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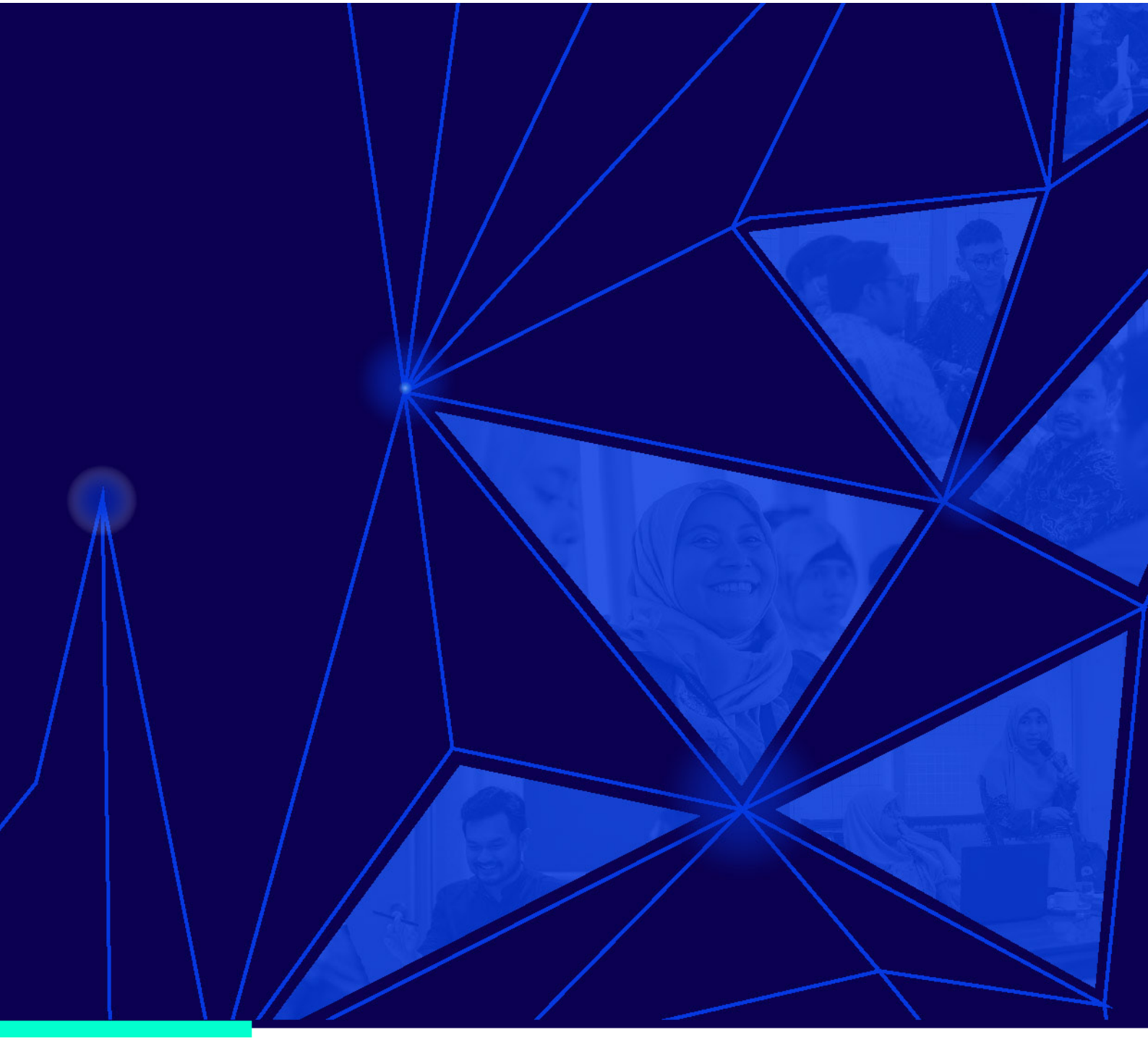

Handbook for Artificial Intelligence (AI) Training for Policymakers

Handbook for Artificial Intelligence (AI) Training for Policymakers

Project Digital Transformation Center (DTC) and
FAIR Forward: Artificial Intelligence for All On behalf
of GIZ Indonesia and the Ministry National Development
Planning/BAPPENAS

Handbook for Artificial Intelligence (AI) Training for Policymakers
Published by Digital Transformation Center (DTC) Indonesia and
FAIR Forward: Artificial Intelligence for All

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Introduction From DTC and FAIR Forward: Artificial Intelligence for All
On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is implementing FAIR Forward: Artificial Intelligence for All which aims to create approach which more open, inclusive, and sustainable to AI. This program collaborates with the Ministry of National Development Planning/BAPPENAS.

FAIR Forward aims to: 1) build, expand and transfer knowledge related to AI technology; 2) increase access to AI training and technology data; and 3) develop a political framework for ethical AI and improve data protection. Meanwhile, the specific aim is to democratize AI and encourage local AI innovation for sustainable development. This is done by making AI open source globally in seven FAIR Forward partner countries (Ghana, India, Indonesia, Kenya, Rwanda, South Africa, Uganda). In November 2023 - March 2024, FAIR Forward: Artificial Intelligence for All presented Artificial Intelligence (AI) Training for Policymakers in Indonesia to increase the capacity of policymakers in Indonesia in responding to the potential and challenges of Artificial Intelligence. This program collaborates with local implementation partner harapura impact and Aptaworks.

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Expression of Gratitude
We express our gratitude to all GIZ Indonesia colleagues who have compiled and completed this book, especially to the Directorate of Electricity, Telecommunications and Informatics, Ministry of National Development Planning/BAPPENAS:

- Taufiq Hidayat Putra, Director of Electricity, Telecommunications, and Informatics
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We also extend our gratitude to all participants and speakers who have contributed their valuable knowledge. The cooperation and dedication of each party have enabled the development of this important resource, which we hope will become a knowledge hub for the development of Artificial Intelligence (AI) policies and practices in Indonesia. We aim to support the ethical and responsible implementation of AI and pave the way for inclusive and beneficial innovation for all of Indonesian society.

On Behalf of
German Federal Ministry for Economic Cooperation and Development (BMZ), through Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

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Glossary

AAAPoMaNet : Africa-Asia AI Policymaker Network
AAC : Asia-Africa Conference
AI : Artificial Intelligence
BAPPENAS : Ministry of National Development Planning
BAWASLU : General Election Supervisory Agency
BMZ : German Federal Ministry for Economic Cooperation and Development (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung)
BPS : Central Bureau of Statistics (Indonesia)
BPSDM : Human Resources Development Agency
CSIS : Centre for Strategic and International Studies
CSO : Civil Society Organization
DPO : Data Protection Officer
DPR : House of Representatives of Indonesia
DTC : Digital Transformation Center
FF : FAIR Forward (Artificial Intelligence for All)
GS : Global South
GIZ : Deutsche Gesellschaft für Internationale Zusammenarbeit
HSRC : Human Sciences Research Council
ICT : Information and Communication Technology
INSW : Indonesian National Single Window
IPR : Intellectual Property Rights
IT : Information Technology
ITB : Bandung Institute of Technology
KOMINFO : Ministry of Communication and Informatics
KPU : General Election Commissions
NGO : Non-Governmental Organization
NLP : Natural Language Processing
OJK : Financial Services Authority
PDP : Personal Data Protection
PPL : Policy Prototyping Lab
PPP : Public-Private Partnership
PTE : Policy Training Exercise
SDGs : Sustainable Development Goals
SIA : Social Impact Assessment
SINTA : Science and Technology Index

SMEs : Small and Medium Enterprises
UN Global Pulse : United Nations Global Pulse
UNESCO : United Nations Educational, Scientific, and Cultural Organization

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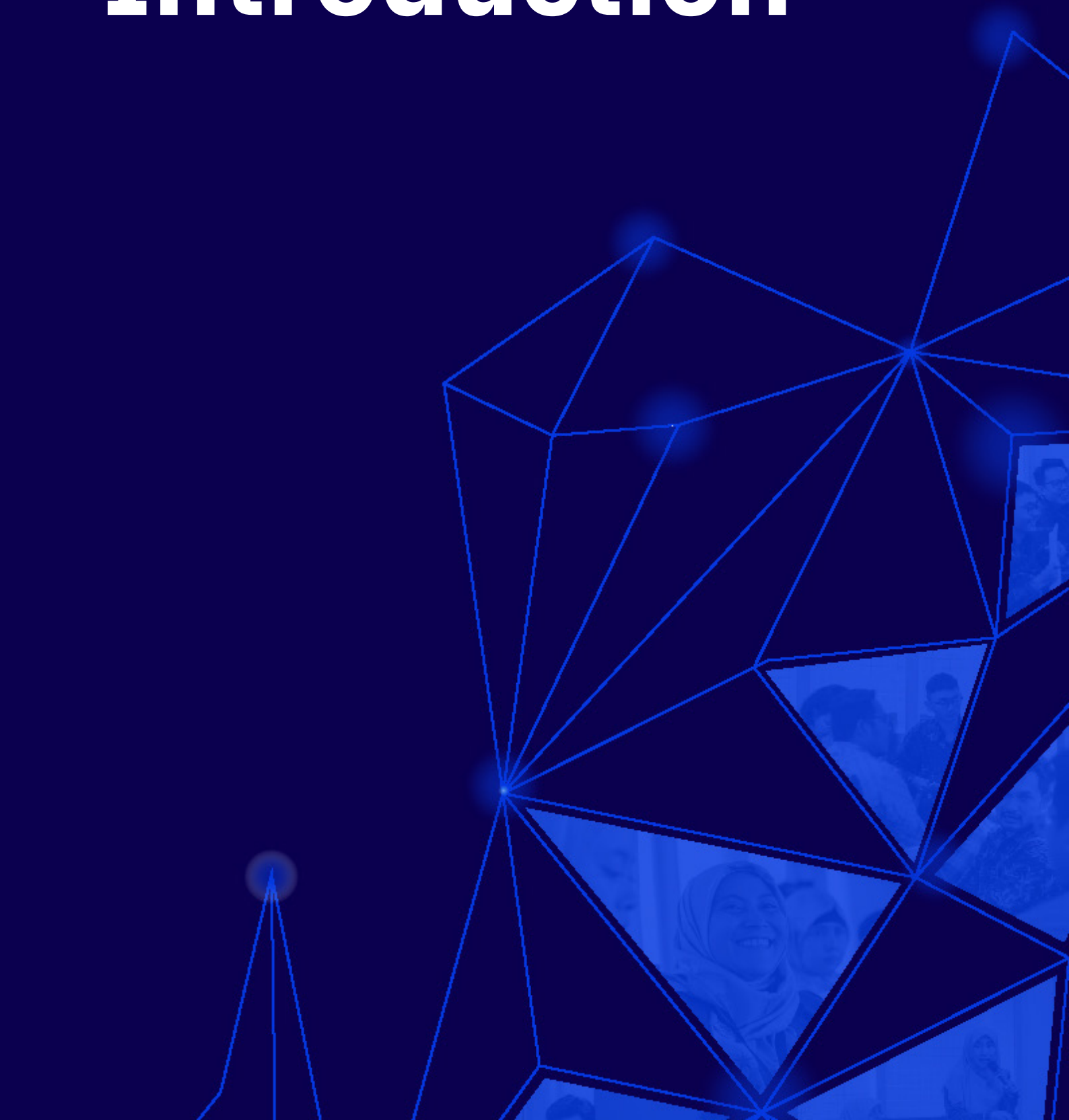
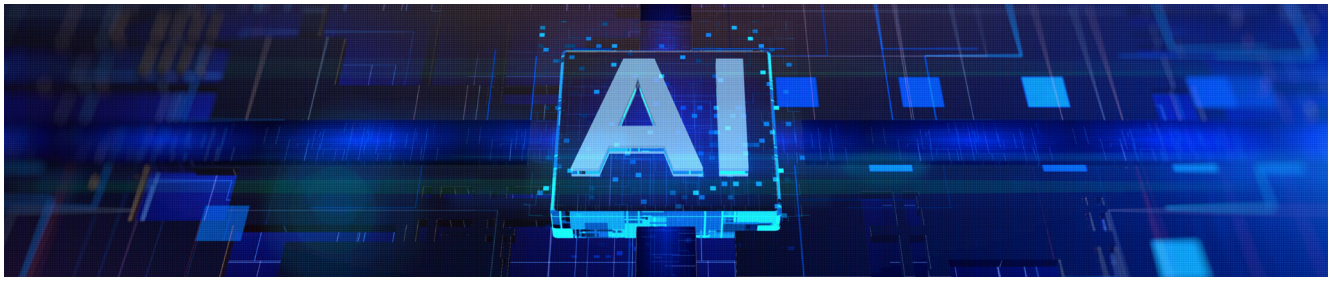
Introduction



Introduction

About The Handbook



In a world increasingly driven by digital innovation, artificial intelligence (AI) has emerged as a revolutionary force in a variety of industries. Having a policy agenda that supports the democratization of artificial intelligence is a crucial step towards global equality and achieving Sustainable Development Goals (SDGs). Technology can be extremely beneficial in dealing with complex issues such as poverty reduction, improved health, educational development, and environmental sustainability. Democratization of AI, which refers to the process of making AI open and accessible to a wide range of individuals and organizations, ensures fair use of technology and the application of AI to drive inclusive growth and sustainable development.

Furthermore, the democratization of AI fosters local innovation by giving people access to AI technologies and equipment. This empowerment enables the development of bespoke solutions that suit local requirements and challenges. AI democratization takes advantage of varied views and regional knowledge by encouraging local innovation. Data training exchanges and policy frameworks are critical in harnessing AI technology to evaluate large amounts of data and offer important insights for making evidence-based policy decisions and formulations. Facilitating exchange within the policy framework promotes responsible development among AI policymakers and the proliferation of responsible AI, particularly for countries that collaborate with FAIR Forward.

This handbook provides a compilation of the lessons learned while delivering this program, with insights on what made the program effective and how problems were addressed. Handbook readers may benefit from reading the full document or referring to individual sections, such as how to run a virtual learning program, presentation materials and curriculum recordings, or lists of references and technical help.

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Contact and Support

If you have any comments or feedback about this handbook, please contact representative program FAIR Forward GIZ Indonesia, Karlina Octaviany, AI Advisor FAIR Forward, GIZ Indonesia through email: karlina.octaviany@giz.de, or Ministry of National Development Planning/BAPPENAS Dit KTI via email: dit.eti@bappenas.go.id and Instagram @dit.kti, or harapura impact via email: impact@harapura.com and Instagram @harapura.impact.

About FAIR Forward: Artificial Intelligence for All

Artificial Intelligence (AI) is a key technology driving the global digital revolution. It offers a range of new opportunities to break down existing barriers to human development and social inclusion and help to achieve the Sustainable Development Goals (SDGs). On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) implements the project "FAIR Forward – Artificial Intelligence for All", which strives for a more open, inclusive and sustainable approach to AI on the international level.

The specific objective of this project is to democratize AI and foster local AI innovation for sustainable development. This is done by open sourcing AI globally and across FAIR Forward's seven partner countries (Ghana, India, Indonesia, Kenya, Rwanda, South Africa, Uganda). In particular, the project tackles the lack of openly available, unbiased and localized AI resources, like training datasets, AI models and other technologies, in developing and emerging countries. Together with missing technical skills and missing political frameworks, this lack represents the major barrier to creating SDG-relevant AI use cases locally. To address this barrier, FAIR Forward explicitly promotes the development of

open-source AI resources for local development challenges, which can be freely used, shared and innovated on across projects, companies, organizations, and indeed across regions and the globe.

To achieve its objective to democratize AI, FAIR Forward operates in three main action areas whose combined outputs consolidate local AI innovation:

(1) Availability of locally usable global public goods is improved by promoting access to training data and AI technologies for local innovation
(2) Competencies of local actors to develop ethically responsible artificial intelligence locally are strengthened
(3) Exchange on policy framework conditions for developing and deploying responsible AI between AI stakeholders is strengthened in and/or between partners countries.

About Artificial Intelligence (AI) Training for Policymakers in Indonesia

harapura impact and Aptaworks implemented Artificial Intelligence (AI) Training for Policymakers in Indonesia from November 2023 to March 2024, as part of a comprehensive initiative to increase policymakers' capacity and understanding of the use of AI in various aspects of national development. This activity began with a thorough training session in Bandung, where participants acquired a knowledge background and an introduction to the policy in Indonesia in AI, which is still relatively new.

After a complete offline training session, the activity continued with online learning between participants, which involved learning the material in each module and collaborative discussions to strengthen understanding and application of the training material. These online activities allowed participants to stay engaged and apply the concepts they have learned in the context of their sectoral policies.

The training program concluded with a closing agenda held in Bali. Several AI technology developers spoke at this event, sharing their experiences and explaining AI implementation ideas. Furthermore, the participants joined the Policy Prototyping Lab, which was a set of activities meant to apply AI expertise to the creation of specific policy prototypes. This activity allowed participants to apply AI to real-world policy issues while receiving quick feedback from other participants and AI experts working in the program.

The objectives of Artificial Intelligence (AI) Training for Policymakers are:

- **Increasing the competence of policymakers:** This program aims to strengthen the capabilities of policymakers in Indonesia by providing in-depth knowledge about AI and facilitating understanding of responsible AI use and development.

- **Enabling exchange of knowledge:** Through making a collaborative platform, the program hopes to spark the exchange of knowledge and best practices policymakers,

policy stakeholders, which will enrich the manufacturing process policy in Indonesia.

- **Developing informative and ethical policy for artificial intelligence:** This program also tries to aid with policy development by using AI that is not only effective but also ethical and responsible, in accordance with local norms and demands.

With integrated formal education, peer-to-peer learning, and practical application through the Policy Prototyping Lab, this training provides a comprehensive approach to educating policymakers with the materials required to use AI technology to improve the quality of life of Indonesians. An example of a training agenda can be checked in **Annex 1.**

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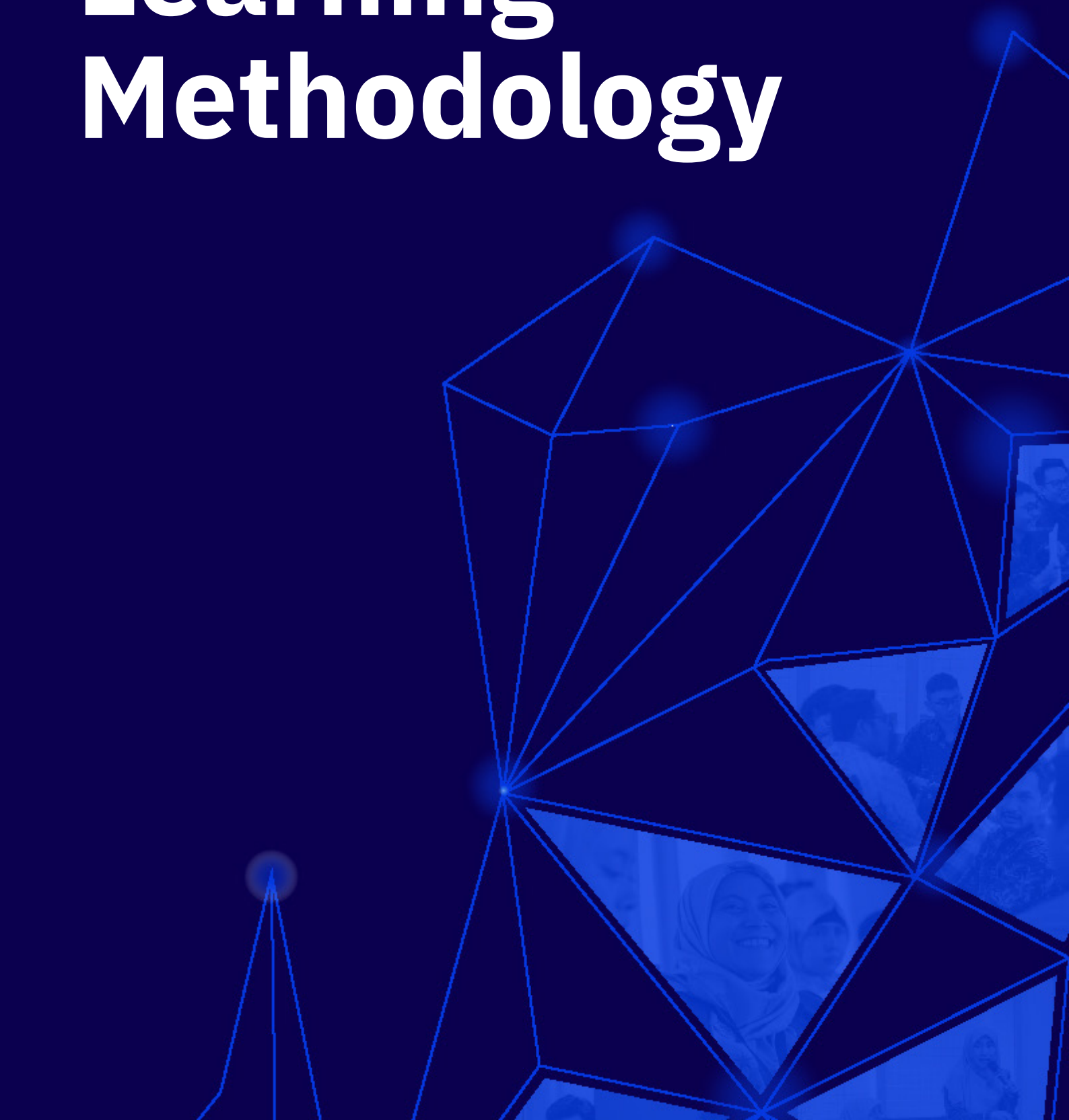
Learning Methodology



Learning Methodology

Adaptation from Artificial Intelligence Training in Rwanda

This Artificial Intelligence Training is based on a Global South-specific training handbook created by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Human Sciences Research Council (HSRC). This training handbook presents a framework for improving implementation program capacity for policymakers using AI, with a focus on practical and contextual applications that are relevant to nations in the Global South

Reference:
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Human Sciences Research Council (HSRC). 2022. Handbook for Implementing a Capacity Building Program for Policymakers on AI. http://bit.ly/AIPolicyHandbook

Contextualization with Indonesian Landscape Policy

To address the problems and capitalize on the opportunities given by worldwide developments in Artificial Intelligence (AI) technology, this course has been contextualized to meet Indonesia's regulatory framework and level of technological maturity. Deep knowledge of the need to build an inclusive and comprehensive AI policy is becoming increasingly critical, particularly in order to sustain Indonesia's global competitiveness while ensuring that existing policies sufficiently safeguard disadvantaged populations.

This training is designed for not only responding to the need but also to take advantage of the new Personal Data Protection (PDP) Law and other policy infrastructure which is an important milestone in protection data and become the foundation for protection of civil in application AI globally. The PDP Law establishes a framework for Indonesia to safeguard people's personal data, which is a critical aspect of ethical and responsible AI management.

This training program is meticulously crafted to address the current needs and to strategically leverage the new Personal Data Protection (PDP) Law, alongside other policy frameworks. These elements mark a significant milestone in data protection and lay the groundwork for safeguarding civil liberties within the global application of Artificial Intelligence (AI). The PDP Law, in particular, introduces a comprehensive structure for Indonesia to protect individuals' personal data, an essential facet of ethical and responsible AI management.

Moreover, this initiative aligns with Indonesia's National Strategy for 2020-2045, which identifies AI technology as a pivotal element in the nation's digitalization and technological advancement efforts. The program is designed to cultivate a cadre of policy champions across various sectors. These individuals will possess not only a deep understanding of AI

technology but also an appreciation for the ethical and human rights principles that underpin innovation. This approach promotes equality through digitalization and the ethical, responsible utilization of AI technology.

Participants of this training will be equipped to translate their knowledge into the development of effective and sustainable policies. This will fortify Indonesia's foundation for inclusive progress in the AI era.

Participant Identification

Identifying participants who are appropriate is the key inside ensure the success of this training, especially considering the important role they play in policy development. This training was specifically addressed to policymakers on second and third echelon levels in Indonesia, and several representatives from Non-Governmental Organizations (NGO), university, and partner development government. To ensure depth of interaction and effective learning, we limited the number of participants to twenty-five people. The selection of participants was carried out by the Ministry of National Development Planning/BAPPENAS, with as strict selection criteria to ensure representation from various ministries and institutions, as well as prioritizing inclusivity towards women's participation for balanced representation gender.

Some of the selection criteria includes prioritising senior-middle officials which capacity and authority to implement policies, ensuring that training has a direct impact on policy making at the operational level. Equalizing the hierarchical range of participants proved essential in creating an egalitarian discussion environment, allowing for the open and honest exchange of ideas and opinions. This is crucial given that the content discussed does not always have clear answers and is often exploratory.

In this program, the inclusion of participants from Civil Society Organizations (CSOs) and academia not only increased the diversity of perspectives but also enriched the discussion content, bringing in-depth understanding and interpretation of the use of Artificial Intelligence. This integration of different perspectives has changed the dynamics of training, making it more inclusive and representative of social needs.

For future training sessions, it is recommended to explore the possibility of organizing training with more homogeneous groups, particularly within specific sectors. This approach is expected to narrow the discussion on sector-specific issues, deepen the analysis, and enhance understanding of AI policy implications per sector. Such an approach could significantly contribute to the development of more detailed and coordinated policy development within specific sectors.

In addition, when it comes to gender inclusion, this program specifically developed strategies to support women's active participation. In the initial invitation sent to institutions, we underscored the importance of the representation of women participants in this program. Apart from that, this program also provided a safe space for participants, especially women, to ask questions, present or respond in discussions. In its implementation, the involvement of women participants reached 49%. By deeply integrating the principles of gender equality in the program structure, this training can strengthen women's representation in the development and application of Artificial Intelligence policy in Indonesia

Approach-based Training Program

This approach-based training program is designed to consider the basic principles of how adults learn effectively, especially those in the realm of policy. Based on empirical proof, a method that considers participants as agents active in the process of learning them—like that carried by methodology ADIDS—has proven to give more substantial learning results. This methodology organizes the learning experience through a series of structured stages, allowing for the use of various learning formats and methods.

The ADIDS methodology, used in this training, is an approach that facilitates adult learning through five main activities in the learning session:

- **Activity and Discussion –** Involve participants in interactive activities, such as polls or case studies, followed by in-depth discussions. These sessions may also include presentations by policymakers, followed by questions and answers.
- **Input –** Interactive teaching delivered through exposure or presentation by the experts.
- **In-depth Study and Synthesis –** Hands on activity that focuses on the application of the content presented at the input stage, for example: analyzing templates, policy frameworks and guidelines in small groups. This activity is complemented by plenary feedback sessions and wider discussions to consolidate understanding.

This training was designed to be interesting and relevant to today's real challenges, using case studies that illustrate situations faced by policymakers in their respective contexts. By bringing the training content closer to participants' reality, the training became more applicable and meaningful.

It is also important that training sessions to be a safe space, in which every participant feels comfortable to speak and be involved in the discussion. The environment makes it possible for participants to feel free to convey ideas and opinions without worrying to be judged or disqualified by other participants.

In addition, this training welcomed diverse perspectives, by integrating experience-based practices from various practitioners in the industry as well as learning from fellow policymakers. This collaboration enriched sessions with insights from various sectors and disciplines, encouraging the exchange of ideas and solutions more innovative and comprehensive in development policy.

This approach accounts for the participants' various levels of technological mastery. As a result, technical terminology was simplified. Furthermore, it is designed to meet standardize national learning criteria, guaranteeing that all participants can properly follow the training content. This method ensures that no one feels left behind because they do not understand technical jargon or advanced topics with which they are unfamiliar. This inclusive approach is expected to not only increase individual competency but also strengthen collaboration between policymakers in the public policy ecosystem.

Team Structure

In this Artificial Intelligence (AI) Training for Policymakers, the role of the trainers goes beyond the traditional function of conveying information; they have an essential role in facilitating discussions and guiding through hands on exercises. The trainers acts as a mediator who enables participants to understand and apply AI concepts in their policy context in an interactive and memorable way. The following is the composition of the training team and the roles required in the training:

Team Leader - Lead Facilitator:

- Ensure that the implementation of the capacity building program is effective.
- Drive all learning sessions between participants and ensure participation is active.
- Facilitate sessions with effectiveness, create a consistent learning structure and spaces for integration.

Second Facilitator:

- Support Team Leader in the program implementation.
- Play an important role in facilitate session and support the development of the curriculum with the Curriculum Development Expert.

Curriculum Development Expert:

- Lead curriculum design and manage specific modules as a content expert, focusing on Quality Assurance rather than on the development of modules and materials.
- Bring specialist knowledge to provide in-depth insight and information on technical content.
- Ensure smooth delivery of content by making it clear and interesting.

Communication and Administrative Coordinator:

- Manage program operations and ensure they run smoothly.
- Provide technical support and manage materials to ensure program content is easily accessible.

Short-term Expert Pool - Expert AI:

- Develop 'Input' for specific modules and facilitate sessions with short-term module experts.
- Provide research-based insights and practices from various groups such as civil

society organizations, the private sector, and policy consultants as presenters and material deepeners to adapt and contextualize training materials.

In addition to the training team, this program was also supported by two project managers who handle administrative tasks, ranging from sending invitations to coordinating activities and general project management. This administrative backbone ensured that all logistical and program management elements were well-coordinated.

Finally the entire team worked to create a learning environment that accommodates the diverse technological knowledge of the participants, using simplified terminology and easily understandable national standards. This ensures that each participant, regardless of their level of technical knowledge, can absorb and apply the concepts to the maximum. The learning environment created not only promotes equality and comfort in discussions but is also open to various perspectives and best practices from different stakeholders, including those from the academic sector, industry, and other policymakers.

Speaker Diversification

This Artificial Intelligence (AI) Training for Policymakers was designed with the involvement of speakers from diverse backgrounds practitioners, academics, civil society organizations, and policymakers. They all contributed to the diversity of perspectives and the depth of discussions. This diversity is a crucial element to ensure that participants gain a comprehensive and multifaceted understanding of AI and its applications in policy.

The criteria that was considered for the selection of speakers is the following:

- **Gender Balance:** Ensuring an equal participation of women and men was a priority. The programme aimed to accommodate diverse perspectives and value the important contributions of all genders in the development and implementation of AI policies.

- **Balanced Perspective:** This training strives for balanced representation from the private and public sector, academia, and other policymakers. Balancing speakers from the private and public sectors, as well as academia, provides diverse and in-depth insights. This enriched discussions and offers comprehensive perspectives, considering various viewpoints and approaches to AI-related issues.

- **Engagement Representative from Marginal Group:** In this training, there was a session facilitated by a speaker with disabilities, discussing the development of inclusive and accessible AI technology. This session aimed to raise participants' awareness and understanding of the importance of incorporating disability perspectives in policy and technology development. This step aimed to create a more inclusive environment and encourage innovation that considers the needs of all community members. Additionally, this session allowed participants to gain new perspectives from marginalized groups as well as recommendations for the implementation or development of AI that can be applied in their respective sectors. This session was leaded by a disabled person and it was conducted at an accessible

Disability Hub that supports the mobility of the speaker. Furthermore, the speaker with disabilities were accompanied by an assistant to facilitate presentations and interactions with program participants.

- **Diverse Social Agenda:** During the program, the selection of speakers was designed to cover different social agendas, including dimensions of sustainability, support for disabled groups, marginalized communities, women, and indigenous people. This demonstrated the training's commitment to inclusive learning and supporting social diversity, ensuring that all elements of society are represented and respected.

- **Specific-Sector Work Exhibition:** At the end of the program, participants were invited to present the work they have done in their sector at the Policy Showcase, allowing for further peer learning and the exchange of best practices among participants.

- **AAAPoMaNet Alumni Contribution:** The program also brought in alumni from AAAPoMaNet from the Government of India to share their experiences with AI policy work. This provided a unique opportunity for participants to learn from international policy practices and offers cross-country perspectives and learning from implemented practices.

The entire lineup of speakers in this program was designed not only to impart knowledge but also to stimulate deep and reflective discussions, where each participant can relate with speakers' experiences and conect it with their own work context. With this inclusive approach, the training program aimed not only to provide education but also to inspire sustainable and responsible actions and innovations in the participants' respective work environments.

Here is the list of speakers for the training that has already been conducted in Indonesia:

1. **Alvin Raihan,** Team Lead Application Development, Flutter Developer, Aptaworks
2. **Muhammad Habib Abiyan Dzakwan,** Researcher, Department of International Relations, Centre for Strategic and International Studies (CSIS)
3. **Matheace Ramaputra,** Consultant in AI & Tech Policy
4. **Indarto,** Founder & CEO Neurobot
5. **Beni Djohan,** Director Analytics, Aptaworks
6. **Dr. Kautsarina, S.Kom. MTI,** Coordinator System Management Information Security (ISMS) and Protection Data Personal (PDP), Center Study and Development Application Informatics and Information Communication Publication, Communication and Information Human Resources Development Agency, Ministry of Communication and Informatics
7. **Debby Kristin,** Project Officer Digital Rights (Indonesia), EngageMedia
8. **Muhammad Rheza Muztahid,** Principal Data Analytics Engineer, United Nations Global Pulse - Asia Pacific
9. **Meidy Fitranto**, Founder & CEO, Nodeflux
10. **Maria Hattya Karienova,** Project Manager Digital Rights (Indonesia), EngageMedia
11. **Meyda Nento,** Associate Project Officer for Social and Human Sciences, UNESCO
12. **Dr. Ayu Purwarianti,** Co-Founder, Prosa.ai

13. **Alia Yofira Karunian,** Researcher, PurpleCode Collective
14. **Rama Devi Lanka,** Director Emerging Technologies, Government of Telangana, India
15. **Prof. Ir. Ketut Wikantika, M.Eng., Ph.D,** Head at Remote Sensing and GIS Research Division, Faculty of Earth Sciences and Technology, Institute of Technology Bandung (ITB)
16. **Ari Juliano Gema**, Partner at Assegaf Hamzah & Partners dan Pengacara Hak Kekayaan Intelektual
17. **I Made Prasetya Wiguna Mahayasa**, CEO PT Mahayasa Teknologi Nusantara dan Representatif Penyandang Disabilitas DNetwork (Jaringan Kerja Disabilitas)
18. **Dea Adhista,** Principal Corpus Developer, Prosa.ai
19. **Sarah Octavianti**, Senior Corpus Developer, Prosa.ai
20. **Galih Pradipta Muridan,** Corpus Developer, Prosa.ai

Communication Management

In the management and coordination of the Artificial Intelligence capacity-building program, communication played an important role in supporting the program's continuity and logistical arrangements to ensure participants had a comfortable and conducive learning experience.

Internal Communication

Internal communication within this program included preparing meeting agendas and recording meeting minutes. We held bi-weekly meetings to update information about the program and ensure all team members are regularly informed about responsibilities and expected outcomes. Project management applications or collaborative tools like Google Docs were used to facilitate this process. Setting specific times for reviewing completed and ongoing actions every two weeks was an essential step in ensuring effective internal communication.

External Communication

For external communication, it was very effective to create centralized documentation that could be accessed by all participants. Email reminders about upcoming activities were sent to ensure participants always receive the latest information. Participants were also provided with a Workbook that contained all the training materials in a single, easily accessible document, making it easier for them to follow all the training activities.

Participant´s Participation Commitment

To ensure the success of the Artificial Intelligence training, each participant was recruited through an official registration process. This process not only ensured their attendance but also their commitment to the program. Through a written statement in the

Commitment to Participation Form, participants ensured their willingness to actively participate in the entire training process. Subsequently, they were provided with detailed information about the training duration, module content, schedule, and the planned series of activities. This information was delivered before the training begins and is updated regularly as needed, ensuring tha participants can allocate the necessary time and arrange their schedules to fit the upcoming activities. This approach is essential to ensure that each participant is fully prepared to engage in the program, with a clear understanding of what is expected of them and how they can contribute to the learning process.

Group Communication

Effective and efficient communication is key to managing the Artificial Intelligence training, especially in reaching out to and reminding participants about upcoming activities. With the participants' consent, we formed a WhatsApp group which serves as the main channel for sending reminders, handling logistics, and facilitating interaction among participants. The choice of using WhatsApp was based on its popularity and affordability in Indonesia, making it an ideal communication tool that allows participants to easily engage and network. This group not only strenghened communication related to logistics and training activities but also created a space for participants to share experiences, exchange ideas, and build valuable professional connections. The presence of this group supported a collaborative learning environment and opens up more opportunities for peer learning that continues even after the training sessions end.

Online Class and Time Flexibility

For online class sessions, we always provide options to the participants and allow them to vote on their preferred class times. The schedule could be changed no later than two weeks in advance, and Zoom invitations and online calendars were sent to the participants. This approach ensured active participation and gives participants the opportunity to express their preferences democratically.

This carefully designed communication approach was intended to maximize participant engagement and participation in every aspect of the program by ensuring that they have all the information and resources needed to support their learning process efficiently and effectively.

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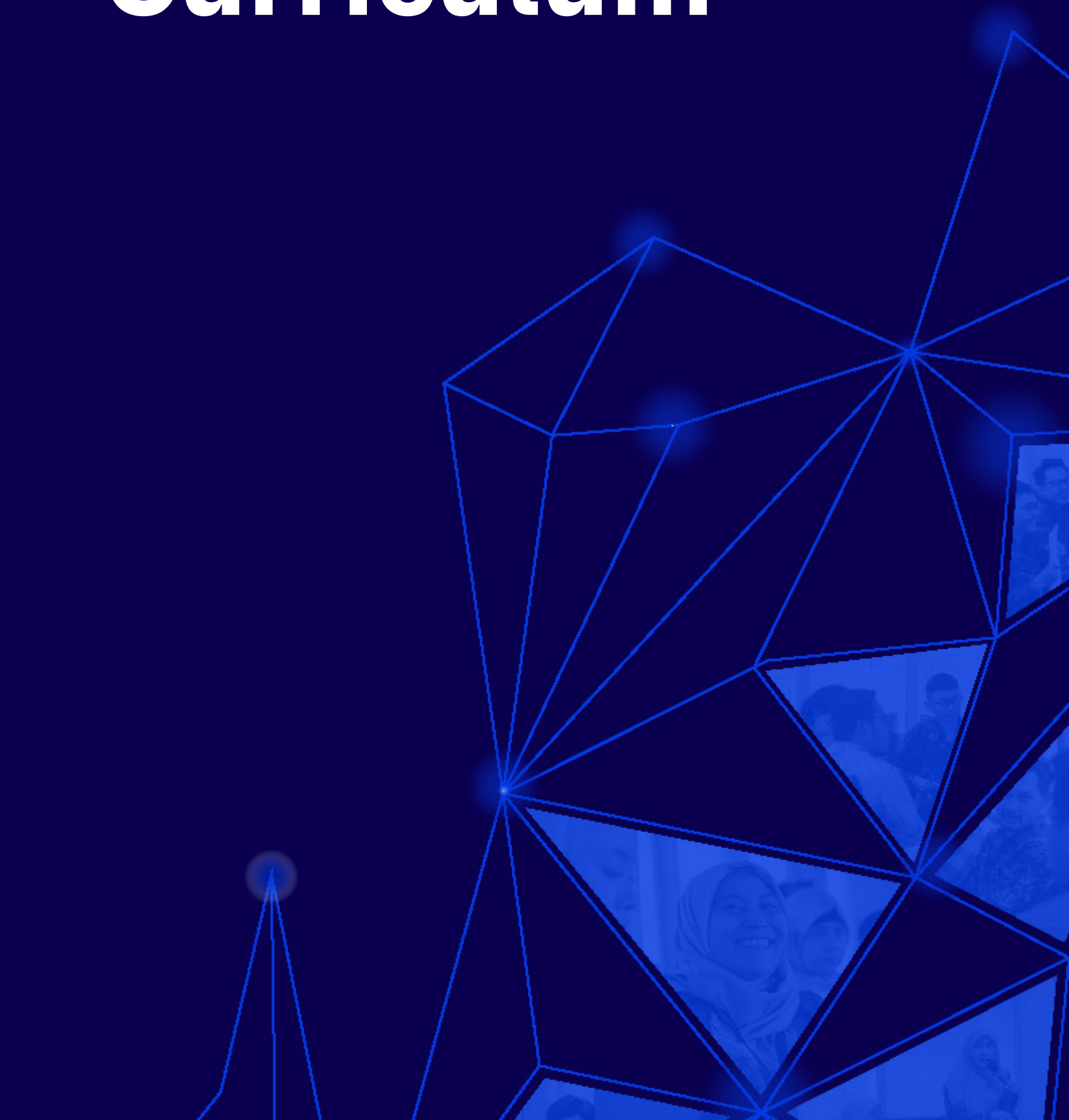
Curriculum



Curriculum

Training Design

The curriculum design for the Artificial Intelligence (AI) Training for Policymakers is structured to ensure that each stage of the training strategically contributes to the development of the skills and knowledge needed by policymakers. This curriculum is also designed to support the participants' learning journey, from initial introduction to comprehensive knowledge application. Each training component is built to ensure that policymakers are equipped not only with theoretical understanding but also with the practical skills needed to make decisions and shape impactful policies in the rapidly evolving AI era.

Official Opening of the Artificial Intelligence (AI) Training for Policymakers

The Artificial Intelligence (AI) Training for Policymakers began with an opening event and a panel discussion with AI leaders and practitioners. To kick off the event, participants heard a welcome address from representatives of the Ministry of National Development Planning/BAPPENAS and GIZ Indonesia. To ensure the effectiveness of the training, participants also signed a commitment form to fully participate in the training program. This was also intended to foster direct engagement within the AI policymaker network.

The opening event also aimed to raise public awareness about AI policymaking and FAIR Forward's support to the Indonesian government through media involvement. Specifically, for the AI Training for Policymakers in Indonesia, the opening was held in conjunction with the week commemorating the 65th anniversary of the first All-African People's Conference held in Accra to highlight the deeper correlation with the spirit of democracy and movement in the Global South. The opening location was also held at the Museum of the Asian-African Conference in Bandung, West Java.

AI Training for Policymakers (In-persons Class)

After the opening, there were two-days intensive training where participants gathered in person to learn five core modules, delivered by various leading experts in ten sessions. In addition to the sessions, participants also receive supplementary sessions such as the Socialization of the PDP Law as a legal basis for data protection and a presentation by a practitioner who implements AI solutions in specific sector.

The speakers involved in this training program were selected based on principles established and discussed by the program implementation team and GIZ. The training program featured presentations from cross-sectoral experts, including academics, researchers, CSO members, policymakers, private sector representatives, and startup representatives to ensure diverse and balanced perspectives. Each speaker had approximately one hour to present their material, which was designed to provide a comprehensive overview despite the limited time for Q&A and discussion. However, the two-day training arrangement was intentionally designed to ensure participant focus and reduce potential drop-off.

Training materials was presented in Indonesian, ensuring that all participants were absorb the information to the fullest without language barriers. Translation support into Indonesian was provided if a speaker presents in a foreign language.

In-depth Study Materials (Online Class)

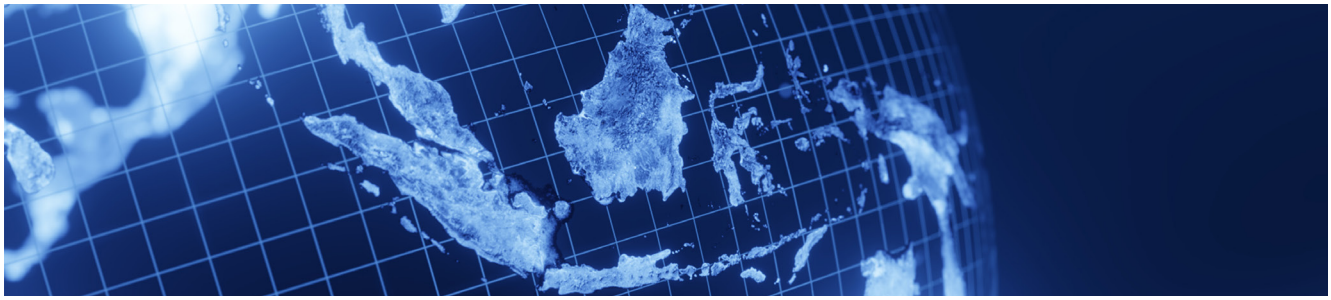
Following the in-person training, the Artificial Intelligence (AI) Training for Policymakers continued with a series of online class sessions designed to deepen understanding of the material. These sessions were designed to provide easy access from various locations, thereby expanding participation and giving participants the flexibility to engage actively.

Over a period of approximately three months, five online class sessions were scheduled to take participants deeper into the core of Artificial Intelligence. Through analysis, synthesis, and discussion sessions, policymakers had a golden opportunity to examine the application of AI technology, connected theory with practice, and enriched their learning experience through collaborative dialogue with experts and their peers.

Each of these sessions emphasized the practical application of the knowledge gained in the in-person training. This was an important bridge between theoretical understanding and policy implementation, allowing participants to visualize and design real solutions for the issues they face in their daily work.

This deepening of the material was enriched by contributions from two guest speakers who provided valuable insights into the latest developments in AI technology and related policy frameworks. The presence of guest speakers added an extra dimension to the discussions, offering fresh perspectives and encouraging participants to consider new aspects of AI they may not have previously considered.

With this structured online class, participants were not only equipped with theory and practice but were also inspired to go further—applying new knowledge and skills to create innovative and responsible policies in the field of AI.



Artificial Intelligence (AI) Training for Policymakers' Closing Ceremony and Certificate Dissemination

The closing event for the Artificial Intelligence (AI) Training for Policymakers marked the completion of a series of intensive learning in this training. In this event, participants gathered to celebrate their achievements and progress, showing concrete results from the

learning process that has been achieved they go through.

The closing agenda was designed to reflect the success of the training with activities designed to open a collaborative forum to develop inclusive and responsible AI policies. The closing event included several activities in meeting offline during two days. Example Agenda Program Closing can be seen in **Annex 2**.

- **Panel Discussion and Practitioner Presentation on AI Technology Development:** In the closing event of the Artificial Intelligence (AI) Training Program for Policymakers, the panel discussion and practitioner presentation highlighted the relevance of inclusion in the development of AI and the policies that regulate it. In this session, participants and experts engaged in in-depth discussions on the application of AI to improve the well-being of people with disabilities, the integration of local wisdom through the use of regional languages, and the Intellectual Property Rights (IPR) issues that often arise in AI technology development. This discussion provided a critical perspective on the social and ethical impacts of AI implementation, ensuring that technological advancement aligns with considerations of justice and individual rights.

- **Policy Showcase:** Selected participants shared their work or ideas on AI development in their respective sectors or institutions in a policy showcase that supports in-depth peer learning, enriching the collective experience with new and innovative insights.

- **Co-Creation: Policy Prototyping Lab:** In the Policy Prototyping Lab, presentations from this co-creation process not only showcased innovative ideas but also spur further commitment and engagement in AI topics by high-level policymakers, paving the way for collaboration and sustainable policies.

- **Visit Field:** A field visit was one of the series of events in the closing ceremony of the Artificial Intelligence (AI) Training Program for Policymakers. This agenda aimed to provide participants with direct experience or understanding of AI-based technologies that have been applied in the field.

- **Natural Language Processing (NLP) Workshop:** This workshop covered various important aspects of the development and utilization of AI technology for natural language. In the content introduction session, the role of NLP in understanding human language in both text and voice forms, challenges in data development, and its application in regional languages were discussed. Participants were invited to understand the data development process in NLP, such as the MATTER cycle (model, annotate, train, test, evaluate, and revise) and the challenges faced, from the annotation process to the quality of the data produced.

As recognition of their efforts and dedication, participants also received graduation certificates symbolizing their achievements in this program. The certificates were provided in two forms: a printed version for memorabilia and formal recognition, and an electronic version to facilitate wider distribution and access. The awarding of certificates at the end of the event

not only marked the closure of the program but also opened a new chapter for the participants as pioneers of AI policy in their respective institutions. It was hoped that they will not only return to their organizations with new knowledge but also become active members of the AAAPoMaNet Indonesia network.

Effective Training Delivery Format

In developing an effective training format, we chose to conduct the main training sessions in person over two days. The physical presence in this training aims to ensure active and comprehensive participation from all participants. The focus of these sessions is to provide a comprehensive introduction to Artificial Intelligence and its policy aspects, enabling direct and in-depth interaction between participants and facilitators.

Hybrid Training Format: After the face-to-face sessions, the training continues with online meetings scheduled every two weeks. These online sessions are dedicated to deepening the material and further discussion, allowing participants to analyze and discuss in depth the application of the material they have learned. This hybrid format not only enhances flexibility in learning but also maintains sustained engagement among participants.

Active and Continuous Learning Participation: The hybrid format offers significant benefits, including the opportunity to connect during the in-person sessions, which then facilitates interaction during the online sessions. This interaction strengthens the relationships among participants and facilitates more effective collaboration during discussions. Active engagement in both formats ensures that participants are not just passively receiving information but also actively developing and applying new knowledge in their policy contexts.

Training and Accessibility Material Management: To support independent learning and self-organization of participants, it is important for us to consistently provide access to training materials. This includes ‘Input’ presentation decks and materials needed to complete training tasks in the Workbook. These materials can also be used by participants as future reference or by those who cannot attend some sessions to understand the missed content. During the training program, recordings of each session are shared with course participants after each module, along with presentation decks and course assignments. All materials are centrally distributed by the project coordinator and communication coordinator.

The training format we have structured is designed to optimally support participants in deeply understanding both the theoretical and practical aspects of Artificial Intelligence. With this approach, we aim to prepare participants to become pioneers in sustainable and forward-looking policy innovation, ready to face and respond to evolving challenges.

In the context of future training, it is important to assess the conditions and availability of existing facilities. If the situation permits, conducting the training in person at the beginning of the program is highly recommended as it provides significant benefits in building strong interactions and connections among participants. The advantages of face-to-face interaction not only enhance the quality of communication but also strengthen collaborative relationships that can enhance the learning process. However, if conditions do not allow, delivering the training online is also an effective option. Modern technology and online learning platforms have made it possible to deliver content just as effectively, ensuring that participants still receive high-quality and interactive education, no matter where they are.

Considering this adaptability, the program can be designed to be flexible and responsive to various needs and situations, ensuring that learning objectives are always achieved and participants gain maximum benefit from their experience.

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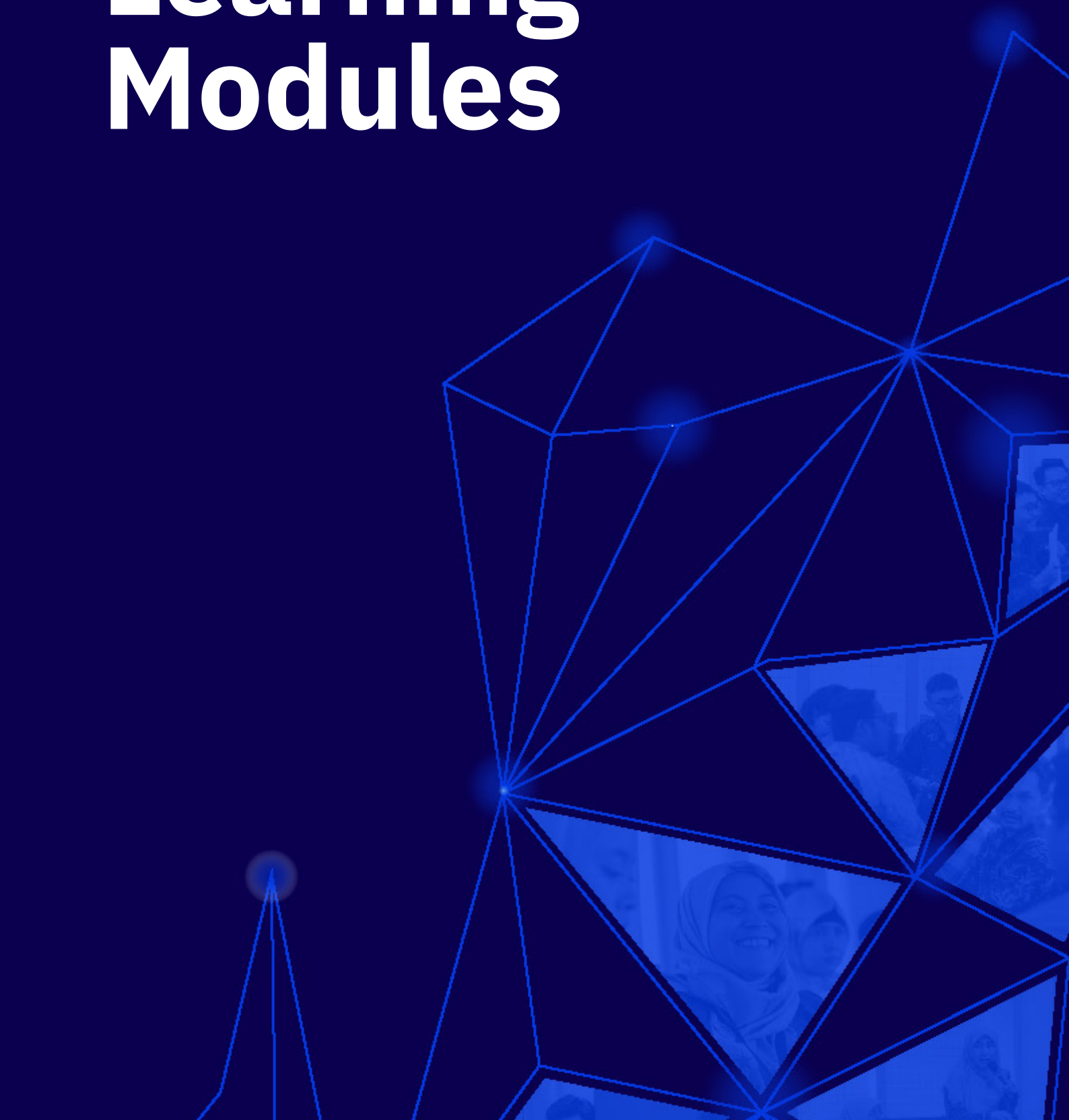
Ministry of National Development Planning/Bappenas
Republic of Indonesia

Learning Modules



Learning Modules

This program is designed to provide in-depth knowledge of Artificial Intelligence (AI) through a series of carefully structured learning modules. The entire training is divided into five main modules, each consisting of two sub-modules and one synthesis deepening activity. These activities are designed not only to provide theoretical understanding but also practical knowledge, by facilitating the direct application of learned concepts in real policy contexts.

Learning Module Details:

No	Module	Duration
1	**Module 1: Introduction About Artificial Intelligence (AI)**	
	Sub-module 1A: What Is Artificial Intelligence (AI)?	60 minutes
	Sub-module 1B: Artificial Intelligence (AI) and Development Agenda	60 minutes
	In-depth Study Material: Group Work in Class 1: Identification of AI-Based Solutions	60 minutes
2	**Module 2: Technology Policy Focused on Artificial Intelligence (AI)**	
	Sub-module 2A: Artificial Intelligence (AI) and Technology Policy	60 minutes
	Sub-module 2B: Artificial Intelligence (AI) and Sectoral Approaches	60 minutes
	In-depth Study Material: Online Group Work 1: Discussion of Module 2 - Equitable Policy Role Discussion	90 minutes
	In-depth Study Material: Online Class 2 - A Policy Comparative Study Focusing on the Use of Artificial Intelligence (AI) in Asia	60 minutes
3	**Module 3: Government for Artificial Intelligence (AI) Ethical Development**	
	Sub-module 3A: Data Management and Sharing	60 minutes
	Additional Sub-module: Socialization of the Personal Data Protection Law	60 minutes
	Sub-module 3B: Artificial Intelligence (AI), Ethics, and Human Rights	60 minutes
	In-depth Study Material: Group Work in Class 2 - Case Study Discussion: Ethical Policy	45 minutes
	In-depth Study Material : Online Class 3 - Discussion of Module 3: Gender in Artificial Intelligence and Small Group Discussions with Community Group Representation	90 minutes

4	**Module 4: Practical Use of Artificial Intelligence (AI)**	
	Sub-module 4A: The Use of Artificial Intelligence (AI) for Sustainable Development	60 minutes
	Additional Sub-module: Artificial Intelligence (AI) Everywhere: Indonesia's Today and Path Forward	60 minutes
	Sub-module 4B: Social Impact Assessment	60 minutes
	In-depth Study Material: Group Work in Class 3 - Social Impact Assessment Matrix	45 minutes
5	**Module 5: Institution Readiness for Artificial Intelligence (AI) Implementation**	
	Sub-module 5A: Readiness for Artificial Intelligence (AI) Implementation	60 minutes
	Sub-module 5B: Building A Responsible Artificial Intelligence (AI) Ecosystem	60 minutes
	In-depth Study Material: Online Group Work 4: Institutional Readiness Analysis for Artificial Intelligence Technology Implementation	60 minutes

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Ministry of National Development Planning/Bappenas
Republic of Indonesia

Module 1:

Introduction About Artificial Intelligence (AI)

Module 1: Introduction About Artificial Intelligence (AI)

Module 1 of this training program is designed to provide a strong foundation on Artificial Intelligence (AI), a technology that is increasingly important and influential in various aspects of life and development. This module is divided into two complementary sub-modules to provide a comprehensive understanding of AI. **Sub-module 1A: What Is Artificial Intelligence (AI)?** offers a basic introduction to AI, explaining key definitions and principles governing this technology. Meanwhile, **Sub-module 1B: Artificial Intelligence (AI) and Development Agenda** explores how AI can be integrated into development agendas at both global and local levels, highlighting the potential of AI in driving socio-economic progress. Furthermore, **In-depth Study Material: Group Work in Class 1: Identification of AI-Based Solutions** invites participants to discuss in groups and identify AI-based solutions that are applicable in various sectors, facilitating a deeper practical understanding. Through this carefully designed structure, Module 1 aims to broaden participants' insights into the power and potential of AI, preparing them for further exploration of its use in effective and innovative policy-making.

General Learning Objectives:

This module is designed to provide a solid foundation of Artificial Intelligence (AI), with a focus on conceptual understanding, key terms and key processes involved. It also links the potential and relevance of AI to the global and regional development agenda, especially in the context of Indonesia and the Global South. The aim is to make AI more accessible and relevant to policymakers with use examples and study cases from local industry in Indonesia.

Learning Adaptation Suggestions:

To ensure that the lesson materials are relevant and easily understood by participants

- Examples and case studies will be taken from local industry to strengthen connections with the participants' everyday experiences.
- Technical terms will be presented in Indonesian with additional explanations for important foreign, facilitating the understanding of concepts.
- Explanations will focus more on practical applications rather than complex technical theory, making it easier for participants to apply learning in practice.

Sub-module 1A: What Is Artificial Intelligence (AI)?

This sub-module provides a basic introduction to Artificial Intelligence (AI) by explaining key definitions, core processes, and the principles governing this technology. The specific learning objectives of this sub-module include a deep understanding of AI and algorithm-based decision-making, including various approaches such as rule-based programming as well as data-driven machine learning and deep learning development.

In this sub-module, participants will learn how machine learning algorithms are trained using historical and new data and how this data is managed. Participants will also be introduced to key AI-related terminology and various approaches in machine learning and deep learning, including exploring topics such as Supervised, Unsupervised, and Reinforcement Learning, as well as the differences between Discriminative and Generative models.

Additionally, this sub-module aims to evaluate the need for AI applications in a policy or operational context by considering the existing benefits and risks.

Specific Learning Objectives:

- Understand AI and algorithmic decision-making, including rule-based programming and data-driven machine learning and deep learning development.
- Recognize how machine learning algorithms are trained using historical and new data and how this data is managed.
- Identify key terminology related to AI and various approaches in machine learning and deep learning.
- Evaluate the need for AI applications in a policy or operational context, considering the existing benefits and risks.

Class Activity Suggestions:

- **Ice Breaking**: Using software tools like Mentimeter, ask participants to mention three words that come to mind when they hear about AI. This will kickstart the discussion and provide initial perspectives on AI.
- **Discussion Starter**: Ask participants for their opinions on how machines are taught and how they learn. Encourage participants to discuss their views on machine learning processes, deepening their understanding of how machines learn.
- **Small Group Discussion**: Focus on the potential use of AI in various sectors, identifying challenges and automation needs in their respective fields or countries.

Example of Responses from Training Participants:

What is the first word that comes to mind when you hear the term Artificial Intelligence?

- **Participant 1**: “The first word that comes to mind? Robot. In terms of definition, maybe a system that resembles human intelligence.”

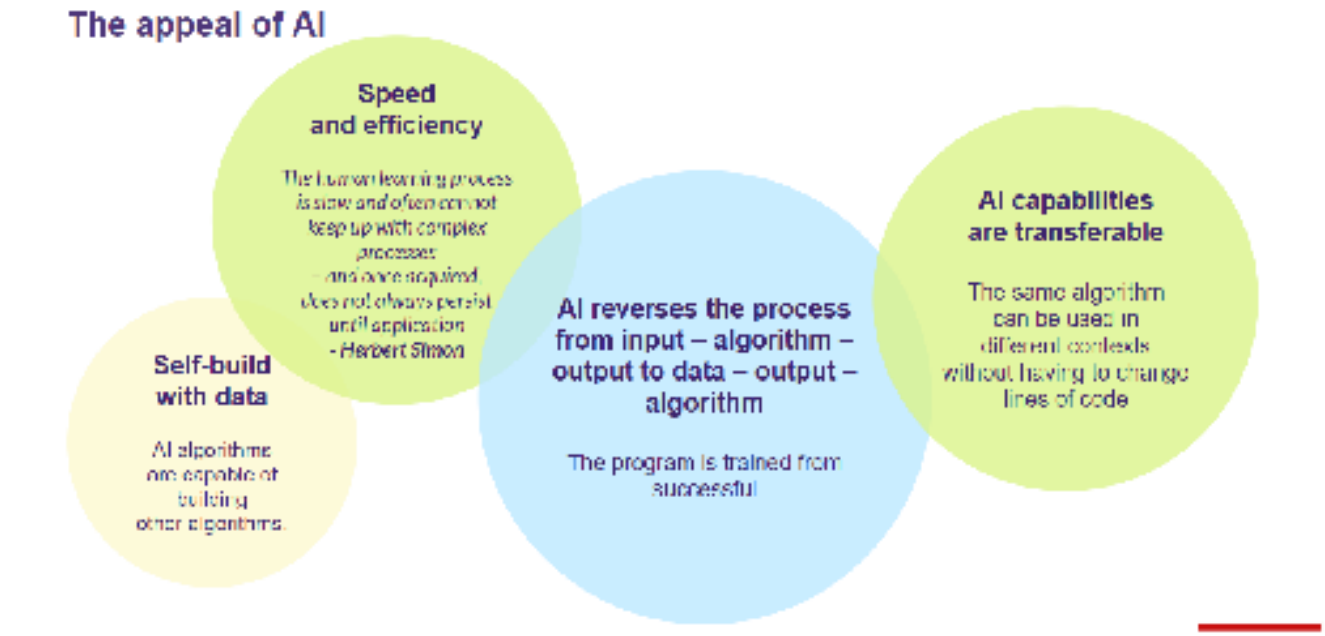
- **Participant 2**: “For me, the word that comes to mind is ‘advanced’.”

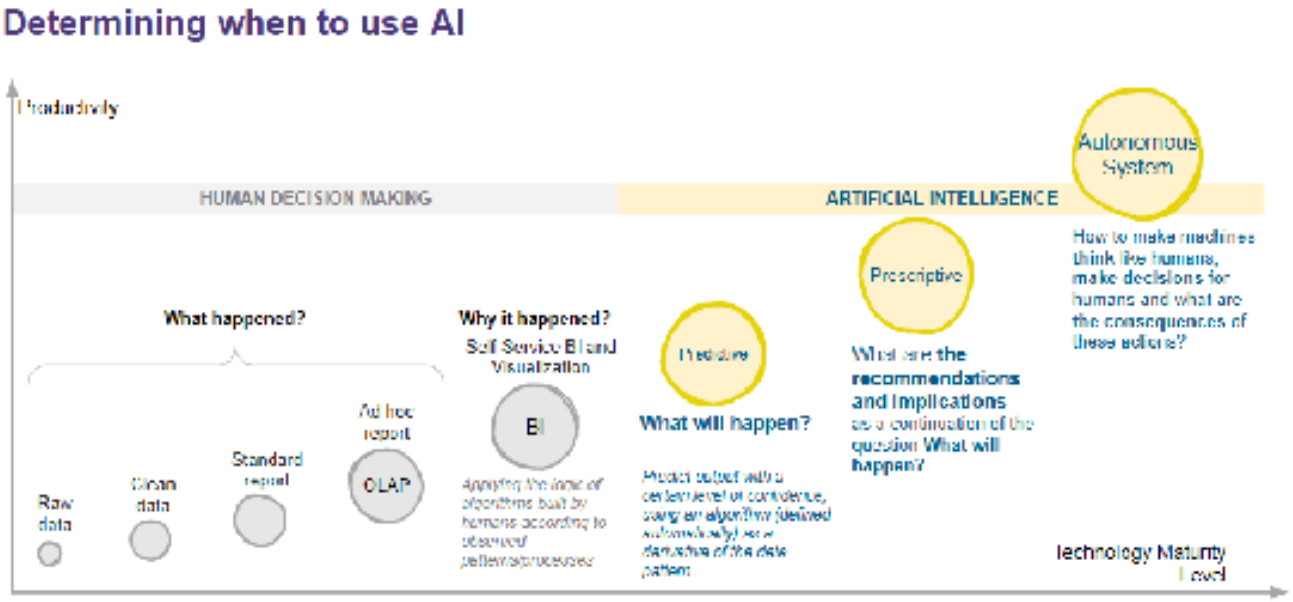
Documentation of Learning Activity:

Inputs Example:

Key events in AI's journey

1950 Turing Test	**1957** Perceptron	**1975** Genetic Algorithms	**1992** Support Vector Machine	**2006** Deep Belief Net (Hinton et al)	**2017** AlphaGo defeats Go world champion (DRL) Attention Is All You Need
1951/1969 NNC Nearest Neighbor Classification	**1965** Multilayer Neural Networks	**1986** Backpropagation	**1997** Deep Blue defeats world chess champion Gary Kasparov	**2009** ImageNet **2012** AlexNet **2015** CV better than human	**2020** GPT **2022** Chat GPT
1953 Monte Carlo Markov Chains	**1968** Hidden Markov Models	**1989** Boosting			





Sub-module 1B: Artificial Intelligence (AI) and the Development Agenda

Sub-module 1B delves into the integration of Artificial Intelligence (AI) in development agendas at both global and local levels. This module aims to build a conceptual understanding of AI, clarify its terminology, and outline its main processes. Participants will learn how AI can advance efficiency, improve public services, and streamline administrative tasks that support the policy cycle from agenda setting to decision-making and evaluation.

Each participant is expected to produce an in-depth analysis of how AI can be used to

advance development and determine practical steps to integrate this technology into existing operations and policies. Evaluation will be conducted through group presentations, class discussions, and peer reviews of proposed solutions. This sub-module aims not only to educate about AI but also to ensure that participants can envision and plan for the practical implementation of AI within current and future development frameworks.

Each participant is expected to be able to provide a thorough analysis of how AI may be utilized to improve development and identify practical strategies for incorporating technology into operations and current policy. Evaluation will take the form of group presentations, class discussions, and peer review of proposed solutions. This sub-module intends not only to teach participants about AI, but also to enable them to see and plan the deployment of practical AI in framework work development that is already underway.

Specific Learning Objectives:

- Identify challenges in various fields or countries that require automation and decision-making support.
- Assess the current state of technology and data analysis that needs improvement through AI solutions.
- Predict benefits and identify risks involved for policymakers and AI implementation.
- Explore key inputs and factors driving the implementation of AI solutions in policymaking and operations.

Class Activity Suggestions:

- **Discussion Starter:** Ask participants to discuss where AI technology can be used in the development sector. This discussion aims to trigger thoughts on practical AI applications and facilitate a deeper understanding of how this technology can be integrated into various development sectors.

Example of Responses / Questions from Training Participants:

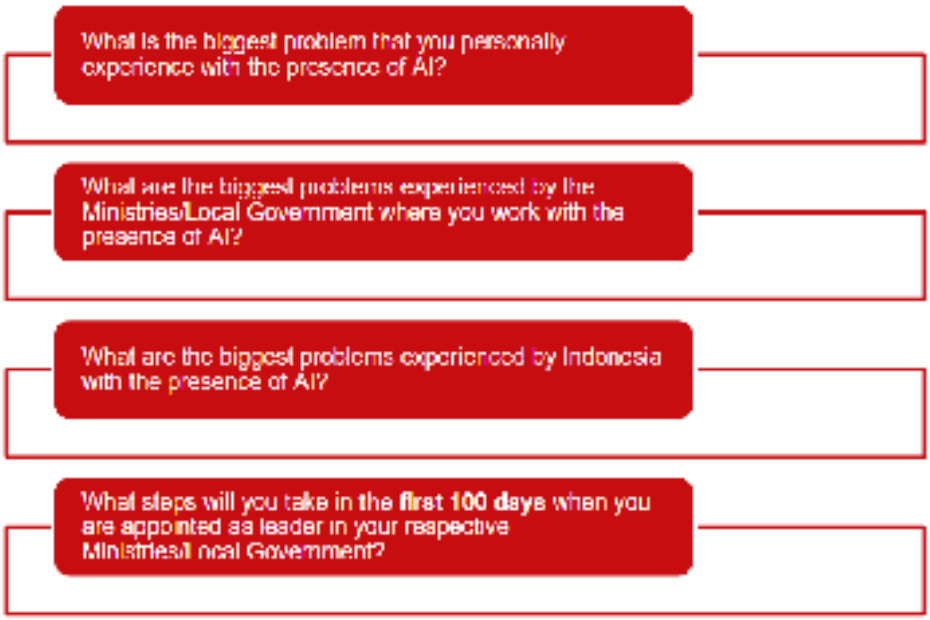
What concerns you the most about the advent of Artificial Intelligence (AI)?

- **Participant 1:** “One thing I fear about Artificial Intelligence or AI is that there might be images we cannot tell if they are real or fake. With such AI technology, we might misinterpret what is real and what is fake, or vice versa.”
- **Participant 2:** “One of my concerns is how artificial intelligence can replace researchers. There are now many [AI applications], like ChatGPT: we give a good prompt, and the result is also good. This is one of the biggest issues in my field.”
- **Participant 3:** “In my opinion, the presence of Artificial Intelligence or AI raises concerns about how AI can take our personal data without ethics. Additionally, AI is considered by society to be capable of creating its own programs or data. So we don’t know if it’s fake news or not. Fake information spreads even faster. ”
- **Another speaker who attended the Sub-module 1B session:** “We want to create proportional regulations that are in line with the risks: not too restrictive to stifle

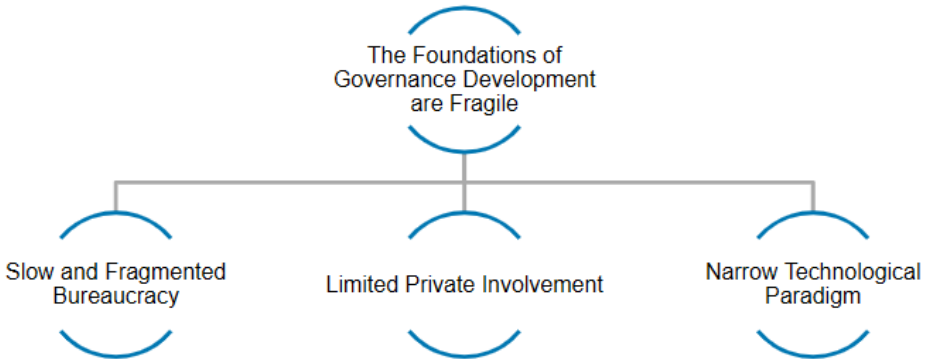
innovation, but not too loose so that the rights of society are not met. Therefore, we will map out the greatest risks. This is why we will seek advice from practitioners who use AI technology daily in their fields to map the risks, whether high or medium. We will identify which risks we can tolerate and which we cannot. This can help us in creating future programs."

Documentation of Learning Activity:

Inputs Example:



Innovation Power and Three Big Problems in Using AI for the Development Agenda in Indonesia



In-depth Study Material

Group Work in Class 1: Identification of AI-Based Solutions

As a follow-up, participants will engage in Group Work in Class 1 using the 'Identification of Artificial Intelligence-Based Solutions' Worksheet. Participants will be tasked with thinking about opportunities for implementing AI solutions in their respective fields, explaining the challenges and risks. This activity is designed to apply the concepts learned in a practical and specific context according to their sector.

Activity Objectives:

- **Deepening Practical Understanding:** Enables participants to apply theory into real and specific practice according to their respective sectors.
- **Identification and Analysis Challenge:** Understand in depth the challenges that may be faced in implementing AI solutions and how to overcome them.

Activity and Discussion:

Every participant is given a worksheet which aims to guide the process identification solution AI. The worksheet is filled in a way independent of every participant for the specified time, for about 20 minutes. This worksheet covers various aspects important like identification problem, potency solution AI, estimation benefit, and discussion to challenge as well as risk which could be faced.

After a period of filling in the worksheet independently, participants will then present their thoughts in a large group discussion. At this stage, every participant presents their findings and together with groups, they discuss and map out potential and interesting sectoral solutions. Discussion not only aims to get feedback and perspective from colleagues, but also for possible collaboration and deep brainstorming to look for solutions which are innovative and effective.

Activity Outputs:

The results of this activity are expected to generate a series of personalized AI-based solutions that are ready to be further explored or even implemented in the participants' professional practices. The large group discussions are also anticipated to inspire new ideas and fresh approaches that participants may not have considered when working independently.

In this way, Group Work in Class - In-depth Study of Module 1 not only activates knowledge but also facilitates the growth of professional and collaborative networks among participants, paving the way for more responsible and effective AI innovation and implementation across various fields.

Documentation of Learning Activity:

Inputs Example:

Template - AI Solution Identification

Use this table to do an initial assessment of potential AI solutions. Example content has been added to demonstrate how the template can be used. See more Africa AI use cases on this list of companies, and read more about whether to use AI here.

Development goal	Decision-making challenge	Possible AI solution(s)	Is AI appropriate?	User benefit	Possible risks (to user & society)	Key enablers
E.g. Increased food security for region	*Banks are reluctant to provide loans to local farmers due to weak credit profiles*	*Banks could consider a more diverse mix of variables (beyond income, assets, credit history) when making loan decisions e.g FarmDrive*	*Large number of variables suggests a machine-learning approach could be helpful* *Cost of errors is medium level, not immediately life threatening, but financial and social implications*	*Local farmers are able to secure loans for supplies and equipment.* *Banks can make more informed loan decisions*	*Privacy of farmer due to increased data collection and sharing.* *Error or bias in credit scoring could affect livelihood of farmer/ bank sustainability.*	*Improved data collection on farmer assets, trading environment and practices.* *Understanding amongst farmers of how data is being used. Transparency and accountability (incl. appeal) on how decisions made*

Presentation of the AI Solution Identification

- Discussion in small groups in breakout rooms (20 minutes)
- Group discussions may choose to narrow down solutions for implementation at the strategic level of ministries as policy makers
- Work on mapping the Identification of AI-Based Solutions according to groups
- Presentation in large groups alternately (5 minutes each group)

Group 1

Development Goals	Decision-making challenges	Possible railway solution	Is KA the right solution?	Benefits for users	Possible risks (users and society)	Prime mover
To assist in the process of drafting regulations related to *AI ethics*	Copyright for the resulting regulations	KA assists the literature study process in regulatory preparation activities	Yes, but the final decision maker lies with the stakeholders	Facilitate literature study activities in the regulatory preparation process	Errors in analyzing source documents	Increase in the number of results of document literacy studies

Group 2

Development Goals	Decision-making challenges	Possible railway solution	Is KA the right solution?	Benefits for users	Possible risks (users and society)	Prime mover
Improvement in the field of education and journalistic media, misinformation, disinformation, hoaxes > Disaster	- HR - Technology - Ethics	- KA can detect artificial / non-artificial information. - Detecting information - misinformation	- Communities can have a social impact	- People can sort information - The media can also take advantage	- Tools - Error/bias	- IFCN - Mafindo - Academics Improvement of media literacy

Group 3

Development Goals	Decision-making challenges	Possible railway solution	Is KA the right solution?	Benefits for users	Possible risks (users and society)	Prime mover
Increasing the quality of research in Indonesia	- Research & data Research is still silo - There is no grand design research yet in Indonesia	- One Indonesian research data that can be processed with generative AI for priority scale Research & Revenue Blueprint planning	- Some solutions still require a national level design maker (human interference)	- Research does not overlap - Focus on research that is considered important according to KA recommendations	State research data can be leaked, especially for vital research	Research institutions both private / government

Learning Materials

Module 1: Introduction About Artificial Intelligence (AI)
Material Reviewer: Beni Djohan (Aptaworks)

Sub-module 1A: What Is Artificial Intelligence (AI)?
Presenter: Alvin Raihan (Aptaworks)

- PDF Material (Indonesian) : Sub-modul 1A : Apa Itu Kecerdasan Artifisial (KA)?
- PDF Material (English) : Sub-module 1A: What is AI?
- Recording Material (YouTube): Sub-modul 1A: Apa Itu Kecerdasan Artifisial (KA)?

Sub-module 1B: Artificial Intelligence (AI) and Agenda Development
Presenter: Habib Abiyan Dzakwan, Centre for Strategic and International Studies (CSIS)

- PDF Material (Indonesian):
  Sub-modul 1B: Kecerdasan Artifisial (KA) dan Agenda Pembangunan
- PDF Material (English):
  Sub-module 1B: AI and Development Agenda in Indonesia's Perspectives
- Recording Material (YouTube):
  Sub-modul 1B: Kecerdasan Artifisial (KA) dan Agenda Pembangunan

In-depth Study Material: Group Work in Class 1:
Identification of AI-Based Solutions
Facilitators: Ivy Londa (harapura impact), Alvin Raihan (Aptaworks)

- Worksheet (Indonesian):
  Diskusi Kelompok Identifikasi Solusi Berbasis Kecerdasan Artifisial (KA)
- Worksheet (English): AI Solution Identification

All learning materials for Module 1 can also be accessed via
https://link.harapura.com/FF-AI-Module1

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Republic of Indonesia

Module 2:

Technology Policy Focuses on Artificial Intelligence (AI)

Module 2: Technology Policy Focuses on Artificial Intelligence (AI)

Module 2 from Artificial Intelligence (AI) Training for Policymakers is designed to explore how Artificial Intelligence (AI) can be integrated in technology policy and its sectoral application, highlighting responsibilities and ethical principles in its use. **Sub-module 2A: Artificial Intelligence (AI) and Technology Policy** explore placement of AI in national innovation and digital strategy, assessing aspects such as skills, infrastructure and use of AI in the public sector. This approach underscores the importance of regulation and public awareness in developing policies that support AI. Meanwhile, **Sub-module 2B: Artificial Intelligence (AI) and Sectoral Approaches** focuses on the use of AI in high impact sectors such as health and agriculture, discussing the risks, opportunities, and necessary policy adjustments for each sector.

For Module 2, the training also includes an interactive activity, **In-depth Study Material: Online Group Work 1: Discussion of Module 2 - Equitable Policy Role Discussion**, providing participants with the opportunity to act as various policymakers in a simulation of AI policy-making. This activity aims to enhance their understanding of the dynamics and challenges in the implementation of this technology. This module aims to strengthen participants' understanding of responsive and responsible AI policies, as well as facilitate active engagement in discussions and practical applications.

The rest, Module 2 also presents **In-depth Study Material: Online Class 2 - A Policy Comparative Study Focusing on the Use of Artificial Intelligence (AI) in Asia** presents exposure policy Artificial Intelligence (AI) ethical from India. Session filled by AAAPoMaNet alumni, providing insight into benchmarks policy as a guest speaker. All activities in this module are designed to strengthen participants' understanding of responsive and responsible AI policy development, while facilitating active involvement in discussion and practical application.

General Learning Objectives:

Module 2 aims to understand how to position AI within technology policy. It focuses on a sectoral approach to responsible AI. It models policy based on legal principles with a focus on transparency and human rights. This module strengthens understanding of the importance of effective regulation and multi-stakeholder engagement in developing and implementing ethical and responsible AI policies.

Adaptation Learning Suggestions:

The following learning adaptation suggestions are designed to ensure optimal participant understanding:

- Refer to the national strategy for the implementation of Artificial Intelligence (AI) as a foundational framework for discussing and understanding technology policy.
- Deepen participants' understanding by studying successful technology policy references, both domestic and international.
- Use case studies relevant to the participants' institutions to provide practical and applicable insights into AI policy implementation.

Sub-module 2A: Artificial Intelligence (AI) and Technology Policy

Sub-module 2A focuses on integrating artificial intelligence (AI) into the technology policy framework in Indonesia, emphasizing the need to catch up in AI adoption and develop an AI ecosystem that balances innovation with risk mitigation. Participants will understand the complexities of the relationship between AI and technology policy, and how these policies can be directed to support innovation while ensuring transparency and respect for human rights.

The learning methodology in this sub-module involves comprehensive analysis of successful national strategies, in-depth discussions on the implementation of existing policies, and the application of relevant case studies. This is done to provide a strong understanding of how AI can be tailored to various public sectors, ensuring that the necessary infrastructure and skills are available, and meeting ethical and transparency principles. Participants will be encouraged to compare various policies, assess their effectiveness and efficiency in supporting the responsible development and implementation of AI. Emphasizing the importance of policymaking that supports innovation while ensuring security and fairness.

Specific Learning Objectives:

- Policy strategies to catch up in AI adoption with a focus on innovation strategies and risk mitigation.
- Establishing policy domains such as skills, infrastructure, technology use in the public sector, and regulation.
- Considering policy aspects such as skills, infrastructure, public sector use, regulation, and AI ethical principles.
- The role of regulation and soft governance approaches in managing AI technology.
- Sectoral policy considerations for implementing AI technology with an emphasis on transparency and human rights.

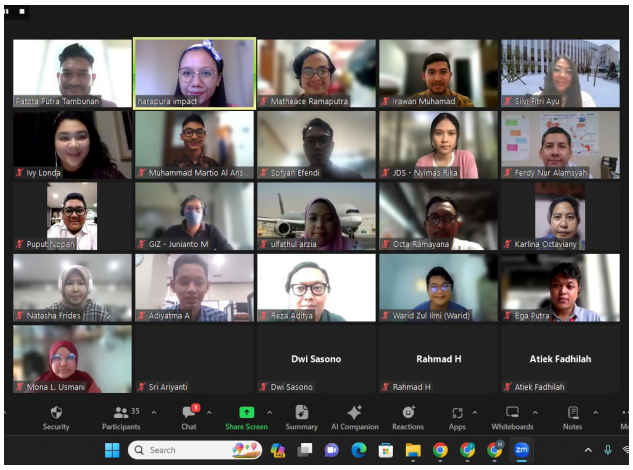
Class Activity Suggestions:

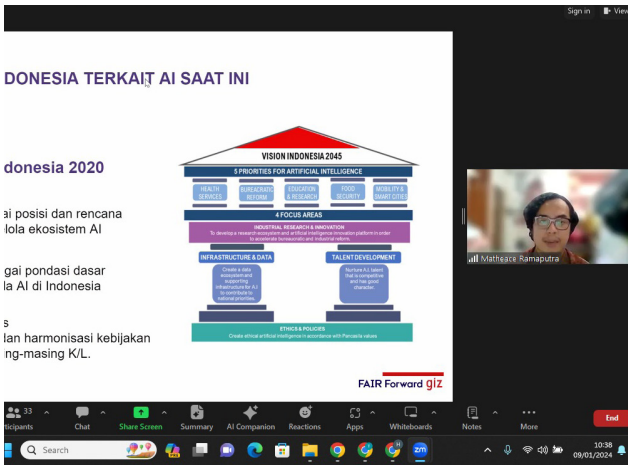
- **Discussion Starter**: Reflection on policy compromises and instruments in the implementation of AI-based technology policies.

Example of Responses / Questions from Training Participants:

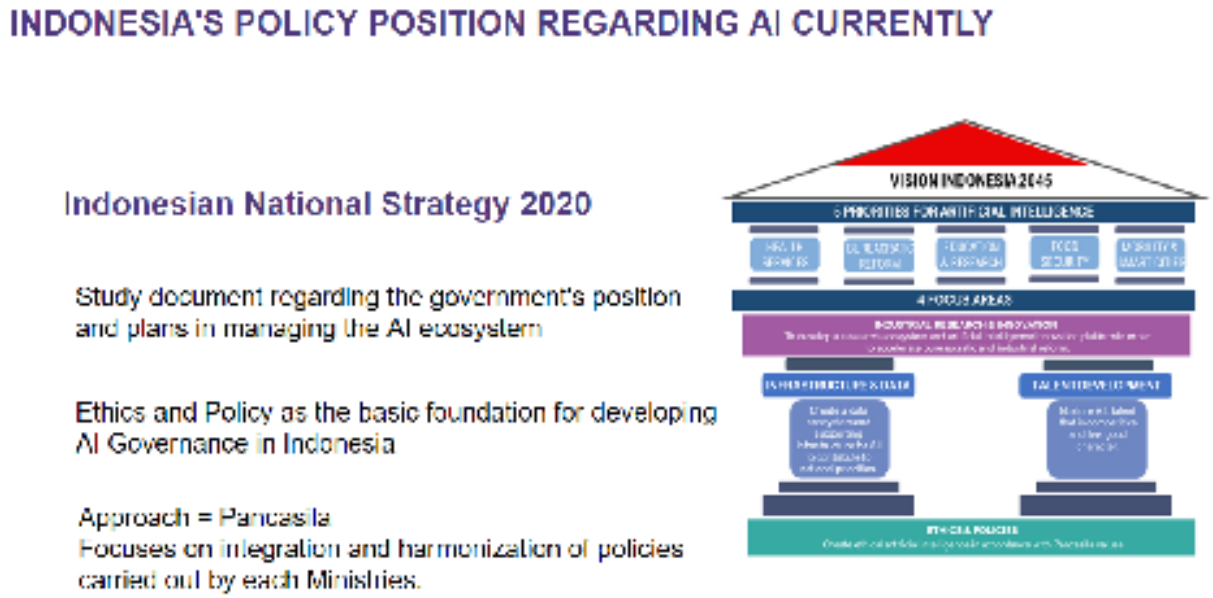
- **Participant 1:** “Are there specific funding programs for artificial intelligence from the government or third parties abroad that often become funding sources for local devel opers in Indonesia?”
- **Participant 2:** “What are your views on the use of Artificial Intelligence (AI) in the con text of bureaucracy, especially in elections? What are the appropriate criteria for using AI in a political context?”

Documentation of Learning Activity:





Inputs Example:



HOW TO DECIDE INDONESIAN AI POLICY PRIORITIES

Three approach policy:

- Governance = Policies that are oriented towards governance development and implementation of AI in specific use cases.
- Enabler = Policy that focuses on giving support growth ecosystem local, both on public AI use nor incentives and coaching for perpetrators business local.
- Regulation = focuses on regulation law on a real risk identified.

Sub-module 2B: Artificial Intelligence (AI) and Sectoral Approaches

Sub-module 2B in the Artificial Intelligence (AI) Training for Policymakers discusses a detailed study on the application of AI in high-impact sectors including healthcare, agriculture, and government services. This module focuses on developing strategic sectoral approaches to AI implementation, with a particular emphasis on formulating policies that harmonize innovation and risk mitigation. Transparency and appreciation of human rights are central to this framework, ensuring that technology implementation is socially responsible.

The methodological approach in Sub-module 2B utilizes case studies on AI adoption and governance across various sectors. Thus, training participants are expected to develop a comprehensive understanding of the risks, opportunities, and dynamics of policymaking. This includes the application of policies and regulations specifically tailored to each sector, ensuring that policies and regulations are not only adaptive but also inclusive of various stakeholders in the development of sectoral AI strategies.

In the sessions of the Artificial Intelligence (AI) Training for Policymakers held in Indonesia, presenters are selected from high-impact sector practitioners. For example, we invited experts who developed AI models in the healthcare sector, particularly in pathology and disease detection. Similar explorations are planned for the education and finance sectors in other training sessions, highlighting a broad and multidisciplinary approach to AI utilization.

Specific Learning Objectives:

- Provide an overview of the application of Artificial Intelligence (AI) in high-impact sectors such as healthcare, agriculture, and government services.
- Examine case studies on the adoption and governance of AI in various sectors to understand best practices and existing challenges.
- Identify the risks, opportunities, and specific stakeholders associated with the implementation of AI in particular sectors.
- Analyze how policies and regulations can be tailored to the specific context of each sector.
- Emphasize the importance of multi-stakeholder engagement in developing and implementing effective AI strategies across various sectors.

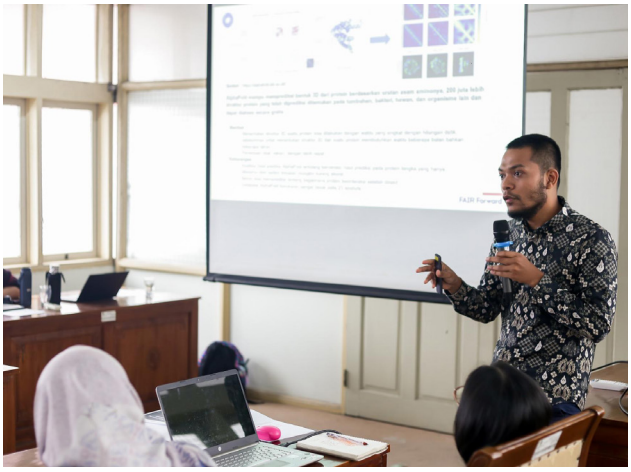
Class Activity Suggestions:

- **Small Group Discussion:** Focus on sectors with high potential for AI to drive inclusive development and discuss specific risks and opportunities
- ***On-site Polling:*** Identify sectors with high potential for AI use, helping to target areas for strategic and innovative interventions.

Example of Responses / Questions from Training Participants:

- **Participant 1:** “What has been your experience as a private sector developer in integrating your technology with government-provided platforms?”

Documentation of Learning Activity:



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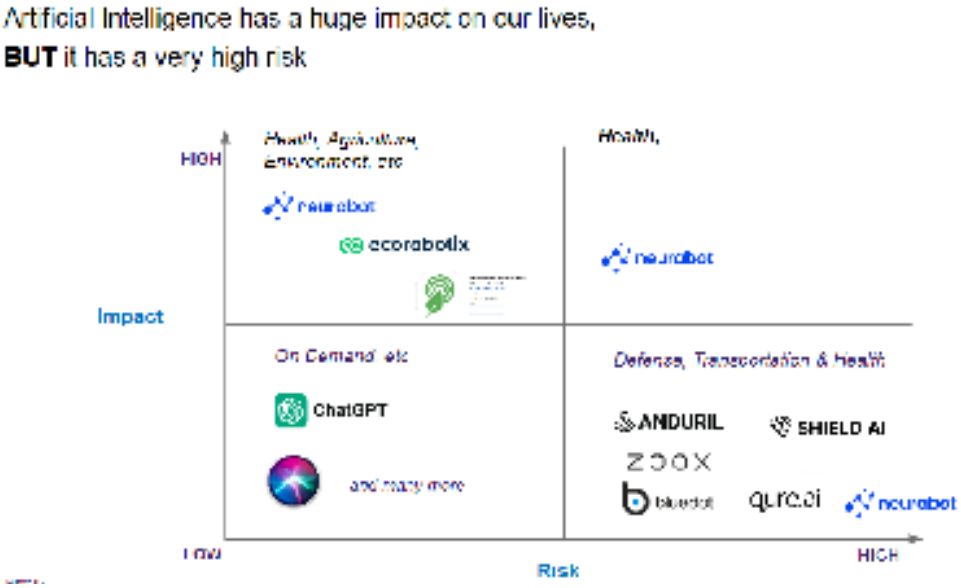


AI 'outperforms' doctors in diagnosing breast and lung cancer

Source :
https://www.bbc.com/news/health-39857259
https://www.nature.com/articles/s41591-019-0447-x

Collaboration to Accelerate Innovation Indonesian Artificial Intelligence

In-depth Study Material

1. Online Group Work 1: Discussion of Module 2 - Equitable Policy Role Discussion

In Online Group Work 1, participants engage in role-playing activities to explore and discuss the perspectives of various stakeholders involved in the implementation of Artificial Intelligence (AI) in technology policy. Each group represents one of four stakeholders: Government, Domestic Industry (Small, Medium, Enterprises / SMEs), Labor Unions and Civil Society, and Large Technology Companies. Participants use the provided activity sheets to analyze and discuss the policy priorities, challenges, and resources needed by their stakeholder group.

Activity Objectives:

- Develop participants' understanding of the different challenges and needs of various stakeholders in the development of a responsible AI policy framework.
- Deepen participants' insights into how policies can be shaped to support innovation while mitigating risks and ensuring fairness.

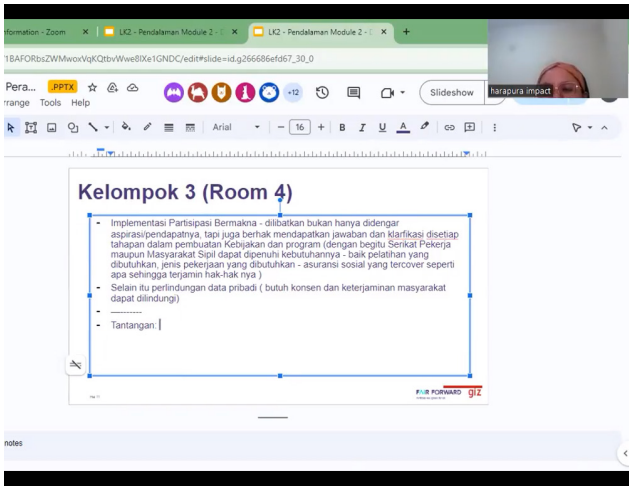
Activity and Discussion:

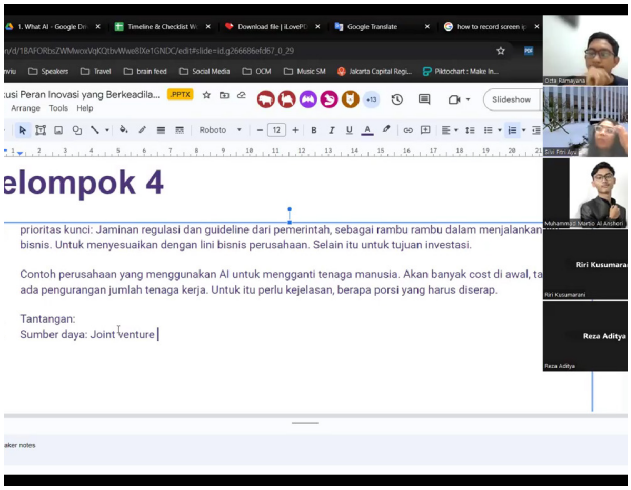
This activity lasts for 90 minutes, beginning with group assignments and a brief explanation of the issues and stakeholders involved. Each group has 25 minutes for facilitated discussion in their breakout rooms to complete the worksheet related to their respective stakeholder group. After the group discussions, participants return to the plenary session to present their group's findings, followed by an open discussion to explore the similarities, differences, and compromises among the various stakeholder perspectives.

Activity Outputs:

The output of this activity is a presentation from each group outlining policy priorities, key challenges, and recommendations for the stakeholder they represent. The results of these discussions will be compiled into a document reflecting the various perspectives and will be used to inform the development of more inclusive and balanced AI policies. The plenary discussion following the presentations will help identify agreements and differences among the groups, providing valuable insights for a comprehensive understanding of AI policy dynamics.

Documentation of Learning Activity





Inputs Example:

AI in Tech Policy Activity: Role Play - Innovation with Equity

Aim: identify policy priorities and conundrums for different stakeholders with regard to developing policy frameworks for Responsible AI

Tools / Resources: Four break out rooms, randomly assigned; Common problem Statement, Activity Sheet, and Fact sheet for each group; 1 note-taker and presenter per break out room; 1 moderator per breakout room

Time: 90 min

- Introduction to activity and problem statement in plenary (10 min)
- Divide room into 4 break out room, each representing one of the following stakeholders.
  - Government
  - Domestic industry
  - Labor unions and Civil Society
  - Big Tech companies
- Each group to identify its key policy priorities and challenges, from the perspective of the assigned stakeholder group. (25 min).
- Return to plenary. Presentation by each group (5 min each * 4 = 20 min)
- Open discussion with aim of capturing points of convergence, divergence, and trade-offs. (35 min)

Problem Statement

The use of AI technologies can enable new forms of efficiency and productivity gains for governments, businesses and people. Careful use of these technologies can help accelerate achievement of the Sustainable Development Goals and help countries address persistent development challenges.

Building these technologies however require significant investment of resources, the availability of talent, and localised and curated data sets. Many developing countries are still in the process of digitalisation and there are significant gaps in internet access and connectivity, particularly for already marginalised social groups. Earlier waves of technological advancement have contributed to an increase in global inequality.

Most of the current advances in machine learning have been enabled by the large amounts of data available to a select few large global technology companies and many developing countries are reliant on these companies for providing essential market and informational infrastructure. Many SMEs also rely on these companies for access to capital and product innovations.

Technological unemployment may increase inequality within domestic country contexts, requiring new forms of wealth redistribution. The availability of cheap labor in developing countries is making them a popular destination for outsourcing the back end work of AI development and deployment, such as data annotation and content moderation. The platform economy is also enabling access to new types of income generating opportunities, but irregular and long working hours, fluctuating wages, and algorithmic management system can undermine labor well being.

How can developing countries leverage AI for economic growth while addressing growing inequality and protecting labor rights?

FAIR FORWARD

Group 1

Stakeholder Group: Government

1. What are the key priorities and issues of concern for your selected stakeholder group?
2. What are the main policy challenges for your stakeholder group?
3. What are the key resources, capacities and partnerships your stakeholder group needs to address these challenges?

Group 1 Discussion Results (Government)

- There is a need for the unification of mindset across all government work units to achieve the concept of Data as a Service in Indonesia.
- How can we exchange data between units so that data processing and management are not siloed in separate sectors?
- Steps that can be taken → the government should provide space for local AI development companies by offering incentive schemes.
- As a regulator, it is necessary to ensure that the policies produced do not overlap with the existing technological advancements.
- Significant investment is needed not only from developers (industry) but also from users, with a focus on developing digital literacy.
- With many developments still being done in silos, the hope is that they can be unified and integrated with each other.

Group 2 Discussion Results (Domestic Industry)

Key Priorities for SMEs:

- SMEs still lack advanced technology; as business owners, they still have to think about profits for the sustainability of the company.
- SMEs are less concerned with labor issues (as long as it's cheap and profitable, prioritizing company interests, tending to neglect social aspects).
- SMEs believe that AI technology can help run their business: such as creating content, automating some tasks, and improving efficiency.

Main Policy Challenges:

- Providing training for a large quantity of low-skilled labor → Scaling up talent who can analyze more deeply for business interests (digital marketing analysis).
- Government oversight of AI technology implementation to ensure safe AI technology providers. As service users, SMEs need to feel secure (in terms of social responsibility).
- Regarding wages, if the workforce skills improve (and can support revenue), SMEs will not have difficulty meeting the minimum wage (they will comply).
- Mitigating the entry of foreign products, whether AI implementation can advance domestic products (without closing off foreign investment opportunities).

Resources/Partnerships to Support Challenges:

- Access to capital: assisted by the government.
- Market access/expansion opportunities: collaboration with other large companies.
- Information infrastructure: cooperation for data utilization by the government (e.g., the Ministry of Village) with companies needing market access/supply access.

2. Online Class 2 - A Comparative Policy Discussion Focusing on the Use of Artificial Intelligence (AI) in Asia

This material presents guidance on AI procurement by governments of other countries. In this training, resource persons were selected from alumni of similar training from the Africa-Asia AI Policymaker Network (AAAPoMaNet), a capacity building and peer learning program for Artificial Intelligence (AI) Training for Policymakers from Ghana, India, Kenya, Rwanda, Africa South, Uganda, and Indonesia.

This presentation from sources who have implemented AI technology policies in India explores How policy procurement and framework Work ethics built for ensuring that application technology the safe and ethical. Discussion includes aspects of regulation, transparency, risk management, and integration of human rights in policy technology AI.

Activity Objectives:

- Provide participants with an understanding of how ethical and responsible AI procurement policies are implemented in India. Participants will learn from concrete examples about the steps taken to minimize risks and maximize the benefits of AI implementation in government.
- Inspire participants on how they can apply similar principles in their own policy contexts.

Activity and Discussion:

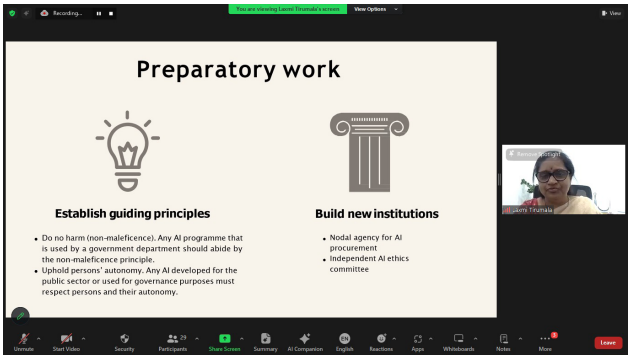
The speaker presents prepared material on the implementation of AI policies in their country, followed by an open discussion. The AI policy themes are tailored to the selected speaker. In the training held in Indonesia, a member of AAAPoMaNet from India provided an overview and lessons on the guiding principles of AI procurement that have been implemented in India, including the establishment of oversight bodies, tender processes, and strict ethical criteria.

At the end of the session, participants are asked to reflect on the comparative study they received from other countries to be implemented in the context of local regulations using the “Policy Comparison Study” canvas. This worksheet helps participants formulate the learning outcomes they gained from other countries.

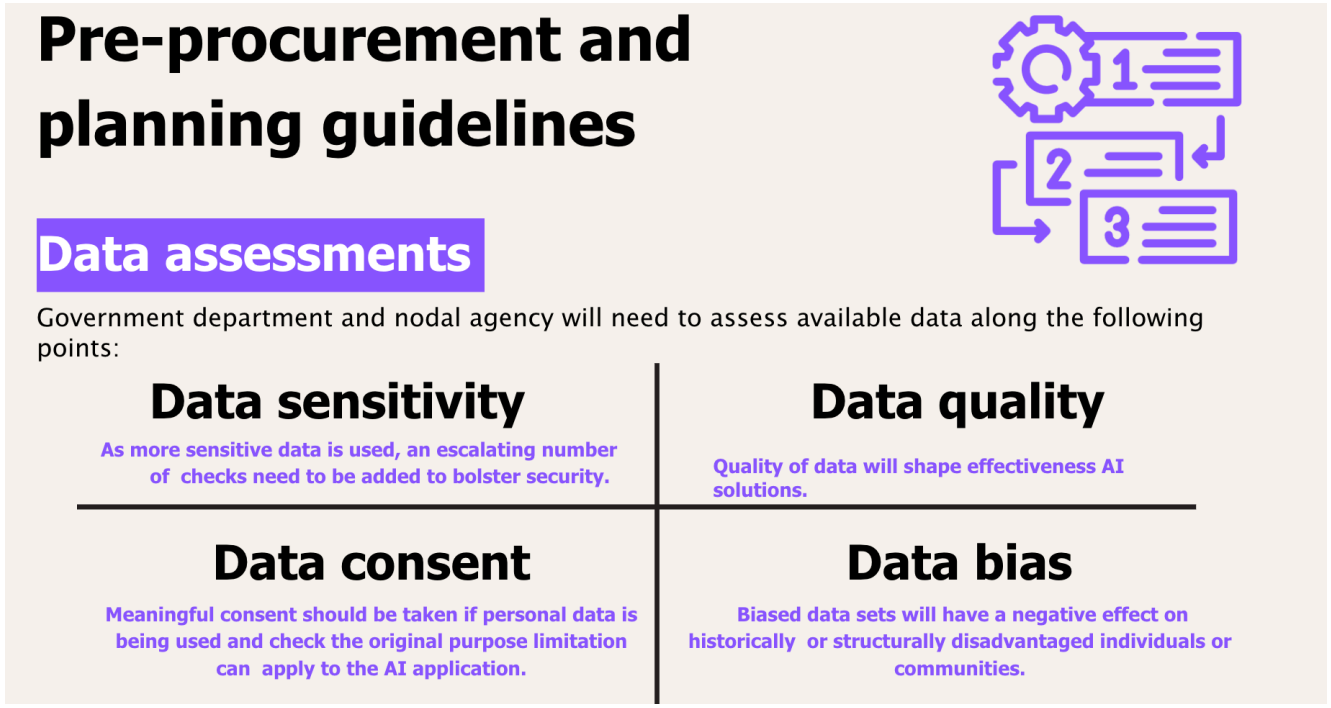
Participant Program Training Question Example:

- **Participant 1**: “Did you develop an AI system and trains it locally, purchase one, or obtain services from a foreign country?”
- **Participant 2**: “What policy recommendations or lessons should Indonesian policymakers consider for developing a local AI talent pool?”

Documentation of Learning Activity:



Inputs Example:



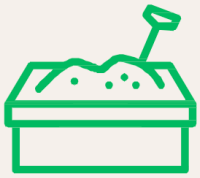
Procurement guidelines

Designing the EOI - Defining the problem and outcomes

Five main key considerations

Problem statement	Specify challenges the department looking to address, limitations and additional functional requirements. Describe why the department considers AI to be relevant and remain open to alternative solutions.
Desired outcomes	Indicate clearly what outcomes it hopes to achieve using the AI solution. For e.g., the nodal agency can say that the desired outcome is a 25% reduction in traffic violations.
Data availability and conditions of use	Elaborate on the kind of data that currently exists in the EOI. Describe the data governance framework covering data access, security framework, data storage capabilities and consent review framework for personnel handling the data.
Describe data requirements	Describe the data requirements for the AI project. Draw on the insights from the pre-procurement assessment report. Highlight the data limitations found and request vendors to describe their strategies for addressing the shortcomings.
Acquire multiple datasets	Recommend nodal agency insist on vendors train their learning AI algorithm on multiple data sets to reduce bias.

Post-procurement guidelines



Sandbox testing of POC

- Must be tested in a sandbox environment before large scale deployment so that any biases and faults can be rectified
- Develop or facilitate the development testing protocols by nodal agency and EC including different data-sets that are:
  - representative of the demographics that the AI solution is aimed for
  - socio-economic profiles of the community that will interact with the AI solution
  - key performance indicators (KPIs)
  - clear definition of success or failure
  - measurement of outcomes.
- At this stage the EC may determine the need for a third-party audit of the AI system.

The EC has the final say on the larger deployment of the AI system to the general public

At the end of testing EC may issue the following outcomes:

- Unconditional authorisation and the launch of the AI application as-is.
- Conditional authorisation where the AI application is launched only after implementation of recommended changes.
- No authorisation and the launch of the AI application is not allowed.

The EC must also publish:

- reports on the progress
- test results
- outcomes achieved during the sandbox testing phase to build confidence

Group 1 - Financial Sector

Success Factors / Components - What design factors/considerations make a policy solution successful?	Key Learnings - What did not go well and can be improved?	Adaptation to Local Context - What do I need to remember to adapt this to my context and situation?
- Government commitment to support the policy - Readiness in terms of industry and infrastructure (with related institutions) - The initial concept already exists and has been discussed with the industry for validation.Policy development begins with collaboration with industry and industry associations	- There are industries or business models whose regulators cannot be directly determined → a clear regulatory and supervisory scheme has been developed - Risks beyond control (e.g., pandemic) → greatly impact policy and may need mitigation - Leveling the playing field for large industries and startups	- Awareness regarding technology: from large industries, startups, users, and other beneficiaries not only from the main sector but also supporting sectors - Internet penetration vs. equal distribution of infrastructure penetration - Leveling the playing field for large industries and startups → for the main and supporting sectors, and regional (province/regency/city)

Group 2 - Education and Research Sector

Success Factors / Components - What design factors/considerations make a policy solution successful?	Key Learnings - What did not go well and can be improved?	Adaptation to Local Context - What do I need to remember to adapt this to my context and situation?
Ethics Committee Bottom-up approach (from the bottom, without top-down commands) Engagement with Private Sectors	Engaging private sector associations From the bottom, without top-down commands, even if they don't yet have national laws Sandbox and supervision within a controlled ecosystem	We already have a National Strategy (Stranas), so we should optimize from Stranas. In Stranas, there are already several points regarding competency improvement. Competency improvement usually comes from the Ministry of Education and Culture and the Ministry of Communication and Information. The National Research and Innovation Agency (BRIN) can be one of the responsible parties, but it must collaborate with the regulators.

Learning Materials

Module 2: Technology Policy Focused on Artificial Intelligence (AI)
Material Reviewer: Beni Djohan (Aptaworks)

Sub-module 2A: Artificial Intelligence (AI) and Technology Policy
Presenter: Matheace Ramaputra (KORIKA)

- PDF Material (Indonesian):
  Sub-modul 2A: Kecerdasan Artifisial (KA) dan Kebijakan Teknologi
- PDF Material (English):
  Sub-module 2A: Indonesia AI Policy, Achieving Safe and Innovative AI
- Recording Material (YouTube):
  Module 2A: Kecerdasan Artifisial (KA) dan Kebijakan Teknologi

Sub-module 2B: Artificial Intelligence (AI) and Sectoral Approaches
Presenter: Indarto (Neurabot)

- PDF Material (Indonesian):
  Sub-modul 2B: Kecerdasan Artifisial (KA) dan Pendekatan Sektoral
- PDF Material (English):
  Sub-module 2B: AI in a Sectoral Approaches
- Recording Material (YouTube):
  Sub-modul 2B: Kecerdasan Artifisial (KA) dan Pendekatan Sektoral

In-depth Study Material: Online Group Work 1: Discussion of Module 2 - Equitable Policy Role Discussion
Facilitators: Ivy Londa, Patota Tambunan, Tiara Mahardika, Octa Ramayana (harapura impact)

- Worksheet (Indonesian) : Diskusi Peran Kebijakan yang Berkeadilan
- Worksheet (English): AI in Tech Policy

In-depth Study Material: Online Class 2 - A Comparative Policy Discussion Focusing on the Use of Artificial Intelligence (AI) in Asia
Presenter: Rama Devi Lanka (Government of Telangana, India)

- PDF Material (Only available in English):
  AI Procurement Guidelines for Government
- Worksheet (Indonesian):
  Studi Banding Kebijakan Berfokus pada Penggunaan Kecerdasan Artifisial (KA) di Asia
- Worksheet (English):
  Policy Study in the use of AI

All Learning materials for Module 2 can also be accessed via
https://link.harapura.com/FF-AI-Module2

FAIR Forward

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implemented by:
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in cooperation with:
Ministry of National Development Planning/Bappenas
Republic of Indonesia

Module 3:

Government for the Development of Ethical Artificial Intelligence (AI)

Module 3: Government for the Development of Ethical Artificial Intelligence (AI)

Module 3 comprehensively explores key aspects in the development and implementation of ethical Artificial Intelligence (AI) by the **government. Sub-module 3A: Data Management and Sharing** discusses effective and ethical data management strategies, introduces concepts such as data sovereignty and data localization, and integrates perspectives from the Data Protection Law socialized in the **Additional Sub-module: Socialization of the Personal Data Protection Law** by the Ministry of Communication and Informatics. This approach emphasizes the importance of transparency and accountability in data usage.

Moving on to **Sub-module 3B: Artificial Intelligence, Ethics, and Human Rights**, this module examines the impact of AI on human rights and discusses ethical challenges specific to developing countries, analyzing how AI affects social justice and privacy. Additionally, the entire module is complemented with an **In-depth Study Material: Group Work in Class 2 - Case Study Discussion: Ethical Policy** where participants will study and discuss several global case studies involving ethical and human rights dilemmas. There is also an **In-depth Study Material : Online Class 3 - Discussion of Module 3: Gender in Artificial Intelligence and Small Group Discussions with Community Group Representation**.

General Learning Objectives:

This module aims to explain how data is managed and shared among stakeholders. Define the framework for data protection and usage that refers to general ethical guidelines. Connect existing technology and planned technology usage to avoid discrimination and other harms.

Adaptation Learning Suggestions:

- Referring to the national strategy for AI implementation, it is recommended that the learning process synchronizes materials with the policies and action plans established by the government, ensuring alignment and relevance with the national agenda.
- Studying technology policy references that have already been implemented provides participants with the opportunity to understand best practices and lessons learned from previous experiences in various jurisdictions.
- Using policy references related to human rights in the national context and its legal foundation allows the integration of human rights principles that are consistent with the values and legal norms prevailing in the country.

Sub-module 3A: Data Management and Sharing

This sub-module covers the importance of effective data governance and data sharing in the context of using Artificial Intelligence (AI). It reviews three main themes: the basic concepts of data management, including principles and frameworks such as data sovereignty, cross-border data transfer, and data sharing models like data trusts. Further explanations on the importance of data security, transparency, data minimization, and data anonymization are provided to emphasize data protection and integrity in practice.

The methodology used in this session combines direct presentations and interactive discussions, where participants are actively encouraged to identify and analyze various aspects of data governance presented. With relevant and applicable examples such as recommendation algorithms on social platforms, participants are trained to understand data collection, usage, and sharing, as well as the responsibilities associated with this data.

Specific Learning Objectives:

- Provide an understanding of the basic concepts that include principles and frameworks for data governance, data sovereignty, cross-border data transfer, and data sharing models such as data trusts.
- Ensure participants can identify and apply best practices in data management for data protection and security in data localization.
- Equip participants with the ability to design and implement effective and ethical data protection policies by introducing essential data protection principles, including transparency and openness, minimal data usage, accountability, consent and management of high-risk information, data anonymization, as well as data security, accuracy, and integrity.
- Provide a holistic and multicultural understanding of how data should be managed and protected in various social and technological contexts through approaches to data protection including group privacy and the philosophy of Ubuntuism, special considerations for minors and consent issues, as well as the ethics of data collection and usage from social media.

Class Activity Suggestions:

- **Data Identification**: The facilitator selects a feature from an application (e.g., Facebook recommendations) and participants answer the following questions:
    - What does the algorithm predict?
    - What data is used for training and testing (if applicable: for prediction)?
    - How is the data collected, used, and shared?
    - Who manages the data collection and usage, and to whom are they accountable?

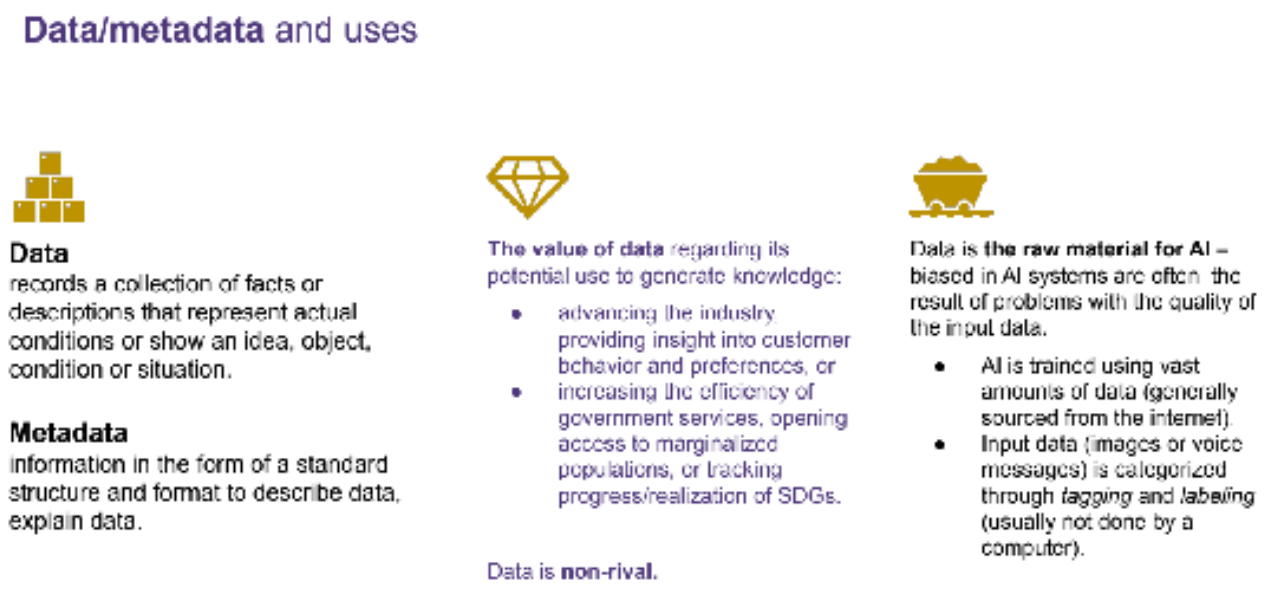
- **Reflection**: Consider potential data governance violations and how to correct or avoid them.
- **Examples of Data Management Relevant to Daily Life**: Materials related to end-to-end encryption, examples of Chatbot innovations for local use (Indonesia), explanation of WhatsApp Communities features.

Example of Responses / Questions from Training Participants:

- **Participant 1**: “Can you provide your view on whether it is better to develop our own algorithm to implement machine learning or AI in a Project Dashboard, considering that once data is entered, ownership fully shifts to ChatGPT or Google?”
- **Participant 2**: “Can you provide your view on whether it is better to develop our own algorithm to implement machine learning or AI in a Project Dashboard, considering that once data is entered, ownership fully shifts to ChatGPT or Google?”

Documentation of Learning Activity:

Inputs Example:



Data governance

Technical or political recommendations (policies, laws, institutions) that regulate what can and cannot be done with data.

Using data to increase economic productivity, building data-based entrepreneurship.

Use of data to advance societal insight and policy making.

Data protection from misuse, such as damaging state security or individual exploitation.

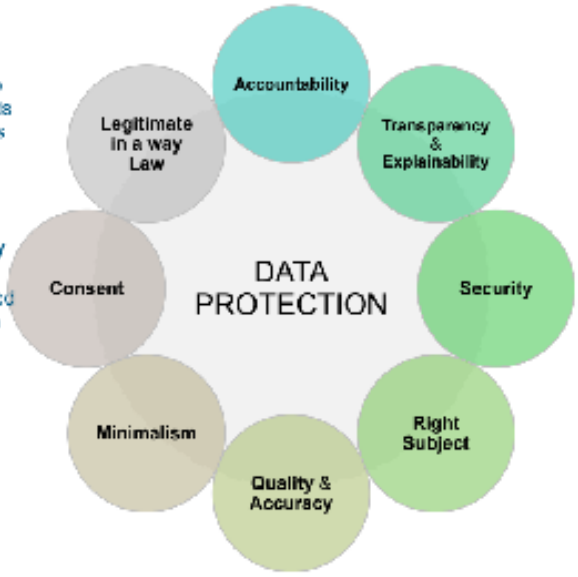
Good data governance can improve inclusive economic development and attract responsible foreign direct investment (responsible FDI).

Core Concepts of Data Protection

Accountability
The data controller is responsible to the data subject regarding who holds the data, the purposes for which it is used and how the data can be accessed.

Transparency and Explainability
The data system is transparent regarding its goals towards affected parties, and system decisions can be explained.

Security
Data controllers implement all security measures within their ability to protect data from unauthorized access.



Data subject rights
Data subjects have the right to know what happened, to have their data corrected or deleted.

Data quality and correctness
The stored data is correct, precise and not misleading.

Minimal data
Data is not collected more than necessary, and is not stored beyond the required time period.

Agreement
Data is obtained directly from the data subject and with consent/permission.

Legitimate basis
Official and legal collection of personal data.

Why share data?

Local

- Enable AI innovation and data-driven services, locally
- Increase transparency and accountability, which improves responsive governance.
- Overcoming knowledge inequality (asymmetry) in society.
- Support public participation and community involvement in public decision making.
- Support the development of more inclusive data-driven services.

International

- Training an AI system using comparative data can improve the accuracy of an AI system
- Building collaboration between countries, for research and innovation purposes
- Attract AI-based FDI and drive economic growth
- Supports cross-border transactions and trade

Additional Sub-module: Socialization of the Personal Data Protection Law

In the Artificial Intelligence (AI) Policy Training Program for Policymakers held in Indonesia, Module 3 also features an additional sub-module on the socialization of the Personal Data Protection Law (UU PDP) No. 27 of 2022 by the Ministry of Communication and Informatics. This material aims to provide a comprehensive understanding of the principles and framework of personal data protection in Indonesia, strengthening awareness of the rights and obligations related to personal data processing and the associated legal implications.

This session uses a combination of presentations and discussions to explain the main elements of the Personal Data Protection Law, including the definition of personal data, the obligations of data controllers and processors, and the rights of data subjects. The method includes detailed explanations of aspects such as transparency, data minimization, and accountability in data processing. The presentation also involves relevant case studies from the Human Resources Development Agency (BPSDM) of the Ministry of Communication and Informatics to illustrate the practical application of data protection principles in the context of government organizations. This helps participants identify and understand practical ways of data protection and the actions that must be taken to ensure compliance with regulations.

Specific Learning Objectives:

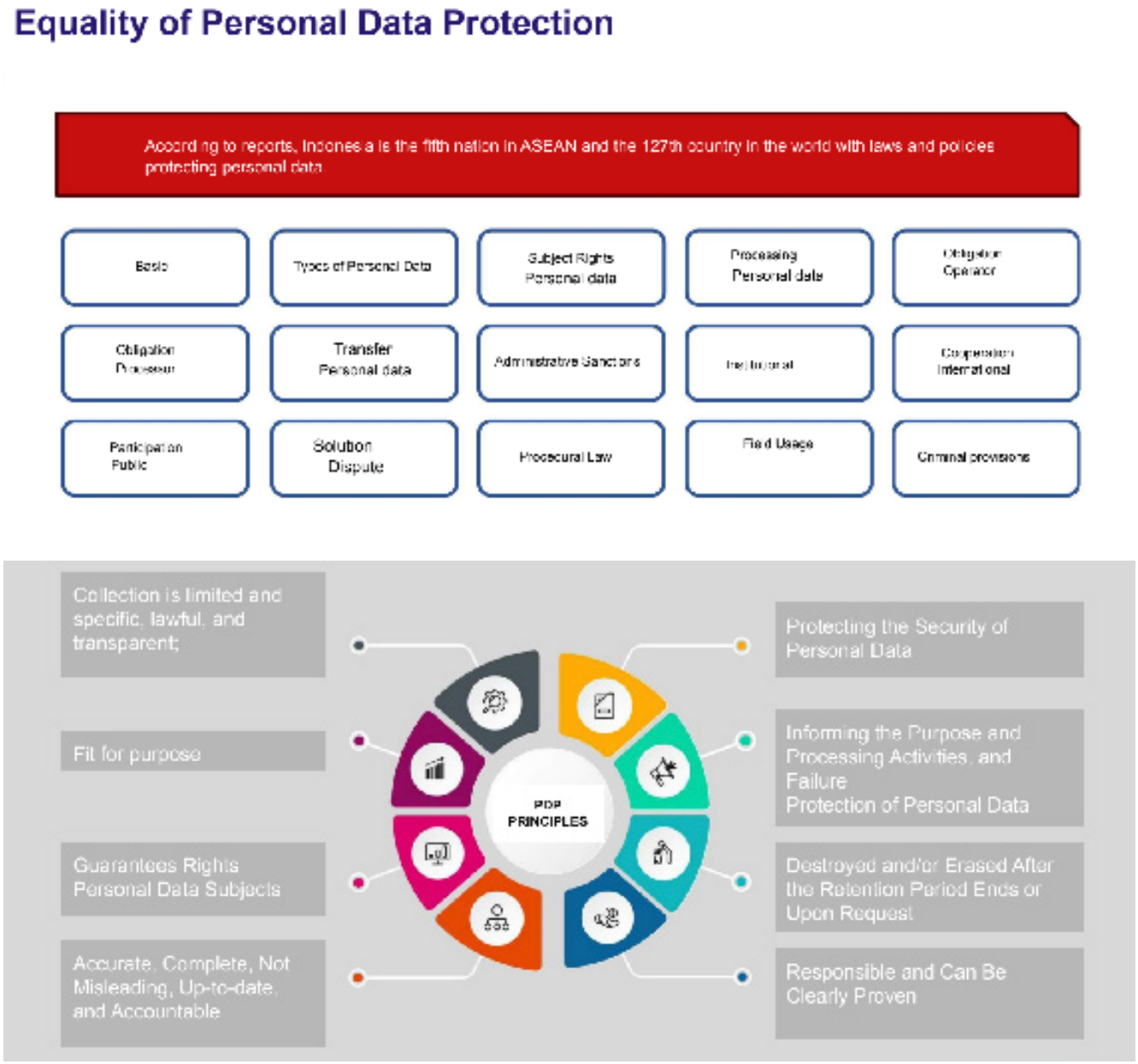
- Understanding and applying personal data protection principles in accordance with the latest law (In this training, UU No. 27 of 2022)
- Analyzing and understanding the legal and ethical obligations of personal data controllers and processors
- Deepening knowledge about the rights of data subjects and how personal data protection affects trust and security in the digital ecosystem

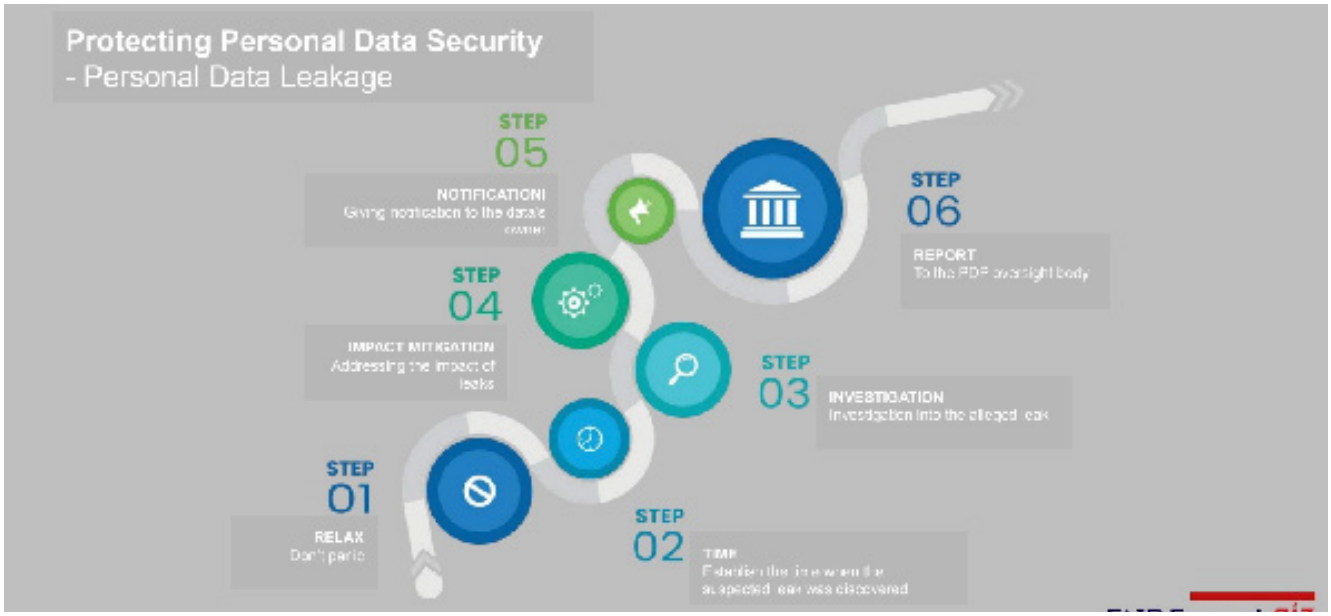
Activity Learning Suggestions:

To enhance the effectiveness of learning in Module 3, which focuses on the socialization of the latest regulations related to Artificial Intelligence (AI) in the training country context, it is highly recommended that facilitators consistently update participants with the latest information on relevant regulations. This updating is crucial to ensure participants understand the current regulatory context. Furthermore, providing an in-depth exploration of the key policies underpinning AI regulations is highly recommended. This enables participants to gain broader insights into how these policies are formulated and their impact on the implementation and evolution of AI.

Documentation of Learning Activity:

Inputs Example:





Aspects of Personal Data Protection in Partnership

- Processing of Personal Data must have a basis
- Processing of Personal Data must be limited, specific, lawful and transparent
- Processing of Personal Data shall only be carried out for the purposes for which the Personal Data is processed
- Accuracy, completeness and consistency of Personal Data shall be ensured in accordance with laws and regulations
- All Personal Data Processing activities shall be recorded
- Personal Data Subject Rights must be guaranteed
- Personal Data Security must be protected
- The purposes, Processing Activities and Protection Failures of Personal Data must be notified
- Personal Data must be destroyed and/or erased after the retention period expires or upon request
- Processing of Personal Data is carried out responsibly and can be clearly substantiated

Sub-module 3B: Artificial Intelligence (AI), Ethics, and Human Rights

Sub-module 3B delves into the deep interconnection between Artificial Intelligence (AI) and Human Rights (HR). This material focuses on understanding how AI can impact human rights and discusses the ethical issues that arise from the use of this technology. The discussion includes potential dangers posed by AI systems, such as bias and discrimination, as well as the human rights implications in the development and application of AI.

This material is delivered through a combination of conceptual presentations and interactive classroom activities. Using a case study approach, participants are invited to analyze real-world examples of AI usage that raise ethical issues, such as data misuse or algorithmic discrimination. In classroom discussions, participants will learn how these issues

are shaped by local, cultural, and political contexts and will discuss various possible solutions to address these challenges. Key activities include small group discussions and Q&A sessions where participants analyze the impact of AI technology on human rights and consider approaches to integrating ethical considerations into policies and practices.

Specific Learning Objectives:

- Understand the various types of dangers that AI systems can pose, from technical risks to broader social implications.
- Identify human rights impacts at every stage of AI system production and deployment, and understand how these issues are influenced by local historical, cultural, and political contexts.
- Analyze the specific ethical challenges and issues faced by developing countries in the adoption and regulation of AI technology.
- Identify and explore various solutions and strategies to address the challenges and issues arising from AI implementation, with the aim of creating more responsible and sustainable practices.

Class Activity Suggestions:

- **Discussion Studies Case - Ethical Policy:** In small work groups (4-5 people), participants are expected to consider various ethical principles contained in consti tutions, national or regional development plans, or public service charters, and analyze the relevance and application of these principles in the context of data and AI usage.

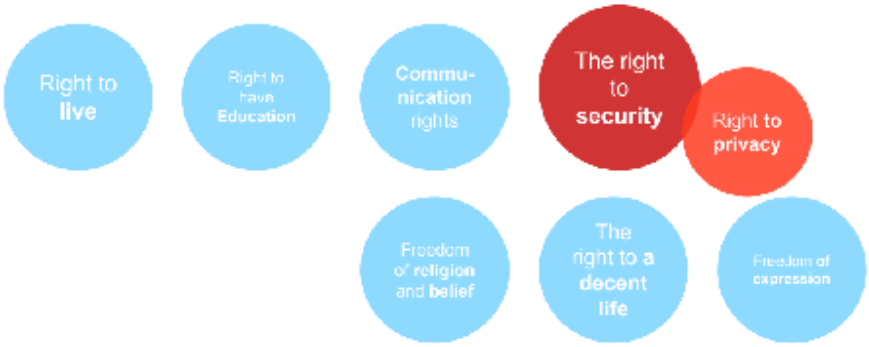
Example of Responses / Questions from Training Participants:

- **Participant 1**: “What does non-discriminatory data look like in Indonesia, considering the diversity of ethnicities, races, archipelagos, and backgrounds?”

Documentation of Learning Activity:

Inputs Example:

What are human rights?



AI Ethics in Indonesia

Ethics on AI Business Actors (KBLI 62015)

Provide a reference for ethical values for Business Actors who have programming activities based on artificial intelligence regarding ethical criteria or considerations in consultation, analysis and programming that utilize artificial intelligence technology.

Utilization of Artificial Intelligence capabilities includes consultancy, analysis and programming activities. The use of Artificial Intelligence technology falls into the subset of machine learning, natural language processing, expert systems, and other subsets.

UNESCO
UGM
OECD
SINGAPORE

Inclusivity
The use of artificial intelligence needs to pay attention to the values of equality, justice and peace in producing information and innovation for the common good

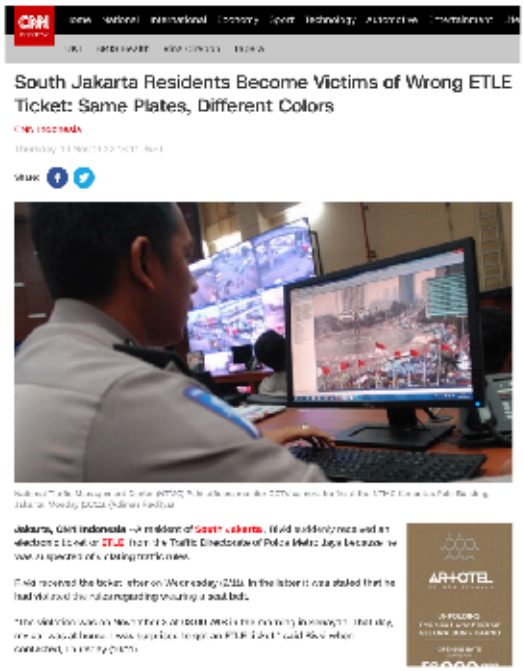
Humanity
The use of artificial intelligence requires paying attention to human values while maintaining mutual human rights, social relations, beliefs held, and everyone's opinions or thoughts

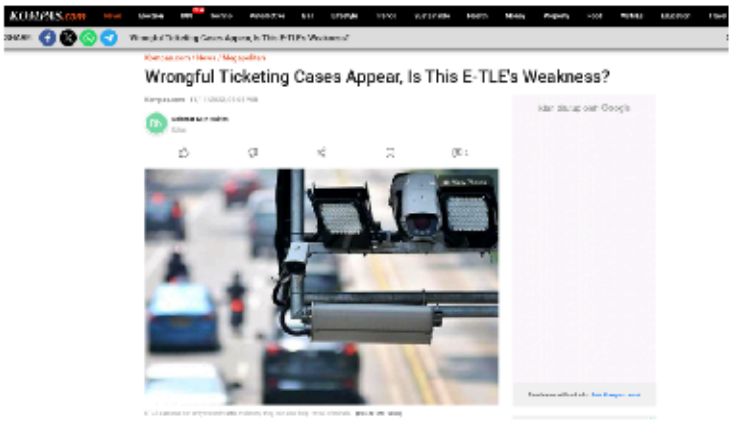
Security
The use of artificial intelligence needs to pay attention to the security aspects of users and the data used in order to maintain everyone's privacy, personal data and comfort so that no party is harmed

Democracy
The use of artificial intelligence is unlimited for every user. Every business actor has the same rights to utilize artificial intelligence capabilities for their benefit while maintaining applicable ethics

Transparency
The use of artificial intelligence needs to be based on transparency of the data used to avoid misuse of data in developing technological innovation

Credibility and accountability
The use of artificial intelligence requires prioritizing the ability to make decisions from the information or innovation produced





In-depth Study Material

1. Group Work in Class 2 - Case Study Discussion: Ethical Policy

This in-depth study on ethical AI policy is designed to provide a comprehensive learning experience regarding ethical dilemmas and human rights issues related to the implementation of Artificial Intelligence (AI). In this activity, participants are divided into small groups to discuss a series of global case studies highlighting the ethical challenges faced in the development and use of AI. Each group will individually read the case studies and then discuss them together, using the “Ethical Artificial Intelligence Development” Worksheet to analyze and apply ethical principles to the situations presented in the cases.

Activity Objectives:

- Understand and analyze various ethical dilemmas related to the use of data and AI technology.
- Apply ethical principles in a practical context based on the case studies.
- Generate personal and group reflections on the ethical implications of using AI.

Activity and Discussion:

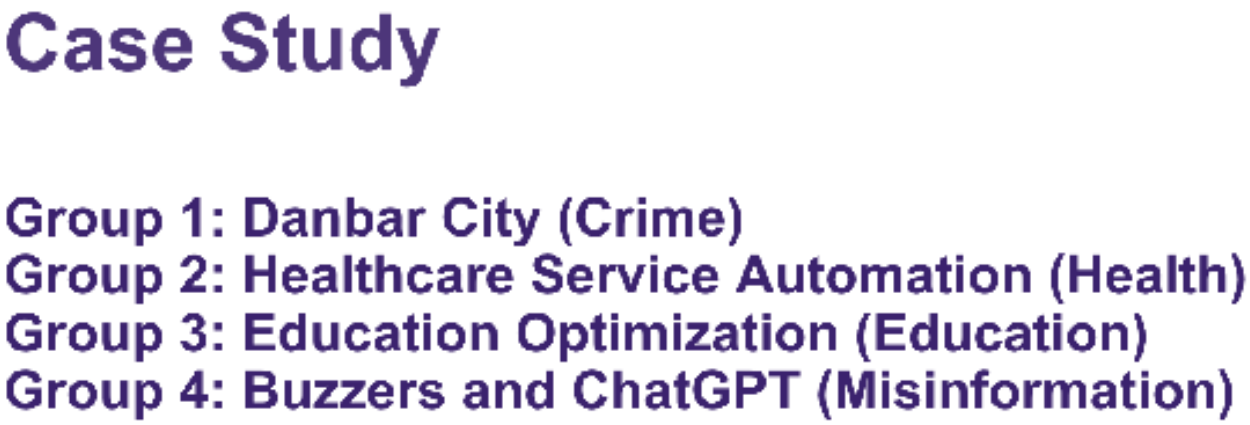
In small group work (4-5 people), participants will read a collection of global case studies that present ethical dilemmas and human rights issues. Allow participants to read the Case Studies individually for 15 minutes and then discuss each participant’s views within the small group. Next, use the “Ethical Artificial Intelligence Development” Worksheet to apply ethical principles in the use of data and AI to the issues presented in the case studies. Participants can then write their reflections individually or as a group and share them in the plenary forum.

Activity Outputs:

The output of this activity will be a document completed by each group, documenting the analysis and application of ethical principles in the use of data and AI. This document will include specific recommendations for adapting or applying these principles in existing or upcoming technology policies. The results of this work are expected to serve as a reference in designing or improving policies that support ethical practices in the use of data and AI in the participants' respective organizations or regions.

Documentation of Learning Activity:

Inputs Example:



Case 1

Original Source:
https://aiethics.princeton.edu/wp-content/uploads/sites/587/2018/10/Princeton-AI-Ethics-Case-Study-6.pdf (Princeton Case Study - Ethical AI)

Summary:

The once-prosperous city of Danbar has faced significant challenges in recent decades, including deindustrialization, rising religious tensions, and a growing budget deficit. Many who had the means to immigrate have moved to wealthier cities in the region, exacerbating the city's financial problems. The deteriorating social conditions in Danbar have led to an increase in violent crime. A potential solution emerged through a meeting with Charles Prince, the CEO of Wales Consulting Group (WCG). WCG offered a solution through data analysis to help address the city's crime problems. WCG worked with data already collected by city agencies without storing or selling the data. Initially, the program successfully reduced crime, but after some time, crime statistics began to rise again. Ultimately, the city adopted a more aggressive approach, targeting individuals deemed likely to commit crimes. The implementation of these changes received significant public criticism.

Case 1

Discussion Questions:

Implications for Individual Rights:

- What are the implications of using such a system on individual rights? Are the benefits and drawbacks of this system likely to be distributed fairly? What biases and shortcomings might exist in this system, and what risks might arise?

Compensation and Benefits:

- How might WCG be expected to be compensated besides money? Data? Experience? Access? Reputational gains? Conversely, what does it mean for the city government to receive AI services for free? What obligations might be placed on them?

Democratic Involvement:

- Is the decision of the Minister to accept WCG's proposal without consulting citizens or other officials through a democratic process considered legitimate? If not, what should the decision-making approach be? Who are the relevant stakeholders that should be consulted?

Approach to Poverty:

- If the algorithm predicts that people in poor communities are more likely to engage in crime, and if targeted interventions on members of these communities prove effective in reducing overall crime, does the state have the right to implement such measures? What balancing values might you consider? For instance, how does this approach compare with traditional concepts of justice that demand punishment proportional to the crime and not based on an individual's potential for committing crime?

Case Presentation

Guidelines for Ethical Data and AI Use

1: Ethical Principles (and their origins)	2: Why and how are these ethical principles suitable for application in data and AI usage?	3: Have these principles been used in the development of data, technology, and AI usage policies so far?
Example: from Constitutional Provisions, National Medium-Term Development Plan (RPJMN), Law, and other provisions.		

Case Presentation

Guidelines for Ethical Use of Data and AI Development

1: Ethical Principles (and their origins)	2: Why and how are these ethical principles suitable for application in data and AI usage?	3: Have these principles been used in the development of data, technology, and AI usage policies so far?
Minister of Health Regulation No. 24 of 2022	In accordance with Minister of Health Regulation No. 24 of 2022. Paragraph 7, Section (2), the storage of electronic medical records must ensure the security, integrity, confidentiality, and availability of medical record data. The use of health data for AI must refer to this regulation.	It has not been clearly communicated to the customers (patients) that the confidentiality and security of their medical records are guaranteed.

FAIR FORWARD giz

Case Presentation

Guidelines for Ethical Use of Data and AI Development

1: Ethical Principles (and their origins)	2: Why and how are these ethical principles suitable for application in data and AI usage?	3: Have these principles been used in the development of data, technology, and AI usage policies so far?
The Information and Electronic Transactions Law No. 127 requires transparency in informing users about how AI systems operate.	Data and AI can be used to violate privacy, security, and human rights, and they have the potential to significantly impact human life.	Not yet, because AI development is still ongoing, so the institutions or founders of the AI system still need to improve how they process information and the AI policy itself.

FAIR FORWARD giz

2. Online Class 3 - Discussion of Module 3: Gender in Artificial Intelligence and Small Group Discussions with Community Group Representation

In-depth Study of Module 3 in the form of a presentation on Gender and Artificial Intelligence (AI) is an essential part of the training program aimed at integrating gender perspectives in the development and implementation of AI. This module explores how social and gender biases can influence technology from the conceptualization phase to execution, and how principles of sustainable and fair governance can be applied to address these issues.

The presentation aims to provide a comprehensive understanding of gender dynamics in AI technology through the use of interactive case studies, group discussions, and reflection activities. Participants will engage in critical analysis of case studies depicting gender bias in AI, followed by brainstorming sessions to identify practical solutions that can reduce bias and enhance inclusivity in technology development. This module also includes discussions on how good governance principles, such as transparency, accountability, and security, can be integrated to support the ethical and fair implementation of AI.

Activity Objectives:

- Deliver a brief presentation on the perspectives of marginalized groups in the ethical, inclusive, and sustainable implementation of AI.
- Provide an in-depth understanding of the role of gender and marginalized groups in the context of AI technology.
- Present case examples or studies on how policies that consider gender and marginalized groups can enhance the positive impact of AI technology.

Activity and Discussion:

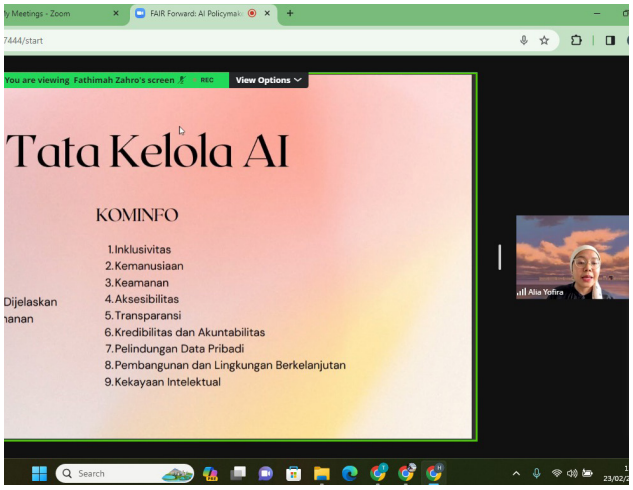
IIn the Gender and Artificial Intelligence (AI) session of the training held in Indonesia, the discussion focused on three case studies: the use of AI in worker recruitment by private companies, the failure of facial verification for Prakerja registrants, and the threat of Deepfake to news security and the women's movement. Participants were given time to read related news articles and express their opinions through a Zoom survey. The discussion then questioned the potential negative impacts of AI use in the context of these case studies, as well as the possible human rights violations. Questions were also raised about existing legal regulations or policy proposals that could be taken to address these potential violations. This discussion was guided by the presenter to deepen participants' understanding.

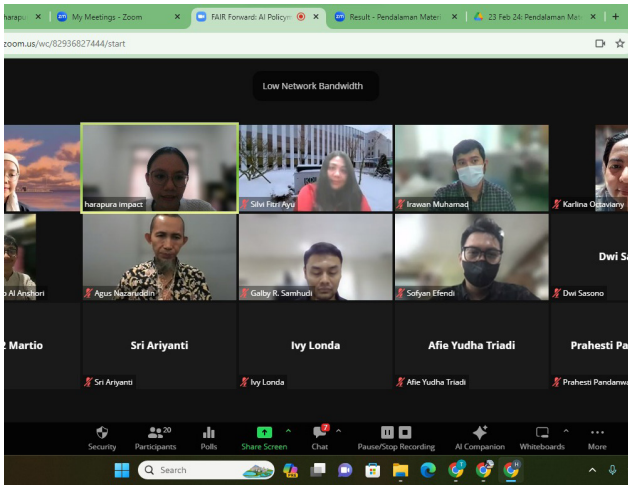
Activity Outputs:

In preparing for this session, speakers should create presentation materials that align with the event's title and objectives to ensure the content is relevant and comprehensive. It is important to ensure that the presentation materials are organized in a way that is easy to follow for the online audience, with clear and structured delivery. Speakers are also encouraged to bring strong case examples and data to reinforce the arguments and recommendations presented during the session. Additionally, speakers should engage

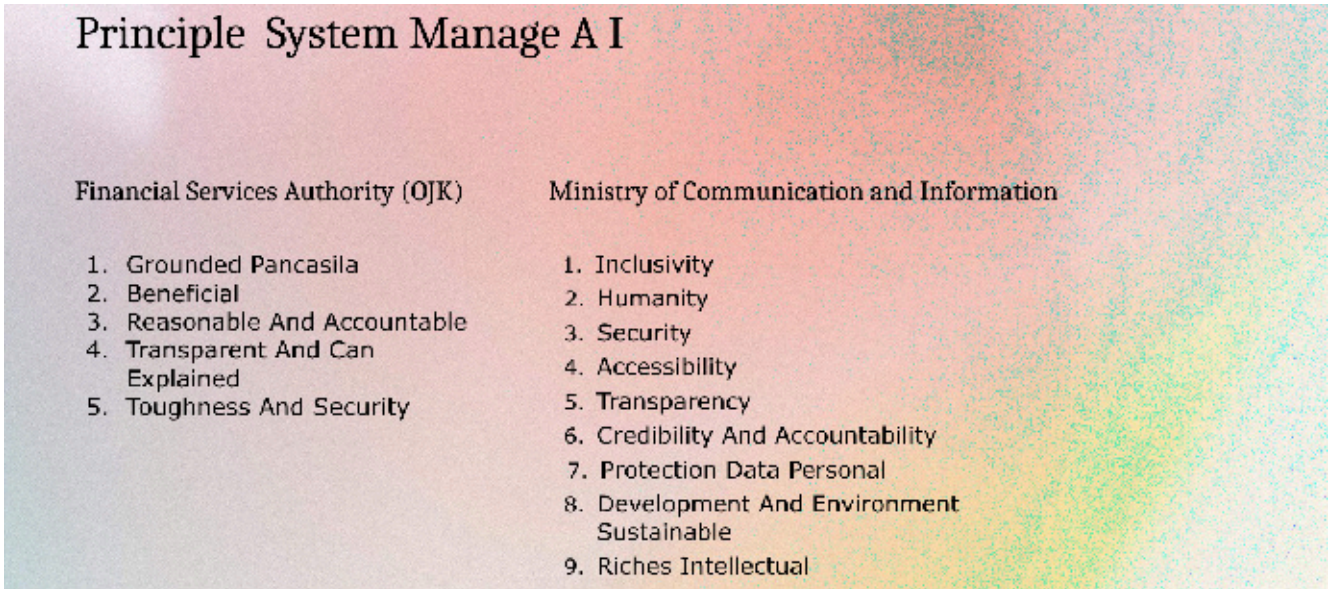
participants in discussions about AI misuse cases that have significant societal impacts, with a special focus on gender and inclusivity perspectives. The presentation format is planned to last for 20-30 minutes, followed by a Q&A or discussion session about case studies exploring dilemmas in AI implementation that affect women, other gender minorities, and marginalized communities.

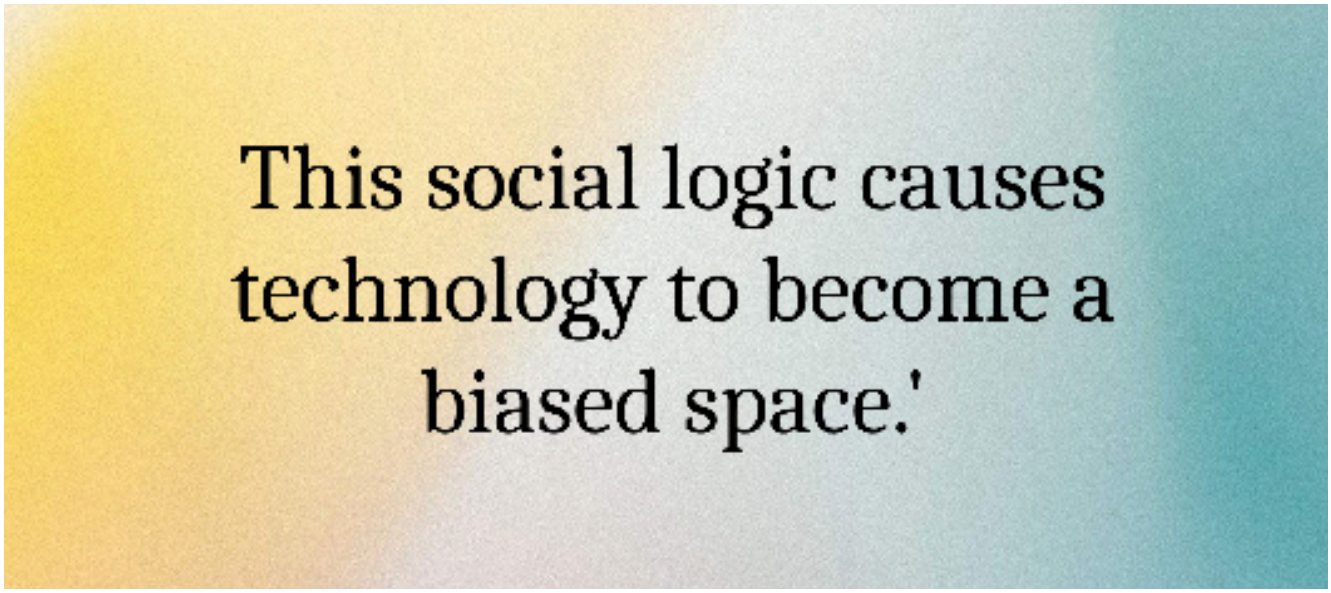
Documentation of Learning Activity:





Inputs Example:




This social logic causes
technology to become a
biased space.'

Learning Materials

Module 3: Government Ethical Development for Artificial Intelligence (AI)
Material Reviewer: Beni Djohan, Aptaworks

Sub-module 3A: Data Management and Sharing
Presenter: Beni Djohan (Aptaworks)

- PDF Material (Indonesian): Sub-modul 3A: Pengelolaan dan Pembagian Data
- PDF Material (English): Sub-module 3A: Data Governance and Sharing
- Recording Material (YouTube): Sub-modul 3A: Pengelolaan dan Pembagian Data

Additional Sub-module: Socialization of the Personal Data Protection Law
Presenter: Dr. Kautsarina (Ministry Communication and Informatics)

- PDF Material (Indonesian):
  Sub-modul Tambahan: Sosialisasi Undang-Undang Perlindungan Data Pribadi
- PDF Material (English):
  Additional Sub-module: Personal Data Protection Law
- Recording Material (YouTube):
  Sub-modul Tambahan: Undang-Undang Perlindungan Data Pribadi

Sub-module 3B: Artificial Intelligence (AI), Ethics, and Human Rights
Presenter: Debby Kristin (EngageMedia)

- PDF Material (Indonesian):
  Sub-modul 3B: Kecerdasan Artifisial (KA), Etika, dan Hak Asasi Manusia
- PDF Material (English):
  Sub-module 3B: AI, Ethics, and Human Rights
- Recording Material (YouTube):
  Sub-modul 3B : Kecerdasan Artifisial (KA), Etika, dan Hak Asasi Manusia

In-depth Study Material: Group Work in Class 2 - Case Study Discussion: Ethical Policy
Facilitators: Ivy Londa and Patota Tambunan (harapura impact), Debby Kristin and Maria Hattya Karienova (EngageMedia)

- Studies Case and Worksheet (Indonesian):
  Studi Kasus Kebijakan Artifisial yang Etis
- Studies Case and Worksheet (English):
  AI Ethics Case Studies

In-depth Study Material : Online Class 3 - Discussion of Module 3: Gender in Artificial Intelligence and Small Group Discussions with Community Group Representation
Presenter: Alia Yofira Karunian (PurpleCode Collective)

- PDF Material (Only available in Indonesian):
  Gender dan Kecerdasan Artifisial (KA)

All learning materials for Module 3 can also be accessed via
https://link.harapura.com/FF-AI-Module3

FAIR Forward

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Ministry of National Development Planning/Bappenas
Republic of Indonesia

Module 4:

Practical Use of Artificial Intelligence (AI)

Module 4: Practical Use of Artificial Intelligence (AI)

Module 4 of this program focuses on the practical uses of Artificial Intelligence (AI) to support sustainable development, incorporating practical insights from experts and practitioners. **Sub-module 4A: The Use of Artificial Intelligence (AI) for Sustainable Development** explores the potential implementation of AI solutions for sustainable development by discussing the importance of transparency, stakeholder participation, algorithm accountability, and data protection. Additional sessions by practitioners building AI solutions from the private sector offer pragmatic perspectives in the **Additional Sub-module: Artificial Intelligence (AI) Everywhere: Indonesia's Today and Path Forward** featuring Nodeflux, a startup operating in Indonesia, as an example of AI usage for sustainable development. This session highlights current and future trends of AI usage in Indonesia. **Sub-module 4B: Social Impact Assessment** focuses on identifying and mitigating the negative impacts of AI solutions. In this sub-module, participants can also engage in **In-depth Study Material: Group Work in Class 3 - Social Impact Assessment Matrix** to help them understand the types of impact risks that may occur in society.

General Learning Objectives:

This module aims to explore the potential uses of AI for sustainable development. It emphasizes the importance of conducting social impact assessments and balancing the social and commercial impacts of AI projects.

Adaptation Learning Suggestions:

To ensure that the lesson materials are relevant and easily understood by participants:

- Use examples and case studies from industries in Indonesia to make them more relatable for participants.
- Use examples and case studies of AI solutions for Sustainable Development implemented by other countries as benchmarks.
- Adjust case studies on social risks to align with current trends and conditions in society.

Sub-module 4A: The Use of Artificial Intelligence (AI) for Sustainable Development

Sub-module 4A focuses on the utilization of Artificial Intelligence (AI) to advance the Sustainable Development Goals (SDGs). This session explores the integration of AI technology into development agendas, emphasizing the practical implementation of ethical and rights-based frameworks in AI solutions.

The methodology of this sub-module prioritizes the “Principles to Practice” strategy aimed at ensuring the tangible integration of development goals, rights, and ethics in the implementation of AI. The discussion includes detailed aspects of transparency, participation, accountability, and data protection. Transparency requires providing affected communities with information about the AI systems that impact them, explaining how these systems work, who develops and tests them, and ensuring that information and updates are available in plain language. Participation and Co-design encourage the inclusion of affected groups in the design and assessment of the AI system’s effectiveness, including consultations with marginalized groups through civil society organizations to ensure that diverse inputs and perspectives shape the technology’s development. Accountability addresses legal protection against harm caused by AI systems, such as discrimination and privacy violations. This includes mechanisms like third-party audits, regular updates, and the use of interpretable AI models to ensure that decisions are understandable and justifiable. Data Protection focuses on legal frameworks such as the Indonesian Personal Data Protection Law to ensure that personal information is handled securely, with consent, and provides mechanisms for data subjects to control their data.

Specific Learning Objectives:

- Ensure that the design process of AI solutions is carried out with transparency, allowing all stakeholders to understand how the solutions are developed and how decisions are made within the system.
- Integrate participation and active involvement of all parties affected by AI solutions to ensure that their needs and inputs are considered in the development of the solutions.
- Enhance the accountability of AI algorithms by ensuring there is legal clarity if AI solutions cause harm to affected parties, including establishing mechanisms for complaint handling and redress.
- Develop and implement effective guidelines and agreements to protect the personal data and privacy of affected parties, in accordance with applicable legal and ethical standards.
- Explain the implementation process and lifecycle management of AI system solutions, from the design, testing, deployment, to maintenance stages, to ensure that the solutions operate effectively and ethically at all times.

Class Activity Suggestions:

- **Ice Breaking**: Start the session with an interactive quiz using platforms like Kahoot or Quiz with questions about AI and the Sustainable Development Goals (SDGs). This

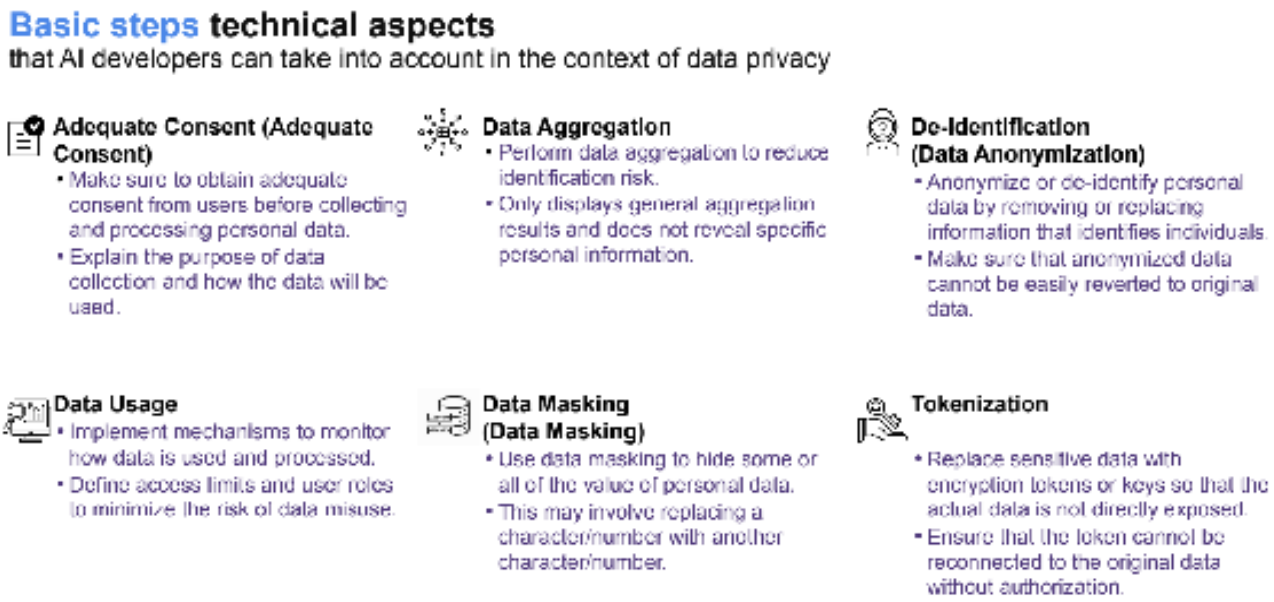
quiz not only serves as a fun icebreaker but also helps assess participants' initial knowledge on the topic, preparing them for a more in-depth discussion.

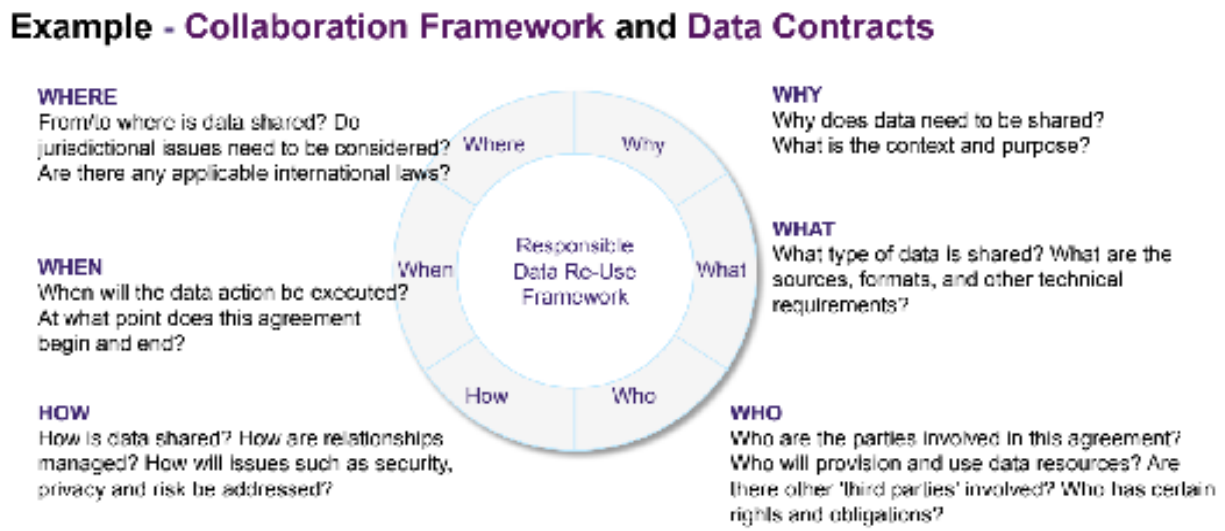
- **Discussion Starter**: The facilitator invites all participants to engage in an open discussion about the potential and challenges of using AI to support the SDGs. This discussion can begin by asking participants for their opinions or experiences related to AI projects they know of or have been involved in. The goal is to gather various perspectives and understand participants' perceptions of AI's impact on social, economic, and environmental development.

Documentation of Learning Activity:




Inputs Example:





Additional Sub-module: Artificial Intelligence (AI) Everywhere: Indonesia's Today and Path Forward

In Additional Sub-module: Artificial Intelligence (AI) Everywhere: Indonesia's Today and Path Forward, private sector practitioners like Nodeflux provide examples of AI implementation in developing and promoting the Sustainable Development Goals (SDGs) in Indonesia. The speaker explains how Nodeflux, as an industry leader in AI in Indonesia, utilizes this technology to address various social and infrastructure challenges.

The approach taken in this module is through the presentation of real case studies where AI has been applied to bring about positive change. Some examples of applications discussed include:

- Security and Surveillance: During the 2018 Asian Games, AI technology from developers was used to enhance security by monitoring and analyzing visitor data in real-time.
- Traffic Management: During the homecoming period, AI technology from developers helped manage traffic density and parking slot accessibility using AI systems, reducing congestion and improving movement efficiency.
- Pandemic Prevention: In East Java, AI facial recognition technology was installed to detect mask usage and assist the government in monitoring compliance with health protocols.

Specific Learning Objectives:

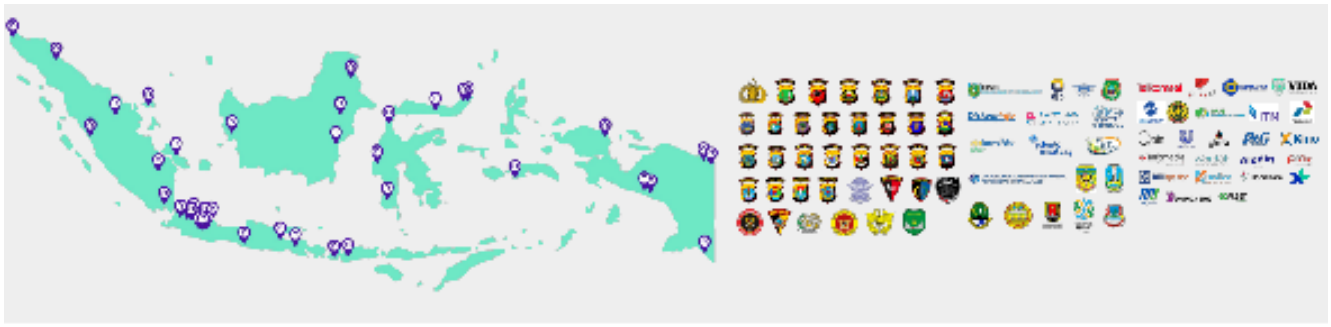
This module aims to demonstrate how AI solutions can be used to address socialchallenges, advance sustainable development, and support government policies.

Activity in Class Suggestion:

- **Reflection**: Each participant is asked to conduct a brief reflection on what they have learned and how they can apply these insights in their own work. Participants can be asked to consider factors such as Sustainable Development Goals targets, the technology to be used, potential partners, and the expected impact. These reflections can be shared in a group forum or submitted to the facilitator as feedback on the session.

Documentation of Learning Activity:

Inputs Example:



Sub-module 4B: Social Impact Assessment

Sub-module 4B aims to provide an in-depth understanding of Social Impact Assessment (SIA) in the context of using Artificial Intelligence (AI). This module is designed to teach participants how to assess and address potential negative impacts arising from the implementation of AI solutions, focusing on creating responsible and ethical solutions.

In Sub-module 4B, the adopted methodology combines theoretical analysis and practical application to examine the social impact of AI usage. This includes a comprehensive assessment of how AI affects individuals, groups, and society as a whole. Participants are taught to evaluate AI impacts through a series of case studies highlighting individual, collective, and social harms. This approach helps understand the immediate and long-term consequences of AI implementation, focusing on identifying, analyzing, and developing mitigation strategies to minimize harm while maximizing social benefits.

Specific Learning Objectives:

- Explain the harm or detrimental actions to affected parties in the context of AI solutions.
- Components of Social Impact Assessment (SIA).
  Principles to be prioritized when conducting Social Impact Assessments.
- Develop participants' ability to identify and assess the social impact of AI implementation, with a specific focus on potential negative impacts and mitigation strategies.
- Teach participants how to apply critical and analytical thinking in the context of AI technology and its social impact.

Class Activity Suggestions:

- **Group Work**: Ask participants to analyze and present the potential negative impacts of AI solutions using a provided template, deepening practical and specific understanding related to their respective sectors.

Documentation of Learning Activity:

Inputs Example:

Definition (Smuha)

- Individual harm: occurs when one or more interests (loss of or damage to a person's rights, property, or physical or mental well-being) are violated.
- Collective harm: occurs when one or more collective interests or a group of individuals are unlawfully thwarted. Just as a collective consists of a number of individuals, so too does this loss consist of a number of losses suffered by each member of the collective.
- Social harm: occurs when one or more societal interests are unlawfully thwarted. In contrast to the above, social harm is not related to the interests of certain individuals or the interests shared by a group of individuals. On the contrary, this involves harm to the interests of society at large, beyond individual interests.

Risk assessment:

Problematization: Automated decision making by AI systems

How they handle:

- Mandatory risk assessment for systems that automate decision making

What goal: help departments and agencies better understand and manage the risks associated with automated decision-making systems

The result: The assessment score is based on many factors, including system design, algorithms, decision type, impact, and data.

In-depth Study Material

Group Work in Class 3 - Social Impact Assessment Matrix

As an in-depth classroom activity, Group Work can be conducted by dividing participants into 4 groups, with each group given a specific AI use case theme: Crime, Healthcare Automation, Education, and Disinformation. They will use the Social Impact Assessment Matrix to analyze and map the potential negative impacts or harms that may arise when AI solutions relevant to their theme are used on a large scale in society.

Activity Objectives:

- Identify the social impacts that may arise from the use of AI in specific contexts such as Crime, Healthcare Automation, Education, and Disinformation.
- Using the Social Impact Assessment Matrix canvas, participants will conduct a systematic and structured analysis to map and evaluate negative impacts.

Activity and Discussion:

As an in-depth classroom activity, Group Work - Social Impact Assessment (SIA) can be conducted by dividing participants into 4 groups, with each group given a specific AI use case theme: Crime, Healthcare Automation, Education, and Disinformation. Participants will use the “Social Impact Matrix” Worksheet to analyze and map the potential negative impacts or harms that may arise when AI solutions relevant to their theme are used on a large scale in society.

Each group receives a worksheet to be completed based on the assigned theme. Group discussions are conducted online for 20 minutes, during which group members work together to fill out the Social Impact Assessment Matrix in the provided template. After the discussion, each group has 5 minutes to present their findings to all participants in the training session. This presentation includes the identification of impacts, sources, measurements, and appropriate mitigation strategies related to the case they analyzed.

Activity Outputs:

The output of this activity is a series of presentations produced by each group, reflecting their analysis of the social impacts of AI according to the given case theme. Each presentation will include an evaluation of individual, collective, and social impacts, as well as recommendations to address negative impacts. The documents and slides generated from this activity will contribute to participants’ overall understanding of how to assess and respond to challenges arising from the use of AI in various social contexts.

Documentation of Learning Activity:

Inputs Example:

Social Impact Matrix - Amplifying Benefits - *Use Case* 1

Apply the following Social Impact Matrix to an AI use-case that could be piloted in your country.

	Individual	Collective	Societal
Type of Benefit			
Source of Benefit			
Measure of Benefit			
Amplification of Benefit			

Discussion

What are the key priorities and challenges for governments, businesses and civil society in balancing AI innovation for economic growth and equity?

Do they align with one another? What are the points of divergence? What are the trade-offs?

Learning Materials

Module 4: Practical Use of Artificial Intelligence (AI)
Material Reviewer: Beni Djohan, Aptaworks

Sub-module 4A: The Use of Artificial Intelligence (AI) for Sustainable Development
Presenter: Muhammad Reza Muztahid (UN Global Pulse)

- PDF Material (Indonesian): Sub-modul 4A: Penggunaan Kecerdasan Artifisial (KA) untuk Pembangunan Berkelanjutan
- PDF Material (English): Sub-module 4A: Use of AI to Support Sustainable Development Goals
- Material Recording (Youtube): Sub-modul 4A: Penggunaan Kecerdasan Artifisial (KA) untuk Pembangunan Berkelanjutan

Additional Sub-module: Artificial Intelligence (AI) Everywhere: Indonesia's Today and Path Forward
Presenter: Meidy Fitranto (Nodeflux)

- PDF Material (Indonesian): Sub-modul Tambahan: Kecerdasan Artifisial (KA) Di Mana Saja di Indonesia Masa Kini dan Masa Mendatang
- PDF Material (English): Additional Sub-module: AI Everywhere: Indonesia Today and Path Forward
- Material Recording (Youtube) Sub-modul Tambahan: Kecerdasan Artifisial (KA) Di Mana Saja di Indonesia Masa Kini dan Masa Mendatang

Sub-module 4B: Social Impact Assessment
Presenter: Maria Hattya Karienova (EngageMedia)

- PDF Material (Indonesian): Sub-modul 4B: Penilaian Dampak Sosial
- PDF Material (English): Sub-module 4B: Social Impact Assessment
- Recording Material (YouTube): Sub-modul 4B: Penilaian Dampak Sosial

In-depth Study Material: Group Work in Class 3 - Social Impact Assessment Matrix
Facilitators: Ivy Londa and Patota Tambunan (harapura impact), Debby Kristin and Maria Hattya Karienova (EngageMedia)

- Worksheet (Indonesian): Matriks Penilaian Dampak Sosial
- Worksheet (English): Social Impact Matrix

All learning materials for Module 4 can also be accessed via https://link.harapura.com/FF-AI-Module4

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Republic of Indonesia

Module 5:

Institution Readiness for Artificial Intelligence (AI) Implementation

Module 5: Institution Readiness for Artificial Intelligence (AI) Implementation

Module 5 of the Artificial Intelligence (AI) Policy Training Program for Policymakers focuses on preparing institutions to effectively and responsibly implement AI solutions. This module is divided into two critical sub-modules and an online group work session that integrates the knowledge gained in a real-world context. **Sub-module 5A: Readiness for Artificial Intelligence (AI) Implementation** provides a methodology to assess how ready policymakers are to implement AI solutions, exploring factors such as the ability to execute AI strategies, existing infrastructure and data, as well as supporting policies and public resources. **Sub-module 5B: Building A Responsible Artificial Intelligence (AI) Ecosystem** discusses the development of an AI ecosystem that involves various stakeholders to create an inclusive and trustworthy environment.

The module concludes with **In-depth Study Material: Online Group Work 4: Institutional Readiness Analysis for Artificial Intelligence Technology Implementation**, which invites participants to complete a provided worksheet to analyze and discuss the readiness of their respective institutions in implementing AI technology, helping to ensure that policymakers have a strong understanding of the steps that need to be taken before widely adopting this technology.

General Learning Objectives:

This module aims to assess the government's resources and capabilities to implement AI solutions. Identify the conditions and needs of government institutions comprehensively. Build an ecosystem for various stakeholders in different fields by adhering to ethical AI practices.

Adaptation Learning Suggestions:

- Assess the readiness of each institution according to their specific conditions
- Review the existing ecosystem in accordance with the guidelines
- Emphasize an interdisciplinary approach in creating AI solutions

Sub-module 5A: Readiness for Artificial Intelligence (AI) Implementation

Sub-module 5A examines the readiness of institutions to implement AI solutions using methods that ensure all affected parties are involved ethically and responsibly. The methods used in this module involve a comprehensive assessment of research and development capabilities, infrastructure and data, as well as governance and public facilities that support the implementation of AI solutions. Additionally, this module explores the Digital Maturity Model, which helps assess how well AI technology can be integrated into the daily operations of institutions. This methodology is supported by case studies from the public sector to demonstrate real-world AI applications and allow participants to understand best practices and the challenges that may be encountered during the implementation process.

Specific Learning Objectives:

The goal of this module is to provide definitions and measures of readiness for policymakers in implementing AI solutions, with an emphasis on the ability to execute effective and fair AI strategies:

- Definitions and measures of readiness for policymakers to implement AI solutions
- The ability to execute AI strategies, including explanations of research and development capabilities, infrastructure and data, and governance and public facilities to implement AI solutions
- Digital Maturity Model for AI solutions
- Case studies on the procurement or implementation of AI solutions in the public sector as a measure of policymakers' ability to implement AI solutions

Class Activity Suggestions:

- Discussion Starter: In this session, participants are invited to reflect on their institution's readiness to adopt AI technology. Give participants time to contemplate these three questions. They can discuss them with their neighbor or directly with the facilitator. Encourage participants to formulate their responses before returning to the plenary for further discussion. When designing discussion starter questions for AI policymaker training, the following guidelines can be integrated to facilitate productive and reflective discussions:

    - **Automation and Optimization**:
      "What aspects of our operations should be automated? What do we want to speed up and optimize? Reflect and discuss which processes or systems need efficiency through automation, and how this could impact overall productivity."

    - **Evaluation of Current Practices**:
      "What do we want to eliminate from current practices? For example, in the context of stakeholder contact data collection, is there excessive paperwork that we can reduce? Discuss the potential elimination of redundant or

inefficient processes."

- **Impact on Identity and Function:**
  "How do the goals we integrate into automation technology shape our identity and the way we function, both as individuals and collectively? Reflect and discuss how this technology reflects and influences our values and policies."

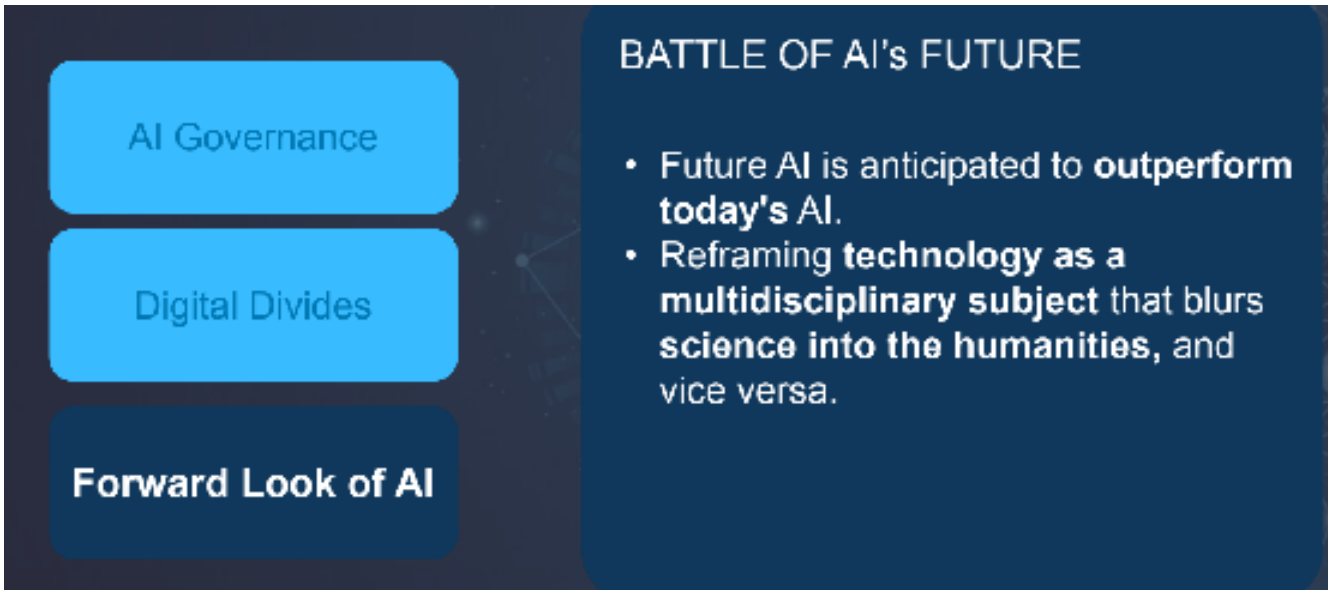
Example of Responses / Questions from Training Participants:

- **Participant 1**: "I would like to propose the development of an Artificial Intelligence (AI) system to improve the quality of research in Indonesia. One of the challenges is that research is still fragmented in terms of data and organization. As a consideration, these discussion questions could also be posed to representatives from ministries that have their own research institutions, as various perspectives need to be considered."

- **Participant 2**: "I have concerns about data security when printing personal data, as I am not entirely sure whether the personal data will be secure or spread out. Additionally, in the case experienced by lecturers, I found administrative complexities, such as using platforms like SINTA and others. Therefore, it is important to integrate administration for efficiency, as well as the readiness of policymakers regarding data security and integrated system integration."

Documentation of Learning Activity:

Inputs Example:



Sub-module 5B: Building a Responsible Artificial Intelligence (AI) Ecosystem

This sub-module aims to strengthen participants' understanding of building a responsible and inclusive AI ecosystem. It focuses on enhancing trust in institutions and organizations that implement AI solutions, explaining the structure of the AI ecosystem, mapping and roles of stakeholders, and how interactions between stakeholders can create an active and trustworthy ecosystem.

The methodology used in this sub-module focuses on a multi-stakeholder approach to integrate diverse views into the AI ecosystem, ensuring the involvement of all relevant parties. The multi-stakeholder approach involves government, industry, academia, society, and media to create an inclusive and collaborative environment, allowing various perspectives and expertise to contribute to the development and implementation of AI. Stakeholder mapping is a key step to identify, understand roles, and assess the influence of stakeholders, which is vital in designing inclusive and effective policies. Policy development emphasizes the formulation of policies and regulations that support ethical and responsible AI, using practical examples and standards set by global organizations and policy development institutions. Each aspect of this methodology is designed to ensure that the AI ecosystem built is not only technically advanced but also socially sustainable and ethical.

Class Activity Suggestions:

- **Interactive Discussion:** Participants are invited to discuss the question, "Who can be trusted and what instruments are important to support responsible AI?" This helps understand the expectations of various stakeholders and identify steps that can be taken to strengthen trust in the use of AI.

Example of Responses / Questions from Training Participants:

- **Participant 1**: "Most of the issues related to artificial intelligence seem to be about bias. I see it as an assessment problem because we only have a checklist. There's a checklist, some are ready, and some are not. But, we never have a well-organized community. So, even if everything is ready, it's not necessarily usable. How can we handle situations like this?"

Documentation of Learning Activity:

Inputs Example:

AI Ecosystem

A network of connections between various parties involved in the development, implementation and utilization of AI technology.

Government : develops policies, regulations, and provides financial support for research and development

Industry : companies and business organizations involved in the development and implementation of innovations

Academics : research and talent development

Society : ensuring the positive impact of innovation

Mass media : sharing information

Triple helix ecosystem
government, ndustry, academ a

Quadruple helix
+ society/community

Penta helix
+ mass media

Process & Strategy **Consulting**

From the OECD.AI national AI policy database, there are various types of consultations used by various countries in the world

1. **Surveys** both online and offline
2. **Conferences** , public hearings, participatory workshops, seminars
3. **Expert** interviews
4. Create **focus groups** or expert groups
5. Create various online discussion **forums**
6. Establish **a permanent institution** to provide advice and coordinate implementation of the national strategy

the most widely used public consultation method

In-depth Study Material

Online Group Work 4: Institutional Readiness Analysis for Artificial Intelligence Technology Implementation

Online Group Work 4 is a crucial session in the training process, where participants are asked to analyze and discuss their respective institutions' readiness to implement Artificial Intelligence (AI) technology. Using the "Institutional Readiness Assessment" as a guide, participants will fill out the provided canvas to identify and map stakeholders and assess their readiness for AI policies.

Activity Objectives:

- Help participants understand and evaluate the critical institutional readiness factors for the successful implementation of AI technology. This includes identifying existing resources, potential challenges, and areas that require development or improvement.
- Promote a better understanding of how interactions among stakeholders can influence the development and implementation of effective AI policies.

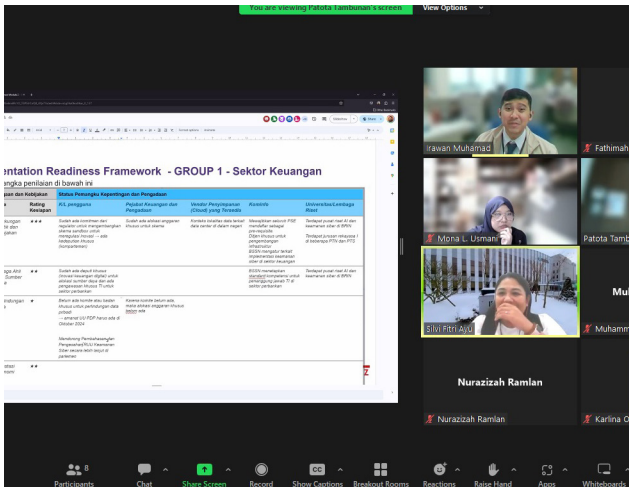
Activity and Discussion:

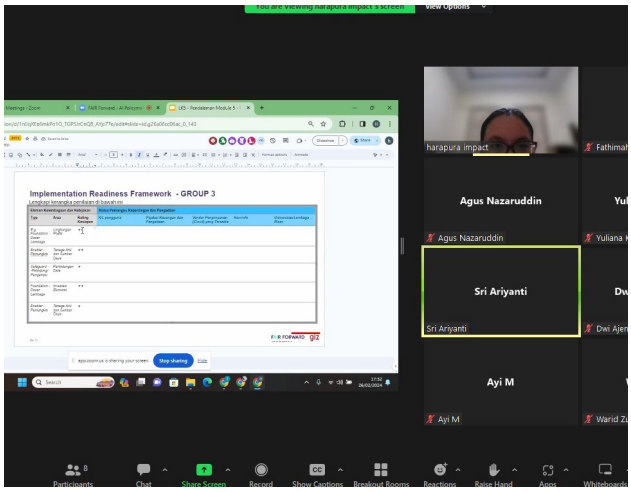
Participants will work in small groups online using the Zoom platform. They will be divided into small groups (4-5 people) and directed to fill out the "Institutional Readiness Assessment," which includes various training module templates with the facilitator. For Module 5, the focus is on the "Implementation Readiness Framework" and "Stakeholder Matrix," where participants must fill out information related to their institution's readiness and conduct stakeholder mapping. The results from each group can be brought together in a plenary discussion to exchange views on the outcomes of their group discussions.

Activity Outputs:

The output of this activity is a completed document that includes the participants' institutional readiness evaluation for AI implementation. This document will cover stakeholder identification, assessment of infrastructure readiness, human resources, and other technical aspects, as well as follow-up plans to address areas needing development. This document can then be part of the institution's action plan to enhance their readiness for adopting AI responsibly and effectively.

Documentation of Learning Activity:





Inputs Example:

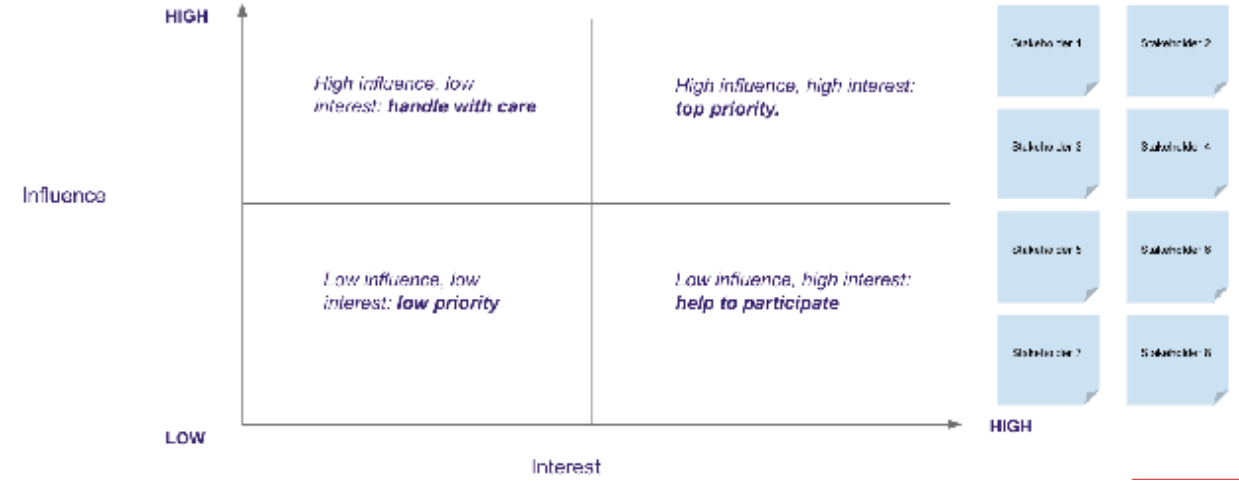
Implementation/ readiness framework

Complete the assessment framework below, referring back to Module 2 and various intra-governmental frameworks such as Govt AI Readiness Index and maturity model for digital services, as well as more society-wide frameworks like AI for

Institutional and policy elements			Stakeholder status and considerations				
Type	Area	Readiness rating	E.g. Govt end user department(s) - health	E.g. Treasury and procurement officials	E.g. Intl. cloud vendors	E.g. Ministry of ICT	E.g. Universities and public research
E.g. Foundation	Political environment	★ ★ ★	Health ministry aims to become national leader in adopting AI	Treasury supports need to pursue emerging technology - current guidelines need review	Unclear about role due to emphasis on data localisation in national policy discourse	Ministry leading development of AI strategy, mandated by President	HEIs at universities strong support for 4IR agenda, supportive of govt policy in this area
E.g. Enabler	Skills and hiring (public sector)	★ ★		Not familiar with emerging tech and association issues (e.g. data licensing)			
E.g. Safeguard	Data protection	★	Health national committee on personal data. Guidelines for AI in draft form for health			Has raised data protection bill in parliament. Timeline uncertain.	
E.g. Foundation	Economic investment	★ ★	Supply side focus of investment (i.e. AI products). Limited funding for use.		Historical investment in cloud infrastructure, but no new growth due to localisation uncertainty	Limited capital budget for investing in infrastructure, seeking private partners	Local research receiving increasing international funding. Looking to diversify locally.
E.g. Enabler	Skills and workforce (sector)	★				National target and programme on data science skills training	Considering expanding data science offering. Limited immediate interest at this stage

Stakeholder matrix

A stakeholder matrix is a simple, useful tool to prioritise engagement with different groups. Use the one below or create as a team on Mural, or do a stakeholder map instead.



Implementation Readiness Framework - GROUP 1 - Financial Sector

Complete the assessment framework below

Institutional and Policy Elements			Stakeholder Status and Procurement				
Type	**Areas**	**Readiness Rating**	*User K/L*	*Finance and Procurement Officer*	*Available Storage (Cloud) Vendors*	*Kominfo*	*Universities/Research Institutes*
Foundation - Foundation of the Institution	*Political and Policy Environment*	★★★	*There is already a commitment from the regulator to develop a sandbox scheme to regulate innovation → there is a special deputy (perpetrator)*	*There has been a special budget allocation for the scheme*	*The context of data security is related to domestic data centers*	*Requiring all PSEs to register as a reporting entity. The special Directorate General for ESSN communications development regulates the implementation of cyber security in the national sector*	*There is an AI and cyber security research center at BRIN* *There are engineering majors / courses in UIs and ITBs*
Enabler - Enabler	*Experts and Resources*	★★	*There is already a special deputy (digital finance) innovation) for resource allocation and there is special IT oversight in the banking sector*			*ESSN sets competency standards for people responsible for IT in the banking sector*	*There is an AI and cyber security research center at BRIN*
Safeguard - Protector/Guardian	*Data Protection* *→ one and a half stars*	★★	*There is no committee or special body for personal data protection yet → the mandate of the PDP Law must be in place by October 2024* ***Encourage further discussion and ratification of the Cybersecurity Bill in parliament*** *- should be in line with PDP*	*Because there is no committee yet, there is no specific budget allocation yet*	*PDN development might be a business for data storage and protection schemes*	*PDN development might be a business for data storage and protection schemes* *Development of data classification* *→ general vs specific data*	
Foundation - Foundation of the Institution	*Economic and infrastructure investment*	★	*Waiting for regulations and governing bodies*			*Technology infrastructure → acceleration of communications & IT access*	*There is no research funding specifically for the AI sector → opportunity already exist at universities*

Implementation Readiness Framework - GROUP 2

Complete the assessment framework below

Institutional and Policy Elements			Stakeholder Status and Procurement				
Type	**Areas**	**Readiness Rating**	*User K/L*	*Finance and Procurement Officer*	*Available Storage (Cloud) Vendors*	*Kominfo*	*Universities/Research Institutes*
Eg Foundation - Foundation of the Institution	*Political Environment*	★★	*BRIN supports research on AI to support Golden Indonesia*	*The APBD is a derivative of the APBN, which needs to be budgeted in the previous year*		*There is already a PDP Law that protects personal data and data management procedures*	*ITB has a research task group for AI. Likewise ITS.*
Enabler - Enabler	*Experts and Resources*	★★★ *(for digital transformation)*	*Provincial Government: the department does not yet have the skills/interest to support digitization. Gov tech is at national level*				*Collaboration with the Ministry of Education and Culture to standardize Digital Transformation education (in the future AI)*
Safeguard - Protector/Guardian	*Data Protection*	★ or ★★	*There is no special committee yet.*			*Does the Ministry of Law and Defense have a role in governing this matter because it is related to human rights?*	
Foundation - Foundation of the Institution	*Economic Investment*	★	*BRIN does not yet have a strategic program for allocating costs to increase research/capacity in the field of AI (new by project)*		*If there is an initiative from the private sector*		*Universities have more flexibility in funding technology development*
Enabler - Enabler	*Experts and Resources*	★					

Implementation Readiness Framework - GROUP 3

Complete the assessment framework below

Institutional and Policy Elements			Stakeholder Status and Procurement				
Type	**Areas**	**Readiness Rating**	*User K/L*	*Finance and Procurement Officer*	*Available Storage (Cloud) Vendors*	*Kominfo*	*Universities/Research Institutes*
Eg Foundation - Foundation of the Institution	*Political Environment*	★★★	*Bappenas: in 2019, the National Strategy for AI was created. Bappenas has also organized AI training*	*There is not yet much attention paid to AI development: the allocation to provide incentives to vendors is still small*	*Currently still renting Cloud, still limited to Indonesia* *PDN Readiness, needs to be studied*	*Kominfo has passed the PDP Law and issued a circular on AI (Dec 2023). The ITE Law can also be used as a basis for the development of AI*	
Enabler - Enabler	*Experts and Resources*	★	*In K/L, there are still limited human resources who master AI. In several new ministries/institutions, human resource development has been initiated to study AI*	*Still limited*	*Still limited*	*Still limited*	*Connected to other countries, it is still limited (even from the graduate specifications for expert staff)*
Safeguard - Protector/Guardian	*Data Protection*	★★	*There is already a PDP Law that can be implemented in every line/policy*	*There are several that already exist but their commitment needs to be increased to provide protection to users (the community)*	*It has been sufficiently implemented in relation to the PDP Law*	*Has issued and socialized the PDP Law which is the basis for data protection*	
Foundation - Foundation of the Institution	*Economic Investment*	★★	*It has been implemented but is still limited*				
Enabler - Enabler	*Experts and Resources*	★	*Still limited*				

Learning Materials

Module 5: Institution Readiness for Artificial Intelligence (AI) Implementation
Material Reviewer: Beni Djohan, Aptaworks

Sub-module 5A: Readiness for Artificial Intelligence (AI) Implementation
Presenter: Meyda Nento (UNESCO)

- PDF Material (Indonesian): Sub-module 5A : Kesiapan untuk Implementasi Kecerdasan Artifisial (KA)
- PDF Material (English): Sub-module 5A: AI Readiness
- Recording Material (YouTube): Sub-modul 5A: Kesiapan untuk Implementasi Kecerdasan Artifisial (KA)

Sub-module 5B: Building a Responsible Artificial Intelligence (AI) Ecosystem
Presenter: Dr. Ayu Purwarianti (Prosa.ai)

- PDF Material (Indonesian): Sub-modul 5B: Membangun Ekosistem Kecerdasan Artifisial (KA) yang Bertanggung Jawab
- PDF Material (English): Sub-module 5B: Building an Ethical AI Ecosystem
- Material Recording (Youtube): Sub-modul 5B: Membangun Ekosistem Kecerdasan Artifisial (KA) yang Bertanggung Jawab

In-depth Study Material: Online Group Work 4: Institutional Readiness Analysis for Artificial Intelligence Technology Implementation
Facilitators: Ivy Londa, Patota Tambunan, Tiara Mahardika (harapura impact)

- Worksheet (Indonesian): Diskusi Peran Rencana Implementasi
- Worksheet (English): Stakeholder Matrix

All learning materials for Module 5 can also be accessed via
https://link.harapura.com/FF-AI-Module5

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Republic of Indonesia

Policy Showcase

Policy Showcase

The Policy Showcase is one of the events in the Artificial Intelligence (AI) Training for Policymakers in Indonesia. In this event, participants have the opportunity to present initiatives or regulatory frameworks that they have developed or are currently developing within their organizations. This event serves not only as a platform to highlight innovative new policies but also as a forum for dialogue and the exchange of best practices among participants.

Objectives of the Policy Showcase:

- **Enhance Insight:** Provide a deep understanding of various policy initiatives from different sectors and organizations.
- **Facilitate Dialogue:** Encourage discussion and constructive feedback from various stakeholders to enrich the sustainable policymaking process.
- **Promote Innovation:** Enable policymakers to showcase and gain recognition for their innovative efforts in implementing AI.

This Policy Showcase uses the following event format:

- **Presentation Sessions:** Three to five speakers from various organizations will present the objectives, rationale behind the development, and the expected impact of the policies introduced.
- **Open Discussion:** Following the presentations, a Q&A session will be held to further discuss the challenges and solutions in implementing these policies.
- **Participant Interaction:** Participants will have the opportunity to interact directly with the presenters and other participants to exchange ideas and explore potential collaborations.

By organizing the Policy Showcase, this training program not only supports effective knowledge transfer but also fosters a dynamic community of practice in the field of AI policy.

Topic Example:

Examples of topics discussed can vary, based on the sector of the participants involved during the training. In the training in Indonesia, the topics discussed included:

1. **Banking Digital Transformation Policy:** Presented by Irawan Muhammad from the Department of Banking Regulation and Development, Financial Services Authority (OJK).

In the presentation on the Banking Digital Transformation Policy, several key points were discussed. Firstly, the potential and challenges of digitalization in Indonesia, where a majority of the population has a high level of technological literacy but there is still a lack of financial literacy. The presentation also covered the development of the digital economy in Indonesia, which shows an increase in e-commerce transactions and other sectors. The

challenges of digital transformation faced by the Financial Services Authority (OJK) include data security risks, cyber-attacks, uneven communication infrastructure, inadequate regulations, and low digital financial literacy.

There are also six main aspects that serve as a reference for banking in conducting digital transformation, such as data protection, appropriate technology architecture, collaboration, risk management, institutional order, and customer experience. Additionally, the presentation discussed OJK regulations related to banking digital transformation and the use of artificial intelligence (AI) in banking services, including account opening, customer service chatbots, protective actions, and fraud detection. However, there are also challenges in the use of AI for banking, such as ethical issues, fairness, transparency, the role of humans, data quality, model security, human resource management, compliance with policies, and access stability.

2. **Optimizing the Role of Artificial Intelligence in the Indonesian General Election:** Presented by Silvi Fitri Ayu, Expert Staff for Commission II of the House of Representatives of the Republic Indonesia.

In the Policy Showcase session on "Optimizing the Role of AI in Indonesia's General Election," several key points were discussed. Firstly, three important elements in the general election in Indonesia were presented: the election organizer (KPU), the election supervisor (BAWASLU), and election participants (political parties, legislative candidates, presidential candidates, and the public as voters). Then, examples of AI use in the 2024 election were explained, including the role of AI in political campaigns, the AI election application as a political consultant for legislative candidates, and the use of public figures as campaign tools. This was followed by a discussion of the risks of using AI in political campaigns, the use of AI by KPU and BAWASLU in elections, and the steps taken by the DPR regarding AI regulations in the general election. This presentation outlined the important role of AI in the context of Indonesia's general election and the challenges and solutions that need to be considered by various related institutions.

3. **Circular Letter of the Ministry of Communication and Information Technology No. 9 of 2023 on Artificial Intelligence Ethics:** Presented by Diah Yuniarti from the Ministry of Communication and Information of the Republic of Indonesia.

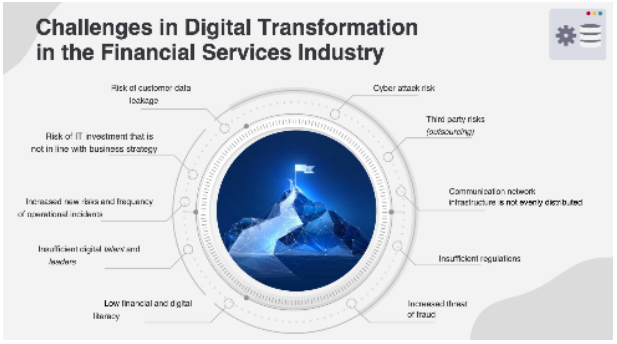
The final Policy Showcase session discussed the purpose, targets, legal basis, and contents of the Circular Letter of the Ministry of Communication and Information Technology No. 9 of 2023 on Artificial Intelligence (AI) Ethics. The purpose of this circular letter is to serve as a guideline in formulating internal policies for companies and Electronic System Providers (PSE) regarding data and AI ethics, as well as providing ethical principles for business actors involved in AI programming activities. The targets of this circular letter include AI-based programming business actors, both in the public and private sectors. The legal basis for this circular letter includes Law No. 19 of 2016 on information and electronic transactions, Law No. 27 of 2022 on personal data protection, and regulations related to the implementation of electronic systems.

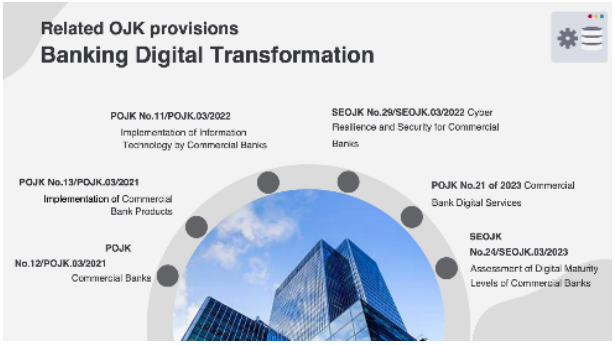
The contents of Circular Letter No. 9 of 2023 include the implementation of AI capabilities, the use of AI technology in subsets such as machine learning and natural

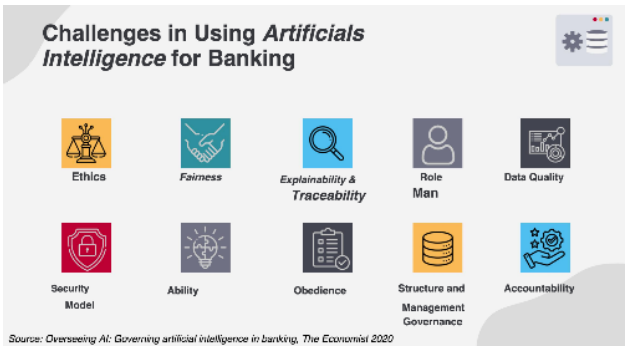
language processing, and attention to ethical aspects such as inclusivity, humanity, security, accessibility, transparency, credibility, accountability, personal data protection, sustainable environmental development, and intellectual property. This is an important step in regulating the use of AI to align with ethical and legal values prevailing in Indonesia.

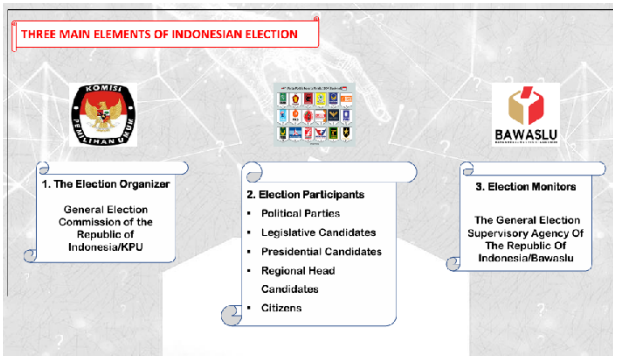
Documentation of Learning Activity:

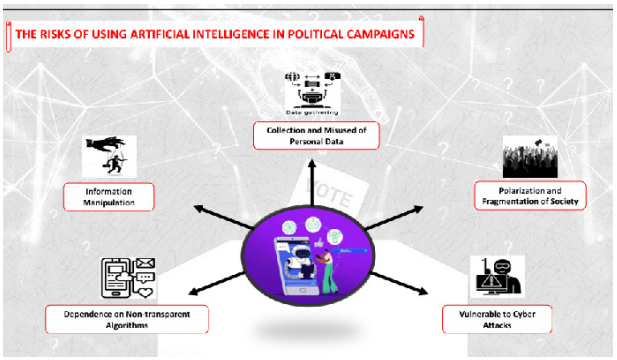
Inputs Example:

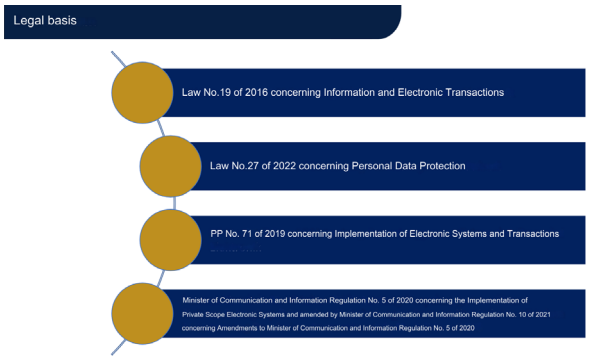


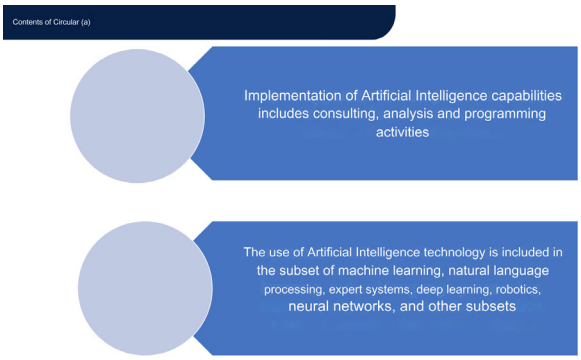












Contents of Circular (b)

The implementation of Artificial Intelligence technology takes into account the values of Artificial Intelligence Ethics including:

1) Inclusivity
2) Humanity
3) Security
4) Accessibility
5) Transparency
6) Credibility and Accountability
7) Protection of Personal data
8) Sustainable Development and Environment
9) Intellectual Property

Contents of Circular (b)

PM Kominfo Number 3 of 2021: Business Activity Standards and Product Standards in the Implementation of Risk-Based Business Licensing in the Post, Telecommunications and Electronic Systems and Transactions Sector, which is an AI-based programming activity based on the standard business field code 62015

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Mini Workshops

Mini Workshops

The Artificial Intelligence (AI) Training for Policymakers in Indonesia features three mini workshops with themes aimed at enriching the perspectives of the training participants. In the training held in Indonesia, three themes were chosen: inclusivity, intellectual property rights, and natural language processing.

Mini Workshop: Artificial Intelligence (AI) for Disability

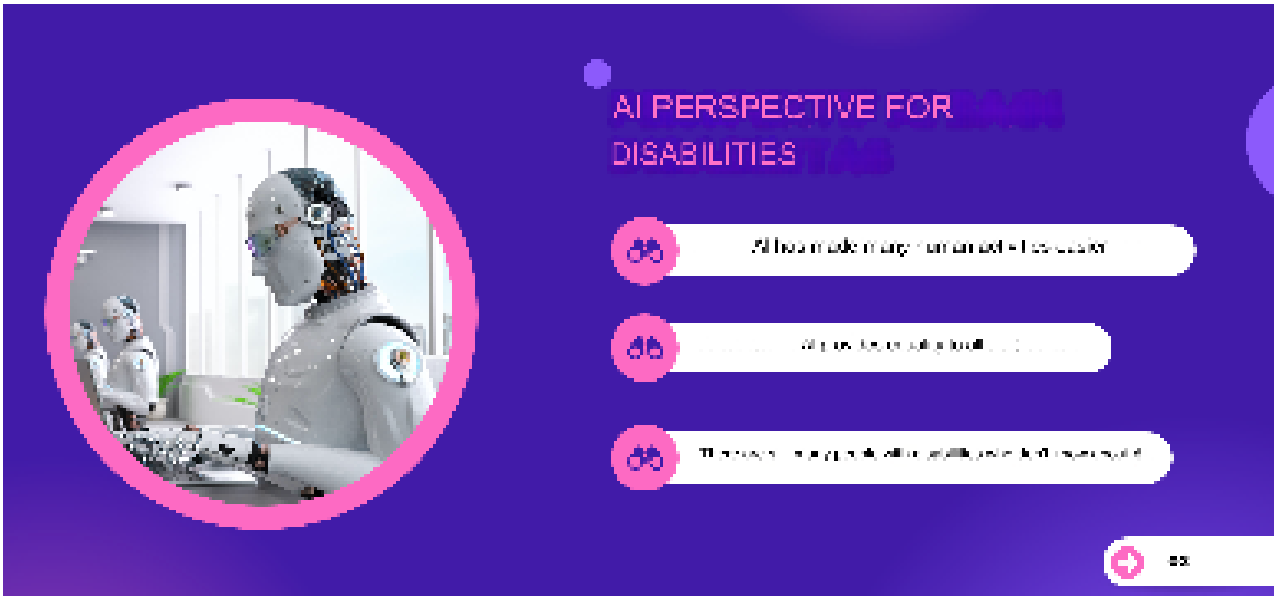
This mini workshop discusses the use of Artificial Intelligence (AI) to assist people with disabilities. Participants gain insights into how AI can be used to improve the quality of life for people with disabilities, focusing on the development of technologies such as more advanced screen readers, sensory aids, and applications that can facilitate the daily and professional lives of people with disabilities.

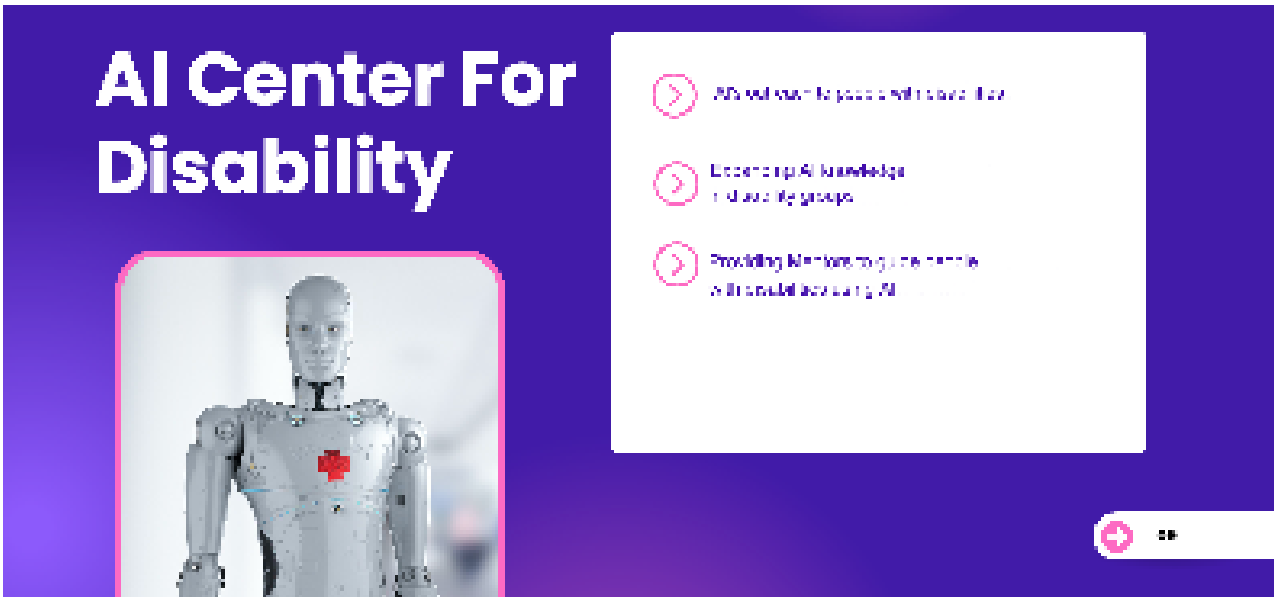
Learning Objectives:

- Understand the potential of AI in supporting the independence and productivity of people with disabilities.
- Analyze the real expectations and needs of the disability community for AI technology.
- Identify opportunities for inclusive integration of AI solutions in public policy.

Documentation of Learning Activity:

Inputs Example:





Mini Workshop: Artificial Intelligence (AI) and Intellectual Property

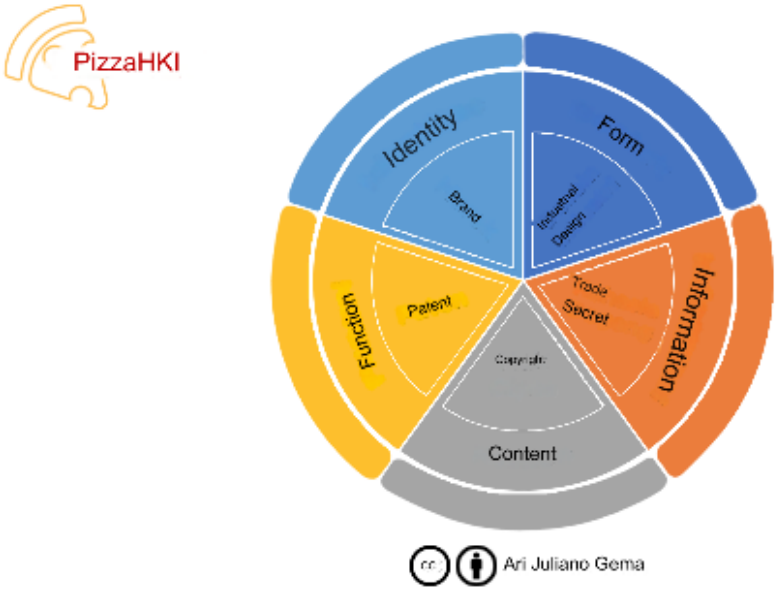
This session explores the interaction between Artificial Intelligence (AI) and Intellectual Property Rights (IPR), including how generative AI affects copyright, patents, and intellectual ownership. Participants learn about the legal challenges arising from the use of AI in creating new works and innovations, as well as regulatory approaches that can support innovation while protecting the rights of IPR holders.

Learning Objectives:

- Delve into the implications of IPR in the development and use of generative AI.
- Identify challenges and solutions in integrating AI with existing IPR systems.
- Encourage discussion on policies that support a balance between innovation and IPR protection.

Documentation of Learning Activity:

Inputs Example:



Copyright protected works.

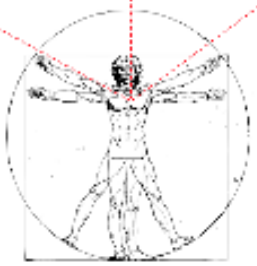
- Books, pamphlets, published forms of written work, and all other written works;
- lectures, lectures, speeches and other similar works;
- teaching aids made for educational and scientific purposes;
- songs and/or music with or without text;
- drama, musical drama, dance, choreography, puppetry, and pantomime;
- works of fine art in all forms such as paintings, drawings, carvings, calligraphy, sculpture,
- sculpture, or collage;
- works of applied art;
- architectural works;
- batik artwork or other motif arts;
- Photographic works
- Map;
- Poroh;
- cinematographic works;
- translation, interpretation, adaptation, anthology, database, adaptation, arrangement, modification and other works resulting from transformation;
- translation, adaptation, arrangement, transformation, or modification of traditional cultural expressions;
- compilation of works or data, either in a format that can be read by computer programs or other media;
- a compilation of traditional cultural expressions as long as the compilation is an original work;
- video games; And
- Computer program.

Creating Party.

A creator is a person or several people who individually or together produce a creation that is unique and personal. (Law No. 28 of 2014 concerning Copyright)

A designer is a person or several people who produce Industrial Designs. (Law No. 31 of 2000 concerning Industrial Design)

An inventor is a person or several people who jointly implement ideas expressed in activities that produce an invention. (Law No. 13 of 2016 concerning Patents)



Mini Workshop: Data Development in Natural Language Processing

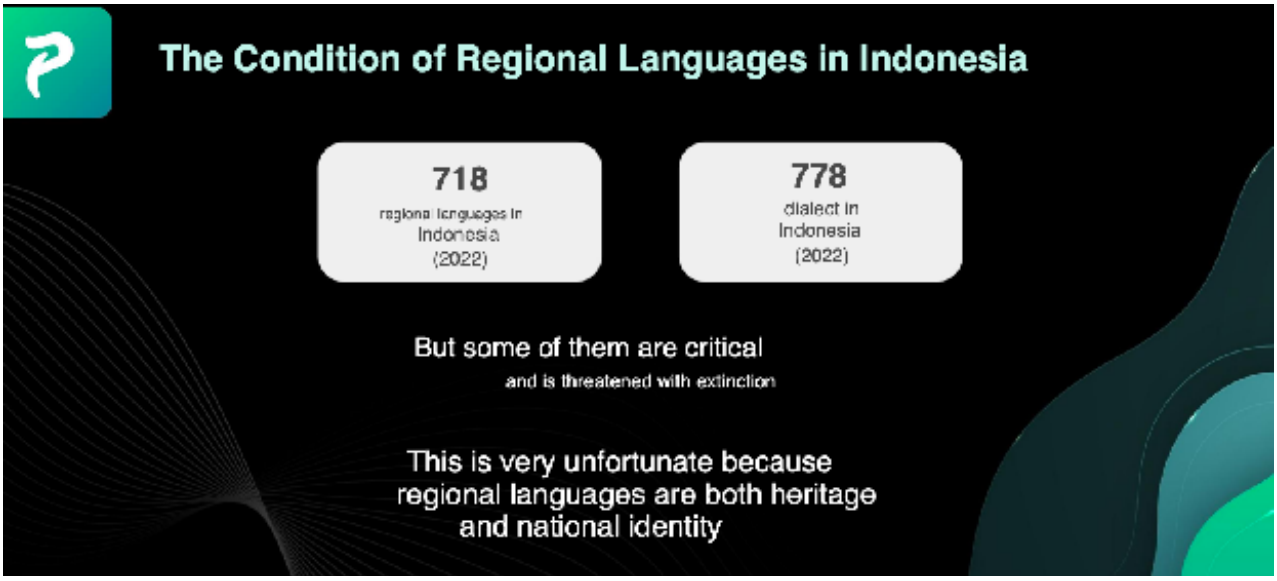
This workshop will discuss the importance of data development in Natural Language Processing (NLP) technology. Participants will be invited to understand how NLP works, the challenges in data development, and the use of NLP in the preservation of regional languages. This includes discussions on data collection and annotation methods, as well as practical applications of NLP in local and regional contexts.

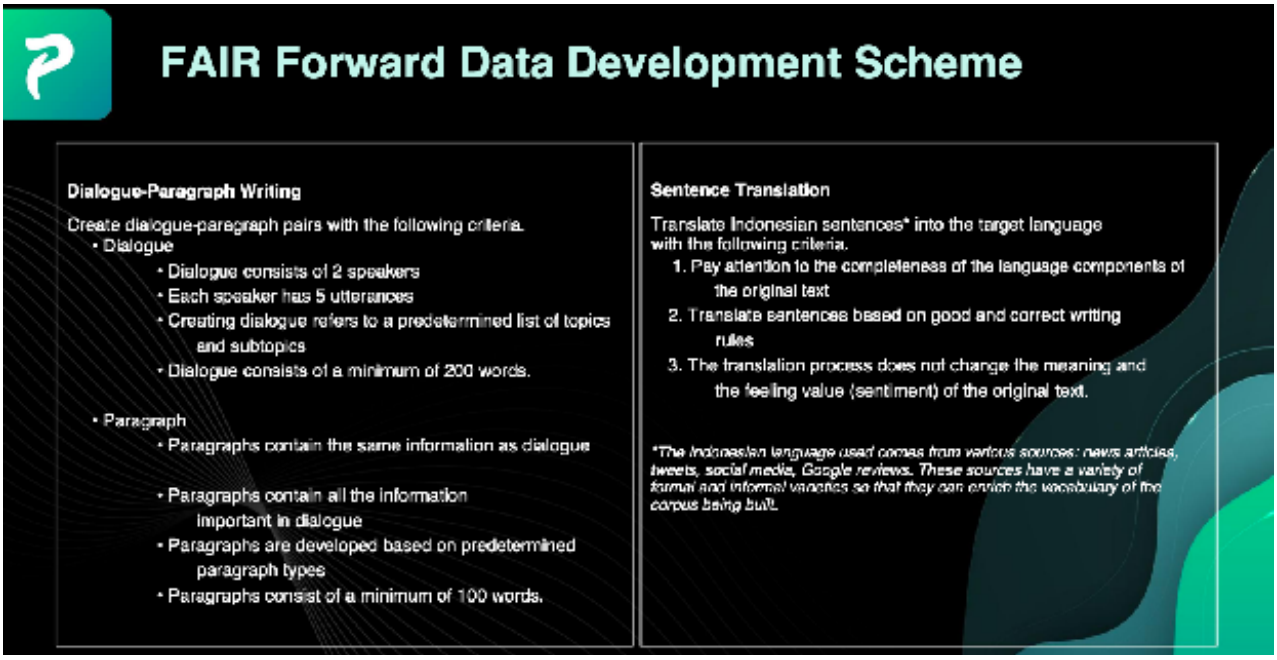
Learning Objectives:

- Deepen understanding of NLP and its applications in language analysis and processing.
- Identify strategies to overcome challenges in NLP data collection and processing.
- Explore the potential of NLP in supporting the preservation and promotion of regional languages.

Documentation of Learning Activity:

Inputs Example:


The Condition of Regional Languages in Indonesia
718
regional languages in Indonesia (2022)
778
dialect in Indonesia (2022)
But some of them are critical
and is threatened with extinction
This is very unfortunate because regional languages are both heritage and national identity


FAIR Forward Data Development Scheme
Dialogue-Paragraph Writing
Create dialogue-paragraph pairs with the following criteria.
• Dialogue
• Dialogue consists of 2 speakers
• Each speaker has 5 utterances
• Creating dialogue refers to a predetermined list of topics and subtopics
• Dialogue consists of a minimum of 200 words.
• Paragraph
• Paragraphs contain the same information as dialogue
• Paragraphs contain all the information important in dialogue
• Paragraphs are developed based on predetermined paragraph types
• Paragraphs consist of a minimum of 100 words.
Sentence Translation
Translate Indonesian sentences* into the target language with the following criteria.
1. Pay attention to the completeness of the language components of the original text
2. Translate sentences based on good and correct writing rules
3. The translation process does not change the meaning and the feeling value (sentiment) of the original text.
*The Indonesian language used comes from various sources: news articles, tweets, social media, Google reviews. These sources have a variety of formal and informal variables so that they can enrich the vocabulary of the corpus being built.

Learning Materials

Mini Workshop: Artificial Intelligence (AI) I for Disability
Presenter: I Made Prasetya Wiguna Mahayasa (PT Mahayasa Teknologi Nusantara and Representatives of People with Disabilities DNetwork - Jaringan Kerja Disabilitas)

- PDF Material (Indonesian): Kecerdasan Artifisial (KA) untuk Penyandang Disabilitas (AI for Disability)
- PDF Material (English): AI for Disability

Mini Workshop: Artificial Intelligence (AI) and Intellectual Property
Presenter: Ari Juliano Gema (Assegaf Hamzah & Partners and Intellectual Property Rights Lawyer)

- PDF Material (Indonesian): Kecerdasan Artifisial (KA) dan Hak Kekayaan Intelektual (AI and Intellectual Property)
- PDF Material (English): Artificial Intelligence and Intellectual Property

Mini Workshop: Data Development in Natural Language Processing
Presenter: Dea Adhista, Sarah Octavianti, Galih Pradipta Muridan (Prosa.ai)

- PDF Material (Indonesian): Kecerdasan Artifisial (KA) untuk Penyandang Disabilitas (AI for Disability)
- PDF Material (English): Data Development in Natural Language Processing

All mini workshop materials can be accessed via
https://link.harapura.com/FF-AI-miniworkshop

FAIR Forward

in cooperation with:

kerja sama jerman
DEUTSCHE ZUSAMMENARBEIT

implemented by:

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Ministry of National Development Planning/Bappenas
Republic of Indonesia

Policy Prototyping Lab

Policy Prototyping Lab

When designing the closing event for the Artificial Intelligence (AI) Training for Policymakers, consider integrating mini workshops or dialogues that focus on specific topics such as Intellectual Property Rights (IPR), AI for people with disabilities, or the development of Natural Language Processing (NLP) in specific social sectors. This will enrich participants' learning experiences by providing practical applications of the AI concepts they have learned, while also deepening their understanding in contexts relevant to their sectoral work.

To support effective knowledge exchange, it is recommended to hold a session where participants can showcase digital projects from their institutions. A format like the Policy Showcase not only supports the exchange of ideas and innovative solutions among participants but also enhances collective understanding of AI applications in various sectors.

Additionally, it is suggested to implement a Co-creation Session: Policy Prototype Lab during the closing event. In this session, participants collaborate in small groups to formulate AI policy solutions tailored to the specific sectoral needs identified. This co-creation session should be designed and facilitated to produce practical and innovative policy ideas, strengthen participants' collaborative skills, and encourage the development of policy prototypes that can be applied in the context of each participant. This session is crucial to ensure that the training leaves not only a theoretical impression but also practical results that can be implemented in policies and practices.

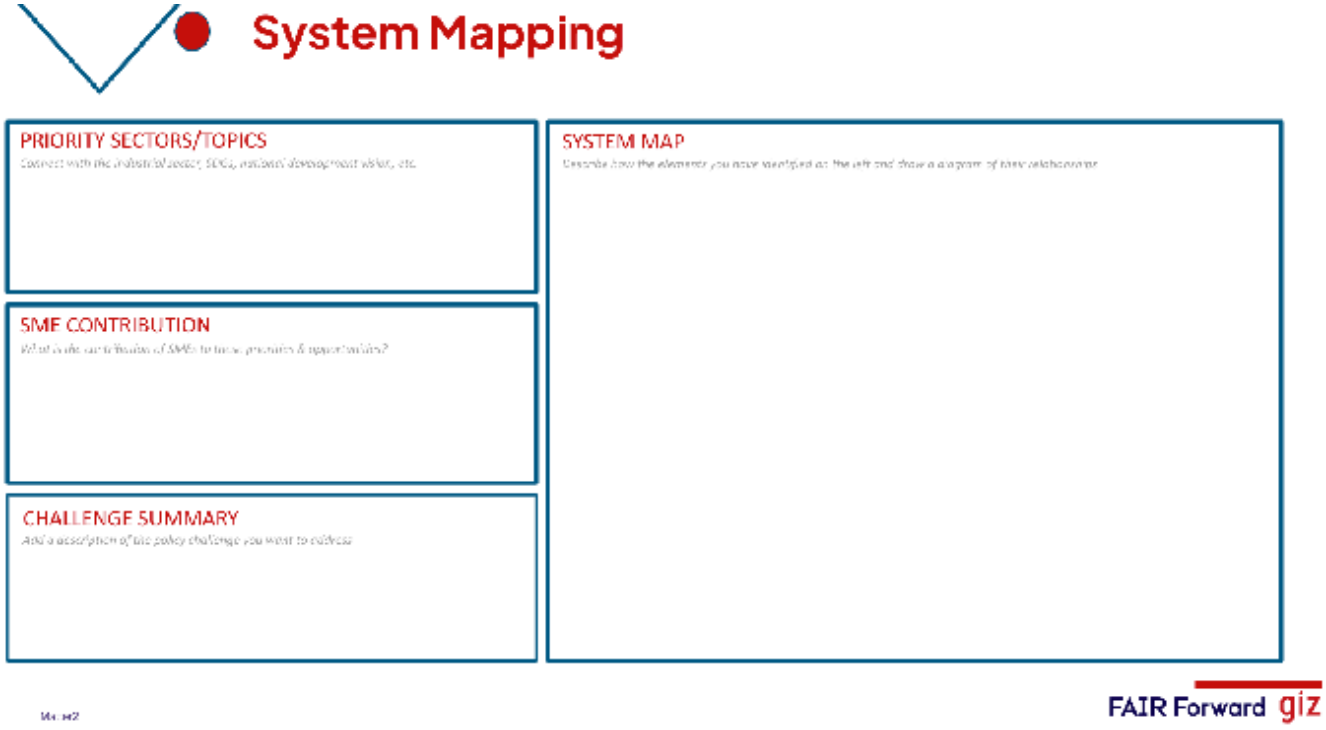
Policy Prototyping Workshops - Co-creation Prototype Policy Session

The Policy Prototyping Workshop - Policy Prototyping Co-creation Session provides a collaborative platform for key ecosystem policymakers to design policies that are responsive to the era of AI implementation and responsible technology. Through this session, they can contribute to policy agenda setting, enhance policy implementation, and provide recommendations that align policy targets with responsible and ethical AI use. The co-created outcomes of this workshop become a final policy summary used by policymakers as a practical guide for the necessary features in forming responsible and inclusive AI implementation policies.

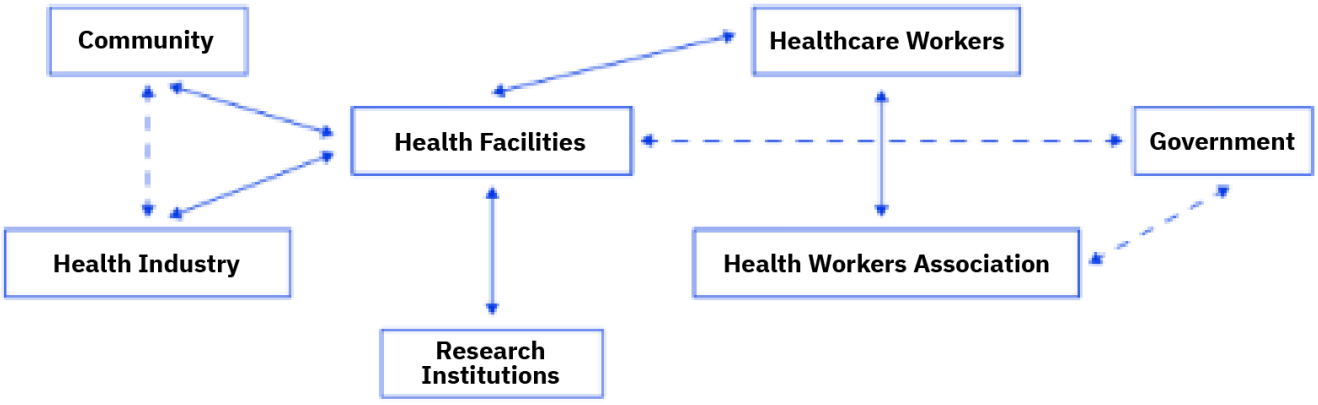
The Policy Prototyping Lab is a space for participants to explore responsive policy solutions to AI technology challenges. Participants are divided into three groups focusing on the sectors of E-Gov, Finance, and Education & Research. The workshop mechanism includes stages of agenda setting, policy drafting, implementation, and policy monitoring and evaluation. Participants use canvases to map systems, understand target groups, design criteria, and create creative solution ideas in the "Crazy 8" session. The workshop aims to facilitate the creation of innovative and effective policy prototypes in response to the dynamics of responsible AI use, concluding with AIDA Model recommendations as a persuasive strategy for presenting policy ideas to the audience.

Worksheet example used in Co-creation Policy Prototyping Lab:

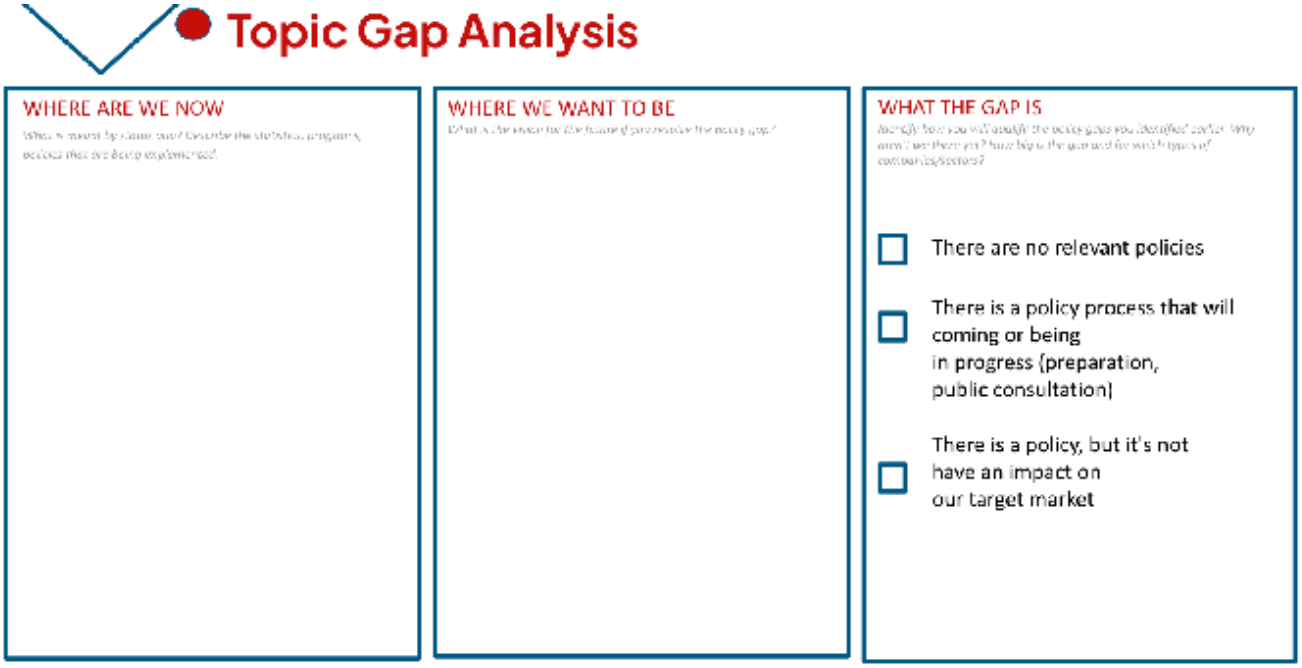
- **System Mapping**



- Priority Sectors/Topics: Discuss the connections with the industrial sector, SDGs, and the national development vision.
- SME Contribution: Explain the ecosystem's contribution to priorities and opportunities within the intended ecosystem.
- Challenge Summary: Add a description of the policy challenges to be addressed.
- System Map: Illustrate the identified elements on the left and draw a diagram of their relationships. Here is an example for the health sector:



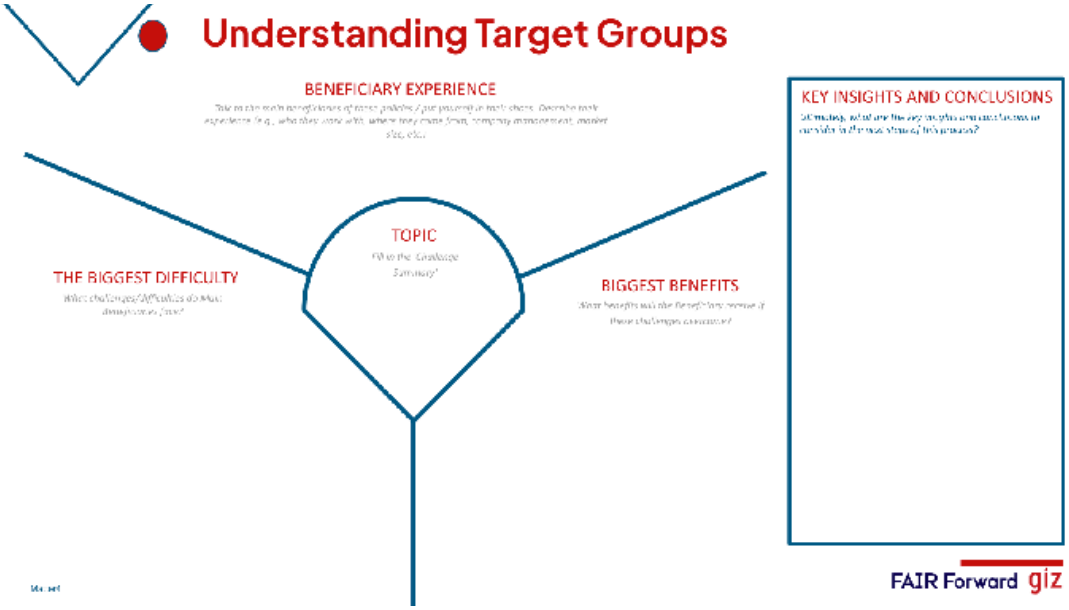
- **Topic Gap Analysis**



On this worksheet, participants requested to analyze topic gaps which are discussed by answering the questions in the description below.

- Where Are We Now: What is meant by the status quo? Describe the current statistics, programs, and policies being implemented.
- Where We Want to Be: What is the vision for the future if you address the policy gap?
- What The Gap Is: Identify how you qualify the policy gap you have previously identified. Why are we not there yet? How big is the gap and for which types of companies/sectors?

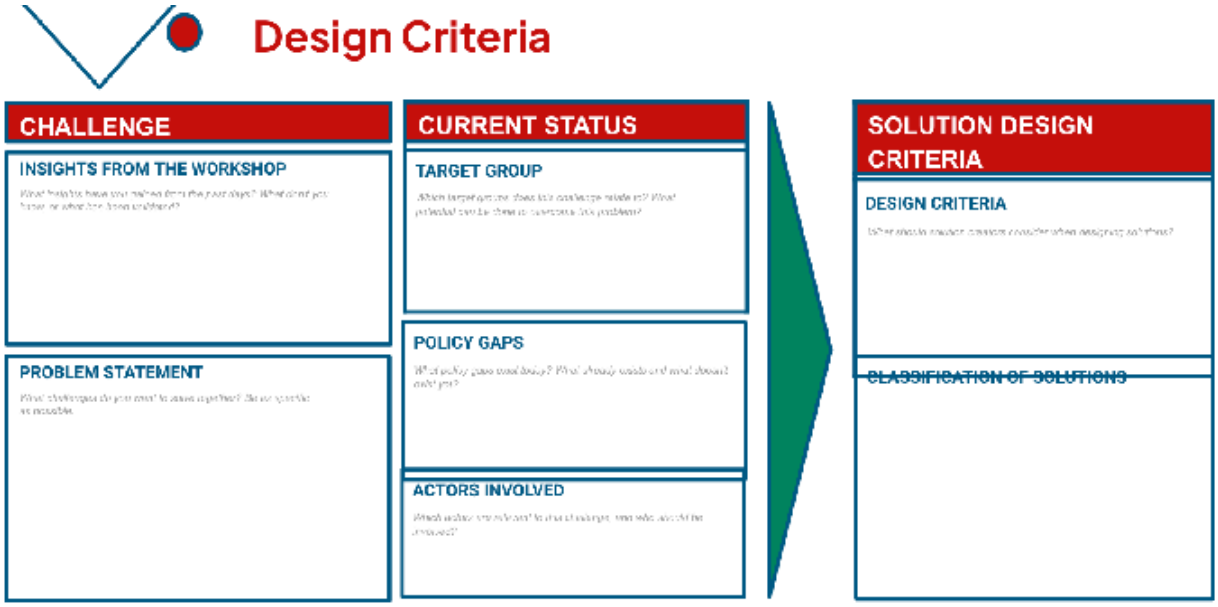
- **Understanding Target Groups**



On this canvas, participants are asked to understand the target groups by answering the following questions:

- Topic: Fill in with the 'Summary of Challenges' that has been previously written on the System Mapping canvas.
- Beneficiary Experience: Speak with the main beneficiaries of this policy / put yourself in their position. Describe their experience (e.g., who they work with, where they come from, company management, market size, etc.)
- Biggest Difficulty: What challenges/difficulties do the main beneficiaries face?
- Biggest Benefits: What benefits will the beneficiaries gain if this challenge is addressed?
- Key Insights and Conclusions: Ultimately, what are the key insights and conclusions that need to be considered in the next steps of this process?

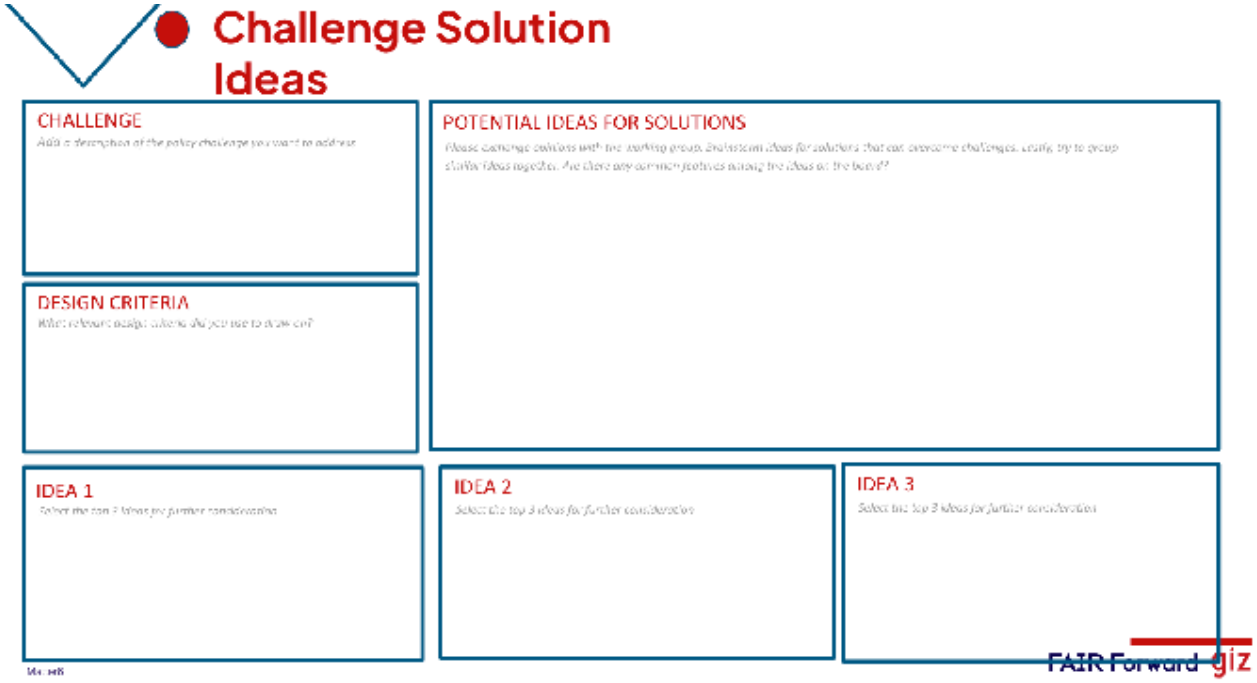
- **Design Criteria**



On the Design Criteria canvas, participants are asked to answer questions about Challenges, Current Status, and Solution Design Criteria as described below:

- Insights From the Workshop: What insights have you gained from the past few days? What do you still not know, or what has been validated?
- Problem Statement: What challenges do you want to solve together? Make it as specific as possible.
- Target Groups: Which target groups are related to this challenge? What potential actions can be taken to address this issue?
- Policy Gaps: What are the current policy gaps? What already exists and what is missing?
- Actors Involved: Which actors intersect with this challenge, and who needs to be involved?
- Design Criteria: What should solution creators consider when designing the solution?
- Classification Solution: A summary of the proposed solution methods.

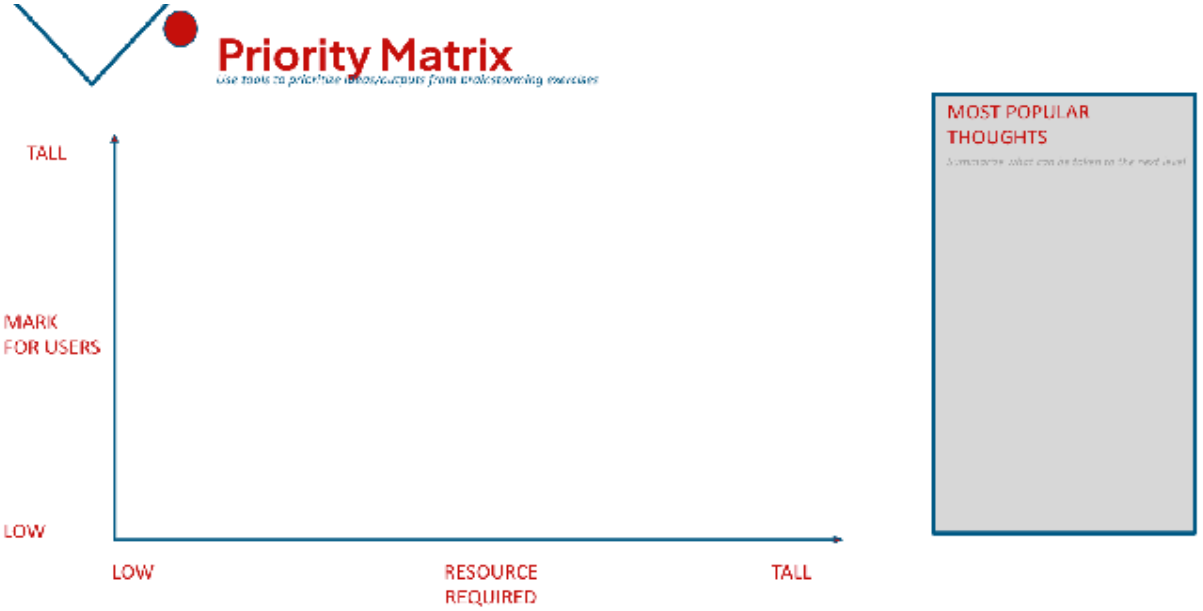
- Challenge Solution Ideas



On the Solution Ideas for Challenges canvas, participants are asked to answer the following questions:

- Challenge: Add a description of the policy challenge you want to address.
- Design Criteria: What relevant design criteria are you using for drawing?
- Potential Ideas for Solution: Please exchange opinions with the working group. Pour out ideas for solutions that can address the challenge. Finally, try to group similar ideas. Are there common characteristics among the ideas on the board?
- Idea 1, Idea 2, Idea 3: Write down the top three ideas for further discussion.

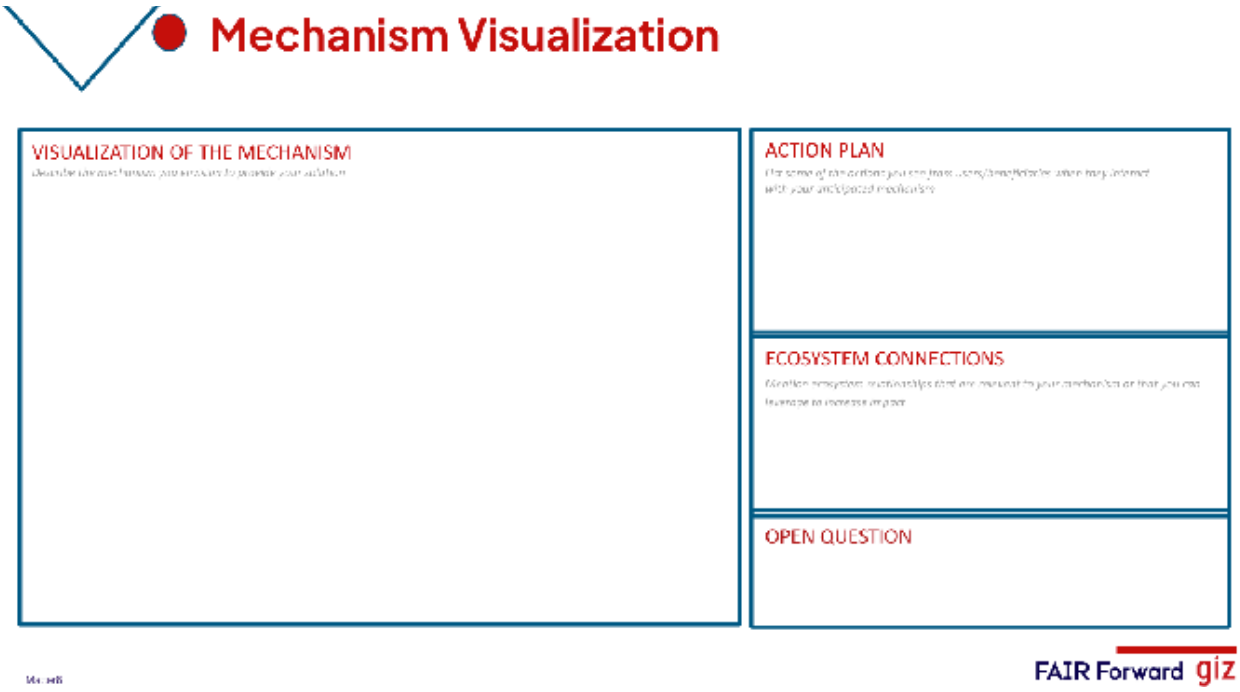
- **Priority Matrix**



On the Priority Matrix canvas, participants are asked to prioritize the ideas or outputs that have been obtained from filling out the Solution Ideas for Challenges canvas. The method used is discussion, debating the pros and cons of implementing the ideas.

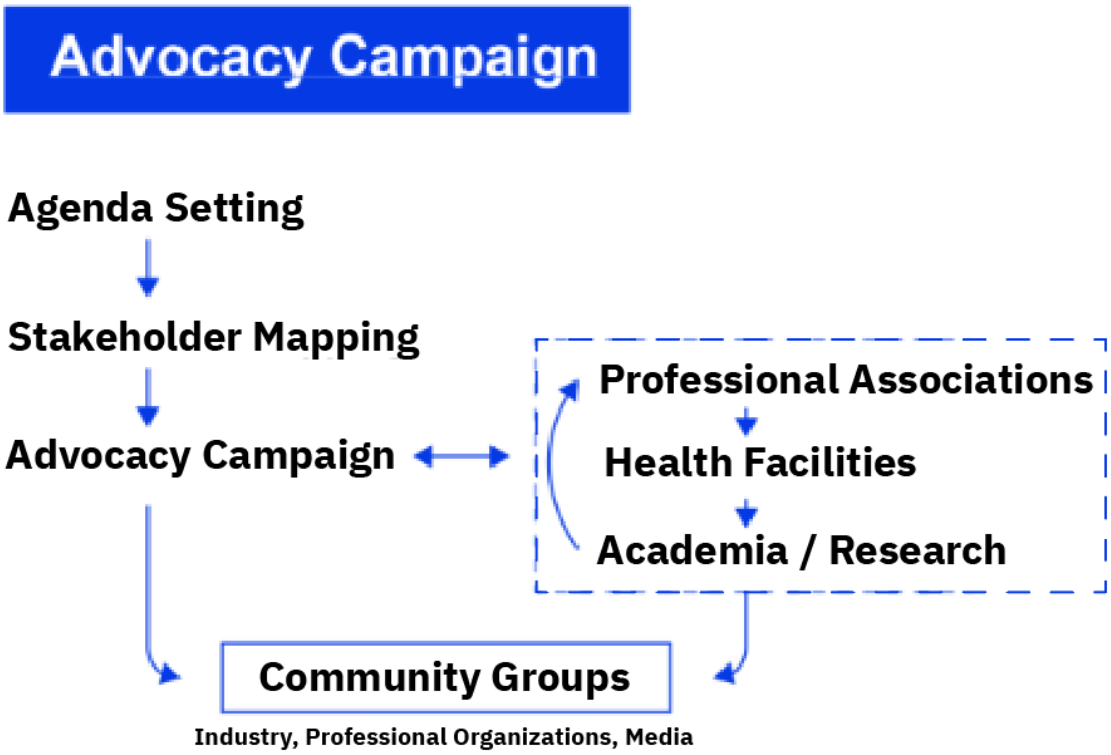
  - Most Popular Thoughts: Summarize what can be taken to the next level.

- **Mechanism Visualization**



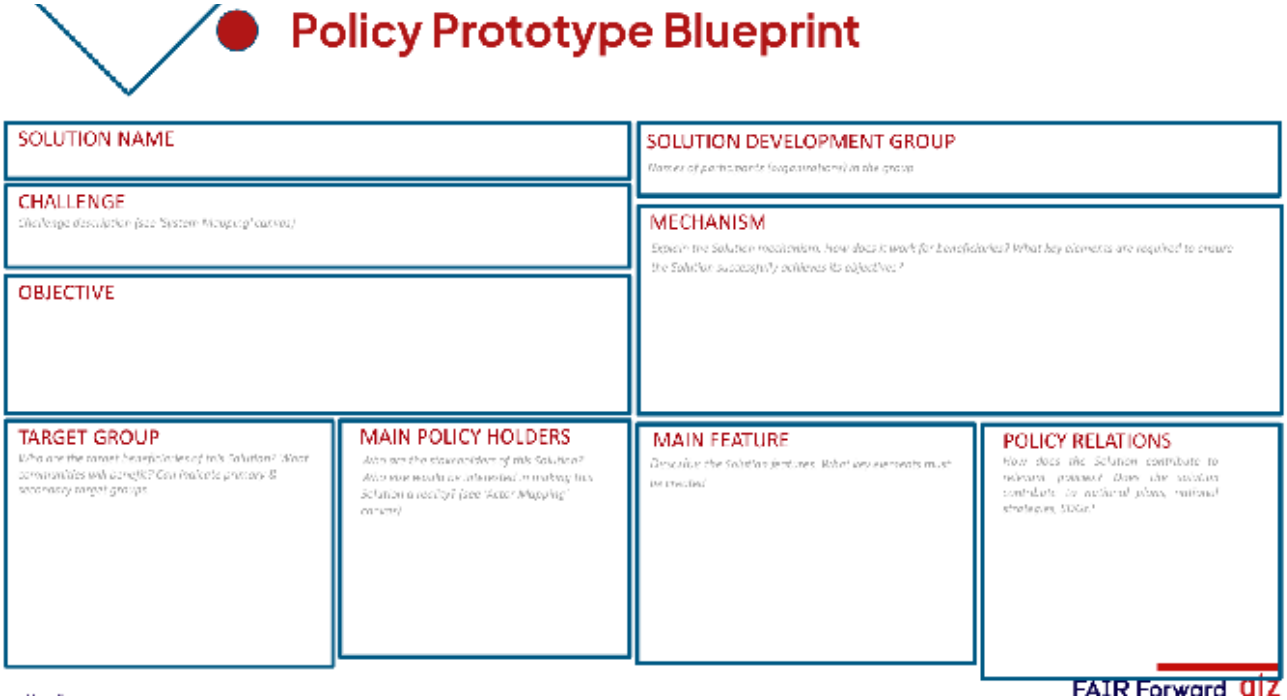
On the Mechanism Visualization canvas, participants are asked to fill in several columns. The instructions for filling are as follows:

- Visualization of the Mechanism: Illustrate the mechanism you envision to provide your solution. For example, an idea to develop a solution in the health sector related to AI can be approached in three ways: Advocacy Campaign, Agenda Setting, and Public-Private Dialogue. From these three potential solutions, it was determined through discussion that the highest value (top priority) is the Advocacy Campaign. Therefore, the mechanism visualization can be made as follows:



- Action Plan: List some actions you anticipate from users/beneficiaries when they interact with the mechanism you envision.
- Ecosystem Connections: Mention the relevant ecosystem relationships with your mechanism or those you can leverage to enhance impact.
- Open Questions: Write down questions that arise from open discussions while discussing this mechanism visualization with the working group.

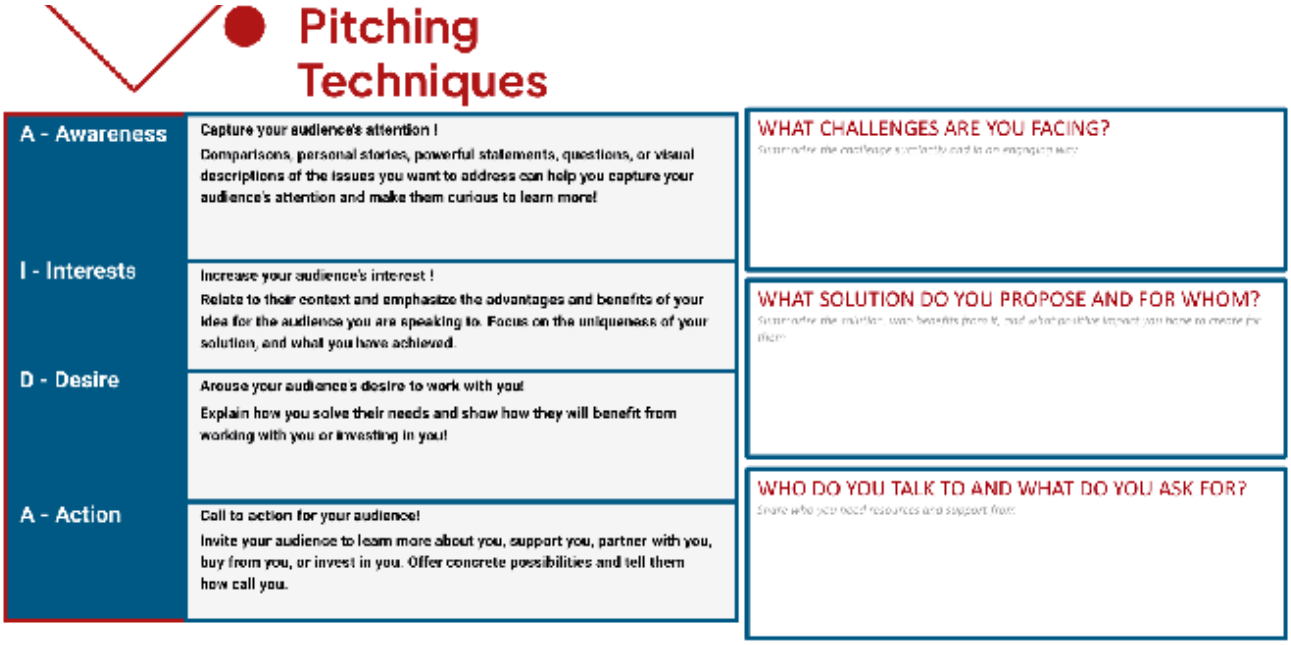
- **Policy Prototype Blueprint**



On this Policy Prototype Blueprint canvas, participants are asked to determine the final outcomes of the co-creation session, which can later be presented in a pitching session before judges and other groups.

- Solution Name: Write the name of the proposed solution.
- Solution Development Group: Names of participants (organizations) in the group.
- Challenge: Description of the challenge (see the 'System Mapping' canvas).
- Objective: Write the objective of the presented solution.
- Mechanism: Explain the mechanism of the solution. How does it work for the beneficiaries? What key elements are needed to ensure the solution successfully achieves its objectives?
- Target Group: Who are the target beneficiaries of this solution? Which communities will benefit? Can indicate primary & secondary target groups.
- Main Policy Holders: Who are the stakeholders of this solution? Who else would be interested in realizing this solution? (see the 'Actor Mapping' canvas).
- Main Feature: Describe the features of the solution. What key elements need to be created?
- Policy Relation: How does the solution contribute to relevant policies? Does the solution contribute to national plans, strategic national agendas, SDGs?

- **Pitching Techniques**



On this Pitching Techniques canvas, participants are asked to summarize the solution that will be presented in the Pitching session. As a guide, participants can summarize it in the following points:

- What Challenge are You Facing?
  Summarize the challenge briefly and in an engaging manner.
- What Solution Do You Propose and For Whom?
  Summarize the solution, who benefits from it, and what positive impact you expect to create for them.
- Who Do You Talk To and What Do You Ask For?
  Share who you need resources and support from.

Solution Policy Prototyping Workshops Results - Co-creation Prototype Policy Session:

Discussion and Presentation Group 1


Discussion and Presentation Group 2


Discussion and Presentation Group 3

a) Blueprint Presentation Group 1: E-Gov

The solution proposed by Group 1 in their Blueprint Presentation is “1DN,” which relates to improving the quality of standardized data in public services. The challenge faced is the presence of data silos or inadequate data quality. With this solution, it is hoped to create a proactive public service platform capable of providing data needed by the public proactively in various situations. Collaboration with the community and academia is the key, while the main features of this solution include standardized data formats, equal data needs distribution, uniform data usage patterns, and integration of public service data. The solution mechanism consists of 3 stages involving policy, ecosystem, and program alignment mechanisms to enhance the capacity of central and regional governments. However, the challenge of maintaining updated data and connecting services remains a primary concern that needs to be addressed for the success of this solution.

b) Session for Blueprints Presentations Group 2: Finance

The solution proposed by Group 2 in their Blueprint Presentation is “Uang Kaget! Punya uang jangan kaget” (“Surprised by Money! Don’t be surprised to have money”). This solution aims to improve financial literacy among the public, specifically digital financial literacy, with a focus on high school students as the primary target. The goal of this solution is for the public to be smarter in managing their finances. This solution involves an ecosystem from the education and finance sectors, including regulators such as the Financial Services Authority (OJK) and the Ministry of Finance. The main features of this solution are the

customization of materials based on education levels and using a game-based approach to facilitate understanding. AI will also be used in this solution to provide better contributions to the target group. During the feedback stage, recommendations include finding relevant examples for the target group, providing training to the Indonesian Teachers Association (PGRI), and explaining in more detail how AI will be integrated into the solution, both in student assignments and assistance for teachers.

c) Blueprints Presentations Group 3: Education and Research

Group 3 in their Blueprint Presentation proposed a solution called SALIM (Interactive and Enjoyable AI Learning System) with a focus on building the next generation of the nation through the concept of "leveling up" Indonesian students using AI. They introduced the concept of gamification in learning to make learning activities more enjoyable. The goal is to create an enjoyable ecosystem for teachers and students and to revolutionize learning motivation from merely achieving grades or scores to fulfilling curiosity. This solution encourages students to learn by satisfying their curiosity, using AI for personalized learning and equitable education.

The main features of this solution include the visualization of student and teacher ability statistics, recommendations for materials and learning styles, and personalized learning software. The main challenges faced are the need for comprehensive data regulation and integration with the existing curriculum. This solution is expected to support the achievement of SDG goals related to reducing inequality and improving the quality of education. In the feedback, this solution was considered attractive because it could provide visualizations and recommendations that could boost teachers' confidence in implementing the curriculum and facilitate teaching, especially for teachers with many students.

Learning Materials

Facilitators: Ivy Londa & Patota Tambunan (harapura impact), Debby Kristin & Maria Hattya Karienova (EngageMedia)

Co-creation Policy Prototype Session

- PDF Material (Indonesian): AI Policymakers Training - Policy Prototyping Lab
- Template Toolkit PDF (Indonesian): Kanvas Toolkit untuk Membuat Prototipe Kebijakan
- Template Toolkit PDF (English): Policy Prototyping Toolkit Canvas

All learning materials for Policy Prototyping Lab can accessed via https://link.harapura.com/FF-AI-policyprototypinglab

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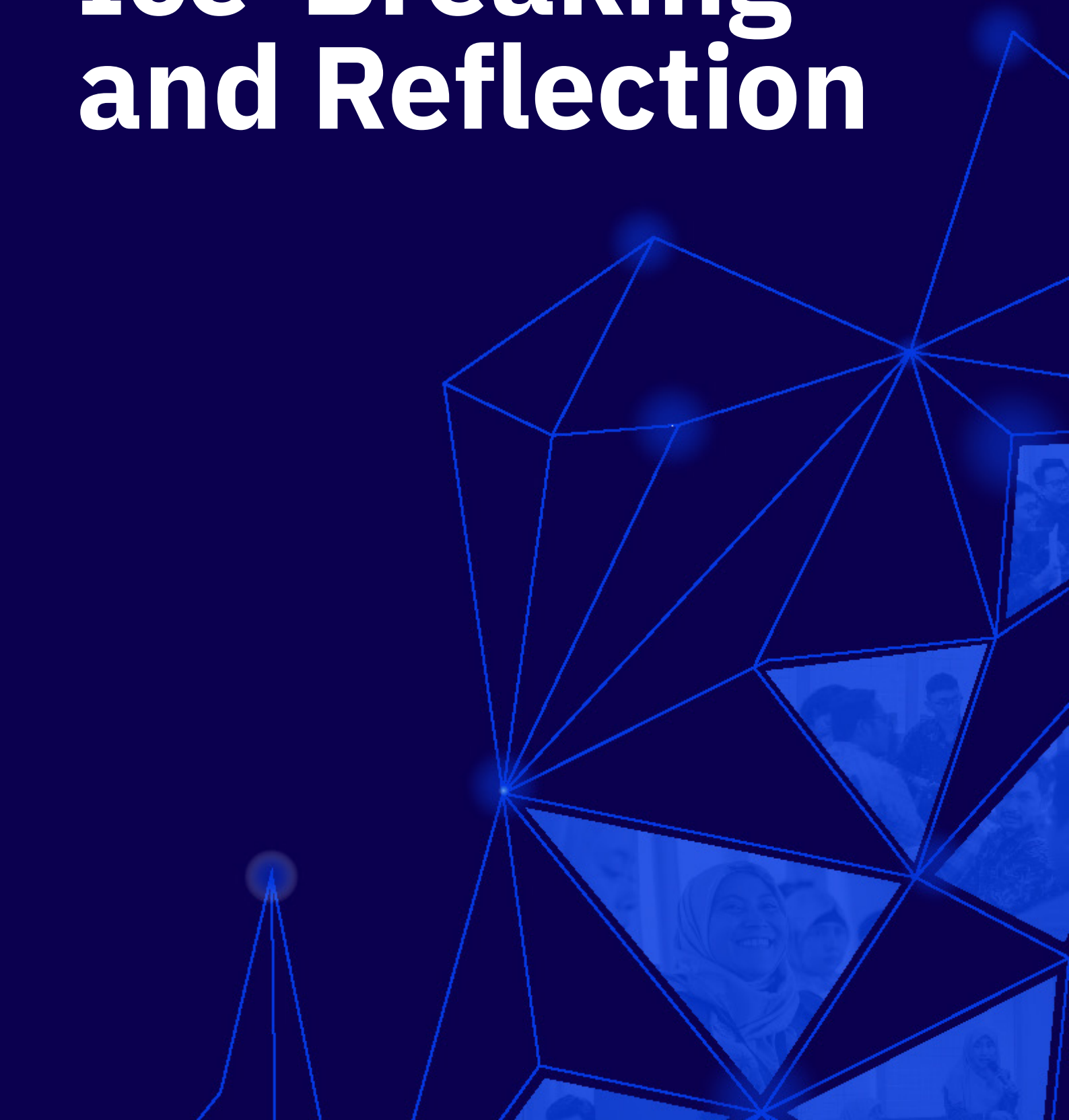
Republic of Indonesia

Ice-Breaking and Reflection



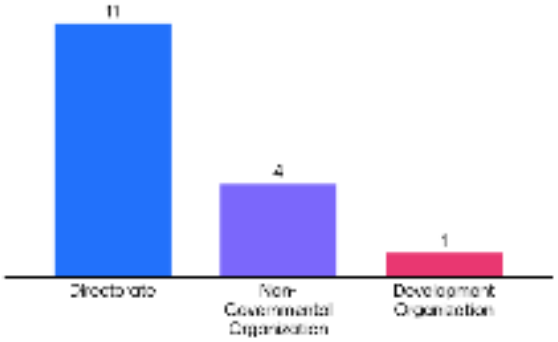
Ice-Breaking and Reflection

Ice-breaking is a crucial element in every training session as it helps create a relaxed and inclusive atmosphere among participants. Through fun and interactive activities, ice-breaking allows participants to get to know each other better, thereby strengthening a sense of togetherness and collaboration. This activity not only reduces initial awkwardness but also increases participants' engagement and motivation throughout the training session. At the end of the session, it is important to hold a reflection session aimed at synthesizing and crystallizing the learning that has been acquired throughout the day. This reflection session is also important to understand that learning is not only related to the information provided but also how the learning process can be applied in real-world contexts. By starting with ice-breaking and closing with reflection, we can ensure that participants feel comfortable and ready to actively participate, which can enhance the effectiveness of the training itself.

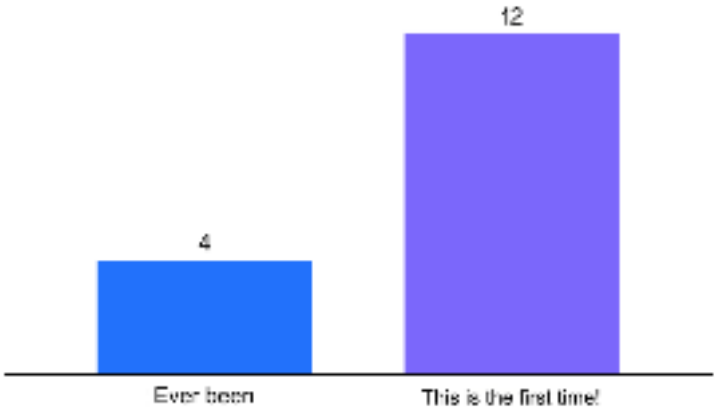
Ice Breaking

- Day 1 Ice Breaking

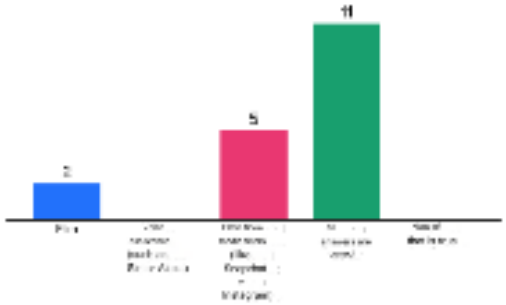
Which best describes your institution?



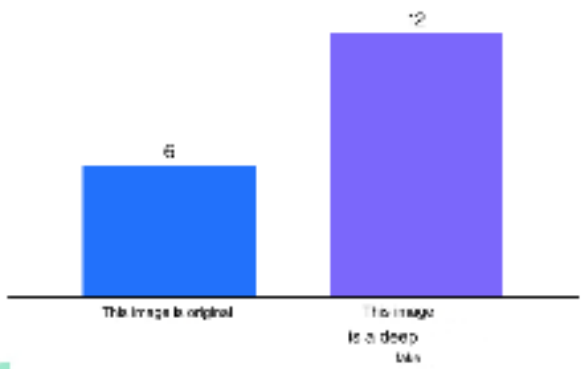
Is this your first AI training?



Have you ever heard of deep fakes? Where do we usually find deep fakes?



Can you find any examples of deep fakes? Guess whether this picture is original or not. Check the consistency of the image around the eyes.



What do you expect from this training?

15 responses

You can find out which one is real and which one is fake	Understand more about AI	Increased understanding regarding AI technology
Understand AI implementation to support work	Solutions to problems in government and society	Insight into AI and its ecosystem.
Want to increase your knowledge about AI	further increase understanding of AI ethics	Can understand AI and use it for developments in the world of journalism
Understand and can apply it in the workplace/at least become new knowledge to share	utilization of AI now and in the future	Want to know an understanding of AI's

- Day 2 Ice Breaking

One word that describes your enthusiasm for participating in training this morning.

13 responses

What food do you like most in Bandung?

21 responses

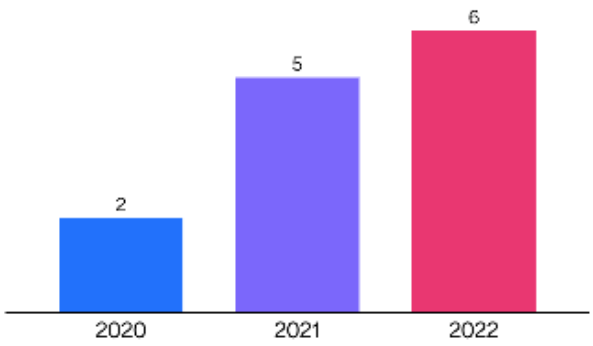
Batagor gravy	Siomay	Whipped noodles
Lontong curry	[illegible]	Grilled ribs
Cuanki Rahayu	Cangki Pusdai	Cendol Elizabeth
Siomay	Uncle Chen's noodles!	Jando satay
Food in Cisangkuy	[illegible]	Izakaya

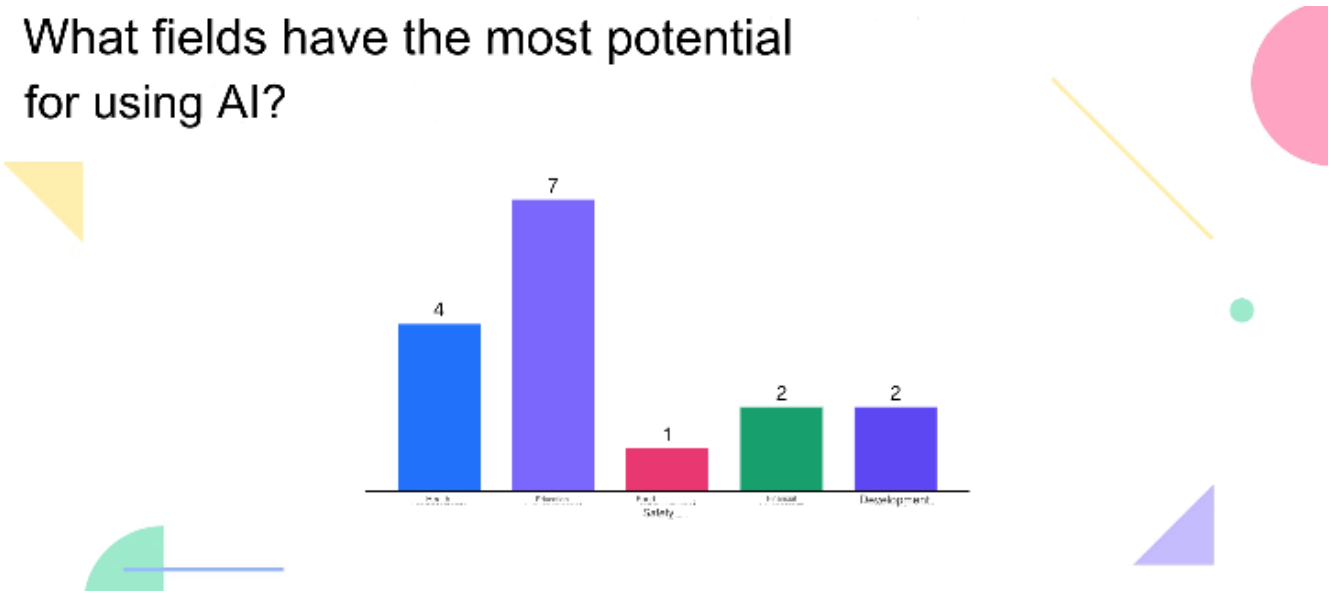
What applications do you use most often besides WhatsApp and Instagram?

12 responses

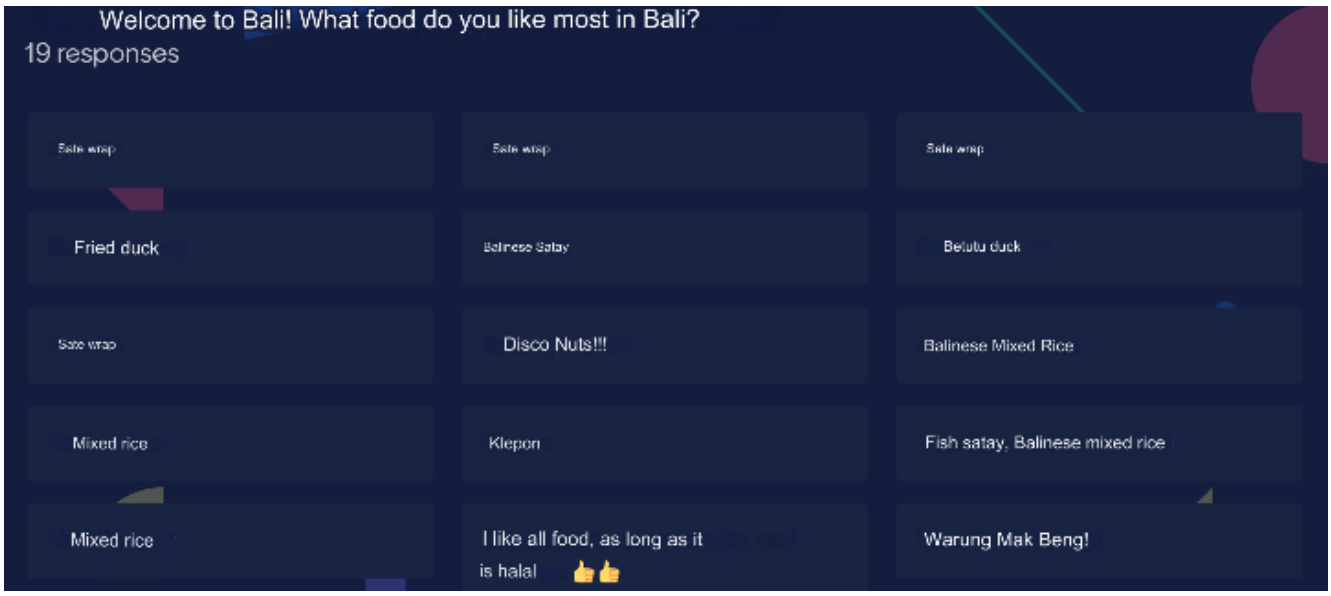
Digiteam, telegram	Ms. Word	Shopee
Telegram	Tiktok	Gojek
Shopee	X	grab
YouTube	Tik Tok, X, Tokped, Seconds,	chrome

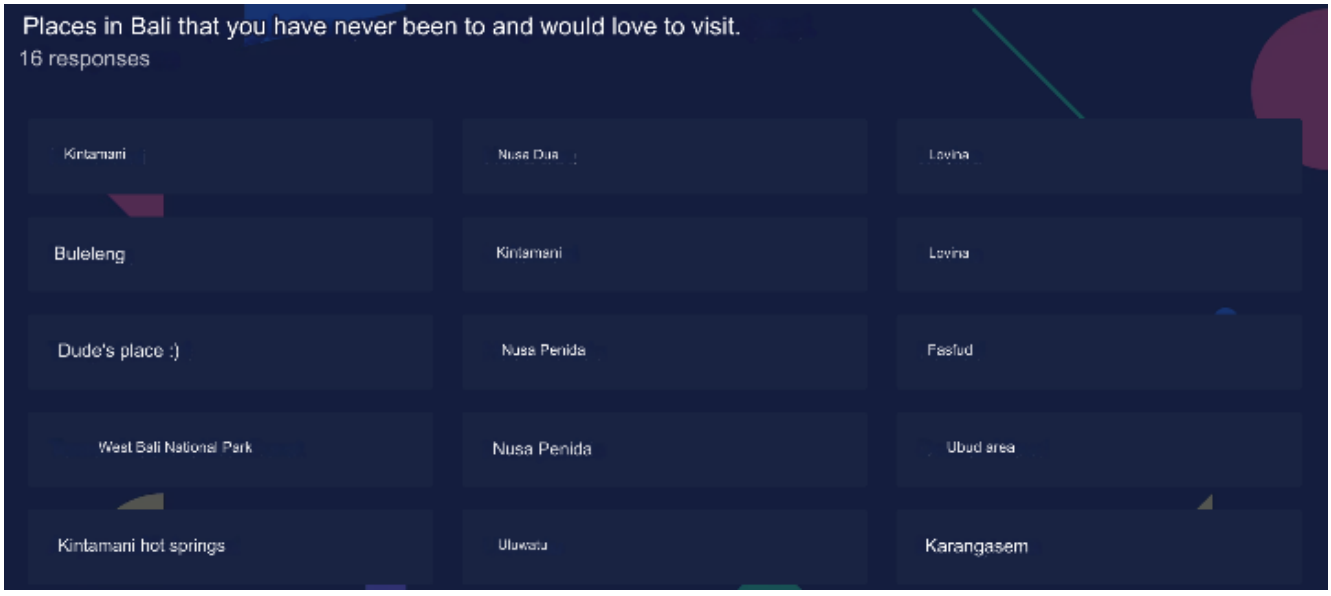
When will ChatGPT be available for public use?





Closing Event Bali - Ice breaking

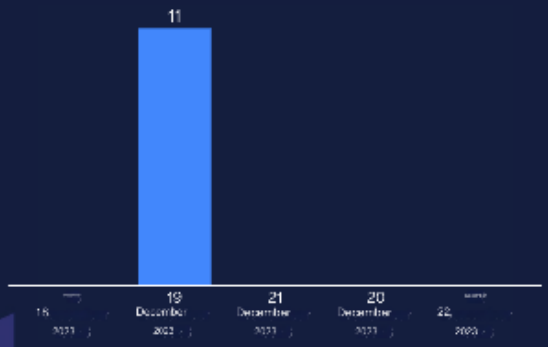




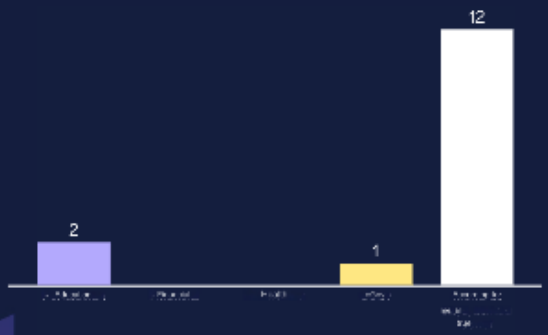
One word that describes your enthusiasm in following the closing agenda of this AI Policymakers Training.

14 responses

When will the Circular Letter of the Minister of Communication and Information Technology Number 9 of 2023 concerning the Ethics of Artificial Intelligence be officially signed?

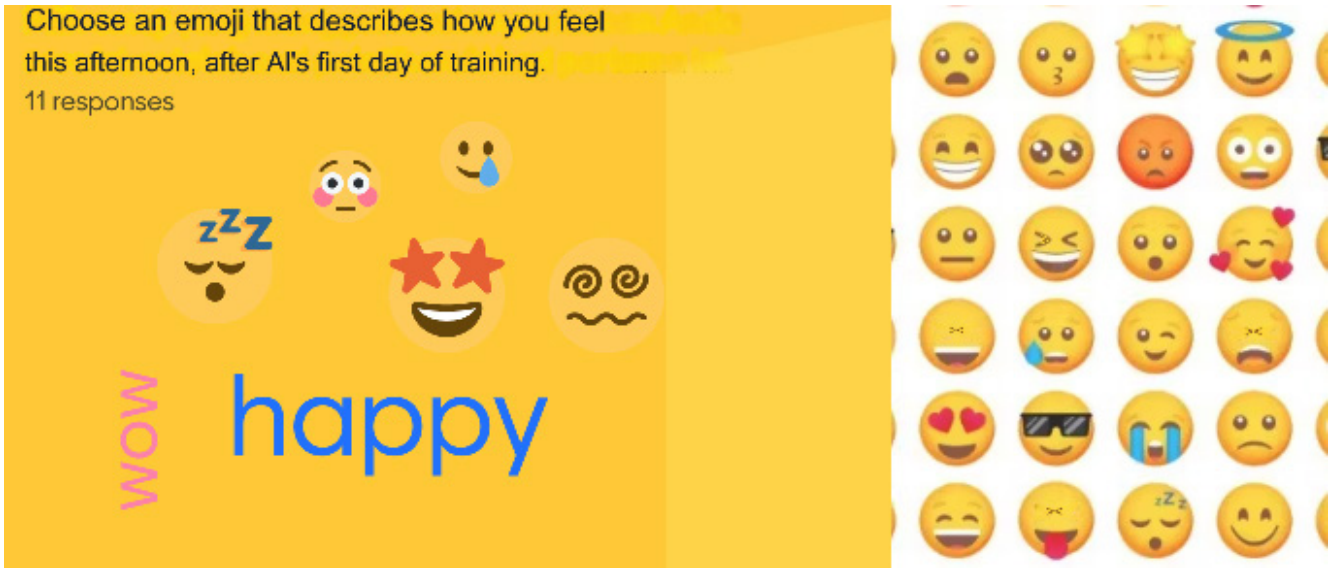


After attending this training, what field do you think has the most potential for using AI?

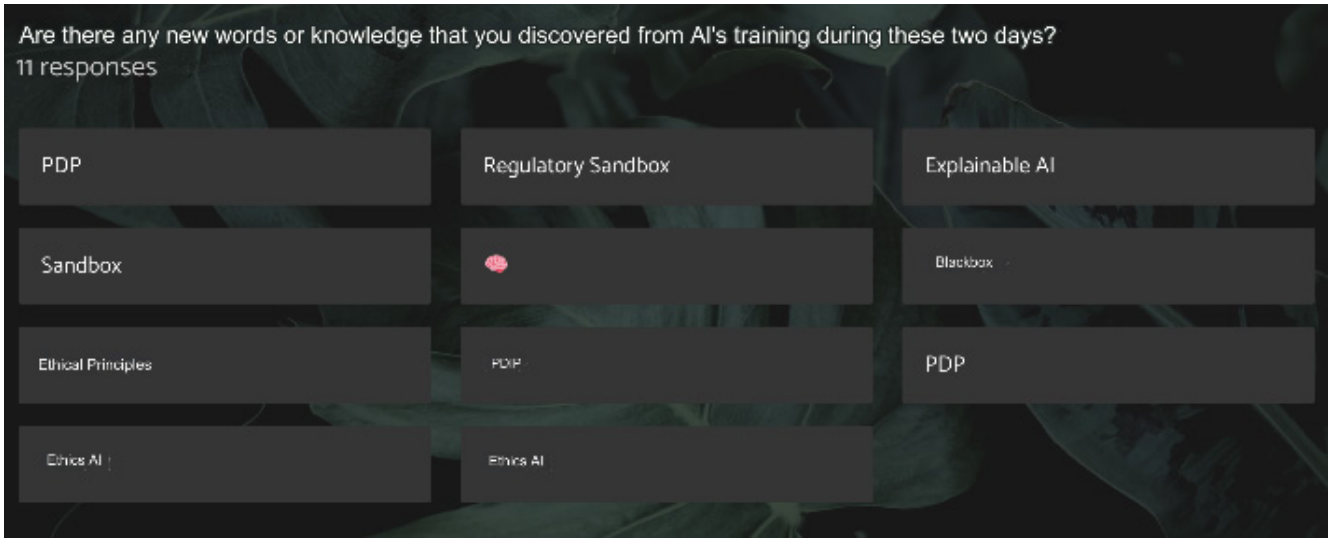


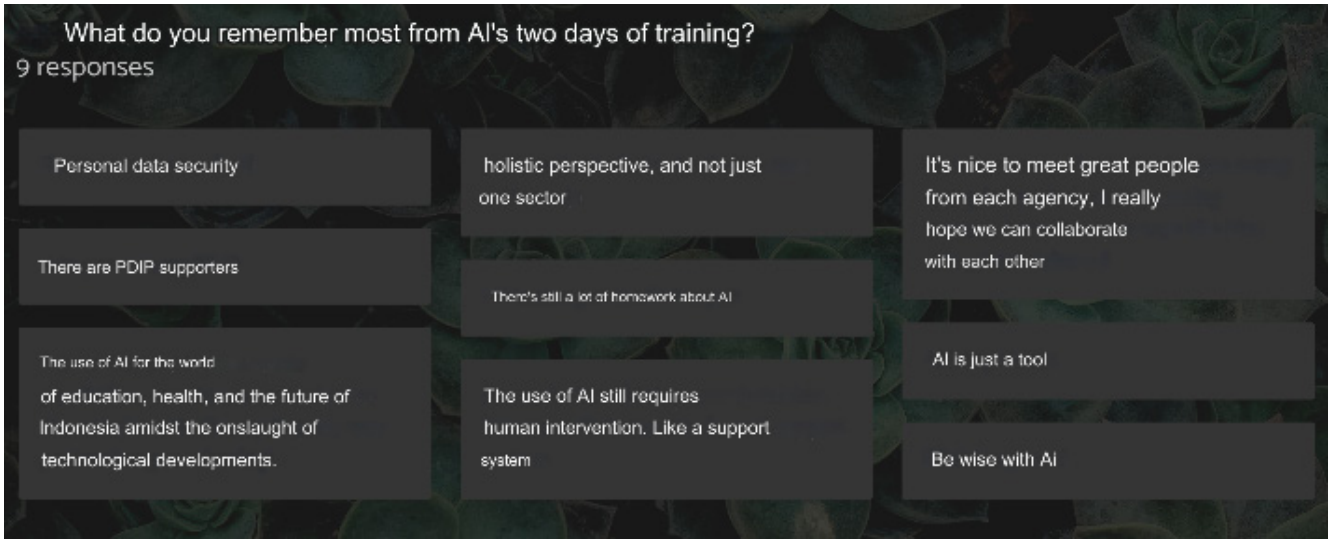
Reflection

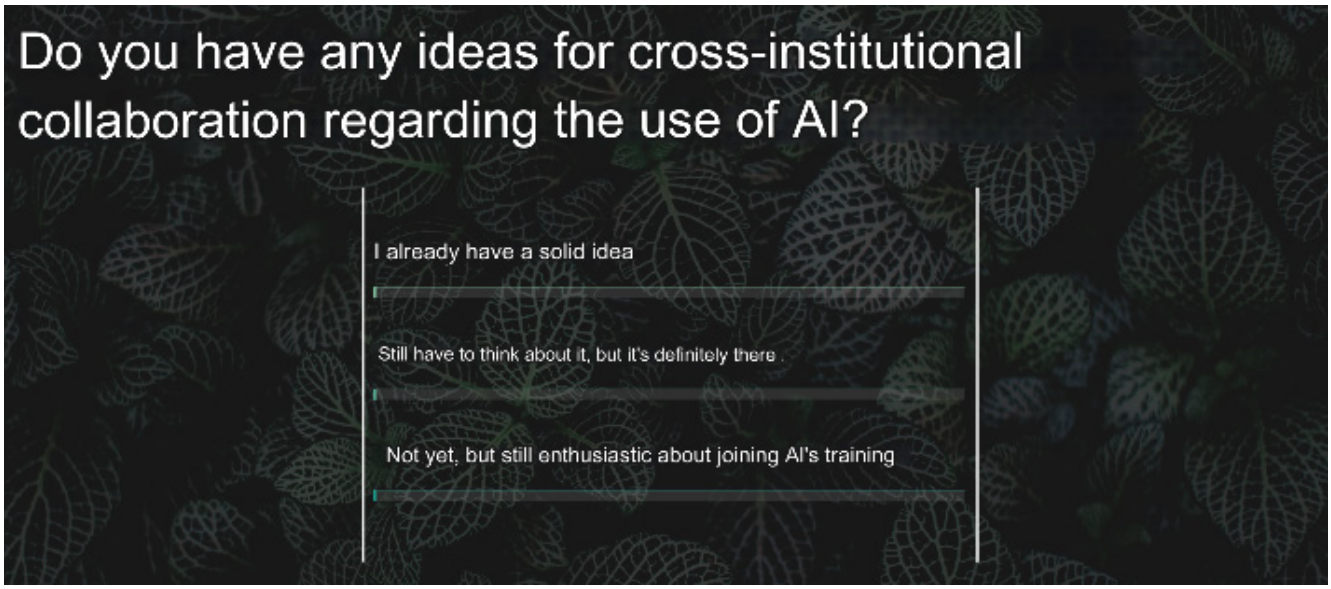
- Day 1 Reflection

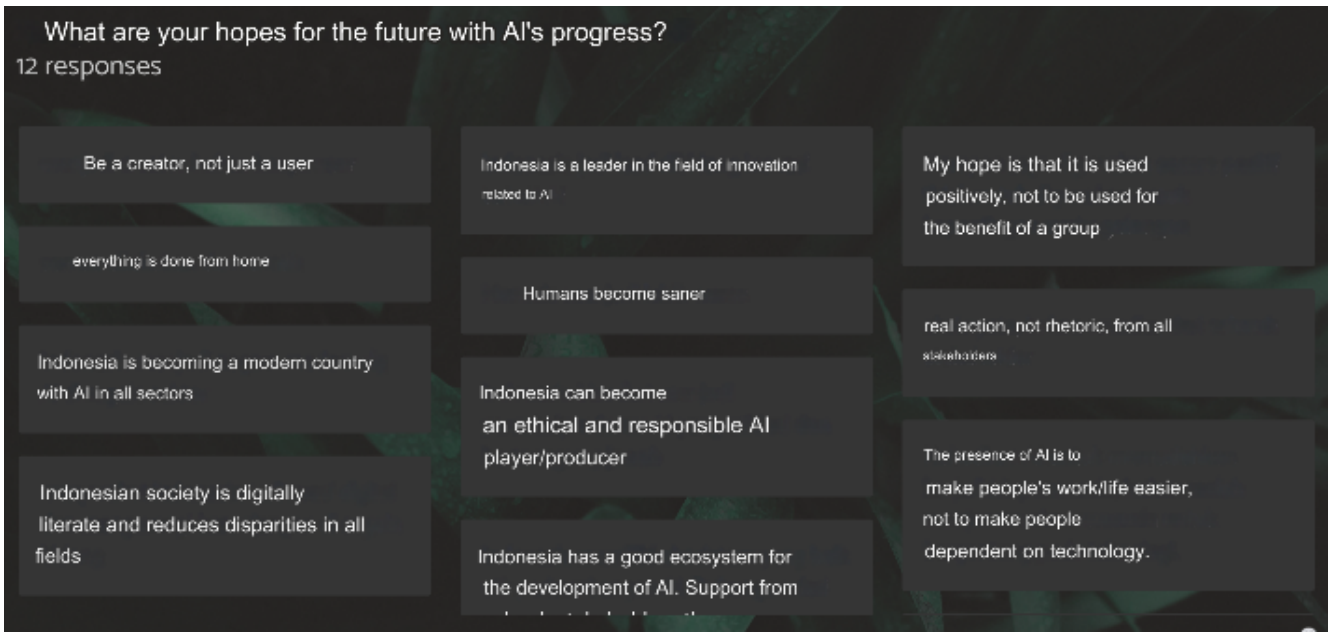


- Day 2 Reflection

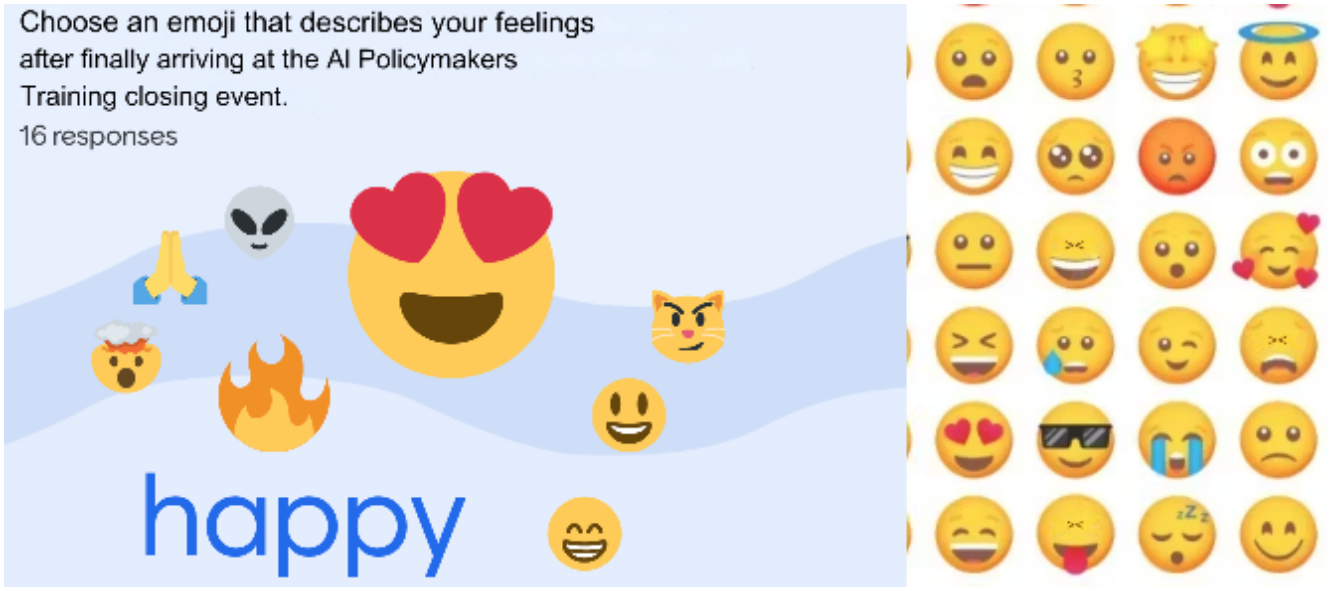


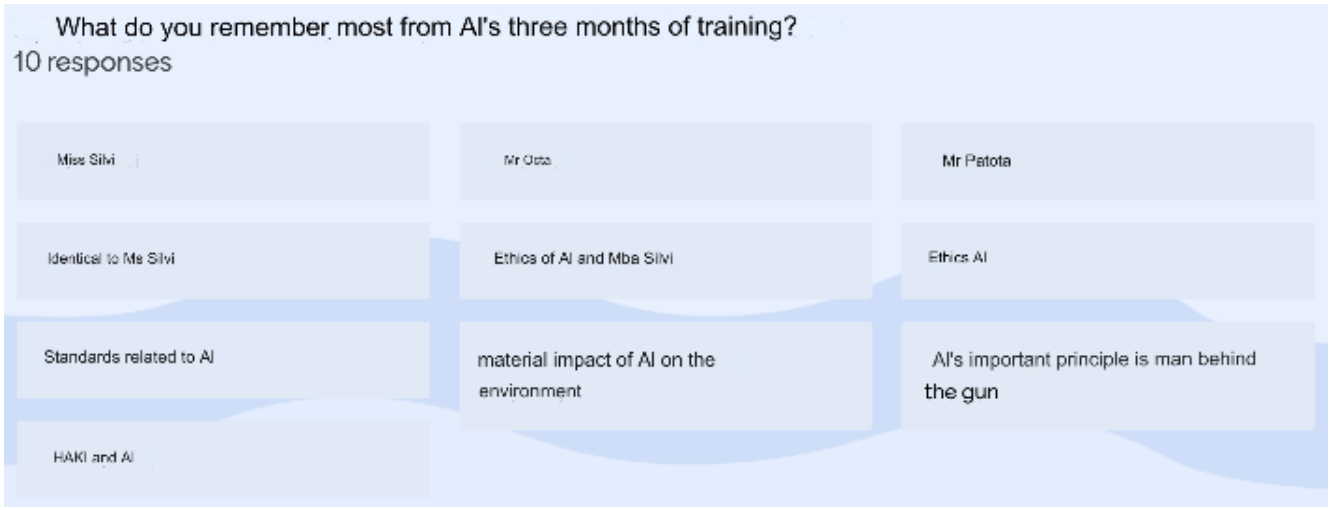

What do you remember most from AI's two days of training?
9 responses
Personal data security
holistic perspective, and not just one sector
It's nice to meet great people from each agency, I really hope we can collaborate with each other
There are PDIP supporters
There's still a lot of homework about AI
AI is just a tool
The use of AI for the world of education, health, and the future of Indonesia amidst the onslaught of technological developments.
The use of AI still requires human intervention. Like a support system
Be wise with AI

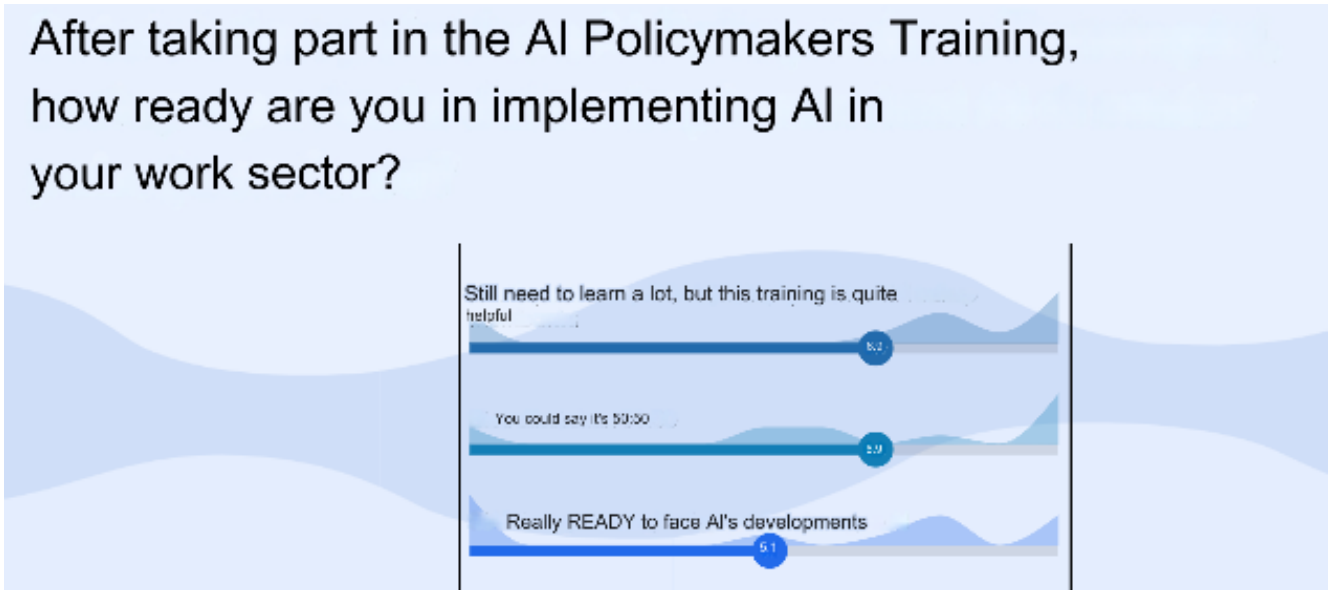

Do you have any ideas for cross-institutional collaboration regarding the use of AI?
I already have a solid idea
Still have to think about it, but it's definitely there
Not yet, but still enthusiastic about joining AI's training

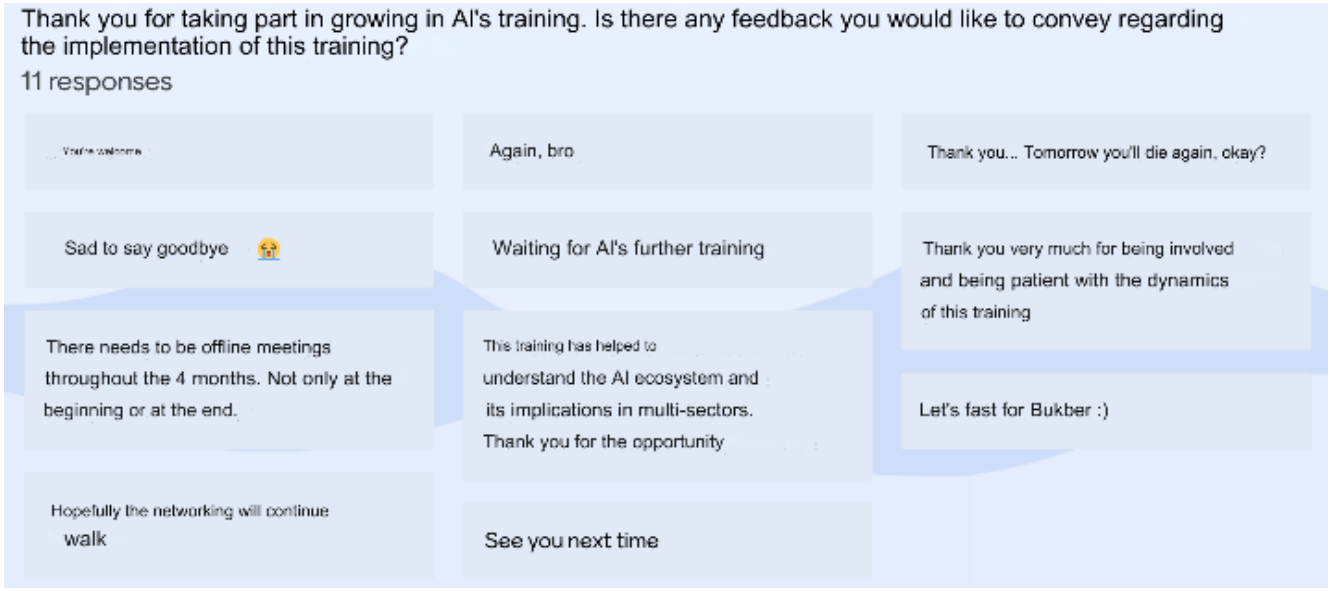

What are your hopes for the future with AI's progress?
12 responses
Be a creator, not just a user
Indonesia is a leader in the field of innovation related to AI
My hope is that it is used positively, not to be used for the benefit of a group
everything is done from home
Humans become saner
real action, not rhetoric, from all stakeholders
Indonesia is becoming a modern country with AI in all sectors
Indonesia can become an ethical and responsible AI player/producer
The presence of AI is to make people's work/life easier, not to make people dependent on technology.
Indonesian society is digitally literate and reduces disparities in all fields
Indonesia has a good ecosystem for the development of AI. Support from

- Closing Event Bali - Reflection








Thank you for taking part in growing in AI's training. Is there any feedback you would like to convey regarding the implementation of this training?
11 responses
Again, bro
Thank you... Tomorrow you'll die again, okay?
Sad to say goodbye
Waiting for AI's further training
Thank you very much for being involved and being patient with the dynamics of this training
There needs to be offline meetings throughout the 4 months. Not only at the beginning or at the end.
This training has helped to understand the AI ecosystem and its implications in multi-sectors. Thank you for the opportunity
Let's fast for Bukber :)
Hopefully the networking will continue
walk
See you next time

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FAIR Forward

in cooperation with:

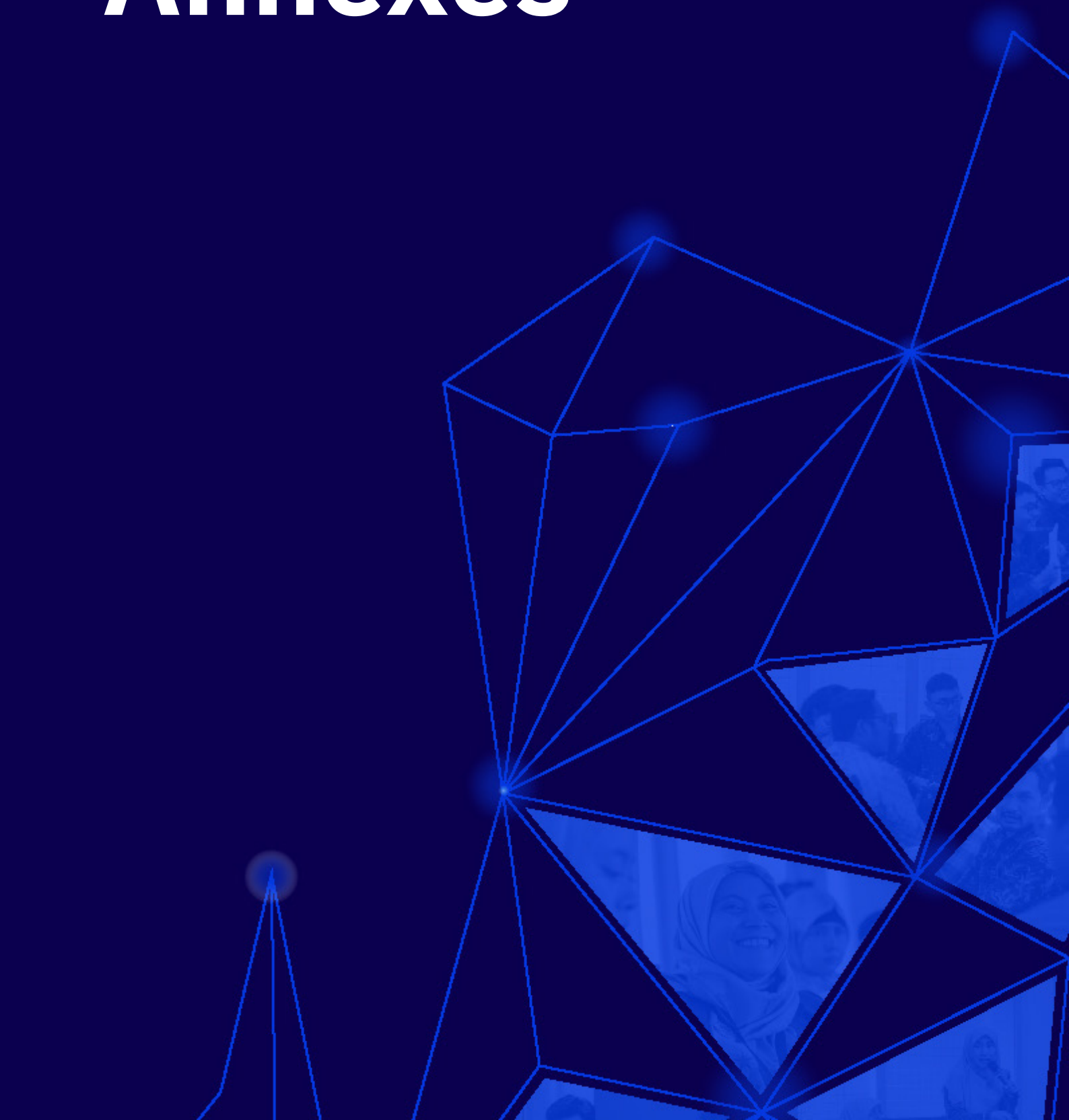
kerja sama jerman
DEUTSCHE ZUSAMMENARBEIT

implemented by:

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Ministry of National Development Planning/Bappenas
Republic of Indonesia

Annexes



Annex 1: Example of the Training Agenda

An example of class distribution in the Artificial Intelligence (AI) Training for Policymakers over a period of 15 weeks is as shown in the table below. This schedule can be adjusted as needed.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1				Opening of the Program	Module 3: Government for Artificial Intelligence (AI) Ethical Development
				Module 1: Introduction About Artificial Intelligence (AI)	Module 4: Practical Use of Artificial Intelligence (AI)
				Group Work in the Class: Identification of AI-based Solutions	
				Module 2: Technology Policy Focused on Artificial Intelligence (AI)	Module 5: Institution Readiness for Artificial Intelligence (AI) Implementation
				Module 3: Government for Artificial Intelligence (AI) Ethical Development	
Week 6		Online: In-depth Study Material: Discussion of Module 2 - Equitable Policy Role Discussion			
Week 8					In-depth Study Material 3: Discussion of Module 3: Gender in Artificial Intelligence and Small Group Discussions with Community Group Representation

Week 10	Online: In-depth Study Material 2: A Policy Comparative Study Focusing on the Use of Artificial Intelligence (AI) in Asia				
Week 12	Online: In-depth Study Material: Institutional Readiness Analysis for Artificial Intelligence Technology Implementation / Stakeholder Policymakers Mapping				
Week 15	Closing Ceremony + Policy Prototyping Lab	Field Visits			

Opening of the Artificial Intelligence (AI) Training for Policymakers
Time: 08.30-10.00 WIB

Date/Time	Activity	Duration
Thursday, 30 November 2023 **07.30 - 16.30 (8 hours)**	**Program Opening**	
	Participant Preparation and Registration	60 Minutes
	Opening Ceremony	8 Minutes
	Welcome: Ministry of National Development Planning/BAPPENAS	8 Minutes
	Welcome: GIZ Indonesia (FAIR Forward)	8 Minutes
	Panel Discussion	30 Minutes
	Photo Session	6 Minutes
	QnA Media	30 Minutes
	Coffee Break	**30 Minutes**
	Module 1: Introduction About Artificial Intelligence (AI)	
	Greetings from harapura impact and Aptaworks (local partners implementation)	5 Minutes
	Icebreaking: Participant Introduction and Pre-Survey	10 Minutes
	Sub-module 1B: Artificial Intelligence (AI) and Development Agenda	45 Minutes
	Sub-module 1A: What Is Artificial Intelligence (AI)?	45 Minutes
	ISHOMA	**60 Minutes**
	Group Work Introduction: Identification AI-Based Solution	15 Minutes
	Small Discussion: Potential Usage of AI	15 Minutes

	Plenary: Integration and Feedback Results Discussion	15 Minutes
	Module 2: Policy Technology Focused on AI	
	Sub-module 2B: AI and Sectoral Approaches	45 Minutes
	Coffee Break	**30 Minutes**
	Module 3: Government for Artificial Intelligence (AI) Ethical Development	
	Sub-module 3A: Data Management and Sharing	60 Minutes
	Reflection First Day	15 Minutes
Friday, 1 December 2023 **08.00 - 17.30 (9.5 hours)**	Opening and Intention Second Day	15 Minutes
	Additional Sub-module: Socialization of the Personal Data Protection Law	30 Minutes
	Module 4: Practical Use of AI	
	Sub-module 4A: The Use of Artificial Intelligence (AI) for Sustainable Development	45 Minutes
	Coffee Break	**30 Minutes**
	Additional Sub-module: Artificial Intelligence (AI) Everywhere: Indonesia's Today and Path Forward	30 Minutes
	ISHOMA	**2 Hours**
	Sub-module 3B: AI, Ethics, and Human Rights	45 Minutes
	Sub-module 4B: Social Impact Assessment (Small Group Discussion)	45 Minutes
	Introduction Group Work 3B: Small Group Studies Case Discussion	45 Minutes
	Sub-module 5A: Readiness for AI Implementation	45 Minutes
	Coffee Break	**15 Minutes**
	Module 5: Institution Readiness for AI Implementation	
	Sub-module 5B: Building a Responsible AI Ecosystem	45 Minutes
	QnA and Online Activities	15 Minutes
	Reflection Second Day	15 Minutes

Annex 2: Example of the Closing Event Agenda

Closing of the Artificial Intelligence (AI) Training for Policymakers
Time: 08.00-17.30 WITA

Date/Time	Activity	Duration
Senin, 4 Maret 2024 08.00 - 17.30 (9,5 jam)	**Closing ceremony**	
	Welcome: Ministry of National Development Planning/BAPPENAS	8 Minutes
	Welcome: GIZ Indonesia (FAIR Forward)	8 Minutes
	Panel Discussion	**45** Minutes
	Q&A Panel Discussion	15 Minutes
	Photo Session - Closing Panel	5 Minutes
	Graduation and Certificate Dissemination	10 Minutes
	Photo Session	5 Minutes
	Coffee Break	**15** Minutes
	Media Q&A - Closing	15 Minutes
	Policy Showcase	
	Presentation from Policymakers	45 Minutes
	Break Lunch & Prayer	**45** Minutes
	Presentation: AI for Disability & Mini Workshop: AI and Intellectual Property Right (IPR)	
	Ice Breaking	5 Minutes
	Presentation: AI for Disability	15 Minutes
	Presentation: Artificial Intelligence and Intellectual Property Right	30 Minutes
	Session QnA	15 Minutes
	Policy Prototyping Lab	
	Opening	10 Minutes
	Worksheet: System Mapping	15 Minutes
	Worksheet: Understanding Target Groups	15 Minutes
	Worksheet: Design Criteria	15 Minutes
	Crazy 8	10 Minutes
	Worksheet: Challenge Solution Ideas	20 Minutes
	Coffee Break	**15** Minutes
	FILL OUT THE SURVEY AND TAKING CERTIFICATE IN REGISTRATION DESK	
	Matrix Priority, Visualization Mechanism, Blueprints	45 Minutes
	Presentation Solution	60 Minutes
	Reflection and Closing	30 Minutes
Tuesday, March 5, 2024 08.00 - 16.30 (9.5 hours)	**Field Visit: Desa Bakas, Klungkung**	
	Registration for the participants	60 Minutes
	Travel time to Desa Bakas, Klungkung	60 Minutes
	Bakas Agriculture Trekking	120 Minutes
	Break Lunch & Prayer	**90** Minutes
	Tour around the villages	60 Minutes
	Workshop Natural Language Processing (NLP) by Prosa.ai	120 Minutes
	Travel time to Sanur/Denpasar	60 Minutes

Annex 3: Survey Example

- **Pre-Program Survey**

Before implementation program, recommended for spread pre-program questionnaire to participant which can seen through this table:

Questionnaire	Answer
Write down your email	
Write down name complete along with title	
Write down position work	
Write down name your institution	
Write down number WhatsApp	
Assess your understanding of AI and its general applications	☐ Don't Understand At All ☐ Don't Understand ☐ Somewhat Understand ☐ Understand ☐ Really Understand
Are you personally integrating usage of AI in your work?	☐ Never ☐ Occasionally ☐ Once, But not often ☐ Quite often ☐ Always use AI
Does your institution integrate the usage of AI?	☐ Never ☐ Occasionally ☐ Once, But not often ☐ Quite often ☐ Always use AI
Data, technology, or related AI projects that you are working on? (present and future project)?	
Have you once followed training related to AI previously?	☐ Never ☐ Once, But not often
What method of Study do you like? (Example: lecture, seminar, discussion group, interactive exercise, etc)	

Would you like to make a short presentation on all or part of the learning material in one of the sessions later?	☐ Yes ☐ No
For assignments outside of class, do you prefer to do them online, in group or independent?	☐ Independent ☐ Group ☐ Both
What do you expect from this program (AI strategy, case studies for center innovation, AI prototype/solution, etc)?	
Do you understand ethical AI?	☐ Don't Understand At All ☐ Don't Understand ☐ Understand Enough ☐ Understand ☐ Really Understand
What three priority developments are important for the agency or your region?	
What sector/application are you interested in?	☐ Health ☐ Security ☐ Identity and biometrics ☐ Financial Technology/Fintech ☐ Elections/regional elections, democracy & media ☐ Agricultural and resilience food

At the moment, what information would you most like to gain more about or skills related to manufacturing policy AI?

- ☐ Relevance AI with national priority development or SDGs
- ☐ How policy AIrelated with policy technology and innovation which more broad use cases and project design in specific sectors (e.g. health, safety, agriculture)
- ☐ Consideration of AI policies in specific sectors System management and data protection
- ☐ AI Ethics and social impact evaluation
- ☐ Use AI by government and process internal or enhancement capacity (e.g. procurement/procurement)
- ☐ Possible ecosystem innovation, investment, and use AI national which more wide

- **Post-Program Survey**

After carrying out the training, it is recommended to distribute surveys to participants to determine the influence or impact that occurred after the training was held. Questionnaire can seen through table in lower this:

Question	Answer
Write your email	
Write your full name and title	
Write down your job title	
Write the name of your institution	
Write down your WhatsApp number	
Assess your understanding of AI and its applications in general after participating in the two-day FAIR Forward program	☐ Very low ☐ Low ☐ Average ☐ High ☐ Very High
Assess your understanding of responsible AI ethics after participating in this two-day FAIR Forward program	☐ Very low ☐ Low ☐ Average ☐ High ☐ Very High
Feedback of the Training	
As a whole, how satisfied are you with the training content so far?	☐ Very dissatisfied ☐ Dissatisfied ☐ Somewhat satisfied ☐ Satisfied ☐ Very Satisfied
How many relevant modules which you already learn with needs in your institution?	☐ Very dissatisfied ☐ Dissatisfied ☐ Somewhat satisfied ☐ Satisfied ☐ Very Satisfied

According to you, is this module enough to equip you to develop policy related AI?	☐ Yes ☐ No ☐ Doubtful
How do you evaluate quality from a facilitator or presenter training module ?	☐ Very dissatisfied ☐ Dissatisfied ☐ Somewhat satisfied ☐ Satisfied ☐ Very Satisfied
How much are you experiencing problems or technical constraint moments, attending training and completing assignments?	☐ Never ☐ Occasionally ☐ Very often
If ever or there is occasionally, please give more details on the obstacles or what it should be changed	
What is the facilitator of sub-module 1A (What is AI? - [Write Name viewer, Name Organization]) have a good knowledge of the topic taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator of sub-module 1B (Artificial Intelligence and the Agenda Development - [Write Name of Presenter, Name of Organization]) have knowledge which Good about the topic which is taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator of sub-module 2A (AI and Technology Policy - [Write Name presenter, Name Organization]) have good knowledge about topics taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree

What facilitators of sub-module 2B (AI and Sectoral Approach - [Write Name viewer, Name Organization]) have a good knowledge of topics taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator sub-module 3A (Management and Data Sharing - [Write it down Name presenter, Name Organization]) own good knowledge about topics taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator of additional sub-module 3A (Socialization of Personal Data Protection Law - [Write Name of Presenter, Name of Organization]) have good knowledge of the topic being taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator of sub-module 3B (CA, Ethics and Human Rights - [Write Name presenter, Name Organization]) have good knowledge about topics taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator of sub-module 4A (Use of AI for Sustainable Development - [Write Name of Presenter, Name of Organization]) have good knowledge of the topic being taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator sub-module 4A (AI Everywhere in Indonesia - Present and Future - [Write Name of Presenter, Name of Organization]) have good knowledge of the topic being taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Is the facilitator of module 4B (Social Impact Assessment - [Enter Name presenter, Name Organization]) knowledgeable about the topic which was taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree

Does the facilitator of module 5A (Readiness for AI Implementation - Meyda Nento, UNESCO [Write Name presenter, Name Organization]) have good knowledge of the topic being taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
Does the facilitator of module 5B (Building a Responsible AI Ecosystem Answer - [Write it down Name presenter, Name Organization]) have good knowledge of topics taught?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
According to you, are the modules given have good arrangement?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
According to you, are the modules given have good arrangement?	☐ Strongly disagree ☐ Somewhat disagree ☐ Neutral ☐ Somewhat agree ☐ Strongly agree
How was system communication to the program?	☐ Too Much ☐ Enough ☐ Not Enough
Does the training certificate influence your decision to participate?	☐ Yes ☐ No ☐ Maybe
Would you like to stay connected with GIZ to provide information on future AI-related activities and content ?	☐ Yes ☐ No
Are you interested in staying connected with other participants as part of the Artificial Intelligence policymakers network in Africa-Asia?	☐ Yes ☐ No ☐ Maybe

If You answer yes/maybe, do you have suggestions on how this network can be organized? ☐ Training addition or presentation expert ☐ Exchange learning addition between participant with the governor policy other ☐ Examples or case studies of policies or guidelines from other countries ☐ Report or research article about governance and AI impact ☐ Meetings with people from industry, academia or civil society with who can partner with us ☐ Support directly with policy or implementation ☐ Other projects:	
What method of communication which according to you is suitable to continue this network?	☐ WhatsApp Group ☐ Facebook Group / Linkedin ☐ Email mailing lists ☐ Other
Do you have any comments or other suggestions to improve training or facilitate learning about the issue of AI?	

- **Program Evaluation Survey**

After training, it is recommended to distribute evaluation surveys to participants to help identify activities that need improvement, determine success, and direct changes to future activities. Evaluation survey questionnaire activity can seen through table in lower this:

Questionnaire	Answer
What type of gender are you?	
Name your institution	☐ Academia ☐ Civil society ☐ Private sector ☐ Public sector
Write the name of the training related to AI policies supported by Fair forward. (Program name: Artificial Intelligence (AI) Training for Policymakers)	

What role do you play in this activity?	☐ Committee ☐ Participant
Write your WhatsApp number	
Please give mark from aspects substantive training following, as long as activity taking place • Risk and opportunity AI • Benefit from promotion/usage open source AI • How develop AI in a way responsible answer • Application practical from several recommendation	☐ Very important ☐ Quite important ☐ Somewhat important ☐ Slightly important ☐ Not important
About risk and opportunity from AI, give an example short to describe evaluation you in on?	
About benefit from promoting/using open sourceAI, give an example short for describing evaluation you on?	
Regarding responsible AI development, give an example short for describing evaluation you in on?	
Is there a comment which you want to add regarding substance training?	
Aspect Technical Program Training	
Give a rating to aspect technical program training • Arrangement in a way whole • Content from each session • Pace/speed training • Time processing task • Facilitation as well as support para speaker in each session	☐ Excellent ☐ Good ☐ Fairly good ☐ Could be better ☐ Bad
Are there any other technical aspects which can be repaired?	
What is your level of satisfaction with the content during the training session?	☐ Very satisfied ☐ Satisfied ☐ Somewhat satisfied ☐ Could be better ☐ Not satisfied
If you choose ‘Somewhat unsatisfied/not satisfied’, which topic do you like the most?	

If you choose ‘Somewhat unsatisfied/not satisfied’, give your reasons	
Do you benefit from session discussion with fellow participants?	☐ Yes ☐ Yes, mostly ☐ Maybe ☐ No, mostly ☐ No
If you choose ‘yes/yes mostly’, What is the biggest aspect which you feel is for your own benefit?	
If you chose ‘mostly not/no’, explain your reasons?	
How do you follow program training during this?	☐ Offline ☐ Online ☐ Both
Give evaluation you related aspect environment and accessibility below this • Ease of navigating the online learning environment • Facility training	☐ Excellent ☐ Good ☐ Fairly good ☐ Could be better ☐ Bad
What aspect of the environment study which according to you can be repaired? • Location • Comfort • Support facilities	☐ Excellent ☐ Good ☐ Fairly good ☐ Could be better ☐ Bad
What factors prevented you from participating during the course? session training?	☐ Difficulty of transportation ☐ Network Problem ☐ Family issues ☐ Work schedule ☐ Other:
Give your input to increase quality this training program	
According to you, what are the important points which you get during the following program?	


AI