological advancements, and innovative practices.
- Advise on strategic decisions, helping the NCAI navigate the intricate pathways of AI implementation.

2. Knowledge Exchange:

- Facilitate the transfer of cutting-edge AI knowledge and skills to the NCAI.
- Organize and participate in workshops, seminars, and discussion forums to disseminate expertise within the NCAI and its stakeholders.

3. Ethical Guidance:

- Offer guidance on ethical considerations and the societal impact of AI.
- Assist in the development of frameworks that ensure the responsible deployment of AI technologies.

4. Partnership Catalyst:

- Utilize the panel members' networks to foster strategic partnerships and collaborations with international AI communities.
- Enhance the NCAI’s credibility and visibility on the global stage.

Terms of Reference (TOR)

The TOR for the Expert Advisory Panel will outline the structure, functions, and procedural guidelines for the panel’s operation. These include:

A. Composition and Selection:

- Criteria for the selection of panel members, ensuring a balance of skills, experience, and diversity.
- Terms of service for panel members, including duration, responsibilities, and the process for renewal or replacement.

B. Consultation Processes:

- Frequency and format of meetings or consultations between the panel and the NCAI.
- Mechanisms for urgent consultations when rapid expert input is required.

C. Knowledge Dissemination:

- Guidelines for organizing educational events and thought leadership sessions.
- Protocols for the creation and distribution of white papers, research findings, and strategic insights.

D. Ethical Framework Development:

- Procedures for reviewing and providing input on ethical guidelines and standards related to AI projects.
- Models for ongoing ethical oversight and advice as AI technologies are developed and deployed.

E. Partnership Development:

- Strategies for leveraging panel members' networks to establish new partnerships.
- Frameworks for engagement with international AI organizations and institutions.

F. Reporting and Accountability:

- Regular reporting mechanisms to the NCAI's leadership on panel activities and advisories.
- Systems for tracking the influence of panel advice on NCAI's strategy and operations.

Appendix A5: Deputy CEO Responsibilities & TOR

The Deputy CEO/Head of the National AI Center (NCAI) plays a critical role in the operationalization and sector-specific implementation of AI initiatives. Acting as a strategic executor, the Deputy CEO ensures that the Center's diverse array of AI projects are effectively managed and closely aligned with the nation's priorities across key sectors.

Roles and Responsibilities

1. Project Leadership and Coordination:

- Spearhead the development and execution of sector-specific AI projects, aligning with the national strategies for health, energy, agriculture, education, and national security.
- Liaise with relevant ministries and governmental institutions to ensure successful integration of AI within sectoral initiatives.

2. Private Sector Engagement:

- Lead the engagement with large enterprises, SMEs, and startups, driving the adoption and integration of AI solutions within the private sector.
- Cultivate relationships with industry players to foster an environment conducive to innovation and collaboration.

3. Strategic Management:

- Oversee the strategic direction of sectoral projects, ensuring they contribute to the NCAI's goals and reflect broader economic and social objectives.
- Monitor the progress of initiatives, adapting strategies as necessary to meet evolving needs and challenges.

4. Interdepartmental Collaboration:

- Facilitate cross-functional collaboration within the NCAI, ensuring coherence and synergy between various departments and their AI-related activities.
- Act as a point of integration, aligning the work of capacity building, public awareness, and partnerships with sectoral needs and objectives.

5. Sector-Specific Strategy Ownership:

- Assume ownership of coordination and development for AI initiatives across the public sector pillars such as the Health, Energy, Agriculture, National Security, and Education sectors.
- Define and execute strategic AI projects that align with sectoral needs and contribute to national objectives.

6. Government Ministry Liaison:

- Act as the primary point of contact between the NCAI and relevant government ministries.
- Facilitate partnerships and align AI strategies with the goals and regulations set forth by governmental bodies.

7. Integration of AI Initiatives:

- Ensure that AI initiatives across different sectors are integrated and that cross-sectoral opportunities are leveraged for greater impact.
- Lead the cross-functional efforts between the NCAI and various public entities to foster a cohesive approach to national AI implementation.

8. Advocacy and Representation:

- Represent the NCAI in discussions with government officials, advocating for policies and resources that support the successful deployment of AI projects.
- Engage in dialogue with public sector stakeholders to understand their AI-related challenges and opportunities.

Terms of Reference (TOR)

The TOR for the Deputy CEO will provide detailed directives on the operational scope and the structural dynamics of the role. Key components will include:

A. Operational Leadership:

- Clear directives on managing the implementation of AI projects across sectors.
- Established benchmarks for progress and success, with specified reporting intervals.

B. Engagement Strategy:

- Defined objectives for private sector engagement, including key performance indicators for partnerships and collaborative ventures.

- Guidelines for interfacing with industry representatives, ensuring consistent and productive dialogue.

C. Strategic Oversight:

- Protocols for the oversight of sectoral projects, ensuring alignment with national AI and digital strategies.
- Decision-making frameworks that enable swift and strategic responses to sectoral developments.

D. Collaborative Integration:

- Mechanisms for fostering interdepartmental cooperation and ensuring the integration of diverse initiatives.
- Structures for cross-departmental teams and task forces focusing on AI project implementation.

E. Reporting and Evaluation:

- Structures for regular reporting to the CEO and the Board, providing transparency on project statuses and outcomes.
- Processes for evaluating the effectiveness of sectoral AI initiatives, ensuring they deliver tangible benefits and align with strategic objectives.

F. Strategic Coordination:

- Provide guidelines for establishing and maintaining strategic coordination across AI projects in various public sectors.
- Detail processes for the continuous evaluation and alignment of sector-specific AI strategies with overarching national goals.

G. Ministry Collaboration:

- Define protocols for consistent and productive interactions with government ministries and institutions.
- Establish regular reporting and feedback loops to ensure that AI strategies are in sync with public policies and ministerial directives.

H. Project Integration:

- Create a model for the integration of AI initiatives across different public sectors, identifying synergies and collaborative potentials.
- Outline methodologies for managing cross-functional teams dedicated to multi-sector AI projects.

I. Government Advocacy:

- Detail strategies for effectively communicating the NCAI's AI initiatives to government stakeholders.
- Develop advocacy plans to secure support and endorsement for AI projects at the national level.

Appendix A6: Chief Technology Officer (CTO)

Objective: Guide and oversee the technological direction of the NCAI, ensuring all AI programs have the necessary infrastructure, data, and tools for success.

Scope:

- Establish a comprehensive technology strategy that aligns with the NCAI's AI initiatives.
- Ensure the availability and scalability of infrastructure and platforms for AI development and deployment.

Responsibilities:

- Lead the assessment and procurement of technology solutions and infrastructure.
- Collaborate with the DTA and the National Data Office to align technological needs and data strategies.
- Provide technology leadership and direction to internal teams.
- Oversee the technology budget, ensuring effective use of resources.

Reporting:

- Maintain transparency with the NCAI leadership about the status of technology initiatives.
- Provide regular updates and strategic advice to ensure that technology keeps pace with the evolving AI landscape.

The inclusion of the CTO role in the NCAI's organizational structure signifies a commitment to the robust technological underpinning required to realize the full potential of AI in national development. With a strategic focus on technology, the NCAI is well-equipped to address the dynamic needs of AI research, development, and implementation.

Appendix B1: Public Sector Transformation Pillar

Objective: Develop and implement AI solutions in Education, Health, Energy, Agriculture, and National Security sectors that are in line with the national AI strategy to enhance public service delivery and security.

Scope:

- Create and execute a strategic AI roadmap for each sector.
- Identify key AI use cases in collaboration with relevant ministries.
- Develop partnerships with technology providers and academic institutions for AI solution development.
- Work with the Enterprise Project Management Office to manage project life cycles from inception to deployment.

Responsibilities:

- Ensure alignment of AI projects with national priorities and policies.
- Manage cross-functional teams to achieve project milestones.
- Oversee the integration of AI systems within public services.
- Monitor and evaluate the impact of deployed AI solutions.

Reporting:

- Provide regular updates on progress to the Deputy CEO.
- Prepare impact reports and case studies showcasing successful AI integrations.

Appendix B2: Emerging Sectors Development Pillar

Objective: Identify and nurture AI applications in nascent sectors with the potential to become future areas of national importance.

Scope:

- Conduct industry research to pinpoint potential AI innovations.
- Assess the readiness and data infrastructure required for AI applications.
- Establish criteria for transitioning mature sectors to the public sector pillar.

Responsibilities:

- Maintain a portfolio of emerging sector AI projects.
- Collaborate with stakeholders to align AI development with growth opportunities.
- Provide guidance on data collection, analysis, and usage specific to AI readiness.
- Cultivate a knowledge-sharing network to stay ahead of emerging AI trends.

Reporting:

- Offer insight into the growth trajectory of emerging sectors through AI applications.
- Regularly report to the Deputy CEO on strategic developments and progress.

Appendix B3: Private Sector Engagement Pillar

Objective: Accelerate the adoption of AI within the private sector, focusing on creating impact, stimulating economic growth, and fostering a competitive business environment.

Scope:

- Strategize for differentiated AI adoption among large enterprises, SMEs, and startups.
- Facilitate access to AI resources, funding, and markets for private entities.
- Encourage collaboration between the private sector and other AI stakeholders.

Responsibilities:

- Create outreach programs to raise AI awareness and capacity in the private sector.
- Engage with private sector leaders to drive AI strategic initiatives.
- Develop incentives and support mechanisms to encourage AI investment and development.
- Track the effectiveness and ROI of AI adoption within the private sector.

Reporting:

- Deliver comprehensive reports on private sector AI engagement activities.
- Analyze and report on the economic impact of AI initiatives to the Deputy CEO.

Each TOR serves as a foundational document, ensuring clarity of purpose, clear delineation of roles, and accountability for outcomes within each pillar of the NCAI, thus driving towards the ultimate goal of creating broad and significant societal value through AI.

Appendix B4: Capacity Building and Talent Development Pillar

Objective: To develop a sustainable talent pipeline equipped with AI competencies across various educational and professional levels in Sri Lanka.

Scope:

- Formulate specialized AI education tracks for different education levels and professional fields.
- Implement technical planning and demand management for AI education initiatives.
- Develop and maintain platforms for AI learning and accreditation systems.

Responsibilities:

- Coordinate with educational institutions and industry partners to design AI curriculum.
- Monitor and support the operations of AI learning platforms.
- Ensure accreditation standards are met and maintained for AI education programs.

Reporting:

- Provide periodic reports on talent development progress, program effectiveness, and skill adoption rates to the Deputy CEO.

Appendix B5: Public Awareness Pillar

Objective: To raise public understanding and awareness about AI and its implications for society and the economy.

Scope:

- Design and deliver educational campaigns on AI technologies.
- Engage communities through collaborative projects and dialogues on AI.
- Develop strategies for employment transition in an AI-influenced job market.

Responsibilities:

- Manage campaign execution and assess impact on public AI literacy.
- Facilitate public forums and discussions on AI ethics and policy.
- Showcase real-world AI opportunities and successes to the public.

Reporting:

- Summarize outreach and engagement activities, including effectiveness and public sentiment, to the Deputy CEO.

Appendix B6: Enterprise Project Management Office (EPMO)

Objective: To provide comprehensive project management services for AI projects, ensuring they are delivered on time, within budget, and with the expected impact.

Scope:

- Oversee the entire lifecycle of AI projects, from planning and execution to monitoring and closure.
- Act as a centralized control tower to provide oversight on all AI projects.
- Conduct finance and audit checks for project compliance and fiscal responsibility.

Responsibilities:

- Liaise with the Deputy CEO to align projects with national AI strategy goals.
- Manage the interim and strategic initiative project portfolios.
- Implement governance procedures and best practices for AI project management.

Reporting:

- Compile and present comprehensive reports on project status, risks, and outcomes to the Deputy CEO.

Appendix B7: Partnerships and Eco-System Pillar

Objective: To build and nurture a sustainable eco-system for AI innovation through strategic partnerships and alliances.

Scope: Establish and manage relationships with key industry players, academia, government, and technology giants.

- Build a dynamic AI partnership network to accelerate innovation and adoption.
- Leverage collaborations with big tech companies for knowledge exchange and technology access.
- Integrate AI initiatives across different sectors through public-private partnerships.

Responsibilities: Engage in continuous partnership development, oversee technology transfer initiatives, and facilitate a collaborative environment for AI growth.

- Strategically identify partnership opportunities that align with Sri Lanka's AI vision.
- Facilitate the sharing of AI resources and expertise among stakeholders.
- Monitor the effectiveness of partnerships and adjust strategies as needed.
- Create a supportive ecosystem that encourages entrepreneurship and AI-driven solutions.

Reporting: Provide progress updates and assessments on partnership developments and ecosystem growth to the Deputy CEO/Head.

Appendix B8: Research and Development Pillar

Objective: To drive AI innovation and knowledge creation within strategic sectors through dedicated research efforts.

Scope: Set up AI research centers, align R&D with national priorities, and engage in technology leadership activities.

- Define strategic R&D objectives to position Sri Lanka as a leader in AI innovation.
- Establish specialized research centers with a focus on key technologies and sectors.
- Encourage interdisciplinary collaborations and technological breakthroughs.

Responsibilities: Oversee R&D projects, cultivate academic and industry partnerships, and guide research teams towards impactful innovations.

- Manage the operationalization of AI research centers, including staffing, funding, and research activities.
- Oversee the alignment of R&D efforts with national AI strategies and global trends.
- Foster a culture of innovation that prioritizes impactful research and its practical applications.
- Ensure technology leadership by staying ahead of emerging AI trends and developments.

Reporting: Offer insights into R&D progress, breakthroughs, and strategic developments in AI.

Appendix B9: Trust and Safety Office

Objective: To ensure the responsible development and application of AI through comprehensive legal and ethical oversight.

Scope: Develop and implement AI governance frameworks, monitor compliance, and manage risks related to AI use.

- Develop a comprehensive strategy for AI governance, including the creation of new regulations and policies.
- Implement monitoring systems to ensure compliance with AI safety and ethical standards.
- Establish protocols for risk assessment and mitigation related to AI applications.
- Engage with international bodies to align local AI governance with global best practices.

Responsibilities: Maintain a pulse on legal developments, provide guidance on ethical AI practices, and ensure public engagement in AI governance.

- Advise on the development of new AI laws and policies that promote public trust and safety.
- Coordinate with government agencies to facilitate the adoption of AI governance frameworks.
- Lead initiatives to educate stakeholders on AI risk management and ethical considerations.
- Regularly review and update trust and safety standards to reflect technological and societal changes.

Reporting: Deliver periodic reports on the state of AI trust and safety, including compliance levels and ethical considerations.

Appendix B10: Finance Pillar

Objective: To strategically manage and oversee the financial aspects of AI initiatives to ensure sustainability and accountability.

Scope: Handle contract management, funding acquisition, financial partnerships, and budget audits for AI projects.

- Develop a fiscal strategy that aligns with the strategic goals of AI initiatives and ensures sustainable funding.
- Manage contracts and procurement processes to support AI project implementation.
- Identify and engage with potential funding bodies, including government grants and private investors.
- Implement financial controls and auditing processes to maintain transparency and accountability.

Responsibilities: Secure financing for AI ventures, manage procurement processes, and conduct financial reviews and follow-ups.

- Direct financial planning, budgeting, and reporting for all AI-related projects.
- Oversee the contract negotiation process, ensuring value for money and compliance with legal requirements.
- Liaise with financial partners to secure funding and manage financial risks.
- Conduct regular audits and financial reviews to ensure the efficient use of resources.

Reporting: Compile comprehensive financial reports on AI investments, expenditures, and audits for review by the Deputy CEO/Head.

Annex 4:

Draft AI Strategy Playbook

1. Introduction

1.1 Context for AI and Significance in Governance

Globally, Artificial Intelligence (AI) is reshaping governance by enhancing public service delivery and fostering greater civic engagement. Sri Lanka recognizes the pivotal role AI and disruptive technologies play in achieving digital empowerment and enhancing citizens' quality of life. As part of its strategic initiative, Sri Lanka aims to harness AI to drive public sector advancements and improve citizen interactions with government services, aligning with global trends where nations leverage these technologies to streamline government operations and improve transparency

The integration of AI into public services transcends being a mere technological upgrade; it is a strategic necessity for enhancing public service delivery and policymaking in Sri Lanka. AI technologies can significantly reduce bureaucratic inefficiencies, provide personalized citizen services, and enable data-driven decision-making. By automating routine tasks, AI frees human resources to focus on complex problem-solving and strategic planning, increasing overall operational efficiency and enhancing the effectiveness of government programs.

1.2 Vision and Objectives

Vision: Sri Lanka envisions becoming a technologically empowered, efficient, and inclusive government that leverages AI to meet the diverse needs of its population. This vision includes harnessing AI to transform planning processes, improve public goods and services, and augment workforce productivity to strengthen its global economic position.

Objectives:

- **Enhance Service Delivery:** Utilize AI to make government processes more efficient, transparent, and accessible, thereby improving the quality of public services.
- **Increase Operational Efficiency:** Implement AI tools to automate administrative processes, reducing redundancy and enabling more efficient resource use.
- **Foster a Culture of Innovation:** Encourage the integration of cutting-edge technologies and foster a mindset of continuous improvement and technological advancement.
- **Inclusivity and Accessibility:** Ensure AI-driven solutions are inclusive and accessible to all citizens, including those in remote or underserved areas, bridging the digital divide and promoting equity.
- **Sustainability:** Develop sustainable models for AI implementation that can adapt to evolving technological landscapes and changing citizen needs, ensuring long-term benefits.

These objectives align with Sri Lanka's broader strategic goals under the National AI Strategy and the Digital Strategy 2030, aiming to position the country as a regional hub for AI development and application, thereby enhancing public welfare and economic competitiveness.

1.3. Purpose of this Strategy Playbook

This preliminary draft AI Strategy Playbook is intended to serve as a guide for implementing Sri Lanka's National AI Strategy. It is designed to provide government agencies, the National Centre for AI (NCAI), and other stakeholders with practical guidance on integrating AI technologies across various sectors of governance and society. The playbook aims to accelerate the responsible development and adoption of AI, fostering innovation, inclusion, social good, and sustainable growth in alignment with the UN Sustainable Development Goals (SDGs). It aims to:

- Provide a structured approach to AI project planning and execution
- Ensure alignment of AI initiatives with national priorities and core principles
- Promote responsible and ethical AI development and deployment
- Facilitate inter-agency coordination and collaboration
- Guide the effective use of resources and capacity in AI implementation

This should be considered as a living playbook and as such NCAI, as the implementing organization for Sri Lanka’s National AI Strategy, periodically revise this document as needed based on learnings from implementation.

1.4 Alignment with the National AI Strategy

The playbook is deeply rooted in the vision and objectives set forth in Sri Lanka's National AI Strategy. It translates the strategy's high-level goals into actionable steps, ensuring that all AI initiatives contribute to the overarching aim of positioning Sri Lanka as a regional leader in ethical and inclusive AI innovation and adoption. Throughout this document, you will find references to specific sections of the National AI Strategy and its annexes, providing a connection between strategic intent and practical implementation.

1.5 Role of NCAI and Whole-of-Government Approach

The National Centre for AI (NCAI) plays a pivotal role in orchestrating the implementation of the AI strategy. However, the successful integration of AI across government requires a collaborative, whole-of-government approach. This playbook is designed to guide not only the NCAI but all government agencies in their AI adoption journey. It provides a common framework for understanding, developing, and deploying AI solutions, ensuring consistency and synergy across different departments and sectors

2. Core Principles of the AI Strategy and their Application

2.1 Overview of core principles

The core principles outlined in the National AI Strategy form the ethical and operational foundation for all AI initiatives in Sri Lanka. These principles should guide every decision and action related to AI development and deployment in the public sector. Let's examine each principle in detail:

1. **Inclusive and Responsible AI for All**: This principle emphasizes the development and deployment of AI solutions that address societal challenges, improve quality of life, and distribute benefits equitably across all segments of society. For government agencies, this means ensuring that AI initiatives consider the needs of diverse populations, including underserved communities and marginalized groups. It's crucial to conduct thorough impact assessments to ensure AI solutions don't inadvertently exacerbate existing inequalities.
2. **Trustworthy and Transparent AI**: Transparency in AI systems is fundamental to building public trust. Government agencies must establish robust ethical standards, privacy measures, and security protocols in line with international frameworks. This principle requires clear communication about how AI systems make decisions, especially in areas that directly affect citizens, such as public service delivery or law enforcement. Implementing explainable AI techniques and maintaining clear audit trails are essential practices.
3. **Human-Centric Approach**: AI should enhance rather than replace human capabilities. In the government context, this means designing AI systems that augment human decision-making and improve efficiency while maintaining human oversight, especially in critical areas. It's important to assess the impact of AI on government employees and develop strategies to upskill and reskill the workforce to work effectively alongside AI systems.
4. **Adoption-Focused and Impact-Oriented Implementation**: This principle emphasizes a pragmatic approach to AI adoption, focusing on a rapid and strategic development of use cases that can deliver tangible benefits to citizens and government operations. It requires government agencies to prioritize AI projects that address specific national challenges and opportunities. Conducting thorough cost-benefit analyses and setting clear, measurable objectives for each AI initiative is crucial.
5. **Agile and Adaptive AI Governance**: Given the rapid pace of AI development, governance frameworks must be flexible and responsive. Government agencies should establish mechanisms for regular review and updating of AI policies and regulations. This principle also

encourages experimentation through regulatory sandboxes and pilot projects, allowing for controlled testing of AI applications before full-scale deployment.

6. **Collaborative and Globally Engaged AI Ecosystem**: Building a robust AI ecosystem requires collaboration across government, industry, academia, and civil society. Government agencies should actively seek partnerships and knowledge-sharing opportunities, both domestically and internationally. This principle also emphasizes the importance of participating in global AI forums and standards-setting bodies to ensure Sri Lanka's interests are represented in the global AI landscape.
7. **Sustainable and Future-Ready AI**: AI initiatives should contribute to long-term sustainable development goals. This includes considering the environmental impact of AI systems, such as energy consumption of data centres, and leveraging AI to address climate change and environmental challenges. Government agencies should also plan for the long-term maintenance and evolution of AI systems, ensuring they remain effective and relevant over time.

2.2 Embedding Principles in AI Initiatives

To ensure these core principles are effectively embedded in all AI-related activities, government agencies should adopt a systematic approach:

- **Principle Alignment Checks**: Develop a comprehensive checklist based on the core principles. Use this checklist at key stages of AI projects, including conceptualization, design, development, testing, and deployment. This ensures continuous alignment with the principles throughout the project lifecycle.
- **Principle-Based Approval Process**: Integrate principle-based criteria into the project approval process. Require project proposals to explicitly address how they align with each core principle. This could include a dedicated section in project documents outlining the principle alignment strategy.
- **Ethical Impact Assessments**: Conduct thorough ethical impact assessments for all AI initiatives. These assessments should evaluate potential risks and benefits related to each principle, considering short-term and long-term impacts on various stakeholder groups.
- **Principle-Aligned KPIs**: Develop and use evaluation metrics that reflect adherence to the core principles. For example, inclusion metrics could measure the diversity of user groups benefiting from an AI solution, while transparency metrics could track the explainability of AI decision-making processes.
- **Training and Awareness Programs**: Implement regular training sessions for all personnel involved in AI initiatives. These programs should cover the core principles, their practical application, and case studies demonstrating principle-aligned AI development.
- **Stakeholder Engagement**: Establish mechanisms for ongoing stakeholder engagement, including citizens, civil society organizations, and industry experts. This ensures diverse perspectives are considered and helps identify potential principle-related issues early in the development process.

- **Principle Champions**: Designate "Principle Champions" within each agency or project team. These individuals would be responsible for advocating for the principles, providing guidance, and conducting internal audits for principle alignment.

2.3 Ethical Considerations in AI Development and Deployment

Ethical AI development is paramount to building public trust and ensuring long-term success. Government agencies should implement several measures to address ethical considerations. These measures are detailed below in preliminary form. Collectively these form the north star of what should be achieved as NCAI and the government improves its capabilities and skills in the longer term. Upon its inception and within its first year of operations, NCAI should develop (in a consultative manner) preliminary measures and accompanying roadmap for achieving the ideal measures listed below. These measures are:

- **Ethics Review Board**: Establish dedicated AI ethics review board at a central level. These boards should include diverse expertise, including ethicists, legal experts, technologists, and domain specialists. They would be responsible for reviewing AI projects at various stages to ensure ethical compliance.
- **Ethics by Design**: Integrate ethical considerations into the AI development process from the outset. This includes choosing algorithms and data sources that minimize bias, implementing privacy-preserving techniques, and designing systems with clear human oversight mechanisms.
- **Bias Detection and Mitigation**: Implement robust processes for detecting and mitigating biases in AI systems. This includes regular audits of training data, algorithms, and system outputs to identify potential biases related to gender, ethnicity, age, or other protected characteristics.
- **Transparency Measures**: Develop clear guidelines for AI transparency. This could include creating "AI Fact Sheets" for each deployed system, detailing its purpose, data sources, decision-making process, and potential limitations. Make these accessible to the public to foster trust and understanding.
- **Accountability Frameworks**: Establish clear lines of accountability for AI systems. Determine who is responsible for system decisions, how contestability is handled, and what redress mechanisms are available for those affected by AI decisions.
- **Ethical AI Guidelines**: Develop comprehensive ethical AI guidelines specific to the Sri Lankan context. These should provide clear direction on handling common ethical dilemmas in AI development and deployment, tailored to different sectors and use cases.
- **Continuous Ethical Monitoring**: Implement ongoing monitoring of deployed AI systems to detect any emerging ethical issues. This could include regular ethical audits, user feedback analysis, and impact assessments.
- **International Collaboration on AI Ethics**: Actively participate in international forums and collaborations focused on AI ethics. This ensures Sri Lanka stays abreast of global best practices and contributes to the global dialogue on ethical AI.

By embedding these ethical considerations and the core principles into every aspect of AI development and deployment, government agencies can ensure that Sri Lanka's AI initiatives not only drive innovation and efficiency but also uphold the highest standards of responsibility, inclusivity, and public trust. This approach will be crucial in realizing the vision of Sri Lanka as a leader in ethical and impactful AI adoption.

3. Governance and Institutional Framework

3.1 NCAI's Role and Functions

The National Centre for AI (NCAI) serves as the central coordinating body for AI implementation in Sri Lanka. Its key functions include:

- Overseeing the execution of the National AI Strategy
- Coordinating AI initiatives across government agencies
- Providing technical expertise and support for AI projects
- Developing standards and guidelines for AI development and deployment
- Facilitating partnerships between government, academia, and industry
- Monitoring global AI trends and adapting the national strategy accordingly

Government agencies should actively engage with NCAI for guidance, resources, and coordination of their AI initiatives. NCAI will provide a centralized knowledge base and serve as a liaison between different stakeholders in the AI ecosystem. Annex 3 of the Sri Lankan National AI Strategy provides more details about the organizational structure, mandate, and responsibilities of the National Centre for AI (NCAI). An draft implementation roadmap for operationalizing the AI Strategy is available in Appendix A of this document.

3.2 Inter-agency Coordination

Effective AI implementation requires seamless coordination across government agencies. To facilitate this:

- Establish AI coordination committees within each ministry or department.

- Designate AI champions in each agency to liaise with NCAI and other departments.
- Implement a shared project management platform for cross-agency AI initiatives.
- Conduct regular inter-agency AI summits to share knowledge and align efforts.

NCAI and DTA will play a crucial role in facilitating this coordination, but agencies should proactively seek opportunities for collaboration and knowledge sharing.

3.2 Public-Private Partnerships

Collaboration with the private sector is essential for driving innovation and leveraging expertise. Government agencies should:

- Develop clear frameworks for public-private AI partnerships.
- Establish innovation sandboxes to test AI solutions with private sector partners.
- Create incentive structures to encourage private sector participation in government AI projects.
- Implement knowledge transfer programs between public and private sector AI teams.

Based on the above, the NCAI should develop a comprehensive guidance for establishing effective public-private partnerships.

4. Strategic Implementation Framework

4.1 Long-Term Enablers

To create a sustainable foundation for AI integration, focus on these long-term enablers:

- **Infrastructure Development**: Invest in robust digital infrastructure, including high-speed connectivity and cloud computing capabilities. Coordinate with the Digital Strategy 2030 implementation to ensure alignment of efforts.
- **Talent Cultivation**: Develop comprehensive AI education programs at all levels, from primary education to professional development. Collaborate with universities to create specialized AI curricula.

- **Regulatory Frameworks**: Establish flexible, adaptive regulatory frameworks that balance innovation with ethical considerations and public safety.
- **Data Ecosystem**: Create a national data strategy that facilitates responsible data sharing and utilization across government agencies and with the private sector.

For a detailed roadmap on developing these enablers, consult Annex 1 of the National AI Strategy, which provides the Indicative Implementation Plan.

4.2 Quick Win Initiatives

To build momentum and demonstrate the value of AI, prioritize these quick win initiatives:

- **AI Clubs Program**: Establish AI Clubs in schools across Sri Lanka as a way to introduce students to AI. Via this program students will learn about AI, its implications, and gain hands-on experience using and building AI. Please refer to Concept Note on AI Clubs in Sri Lanka Schools (Annex 9 of the National AI Strategy) for more detailed information on this initiative.
- **AI Hubs Program**: Establish accessible AI hubs across the country to provide communities with tools and resources for AI experimentation and learning. For more information, please refer to the Concept Note on AI Hubs & AI Apprenticeship Programs (Annex 10 of the National AI Strategy).
- **National Information Chatbots**: Deploy AI-powered chatbots across government platforms to improve public service delivery and citizen engagement. For more information, please refer to the Concept Note on National Information Chatbots in Sri Lanka (Annex 12 of the National AI Strategy).
- **AI-Enhanced Public Services**: Identify and implement AI solutions in high-impact areas such as healthcare appointment systems or traffic management.

These initiatives should be implemented rapidly while adhering to the core principles and ethical guidelines.

4.3 Sector-Specific AI Integration

Different sectors will have unique needs and opportunities for AI integration. Some potential focus areas include:

- Healthcare: Implement AI for diagnostic support, patient management, and public health monitoring.

- Education: Develop AI-powered personalized learning systems and administrative support tools.
- Agriculture: Deploy AI for crop management, weather prediction, and supply chain optimization.
- Public Safety: Utilize AI for predictive policing and emergency response coordination.

Each sector should develop a tailored AI integration plan in coordination with NCAI. These plans should align with the overall national strategy while addressing sector-specific challenges and opportunities.

5. AI Project Lifecycle Management

5.1 Project Scoping and Business Case Development

Effective AI project scoping is crucial for success. As such it should follow these steps:

1. Clearly define the problem or opportunity the AI solution will address.
2. Conduct a thorough stakeholder analysis to understand needs and potential impacts.
3. Assess data availability and quality for the proposed AI application.
4. Develop a detailed cost-benefit analysis, including both tangible and intangible benefits.
5. Create a risk assessment matrix, including ethical considerations.
6. Outline resource requirements, including personnel, technology, and funding.

Use the draft project scoping template provided in Guidance Note on Establishing Standards for AI Project Scoping and Implementation(Annex 6 of the National AI Strategy) for a standardized approach across government agencies.

5.2 Procurement Guidelines for AI Solutions

When procuring AI solutions:

- Prioritize open-source and open standards technologies to promote interoperability and avoid vendor lock-in.

- Develop clear evaluation criteria that include adherence to ethical AI principles.
- Require vendors to provide transparency in their AI models and decision-making processes.
- Consider the long-term sustainability of the procured technologies, including maintenance, updates, and support
- Include provisions for knowledge transfer and capacity building in procurement contracts.
- Implement a multi-stage procurement process that includes proof-of-concept phases.
- Avoid long-term exclusive contracts with single vendors to maintain flexibility and competitive pricing.

During its first year of operations, NCAI should develop detailed procurement guidelines.

5.3 Agile Development Methodology for AI

Adopt an agile approach to AI development:

- Break projects into small, manageable sprints with clear deliverables.
- Implement continuous integration and continuous deployment (CI/CD) practices.
- Conduct regular stakeholder reviews to ensure alignment with user needs.
- Utilize iterative testing and refinement of AI models.
- Maintain flexibility to pivot or adjust project scope based on emerging insights.

For a comprehensive guide on agile AI development in government, consult the draft System-Specific Development Lifecycle for AI document (Annex 7 of the National AI Strategy).

5.4 Risk and Impact Assessment

Conduct thorough risk and impact assessments:

- Identify potential risks, including technical, operational, ethical, and societal risks.
- Assess the potential impact on different stakeholder groups, including vulnerable populations.

- Develop mitigation strategies for identified risks.
- Conduct regular re-assessments throughout the project lifecycle.
- Implement safeguards and monitoring mechanisms to detect and address emerging risks.

Table: Sample Risk Assessment and Mitigation framework

Risk Category	Specific Risk	Identification Strategy	Mitigation Strategy
Technical	Data Privacy Breaches	Regular security audits and compliance checks.	Implement state-of-the-art cybersecurity measures and encrypted data storage.
Operational	System Downtime	Continuous monitoring of AI system performance.	Develop redundancy systems and robust backup solutions.
Social	Bias in AI Decision-Making	Periodic reviews of AI algorithms and training data sets.	Ensure diversity in training data and inclusion of ethical considerations in AI development.
Regulatory	Non-compliance with Laws	Regular updates and training on new AI regulations.	Establish a dedicated legal team to focus on AI compliance issues.

NCAI should develop a comprehensive risk assessment framework during its first year of operations.

5.5 Monitoring and Evaluation Framework

It is imperative that all AI projects have a robust M&E framework.

- Define clear, measurable key performance indicators (KPIs) aligned with project objectives.
- Implement real-time monitoring systems to track AI performance and impact.
- Conduct regular internal and external evaluations of AI projects.
- Establish feedback loops to incorporate learnings into ongoing development.
- Develop standardized reporting mechanisms to share outcomes across government agencies.

Upon its inception, NCAI should develop a comprehensive M&E framework for AI initiatives, that can be further customized as needed and leveraged by other government agencies as and when needed.

5.6 Ensuring Scalability and Sustainability

To ensure AI projects are scalable and sustainable:

- Design solutions with modularity and interoperability in mind from the outset.
- Develop clear documentation and knowledge management practices.
- Implement robust data governance to ensure long-term data quality and availability.
- Plan for ongoing maintenance and updates of AI systems.
- Build internal capacity to reduce dependence on external vendors over time.

During its first year of operations, NCAI should develop more detailed guidance on building scalable and sustainable AI solutions..

6. Capacity Building and Talent Development

6.1 AI Literacy Programs

Develop comprehensive AI literacy programs:

- Integrate AI awareness modules into existing digital literacy initiatives.
- Create online learning platforms for self-paced AI education.
- Conduct nationwide AI awareness campaigns through various media channels.
- Establish partnerships with educational institutions to develop AI curricula for schools and universities.

Based on the Skills development strategy in the National AI Strategy, as well as the preliminary initiatives (Annex 1 of the National AI Strategy) identified to support the implementation of the skills development component of the National AI Strategy, the NCAI should develop detailed plans to realize this objective.

6.2 Specialized AI Training for Government Officials

Implement targeted AI training for government personnel:

- Develop role-specific AI training modules for different levels of government officials.
- Establish an AI certification program for public sector employees.
- Create mentorship programs pairing AI experts with government departments.
- Conduct regular AI workshops and seminars for continuous learning.

Based on the Skills development strategy in the National AI Strategy, as well as the preliminary initiatives (Annex 1 of the National AI Strategy) identified to support the implementation of the skills development component of the National AI Strategy, the NCAI should develop detailed plans to develop capacity for the public sector.

6.3 Collaboration with Academia and Industry

Foster strong ties with academia and industry for talent development:

- Establish AI research partnerships between government agencies and universities.
- Create internship and fellowship programs to bring academic talent into government AI projects.
- Develop industry exchange programs to facilitate knowledge transfer between public and private sectors.
- Sponsor AI challenges and hackathons to engage the broader tech community in solving government challenges.

Based on National AI Strategy, as well as the preliminary initiatives (Annex 1 of the National AI Strategy) identified to support the implementation of the National AI Strategy, the NCAI should develop detailed plans to partnership strategy of which one component should be on how to foster increased collaboration for the public sector with academia and the private sector.

7. Data Governance and Infrastructure

7.1 Data Management and Sharing Policies

Sri Lanka already has various data governance aspects already at various stages of design and implementation. These need to be pulled together and in some cases updated as required. Overall clear and robust data governance practices would:

- Develop clear data classification guidelines to ensure appropriate handling of sensitive information.
- Establish data sharing agreements between government agencies to facilitate AI development as well as between government and private sector.
- Implement data quality assurance processes to ensure AI systems are trained on reliable data.
- Create a centralized data exchange to make government datasets discoverable and accessible amongst government agencies.
- Revamp the existing open data portal to make government data access accessible for the public and private sectors.

NCAI should develop comprehensive data governance guidelines for the government as is intended as one of the main initiatives in the implementation of the National AI Strategy. Please refer to the data section of the National AI Strategy as well as the preliminary of initiatives in relation to data that have been identified for the implementation of the National AI Strategy (Annex 1) for more details.

7.2 Infrastructure Requirements for AI

Ensure adequate infrastructure to support AI initiatives:

- Assess and upgrade existing IT infrastructure to meet the computational needs of AI systems.
- Develop a cloud strategy that balances the use of public and private cloud resources for AI workloads.
- Implement high-speed networking capabilities to support data-intensive AI applications.
- Establish AI-ready development environments and toolkits for government agencies.

These are all aspects covered under the National AI Strategy and a list of preliminary activities under meeting the infrastructure requirements are covered in Annex 1 of the National AI Strategy. These should be consulted an AI Infrastructure playbook should be developed by NCAI.

7.3 Cybersecurity and Data Protection

Prioritize cybersecurity and data protection in AI systems:

- Implement robust encryption and access control measures for AI-related data and systems.
- Conduct regular security audits and penetration testing of AI infrastructure.
- Develop incident response plans specifically tailored to AI-related security breaches.
- Ensure compliance with data protection regulations, including the Sri Lanka Personal Data Protection Act.

A comprehensive cybersecurity framework for AI needs to be developed by NCAI and NCAI will need to coordinate on this with Cyber Security Regulator Agency that will be created upon the adoption of Sri Lanka's National Cyber Security Act.

8. Fostering Innovation and Research

8.1 AI Research Initiatives

Promote cutting-edge AI research:

- Establish government-funded AI research programs in priority areas.
- Create a national AI research centre to coordinate and support research efforts.
- Implement a grants program to support AI research in universities and research institutions.
- Develop mechanisms to translate research findings into practical applications for government.

For more details on fostering AI research, consult the research and development section in the National AI Strategy as well as the associated preliminary list of initiatives for implementation outlined in Annex 1 of the National AI Strategy. Based on these and the intent outlined above, an AI R&D Playbook should be developed to guide government.

8.2 Innovation Hubs and Incubators

Create environments that nurture AI innovation:

- Establish AI innovation hubs in key locations across the country.
- Develop incubator programs specifically for AI startups.
- Create co-working spaces that bring together government, academia, and industry AI practitioners.
- Implement mentorship programs connecting established AI experts with emerging innovators.

Refer to the Concept Note on AI Hubs & AI Apprenticeship Programs (Annex 10 of the National AI Strategy) for additional details.

8.3 International Collaboration

Foster international partnerships to accelerate AI development:

- Establish bilateral AI cooperation agreements with leading AI nations.
- Participate actively in international AI forums and working groups.
- Facilitate exchange programs for AI researchers and practitioners.
- Collaborate on cross-border AI projects addressing regional challenges.

NCAI should develop guidelines for government to foster international collaborations in its AI journey based on the National AI Strategy.

9. Public Awareness and Trust Building

9.1 Citizen Engagement Strategies

Develop strategies to engage citizens in the AI journey:

1. Conduct public consultations on AI policies and initiatives.
2. Create citizen advisory boards for AI projects with significant societal impact.

3. Develop AI demonstration centers where the public can interact with AI technologies.
4. Implement AI-focused citizen science projects to involve the public in AI development.

9.2 Transparency in AI Decision-Making

Ensure transparency in AI systems used in government:

- Develop explainable AI guidelines for government applications.
- Implement mechanisms to provide citizens with explanations of AI-driven decisions affecting them.
- Publish regular reports on the performance and impact of government AI systems.
- Create public registries of AI systems used in government decision-making.

9.3 Addressing Societal Impacts of AI

Proactively address the broader societal impacts of AI:

- Conduct regular assessments of AI's impact on employment and develop responsive policies.
- Implement programs to support workforce transition in AI-affected industries.
- Develop policies to ensure AI benefits are equitably distributed across society.
- Create forums for ongoing dialogue on the ethical and societal implications of AI.

10. Monitoring, Evaluation, and Continuous Improvement

10.1 Key Performance Indicators

Develop a comprehensive set of Key Performance Indicators (KPIs) to measure the progress and impact of AI initiatives:

- **Adoption metrics**: Track the number of government agencies implementing AI solutions and the diversity of applications.
- **Efficiency gains**: Measure improvements in service delivery times, cost savings, and resource optimization.
- **Innovation indicators**: Monitor the number of AI patents filed, research papers published, and new AI startups founded.

- **Skill development**: Assess the growth in AI-skilled workforce and the effectiveness of AI training programs.
- **Public perception**: Gauge public awareness, understanding, and trust in government AI initiatives through regular surveys.

These preliminary KPIs should be expanded upon and furthermore they should be regularly reviewed and updated to ensure they remain relevant and aligned with the evolving AI landscape.

10.2 Feedback Mechanisms

Implement robust feedback mechanisms to continuously improve AI initiatives:

- Establish multi-channel feedback systems (e.g., online platforms, mobile apps, in-person sessions) for citizens to provide input on AI-driven services.
- Conduct regular stakeholder consultations to gather insights from industry, academia, and civil society.
- Implement internal feedback loops within government agencies to capture insights from public servants working with AI systems.
- Utilize AI-powered analytics to process and analyze feedback data, identifying trends and areas for improvement.

Ensure that feedback is not only collected but actively incorporated into the decision-making process for AI project refinement and policy development.

10.3 Strategy Revision Process

Implement a systematic process for reviewing and updating the AI strategy:

- Conduct annual reviews of the AI strategy implementation, assessing progress against set objectives and KPIs.
- Perform a comprehensive strategy revision every three years, involving all key stakeholders.
- Establish a dedicated team within NCAI to continuously monitor global AI trends and best practices, feeding insights into the strategy revision process.
- Develop a change management protocol to efficiently implement strategy updates across all government agencies.

The strategy revision process should be agile and responsive, allowing for quick adjustments to capitalize on new opportunities or address emerging challenges in the rapidly evolving AI landscape. For detailed guidance on the strategy revision process, consult Annex 3 of the National AI Strategy on the National Centre for AI.

11. Conclusion

11.1 Key Takeaways

In order to foster a vibrant environment for the uptake of AI in government, industry, and the wider society and for the government to champion this push towards becoming an AI enabled nation, It is crucial to emphasize several key points :

- **Whole-of-Government Approach**: The successful implementation of AI across Sri Lanka's public sector requires coordinated effort from all government agencies, with NCAI serving as the central coordinating body.
- **Principles-First Implementation**: All AI initiatives must be grounded in the core principles outlined in the National AI Strategy, ensuring ethical, inclusive, and responsible AI development.
- **Balancing Quick Wins and Long-Term Vision**: While pursuing quick wins to demonstrate AI's value, it's crucial to simultaneously invest in long-term enablers like infrastructure, talent, and governance frameworks.
- **Continuous Learning and Adaptation**: The AI landscape is rapidly evolving, necessitating a commitment to continuous learning, evaluation, and strategy refinement.
- **Collaborative Ecosystem**: Fostering strong partnerships between government, industry, academia, and civil society is essential for building a robust and innovative AI ecosystem.

11.2 Next Steps for Implementation

To move forward with the implementation of this playbook:

- **Dissemination**: Ensure this playbook is distributed to all relevant government agencies and stakeholders.
- **Training**: Conduct workshops and training sessions to familiarize key personnel with the playbook's contents and methodologies.
- **Pilot Projects**: Identify and initiate pilot projects in priority areas, applying the principles and methodologies outlined in this playbook.

- **Feedback Loop**: Establish a mechanism for agencies to provide feedback on their experiences using the playbook, enabling continuous refinement.
- **Regular Reviews**: Schedule quarterly reviews to assess the playbook's effectiveness and identify areas for improvement.

The journey to integrate AI into Sri Lanka's governance and society is ambitious and transformative. By following this playbook and working collaboratively, we can harness the power of AI to drive innovation, enhance public services, and improve the lives of all Sri Lankans.

This playbook is a living document. As we gain experience and as the AI landscape evolves, NCAI will continue to update and refine our approach.

Appendix A: Implementation Roadmap

The implementation roadmap for the National AI Center outlines a structured approach to deploying AI initiatives over the next three years. This phased plan ensures systematic progress through short-term wins, mid-term expansions, and long-term integration, aligning with the broader strategic goals of Sri Lanka's AI strategy.

	Activities	Key Milestones
Year 1: Foundation and Pilot Projects	• **Establishment of the NAIC:** Finalize the physical and organizational setup of the NAIC, ensuring it is fully operational with a clear mandate and resource allocation. • **Development of Legal and Regulatory Frameworks:** Draft and implement essential AI governance frameworks to support ethical AI development and deployment. • **Launch of Pilot Projects:** Initiate pilot projects in key sectors such as healthcare, education, and public safety to test AI applications and assess their impact. • **Stakeholder Engagement:** Establish a comprehensive stakeholder engagement process, involving workshops and public consultations to gather input and build support for AI initiatives.	• Operational NAIC with full staff and board. • Approved AI regulatory frameworks. • Successful completion of at least two pilot projects. • Established routine for stakeholder engagement.
Year 2: Scaling and Integration	• **Expansion of AI Applications:** Based on the success of pilot projects, begin broader implementation of AI technologies across various government sectors. • **Enhancement of AI Infrastructure:** Upgrade digital infrastructure to support expanded AI deployment, including data centers and network capabilities.	• AI applications active in more than five sectors. • Upgraded infrastructure to support advanced AI functionalities. • Over 1,000 public sector employees trained in AI.

	• **Capacity Building:** Roll out extensive training programs for AI literacy and skills among public sector employees and other stakeholders. • **Private Sector Partnerships:** Strengthen collaborations with tech companies and academia to enhance innovation and practical application of AI.	• At least five strategic partnerships formed with private sector entities.
Year 3: Optimization and National Integration	• **Full-Scale National AI Integration:** Extend AI applications to all feasible areas of public governance, ensuring that AI technologies are deeply integrated into the fabric of public service delivery. • **Continuous Improvement and Innovation:** Implement a feedback loop from AI applications to continually improve processes and explore new innovations in AI. • **International Collaboration:** Engage with international AI projects and forums to ensure Sri Lanka remains at the forefront of AI developments and practices. • **Public Awareness and Support Programs:** Expand efforts to educate the public on AI benefits and safety, ensuring widespread understanding and support for AI initiatives.	• Comprehensive AI integration across all government sectors. • Established process for continuous AI improvement. • Active participation in at least three international AI initiatives. • Broad public engagement programs demonstrating clear understanding and support of AI initiatives.

This roadmap provides a clear and structured path for the rollout of AI initiatives, ensuring that each phase builds on the successes of the previous and contributes to a robust, ethical, and effective AI ecosystem in Sri Lanka.

Annex 5:

Guidance Note on Multi-Stakeholder Involvement in AI Projects

1. Introduction

In the rapidly evolving field of artificial intelligence (AI), the complexity and impact of projects often extend across various sectors and touch upon numerous aspects of daily life. This governance note outlines the importance of multi-stakeholder involvement in AI projects, particularly those spearheaded by the National AI Center (NAIC) in executing Sri Lanka's national AI strategy. It emphasizes the need for a collaborative approach in the scoping, design, and operationalization of AI solutions to ensure they are well-aligned with the socio-economic needs and technological capacities of the country.

2. Importance of Multi-Stakeholder Involvement

Multi-stakeholder involvement ensures that AI projects are not only technically feasible but also socially relevant and widely accepted. This approach aligns with the principles set out in Sri Lanka's national AI strategy, which advocates for a collaborative and inclusive method to AI development and deployment.

This approach is crucial for several reasons:

1. **Enhanced Project Design and Scoping**: By involving end-users, system owners, and subject matter experts from the beginning, projects are more likely to address the actual needs and integrate practical insights that can lead to better design and functionality of AI systems.
2. **Increased Adoption and Impact**: Early involvement of stakeholders ensures that the projects have a broader acceptance and higher practical value, facilitating smoother adoption and more significant impact on the intended sectors.
3. **Risk Mitigation**: Collaborative project planning helps identify potential pitfalls and sector-specific challenges early in the project lifecycle, allowing for timely adjustments that mitigate risks and enhance project success.
4. **Resource Optimization**: Engaging a diverse group of stakeholders helps in aligning the project goals with available resources, ensuring optimal use of national capabilities and avoiding redundancy.

3. Operationalizing Multi-Stakeholder Engagement

To operationalize this approach effectively, the NAIC should adopt the following strategies:

1. **Establishment of Cross-Sectoral Teams**: For each AI project, establish a team comprising technical experts, end-users (e.g., farmers in agriculture projects, doctors and patients in health projects), and policy makers. This team will work together from the project's conception through to its deployment and evaluation.

2. **Stakeholder Workshops and Consultations**: Regular workshops and consultation sessions should be held throughout the project lifecycle. These sessions will facilitate ongoing dialogue, gather feedback, and adapt project scopes based on stakeholder input.
3. **Integration with National Strategies**: Ensure that all AI projects are aligned with broader national goals such as those outlined in the Digital Strategy 2030 and other relevant sectoral strategies. This alignment helps in maximizing the socio-economic benefits of AI projects.
4. **Training and Capacity Building**: Conduct regular training sessions and capacity-building workshops for stakeholders to understand AI technologies, project design, and implementation processes. This will empower them to actively participate in project development and oversight.
5. **Clear Communication Channels**: Establish and maintain clear communication channels that allow continuous reporting, feedback, and adaptation of project strategies based on real-time insights from all stakeholders.

4. Conclusion

The success of AI projects in enhancing public welfare and economic growth significantly depends on the active involvement of all relevant stakeholders. By adopting a structured and strategic approach to multi-stakeholder involvement, Sri Lanka can ensure that its AI initiatives are well-crafted, widely supported, and effectively implemented, aligning with the vision of the national AI strategy to leverage technology for sustainable and inclusive growth. The NAIC, by coordinating these efforts, will play a pivotal role in transforming Sri Lanka into a digitally empowered society and economy.

Annex 6:

Guidance Note on Establishing Standards for AI Project Scoping and Implementation

Executive Summary

Purpose

This whitepaper articulates the strategic intent and core objectives of the initiative aimed at refining the process of scoping and operationalizing AI projects within Sri Lanka. The purpose is to establish a standardized framework to effectively plan, implement, and maximize the impact of AI use cases, ensuring their alignment with national strategic goals and facilitating widespread adoption across various sectors.

Key Proposals

The proposal centers on instituting a formal scoping process as a standard practice for all AI projects undertaken by the National AI Center and the AI Hubs. Adapted from methodologies developed by renowned institutions, this process is designed to enhance the precision, effectiveness, and strategic alignment of AI initiatives with the broader goals outlined in Sri Lanka's AI and Digital Strategy 2030.

Benefit Overview

The implementation of a structured scoping process promises substantial benefits across the national landscape. It is expected to:

- Improve the success rates of AI projects by ensuring they are well-aligned with both the technical capabilities available and the socio-economic needs of the nation.
- Optimize resource allocation, thereby increasing the efficiency of investments in AI.
- Foster innovation by systematically selecting projects that push the envelope on current technological capabilities and address pressing societal challenges.
- Enhance the scalability and sustainability of AI solutions, promoting long-term benefits across diverse sectors including healthcare, education, and public administration.
- Ensure equitable technological advancement by prioritizing inclusivity in AI deployment.

By adopting this formalized approach to AI project scoping, Sri Lanka aims to position itself as a leader in digital transformation, leveraging AI to drive national development, enhance public welfare, and achieve significant economic growth.

1. Introduction

1.1 Context

The landscape of artificial intelligence (AI) is evolving rapidly, asserting its influence across various sectors by enhancing efficiencies, fostering innovations, and offering new capabilities. Sri Lanka recognizes the transformative potential of AI to catalyze national progress and enhance the well-being of its citizens. However, to harness these benefits fully, it's essential to implement a structured approach to scoping and planning AI use cases. This ensures not only the strategic alignment of AI projects with national objectives but also maximizes impact and ensures widespread adoption.

1.2 Alignment with Sri Lanka's AI and Digital Strategy 2030

AI initiatives within the scope of the National AI Strategy are aimed at accelerating Sri Lanka's socio-economic development through intelligent technology. By adhering to the comprehensive strategy framework, the proposed scoping process aligns with several strategic goals outlined in the National AI Strategy and the Digital Strategy 2030.

The alignment points are presented in the table below.

Strategy Component	**Alignment through AI Project Scoping**
Enhance public sector efficiency	Ensures AI projects are strategically targeted to improve government services and operations.
Stimulate economic growth and innovation	Focuses on selecting AI projects that drive economic activities and foster innovation in key sectors like healthcare, education, and agriculture.
Promote inclusive technological advancement	Prioritizes projects that are scalable and have a broad societal impact, ensuring benefits across diverse population segments.
Build a resilient digital infrastructure	Aligns with infrastructure upgrades essential for supporting sophisticated AI applications.

1.3 Problem Statement

Despite the high potential, the journey towards a technologically empowered nation faces significant hurdles. There is a current lack of structured methods to identify, select, and prioritize AI projects, which leads to inconsistent project success rates and suboptimal allocation of resources.

Moreover, the absence of a formal scoping process may result in the selection of projects with limited impact or feasibility, hindering the nation's ability to fully benefit from AI innovations. This whitepaper proposes a standardized scoping process to address these challenges, ensuring that each AI project is meticulously planned, strategically aligned, and poised for successful implementation and adoption.

2. Operational Plan

2.1 Objective

The primary objective of this initiative is to institutionalize a standardized scoping process for all AI projects within the National AI Center and the AI Hubs of Sri Lanka. This process, adapted from a model developed by the Data Science and Public Policy Lab at Carnegie Mellon University, aims to enhance the precision and effectiveness of project selection and implementation. By integrating a formal scoping process, we ensure that each project is meticulously evaluated for its social impact, technical feasibility, data readiness, and alignment with strategic national goals.

2.2 Scope and Deliverables

Scope:

- The scope of this initiative encompasses establishing a formal procedure for the scoping of AI projects that will be uniformly applied across various sectors engaging with the National AI Center. This process will serve as the foundational step in the project lifecycle, influencing subsequent decisions on resource allocation, project design, and implementation strategies.

Key Deliverables:

- AI Project Scoping Guidelines, detailing the procedures for initial project evaluation.
- A set of tools and templates to assist in the scoping process, including digital forms and checklists.
- Training modules and workshops for project managers and other stakeholders to effectively utilize the scoping process.

2.3 Project Selection and Prioritization

Master List Development:

- Collate a comprehensive list of potential AI projects by engaging with stakeholders across various domains, including healthcare, education, and public safety. This list will be dynamically updated as new proposals are received.

Project Evaluation and Prioritization:

- Establish criteria based on strategic importance, feasibility, data availability, and potential for societal impact.
- Use the AI Project Scoping Worksheet to assess and prioritize projects, ensuring that those selected align with the broader goals of the National AI Strategy.

Operationalization and Implementation:

- Outline clear steps for moving projects from scoping to pilot phases, and eventually to full-scale implementation.
- Develop a phased rollout plan for projects, starting with pilot regions or sectors, based on the complexity and readiness of the technology.

We employ the AI Project Scoping Worksheet, provided in Appendix A, to systematically assess and prioritize projects, ensuring alignment with our strategic goals and operational capabilities.

2.4 Strategic Importance

Incorporating a structured scoping process is critically important for aligning AI projects with the national strategy of digital transformation. It ensures that projects are not only technically viable but also address significant national challenges and opportunities. By doing so, it maximizes the impact of AI on national development and public welfare, setting a benchmark for project execution that aligns with global best practices.

2.5 Implementation Plan

Project Initiation:

- Officially launch the scoping process with a detailed presentation to all relevant stakeholders, explaining the benefits and procedures involved.
- Establish a dedicated team within the National AI Center to oversee the implementation of the scoping process.

Stakeholder Engagement:

- Conduct comprehensive training sessions for all potential project submitters to familiarize them with the scoping tools and criteria.
- Create a feedback mechanism to continuously improve the scoping process based on stakeholder experiences and project outcomes.

Resource Allocation:

- Secure adequate resources, including funding, manpower, and technological tools, to support the scoping and subsequent project phases.
- Engage with international experts and institutions, such as Carnegie Mellon University, to ensure the scoping process remains aligned with global standards.

This operational plan ensures that the scoping process is thoroughly integrated into the project lifecycle, enhancing the strategic deployment of AI initiatives across Sri Lanka. It emphasizes the need for coordination by the National AI Center and involves key stakeholders including end-users and technical experts to ensure projects are not only feasible but also tailored to the specific needs and conditions of Sri Lanka, enhancing their likelihood of success and adoption.

To facilitate effective use of the standardized scoping process, stakeholders will be trained using the AI Project Scoping Worksheet, which can be found in Appendix A. This tool is essential for ensuring comprehensive project evaluation.

3. Governance Structure

3.1 Governance Framework

The governance framework for AI project scoping within Sri Lanka's National AI Center and AI Hubs is designed to ensure accountability, transparency, and effectiveness in managing AI initiatives. This framework establishes a structured oversight mechanism, consisting of multiple layers of governance, to facilitate effective decision-making and project oversight. It includes the formation of a Steering Committee, a Project Management Office (PMO), and specialized working groups for different AI domains. These entities work in a coordinated manner to oversee project scoping, approval, and implementation, ensuring that projects align with national priorities and ethical standards.

3.2 Roles and Responsibilities

- **Steering Committee**: Composed of senior leaders from various sectors, the committee sets strategic directions, approves major projects, and ensures alignment with the national AI strategy.
- **Enterprise Project Management Office (EPMO)**: Acts as the operational hub, responsible for the day-to-day management of AI projects, from initiation through completion. The PMO ensures projects adhere to the scoping process, manages resources, and coordinates between different stakeholders.

- **Technical Experts and Data Scientists**: Provide expertise in AI, machine learning, and data management. They are crucial for assessing the technical feasibility of projects and guiding the scoping process to align technical solutions with practical outcomes.
- **Ethics and Compliance Officers**: Ensure that all AI projects comply with legal standards and ethical guidelines, focusing on data privacy, security, and ethical AI use.

3.3 Project Management and Oversight

The project management approach is structured to ensure rigorous oversight and dynamic response to the evolving needs of AI projects. It includes:

- **Regular Review Meetings**: Scheduled reviews at each project milestone to assess progress, address challenges, and make adjustments to project scopes as necessary.
- **Risk Management Processes**: Proactively identifying potential risks and implementing mitigation strategies to minimize impact on project objectives.
- **Performance Audits**: Conducting periodic audits to evaluate the effectiveness of the project management framework and the success of implemented AI projects in achieving their goals.

This governance structure is essential for maintaining the integrity and success of AI initiatives, ensuring that they not only meet technical standards but also serve the broader goals of national development and public good. The inclusion of diverse roles from various sectors enhances the robustness of the project scoping and implementation process, fostering a holistic approach to AI governance that is sensitive to the socio-economic landscape of Sri Lanka.

The Project Management Office will utilize the AI Project Scoping Worksheet from Appendix A to maintain stringent adherence to scoping standards across all project stages.

4. Monitoring and Evaluation

4.1 Monitoring Framework

The monitoring framework for AI initiatives under the National AI Center and AI Hubs will utilize a comprehensive set of metrics and Key Performance Indicators (KPIs) designed to continuously assess the progress and impact of AI projects. This framework will include real-time data dashboards to track project milestones, budget adherence, and performance against established KPIs. Monitoring tools will also be integrated into

AI systems to collect usage statistics and feedback, ensuring dynamic adjustments and improvements can be made throughout the lifecycle of the projects.

4.2 Evaluation Methodology

The evaluation of each AI initiative will employ both quantitative and qualitative methods to ensure a holistic analysis of outcomes. Quantitative measures will include data-driven metrics such as system efficiency, accuracy rates, and return on investment. Qualitatively, the evaluation will gather stakeholder feedback through surveys and interviews to assess user satisfaction and the system's practical impact on operations. Regular evaluation intervals will be scheduled to assess the short-term success post-implementation and the long-term sustainability and scalability of the solutions.

4.3 Risks and Challenges

Identifying potential risks and challenges early in the project lifecycle is critical for the timely delivery of AI initiatives. Common risks include data privacy concerns, integration complexities with existing IT systems, and resistance to change among users. Challenges specific to the AI projects such as algorithm bias, lack of skilled personnel, and technological limitations will also be addressed.

4.4 Mitigation Strategies

To counteract these risks, robust mitigation strategies will be implemented:

- **Data Privacy**: Adopt stringent data governance policies and ensure compliance with national and international data protection regulations.
- **Technical Integration**: Employ dedicated technical teams to oversee the seamless integration of AI systems with existing infrastructures.
- **Change Management**: Conduct comprehensive training sessions and workshops for all stakeholders to facilitate smooth adoption and operational transition.
- **Quality Assurance**: Establish rigorous testing phases to identify and correct any biases or errors in the AI algorithms prior to deployment.

5. Key Performance Indicators (KPIs)

5.1 Specific KPIs

KPIs will be tailored to each AI initiative but generally will include:

- **Time to conduct scoping**: Measure the amount of time to complete the scoping of a project.
- **Number of projects scoped**: Track number of projects scoped in relation to selected projects
- **Accuracy and Reliability**: Measure the correctness of outputs provided by AI systems.
- **User Adoption Rate**: Track how quickly and extensively the AI solution is being adopted within its intended environment.
- **Operational Efficiency**: Evaluate improvements in process efficiency and time savings due to the AI implementation.
- **Cost Savings**: Assess the reduction in operational costs resulting from AI solutions.

5.2 Targets and Benchmarks

Each KPI will have clear targets set based on the expected capabilities of the AI system and industry benchmarks. These targets will be reviewed and adjusted annually to reflect the evolving technology landscape and the strategic goals of the National AI Center.

6. Conclusion

6.1 Summary of Benefits

This whitepaper introduces a comprehensive framework for the scoping and operationalization of AI projects within Sri Lanka, aimed at maximizing their impact and ensuring broad adoption. The outlined procedures are designed to harness the transformative potential of AI, aligning each initiative with the strategic objectives of national development. By instituting a formalized scoping process, Sri Lanka is poised to enhance governmental efficiencies, stimulate economic growth, and ensure equitable technological advancements across various sectors. The adoption of this standardized approach ensures that AI projects are not only feasible and strategically aligned but also poised for successful integration and scalability, thereby contributing significantly to the national welfare and positioning Sri Lanka on the path to becoming a digitally empowered economy.

6.2 Call to Action

To actualize the goals set forth in this whitepaper, we urge all stakeholders—government bodies, private sector leaders, academic institutions, and international partners—to collaborate actively in the implementation of the proposed scoping framework. We call upon these entities to engage in dialogue, participate in training sessions, and contribute to the continuous refinement of the scoping process. By collectively endorsing and adopting this standardized approach, we can ensure that AI initiatives are effectively aligned with Sri Lanka's digital strategy, ultimately accelerating the nation's progress towards its AI-enhanced future.

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Appendix A: Draft AI Project Scoping Worksheet

This is an adaptation of the Data Science Project Scoping Worksheet developed by the Data Science and Public Policy Lab (DSaPP) at Carnegie Mellon University.[1]

It is important to note that this document merely provides a starting point to scoping an AI project for the public sector and does not capture every possible nuance and priority. Depending on the use-case, this would have to be further customized.

Who will submit this worksheet?	
Project Title:	
Organization:	
Scoping Team:	

1. High Level Screening

What is the Positive social impact of this project?	
Is the project feasible under the following four determinants? (1) The problem is solvable using data (at least to a certain degree) & AI. (2) The organization has access to some relevant data. (3) We have access to necessary computational, system, or system operational resources and skills. (4) Necessary funding to start and sustain the project.	

[1] The complete Data Science Project Scoping Worksheet can be found at http://www.datasciencepublicpolicy.org/wp-content/uploads/2021/09/ProjectScopingWorksheetBlank.pdf

Are the partnerships necessary for implementing the project in place (or viable) and that this project is a priority for all stakeholders? Do We have a champion who understands the ground reality and will drive the initiative?	

If all the above criteria are satisfied, we can start with the process of scoping the AI project.

2. Understanding the Problem

The goal of this section is to understand and define the operational problem that needs solving, and its significance. This is important in ensuring that the project (and the AI models built) are grounded in solving a real problem.

Describe the business/policy problem you are facing	
Why is solving this problem a priority?	
Have you tried solving this problem before without AI? How? What were the outcomes?	

3. Defining the goals of the project

It is worth noting here that the goal of the project **is not** to build some tool (e.g., AI model, dashboard etc.), it is to improve some societal outcome. The abstract goal is to solve the problem described above, but what specific outcome are you trying to improve? And how would we measure it? *E.g., Assume the problem is high prevalence of advanced liver disease. The goal of the work could be, reducing the prevalence of liver disease*

(within a certain population). Then, the measurement would be the % population with advanced liver fibrosis, and if the project is successful, this number should decrease over time.

What are your goals?	
What are the metrics you would use to measure each outcome?	
Are there any constraints in achieving each goal? *Typically, this is resource constraint, e.g., prescreening resources are limited to 1000 people per 6 months.*	

4. Defining the Actions

This section aims to define the actions you are planning to take, to achieve your goal and solve your problem. For each action, answer each question, if all information is not available, leave it blank, but make sure to follow up and find relevant answers.

	Action 1	**Action 2**	**Action 3**
What is the action? *e.g. inspect a house for health hazards, conduct lab tests to diagnose health conditions.*			

Who is executing this action? *e.g. PHI, Physician.*			
Do you have control over performing this action?			
Who or what is the action being taken on? *e.g. house, patient*			
How often is the decision to take this action made? *e.g. weekly, quarterly.*			
Are there any resource or capacity constraints with this action? *e.g. only 100 inspections can take place every month, or only 1000 patients can be screened for free.*			

5. Defining the analytics needs

Once we have the problem, goals, and actions defined, we can start planning the analysis that would inform the actions you specified above. This is where we will define the AI system that needs to be built.

What information do you need to effectively perform your actions? *E.g., for screening patients proactively, we need to know*	

which patients are at risk of the disease.	
What type of analysis is needed to produce this information? *E.g., we would need to build a predictive model that predicts the risk of future advanced liver disease (concretely, the likelihood that a person would get an advanced fibrosis diagnosis in the next XX years).*	
What is the simplest analysis we can do (e.g., if the data is not sufficient to build a predictive model) *E.g., rank people by their last known cholesterol value. Take medical guidelines and build a rule-based system, build a linear model that fits a handful of predictors.*	

6. Assessing the Data Needs and Availability

Once we know what AI system (or other analytics solution) we need to build, we can assess the data needed to build such a system and assess the availability of data. Please note that, we might have to revise the analysis given the data availability. Data sources include internally collected data by the organization (e.g., administrative data), and publicly available data that would be relevant to the project (e.g., census data).

	Data Source 1	**Data Source 2**	**Data Source 3**

What is the name of the data source? *e.g. hospital admissions database*			
What does it contain? Describe the attributes included in the data source. *e.g. admission and discharge records for hospitals nationwide, including patient sociodemographic, insurance type, and physician information.*			
What level of granularity/detail is the data? *e.g. inspection level, student level, patient visit level*			
How far back does the data in this data source go? *Is it sufficient for the problem being scoped?*			
How frequently is the data collected or updated after it is captured? *e.g. immediately (real-time), daily, weekly, monthly, yearly, ad hoc*			

Does the data have reliable and unique identifiers that can be linked to other data sources? *e.g. patient identifier, ID number*			
Who owns the data? *e.g. Ministry of health*			
How is the data stored? *e.g. in a database, in pdfs, in excel, in a SAS data store*			
What are the ethical issues associated with using this data source? *e.g. do you need consent from the people in the data to use their data? are there security protocols that need to be in place? does the data collection process systematically result in any type of known collection biases?*			
What additional data do you wish you had access to, to build the AI system?			

7. Ethical Considerations

Ethical issues should be considered continuously, in every part of the scoping process as well as during the project. This section provides a set of questions to answer as a starting point for those discussions through the project scoping, design, and execution phases.

7.1 Privacy, Confidentiality, and Security

Are you working with personal and/or sensitive data? What are the legal as well as ethical considerations for privacy and confidentiality with the data being used? What type of protections need to be in place? How are these data protections being audited, and how often?	

7.2 Transparency

Which aspects of the project do different stakeholders need to be informed about? Stakeholders typically include policymakers, frontline workers, people who will be affected by the actions, the general public, etc. What should each of them know about this project? Do the people who "own" the data know how you're using it? Do the people being prioritized for intervention know why they're being prioritized?	

7.3 Discrimination/Equity

For which specific groups do you want to ensure equity of outcomes (e.g. groups of interest defined by gender, age, location, social class, educational level, urban or rural residency, ethnicity, etc.)? How might each of these groups define equity in outcomes in this context?	

How will you detect biases in your system and reduce them or mitigate their impacts? How should you take into account any broader sources of inequities that affect the outcomes you're seeking to improve?	

7.4 Accountability

Who is responsible for ensuring that each of the above ethical considerations are made? What accountability lies with the people building the data science system, the people acting on them, and the policymakers defining the goals and objectives? If there are data leaks, misuses of the system, unintended consequences, or other harms arising from this work, who is accountable?	

7.5 Social License

If the entire population of the country finds out about your project, will they be ok with it? Why? Are there any specific groups who might object, and what concerns would they raise? If it was on the front page of the newspaper, would the headline be positive or negative?	

7.6 Ethical Considerations

Are there any other ethical considerations that should be made prior to or during the data science project?	

e.g. legal issues, informed consent, etc.?	

Annex 7:

System-Specific Development Lifecycle for AI

Executive Summary

Purpose

This whitepaper delineates the strategic intent and core objectives of adopting a system-specific development lifecycle tailored for AI systems within Sri Lanka. The initiative seeks to refine the approach to scoping, designing, developing, testing, and deploying AI systems, recognizing the distinct needs that differentiate AI from traditional software development.

Key Proposals

- **Establishment of a System-Specific AI Development Lifecycle**: Proposing a structured framework that differs fundamentally from conventional software methodologies to address the unique characteristics of AI, including its reliance on data, iterative learning processes, and continuous integration.
- **Institution of MLOps and DevOps Frameworks**: Integrate modern operational practices to ensure the sustainability and efficiency of AI systems throughout their lifecycle.
- **Strengthened Multi-Stakeholder Engagement**: Ensuring that the development and deployment of AI technologies are conducted in a collaborative environment involving stakeholders from government, academia, the private sector, and civil society.

Benefit Overview

- **Enhanced System Reliability and Efficiency**: By implementing a tailored development lifecycle, AI projects are expected to achieve higher accuracy, better performance, and reduced failure rates.
- **Alignment with National Strategic Goals**: This initiative supports Sri Lanka's AI and Digital Strategy 2030 by promoting advanced AI skills development, enhancing the digital infrastructure, and integrating AI solutions into public services to improve their efficiency and accessibility.
- **Ethical and Responsible AI Development**: Establishing standards and practices that ensure AI deployments are not only technologically sound but also ethically responsible and socially beneficial.
- **Economic and Social Advancements**: By fostering a robust AI ecosystem, the initiative is poised to drive significant economic benefits and enhance the quality of life for Sri Lanka's citizens.

1. Introduction

1.1 Context

The surge in artificial intelligence (AI) applications across various sectors marks a pivotal shift in technological capabilities and societal integration. As AI continues to evolve, its impact transcends traditional software domains, requiring specialized frameworks for development that account for its unique characteristics and challenges. This whitepaper addresses the critical need for a system-specific AI development lifecycle that is distinct from conventional software development processes. The rationale for this distinction stems from AI's inherent reliance on data quality, algorithmic complexity, and the iterative nature of model training and evaluation.

1.2 Alignment with Sri Lanka's AI and Digital Strategy 2030

The proposed AI system-specific development lifecycle aligns seamlessly with Sri Lanka's strategic goals as outlined in the National AI Strategy.

The table below shows how this initiative aligns with the broader strategic goals.

Strategy Component	Alignment through AI Project Scoping
National AI Strategy	Enhances foundational AI skills and infrastructure, fostering a conducive environment for AI innovations.
Digital Strategy 2030	Supports the creation of a robust digital infrastructure and skilled workforce, pivotal for AI deployment.
Public Sector AI Initiatives	Aligns with efforts to integrate AI solutions within public services, enhancing efficiency and accessibility.

1.3 Problem Statement

Despite the rapid adoption of AI technologies, a significant gap exists in the standardized development processes tailored for AI systems. Unlike traditional software, AI systems require continuous data validation, model adjustments, and adherence to ethical standards to ensure accuracy and fairness. The absence of a specialized AI development lifecycle leads to challenges in scalability, reliability, and trustworthiness of AI applications. This whitepaper proposes a structured framework to address these challenges, emphasizing the necessity for a lifecycle that accommodates continuous learning and adaptation, integral to the sustainable deployment of effective AI systems.

This development approach is crucial not only for technological advancements but also for ensuring that AI implementations are aligned with ethical standards and societal needs, thereby supporting Sri Lanka's vision to be a leader in responsible and impactful AI deployment.

2. Differentiating AI System Development from Traditional Software Development

Artificial Intelligence (AI) systems and traditional software systems, while both central to technological advancements, diverge significantly in their development processes. This chapter delineates the distinct approaches required for AI system development as opposed to traditional software development, highlighting the unique challenges and methodologies associated with each.

2.1 Key Differences Between AI System Development and Software Development

The following table summarizes the primary distinctions between AI system development and traditional software development:

Aspect	AI System Development	Traditional Software Development
Problem Definition	Often exploratory, with problems and solutions evolving through data analysis.	Well-defined requirements and clear, specific problem statements.
Data Dependency	Heavily reliant on data quality, volume, and relevance for model effectiveness.	Data is important but not always central to functionality.
Development Process	Iterative and experimental, involving cycles of training, testing, and tuning.	Linear or incremental, with distinct phases from design to deployment.
Outcome Predictability	Outputs are probabilistic, with performance heavily dependent on data quality.	Outputs are deterministic and expected to be consistent.
Maintenance	Continuous monitoring and updating due to model drift and changing data patterns.	Focuses on bug fixes, updates, and compatibility issues.
Skill Requirements	Requires expertise in machine learning, statistics, and data science.	Emphasizes software engineering, system architecture, and programming.
Evaluation Metrics	Uses statistical measures like accuracy, precision, recall, and F1-score.	Tested against functional and non-functional requirements.

2.2 Discussion

Problem Definition and Solution Approach

- **AI System Development:** AI projects often begin without a fixed endpoint in sight. The goal evolves as data is explored and analyzed. This exploratory nature requires flexibility in project scopes and objectives.

- **Traditional Software Development:** Projects start with specific requirements and a clear understanding of the desired outcome. The development process is more predictable and structured.

Development Process

- **AI System Development:** The process is highly iterative, with ongoing adjustments as the system learns from new data. It requires frequent validation against real-world scenarios to ensure the model's generalizability and robustness.
- **Traditional Software Development:** Typically follows models such as Waterfall or Agile, which are more sequential and defined, with less iteration unless requirements change significantly during the project lifecycle.

Maintenance and Updates

- **AI System Development:** AI systems require continuous monitoring to detect and correct model drift, which occurs as the environment changes over time. Updating an AI system is about retraining models with new data or refining algorithms.
- **Traditional Software Development:** Maintenance generally involves fixing bugs, updating libraries, and adding features as new requirements arise. The core functionality remains largely stable over time.

Stakeholder Engagement

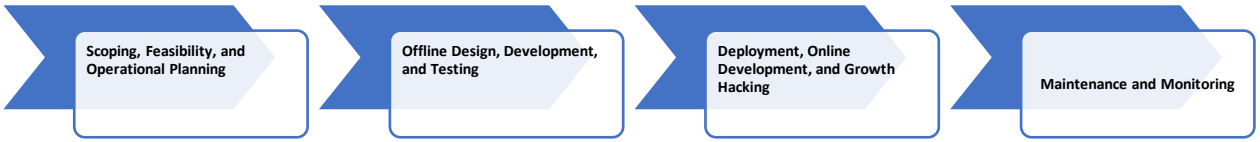
- **AI System Development:** Often involves a broader range of stakeholders, including data scientists, domain experts, and end-users, to ensure the model accurately reflects real-world complexities.
- **Traditional Software Development:** Involves stakeholders for requirement gathering, testing, and validation, but typically the engagement is less continuous.

Understanding these differences is crucial for organizations as they adopt AI technologies. It informs better planning, resource allocation, and management practices tailored to the unique demands of AI system development. This distinction also guides training and development for teams, ensuring they possess the requisite skills and methodologies to successfully deploy AI systems.

3. Operational Plan

3.1 Objective

The primary objective of this initiative is to establish a robust and specific development lifecycle tailored to AI systems. This lifecycle aims to address the unique complexities associated with AI projects, including the scoping, design, development, testing, deployment, and maintenance phases. The goal is to standardize these processes to enhance efficiency, effectiveness, and adaptability of AI systems across various sectors within the national framework.



Stage 1: Scoping, Feasibility, and Operational Planning

This initial stage sets the foundation for the AI project by assessing its viability and aligning it with strategic business goals. It involves in-depth analysis to determine whether the AI solution can effectively address the identified problems within the constraints of current technology and market conditions.

Stage 2: Offline Design, Development, and Testing

This stage focuses on creating the actual AI models and the accompanying software system. Data engineers prepare and manage the data, AI scientists develop and train the models, and software engineers build the application framework. This phase also includes rigorous testing to ensure functionality and accuracy before deployment.

Stage 3: Deployment, Online Development, and Growth Hacking

After offline testing, the AI system is deployed into a live environment where it can interact with real-world data and users. This phase often involves iterative improvements and optimizations based on user feedback and system performance data, a process known as growth hacking, to enhance system efficacy and user engagement.

Stage 4: Maintenance and Monitoring

The final stage of the lifecycle is focused on maintaining the deployed AI system. This involves regular monitoring to ensure the system operates smoothly, performs optimally, and remains reliable over time. Maintenance may involve updating models, upgrading system infrastructure, and responding to new challenges as they arise.

3.2 Scope and Deliverables

The scope of this initiative includes the development and implementation of a comprehensive lifecycle management system specifically for AI projects, encompassing:

- **Scoping and Planning:** Identification and definition of project scope, feasibility analysis, and operational planning.
- **Design and Development:** Detailed design and development phases, including offline testing and model training.
- **Deployment:** Strategies for deployment and online development, focusing on integration and growth hacking.
- **Maintenance:** Ongoing monitoring and maintenance of deployed AI systems.

The deliverables would include the following:

- A framework document outlining the AI-specific development lifecycle.
- Training programs for stakeholders on each phase of the lifecycle.
- A set of tools and guidelines for effective management of AI projects.
- Regular reports and updates on project progress and outcomes.

3.3 Project Selection and Prioritization

- **Master List Development:** Compilation of a comprehensive list of potential AI projects by assessing needs across departments and sectors.
- **Project Evaluation and Prioritization:** Establishing criteria for project selection, focusing on potential impact, alignment with national objectives, and resource availability.
- **Operationalization and Implementation:** Detailed action plans for each selected project, outlining steps from initiation to completion, ensuring that projects are completed on time, within budget, and meet the desired outcomes.

3.4 Strategic Importance

This initiative is of strategic importance as it directly supports the national goal of becoming a leader in AI by establishing a systematic approach to developing and managing AI systems. It addresses the critical need for a specialized framework that can handle the complexities of AI, differentiating it from traditional software development and ensuring that AI projects are scalable, sustainable, and capable of driving significant societal and economic benefits.

3.5 Implementation Plan

The implementation plan involves:

- **Project Initiation:** Setting up project teams, defining objectives, and preparing resources.
- **Stakeholder Engagement:** Involving key stakeholders from government, industry, academia, and the public to ensure broad-based support and collaboration.
- **Resource Allocation:** Allocating necessary resources, including funding, technology, and human capital, to support project activities.
- **Training and Development:** Providing training and support to all stakeholders to ensure they have the skills needed to contribute effectively.
- **Monitoring and Evaluation:** Setting up systems to monitor progress and evaluate the impact of the projects against predefined KPIs.

3.6 Detailed Process Description for Each Stage

The table below outlines the comprehensive lifecycle from the initial planning stages through to ongoing maintenance, emphasizing the tailored approach required for AI systems development compared to traditional software systems.

Stage	Stakeholders	Skills Needed	Key Deliverables	KPIs
1. Scoping, Feasibility, and Operational Planning	Business owners, NAIC, technical experts	Strategic planning, technical analysis, market analysis	Project feasibility reports, scope documents, operational plans	Alignment with strategic goals, feasibility score, stakeholder approval rate
2. Offline Design, Development, and Testing	Data engineers, data scientists, AI scientists, software engineers, DevOps	Data management, machine learning, software development	Data models, trained algorithms, software applications, test reports	Model accuracy, software functionality, bug rates, test completion rate
3. Deployment, Online Development, and Growth Hacking	Business owners, technical experts, marketing teams	Project management, technical integration, marketing	Deployed AI systems, integration reports, performance analytics	System uptime, user engagement, performance improvements
4. Maintenance and Monitoring	Business owners, technical owners	System monitoring, data analysis, technical support	Maintenance logs, performance updates, system upgrades	System reliability, downtime, response time to issues

4. Governance Structure

4.1 Governance Framework

The governance framework for the AI system-specific development lifecycle is designed to ensure robust oversight and efficient management of AI projects. It involves establishing clear roles and responsibilities, compliance with international standards, and adherence to ethical guidelines. Key governance mechanisms include:

- **Central Oversight Committee**: Led by the National AI Center (NAIC), this committee oversees all AI projects, ensuring they align with national strategies and ethical standards.
- **AI Ethics Board**: A body that ensures all AI applications comply with ethical standards and respects user privacy and data protection laws.
- **Technical Advisory Groups**: Composed of experts from various fields, these groups provide technical guidance and ensure the use of state-of-the-art AI technologies.

4.1 Roles and Responsibilities

- **Business Owners**: Define project goals and ensure projects align with business objectives and stakeholder needs.
- **Technical Experts**: Include AI scientists, data engineers, and DevOps, responsible for the technical aspects of AI projects from design to deployment.
- **Ethics Officers**: Ensure AI applications adhere to ethical guidelines and legal standards throughout the lifecycle.
- **National AI Center (NAIC)**: Acts as the central coordinating body for all AI projects. NAIC ensures standardization across projects, regardless of the executing body, and maintains oversight across all stages of the AI lifecycle.
- **Technical Experts**: Comprising AI scientists, data engineers, and software developers, responsible for the technical design, development, and implementation of AI solutions.
- **Ethics Officers**: Ensure all AI applications adhere to ethical guidelines and legal standards throughout the project lifecycle.
- **Development Teams**:
    - **Internal Teams within AI Hubs**: These teams are integral parts of the AI Hubs, working on projects that align with strategic national interests and innovation goals.
    - **External Companies**: Outsourced teams that bring specialized expertise or additional capacity to AI projects under the strict guidelines and coordination of the NAIC.
    - **Contractors**: Freelance experts or entities hired for specific tasks or phases of a project, required to follow the established AI development process and coordinated by the NAIC to ensure consistency and quality.

4.3 Project Management and Oversight

Project management and oversight are crucial to maintaining the integrity and success of AI projects. This includes:

- **Project Planning and Monitoring**: Utilizing advanced project management tools to track progress, manage risks, and ensure timely delivery of AI projects.
- **Quality Assurance**: Regular audits and checks to ensure that AI projects meet predefined quality and performance standards.
- **Feedback Mechanisms**: Regular stakeholder meetings and feedback sessions to refine AI projects and align with user expectations and needs.

4.4 Ensuring Consistency and Coordination

Regardless of the composition of the development teams, the NAIC plays a pivotal role in ensuring that all teams adhere to the standardized development process. This is achieved through:

- **Standardization of Processes**: Implementing uniform processes that all teams must follow, ensuring consistency across different projects and stages.
- **Regular Training and Certification**: Providing training sessions and requiring certification for all developers working on AI projects, ensuring they are up to date with the latest standards and practices.
- **Comprehensive Oversight**: Conducting regular reviews and audits to monitor compliance with the development lifecycle and the integration of feedback mechanisms to adapt processes as needed.
- **Integration Protocols**: Establishing clear protocols for how different teams interact and integrate their work to ensure seamless collaboration and efficiency.

By standardizing the AI development lifecycle and ensuring all development teams, whether internal or external, follow this structured approach, the NAIC supports the overarching goal of deploying effective, ethical, and sustainable AI solutions across various sectors. This structured governance and coordination are essential for harnessing the full potential of AI technologies in alignment with Sri Lanka's strategic digital and AI objectives.

5. Monitoring and Evaluation

5.1 Monitoring Framework

The monitoring framework for AI projects includes continuous assessment of system performance, user feedback integration, and real-time adjustments to project parameters. This involves:

- **Performance Metrics**: Tracking system uptime, accuracy, and efficiency using automated tools.
- **User Feedback Analysis**: Analyzing user feedback to continuously improve system performance and user experience.
- **Compliance Monitoring**: Regular checks to ensure all AI projects comply with ethical standards and legal requirements.

5.2 Evaluation Methodology

The evaluation methodology involves quantitative and qualitative measures to assess the impact and success of AI projects:

- **Impact Assessment**: Measuring the tangible and intangible impacts of AI projects on business operations and user satisfaction.
- **Cost-Benefit Analysis**: Evaluating the economic efficiency of AI projects, ensuring they deliver maximum benefit for the investment made.
- **Longitudinal Studies**: Long-term studies to assess the effects of AI projects over time, ensuring they deliver sustained value.

5.3 Risks and Challenges

Potential risks include technological glitches, ethical breaches, and resistance to change. Strategies to mitigate these risks include:

- **Risk Assessment Frameworks**: Early identification and mitigation of potential risks using AI-specific risk assessment tools.
- **Ethical Guidelines and Training**: Regular training sessions on ethical AI use and guidelines to prevent misuse and ensure fairness.
- **Change Management Programs**: Programs designed to facilitate smooth adaptation to new technologies among users and stakeholders.

5.5 Mitigation Strategies

To address potential challenges and risks, mitigation strategies include:

- **Robust Testing Protocols**: Extensive testing of AI systems under various conditions to ensure reliability before full-scale deployment.
- **Transparency and Openness**: Maintaining transparency in AI operations and decisions to build trust among users.
- **Continuous Learning and Adaptation**: Encouraging continuous learning and adaptation among AI systems to handle evolving scenarios effectively.

The governance structure, combined with thorough monitoring and evaluation, ensures that AI systems are developed, deployed, and maintained responsibly, aligning with the strategic goals of enhancing operational efficiency and promoting innovation in AI applications. This structured approach not only mitigates risks but also maximizes the benefits of AI systems, supporting Sri Lanka's vision of becoming a leader in responsible and impactful AI deployment.

6. Key Performance Indicators (KPIs)

6.1 Specific KPIs

For the effective measurement and management of AI projects under the new development lifecycle, the following Key Performance Indicators (KPIs) are proposed:

- **Model Accuracy and Reliability**: This KPI measures the precision and reliability of AI models across various iterations and deployments.
- **Compliance Rate with Ethical Standards**: Measures adherence to established AI ethics guidelines throughout the project lifecycle.
- **System Uptime and Stability**: Tracks the operational availability and consistency of AI systems deployed in production environments.
- **Stakeholder Satisfaction Score**: Assesses the satisfaction levels among users and stakeholders with the AI solutions provided.

- **Innovation Index**: Quantifies the level of innovation achieved through AI projects, including novel applications and enhancements over existing solutions.

6.2 Targets and Benchmarks

Targets for these KPIs will be set based on baseline assessments and industry standards. Benchmarks will be adjusted annually to reflect advancements in technology and shifts in strategic objectives, ensuring continuous improvement and alignment with global best practices.

7. Sustainability and Scalability

The approach to ensuring the long-term sustainability and scalability of AI initiatives includes:

- **Framework Flexibility**: The development lifecycle will be adaptable to accommodate future technological advancements and changing regulatory landscapes.
- **Resource Efficiency**: Focus on optimizing the use of computational and human resources to reduce costs and environmental impact.
- **Scalability Protocols**: Establish protocols that allow AI systems to scale seamlessly with increasing data volumes and user demands without compromising performance.
- **Ongoing Training and Development**: Continuous education programs for teams to keep up with AI advancements and sustain innovation and operational excellence.
- **Stakeholder Engagement**: Regular engagement with stakeholders to gather insights and feedback that inform the iterative improvement of AI projects.

8. Conclusion

8.1 Summary of Benefits

Adopting a system-specific AI development lifecycle as proposed in this whitepaper is expected to profoundly impact Sri Lanka's AI landscape by:

- Enhancing the precision and efficiency of AI projects.
- Ensuring AI deployments are ethically aligned and socially beneficial.
- Reducing the time-to-market for innovative AI solutions.
- Establishing Sri Lanka as a leader in responsible AI development on the global stage.

8.2 Call to Action

We encourage all stakeholders—including policymakers, industry leaders, academic institutions, and the tech community—to actively participate in this transformative journey. By endorsing and implementing the standardized AI development lifecycle, we can collectively drive Sri Lanka towards a future where AI not only propels economic growth but also enhances societal well-being.

Annex 8:

Educating for AI Excellence- White Paper on Transforming Sri Lanka's Higher Education Sector for a Digital Future

Executive Summary

Purpose

This whitepaper articulates the strategic intent and core objectives of a transformative initiative aimed at integrating Artificial Intelligence (AI) education across Sri Lanka's state university sector. The purpose of this initiative is to ensure that Sri Lanka's higher education system is fully aligned with the evolving technological landscape, specifically the advancements in AI. By doing so, the initiative aims to prepare a future-ready workforce that can contribute significantly to national development and compete on a global stage.

Key Proposals

The initiative proposes a comprehensive reform across five strategic pillars to embed AI education at multiple levels within the state higher education system:

1. **Introduction of New AI Degree Courses**: Establish specialized degree programs in AI Engineering and AI Science to cultivate both practical skills and research capabilities.
2. **Curriculum Reform in Existing Programs**: Revise the curriculum of existing Computer Engineering, Computer Science, IT, and ICT degrees to include essential AI and AI engineering modules.
3. **Post-graduate AI Programs**: Develop advanced postgraduate programs to upskill current professionals in AI, data science, and cloud engineering.
4. **AI in Business Education**: Integrate AI training into business and management courses to enable the development of AI-driven business models.
5. **General AI Education**: Offer foundational AI education across all university degrees to enhance AI literacy and enable students to become proficient AI users.

Overview of Benefits

The proposed reforms are expected to yield substantial benefits, aligning closely with both national and organizational strategies:

- **Enhanced National Competitiveness**: By elevating the AI proficiency of graduates, Sri Lanka can enhance its attractiveness to international businesses and investors, thereby boosting its global competitiveness.
- **Inclusive Workforce Development**: The initiative ensures that AI education is accessible across all disciplines, preparing a diverse workforce capable of driving and supporting an AI-enabled economy.

- **Innovation and Economic Growth**: With a more educated workforce skilled in AI, the potential for innovation and economic growth is significantly increased, supporting the nation's ambitions to become a knowledge-based economy.
- **Sustainable Development**: Through targeted educational programs, the initiative supports sustainable development by equipping students with the skills to address complex challenges through AI-driven solutions.

By adopting these comprehensive educational reforms, Sri Lanka is poised to transform its higher education landscape, making it a cornerstone of the country's AI strategy and a model for global best practices in technology education.

1. Introduction

1.1 Context

As Artificial Intelligence (AI) reshapes global industries and societal functions, Sri Lanka stands at a pivotal juncture to harness this transformative technology for national development. The proposed higher education reforms aim to position the country at the forefront of the AI revolution, ensuring comprehensive readiness across the state sector. By integrating AI education across all state universities, Sri Lanka can cultivate a universally competent workforce, capable of propelling the country towards its vision of becoming a knowledge-based economy. This initiative is not just about technological advancement but also about inclusive educational reform that ensures no one is left behind, making every state university graduate future ready.

1.2 Alignment with Sri Lanka's AI and Digital Strategy 2030

The initiative to overhaul higher education in AI aligns meticulously with Sri Lanka's National AI Strategy. This strategic congruence is outlined below, demonstrating how educational reforms support the overarching goals of national development.

Strategy Component	**Alignment Description**
Inclusive AI Development	Ensuring all state university programs are equipped with AI and data science curricula to foster a uniformly advanced workforce.
National Competitiveness	By enhancing the AI capabilities of graduates, Sri Lanka can boost its competitiveness on a global scale, attracting international businesses and investments.
Sustainable Development	Integrating AI education across disciplines aids in addressing key sustainable development goals through technology-driven solutions.

Innovation Ecosystem	Building a broad base of AI-educated individuals stimulates an innovation ecosystem, encouraging startups, and enhancing public and private sector collaborations.
Workforce Transformation	Preparing a diverse, technologically adept workforce ready to meet the challenges of tomorrow's AI-driven job market.

1.3 Problem Statement

Sri Lanka's higher education system currently faces the challenge of uneven technological integration and specialization in AI, risking a future of disparate capabilities among graduates. The lack of a unified AI-centric educational framework across the state sector may hinder the nation's ability to fully capitalize on AI technologies. To avoid a digital divide and ensure equitable access to AI benefits, comprehensive reforms are essential. These reforms will standardize AI education across all state universities, fostering a holistic upliftment of the educational standards and making every graduate a proactive participant in Sri Lanka's AI-driven future.

2. Project Proposal

2.1 Objective

The primary objective of the higher education reform initiative is to systematically integrate Artificial Intelligence (AI) education across all levels of state university programs in Sri Lanka. This initiative aims to develop a robust, future-ready workforce equipped with AI capabilities, ensuring that all graduates can effectively participate in and contribute to the national and global AI-driven economic landscapes.

2.2 Scope and Deliverables

The reform will encompass the following key deliverables across five strategic pillars:

1. Introduction of New AI Degree Courses	• AI Engineering Degrees focused on practical skills like data engineering, MLOps, and cloud engineering. • AI Science Degrees aimed at fostering research and development skills in AI technologies.
2. Curriculum Reform in Existing Programs	Inclusion of AI and AI engineering modules in all existing Computer Engineering, Computer Science, IT, and ICT degrees.
3. Post-graduate AI Programs	Advanced programs designed to upskill current professionals in AI, data science, and cloud engineering.
4. AI Business Education	Integration of AI into business and management courses to develop capabilities around building AI-driven business models.

5. General AI Education	Basic AI education across all university degrees to enhance general AI literacy and enable students to become proficient AI users.

2.3 Project Selection and Prioritization

- **Master List Development:** A comprehensive list of potential projects and educational modules will be developed, focusing on both breadth and depth in AI education.
- **Project Evaluation and Prioritization:** Projects will be assessed based on their potential impact on educational outcomes, alignment with national AI goals, and resource availability.
- **Operationalization and Implementation:** Effective strategies will be put in place for the phased implementation of these educational reforms, ensuring minimal disruption and maximum impact.

2.4 Strategic Importance

This initiative is strategically vital as it aligns with global trends where AI is becoming a cornerstone of economic development. By reforming the higher education sector to include AI at multiple levels, Sri Lanka can enhance its competitive edge globally, drive innovation, and ensure that its workforce is prepared for the future. Additionally, these reforms support inclusive growth by ensuring that all segments of the student population are equipped with relevant AI skills.

2.5 Implementation Plan

- **Project Initiation**: Collaboration with educational experts, industry leaders, and government stakeholders to outline detailed project scopes.
- **Stakeholder Engagement**: Continuous engagement with university administrators, faculty, and students to ensure the reforms meet the evolving needs of the educational and industrial sectors.
- **Resource Allocation**: Strategic allocation of resources including funding, faculty development, and infrastructure upgrades to support the implementation phases.
- **Curriculum Evolution**: Establishing a mechanism for continuous curriculum updates to incorporate the latest advancements in AI, ensuring that teaching methods and tools remain at the cutting edge.
- **International Collaboration**: Seeking international partnerships and assistance to enrich the curriculum and teaching practices, leveraging global expertise to enhance local education standards.

- **Adoption-Centric Approach**: Emphasizing practical, hands-on learning experiences in AI education to ensure students can immediately apply AI knowledge in various sectors.

2.6 Detailed Initiatives and Pillars

Each pillar of the reform initiative addresses specific needs within the higher education sector:

Pillar	Subjects to be Added	Context	Benefits
AI Engineering Degrees	• Data Engineering • Analytics Engineering • DevOps • MLOps • Cloud Engineerin (*See **Appendix A1** for extended details*)	Focuses on the practical application of AI, preparing students for AI system deployment and maintenance in real-world scenarios.	Equips students with critical skills needed for the backbone of AI application, enhancing employability and technical proficiency in high-demand areas.
AI Science Degrees	• AI and Data Science Theory • Advanced AI Techniques • Mathematics for AI • Statistics for Research • Computational Models (*See **Appendix A2** for extended details*)	Tailored to develop deep theoretical knowledge and research capabilities in AI, preparing students for roles in innovation and development.	Supports the creation of a research-oriented workforce capable of driving AI advancements and innovations.
Inclusion in Existing Degrees	• Introduction to AI • Machine Learning Models • Neural Networks • AI Ethics (*See **Appendix A3** for extended details*)	Incorporation of AI modules into existing tech-related degrees to ensure that all tech students have a fundamental understanding of AI technologies.	Broadens the base of AI knowledge across all tech graduates, ensuring a technologically adept future workforce.

Post-graduate Programs in AI	• Data Science Techniques • Advanced MLOps • Cloud Solutions for AI • AI Project Management (*See **Appendix A4** for extended details*)	Programs aimed at upskilling existing professionals in advanced AI applications and management.	Enhances the capabilities of the current workforce, aligning them with new technological demands and opportunities.
AI in Business Education	• AI for Business Optimization • Building AI-driven Business Models • Managing AI Projects • Ethical Considerations in AI (*See **Appendix A5** for extended details*)	Focuses on integrating AI understanding into business curricula to enable the creation and management of AI-driven enterprises.	Prepares business students to effectively use AI in enterprise settings, driving innovation and competitive advantage in the business sector.
AI for All University Degrees	• Basics of AI • AI in Society • Generative AI Applications • Ethical Implications of AI (*See **Appendix A6** for extended details*)	General AI education to ensure all students regardless of their major understand AI and its implications.	Ensures that all graduates are prepared to engage with AI technologies in their respective fields, promoting a well-informed and ethically aware society.

This comprehensive approach not only supports the national strategy to become a leader in AI but also ensures that the benefits of AI advancements are widely accessible to all sectors of society. This operational plan, with its emphasis on inclusivity and strategic alignment with national goals, positions the higher education reforms as a crucial step towards realizing Sri Lanka's AI ambitions.

3. Governance Structure

3.1 Governance Framework

The governance structure will include a central AI Education Reform Committee, supported by various specialized sub-committees focusing on curriculum development, faculty training, and international collaborations. This framework ensures that reforms are consistent with international standards and adaptable to rapid technological changes.

3.2 Roles and Responsibilities

- **AI Education Reform Committee**: Oversee the overall direction and strategy of AI education reforms.
- **Curriculum Development Subcommittee**: Responsible for continuously updating curricula to reflect the latest AI advancements.
- **International Collaboration Subcommittee**: Manage partnerships and collaborations with international universities and institutions to integrate global insights.

3.3 Project Management and Oversight

Project management will follow an agile approach to accommodate the dynamic nature of AI technologies and education needs. Regular reviews and adjustments will be part of the process to ensure that the educational offerings remain relevant and impactful.

4. Monitoring and Evaluation

4.1 Monitoring Framework

A comprehensive monitoring framework will be established, incorporating both quantitative and qualitative KPIs that reflect educational outcomes, student engagement, and industry alignment.

4.2 Evaluation Methodology

Evaluation will be conducted using a mixed-methods approach, combining data analytics with stakeholder feedback to assess the effectiveness of the educational reforms and their alignment with industry needs.

4.3 Risks and Challenges

- **Rapid Technological Changes**: The swift pace of AI development may outstrip curriculum updates.
- **Resource Constraints**: Limited faculty with the necessary expertise to teach advanced AI topics.
- **International Collaboration Challenges**: Navigating partnerships across different educational and regulatory landscapes.

4.4 Mitigation Strategies

- **Continuous Learning and Development for Faculty**: Establish ongoing training programs for faculty to stay current with AI advancements.
- **Adaptive Curriculum Development**: Implement a modular, flexible curriculum that can be quickly updated or modified.
- **Robust International Partnership Models**: Develop clear guidelines and objectives for international collaborations to enhance curriculum relevance and quality.

5. Key Performance Indicators (KPIs)

5.1 Specific KPIs

- **Student Employability Rate in AI Fields**: Track the employability of graduates in AI-specific roles.
- **Innovation and Research Outputs**: Measure the quantity and quality of student and faculty research and development projects.
- **International Collaboration Impact**: Assess the effectiveness of international partnerships in curriculum enhancement.

5.2 Targets and Benchmarks

- Achieve a 90% employability rate for graduates from AI programs within the first year post-graduation.
- Double the number of research papers and projects related to AI technologies within three years.
- Establish at least five new international partnerships each year with leading AI education institutions.

By integrating these elements, your whitepaper will articulate a comprehensive and dynamic approach to reforming higher education in alignment with AI advancements. This will not only help in fostering a capable AI workforce but also ensure that Sri Lanka's educational institutions remain competitive and relevant on a global scale.

6. International Benchmarks and Collaborative Opportunities

6.1 Benchmarking with Leading Models

To ensure the reforms align with global standards, we will benchmark against leading educational models in AI from institutions such as MIT, Stanford, and NUS. These benchmarks will cover curriculum design, faculty qualifications, and student outcomes. By aligning our standards with top global institutions, we aim to elevate our programs to world-class status, ensuring that our graduates are competitive internationally.

6.2 Proposing Collaborative Assistance

Collaborative assistance is crucial for the success of these educational reforms. We plan to engage with international AI research institutions and educational bodies to help develop our curriculum and faculty capabilities. This will include faculty exchange programs, joint research initiatives, and shared resources which will expedite the development of a robust AI education framework in Sri Lanka.

6.3 Collaboration Benefits

Collaborations will bring numerous benefits:

- **Knowledge Transfer**: Access to cutting-edge research and global best practices in AI education.
- **Resource Optimization**: Shared resources can reduce the cost and time required to develop proprietary materials and programs.
- **Enhanced Research Opportunities**: Joint projects can increase the scope and impact of research, providing students and faculty with invaluable exposure to international standards.

6.4 Implementation Steps

- **Identify Potential Partners**: Focus on institutions that have strengths in areas we aim to develop.
- **Develop Formal Agreements**: Outline the scope of collaboration, expected outcomes, and responsibilities of each party.
- **Initiate Pilot Projects**: Start with small-scale collaborations to build trust and refine the cooperation framework.
- **Expand Engagement**: Based on the success of pilot projects, expand the scope of collaboration to include more extensive exchanges and deeper integration.

7. Conclusion

7.1 Summary of Benefits

The proposed reforms will transform Sri Lanka's higher education landscape by embedding advanced AI competencies at the heart of academic programs. These reforms are expected to:

- Equip students with high-demand AI skills, making them competitive both locally and globally.
- Foster an innovative educational environment that encourages research and development in cutting-edge AI technologies.
- Enhance the overall quality of higher education in Sri Lanka.

7.2 Call to Action

We urge all stakeholders—government bodies, educational institutions, industry leaders, and international partners—to engage actively with this initiative. Your support and involvement are crucial to achieving our vision of a future-ready workforce that can drive Sri Lanka's ambitions in AI and beyond.

Appendix A: Draft Curriculum Framework for AI Degree Reforms

AI Engineering Degrees

Objective: Prepare students to design, build, and maintain AI systems with a strong emphasis on the practical application of AI technologies in various industries.

Core Courses:

- **Data Engineering:** Focus on the collection, storage, and preprocessing of data for AI systems.
- **Analytics Engineering:** Techniques for analyzing large datasets to derive insights and drive decision-making.
- **DevOps for AI:** Integration of AI development and operational stages to streamline deployment and scalability.
- **MLOps:** Specific practices for machine learning model lifecycle management, from development to production.
- **Cloud Engineering:** Utilization of cloud resources for scalable AI solutions, focusing on architectures that support AI workloads.

Skills Developed:

- System design and architecture for AI applications.
- Management of AI project lifecycles.
- Application of cloud technologies in AI contexts.
- Ethical and sustainable implementation of AI solutions.

AI Science Degrees

Objective: Cultivate deep theoretical knowledge and research skills to push the boundaries of AI technology and innovation.

Core Courses:

- **Advanced AI and Data Science Theory:** Foundations of machine learning algorithms and their mathematical underpinnings.
- **Mathematics for AI:** Topics include linear algebra, calculus, and probability as applied to AI models.
- **Statistics for Research:** Statistical methods critical for AI research, including hypothesis testing and regression models.

- **Computational Models:** Study of algorithms and computational theories underlying AI.

Skills Developed:

- Research and development in new AI techniques.
- Critical analysis and adaptation of AI algorithms.
- Statistical modeling and data interpretation.
- Contribution to academic and practical AI advancements.

Inclusion in Existing Degrees

Objective: Integrate AI and AI engineering modules into existing technology-related programs to ensure all graduates possess foundational AI knowledge.

Core Courses:

- **Introduction to AI:** Basic principles and applications of AI.
- **Machine Learning Models:** Overview of various models and their use cases.
- **Neural Networks:** Deep dive into the architecture and functioning of neural networks.
- **AI Ethics:** Study of ethical considerations and societal impacts of AI.

Skills Developed:

- Fundamental understanding of AI technologies.
- Ability to apply machine learning models in practical scenarios.
- Ethical reasoning in the deployment of AI systems.
- Broader comprehension of AI's role in modern technology landscapes.

Post-graduate Programs in AI

Objective: Upskill existing professionals and provide deep technical knowledge in AI, data science, and related technologies.

Core Courses:

- **Advanced Data Science Techniques:** In-depth techniques in data manipulation and analysis.
- **Advanced MLOps:** Complex practices in managing and deploying machine learning models.
- **Cloud Solutions for AI:** Advanced use of cloud technologies for designing scalable AI solutions.
- **AI Project Management:** Management skills specific to AI projects, including stakeholder communication and resource allocation.

Skills Developed:

- Expertise in state-of-the-art AI and data science methodologies.
- Leadership in managing AI projects.
- Advanced technical skills in deploying AI solutions at scale.
- Strategic decision-making in technology adoption.

AI in Business Education

Objective: Equip business students with the knowledge to incorporate AI into business strategies and operations effectively.

Core Courses:

- **AI for Business Optimization:** Techniques for leveraging AI to enhance business processes and customer experiences.
- **Building AI-driven Business Models:** Design and implementation of business models that capitalize on AI technologies.
- **Managing AI Projects:** Comprehensive management approaches for overseeing AI initiatives within business contexts.
- **Ethical Considerations in AI:** Focus on maintaining ethical standards and corporate responsibility in AI applications.

Skills Developed:

- Integration of AI into business decision-making processes.
- Design of innovative business models based on AI technologies.
- Ethical leadership in deploying AI solutions.
- Enhanced competitiveness and innovation in business through AI.

General AI Education for All University Degrees

Objective: Provide a foundational understanding of AI to students from all disciplines to ensure broad literacy in AI concepts.

Core Courses:

- **Basics of AI:** Fundamental concepts and general applications.
- **AI in Society:** Exploration of AI's impact across various sectors and societal implications.
- **Generative AI Applications:** Introduction to generative models and their potential uses.
- **Ethical Implications of AI:** Discussion of ethical issues arising from AI deployment.

Skills Developed:

- General awareness of how AI works and its potential impacts.
- Ability to identify opportunities for applying AI in diverse fields.
- Understanding of ethical considerations in AI use.
- Preparation for engagement with AI technologies in future careers.

Annex 9:

Concept Note on AI Clubs in Sri Lanka Schools

Concept Note

The growth of AI

The growth of Artificial Intelligence (AI) over the last decade has been remarkable, driven by advancements in computational power, the availability of vast datasets, and significant improvements in machine learning algorithms. This period has seen AI transition from a primarily academic pursuit to a ubiquitous technology, impacting a wide range of sectors including healthcare, finance, automotive, and entertainment. The acceleration of AI development has been particularly pronounced in the past year, with the advent of generative AI models that can produce text, images, and code at levels of sophistication previously unattainable. These models have demonstrated capabilities that blur the lines between human and machine-generated content, signaling a shift towards more intuitive, efficient, and personalized AI applications. This exponential growth in AI capabilities has sparked both enthusiasm and debate around its potential impacts on society, including ethical considerations, job displacement concerns, and the need for regulatory frameworks to ensure its responsible deployment. Furthermore, AI knowledge among the general public is limited, resulting in misunderstandings that are often overly positive or negative. Awareness campaigns are needed across all elements of society to create an informed citizenry who can make their voices heard on future issues of AI.

Why AI in Schools

AI growth impacts every aspect of human life, and necessitates AI literacy for everyone. Nations have realized that AI literacy cannot wait till university or workforce entry. To prepare our students for their future, AI literacy must begin early. The good news is that the multidisciplinary nature of AI, coupled with advanced tooling, has made it possible for students as young as kindergarten to appreciate the essence of AI as a tool that they can leverage in many aspects of their lives. Necessary to this learning is also understanding the risks and benefits of AI, the necessity of ethical AI practices, and how to safeguard human agency in the era of AI.

AI is already having a transformative impact on education. As an example - the launch of ChatGPT version 4 was accompanied by its test scores - which surpassed students at many of the standardized tests (SAT, US Computing Olympiad etc.) that are considered arbiters of academic performance worldwide. To thrive in the workplaces of the future, children today will need to excel not at subjects that AI can learn, but in how to leverage AI to excel further in problem solving. To do this requires a level of AI understanding - how AI works and how to use it safely and effectively.

AI Literacy

AI's transformative impact on education and the workforce makes AI literacy essential for every student. While AI is often considered to be in the realm of computer science, coding or mathematics, it is critical to note that all students, regardless of their academic subject focus, will need to be AI literate to thrive in the future workplace. Given this, AI literacy is not merely a matter of learning the mathematics, software or algorithms of AI. It is about having a nuanced and grounded understanding of how AI is used in life, the attendant risks, benefits and challenges of the technology, and the critical interaction between AI technology, human agency, accountability, and well being. With this in mind, AI Literacy can be introduced to students in four key dimensions:

- **Concepts:** Students will learn how AI works, how AI is reliant upon data, and how AI systems learn and function
- **Context:** Students will determine how AIs that surround their daily lives (such as those in smartphones or on the internet) work and how they apply the concepts described above.
- **Capability:** Students will learn how to build AI and also how to effectively use AIs around them while following ethical principles.
- **Creativity:** Students will imagine a future where AI can be used to solve problems critical for humanity. By exploring how AI is used to solve scientific and other problems, and applying their own creativity to custom projects, students will start on a journey of combining AI power with their human agency and imagination.

This broad interpretation of AI literacy is also why it is possible to introduce AI literacy to students as young as kindergarten. With each grade, the concepts can be introduced in sufficient depth to match the student's understanding of their environment, their understanding of ethics etc. Capability (building AIs) can be introduced at a young age via no-code tools (where AIs can be built without coding), with coding added for higher grades.

AIClubs in Schools

We propose AIClubs as a way to introduce students to AI. An AIClub is a school program where students learn about AI, its implications, and gain hands-on experience using and building AI. A typical club will involve a group of students and one or more facilitators (who can be teachers or other staff). A club may meet at regular intervals as deemed appropriate by the hosting school, and will explore AI topics and conduct activities to build, use, explore and discuss AI. Facilitators will lead students in exploring the challenges and opportunities of AI, and encourage debate about AI implications for the future. Students may conduct additional projects in between club meetings.

Considerations

The elements to consider when introducing AIClubs into schools include

- **Age:** AIClubs have been deployed in other countries at ages starting from kindergarten and it is possible to introduce the core concepts of AI to students at varying ages. For younger students in lower primary, concepts such as AIs needing to learn, or the ability of AIs to learn from data, can be introduced. For students in grades 6 and above, they are able to appreciate more of the ethical implications. Their greater knowledge of mathematics can help them understand more of the underlying details of how AI works. At 9th grade and higher, there is a greater awareness of global issues such as climate change, and as such a better ability to appreciate how AI can be used for scientific research and global problems.
- **Connectivity requirements:** AI concepts and context can be introduced in group discussion without connectivity requirements. It is also possible to execute "unplugged" exercises, particularly for younger students, where AI concepts can be explored at depth. Beyond that point, exercises in capability and creativity will benefit from internet connectivity.
- **Computing resources:** This is closely tied to connectivity. While options exist for activities, discussion and learning without computing resources, further and more in-depth exploration will require access to some computing resources at least for the duration of the club hours. Options to leverage minimal resources include multiple students sharing a computer. It is worth noting that, given the ubiquity of online AI resources, a simpler computer with internet access is preferable to a more powerful computer without internet access. Opportunities exist to leverage Chromebooks or other low cost computing resources for this purpose.
- **Equity:** AI has shown a profound ability to engage girls, and furthermore has been shown to increase girls' interest in Science, Technology, Engineering and Mathematics (STEM). A possible reason for this is the multidisciplinary nature of AI use cases - enabling all students to explore AI applications in an area of their own interest, with examples as wide as sports, literature, medicine, or environment.[2]
- **Math and Science:** While AIClubs can be introduced at any grade level, the depth at which the AI concepts are introduced will depend on the level of math that the students have learned. With science, exposure to topics in physics, chemistry or biology, can help students better appreciate AI use cases that solve problems in these domains.
- **Relationship to Coding and Robotics:** AI is often confused with coding and robotics. It may be helpful to clarify that AI, Coding, and Robotics are complementary activities. For example - with modern tooling it is possible to build an AI without any code. With Robotics as well - it is possible to build AI powered intelligent robots, but it is also possible to create robot solutions without AI and it is also possible to create AI solutions that have no robotics component. An AIClub can also help clarify this relationship.
- **Student privacy:** Maintaining student privacy is imperative. The AIClubs will need to both use strong mechanisms to protect privacy, as well as ensure that AI Ethics portions of the club curriculum help the students understand how to protect their privacy not just within the AIClub but also across any AI tools they may interact with outside of the clubs.

[2] An example of the power of AI to engage girls can be found here https://www.corp.aiclub.world/post/girls-in-ai-bringing-girls-into-ai-stem-and-computer-science.

Additional considerations for the program will include teacher and staff training, as well as awareness across school officials so that they can better appreciate the purpose and content of the clubs, and can guide parents and answer parent questions.

Illustrative Case Studies

To illustrate implementation options - below are two case studies from AIClub (an Educational Technology Company in the United States) of AIClubs in the Philippines and India.

School in Philippines

At an all-girls school in Manila, the Philippines, students from grades 3-6 are embracing an AI curriculum that seamlessly integrates with their Math and Science courses. This program, accessible through Google Chrome, requires no installations, allowing students to dive into the world of AI using just a browser. The curriculum is designed to enhance their understanding of AI and its real-world applications, with each grade engaging in a series of 9 units per subject, each lasting 40-45 minutes. The program runs across the school year.

In Science, students begin by exploring what AI is and how it impacts their lives, from plant care to self-driving cars. They progress to understanding AI's role in health and the environment and engage in custom projects where they teach an AI about animals. In Math, the journey starts with the everyday presence of AI and moves to more complex concepts like chatbots, number recognition, and the creation of AIs for specific tasks, such as understanding mathematical operations. Across the activities, the concepts of responsible and ethical AI are reinforced, developing this awareness as a core element of AI Literacy.

By grade 6, the curriculum becomes more advanced, with students building their own image based AIs, exploring AI in healthcare and space, and delving into the nuances of AI classification and measurement. Integrating with their math learning, AIClub activities focus on teaching AIs new ideas, detecting numbers, and calculating averages, culminating in custom projects where students demonstrate their AIs.

The curriculum is led by the school’s teachers and staff who were trained on the content. The school has successfully highlighted the potential of this course through the innovative projects developed by the students, culminating in an “AI Day” where students demonstrate their projects.

Throughout the program, student privacy and security are paramount, with all online accounts anonymized and accessible only to the classroom teacher. This ensures that the AIs built by students remain secure and private, fostering a safe learning environment. The curriculum's alignment with Math and Science courses not only enhances students' understanding of these subjects but also connects them to cutting-edge technology, making learning more relevant and exciting.

School in India

In India, a CBSE-affiliated school has seamlessly incorporated an AIClub into its educational framework for grades 6-8, providing a comprehensive introduction to artificial intelligence (AI). The curriculum covers a wide range of topics, including Python programming, AI concepts, robotics, and the Internet of Things (IoT), using online platforms that require minimal computing resources and internet connectivity. This ensures accessibility and scalability of the program. The program runs for one hour per week (per grade and section) and for the whole academic year.

Engagement of all students, regardless of gender, in STEM fields is ensured by offering a multidisciplinary approach to AI. Students can explore AI applications in areas of their interest, such as healthcare, environmental science, and robotics, fostering a diverse and inclusive learning environment.

Students in sixth grade delve into Python programming and basic AI concepts, utilizing platforms like Google Colab and Repl.it for projects on object detection and chatbots, and applying AI in real-world contexts such as agriculture. The curriculum for seventh graders builds on their Python skills, introducing data analysis with Pandas and TensorFlow, and covering machine learning, neural networks, and robotics. They work on projects like audio classifiers and sound-responsive robots.

In the eighth grade, the focus shifts to more advanced AI topics, including neural networks with MobileNetV2 and natural language processing with BERT. Students combine AI with web development to create applications like mini-ChatGPT and construct robotic models that recognize colors from images.

This case study indicates a second approach - where coding is incorporated into the AI curriculum. While the curricula differ, In both cases, age appropriate, academic subject aligned, AI literacy content introduced to the students and important considerations such as connectivity, computing resources, and student privacy are incorporated, where the students explore AI Concepts, Context, Capability and Creativity.

Awareness and Interest

Since AI is new to schools, teachers and parents, it will be critical to increase awareness and interest. This can be done with workshops or introductory webinars to help students and parents understand the value of participating in an AIClub. Competitions, demonstrations of student accomplishments, and other events can further reinforce value and success, and motivate new students to join in following years. Examples of

how this can be done effectively can be found in both the case studies above as well as in international competitions such as Technovation Girls (where a Sri Lankan student reached the worldwide finals in 2021 with an AI-powered app – top 12 in over 1700 entries.[3]

Summary

The concept note discusses the establishment of AIClubs in Sri Lankan schools to introduce students to artificial intelligence (AI). It emphasizes the importance of AI literacy from an early age, given AI's impact on various sectors. AIClubs aim to provide a comprehensive understanding of AI, covering concepts, context, capability, and creativity. The note outlines considerations for implementing AIClubs, including age appropriateness, connectivity, computing resources, equity, and the relationship to other STEM subjects. It also presents case studies from the Philippines and India to illustrate successful integration of AI education in schools.

[3] See https://www.life.lk/article/lifestyle/14-Year-Old-Anudi-Nupearachchi-A-Finalist-At-Technovation-Girls-2021/45/19782 for more information.

Pilot Program for AIClubs in Sri Lanka Schools

Background

The recent growth of AI has necessitated the rapid development of AI skills among the future workforces. To facilitate this effort, this document proposes a pilot program to launch AIClubs in 100 schools. The proposal covers the goals of this program, key elements of a potential rollout and considerations.

Objectives of the pilot program

The objectives include

- Improve AI Literacy in the Sri Lankan school-age student population and school community (teachers, parents, etc.)
- Increase awareness and excitement about AI in schools, schoolteachers and staff, children and parents.
- Set a new standard for AI education.

Club structure

With the above objectives in mind, the club is to be structured as follows

- **Companion to curricular programing:** The club will be an extracurricular activity which is complementary to the existing school curriculum and is optional for students. This approach enables fast deployment of AIClubs and the ability to dynamically adapt to the fast changing nature of AI.
- **Club Membership / Grade levels:** While grades from 1-12 are possible (and demonstrated in successful deployments in other nations), grades 6-8 are recommended for starting pilot. Experience has shown that, at this grade level, students are able to explore AI with awareness of social implications and to engage in measurement and improvement of AI systems. For example, a recent report by UNESCO on the state of AI Curricula in K-12 indicates that several countries (for example China, India and Germany have employed AI programs in these grades or younger).
- **Schedule:** Recommend a weekly meeting for the club (of 1 hour - 1.5 hours per meeting). Each meeting will include students and one or more facilitator (recommend one facilitator for every 10-15 students). Recommendation for the club training duration is 3 months (12 sessions) but it is possible to run the training component for as few as 8 sessions while maintaining the overall structure. After this time, the club will continue under the support of the school and assigned teacher.
- **Content:** During these meetings, students will explore AI literacy according to the 4 C's (Concepts, Context, Capability and Creativity)

- Concepts: The students will engage in learning and discussion of core AI concepts - such as “what is AI”, “why does AI need to learn”, etc.
- Context: The students will explore current common use cases of AI, such as digital assistants, applications in healthcare, agriculture etc.
- Capabilities: Students will build AI models to solve common problems - such as sentiment detection, image classifications, etc.
- Creativity: Over several sessions, students will define a custom project (from provided examples) and use the concepts, context and capabilities to build the custom project to solve a problem of their choosing.

- **Showcase:** At the end of the training duration, each student (or pair of students) will deliver a 2-5 minute presentation of their custom project to their class. The showcase presents an opportunity to raise awareness of AI and generate excitement among the communities, which can be valuable for expanding beyond the pilot program.
- **Awards:** Recommend that an award be given to the top presenter at each school and possibly to the top 1-3 presenters across all the pilot schools. This will present an additional opportunity to raise awareness and excitement.

Proposed Curriculum

Learning objectives	Students will get introduced to the technology of AI and its usage around them. They will learn to interact and build their own AI. They will understand the role of AI to solve problems. The specific areas of AI explored within the pilot are natural language processing and computer vision.
Outcomes	Students will build working AIs for different use cases plus a custom project presented by each student at the end of the program.
Session 1	What is AI - lets build one!
Session 2	How AIs Learn - Retrain and Measure your AI
Session 3	How Digital Assistants work
Session 4	Stages of AI Lifecycle
Session 5	AIs and Self Driving Cars
Session 6	Sources of data
Session 7	How AIs can help agriculture
Session 8	The student (or pair of students) will select a custom project to build for their final presentation. See further details regarding custom projects below.

Session 9	AI Ethics - how to build responsible AI and why this is important
Session 10	AI and Robotics - how are they different? How can they be combined?. Continue work on custom project
Session 11	Work on custom project and prepare presentation
Session 12	Present custom project to club participants

Custom projects

Students will be provided a list of custom projects from which they can choose. In all cases, datasets will be provided and ensured to be suitable for the age group. The lessons in sessions 1-9 will provide them with the Capability skills needed to execute any of the selected projects. Individual projects or projects for 2 children are recommended. Once a project is selected, the students will work on the project for a part of the remaining sessions, building an AI, improving it via experimentation, and preparing a presentation. Each student will deliver their presentation at the end of the program and demonstrate the AI that they have built.

Datasets for all projects will be provided as part of the curriculum and will be preloaded into the cloud for ease of use for the students

Examples of custom projects include:

- Currency identification (mapped to local Sri Lankan currency) – Image classification
- COVID-19 from XRays - image classification
- Sports equipment identification - image classification
- Harry Potter Sorting Hat - natural language processing
- Selecting a genre for a book or movie - natural language processing
- Detecting disease in plants - image classification

Unplugged activities

Several unplugged (without connectivity or computer) activities that explore AI reasoning, features, and biases, will be part of the curriculum and can be used if there is an unexpected loss of connectivity or power. The activities require only pencil and paper.

Companion textbook

A companion textbook is also available if needed.

Requirements - Infrastructure to facilitate this curriculum

Access to some computing infrastructure with a local chrome browser and internet access for the duration of the club session. A web browser can be shared between 2 students if needed.

The same computing infrastructure can be reused between different students if there is a need to run the club for different groups. Each student (or pair of students) will get an account with which they can access past projects and continue work on their project between sessions

No local storage is needed. Students can use different computers across the sessions - no need to reattach to the same computer.

Cloud Infrastructure

The activities can be done in a range of publicly available tools. The details in the proposal are based on the use of AIClub's infrastructure which is based on AWS. We anticipate minimal costs for AWS use

Student privacy

All student access will be anonymized.

Language needs

All AI tooling today worldwide is in English. While it is possible to translate both tooling and curriculum to Sinhala and Tamil, we do not recommend this approach since it will limit the students' progress beyond the club. We recommend introducing the necessary English learning where needed and relying upon the facilitators to bridge language gaps.

Facilitators

The role of facilitators will be to undertake initial training and in turn train and support the teachers. Facilitators will need to have basic IT skills including:

- Set up and use of a computer

- Working with a chrome browser
- Debugging connectivity issues
- Some knowledge of Google slides would be helpful for the presentation element. No previous experience with AI is required. All necessary AI knowledge will be imparted during facilitator training workshops prior to the pilot.
- Basic mathematics (averages, percentages and square roots) is sufficient
- No programming experience is needed. There is no coding in this program.

Rollout options

Previous experiences with similar pilots have found the following strategies to be successful:

- Provide an introductory workshop to familiarize students, teachers, and parents with AI, the value of the pilot program and the benefits of participation.
- Publicize the pilot program to generate interest from schools. This can be done via an email campaign or via other forms of media such as newspapers.
- Select schools based on alignment with the resource criteria.
- If there is more student interest than spots are available, there are multiple options for student selection that maintain equitable access to all students in the school (of the age group).
    - Self-select: The first students to indicate interest are accepted. Some number of waitlist students are selected in case the first batch has dropouts.
    - Select by grades. Students with Bs and above in math and science, who express interest in the program, are accepted on a first come, first served basis.
- Online facilitator training coupled with online curriculum delivery. The curriculum contains discussion modules, videos, slides, etc. for ease of delivery by the facilitator.

Feedback and Assessment

The following assessments are recommended at the end of the program to formalize learnings and next steps:

- Student assessment covering their AI learning, interest and motivation to continue further learnings.
- Assessments from students and facilitators on the initial rollout and areas for improvement

Sri Lanka AI Clubs - Program Rollout Playbook - Ministry

Summary

The recent growth of AI has necessitated the rapid development of AI skills among the future workforce. Following up on the program development for AI Clubs in Sri Lanka's schools, this document contains a playbook that can be nationwide, with a short introduction to the goals of AI clubs in schools, and a step-by-step guide on how to launch a series of clubs across schools.

Goals of School AI Clubs

- Improve AI Literacy in the Sri Lankan school-age student population and school community (teachers, parents, etc.)
- Increase awareness and excitement about AI in schools, school teachers and staff, children, and parents.
- Set a new standard for AI education before university.

Club structure

With the above goals in mind, the program is to be structured as follows

- **Companion to curricular programming:** The club will be an extracurricular activity that is complementary to the existing school curriculum and is optional for students. This approach enables fast deployment of AIClubs and the ability to adapt to the fast-changing nature of AI technology.
- **Grade levels:** While grades from 1-12 are possible (and demonstrated in successful deployments in other nations), we recommend grades 6-9 as the starting point for any new school that wishes to start a club. Experience has shown that, at this grade level, students can explore AI with an awareness of social implications and to engage in the measurement and improvement of AI systems.
- **Content:** During these meetings, students will explore AI literacy according to the 4 C's (Concepts, Context, Capability, and Creativity)
    - Concepts: The students will engage in learning and discussion of core AI concepts - such as "What is AI", "Why does AI need to learn", etc.
    - Context: The students will explore common use cases of AI, such as digital assistants, applications in healthcare, agriculture, etc.
    - Capabilities: Students will build AI models to solve common problems - such as sentiment detection, image classifications, etc.
    - Creativity: Over several sessions, students will define a custom project (from provided examples) and use the concepts, context, and capabilities to build the custom project to solve a problem of their choosing.

Conditions for Success

To ensure successful rollouts and the continued success of the program - it is critical to ensure the following aspects are considered:

- **Awareness:** It is critical that the school community (school officials and administrators, parents, students, other stakeholders) appreciate the need for AI Literacy and the importance of the AI Clubs initiative to deliver AI Literacy for the next generation.
- **Preparedness:** Schools are expected to have a wide range of infrastructure, connectivity, teacher availability, and other resources. A club curriculum has been designed to be maximally resilient to a wide range of possible environments. However, it is important to ensure that schools meet the prerequisites required for successful club implementation and continuance.
- **Key Performance Indicators:** To ensure quality execution, learning, and improvement, KPIs should be identified and tracked. The AI Clubs initiative should also undergo periodic assessments and data-driven improvements. KPIs are included in the NPD proposal document.
- **Identifying and Mitigating Issues:** To ensure quality execution at scale, methods need to be put in place to identify and mitigate issues, as well as to enable stakeholders to reach out with issues and get assistance.
- **Maintaining state-of-the-art AI education:** AI is a fast-moving field. To ensure that the AI Clubs are providing students with access to and expertise in the latest technologies in AI, AI Club curriculum and activities will need to be regularly updated. Additional programs should be in place to encourage and support accelerated learning for the top performing students.

Steps for AI Clubs Rollout - Pilot Only:

To achieve the above objectives, we recommend the following steps be taken in the AI Clubs rollout for the Pilot. Expansion post-pilot will be discussed separately.

1) Announcement and Information Sessions: The AI Clubs initiative should be announced publicly, with associated collateral, website presence, and a series of information sessions so that Sri Lankans can be aware of the initiative and its importance in the education of the next generation.
2) Guidance/Direction to Schools: A related document (Playbook for Schools) has been created to offer specific guidance and recommendations to individual schools. Each selected school should receive specific instructions empowering and requiring the school to study and follow the Playbook for Schools.
3) Teacher training and assessment: To accommodate teacher training at scale, we recommend a two-step process
    (a) Train the Trainer: Initially, a group of up to 30 facilitators will be trained. These facilitators will both support the 100 pilot schools as well as train the initial 200 teachers.
    (b) Both facilitators and teachers will be required to take and pass a certification exam to ensure that they have acquired the necessary skills to conduct the club.

(c) We recommend financial incentives to both facilitators and teachers to encourage them to take and pass the certification exam. The certification can be provided by SLASSCOM.

4) School Preparedness Check and Operational Manual: The Schools Playbook includes a detailed list of requirements that each school should meet - which includes infrastructure requirements and cloud account set up. Each school should follow the specified process prior to the start of the club and confirm that the prerequisites are met.

5) Support: Channels should be set up to ensure communication between teachers, facilitators, industry partners, and government agencies involved in the running of the clubs. We recommend a private Facebook group for this purpose. The Facebook group will be a mechanism for anyone involved in the running of the clubs to raise issues and learn from the experiences of others.

6) Periodic reporting: Each school will be required to provide periodic reports on the status of the clubs. These reports will be combined with cloud data on activities (all student activities will be tracked via cloud infrastructure and the results will indicate the progress of the clubs. These reports will be used to assess performance against KPIs and to conduct data-driven improvements. In addition, we recommend periodic site visits to clubs to observe firsthand, and feedback surveys for both students and teachers to gather feedback to improve the program.

7) Awards: We recommend that the government institute an award structure to recognize the accomplishments of the students and teachers who have participated in the club. The proposed structure is as follows
   (d) Each school will nominate the top 3 students for school-level awards. The club curriculum will include a rubric which will be used to score the students and determine the top 3.
   (e) An island-wide competition where the top students from each club will compete for national honors and prizes. Students participating in this competition will receive additional mentoring from industry participants.
   (f) A small number of the top students will receive additional mentoring (from industry partners and universities) to either represent Sri Lanka in international competitions or conduct advanced AI development.
   (g) Further, we recommend that all teachers receive monetary incentives upon the completion of the first 3 months and further on an annual basis.

Beyond the first year:

After the above has been reviewed and feedback integrated, an assessment against KPIs should be done to identify areas for improvement. These will be included in subsequent year plans.

In addition, activities beyond the pilot and the first 3 months include

- Expanding to more schools
- Expanding to a greater grade range within schools
- Updating curriculum annually to reflect progress in AI and to ensure fresh content for students who participate in the clubs year after year.

- Expanding reach for students to participate in competitions, and research initiatives and to become deeply integrated into the industry via internships, etc.

Sri Lanka AI Clubs - Program Rollout Playbook - Individual Schools

Summary

The recent growth of AI has necessitated the rapid development of AI skills among the future workforce. Following up on the program development for AI Clubs in Sri Lanka's schools, this document contains a playbook that can be used within each school. The playbook includes a short introduction to the goals of AI clubs in schools and a step-by-step guide for how to start and continue a club initiative.

Goals of School AI Clubs

- Improve AI Literacy in the Sri Lankan school-age student population and school community (teachers, parents, etc.)
- Increase awareness and excitement about AI in schools, school teachers and staff, children, and parents.
- Set a new standard for AI education before university.

Club structure

With the above goals in mind, the program is to be structured as follows

- Companion to curricular programming: The club will be an extracurricular activity complementary to the existing school curriculum and optional for students. This approach enables fast deployment of AIClubs and the ability to adapt to the fast-changing nature of AI technology.
- Grade levels: While grades from 1-12 are possible (and demonstrated in successful deployments in other nations), we recommend grades 6-9 as the starting point for any new school that wishes to start a club. Experience has shown that, at this grade level, students can explore AI with an awareness of social implications and engage in measuring and improving AI systems.
- Schedule: We recommend a weekly meeting for the club (of 1 hour - 1.5 hours per meeting). Each meeting will include students and one or more facilitators (recommend one facilitator for every 10-15 students).
- Content: During these meetings, students will explore AI literacy according to the 4 C's (Concepts, Context, Capability, and Creativity)
    - Concepts: The students will engage in learning and discussion of core AI concepts - such as "What is AI", "Why does AI need to learn", etc.
    - Context: The students will explore common use cases of AI, such as digital assistants, applications in healthcare, agriculture, etc.
    - Capabilities: Students will build AI models to solve common problems - such as sentiment detection, image classifications, etc.
    - Creativity: Over several sessions, students will define a custom project (from provided examples) and use the concepts, context, and capabilities to build the custom project to solve a problem of their choosing.

- Showcase: 2-3 times per year, each student (or pair of students) will deliver a 2-5 minute presentation of their custom project to their class. The showcase presents an opportunity to raise awareness of AI and generate excitement among the communities, which can be valuable for expanding beyond the pilot program.
- Each year, selected students may participate in national or international AI competitions.

Starting a club - requirements

A school starting a new club should ensure that all of these requirements are met before club launch:

- Two teachers (one lead and one backup) to lead the club. The club lead teacher is expected to be present at each meeting, teach the necessary concepts, and guide the students as they perform the exercises. Both teachers should complete the AI Club training course and pass the certification exam before starting the club. The teachers should have the following capabilities
    - Some experience with IT, including the ability to set up a computer and web browser and debug internet issues.
    - ICT teachers are preferred.
    - The same two teachers should ideally guide the club for the whole year.

  Note: For the calendar year 2024, industry partners will provide facilitators who will both train the teachers and be present at club meetings. For that reason, in 2024, teachers may lead clubs while they are completing their training.

  One named school official will be responsible for the club. This individual will be required to undergo basic training regarding club operations and will be expected to coordinate with external stakeholders regarding the progress and/or needs of the club. External stakeholders can include government ministries and industry partners. This individual can be one of the teachers or a third school official.
- At least one internet-accessible computer, purchased after 2019, for every 2-4 students in the club. For example, if the club hosts 20 students, at least 5 computers are required. One computer per student is ideal but not required. The computers do not need to be the same brand, manufacturer, or age. All computers must be able to run a Chrome browser. The computers will only be used by the students during club hours, so if two club sessions run at different times, they can use the same computer.
- Internet access for all computers. Internet access speed guidelines will be provided, as well as means to measure speeds.
- 30 sheets of white paper and one pencil per student. These will be kept by the teacher and handed out to the students during club meetings. Students may take completed sheets home with them. The pencils should be returned to the teacher to be used for future sessions.
- A room where the club can meet, and a fixed schedule (1-1.5 hours weekly) for club meetings. The schedule can be selected by the school as appropriate with respect to other activities and student schedules. Club meetings are expected to occur at regular intervals but may be skipped during test periods or vacation periods. The room should contain:

- Chalkboard or projector.
- Chairs and tables where students can be seated as they perform the activities.
- Power for computers

Starting a club - steps for launch and Year 1

Schools desiring to start a club should follow the steps below:

1) Ensure all requirements above are met and responsible stakeholders identified
2) Announce the start of the club to the school, teacher, parent, and student community. Sample announcements will be provided. The announcement will explain why AI education is critical, what the club will do, the schedule, and how to apply (if applications are accepted).
3) Conduct an information session for parents and the school community and answer questions about the club. Specific content to present at the information session, and a list of frequently asked questions and answers, will be provided to facilitate discussion.
4) Request template accounts for the number of students expected in the club. To protect student privacy, only the school will maintain the names of the club students. Students will receive accounts saying, for example, “student-1”, “student-2”. The school will maintain which accounts are assigned to which students.
5) The teachers will receive their accounts along with the curriculum during their training. The teacher accounts will be named and each teacher will also be enrolled to curriculum and support channels.
6) Follow the government-stated policy on student selection.
7) Once the students are selected, ensure that all students and teachers are prepared for the first day of the club.
8) Start the club and follow the specific curriculum on the activities and lessons for each club meeting.
9) At specific intervals, select students to be nominated for island-wide presentations or events. Follow the curriculum directions to prepare these students and engage with external stakeholders as appropriate.
10) If there are issues, consult the provided Facebook page and contacts for help.
11) The club representatives should provide stakeholders with a report every 3 months on the status of the club. A form will be sent to be filled out.
12) Periodic site visits may occur to observe the club. These will be handled on a case-by-case basis.

Directions for Year 2 and beyond

Will be provided separately.

Annex 10:

Concept Note on AI Hubs & AI Apprenticeship Programs

Executive Summary

Purpose

This whitepaper outlines the strategic framework and operational guidelines for the AI Hubs and AI Apprenticeship Program in Sri Lanka. These initiatives are integral to the national AI strategy, aimed at accelerating digital transformation and fostering a robust AI ecosystem across various sectors. By establishing AI Hubs and offering practical AI training through the Apprenticeship Program, the plan addresses the urgent need for enhanced AI capabilities and infrastructure within the country.

This whitepaper articulates the strategic framework and operational guidelines for the AI Hubs and AI Apprenticeship Program in Sri Lanka. Central to the national AI strategy, these initiatives are designed to accelerate digital transformation and enhance AI capabilities across various sectors. The introduction of a systematic project selection and prioritization process ensures that these initiatives align closely with Sri Lanka's strategic goals and resource allocations.

Key Proposals

The document proposes the creation of AI Hubs as centers of excellence that will serve as the nexus for AI development and deployment. Starting with a pilot at a major university, these hubs will scale up based on defined success metrics. The AI Apprenticeship Program is designed to complement these hubs by developing human capital, targeting the training of at least 40 AI engineers annually at each hub. Both initiatives aim to deploy AI systems within the first year, with a focus on high-impact national projects.

The whitepaper details the establishment of AI Hubs as centers of excellence and the complementary AI Apprenticeship Program to develop skilled AI professionals. A significant addition is the structured process for project selection and prioritization:

- **Master List Development**: The National AI Center, in collaboration with the Digital Transformation Agency and other stakeholders, will develop and maintain a master list of projects, ensuring a strategic alignment with national priorities.
- **Project Evaluation and Prioritization**: Projects will undergo rigorous scoping and feasibility assessments. A value-based prioritization method will be applied to select projects with the highest potential impact, optimizing resource allocation and focus.
- **Operationalization and Implementation**: Selected projects will be systematically handed over to AI Hubs for execution, with the National AI Center overseeing their operationalization, adoption, and eventual handover.

Overview of Benefits

Strategically, these initiatives promise significant national benefits:

- **Enhanced Public Services**: AI-driven solutions will improve efficiency in critical areas like healthcare, public safety, and traffic management.
- **Economic Empowerment**: By enabling SMEs with AI tools, the program aims to boost productivity and competitiveness across industries.
- **Skill Development**: Addressing the local skills gap, the program will produce industry-ready AI professionals, thereby strengthening the workforce.
- **Inclusive Growth**: Ensuring equitable access to AI technology across different regions will help minimize the digital divide and promote balanced economic development.

By linking these efforts with the broader goals of Sri Lanka's National AI Strategy 2030, the AI Hubs and Apprenticeship Program are positioned to catalyze transformative economic and social changes, preparing Sri Lanka for a future shaped by advanced digital technologies.

The strategic implementation of these initiatives, underscored by the methodical selection and prioritization of projects, promises significant national benefits. Enhanced public services, economic empowerment through SMEs, and the development of a skilled workforce are core outcomes. This systematic approach ensures that the deployment of AI technologies is both impactful and aligned with the broader goals of Sri Lanka's National AI Strategy 2030.

1. Introduction

1.1 Context

The AI Hubs and AI Apprenticeship Program are strategically designed to catalyze the adoption and innovation of AI across various sectors in Sri Lanka. Positioned as critical enablers within Sri Lanka's National AI Strategy, these initiatives aim to act as accelerators for the country's digital transformation, providing immediate benefits of AI to the Sri Lankan society and the efficient functioning of government. By setting up AI Hubs, the strategy intends to create centers of excellence that facilitate the development and deployment of robust AI solutions, helping to bridge the current digital divide until the more comprehensive benefits of the broader AI strategy come to fruition. Concurrently, the AI Apprenticeship Program is developed to mitigate the current shortage of skilled AI professionals by offering hands-on training and practical experience, aligning with the national goal to boost workforce capabilities in emerging technologies.

1.2 Alignment with Sri Lanka's AI and Digital Strategy 2030

The proposed initiatives are in direct alignment with several key areas of Sri Lanka's AI and Digital Strategy 2030. Below is a table detailing these alignments:

Strategy Component	Alignment Description
Data Strategy	AI Hubs will serve as key nodes in the national data infrastructure, enhancing data accessibility and quality, which are critical for advanced AI applications.
Skills Development	The AI Apprenticeship Program will directly contribute to building the AI skills of the workforce, in alignment with the national goal to enhance AI literacy and capabilities.
Infrastructure Development	Establishing AI Hubs will require upgrades to digital infrastructure, supporting the strategy's goal of nationwide high-speed connectivity and advanced computing resources.
Public Sector Innovation	AI Hubs will develop AI solutions that improve public service delivery, aligning with the goal to transform the public sector through digital technologies.
Private Sector AI Adoption	By training skilled AI professionals, both initiatives will stimulate AI adoption in the private sector, particularly among SMEs, driving economic growth and innovation.

1.3 Problem Statement

Despite significant advancements in digital and AI education, Sri Lanka continues to face substantial challenges in harnessing the full potential of AI technologies, primarily due to low AI penetration in the public sector and SMEs. This gap stems from a critical shortage of practical AI skills within the workforce and the absence of a cohesive infrastructure to support AI development and deployment across the country. The AI Hubs and AI Apprenticeship Program address these issues by establishing facilities dedicated to AI training and development and providing targeted programs to cultivate a skilled AI workforce. This strategic approach aims to decentralize AI expertise and infrastructure, ensuring equitable access to AI benefits across all regions of Sri Lanka, thus supporting the national vision of a digitally empowered society and knowledge-based economy.

2. Operational Plan

2.1 Objective

The objectives of the AI Hubs and AI Apprenticeship Program are strategically designed to:

1. **Establish AI Hubs** across Sri Lanka, beginning with a pilot at a major university to serve as a model for subsequent hubs.

2. **Deploy AI Systems** that are developed through rigorous scoping, evaluation, and feasibility studies, targeting at least four full deployments within the first year.
3. **Develop Human Capital** by training at least 40 AI engineers annually at each hub, enhancing the local talent pool with practical, industry-relevant skills.
4. **Transition AI Systems to Production** by ensuring all deployed systems are fully handed over to their final owners, including ongoing support for maintenance and development.

2.2 Scope and Deliverables

Phase 1: Pilot Hub Setup	**Phase 2: Expansion to Additional Provinces**
Location: A leading university with strong technology and research capabilities. **Tasks:** • Setup infrastructure, including labs and computing resources. • Formulate the team, consisting of educators, industry experts, and initial batch of AI apprentices. • Begin the scoping and evaluation process for potential AI systems, aiming to assess 20 potential projects. • Start development on selected AI systems with high national importance.	**Timeline:** 12 months after the initial setup. **Expansion Criteria:** Based on the success metrics and learnings from the pilot hub. **Tasks:** • Establish additional hubs in two new provinces. • Replicate the successful practices and infrastructure from the pilot project. • Scale up the training program to include more apprentices.

There will be continuous development and support for the hubs:

- **Project Management:** Managed by the National AI Center, which will select and prioritize projects based on national value and alignment with strategic guidelines.
- **Lifecycle Management:** Adhere to the standardized processes outlined in the "Strategy Whitepaper: Life-cycle management of AI projects" for development, deployment, and maintenance.

2.3 Project Selection and Prioritization

- **Developing the Master List**: Describe how the National AI Center will collaborate with the Digital Transformation Agency, ministries, and other relevant entities to develop and maintain a master list of potential AI projects. This will ensure that all proposed projects align with the national digital strategy and other key policy frameworks.
- **Project Scoping and Feasibility Assessment**: Outline the procedures for scoping each project, including feasibility studies and operational planning conducted by the National AI Center to ensure that projects are both viable and aligned with strategic objectives.
- **Value-Based Prioritization**: Explain the criteria and methodology used by the National AI Center for value-based prioritization, focusing on selecting projects that promise the highest value in terms of impact and alignment with national goals.
- **Handover for Implementation**: Detail the process of how selected projects are handed over to the AI Hubs for implementation, ensuring a smooth transition and clear communication of project goals and requirements.

2.4 Strategic Importance

The AI Hubs and AI Apprenticeship Program aim not only to develop and deploy AI systems but also to ensure these systems are seamlessly integrated into public and private sectors for immediate utilization. The focus on adoption is crucial for achieving tangible benefits such as:

- **Enhanced Public Services**: Deploy AI solutions that directly improve efficiency and effectiveness, such as in healthcare diagnostics, traffic management, and public safety.
- **Economic Empowerment**: Enable SMEs to integrate AI technologies that can transform business operations, leading to increased productivity and competitiveness.
- **Inclusive AI Benefits**: Ensure that AI advancements are accessible across various regions, minimizing the digital divide and promoting equitable growth.

2.5 Implementation Plan

Project Initiation	• **Objective Setting:** Define clear, measurable goals for each AI hub based on the national AI strategy priorities. • **Stakeholder Engagement:** Involve government, academia, and industry stakeholders to ensure alignment and support.
Resource Allocation	• **Budgeting:** Allocate funds for infrastructure, staffing, and operational costs. • **Recruitment:** Hire key personnel, including project managers, trainers, and technical experts.
Phased Development	• **Phase 1:** Establish the pilot hub, develop initial AI projects, and begin training programs. Establish guidelines for AI projects that include clear adoption criteria, focusing on ease of integration, user training, and support systems.

	• **Phase 2:** Expand based on evaluation results; adjust plans as necessary to optimize the model. Implement feedback mechanisms from early adopters in the initial hub to refine and tailor AI systems for broader application in subsequent expansions.
Monitoring and Evaluation	• **Continuous Assessment:** Implement agile evaluation methods to monitor progress and impact. • **KPI Tracking:** Measure success through predefined KPIs such as the number of AI systems deployed, AI engineers trained, and successful handovers to system owners.

A phased approach not only aligns with Sri Lanka's strategic goals for AI but also provides a practical roadmap for immediate implementation and future scalability.

3. Governance Structure

3.1 Governance Framework

The governance of the AI Hubs and AI Apprenticeship Program will be structured to ensure clear oversight, accountability, and alignment with national AI objectives. The National AI Center will serve as the main governing body, overseeing all strategic, operational, and financial aspects of the hubs. This centralized governance model will ensure consistency in the implementation of AI projects across different hubs and facilitate the sharing of best practices and resources.

The governance structure will prioritize not only the oversight of AI development but also the facilitation of AI adoption across various sectors. This involves:

- **Adoption Committees:** Establish dedicated committees within each AI hub focused on the transition of AI projects from development to real-world application.
- **Partnership Models:** Develop strategic partnerships with key industry players and sector-specific agencies to drive the adoption of AI technologies.

3.2 Roles and Responsibilities:

- **National AI Center:** Acts as the strategic leader, setting guidelines, approving projects, and monitoring overall progress. It will also be responsible for funding allocations and policy alignment with national goals.

- **University Partners:** Host the AI hubs, provide academic expertise, and contribute to research and development. They are responsible for integrating educational programs with practical AI training.
- **Industry Partners:** Offer practical insights, project opportunities, and potential funding. They play a crucial role in apprenticeship placements and real-world training.
- **AI Apprentices:** Engage in learning and project work under the guidance of mentors, contributing to research and development efforts while gaining hands-on experience.
- **Local Government:** Facilitate the regional expansion of AI hubs, ensuring alignment with local economic and social needs, and provide necessary support for infrastructure and operations.
- **Adoption Specialists**: Include roles specifically tailored to support the integration of AI systems within user environments, providing training and ongoing support to ensure successful adoption.

3.3 Project Management and Oversight

- **Oversight and Operationalization:** Expand on the role of the National AI Center in overseeing the operationalization, adoption, and final handover of AI projects. This includes monitoring project implementation at the AI Hubs and ensuring that projects achieve their intended outcomes.
- **Integration with National Goals:** Further clarify how the governance structure ensures that the project selection and prioritization process align with broader national AI and digital transformation goals.

4. Monitoring and Evaluation

4.1 Monitoring Framework

The progress and performance of the AI Hubs and Apprenticeship Program will be continuously monitored through a set of predefined metrics. Regular reports will be generated by each hub, detailing progress against objectives, budget usage, and project outcomes. The National AI Center will conduct quarterly reviews to assess these reports and adjust as needed.

4.2 Evaluation Methodology

The evaluation of the AI hubs will be conducted through both qualitative and quantitative measures:

- **Quantitative Evaluation:** Includes metrics such as the number of AI systems developed, the number of engineers trained, and project completion rates.

- **Qualitative Evaluation:** Feedback from stakeholders, including apprentices, industry partners, and academic institutions, assessing the impact and effectiveness of the training and projects.

4.3 Risks and Challenges

- **Skill Gaps:** Potential mismatches between training programs and industry needs.
- **Funding Constraints:** Insufficient funding to support the scale and scope of the planned activities.
- **Technology Adaptation:** Rapid changes in AI technology that may outpace curriculum updates.
- **Engagement:** Ensuring consistent engagement from industry and academic partners.
- **Adoption Resistance**: Identify and address potential resistance from users or sectors unfamiliar with AI benefits.
- **Complexity of Integration**: Manage challenges related to the integration of AI into existing systems, ensuring compatibility and user-friendliness.

4.4 Mitigation Strategies:

- Regular alignment checks with industry to adjust training programs.
- Diverse funding sources, including government grants, industry partnerships, and international collaborations.
- Agile curriculum development to incorporate the latest AI advancements.
- Structured partnership agreements and continuous communication channels.
- Adoption Resistance: Identify and address potential resistance from users or sectors unfamiliar with AI benefits.
- Complexity of Integration: Manage challenges related to the integration of AI into existing systems, ensuring compatibility and user-friendliness.

5. Key Performance Indicators (KPIs)

5.1 Specific KPIs

- **Number of AI Systems Developed and Deployed:** Tracks the productivity and impact of the hubs.
- **Apprentice Graduation Rate:** Measures the effectiveness of the training program.
- **Project Adoption Rate by Stakeholders:** Indicates the relevance and utility of developed AI systems.

- **Return on Investment (ROI):** Assesses the economic impact of the AI systems on public and private sectors.
- **Adoption Resistance**: Identify and address potential resistance from users or sectors unfamiliar with AI benefits.
- **Complexity of Integration**: Manage challenges related to the integration of AI into existing systems, ensuring compatibility and user-friendliness.

5.2 Targets and Benchmarks

- Achieve a 90% graduation rate for AI apprentices within the first year.
- Achieve an adoption rate of at least 80% among targeted users within the first year of deployment.
- Maintain high system utilization rates, with quarterly reviews to ensure continuous alignment with user needs and system enhancements.
- Successfully deploy at least 4 AI systems in the first year, with an adoption rate of 75% by stakeholders.
- Attain a positive ROI within three years of each AI system's deployment.

6. Sustainability and Scalability

The AI Hubs and Apprenticeship Program are designed with long-term viability in mind. Scalability is built into the governance structure and project design to ensure that successful initiatives can be replicated and expanded. Future developments will include the establishment of additional AI hubs based on the successful model of the initial hubs, tailored to meet the specific needs and capabilities of different regions across Sri Lanka. This phased expansion will facilitate the gradual buildup of a robust national AI infrastructure, promoting sustainable economic growth and technological advancement.

7. International Benchmarks and Collaborative Opportunities

7.1 Benchmarking with AI Singapore

The success of AI hubs and apprenticeship programs can be greatly informed by looking at established models around the world. AI Singapore's initiatives, such as the 100 Experiments (100E)[4] and the AI Apprenticeship Programme (AIAP),[5] serve as excellent benchmarks for our endeavors in Sri Lanka.

[4] For more information on the 100 Experiments program please refer to https://aisingapore.org/innovation/100e/
[5] For more information on the AIAP program please refer to https://aisingapore.org/innovation/aiap/

- **AI Singapore's 100E Program** is designed to accelerate AI innovation and commercialization across industries. By partnering with different companies to co-create AI projects, the initiative has successfully delivered solutions that are both scalable and impactful. This approach could be mirrored in our AI hubs to foster similar collaborative and innovative environments.
- **The AIAP** of Singapore focuses on equipping recent graduates with the necessary skills and real-world experience to become proficient AI professionals. By adopting a similar model, our AI Apprenticeship Program could enhance the practical skills of participants, ensuring they are industry-ready upon completion.

7.2 Proposing Collaborative Assistance

To maximize the potential of our AI hubs and apprenticeship programs, it is proposed that we seek collaborative assistance from the Singaporean government and AI Singapore. Their expertise and experience in running successful AI programs could provide valuable insights and guidance, helping to accelerate the development and adoption of AI technologies in Sri Lanka.

7.3 Collaboration Benefits:

- **Knowledge Transfer:** Leveraging Singapore's experiences and lessons learned could help avoid common pitfalls and implement best practices from the outset.
- **Curriculum Development:** Assistance in developing a curriculum that reflects the latest trends and technologies in AI, modeled after Singapore's rigorous training programs.
- **Joint Ventures:** Encouraging joint projects between Sri Lankan and Singaporean entities, fostering innovation and cross-border knowledge exchange.

7.4 Implementation Steps

1. **Official Request for Collaboration:** Initiate formal communication with the Singaporean government to express interest in collaboration.
2. **Bilateral Meetings:** Arrange meetings between representatives of Sri Lanka's National AI Center and AI Singapore to discuss potential areas of cooperation.
3. **Memorandum of Understanding (MoU):** Establish an MoU outlining the scope of collaboration, responsibilities, and objectives both parties aim to achieve.
4. **Implementation of Pilot Projects:** Start with small-scale joint projects to fine-tune collaboration mechanisms and ensure effective knowledge transfer.

8. Conclusion

8.1 Summary of Benefits

The AI Hubs and AI Apprenticeship Program represent a transformative initiative within Sri Lanka's broader National AI Strategy, designed to expedite the country's transition into a digitally empowered economy. These programs aim to bridge the current gap in AI skills and infrastructure by establishing dedicated centers for AI excellence and training. The benefits of such initiatives are manifold:

- **Enhanced National Competitiveness:** By fostering a robust ecosystem of AI innovation, Sri Lanka positions itself as a leader in technology within the region, attracting both international investment and global partnerships.
- **Economic Growth:** Targeted AI solutions developed through these hubs will drive efficiency and innovation across key sectors including healthcare, finance, and manufacturing, contributing to economic growth and job creation.
- **Skill Development:** Training and nurturing over 40 AI engineers per hub per year will address the critical skills shortage in the local market, preparing a new generation of workers for the challenges of tomorrow's economy.
- **Social Impact:** By focusing on the deployment of AI systems that cater to national needs, the hubs will directly contribute to improving the quality of life for citizens through enhanced public services and access to cutting-edge technology.

8.2 Call to Action

To realize these benefits, it is imperative that all stakeholders — government bodies, educational institutions, industry leaders, and international partners — collaborate closely to support and implement the AI Hubs and AI Apprenticeship Program. We invite you to join us in this endeavor:

1. **Government and Regulatory Bodies:** Provide supportive policies, funding, and infrastructural support to facilitate the swift and effective establishment of AI hubs.
2. **Academic Institutions:** Partner with the program to align educational curricula with industry needs, ensuring that graduates are well-prepared to contribute to these initiatives.
3. **Industry Leaders:** Engage with the hubs to co-create solutions, provide apprenticeship opportunities, and adopt AI technologies to drive innovation within your operations.
4. **International Partners:** Share expertise, collaborate on research, and help scale successful models from global best practices such as the AI Singapore program.

Together, we can harness the full potential of artificial intelligence to secure a prosperous and sustainable future for Sri Lanka.

References

Citations and references for the development of this whitepaper include:

- AI Singapore Program, 100 Experiments (100E), https://aisingapore.org/innovation/100e/
- AI Singapore Program, AI Apprenticeship Programme (AIAP), https://aisingapore.org/innovation/aiap/
- Sri Lanka's National AI Strategy
- Sri Lanka's Digital Strategy 2030

Annex 11:

White Paper on Enabling Inclusive AI through Local Language Models

Executive Summary

Purpose

This whitepaper articulates the strategic vision for the National Initiative to develop Local Language Large Models (LLMs) in Sinhalese and Tamil. The initiative aims to empower all Sri Lankans by enhancing the accessibility of digital services, supporting educational and governmental initiatives, and preserving the rich cultural heritage embedded in the nation's languages.

Key Proposals

1. **Development of Local Language LLMs:** Building advanced LLMs to support natural language understanding and generation in Sinhalese and Tamil, enhancing public and private sector services.
2. **Data Curation for AI Training:** Establishing robust mechanisms to gather, curate, and manage large-scale language data that respects privacy and ensures representational fairness.
3. **Infrastructure and Partnerships:** Leveraging both local expertise and international partnerships to create a sustainable ecosystem for ongoing AI development.

Benefit Overview

The proposed initiative is designed to deliver substantial benefits across various sectors by:

- **Enhancing Educational Access:** Facilitating more inclusive education through AI-driven tools and resources available in local languages.
- **Improving Government Services:** Increasing efficiency and accessibility in government interactions with the public, ensuring that all citizens can access services in their native languages.
- **Driving Economic Growth:** Fostering innovation in the tech sector by enabling local businesses to integrate advanced AI tools, thereby improving competitiveness in the global market.
- **Cultural Preservation:** Safeguarding linguistic diversity and cultural heritage by embedding local languages in modern digital platforms, thus ensuring cultural knowledge is passed on to future generations.

This initiative aligns closely with Sri Lanka’s National AI Strategy by promoting technological inclusivity and positioning the nation as a leader in the global AI landscape. The development and implementation of LLMs are pivotal to achieving a digitally inclusive society where the benefits of

AI advancements are equitably shared among all citizens. Through strategic partnerships, comprehensive governance, and sustained investment, Sri Lanka can harness the full potential of AI to drive national progress and enhance the quality of life for its people.

1. Introduction

1.1 Context

Sri Lanka, on its journey to becoming a digitally empowered nation, recognizes the transformative power of artificial intelligence (AI) to catalyze national progress, enhance citizen well-being, and bolster its position in the global economy. AI's potential to revolutionize industries such as healthcare, education, agriculture, and public service delivery is immense. However, to harness this potential fully, it is imperative to foster a strong AI ecosystem that not only supports AI development but also ensures its responsible and inclusive application.

The project not only aims to bridge the digital language divide but also addresses significant challenges such as high resource demands, technical complexity, and the need for extensive, unbiased data. Overcoming these challenges through strategic planning and international cooperation will position Sri Lanka at the forefront of inclusive AI technology development, fostering local expertise and promoting global cultural diversity in AI applications.

1.2 Alignment with Sri Lanka's AI and Digital Strategy 2030

The initiative to develop local language large language models (LLMs) aligns closely with several strategic goals outlined in Sri Lanka's National AI Strategy 2023-2028:

Strategy Component	**Alignment with the LLM Initiative**
Enhancing Public Service Delivery	LLMs in local languages will improve accessibility and inclusivity of public digital services for all linguistic groups.
Boosting Economic Competitiveness	By fostering local AI development, these models can stimulate innovation and economic growth within the tech sector.
Fostering Social Inclusion	The use of local languages in AI applications ensures that AI benefits are equitably distributed among all population segments.
Strengthening Global Economic Position	Developing unique AI capabilities can position Sri Lanka as a leader in multilingual AI technologies on the international stage.

Building Digital Infrastructure	Supports the development of AI-driven solutions and platforms, contributing to the broader digital transformation goals.

1.3 Problem Statement

Despite the rapid advancement in AI technologies globally, there remains a significant language gap. Most AI tools are developed for high-resource languages such as English, leaving behind many local languages, including Sinhalese and Tamil spoken in Sri Lanka. This gap poses a risk of cultural erasure and limits the accessibility of AI-driven solutions to a large portion of the Sri Lankan population. Developing LLMs tailored to the linguistic diversity of Sri Lanka is essential not only for preserving cultural heritage but also for ensuring that the benefits of AI advancements are accessible and useful to all citizens, thus supporting the national vision of a digitally inclusive society.

2. Large Language Models

2.1 Relevance and Importance of Local Language LLMs

The relevance of developing local language LLMs lies in bridging the language digital divide, preserving cultural identity, and ensuring that the benefits of AI are accessible to all citizens regardless of their language. This initiative is crucial for:

- **Educational Equity**: Providing educational content and resources in local languages, thereby enhancing learning outcomes.
- **Government Accessibility**: Improving citizen access to government services through natural language processing applications in local languages, thus increasing engagement and satisfaction.
- **Cultural Preservation**: Ensuring that the rich cultural heritage and linguistic nuances of Sri Lanka's languages are maintained and celebrated in the digital age.

2.2 Challenges Related to Costs and Data

- **Cost Challenges**: The high cost of computational resources, the need for specialized hardware, and the ongoing expenses of maintaining and updating the models.
- **Data Challenges**: The extensive need for diverse and comprehensive datasets, ensuring data privacy and ethical usage, and overcoming the bias in AI training processes.

3. Project Proposal

3.1 Project Rationale

The initiative to create local language large language models (LLMs) for Sinhalese and Tamil is strategically vital for fostering technological inclusivity and supporting Sri Lanka's vision to become a regional leader in digital innovation. The models will enable greater accessibility to digital services and government communication for all linguistic groups, promoting equitable societal benefits.

3.2 Methodology and Technology

The development of LLMs for Sinhalese and Tamil will incorporate a multifaceted approach:

1. **Collaboration with Technology Partners**: Partnering with global AI leaders such as OpenAI, Google, and Microsoft, leveraging their advanced technologies and infrastructure to build robust LLMs.
2. **Participation in International Consortia**: Engaging in global multilingual AI projects and consortia which focus on developing multilingual models that can be adapted for local use. This participation helps share costs, risks, and resources, increasing the project's viability and scope.
3. **Use of Open Source Models**: Employing and customizing open-source AI models at local research institutions, allowing for direct control over the training process and adaptability to specific linguistic needs of Sri Lanka.

3.3 Independent Dataset Initiative

Establishing a separate initiative to create datasets for training LLMs, which will proceed concurrently with the model development. This initiative will focus on:

- **Data Collection:** Gathering extensive and varied linguistic data from multiple sources to ensure diverse representation.
- **Data Curation:** Meticulously curating the datasets to reflect the nuances of local languages and dialects, ensuring high-quality training material.
- **Privacy and Ethics Compliance:** Adhering to stringent data privacy and ethical standards to safeguard information and ensure the responsible use of AI.

3.4 Business Plan

The business plan for the initiative will focus on creating a sustainable model through:

- **Public-Private Partnerships:** Engaging with local and international tech companies to share resources and expertise.

- **Government Funding and Grants:** Securing support from national and international grant programs to fund initial development phases.
- **Commercialization:** Developing a licensing model for private companies to use the LLMs in commercial applications, generating ongoing revenue to fund further research and development.

3.5 Timeline and Budget

The project is anticipated to span three years from initial research and development to full deployment:

- **Year 1:** Focus on partnership formation, initial data collection, and beginning model training.
- **Year 2:** Continued model training, initial testing phases with limited public deployment.
- **Year 3:** Full deployment and integration into public and private sector applications.

The estimated budget for the project is $2 million, covering technology acquisition, personnel costs, data collection and processing, and operational expenses.

4. Governance Structure

4.1 Governance Framework

The governance structure for the local language large language models (LLMs) initiative will involve a collaborative framework that includes the National AI Center as the primary coordinator. The framework will also integrate contributions from government departments, academic institutions, private sector partners, and international collaborators. This structured approach ensures comprehensive oversight, strategic alignment, and effective resource management.

4.2 Roles and Responsibilities

- **National AI Center:** Serve as the project lead, overseeing all aspects of the initiative, including funding, compliance, and progress tracking.
- **Technical Advisory Board:** Composed of AI experts, linguists, and data scientists, responsible for guiding the technological and methodological aspects of the LLM development.
- **Data Governance Team:** Ensure the integrity, confidentiality, and compliance of data collection and processing, adhering to both local and international data protection regulations.

- **Project Management Office (PMO):** Handle day-to-day operations, coordinate between different stakeholders, manage timelines, and budget allocations.

4.3 Project Management and Oversight

The PMO will implement standardized project management methodologies such as Agile and PRINCE2 to manage the project life cycle effectively. Regular meetings, comprehensive progress reports, and stakeholder engagement sessions will be institutionalized to ensure transparent communication and timely resolution of issues. Risk management strategies will be proactively developed to address potential delays and other barriers to successful implementation.

5. International Benchmarks and Collaborative Opportunities

5.1 Benchmarking with Leading Models

This section compares Sri Lanka's initiative with successful international examples where local language models have been developed and implemented. Such comparisons will not only justify the project but also help in extracting best practices.

India: Enhancing Accessibility Through Multilingual AI

- **Overview**: India has leveraged AI to address linguistic diversity within its borders, particularly through government-funded projects aimed at developing AI capable of understanding and interacting in multiple Indian languages. This initiative is part of a broader government agenda to make digital services accessible to its entire population, which speaks over 22 officially recognized languages and hundreds of dialects.
- **Impact**: The deployment of multilingual AI has significantly improved accessibility and efficiency in public services. For example, AI-powered interfaces in local languages have been implemented in various government services, helping to reduce language barriers and enhance citizen engagement across India's diverse linguistic landscape.
- **References**: Details on specific projects and their outcomes can be found in publications by the Ministry of Electronics and Information Technology and related policy documents.[6]

[6] https://www.meity.gov.in/

European Union: Fostering a Multilingual Digital Single Market

- **Overview**: The European Union has been a pioneer in promoting multilingualism within digital services, driven by the goal to ensure that all EU citizens can access digital content in their native languages. This effort is facilitated by substantial funding from EU frameworks like Horizon 2020, which support research and development in language technologies.
- **Impact**: Projects under these frameworks have led to significant advancements in AI-driven translation services and language understanding technologies, which are crucial for businesses and public services operating across the diverse linguistic regions of the EU.
- **References**: More detailed information and success stories can be accessed through the European Commission's digital strategy documents[7] and Horizon 2020 project summaries.[8]

China: Leading with Comprehensive AI Language Models

- **Overview**: In its quest to become a global AI superpower, China has emphasized the development of AI technologies that not only focus on Mandarin but also include other Chinese dialects and minority languages. This initiative is integral to China's AI development plan, which aims to achieve broad technological integration across all sectors of society.
- **Impact**: The initiative has enhanced communication in educational, governmental, and commercial sectors, making AI technologies more inclusive and widely adopted throughout the country.
- **References**: A comprehensive outline of these strategies is available in China's Next Generation AI Development Plan, which provides insights into the objectives and strategies of China's AI ambitions.

5.2 Proposing Collaborative Assistance

This section would explore potential collaborative opportunities with international AI initiatives to leverage their technologies, insights, and innovations.

- **Partnership Opportunities**: Engage with global AI consortia like the Partnership on AI, which includes stakeholders from various countries working on inclusive AI technologies.
- **Funding and Resource Sharing**: Opportunities to tap into international grants and funding resources aimed at AI development for cultural and linguistic preservation.

[7] https://digital-strategy.ec.europa.eu/en
[8] https://ec.europa.eu/programmes/horizon2020/en

5.3 Collaboration Benefits

Outline the benefits of international collaboration:

- **Shared Knowledge**: Access to cutting-edge AI research and development.
- **Cost Efficiency**: Shared resources can reduce overall project costs.
- **Enhanced Innovation**: Diverse international perspectives can foster innovative solutions.

5.4 Implementation Steps

Steps to initiate and manage these collaborations:

- **Initial Workshops and Seminars**: To engage potential international partners.
- **Joint Pilot Projects**: To evaluate the feasibility of expanded cooperation.
- **Long-term Strategic Agreements**: Formalize partnerships with detailed roles and responsibilities.

6. Monitoring and Evaluation

6.1 Monitoring Framework

The initiative will be monitored through a series of key performance indicators (KPIs) related to model accuracy, user engagement, and system robustness. Monitoring tools and AI analytics platforms will be utilized to continuously assess the performance of the LLMs against these KPIs, providing real-time feedback for ongoing improvement.

6.2 Evaluation Methodology

Evaluation will be conducted using both quantitative and qualitative methods. Quantitative measures will include model performance tests, user satisfaction surveys, and adoption rates, while qualitative assessments will focus on stakeholder feedback and expert reviews. External audits will also be conducted annually to ensure the project meets all stated objectives and compliance requirements.

6.3 Risks and Challenges

Potential risks include technological challenges, data privacy concerns, funding shortages, and slower-than-expected user adoption rates. Strategic partnerships and robust data management protocols will be critical in mitigating these risks.

6.4 Mitigation Strategies

To address these risks, the project will:

- **Adopt scalable technologies** to adapt to increasing demands and unforeseen challenges.
- **Implement strict data security measures** to protect user data and comply with PDPA and other privacy laws.
- **Secure diversified funding** from government, private sector, and international donors to ensure financial stability.
- **Promote widespread adoption** through targeted outreach and comprehensive training programs for end-users.

By establishing a clear governance structure, and robust monitoring and evaluation processes, the initiative aims to develop LLMs that are not only technologically advanced but also socially beneficial and widely accepted across Sri Lanka. This structured approach ensures that the project aligns with national AI strategies and effectively contributes to the digital empowerment of Sri Lanka's diverse linguistic communities.

7. Key Performance Indicators (KPIs)

7.1 Specific KPIs

To effectively measure the impact of the local language large language model (LLM) initiative, the following KPIs will be utilized:

- **Model Accuracy and Performance**: Regularly evaluated using precision, recall, and F1-score metrics to ensure the models accurately reflect the nuances of the local languages.
- **Adoption Rates**: Tracking the uptake of the LLMs across various sectors such as education, government services, and local businesses.
- **User Satisfaction**: Measured through surveys and feedback mechanisms to gauge the utility and user-friendliness of the applications developed using the LLMs.

7.2 Targets and Benchmarks

- **Model Performance**: Achieve a benchmark accuracy rate of 95% on standard language processing tasks within the first year post-deployment.
- **Adoption Rate**: Target a 50% adoption rate in targeted sectors within two years.
- **User Satisfaction**: Maintain an average user satisfaction score of 4.5 out of 5.

8. Sustainability and Scalability

The initiative will focus on creating a self-sustaining model through the following approaches:

- **Public-Private Partnerships**: Collaborate with industry leaders to share technological resources and expertise.
- **Community Involvement**: Continuously engage with linguistic communities to enrich the datasets and ensure the models remain relevant and up-to-date.
- **Government Funding and Grants**: Secure ongoing funding from national and international sources to support the scalability of the technology across different sectors.

9. Conclusion

9.1 Summary of Benefits

The development of local language LLMs in Sri Lanka represents a transformative potential to bridge the digital language divide, enhance public access to technology, and promote cultural preservation. The initiative will:

- Enhance accessibility to digital services in local languages.
- Support the growth of local businesses through advanced AI tools.
- Foster educational opportunities by providing resources in native languages.

9.2 Call to Action

We invite stakeholders from all sectors—government, business, academia, and the public—to engage with this initiative. Your involvement is crucial to shape the future of AI in Sri Lanka, ensuring it is inclusive, equitable, and representative of our diverse linguistic heritage.

References

- **Schwartz Reisman Institute**: On the development and ethical implications of AI technologies.
- **Brookings Institution**: Studies on AI inclusivity and the digital divide.
- **Local AI Research**: Papers and findings from universities and research institutions within Sri Lanka.
- For India’s initiatives, publications by the Ministry of Electronics and Information Technology.

- For the EU’s digital strategy, check the European Commission’s Digital Strategy.
- For China’s AI development plans, you can refer to the official government publication.

Annex 12:

Empowering Digital Governance- Concept Note on National Information Chatbots in Sri Lanka

Executive Summary

Purpose

The primary purpose of the National Information Chatbot Program is to revolutionize the accessibility and efficiency of government services across Sri Lanka, particularly for citizens outside major urban centers like Colombo. By leveraging advanced AI technology, this initiative aims to establish a robust, user-friendly platform where citizens can easily interact with and access necessary government services electronically, without the need to physically visit government offices.

Key Proposals

This proposal encompasses the development and deployment of a national platform dedicated to the creation, hosting, and management of AI-powered chatbots. These chatbots will support local languages and be accessible across multiple digital platforms, ensuring that every citizen can benefit regardless of their location or primary language. The initiative consists of two main projects:

1. **National Platform Development**: Establishing the infrastructure for chatbot creation, hosting, and access.
2. **Content Development Funnel**: Systematically creating and maintaining chatbots tailored to specific government services, with continuous updates and improvements.

Benefit Overview

The National Information Chatbot Program is expected to deliver multiple significant benefits:

- **Enhanced Access to Services**: Citizens, especially those in remote areas, will be able to obtain information and complete transactions with ease, reducing the digital divide.
- **Increased Efficiency**: Automating responses to common inquiries will significantly decrease the workload on human staff and streamline government operations.
- **Cost Reduction**: By reducing the necessity for physical infrastructure and in-person interactions, the program will lower operational costs for government services.
- **Improved Citizen Satisfaction**: Faster, more accurate responses to inquiries and the ability to handle high volumes of interactions will increase overall citizen satisfaction.
- **Scalability and Innovation**: The platform will be designed to scale and evolve, incorporating additional services and technologies over time, thus future-proofing the government's digital interaction capabilities.

This executive summary underscores the alignment of the chatbot initiative with the national goals of digital transformation and public service improvement, setting the stage for detailed discussions in the subsequent sections of the whitepaper.

1. Introduction

1.1 Context

Sri Lanka's aspirations to harness artificial intelligence (AI) extend beyond mere technological adoption; they are a strategic endeavor to catalyze national progress and elevate the quality of life for its citizens. Currently, obtaining information about government services, especially for those residing outside the urban epicenter of Colombo, involves cumbersome processes and physical visits to government offices. By integrating AI-driven chatbots, Sri Lanka can revolutionize how public services communicate, providing seamless, efficient, and accessible services to all citizens, regardless of their location.

1.2 Alignment with Strategic Goals

The proposed national information chatbot program aligns with several strategic goals outlined in Sri Lanka's National AI Strategy and Digital Strategy 2030. The following table illustrates this alignment:

Strategic Document	**Goal/Initiative**	**Alignment with Chatbot Program**
Digital Strategy 2030	Digital transformation of government services.	Chatbots as a tool for transforming how services are delivered digitally.
National AI Strategy	Improve public service delivery using AI.	Chatbots to enhance accessibility and efficiency of public services.
	Enhance digital infrastructure and skills.	Utilizing and further developing AI capabilities and digital literacy through the deployment of chatbots.
	Foster public-private partnerships.	Collaborative efforts in chatbot development and deployment.

1.2 Problem Statement

The challenge of accessing government services is particularly acute for Sri Lanka's rural population, who often face logistical and financial burdens when required to engage with centralized government offices in Colombo. The existing digital divide further exacerbates this issue, as many citizens

lack the necessary tools and skills to access digital services effectively. The national information chatbot program aims to bridge this gap by providing a user-friendly, multilingual platform that facilitates easy access to government services, thus ensuring inclusivity and enhancing the citizen-government interaction landscape. This initiative is pivotal not only for improving service delivery efficiency but also for strengthening trust and satisfaction among citizens, aligning with the broader vision of a digitally empowered Sri Lanka.

2. Operational Plan

2.1 Objective

The primary objective of the National Information Chatbot Program is to establish a centralized platform for creating and hosting AI-powered chatbots that provide streamlined access to government services. This program aims to enhance the accessibility of these services for all citizens, particularly those outside urban areas like Colombo, by offering support in local languages and across multiple digital platforms.

2.2 Problem Statement for Non-Technical Stakeholders

Accessing government services in Sri Lanka, especially from rural or less urbanized regions, presents significant challenges, including the need for travel to city centers and complex bureaucratic processes. The proposed chatbot program seeks to mitigate these issues by leveraging AI technology to deliver government services efficiently and inclusively. This initiative is crucial for ensuring that all citizens can benefit from the digital economy, irrespective of their geographical location or tech-savviness, aligning with Sri Lanka's vision for a digitally empowered nation.

2.3 Scope and Deliverables

Scope

The project encompasses the development of a national chatbot platform and a development funnel for creating and maintaining chatbots tailored to various government services.

Key Deliverables

- A robust national platform for chatbot creation and hosting.
- A series of operational chatbots for key government services.
- Integration capabilities for future expansion to include transactional services in Phase II.

Phases

- **Phase I:** Focus on information and communication services.
- **Phase II:** Extend to transactional functionalities using APIs from the national digital strategy.

2.4 Project Selection and Prioritization

- **Master List Development:** Compile a comprehensive list of government services that would benefit most from chatbot integration, prioritizing based on ease of implementation, high public demand, and strategic importance.
- **Project Evaluation and Prioritization:** Evaluate potential chatbot projects based on criteria such as expected impact, resource requirements, and alignment with the national AI strategy.
- **Operationalization and Implementation:** Develop a phased implementation plan, starting with pilot projects for critical services followed by a wider rollout based on the lessons learned and feedback received.

2.5 Strategic Importance

Implementing this chatbot initiative is strategically crucial as it aligns with global digital transformation trends and positions Sri Lanka at the forefront of innovative public service delivery. By enhancing the accessibility and efficiency of government interactions, the program supports broader goals of increased civic engagement, improved public satisfaction, and heightened transparency in government operations.

2.6 Implementation Plan

- **Project Initiation:** Establish a project management office to oversee the program. Engage with technology partners and stakeholders to finalize the project framework and governance structure.
- **Stakeholder Engagement:** Conduct workshops and consultation sessions with government agencies, IT experts, and the public to gather input and align the project with user needs.
- **Resource Allocation:** Secure funding and allocate resources for the initial development phase, including technology infrastructure and human resources.

3. Adoption-Centric Implementation Strategy

To ensure the success of the National Information Chatbot Program, it is critical to focus on the adoption of the technology by its end-users—Sri Lanka's citizens. This chapter outlines a strategic approach to foster widespread acceptance and use of chatbots, ensuring that all citizens, particularly those in remote areas, can effectively engage with government services via this new platform.

Adopting a user-centric approach in the implementation of the National Information Chatbot Program is essential for its success. By focusing on user engagement, inclusive design, continuous feedback, and community integration, the initiative is positioned to transform public access to government services, making it more efficient, accessible, and responsive to the needs of all Sri Lankans.

We encourage all stakeholders, including government officials, technology partners, and the community at large, to engage actively with this initiative. Your involvement is crucial in shaping a digital future that is accessible, efficient, and equitable for every citizen.

3.1 Understanding User Needs and Ensuring Accessibility

- **User Research:** Engaging directly with citizens through surveys, focus groups, and community forums to understand their needs, preferences, and barriers to digital service adoption. This foundational step aims to tailor the chatbot functionality to real-world requirements and cultural contexts.
- **Inclusive Design:** Developing a user interface that is intuitive and easy to navigate for all users, including those with limited digital skills or disabilities. The interface will support multiple local languages and dialects, ensuring that no user is left behind due to language barriers.

3.2 Iterative Development and Community Engagement

- **Prototype Testing and Iterative Feedback:** Implementing an agile development process that includes cycles of user testing and feedback integration. Prototypes will be refined based on real user interactions, making adjustments to improve user experience continually.
- **Community-Based Workshops:** Organizing workshops in community centers and local institutions to demonstrate the use of chatbots and educate citizens on how they can leverage these tools to access government services conveniently.

3.3 Awareness and Training Initiatives

- **Awareness Campaigns:** Launching extensive multimedia campaigns that inform the public about the chatbot services, focusing on the benefits and simplicity of use. These campaigns will utilize local media channels, social media, and community bulletins to ensure broad coverage.
- **Training and Support:** Setting up help desks and online support resources to assist users in learning to interact with the chatbots. These resources will be critical in building confidence among users, particularly in rural or underserved areas.

3.4 Strategic Partnerships and Platform Integration

- **Collaboration with Local Organizations:** Partnering with local NGOs, community leaders, and educational institutions to promote the chatbot services and facilitate trust-building within communities.
- **Multi-Platform Availability:** Ensuring that the chatbots are accessible on platforms that users are already familiar with, such as popular social media networks and mobile messaging applications, to reduce the learning curve and enhance accessibility.

3.5 Monitoring, Feedback, and Continuous Improvement

- **Real-Time Monitoring and Analytics:** Utilizing advanced analytics to monitor how the chatbots are used and identifying any usage patterns or areas for improvement. This data will help understand user engagement levels and pinpoint features that may require optimization.
- **Adaptive Strategies Based on User Feedback:** Maintaining a dynamic approach to user feedback to continually refine and improve the chatbot services. This includes regular updates and enhancements based on suggestions and criticisms received from the user base.

4. Governance Structure

4.1 Governance Framework

The governance framework for the National Information Chatbot Program will be established to ensure strategic alignment, operational efficiency, and compliance with national regulations. This framework will consist of a steering committee, an operational management team, and a technical support team. The steering committee will include representatives from key government ministries, IT experts, and stakeholders from the public sector.

4.2 Roles and Responsibilities

- **Steering Committee**: Provide strategic direction, approve major decisions, and mobilize resources.
- **Operational Management Team**: Oversee daily operations, coordinate between different government agencies, and manage the development funnel.
- **Technical Support Team**: Handle technical aspects including AI model training, data management, and platform maintenance.

4.3 Project Management and Oversight

A robust project management office (PMO) will be established to ensure that the project adheres to timelines, budgets, and quality standards. The PMO will use proven project management methodologies such as Agile for iterative development and deployment of chatbot services.

5. Monitoring and Evaluation

5.1 Monitoring Framework

The program will implement a comprehensive monitoring system that uses digital analytics tools to track user engagement, functionality usage, and user satisfaction. Key Performance Indicators (KPIs) will be established to measure effectiveness and efficiency.

5.2 Evaluation Methodology

Evaluation will be conducted through periodic reviews and assessments involving user surveys, system audits, and performance analysis. These evaluations will help in understanding the impact of the chatbots on public service delivery and user satisfaction.

5.3 Risks and Challenges

Potential risks include technological failures, data privacy concerns, and low user adoption rates. These will be mitigated through rigorous testing, adherence to data protection laws, and continuous user education campaigns.

5.4 Mitigation Strategies

Strategies include developing a robust technical infrastructure to handle scale, implementing strict data security measures, and conducting ongoing public awareness programs to increase adoption.

6. Key Performance Indicators (KPIs)

6.1 Specific KPIs

- **User Engagement Rate**: Measure the frequency and depth of user interaction with chatbots.
- **Resolution Effectiveness**: Percentage of queries successfully resolved without human intervention.
- **User Satisfaction Score**: Gathered through direct feedback mechanisms integrated into the chatbot interface.

6.2 Targets and Benchmarks

Set realistic targets for each KPI based on baseline data collected during the pilot phase. Benchmarks will be adjusted annually based on performance and technological advancements.

7. Sustainability and Scalability

To ensure the initiative's long-term sustainability and scalability, the program will:

- **Adopt Modular Design**: Design the chatbot platform to be modular to easily integrate new services and technologies.
- **Ensure Financial Viability**: Explore models for sustainable funding, including potential monetization of certain premium services.
- **Foster Partnerships**: Develop partnerships with tech companies and academic institutions to keep pace with AI advancements and leverage emerging technologies.
- **Plan for Scalability**: Prepare the infrastructure to scale up to accommodate increasing user numbers and service demands.

This structured approach ensures that the National Information Chatbot Program not only meets current needs but is also adaptable to future requirements and technologies, ensuring it remains a valuable asset for public service delivery.

8. International Benchmarks and Collaborative Opportunities

8.1 Benchmarking with Leading Models

To ensure the success of the national information chatbot program, it is crucial to benchmark against leading international models. This analysis will focus on countries that have successfully implemented AI in public sector communication, such as Estonia's integration of AI in public services and Singapore's use of chatbots for public feedback and queries. These benchmarks will help identify best practices in chatbot functionality, user engagement, and multi-lingual support, providing a robust foundation for the local implementation.

8.2 Proposing Collaborative Assistance

Exploring international collaboration offers significant advantages. Collaborative efforts could include partnerships with global tech giants for advanced AI technologies and engaging with international public sector AI initiatives to share knowledge, tools, and strategies. This collaboration will not only enhance the technical capabilities of the national platform but also ensure that the program remains at the forefront of digital service innovation.

8.3 Collaboration Benefits

Collaborations can provide access to cutting-edge technology, expedite the development process, and offer new insights into user engagement strategies. Additionally, they can help navigate common regulatory and security challenges associated with deploying AI solutions in public sectors globally.

8.4 Implementation Steps

Implementation of international collaborations will involve:

- Identifying potential international partners and technology providers.
- Establishing formal agreements and collaboration frameworks.
- Joint development workshops and technology transfer sessions.
- Regular review and adaptation of international best practices to local contexts.

9. Conclusion

9.1 Summary of Benefits

The National Information Chatbot Program is set to transform how citizens interact with government services, making these interactions more accessible, efficient, and user-friendly. Key benefits include:

- Enhanced accessibility of government services across diverse regions, reducing the urban-rural information gap.
- Improved efficiency in handling queries and providing services, reducing operational costs and time.
- Increased citizen satisfaction through timely and effective communication.

9.2 Call to Action

To realize these benefits, it is imperative for all stakeholders, including government bodies, technology partners, and the public, to actively engage with and support this initiative. Steps include:

- Government agencies to prioritize the integration of chatbot services within their communication channels.
- Technology partners to provide continuous support in terms of software updates, security enhancements, and system scalability.

- Citizens to participate in feedback programs to help refine and improve the chatbot functionalities.

Engagement at all levels will ensure that the program not only meets its current objectives but also adapts to future needs and technologies, securing its long-term success and relevance.

Annex 13:

Guidance Note on Advancing Sri Lanka's Global AI Readiness Rankings

An approach to increasing Sri Lanka’s Global Ranking in AI Readiness

Assessing the effectiveness of our AI journey to realize our goals of inclusion, social good, and sustainable growth is critical. Related to this is the importance of ensuring that we improve our global rankings in relation to AI. Globally, assessing a country's AI readiness has gained significance, with the Oxford Insights' Government AI Readiness Index serving as a prominent benchmark.

Improvements in the Oxford Insights' Government AI Readiness Index can significantly benefit Sri Lanka by attracting foreign investment and boosting local start-ups through enhanced credibility in the global AI sector, thus driving economic growth and creating high-skill jobs. Higher rankings in indicators such as regulatory quality, data protection, and digital capacity can stimulate technological innovation and improve public services. Enhanced scores in human capital and R&D spending can foster a skilled workforce and attract international collaborations. Societal benefits include reducing the digital divide and promoting inclusive growth through better internet access and ICT skills. Additionally, improved infrastructure and data governance scores can support sustainable practices, positioning Sri Lanka as a global AI leader and contributing to long-term national development and prosperity.

This document presents a comprehensive analysis of Sri Lanka's National AI Strategy, examining how its various components align with the indicators measured by the Oxford Insights' Government AI Readiness Index. By evaluating the strategy's initiatives and their potential impact on Sri Lanka's scores across the index's three pillars—Government, Technology Sector, and Data and Infrastructure—this analysis aims to highlight how the effective implementation of the strategy can enhance Sri Lanka's overall AI readiness and elevate its position in global rankings.

Through this in-depth exploration, we seek to provide valuable insights into Sri Lanka's strategic approach to AI and its potential to drive the country's transformation into a regional and global leader in AI readiness and adoption.

Government Pillar

1. Vision

Sri Lanka's National AI Strategy provides a clear vision for implementing AI, aiming to "*rapidly accelerate the responsible development and adoption of AI to realize a digitally empowered Sri Lanka that fosters innovation, inclusion, social good, and sustainable growth*." This comprehensive vision aligns with the UN Sustainable Development Goals and builds upon the country's Digital Strategy 2030. Having a published national AI strategy should significantly boost Sri Lanka's score in this indicator.

2. **Governance and Ethics**

   The strategy emphasizes the importance of developing a robust AI governance framework, including principles, guidelines, and best practices for responsible AI development. It also stresses the need to update existing laws and regulations to address AI governance gaps. Implementing these measures should improve Sri Lanka's scores in the data protection and privacy legislation, cybersecurity, regulatory quality, and national ethics framework indicators. The strategy's focus on accountability and public scrutiny of AI initiatives could also boost its accountability indicator score.

3. **Digital Capacity**

   The strategy outlines plans to improve digital government services and infrastructure, which should positively impact Sri Lanka's scores in the online services and foundational IT infrastructure indicators. Its emphasis on promoting investment in emerging technologies could improve the respective indicator score.

4. **Adaptability**

   By establishing a dedicated organization (NCAI) to drive AI adoption and continuously review and update the AI strategy, Sri Lanka demonstrates a commitment to responsiveness and effective governance. This could improve scores in the government effectiveness and responsiveness to change indicators. The strategy's plan to develop procurement guidelines for AI could also boost the procurement data indicator score.

Table 1: Coverage of Sub-indicators of Government Pillar

Dimension	Oxford Insights Indicator	Sri Lanka AI Strategy Impact

Vision	National AI Strategy (Y/N)	Comprehensive National AI Strategy aligns with global best practices
Governance and Ethics	Data protection and privacy legislation	Establishment of Responsible AI Framework and alignment with Personal Data Protection Act
Governance and Ethics	Cybersecurity	Alignment with upcoming National Cyber Security bill
Governance and Ethics	Regulatory quality	Focus on ethical AI development and governance
Governance and Ethics	National ethics framework	Responsible AI Framework ensures ethical standards
Governance and Ethics	Accountability	Transparency and accountability measures in AI governance
Digital Capacity	Online services	Enhancement of online services through AI
Digital Capacity	Foundational IT infrastructure	Investment in scalable, sustainable digital infrastructure
Digital Capacity	Government promotion of investment in emerging technologies	Promotion of AI adoption in public and private sectors
Adaptability	Government effectiveness	Agile governance and adaptive approach to AI development
Adaptability	Government's responsiveness to change	Continuous impact assessments and iterative improvements
Adaptability	Procurement data	Improvement in government procurement processes for AI

Technology Sector Pillar

1. **Maturity**

   The strategy's initiatives to stimulate AI adoption in the private sector, such as supporting AI start-ups and SMEs, fostering innovation hubs, and attracting international AI companies, could lead to an increase in the number of AI and non-AI tech companies and the value of ICT services and goods trade.

2. **Innovation Capacity**
   Measures to create a conducive business environment for AI innovation, provide grants for AI development, and facilitate access to cloud credits and infrastructure could improve scores in the indicators measuring R&D spending, company investment in emerging technologies, and the number of AI research papers. Efforts to reduce compliance burdens for SMEs could improve the time spent dealing with government regulations indicator.

3. **Human Capital**
   The strategy's comprehensive skills development initiatives, including integrating AI into education curricula, offering targeted training programs, promoting STEM education, and encouraging AI entrepreneurship among students, should positively impact scores in the ICT skills, STEM graduates, and quality of engineering and technology education indicators. The focus on gender inclusivity could also improve the female STEM graduates indicator.

Table 2: Coverage of Sub-indicators of Technology Pillar

Dimension	Oxford Insights Indicator	Sri Lanka AI Strategy Impact
Maturity	Number of AI unicorns	Support for AI start-ups and attraction of international AI companies
Maturity	Number of non-AI technology unicorns	Support for technology start-ups
Maturity	Value of trade in ICT services (per capita)	Promotion of AI and ICT trade
Maturity	Value of trade in ICT goods (per capita)	Enhancement of ICT goods trade
Maturity	Computer software spending	Increased investment in AI and software
Innovation Capacity	Time spent dealing with government regulations	Business-friendly regulatory environment
Innovation Capacity	VC availability	Increased venture capital availability through supportive policies

Innovation Capacity	R&D spending	Promotion of AI R&D through grants and collaborations
Innovation Capacity	Company investment in emerging technology	Support for AI innovation and entrepreneurship
Human Capital	Graduates in STEM	Enhanced education and training programs
Human Capital	GitHub users per thousand population	Promotion of AI literacy and skills development
Human Capital	Female STEM graduates	Focus on inclusivity and equitable education
Human Capital	Quality of engineering and technology higher education	Improvement of higher education quality
Human Capital	ICT skills	Comprehensive skills development initiatives

Data and Infrastructure Pillar

1. **Data Availability**
   Sri Lanka's plans to develop a comprehensive data strategy and governance framework, reactivate its open data portal, establish data sharing mechanisms, and promote a data-sharing culture could significantly improve its scores in the open data, data governance, and statistical capacity indicators. Efforts to enhance digital literacy and access could boost scores in the mobile subscriptions and internet access indicators.

2. **Data Representativeness**
   While the strategy does not explicitly address the gender gap in internet access or the cost of internet-enabled devices, these aspects are covered in Sri Lanka’s Digital Strategy 2030. Proper implementation of Digital Strategy 2030 and the AI Strategy’s overall focus on inclusive digital transformation and expanding connectivity would contribute to improving these indicators.

3. **Infrastructure**

Initiatives to invest in secure, scalable, and sustainable digital and data infrastructure, expand high-speed connectivity, develop shared AI platforms, and promote energy-efficient technologies should enhance Sri Lanka's scores in the indicators measuring telecommunications infrastructure, broadband quality, and adoption of emerging technologies. Plans to develop an AI cloud platform could also improve its score in the supercomputer's indicator.

Table 3: Coverage of Sub-indicators of Data and Infrastructure Pillar

Dimension	Oxford Insights Indicator	Sri Lanka AI Strategy Impact
Infrastructure	Telecommunications infrastructure	Investment in telecommunications infrastructure
Infrastructure	Supercomputers	Development of energy-efficient AI cloud computing platforms
Infrastructure	Broadband quality	Expansion of broadband connectivity
Infrastructure	5G infrastructure	Development of 5G infrastructure
Infrastructure	Adoption of emerging technologies	Promotion of AI and emerging technologies
Data Availability	Open data	Promotion of open data and responsible data practices
Data Availability	Data governance	Development of robust data governance framework
Data Availability	Mobile-cellular telephone subscriptions	Enhancement of mobile connectivity
Data Availability	Households with internet access	Improvement of internet access
Data Availability	Statistical capacity	Enhancement of statistical capacity
Data Representativeness	Gender gap in internet access	Reduction of digital divide
Data Representativeness	Cost of internet-enabled device relative to GDP per capita	Affordability of internet-enabled devices

In conclusion, Sri Lanka's National AI Strategy comprehensively addresses many of the key components measured by the Oxford Insights' Government AI Readiness Index. By successfully implementing the outlined initiatives and continuously monitoring and refining its approach, Sri Lanka could significantly improve its overall ranking and scores across the three pillars of the index. The strategy's strong alignment with international best practices and its focus on responsible, inclusive, and sustainable AI development position Sri Lanka well to become a regional leader in government AI readiness.