Final Report:
AI For Social Good, Strengthening Capabilities & Governance
Case Studies of Thailand and Bangladesh

APRU

Google

In partnership with the United Nations Economic and Social Commission for Asia and the Pacific

Final Report:
AI For Social Good, Strengthening Capabilities & Governance
Case Studies of Thailand and Bangladesh

About APRU:
As a network of leading universities linking the Americas, Asia, and Australasia, APRU (the Association of Pacific Rim Universities) brings together thought leaders, researchers, and policy-makers to exchange ideas and collaborate on practical solutions to the challenges of the 21st century.

apru.org
info@apru.org

Association of Pacific Rim Universities (APRU)
Unit 902, Cyberport 2, 100 Cyberport Road, Hong Kong

In partnership with the United Nations Economic and Social Commission for Asia and the Pacific

Case Study: AI For Social Good, Strengthening Capabilities & Governance

Executive Summary

The AI for Social Good Strengthening Capabilities and Governance Frameworks in Asia and the Pacific was a collaboration between the Association of Pacific Rim Universities (APRU), the United Nations Economic and Social Commission for Asia and the Pacific (United Nations ESCAP), and government partners in Bangladesh and Thailand. The overall goal was to support the development of country-specific AI governance frameworks and capabilities to enable transparent ecosystems and AI solutions for socio-economic challenges. The project brought together academic researchers and government stakeholders through a series of workshops and meetings to formulate evidence-based policies and strategies. Two research teams produced country case studies on leveraging AI for maternal health in Bangladesh, with two other research teams addressing digital health governance and data governance for poverty alleviation in Thailand.

Key findings across the research highlighted barriers currently inhibiting effective AI adoption and provided recommendations to address these.

Bangladesh: Mobilizing AI for Maternal Health

The Bangladesh Maternal Health project examined the application of AI innovations to enhance pregnancy care and outcomes. Findings revealed AI's potential to assist community health workers through personalized guidance and efficiency tools. However, barriers around marginalized groups' digital access, literacy divides, sociocultural restrictions, and infrastructure limitations currently constrain user adoption. Therefore, strategic basic digitization efforts would need to focus on consolidating systems, expanding facilities' capabilities, and supplying expectant mothers and healthcare providers with universally accessible mobile tools to establish foundations for advanced AI integration. Recommendations thus centered on completing digitization of health systems to feed future AI while immediately instituting widespread mobile appointment reminder systems to bolster timely monitoring while ensuring the quality of care.

Bangladesh: AI for Pregnancy Monitoring

The Bangladesh Pregnancy Monitoring project assessed the introduction of AI-enabled pregnancy monitoring. Findings exposed challenges around motivational issues in transitioning providers to electronic systems. Unreliable connectivity between urban centers and rural facilities also undercuts robust AI. To realize AI's future potential for automated patient support, recommendations targeted strengthening underlying infrastructure, integrating health record systems, and improving healthcare providers' access to computers. Multisectoral coordination can help transform engagement into implementation by resolving systemic technology access gaps limiting AI capabilities currently.

Thailand: Responsible Data Sharing for AI Innovation in Healthcare

Findings exposed barriers from manual processes, resource asymmetry, complex regulations, and legal uncertainties that restrict health data exchanges in Thailand. This inhibits healthcare improvements from AI systems dependent upon data. While national strategies signify progress in digital transformation, targeted actions around providing guidelines, exchange platforms, regulatory sandboxes, and securing data governance are necessary to realize the potential of technological innovations to elevate services. Key recommendations therefore centered on clearly communicating codes of practice for data sharing, enforcing standards through government units, exploring experimental legal environments to formulate optimal regulation, and organizing Public Private Dialogue for developing regulatory sandboxes.

Thailand: Enhancing Information Sharing for The People Map and Analytics Platform (TPMAP)

Findings revealed cultural obstacles within bureaucratic silos stemming from protective approaches to data along with legal ambiguity over new privacy laws that block integration initiatives. With gaps in internal data flows, the TPMAP advanced analytics platform cannot fulfill its anti-poverty potential. But high-level leadership directives, collaboration drives, and test cases to reduce uncertainty can reshape these rigidities. Key recommendations emphasized sponsoring demonstrations of appropriate data sharing practices and intensifying cross-agency data sharing through publicity efforts as well as integrating NECTEC staff with local TPMAP committees, and leadership support to boost data governance.

Advancing the viability of research-based policies

The project cultivated valuable cross-learning and strengthened relationships between researchers and policymakers through its collaborative approach. Unlike typical academic or private sector collaborations, the project's cooperative format put specific emphasis on working closely with government agencies up front, identifying and exploring areas of need while focusing on co-designing relevant research questions enabling specific priority alignment alongside embedded learning, and integrated knowledge sharing that enhanced impact-driven policy translation centered on public needs. Continuous engagement via meetings and workshops enabled the co-design of practical recommendations tailored to local contexts, supporting their implementation viability.

Mutual participation between government and academic teams built connections while granting researchers access to on-the-ground insights from various policy stakeholder groupings. Meanwhile, officials obtained exposure to leading theoretical frameworks and global best practices from the research teams. This blending of applied and technical knowledge produced actionable policy tools for real-world application.

Convening research collaborations simultaneously created a positive cohort effect. Shared timelines, group interactions, and continuous discussions with peer reviewers as constructive contributors and critical friends promoted identification of systemic gaps, sparking modifications that enhanced relevance. Presentations at the culminating summit also allowed teams to inspire comprehensive perspectives across sectors crucial for balanced AI ecosystems.

Overall, the project's interactive format supported impact-driven policy translation centered on societal needs. It facilitated practical learning for both academic and government partners through joint analysis of pressing challenges. This co-creative approach could serve as an engaging model for future research collaborations aiming to generate evidence-based insights for decision-makers and develop equitable, ethical frameworks for emerging technologies through participatory design.

Table of Contents

Background

The **AI for Social Good: Strengthening Capabilities and Governance Frameworks in Asia and the Pacific** engagement aimed to provide active support in the development of country-specific AI governance frameworks and national capabilities to build transparent ecosystems and develop AI solutions that tackle socio-economic challenges. United Nations ESCAP and APRU, with funding from Google.org, convened a network of regional scholars to formulate policies and strategies in collaboration with Bangladesh and Thailand governments that support, advance, and maximize AI for Social Good.

The initiative was in response to harnessing the potential artificial intelligence offers to provide technological solutions to complex challenges in advancing the SDGs for the 2030 Agenda in the realm of sustainable development and recovery from the COVID-19 pandemic.

The objectives of the engagement were to:

- Identify specific information needs and existing research gaps that need to be addressed to inform the plans of Bangladesh and Thailand government agencies.
- Develop research to address identified information needs and research gaps by drawing on academic, industry, and other experts from the established network.
- Support government agencies and their key stakeholders in applying research insights to develop enabling AI policy frameworks and build AI capabilities for social good.

The engagement convened government and academic researchers in two country workshops, and a summit to align the research findings to government and country needs, and identify ways to translate them into policy. It pooled together nuanced insights to address complex challenges in the selected research topics. The collaborative process revealed frameworks to aid AI-related policymaking.

The engagement also built on the insights and findings from the comprehensive AI for Social Good Report and the AI for Social Good Summit which concluded in November 2020. The engagement targeted the following abilities governments must develop to build an enabling environment that effectively leverages AI for social good:

- **Ability for agile regulation.** Develop governance frameworks that promote transparency in AI models through documentation, while also improving their own technology literacy. This will enable effective oversight of AI systems.

- **Ability to negotiate interest groups and ethical considerations.** Create multi-stakeholder processes to build trust and resolve conflicts regarding AI applications in favor of citizens, especially the most vulnerable. Governments must also create data trusts that centralize, anonymize and render accessible sensitive and valuable data that might not otherwise be shared where the data is managed "in trust" by a third party on behalf of the people who originated the data, while making that data accessible to important AI applications.

Findings of the report align with Agenda 2030, in particular SDG 1, by way of the engagement's effort to reduce inequalities by leveraging artificial intelligence capabilities and opportunities to catalyze inclusive development and sustainable progress in the Asia Pacific region. The engagement targeted the following areas:

- **Capacity building.** Promote skill development and AI literacy across various sectors to promote equitable access to AI technologies and resources.

- **Policy and regulation.** Develop AI governance frameworks that prioritize transparency, accountability, and fairness to ensure AI technologies benefit all segments of society.

- **Data privacy and ethics.** Ensure that AI initiatives adhere to strict data privacy guidelines and ethical principles to protect individuals' rights and promote trust in AI systems.

The methodology of the case study report can be found in Appendix 1.

Country Case Study: Bangladesh

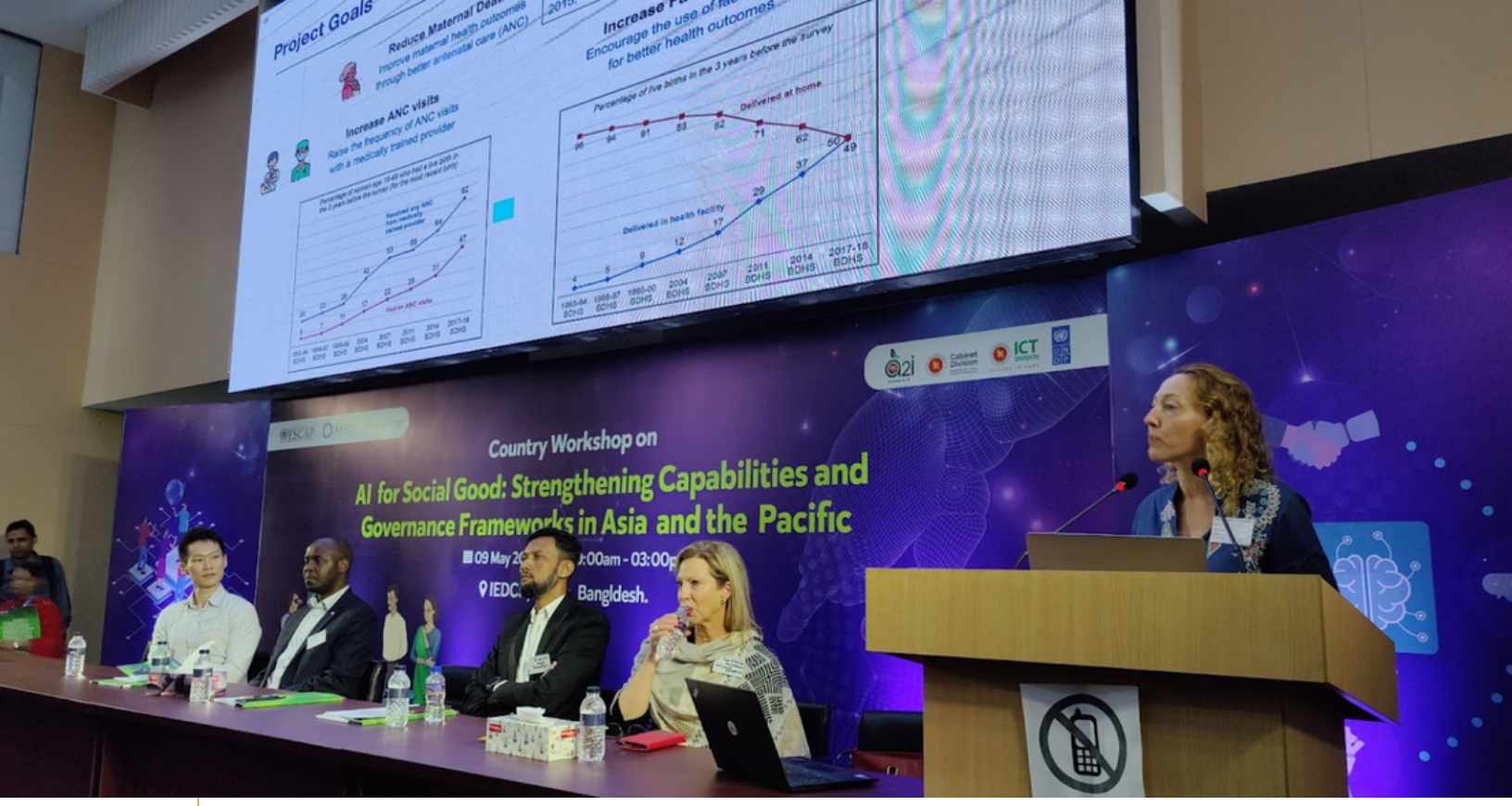
With a focus on enabling AI policy frameworks and building AI capabilities to support citizen-friendly public service innovations, the Bangladesh government launched the Aspire to Innovate (a2i) Programme. Under the auspices of the Bangladesh Government, a2i collaborated with two teams of academic researchers to advance pregnancy monitoring, with the endeavor of promoting AI for social good.

The Bangladesh case study examines the collaboration between academic researchers and the Bangladesh government on two pregnancy monitoring research papers. The first paper explores applying AI to maternal health, while the second focuses on user group receptiveness to utilizing AI in pregnancy monitoring. The study outlines the collaboration objectives, overview of the papers, key findings, and concluding recommendations.

Key partners of the Bangladesh research projects

Name	Role
Mr. Anir Chowdhury	Government lead
Dr. Shabnam Mostari	Government partner - Subhead for both pregnancy monitoring projects
Dr. Arif Rahman	Academic researcher - Lead for 2nd pregnancy monitoring project
Dr. Cornelius Kalenzi	Academic researcher for 1st pregnancy monitoring project
Ms. Fariza Rashid	Academic researcher for 2nd pregnancy monitoring project
Dr. Olivia Jensen	Academic researcher - Lead for 1st pregnancy monitoring project
Mr. Qian Jin 'Nathaniel' Tan	Academic researcher for 1st pregnancy monitoring project
Prof. Toni Erskine	Academic lead across projects

Refer to Appendix 3 for each partner's title and affiliation.



Research Collaboration 1: Mobilizing Artificial Intelligence for Maternal Health in Bangladesh

Dr. Olivia Jensen, Nathaniel Tan, and Dr. Cornelius Kalenzi

For the policy-focused research paper visit apru.org.

"The structure of the project provided us with a platform to discuss our analysis and recommendations directly with the organizations capable of implementing change in Bangladesh's maternal health sector and to see the potential impact of our research. At the same time, we were able to bring perspectives from academic research on risk perception and risk communication which were valued by the government partners."

Dr. Olivia Jensen, Academic Researcher for Bangladesh
Lead for Pregnancy Monitoring Project

Objective of collaboration

The collaboration aimed to provide an assessment of how AI applications could aid maternal health objectives in Bangladesh, emphasizing user group receptivity and alignment with current antenatal care delivery systems, centering community health workers as critical actors in the continuum of antenatal care who could benefit from digitalisation and ultimately AI tools.

Overview of paper

The paper explored leveraging AI to advance antenatal healthcare in Bangladesh, and considered four key user groups: pregnant women and their families, healthcare professionals, community health workers, and administrators. Despite progress since the 1990s, efforts to reduce maternal deaths have plateaued in recent years. At the global level, AI presents opportunities to enhance health outcomes for new and expecting mothers through enhanced monitoring, personalized interventions, expedited diagnosis and treatment, and optimized care delivery models. Specific AI applications hold promise for filling gaps by facilitating targeted medicine, prompt clinical response, and coordinated pregnancy support.

Key findings

The researchers arrived at the following key findings. First, community health workers are critical for maternal health progress and could significantly benefit from AI tools for guidance, referrals, visit planning etc. to deliver services and gather information more effectively. Second, administrative incentives and constraints faced by health professionals in adopting digital record-keeping and using AI-enabled technologies (e.g. applications like dictation software) must be addressed to ensure timely and sustained uptake of technologies. Third, AI applications directed towards pregnant women and their families have potential to empower individuals and to incentivize them to seek care, but barriers to adoption such as digital access, literacy, social norms, and inability to act on information are high, particularly among the most at-risk groups. Tailored information services employing a fee-based model could be rolled out first among high-income users while models for financially sustainable universal access are explored. Fourth, digital infrastructure must be strengthened in order to ensure that the most vulnerable expecting mothers benefit from interventions. Complex AI applications rely on first strengthening digital infrastructure and overcoming persistent socio-economic barriers faced by vulnerable users such as women in rural areas, where preventable maternal deaths are highest. User-centric design is essential. Lastly, near-term basic digitization efforts must lay the groundwork before more advanced AI can become feasible and useful for improving maternal health.

Key recommendations

The researchers recommend implementing two short-term digitally enabled interventions to yield immediate benefits:

1. Completing the digitalization of standard antenatal care data entry within the public health system.
2. Universalizing a mobile-based system of appointment tracking and reminders for expecting mothers and community health workers.

Though not directly employing AI or immediately impacting maternal outcomes, the researchers deemed the interventions necessary precursors for two key reasons:

- Digitalization of health systems enhances monitoring capacity and improves data quality. Higher quality data allows the eventual application of machine learning techniques for AI analysis.
- Robust data also underpins effective AI deployment to assist key groups: pregnant women, doctors, nurses, midwives, and community health workers.

Research Collaboration 2: Artificial Intelligence (AI) in Pregnancy Monitoring: Technical Challenges for Bangladesh

Dr. Arif Rahman and Ms. Fariza Rashid

For the policy-focused research paper visit apru.org.

"This research has given us valuable insights, enhancing our understanding of the collaborative efforts required among public sector agencies. It underscores the necessity to address fragmentation and foster a cohesive approach, not only within the public sector but also in collaboration with the private sector."

Mr. Anir Chowdhury, Bangladesh Government Lead

Objective of collaboration

The collaboration sought to pinpoint and examine key technological and infrastructure barriers for Bangladesh to integrate AI into the continuous pregnancy monitoring system.

Overview of paper

The paper explored the technical feasibility of introducing an AI system for personalized, continuous monitoring of pregnant women in Bangladesh to improve maternal health outcomes. Given the lack of a universal electronic health record (EHR) system, the authors examined the necessary IT infrastructure to enable AI integration. They assessed options for developing localized AI models using available data from hospitals and clinics. The paper also provided recommendations for establishing the digital capacity required for AI-enhanced monitoring, including deploying mobile apps, sensors, and wearables to capture patient data and make datasets interoperable. Despite technical barriers, the authors concluded an AI system is viable through strategic development of IT systems and localized AI models. The paper offered practical suggestions for building the technical foundations to support personalized AI monitoring.

Key findings

The researchers identified several challenges confronting effective, large-scale AI maternal monitoring in Bangladesh. A comprehensive plan is required to motivate healthcare providers to enter patient data electronically. Bangladesh can learn from other countries' failures and successes in implementing EHR systems over the past 40 years. Transitioning from paper-based systems requires substantial workflow and process changes. Prioritizing user acceptance, conducting targeted campaigns, and implementing organizational change management are essential. Consensus is needed on EHR guidelines to ensure integration, interoperability and privacy rules to safeguard patient records. Continuous maintenance and support from IT vendors/ technical experts is crucial for software in addition to hardware warranties. A comprehensive sustainability plan can help avoid project failures. Studying and applying lessons around strategic planning, accountability, leadership training, and ongoing maintenance from successful national projects can facilitate smooth adoption. Unreliable connectivity can cause significant problems in healthcare, so improving connectivity reliability between data centers and health facilities is essential. This includes considering training needs, infrastructure availability, affordability, monitoring capabilities, unintended consequences, and social/cultural acceptability during the design phase. Technology acceptance by all stakeholders is critical. The lack of a universal electronic health record system poses the most significant hurdle; without quality data to supply AI systems it is not possible to provide relevant solutions.

Key recommendations

To enable effective AI use in maternity care, the researchers' main recommendations were to:

1. Develop, consolidate and integrate electronic health record systems.
2. Improve healthcare providers' access to computers.
3. Enhance connectivity infrastructure.

Multi-sector coordination is vital to overcoming challenges around health records, technology availability, and connectivity deficits. The government can align healthcare institutions, technology providers, and other relevant stakeholders to elevate digital foundations and modernize platforms backing AI integration. By resolving systemic technology gaps and optimizing existing resources, Bangladesh can work toward an automated, AI-enhanced clinical support system to drive long-term improvements in maternal health outcomes and reduce maternal mortality.

Country Case Study: Thailand

The Office of National Higher Education, Science Research and Innovation Policy (NXPO), affiliated with the Ministry of Higher Education, Science, Research and Innovation, collaborated with two research teams that conducted research to support the Thai Government in the development of policies promoting and enabling AI policy frameworks and building AI capabilities for social good in the topics of medicine and healthcare, and poverty alleviation.

The Thailand case study examines the findings from the collaboration between the academic researchers and the Thai government. The first paper examines barriers to medicine and healthcare data sharing, while the second focuses on improved information sharing to better leverage the TPMAP. The study outlines the collaboration objectives, overview of the papers, key findings, and concluding recommendations.

Key partners of the Thailand research projects

Name	Role
Ms. Aprajita Kaushik	Academic researcher for medicine and healthcare project
Ms. Capucine Barcellona	Academic researcher for medicine and healthcare project
Dr. Jasper Tromp	Academic researcher - Lead for medicine and healthcare project
Dr. Kanchana Wanichkorn	Government lead
Dr. Kommate Jitvanichphaibool	Government partner - Subhead for medicine and healthcare project
Ms. Nikita Kanumoory Mandyam	Academic researcher for medicine and healthcare project
Dr. Pranpreya Sriwannawit Lundberg	Government partner
Dr. Sarah Logan	Academic researcher - Lead for poverty alleviation project
Dr. Si Ying Tan	Academic researcher for medicine and healthcare project
Dr. Soontharee Namliwal	Government partner
Dr. Suttipong Thajchayapong	Government partner - Subhead for poverty alleviation project
Prof. Toni Erskine	Academic lead across projects

Refer to Appendix 3 for each partner's title and affiliation.

Research Collaboration 1: Responsible Data Sharing, AI Innovation And Sandbox Development: Recommendations For Digital Health Governance In Thailand

Dr. Jasper Tromp, Ms. Aprajita Kaushik, Ms. Capucine Barcellona, Ms. Nikita Kanumoory Mandyam, Dr. Si Ying Tan

For the policy-focused research paper visit apru.org.

"We're used to thinking about issues at a very high level. Having the discussions we had with our government partners actually changed my way of thinking about these issues. To think outside of the abstract and more of the who, what, and where of the issue. It also changed our thinking about the way we're conducting our research."

Dr. Jasper Tromp, Academic Researcher for Thailand
Lead for Medicine and Healthcare Project

Objective of collaboration

The collaboration aimed to examine barriers hindering effective medical and healthcare data sharing in Thailand, offering policy recommendations to address challenges from ensuring responsible sharing.

Overview of paper

The paper aimed to analyze barriers to sharing medical and healthcare data in Thailand and provide recommendations to address these. A systematic review of seven themes influencing health information exchange (e.g., socio-political, infrastructure) and stakeholder interviews identified several barriers in Thailand related to technical factors, limited resources, unclear regulations, and more. Despite these barriers, Thailand is taking steps through its National AI Strategy to establish data sharing guidelines, promote standardized formats, and accelerate its digital health transformation. The paper recommends concrete policy actions for Thailand including providing written data sharing guidance, promoting platforms for data exchange, conducting stakeholder dialogues, defining intellectual property rights models, and exploring regulatory sandboxes in AI innovation. Addressing barriers around integration, standardization, resourcing, and regulation is crucial for unlocking the full potential of digital health initiatives to achieve improved healthcare outcomes.

Key findings

Significant barriers and enablers to data sharing for AI were identified. Inconsistent data architecture, a lack of software standardization across hospitals' systems and healthcare provider entities, and the persistence of manual data management practices and paper-based electronic health records conflict with digitized data sharing. An uneven distribution of human, technical, and financial resources across healthcare institutions and high costs of equipment limit smaller clinics and hospitals. Limited incentives for sharing data, heavy clinician workloads, and a general lack of understanding of the value of sharing data prevent more people from taking the initiative to share data. Complex, unclear or non-existent data sharing regulations and guidelines lead to uncertainty. A lack of formal data sharing mechanisms, and issues adopting international data standards also persist. Confidentiality breaches, cybersecurity attacks and lack of patient consent procedures compromise privacy. Poor communication and mistrust between public and private healthcare sectors as well as lack of public awareness on data rights further exacerbate the barriers to data sharing.

Key recommendations

The researchers recommended to:

1. Have clear data sharing guidelines that can enable public healthcare organizations to share data with other public and private partners. Promote data format standards in the public healthcare sector using international standards, such as DICOM (for medical imaging data); promoting development of a data sharing platform;
2. Ramp up training of human capital in big data for AI across the public and private sectors; and
3. Organize a Public Private Dialogue and develop regulatory sandboxes for digital health, which are controlled environments for regulators to test out and explore the optimal regulations for a digital health product/service.

Accelerate data sharing will be an important requirement for drawing on the potential AI can offer through relevant and evidence-based policy actions. Learning from countries in the South-East Asian region as well as other developed countries such as the UK and Netherlands will also be fruitful in ramping up Thailand's achievements and closing the existing gaps in AI.

Research Collaboration 2: Addressing Challenges in Data Sharing for TPMAP

Dr. Sarah Logan

For the policy-focused research paper visit apru.org.

"I think it's the first time that we worked with social scientists. You see, we've been working on TPMAP for six years but you know, nothing. But when Dr. Logan came in, she put everything [information sharing] in a framework. So that's the first time I could see that you can frame information sharing in such a way. That we can understand it better and in a different light."

Dr. Suttipong Thajchayapong, Thailand Government Partner
Subhead for Poverty Alleviation Project

Objective of collaboration

Examine pathways for enhancing internal information exchange within Thailand's administration to fully utilize the advanced analytics and AI capabilities of The People Map and Analytics Platform (TPMAP).

Overview of paper

The paper examined strengthening internal information exchange within Thailand's administration, to better leverage advanced analytics from the TPMAP platform for poverty reduction. TPMAP applies big data and AI to enhance targeting of anti-poverty initiatives. However, data siloes and reporting gaps currently limit the value of insights that can be extracted compared to the full potential that TPMAP platform can offfer. Assessing pathways to improve data flows and integration can allow TPMAP's tools to optimize evidence-based interventions for alleviating poverty.

Key paper findings

While there are no major technical or legal barriers to sharing data into TPMAP from other government agencies, there are four key "cultural" barriers. First, data is perceived as "owned" by the agency that collects it, making agencies reluctant to share. This is linked to fears over losing credit for programs, exposing flawed data, and personal risks from public disclosure. Second, there is a lack of administrative incentives to share data, due to siloed structures, lack of awareness of data sharing directives, and limited local official mandates and turnover. Third, data integrity issues from poor collection practices inhibit the sharing and use of data. Fourth, uncertainty around Thailand's new Personal Data Protection Act (PDPA) increases risk aversion to sharing data containing personal information. The paper argues these cultural barriers limit the effectiveness of TPMAP in leveraging data to target poverty reduction efforts in Thailand, despite no major technical or legal obstacles. It recommends steps to address uncertainty over data sharing rules, increase administrative incentives, embed TPMAP staff locally, and boost coordination.

Key recommendations

The researcher recommended the following:

1. National Electronics and Computer Technology Center (NECTEC) or Office of the National Economic and Social Development Council (NESDC) could consider sponsoring/initiating a PDPA test case to demonstrate appropriate data sharing practices and reduce uncertainty over the law's implementation.
2. NECTEC and NESDC could engage with emerging Thai data governance initiatives and actors to increase focus on facilitating data sharing between government agencies. This could include PR campaigns to promote awareness and successes.
3. NECTEC could consider further embedding staff with local TPMAP committees to analyze data sharing barriers at provincial and local levels and build relationships. Rotating partner agency staff through TPMAP could also help.
4. NESDC could provide high-level political leadership support to boost the authority of Thailand's Digital Government Development Agency (DGA) in enforcing data governance requirements that enable sharing.

Engagement

The AI for Social Good: Strengthening Capabilities and Governance Frameworks in Asia and the Pacific engagement process focused on bringing together government partners and academic researchers to jointly develop policy recommendations enabling AI-related frameworks and building AI capabilities. The collaborative process enabled mutual learning between researchers and policymakers across disciplines and countries to comprehensively address complex challenges. The key outcomes of this collaboration were four sets of evidence-based policy recommendations.

The engagement convened partners and stakeholders in a series of meetings, country workshops, and a summit to facilitate collaboration.

- **Conceptualization meetings** were held between government and the Academic Lead to jointly scope the research questions. These collaborative sessions identified key documents and strategic areas of need to inform evidence-building. Through scoping government needs, the engagement established pathways for consultative knowledge-sharing. This interactive groundwork focused on nurturing a collaborative environment where findings can reliably and pragmatically feed into decision-making.
- **Alignment meetings** enabled partners to calibrate expectations, confirm directions, review workshop plans, and discuss required support and strategic documents for sharing. Stakeholders also outlined pathways to apply findings post-completion by plotting critical paths to guide policy translation. These collaborative sessions ensured continued relevance through transparency and accountability.
- The **1st country workshop** assembled government and researchers to discuss the research approach, map the cooperative process, and align on the next phases. The interactive sessions enabled stakeholders to relay informed feedback while jointly plotting critical paths to guide result-driven policies. Discussions aimed to sustain engagement through transparent priority setting and accountability.

- The **2nd country workshop** facilitated collaborative discussions between researchers and policymakers to align on pathways for translating findings into actionable policies. Researchers presented initial findings and solicited stakeholder perspectives. Constructive dialogues then examined feasible measures to incorporate data-driven insights through targeted policy development. The interactive sessions focused on bridging research and policy worlds to ensure evidence reliably informs decision-making.
- The **AI for Social Good 2023 Summit** convened all partnering agencies, organizations, and researchers to showcase research results and extract insights from the collaborative process. The culminating event enabled stakeholders across teams and functions to exchange lessons learned while underscoring the merits of cross-domain perspective sharing. Discussions spotlighted how multifaceted inputs strengthen practical applications to advance social good.

Refer to Appendix 2 for the complete description of the engagement and the project timeline.

The project was organized by the following members:

List of organizing members.

Name	Role	Affiliation
Ms. Christina Schönleber	Project lead	APRU
Ms. Marta Pérez Cusó	Project lead	United Nations ESCAP
Prof. Toni Erskine	Academic lead	Australian National University

Refer to Appendix 3 for each partner's title and affiliation.

Findings

Insights from interviews with 18 stakeholders reveal several key points about the benefits of the engagement process, its impact on research quality, scope, and relevance, and the transformation of relationships and roles amongst government partners, researchers, and peer reviewers. An overarching theme across findings is the value of the collaborative and co-creative approach to research that was done in this AI4SG initiative. There are seven key findings: co-creation, co-designing the research question, building buy-in, greater access, broader set of stakeholders, cohort effect, and role of peer reviewers.

Co-creation

The engagement process facilitated the co-creation of policy recommendations in a way that conventional research processes or consultancy approaches do not.

Conventionally, either the government directs consultancy projects they commission, or a research team takes the lead in defining research engagements. The AI for Social Good engagement facilitated a partnership between government and academe, enabling them to co-create the research projects throughout the engagement. The engagement positioned government and academic researchers as partners.

The convergence of international expertise and local knowledge strengthened the research. Academic researchers brought value to the research process in four areas. Researchers contributed new theoretical frameworks and global best practices. The academic researchers provided qualitative analysis and an application-oriented approach to doing research.

> *"The academic perspective brings something different— broader theories or frameworks that you might not normally see or even be aware of because these researchers are looking at global research."*
>
> Dr. Kanchana Wanichkorn, Thailand Government Lead

Government partners said the researchers deepened their understanding of issues by bringing specific frameworks rather than general ones. Government partners contributed in two areas, they provided critical on-the-ground insights about local contexts and information on key stakeholders that researchers can interview. The researchers said that government partners helped them understand how their papers could better address and fit the needs of the intended audience or user. This blending of perspectives yielded actionable and practical recommendations tailored to real needs.

> *"Our ongoing health initiatives in Bangladesh focus on leveraging artificial intelligence to enhance the efficacy of the public health sector. Through this research, we have been able to further identify key challenges in infrastructure, technology, and adaptation that currently exist. These insights are helpful to narrow the gaps while addressing the challenges, providing a comprehensive understanding for policymakers, facilitating informed decision-making to address and mitigate prominent challenges in the public health domain."*
>
> Mr. Anir Chowdhury, Bangladesh Government Lead

Engaging directly with the government partners made researchers better able to exercise their power and responsibility to produce more practical recommendations.

Unlike conventional research, the engagement offered researchers extensive local access. Government partners provided on-the-ground insights that helped integrate country-specific complexities often unemphasized in academic research lacking practical application.

With real-world implementation in mind, researchers focused on improving proposals to address tangible needs. Continuous workshops with government partners clarified objectives to meet partner expectations.

These discussions pushed researchers beyond theoretical recommendations toward more practical ones tailored to local contexts.

Localized research made recommendations more actionable. For instance, in Thailand, interviews with health service providers revealed stakeholder satisfaction and ground-level challenges. With respect to one of the Bangladesh projects, researchers' localization suggestions are already being presented to the Directorates and Health Ministry for implementing AI in the health sector. Another notable result from the collaboration was that NXPO has already begun to use the research findings and recommendations as guidelines for AI research. This demonstrates how close collaboration empowers researchers to shape high-impact, practical research grounded in real needs.

> "*After sitting with our health ministry and revising the proposal objective to meet the country's expectations based on the country's context, together with the researchers we were able to adapt the objective and overall policy brief and design.*"
>
> Mr. Anir Chowdhury, Bangladesh Government Lead

Co-designing the research question

Jointly crafting the research question through a series of meetings introduced a broader set of perspectives and ensured the research question takes social inclusion into context.

In conventional research projects involving government and academe, the direction and design of the research question is driven unilaterally by one side. For instance, in independent academic research, government is generally not involved in the process of formulating the research question. The approach is also more focused on knowledge creation. On the other hand, in consulting projects, the main driver is the government as client and it is focused on solving immediate and tangible policy challenges. In contrast to the previously mentioned arrangements, in the AI4SG engagement, the research question was crafted in a series of meetings with government and the academe—represented by the Academic Lead.

"The collaborative and co-creative aspect of these engagements was very thoughtful, and it started at a very early stage. What's key to co-creation is that both sides should be involved in setting the questions. This kind of co-creation does not usually happen. Normally, one side comes in with a fixed idea about what needs to be done, then we move forward from there, but this engagement started with an initial discussion between a higher level in the academe (i.e., research program coordinator) and government to try to understand what questions were pertinent for them."

Dr. Olivia Jensen, Academic Researcher for Bangladesh,
Academic Lead for Pregnancy & Monitoring Project

The engagement blended the value of the researchers' academic independence with the practicality of in-depth context while ensuring government needs were met. It enabled the researchers to broaden questions posed by the government and ensure they are addressing not only the immediate policy questions but broader societal and inclusion considerations as well.

Identifying key stakeholders and building buy-in to take policy forward

Continuous engagement enhanced government clarity and buy-in for research.

Identifying key stakeholders to shape the research was as crucial for policy making as the policy recommendations. The AI4SG process engaged stakeholders in relevant parts of government in two key areas: in the iterative research process, from the design phase to producing the paper itself; and in the broader consultative activities like the country workshops.

The continuous engagement between government and academe facilitated a learning process that led to more robust research findings, and to a strong understanding of the research findings and recommendations. It contributed to building buy-in from key parts of government that might be involved in taking the recommendations forward.

"We could have read papers, read research reports, but this provided us with an avenue for extensive engagement and interaction between researchers and relevant stakeholders. The benefit of this engagement is it helped us contextualize our paper. Normally, when you read a research paper, you don't get a chance to talk to the researchers in the way this allowed us to do."

Mr. Anir Chowdhury, Bangladesh Government Lead

"One of the benefits of this engagement is that different government agencies are now aware of what we are doing. They know that they are part of this so-called ecosystem of beneficiaries or stakeholders. They know what they can do once they are aware of the issues."

Dr. Kanchana Wanichkorn, Thailand Government Lead

Greater access to people and information in government

Working in partnership with government, researchers were able to access a range of expertise and stakeholders they might not otherwise have been able to access.

Governments provided the researchers access to government stakeholders and information they otherwise would not have had access to as outsiders. The Thai government's endorsement lent credibility and built trust in the researchers' motivations. The endorsement was aided with the knowledge of the involvement of international bodies - namely United Nations ESCAP and APRU - in leading the collaboration. By introducing and backing the researchers, the government helped position them as credible knowledge-seekers in pursuit of insights.

"The big benefit of working with the government partners was getting access to other government partners, which is something you don't normally get."

Dr. Jasper Tromp, Academic Researcher for Thailand –
Academic Lead for Medicine and Healthcare Project

In the poverty alleviation research project, the research team gained access to detailed and pertinent information on data collection and sharing among government units in Thailand that would have been difficult to obtain independently by external researchers outside the collaboration.

> *"The problem only made sense to me when [government partner] and I spoke, and she had a diagram which showed how the information and collection sharing worked. I then understood how the information and collection sharing was meant to work, and how currently it's not working like that."*
>
> Dr. Sarah Logan, Academic Researcher for Thailand
> Academic Lead for Poverty Alleviation Project

In another instance, thanks to government partners, one of the pregnancy monitoring research teams was able to extensively examine various electronic service systems being implemented. They discovered that although there were many efforts to develop electronic systems, paper records were still used, resulting in duplications. It highlighted the current challenges of building on existing work. Moreover, it led them to the significant realization that, rather than reinventing or creating a new system, it is more strategic to build on these existing efforts and interventions.

Engaging a broader set of stakeholders

Government counterparts, acting as neutral conveners, enabled research teams to effectively collaborate across multiple agencies, enhancing the comprehensiveness of the research.

Too often, research projects are tied to a single ministry due to the practical and political challenges of coordinating across government agencies. In the project, the government counterparts were both positioned as platforms that allowed them to convene stakeholders across government. The government counterpart needed to be able to take on this role because the research topics spanned across multiple agencies and ministries.

For example, a2i previously sat in the Prime Minister's Office in Bangladesh. Carrying previous associations with the central authority of government gave it leverage to convene and gain access to other agencies. In Thailand, NXPO has a long track record of working across ministries within the Thai government on topics such as innovation-driven enterprises and social mobility.

"We have the flexibility to really engage and be part of this complex system. We are in a very good position because we are quite neutral in doing this and providing neutral recommendations."

Dr. Kanchana Wanichkorn, Thailand Government Lead

Cohort effect

The research teams enhanced each other's work through cross-project learning and by promoting a deeper understanding of cross-cutting challenges as they undertook the engagement together.

Conducting the research projects as a coordinated cohort on a shared, parallel timeline yielded a few key advantages. One advantage was being able to identify challenges spanning more than one research project. For instance, the two Thailand research teams learned their respective research shared similar challenges in data sharing through the meetings which they delved into further in the second country workshop. This cross-team and cross-sectoral learning prompted modifications to the research outputs.

A second advantage was it helped reveal gaps in the research approach. Researchers from the medicine and healthcare project noted that their interaction with the poverty alleviation team helped them identify missing pieces and gain insights that improved their paper's policy relevance.

"When we met everybody at the workshop in Thailand, we got a chance to really interact with the other team. That is where there we gathered a couple of things and insights about what we should have included more from a policy perspective……. "There is [also] cross-sectoral learning through this engagement. Academic researchers for the Poverty Alleviation project in Thailand had a different project in a different setting but we shared similar lessons, which we would otherwise not have derived if we didn't do this cross-sectoral learning."

Dr. Jasper Tromp, Academic Research Partner for
Thailand Academic Lead for Medicine and Healthcare Project

Transforming the role of peer reviewers

The process positioned peer reviewers as constructive contributors and critical friends rather than gatekeepers.

Peer reviewers often take gatekeeping – and sometimes oppositional – roles, either as guardians of the quality of papers that get published or providers of quality assurance for grant proposals. They often take on this role at the end of a process, whether it be the writing of a paper or the design of a grant proposal. In the engagement, peer reviewers were involved from the start of the research writing process until the end. The peer reviewers helped the research teams by acting as a "critical friend" who reviewed the researchers' drafts, clarified their ideas, and provided direct and impartial feedback, thus leading to a more nuanced work.

For instance, the practice helped one of the pregnancy monitoring teams better understand how to ground their work in maternal health issues. It led to them integrating published data on mothers' experiences into their paper. Peer reviewers also provided important suggestions to more likely implement the research by asking them to factor in perspectives on socio-economic realities. In another instance, peer reviewers suggested that the same research team scale down the scope to produce a more focused and impactful paper, and provide more attention to the socio-technical challenges. The researchers found this valuable and this became a key theme in their research.

> *"Technical advances must be fitted to the people who are most affected. Ideally, mothers' voices and perspectives would be directly central to this project. I wondered if the authors can consider creative ways to still incorporate that perspective, such as holding small focus groups, engaging more deeply with existing literature that used community-based methods, and/or finding published accounts in the news media of mothers commenting on the pregnancy experience?"*
>
> Dr. Jenny Davis, Peer Reviewer for Bangladesh Projects

By engaging peer reviewers from diverse backgrounds continuously, researchers gained a greater ability to see their research through multiple lenses.

The peer reviewers, drawing from their diverse backgrounds, suggested examining the projects not only through a technological lens but also through social, economic, and political perspectives. A political scientist with expertise In Thai politics provided the Thailand projects with an invaluable socio-political perspective in a project that otherwise focused on technology and health. A computer scientist with expertise in AI and innovative design and a sociologist specializing in technology-related social inequalities contributed novel insights critical to making Bangladesh projects more apt for context-specific needs and realities.

> *"Instilling habits, protocols and processes for sharing information across organizational boundaries tend to be challenging in Thailand. Having a significant governmental actor committed to digital health sharing will probably determine whether sharing occurs. The Thai monarchy has had a long association with medical matters. Therefore, the personal backing of the Thai royal institution would significantly enhance the prospects for implementation of national digital health data sharing."*
>
> Dr. Greg Raymond, Peer Reviewer for the Thailand Projects

Recommendations

Drawing lessons from the key findings, the following recommendations are to inform future policymaking collaborations.

1. Adopt a co-creative approach with extended timelines. The project highlights a common challenge in collaborations - government stakeholders and academic partners often inhabit separate worlds with differing priorities and perspectives. Yet greater alignment is key to producing research that meets governmental needs. It requires an iterative, co-creative process that may require extended timelines across all phases. Additional time also expands the possibilities for investigating the research questions from multiple angles and leverages a broader mix of data collection methods to incorporate meaningful contextual sources.

> *"It is always challenging but rewarding to engage researchers in informing policymaking, because government officials and academic researchers come from different worlds with different priorities and mandates. It takes time and a collaborative approach to breach both worlds. However, when this happens, the outcome of the research and the process are invaluable."*
>
> Ms. Marta Perez Cuso, United Nations ESCAP Project Partner

2. Leverage the convening power of government agencies with cross ministerial reach. Governments agencies with cross ministerial mandates occupy a unique position that enables them to bring together a diverse range of stakeholders across sectors and ministries to participate in the research process. This expands perspectives and ensures recommendations account for complex system interlinkages.

3. Advance collaborations through credible partnerships with international organizations. International and regional organizations leverage significant credibility and trust that unlocks stakeholders' access to spaces and actors that allow them to forward their agenda. Their unique position and influence in government and academic spaces accelerates certain processes, such as arranging conversations involving government, that otherwise could take longer depending on the perception of credibility.

> *"The credibility and influence of international organizations like ESCAP and APRU can help engage senior stakeholders from government."*
>
> Dr. Kommate Jitvanichphaibool, Thailand Government Partner
> Sub-Head of Medicine and Healthcare Project

4. Engage peer reviewers as 'critical friend' partners. Transform conventional peer reviewer roles into ongoing constructive partnerships throughout the research process to strengthen theoretical framing as well as applied relevance. Engaging them as partners transforms the peer review process into a supportive process that can enhance research practicality and propel researchers in directions they otherwise might not have taken.

5. Create flexible funding terms. Adopt funding arrangements that allow for ongoing adjustments to research plans. It can be achieved by allocating a part of the project's budget under terms that permit flexible use, catering to evolving requirements and unforeseen circumstances during the research.

Next Steps

To ensure the engagement's achievements and impact lead to the implementation of AI-related policies, the following must be undertaken:

1. Continuously engage government stakeholders to move forward with recommendations. Present the recommendations to relevant agencies and ministries, solicit their perspectives, and collaboratively determine the next steps on how to utilize and apply the recommendations. Maintaining a dialogue through follow-up meetings would help transition the recommendations from research findings into public policies and programs. The meetings would also provide clarity on suggested actions and allow stakeholders to jointly decide how to best move the recommendations forward.

> *"I told the team that we should definitely have follow up meetings just among the Thai government colleagues, you know, circulate it publicly [the project outputs]. We should definitely engage with this key stakeholder that we have identified and let them make use of the recommendation."*
>
> Dr. Kanchana Wanichkorn, Thailand Government Lead

2. Create consolidated channels for policy implementation. The implementation plan of the recommendation must be designed to completely translate the research recommendations to a policy recommendation. One way to ensure implementation follows through is by establishing centralized progress-tracking mechanisms and sustained communication between partners.

> *"The impact of this entire program depends on this program entrepreneur and the government policy-making people. It depends on whether there are any changes in decision-making practices after taking lessons from the recommendations we produced."*
>
> Dr. Arif Rahman, Academic Researcher for Bangladesh
> Academic Lead for Pregnancy Monitoring Project

Conclusion

The AI for Social Good project demonstrates the value of bringing together government, academic researchers, and peer reviewers in a co-creative process to conduct research and develop policy recommendations. The engagement facilitated mutual learning and leveraged the strengths of each partner to produce practical and implementable policy insights tailored to local contexts. Key outcomes included building government buy-in, gaining localized perspectives, and transforming typically oppositional roles into collaborative ones.

Ultimately, the engagement model underscores the potential of participatory, multi-stakeholder processes to tackle complex societal challenges through research and policy innovation. It further highlights the significance of organizations such as APRU and United Nations ESCAP who bring multi-disciplinary and multi-stakeholder collaborations together. These organizations have the ability to convene stakeholders from various sectors and industries and enable them to work together towards a shared objective. Adopting this collaborative approach more widely could strengthen the impact of research and its translation into policies that truly serve the public good.

Appendix 1

Methodology of case study report

The case study report sought to answer the following key questions:

1. How was the engagement process unique or different from how governments might conduct policy research ordinarily?
2. What impacts were seen from doing this type of collaborative process in terms of stakeholder relationships and project outcomes?
3. Has the engagement generated recommendations that could aid in developing policy?

This case study report was developed through:

- **A review of key documents.** Reviewed the project concept notes, research papers produced through this engagement, press releases of key activities (e.g. country workshops), and feedback summaries on the papers.
- **Stakeholder interviews.** Conducted interviews with stakeholders which include project organizers, key government partners of the country project topics (medicine and healthcare, poverty Alleviation, and pregnancy monitoring), academic partners and peer reviewers, and the academic research teams. The interviewees were selected based on their participation and contribution to the engagement. The perspectives and experiences they represent, based on their expertise and background, were also considered. A total of 18 stakeholders were interviewed.
- **The synthesis of findings and insights.** Extracted insights from the interviews and documents. These were synthesized to feed into the findings written in the case study report.

Appendix 2

Process

Phase 1: Initiation and conceptualization of research projects

The engagement was carried out in two phases. The first phase identified government partners, scoped the research questions, and selected the academic researchers. Phase 1 began in 2022 with the identification of government partners.

Identification of key stakeholders within government. Two government partners at the leadership level within Thailand's NXPO and Bangladesh's a2i were identified and took forward the agenda within the ministry. A project focal person on a more technical level who acted as a day-to-day contact was also identified. The government agencies, a2i (Bangladesh) and NXPO (Thailand), were chosen on the basis of whether they could provide pathways to translating research into policy when it comes to AI for social good.

Formulation of research questions. A series of meetings were held between the government and the Academic Lead to jointly scope the research questions. This was a collaborative process that sought to identify strategy and/or policy priorities or documents of government to ensure the research papers that would be produced could translate into policymaking. The questions were finalized based on how relevant they were to the problem identified by the government agency and their viability in terms of whether they could be answered within the span of the engagement.

Call for expressions of interest (EOI). The call for EOI was released by APRU aimed at academics (in any discipline) with expertise in AI-related topics who are interested in helping inform AI policies and strategies with Thailand and Bangladesh government agencies.

- **Evaluation.** Thailand received 15 responses. Bangladesh received 8 responses. The selection criteria included project viability, originality, and the relevant expertise and experience of the proposed researchers.. There was also consideration for gender diversity and inclusion.

- **Selection of academic researchers.** A total of four research teams were selected, two for each country. The research teams came from the National University of Singapore, University of Hawaii at Manoa, Australian National University, Korea Advanced Institute of Science & Technology (KAIST), and University of Sydney.

Phase 2: Development of research outputs

The second phase of the engagement was to develop and write the research papers and share the findings with government.

Key dates	Activity
March-May 2022	Alignment meetings
April-June 2022	1st country workshop (virtual)
August 2022	1st virtual project meeting
November 2022	Submission of draft outline
January 2023	2nd virtual project meeting
	Submission of draft papers
March 2023	Submission of revised draft papers
March- April 2023	Feedback meetings per country: opportunities and actions
May 2023	2nd country workshop (in-person)
July 2023	Submission of final papers
July 2023	AI for Social Good 2023 Summit
July - November 2023	Develop case study report

Alignment meetings. The meetings served to prepare the academic researchers and government partners for the 1st country workshop. Separate meetings were held for the researchers and government. The meeting served to align expectations, verify the path forward, discuss the 1st country workshop agenda, and review discussion points for the workshop (e.g. what type of support researchers will need from government, or relevant documents / strategies government would like to share with the researchers), and discuss the pathways forward after the completion of the research projects.

1st country workshop (virtual). The workshop convened government and academic researchers for the first time, with one workshop for the Thailand projects and another for the Bangladesh projects. The workshop served to align expectations between the government and the researchers, set out the key elements of the collaboration, and discussed the next steps to kickstart the engagement.

- **Participants.** The workshop participants included the government lead and project focal person in government, select policymakers relevant to each research project, the academic research teams, the project partners and organizers.
- **Presentations.** The government partner presented the strategy or policy foundation of their ministry that would inform how the research outputs will be used. The academic researchers then presented their proposed research approach.
- **Discussions.** There were discussions on how government can support the academic researchers in their research. One of which is to support the researchers in connecting them to government people to set-up interviews. The government also shared current interventions being done in relation to the research questions and its challenges.

Development of research papers. Discussions between government and the academic researchers continued to develop the research projects.

- **Project meetings.** Presentation of the draft outline of the research papers happened in the first project meetings. Government provided suggestions on lenses and frameworks to use (e.g. equity), and peer reviewers provided feedback to help connect the research to other angles (e.g. income inequality). Cross-cutting challenges and themes were revealed across the research projects in this stage.
- **Feedback meeting on opportunities and action.** The meetings encouraged government to raise questions, concerns, and note opportunities and action for policymaking.

Peer reviews. The peer reviewers came in at three different stages in the engagement. The peer review process was led by the Academic Lead. The peer reviewers provided feedback on the draft outlines, the subsequent draft papers, and the revised papers during the 2023 Summit. The peer reviewers were composed of an interdisciplinary set of scholars and experts, including:

- **Dr. Gregory V. Raymond** is a Senior Lecturer in the Strategic and Defence Studies Centre. He researches Southeast Asian defense, politics, and foreign relations, particularly in Thailand and Mekong states within the Strategic and Defence Studies Centre, The Australian National University. He convenes the Global China Research Spoke for the Centre for China in the World, and the ASEAN Australia Defence Postgraduate Scholarship Program for the Australian Department of Defence.
- **Dr. Jenny L. Davis** is an Associate Professor of Sociology, ANU. Her work intersects technology studies and social psychology, with a current focus on AI and machine learning. She is Deputy Lead of the Humanising Machine Intelligence Program at ANU, Co-Director of the ANU Role-Taking Lab, on the board for Theorizing the Web, Past Chair of the Communication, Information Technologies, and Media Sociology section of the American Sociological Association, and author of How Artifacts Afford: The Power and Politics of Everyday Things (MIT Press).
- **Dr. Lexing Xie** is Professor of Computer Science the leader of the Computational Media Lab and leader of the multi-disciplinary Humanising Machine Intelligence Grand Challenge project at ANU, a $6m investment to explore the foundations and design of democratically legitimate data and AI systems. She is the winner of the Chris Wallace award for Outstanding Research 2017-18, and has published influential work on a range of topics in machine learning, including work on ML algorithms in social media.

Appendix 3

Roles

- **Government partners**
  - **Government lead.** They are at a leadership level in their agency providing guidance and expertise to the project as well as direction to the research agenda.
  - **Project focal person.** They act as the contact person representing the government team for day-to-day operations and communications.
  - **Select government partners.** They are government colleagues invited to participate in the engagement, particularly policymakers and implementers who are relevant to the research topics. Some were also chosen to be the contact person for each research project.

- **Academic research partners**
  - **Academic researchers.** Researchers who were selected to write a research paper and recommendation in collaboration with government.

- **Project partners**
  - **APRU Project Lead.** Christina Schönleber set up the collaboration and convened the projects together with United Nations ESCAP.
  - **United Nations ESCAP Project Lead.** Marta Pérez Cusó set up the collaboration and convened the projects together with APRU.
  - **Academic Lead.** Prof. Toni Erskine of Australian National University (ANU) took the role, where she jointly crafted the research questions with government and guided the development of each research project in Bangladesh and Thailand.
  - **Peer reviewers.** Scholars and experts from ANU gathered by the Academic Lead who provided feedback on the research papers at different stages in the engagement.

Appendix 4

List of project partners and stakeholders

Name	Role	Title & Affiliation
Mr. Anir Chowdhury	Bangladesh Government Lead	Policy Advisor at Aspire to Innovate (a2i), ICT Division, Bangladesh
Ms. Aprajita Kaushik	Academic Researcher for Medicine and Healthcare Project	Research Associate at National University of Singapore
Dr. Arif Rahman	Academic Researcher – Lead for 2nd Pregnancy Monitoring Project	Assistant Professor at Hawai'i Pacific University
Ms. Capucine Barcellona	Academic Researcher for Medicine and Healthcare Project	Research Assistant at National University of Singapore
Ms. Christina Schönleber	APRU Project Lead	Chief Strategy Officer at APRU
Dr. Cornelius Kalenzi	Academic Researcher - Lead for 1st Pregnancy Monitoring Project	Post-Doctoral Researcher at, Korea Advanced Institute for Science and Technology
Dr. Gregory V. Raymond	Peer Reviewer	Senior Lecturer at Australian National University
Dr. Jenny L. Davis	Peer Reviewer	Associate Professor at Australian National University
Dr. Jasper Tromp	Academic Researcher - Lead for Medicine and Healthcare Project	Assistant Professor at National University of Singapore
Dr. Kanchana Wanichkorn	Thailand Government Lead	Senior Strategist at NXPO, and Director of ASEAN Sectoral Development at ASEAN Secretariat (former Vice President at NXPO)
Dr. Kommate Jitvanichphaibool	Thailand Government Partner - Subhead for Medicine and Healthcare Project	Senior Division Director at NXPO

Appendix 4

List of project partners and stakeholders

Name	Role	Title & Affiliation
Dr. Lexing Xie	Peer Reviewer	Professor at Australian National University
Ms. Marta Pérez Cusó	United Nations ESCAP Project Lead	Economic Affairs Officer at United Nations ESCAP
Ms. Nikita Kanumoory Mandyam	Academic Researcher for Medicine and Healthcare Project	Research Assistant at National University of Singapore
Dr. Olivia Jensen	Academic Researcher - Lead for 1st Pregnancy Monitoring Project	Lead Scientist, Lloyd's Register Foundation Institute for the Public Understanding of Risk, Senior Research Fellow at the Lee Kuan Yew School of Public Policy's Institute of Water Policy, at National University of Singapore
Dr. Pranpreya Sriwannawit Lundberg	Thailand Government Partner	Division Director at NXPO
Dr. Sarah Logan	Academic Researcher - Lead for Poverty Alleviation Project	Lecturer at Australia National University
Dr. Si Ying Tan	Academic Researcher for Medicine and Healthcare Project	Postdoctoral Fellow at National University of Singapore
Dr. Shabnam Mostari	Bangladesh Government Partner – Subhead and Project Focal Point for both Pregnancy Monitoring Projects	Head (Digital Health) at Aspire to Innovate (a2i), ICT Division, Bangladesh
Dr. Soontharee Namliwal	Thailand Government Partner - Project Focal Point	Policy Specialist at NXPO
Dr. Suttipong Thajchayapong	Thailand Government Partner - Subhead for Poverty Alleviation Project	Principal Researcher at NECTEC
Prof. Toni Erskine	Academic Lead	Professor of International Politics and Director of the Coral Bell School of Asia Pacific Affairs at Australian National University

Appendix 5

List of interviewees

Name	Role	Title & Affiliation
Dr. Amanda Watson	Peer Reviewer	Research Fellow at Australian National University
Ms. Aprajita Kaushik	Academic Researcher for Medicine and Healthcare project	Research Associate at National University of Singapore
Mr. Anir Chowdhury	Bangladesh Government Lead	Policy Advisor at at Aspire to Innovate (a2i), ICT Division, Bangladesh
Dr. Arif Rahman	Academic Researcher - Lead for 2nd Pregnancy Monitoring Project	Assistant Professor at Hawai'i Pacific University
Ms. Christina Schönleber	APRU Project Lead	Chief Strategy Officer, APRU
Dr. Cornelius Kalenzi	Academic Researcher - Lead for 1st Pregnancy Monitoring Project	Post-Doctoral Researcher at Korea Advanced Institute for Science and Technology
Dr. Gregory Raymond	Peer Reviewer	Senior Lecturer at Australia National University
Dr. Jasper Tromp	Academic researcher - Lead for Medicine and Healthcare Project	Assistant Professor at National University of Singapore
Dr. Kanchana Wanichkorn	Thailand Government Partner	Senior Strategist at NXPO, and Director of ASEAN Sectoral Development at ASEAN Secretariat (former Vice President at NXPO)

Appendix 5

List of interviewees

Name	Role	Title & Affiliation
Dr. Kommate Jitvanichphaibool	Thailand Government Partner	Senior Division Director at NXPO
Ms. Marta Pérez Cusó	United Nations ESCAP Project Lead	Economic Affairs Officer at United Nations ESCAP
Dr. Pranpreya Sriwannawit Lundberg	Thailand Government Partner	Division Director at NXPO
Dr. Sarah Logan	Academic Researcher - Lead for Poverty Alleviation Project	Lecturer at Australian National University
Dr. Shabnam Mostari	Bangladesh Government Partner – Subhead and Project Focal Point for both Pregnancy Monitoring Projects	Head (Digital Health) at Aspire to Innovate (a2i), ICT Division, Bangladesh
Dr. Soontharee Namliwal	Thailand Government Partner - Project Focal Point	Policy Specialist at NXPO
Dr. Suttipong Thajchayapong	Thailand Government Partner - Subhead for Poverty Alleviation Project	Principal Researcher at NECTEC
Dr. Olivia Jensen	Academic Researcher - Lead for 1st Pregnancy Monitoring Project	Lead Scientist, Lloyd's Register Foundation Institute for the Public Understanding of Risk, Senior Research Fellow at the Lee Kuan Yew School of Public Policy's Institute of Water Policy, at National University of Singapore
Prof. Toni Erskine	Academic Lead	Professor of International Politics and Director of the Coral Bell School of Asia Pacific Affairs at Australian National University


MODEL
R-12