Multistakeholder Experts Group Report

November 2022 - GPAI Tokyo Summit

GPAI / THE GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE

This Multistakeholder Experts Group Plenary Annual Report was developed on the basis of the reports of the GPAI Working Groups. The report reflects the personal opinions of the GPAI Experts involved and does not necessarily reflect the views of the Experts' organisations, GPAI, or GPAI Members. GPAI is a separate entity from the OECD and accordingly, the opinions expressed and arguments employed therein do not reflect the views of the OECD or its Members.

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1. Multistakeholder Experts Group Foreword

At the Global Partnership on AI, we are united in the mission to advance the responsible and human-centric development of AI and to create a future that advances human progress and ultimately benefits all.

We live in a time of heightened tensions between nations and growing economic instability, yet technology waits for no one. The time to make progress on international governance frameworks is now. While Governments and multinational institutions are racing to create principles, laws, and regulations for AI, progress remains uneven, and we are already seeing a divergence in legislation and policy. As such, the role of GPAI to uphold global accountability and set the standards for using this rapidly-developing technology has never been more important.

Since Prime Minister Justin Trudeau and President Macron launched GPAI in 2018 and established it during the 2018 and 2019 G7 presidencies, we have demonstrated our capacity for collaboration and the progress that can be made through the coordination of governments, industry, civil society, and academia.

Whilst AI is driving world-changing innovation, it is up to us to prevent it from being used to undermine our core principles of freedom, human rights and equality. For the past two years, I have been proud to take on this effort as Chair of the Multistakeholder Experts Group and Co-Chair of the Steering Committee. It has been an honor to be a part of this global community and work with so many brilliant minds to promote the ethical advancement of AI on a global stage.

The work enclosed in this report is a testament to the selfless dedication and commitment of our experts, who have delivered cutting-edge research and applied AI projects in pursuit of GPAI's mission. These multi-sector experts have the experience and influence to ensure the development of AI that elevates humanity. It is critical that our Members and our experts use this report to solidify a meaningful partnership through GPAI and guarantee that it endures in the long term. To this end, it is also vital that Members translate the research herein into practical action.

The frameworks we have relied on for centuries no longer fit in a world defined by emerging technologies like AI. Government and businesses need to partner to take forward the work developed in the past two years and the recommendations in this report. The following document showcases the efforts of GPAI's Working Groups in realms shaping the AI ecosystem: **Responsible AI**, **Data Governance**, the **Future of Work** and **Innovation** and Commercialization. Each section outlines what these groups have achieved in their mission to advance AI responsibly and ethically and how they are taking forward their projects next year. Along with the **MEG Report Editorial Committee**, I wish to express my gratitude to the **Montreal and Paris Centers of Expertise** for their generous counsel and support during the creation of this document.

I call on all GPAI Members to read this report, engage with our experts' findings, and use them to deepen dialogues with the MEG, Working Groups and Project Leaders. Combining our efforts to action these recommendations ultimately empowers GPAI and brings our community together.

The development and deployment of responsible AI is fundamental to what we strive to achieve at GPAI, and our Working Group for Responsible AI has been seeking to understand how to engage the artificial intelligence community in achieving this goal. One recommendation of the Group is to invite the AI ecosystem to participate in a series of Grand Challenges: contests inviting applicants to submit projects including prototypes, educational or policy tools, or concepts that encourage and showcase the deployment of responsible AI. The Working Group also recommends developing a set of accountability tools for AI applied to sustainable development goals (SDGs), which evaluates the effectiveness of projects in the pursuit of the SDGs, ensuring that it plays a role in building a better future.

The Data Governance Working Group has developed recommendations to advance data rights and justice, which are vital if we are to shape a world in which AI uplifts humanity at a regulatory and legislative level. The Group also recommends experimentation with privacy-enhancing technologies, or 'PETs', and similar technologies. Data sharing is equally a cornerstone of responsible and ethical AI development. To this end, the Working Group recommends that GPAI Members and international initiatives consider strategic investment into data sharing and stewarding institutions.

The Future of Work Working Group has made important recommendations based on supporting dialogue between workers and businesses about the implementation of AI in the workplace and the implications of this. There is much concern about what artificial intelligence could mean for employees, which could be resolved if GPAI Members considered ways to utilize AI information at work broadly. To ensure that workplaces get the best from deploying AI, Members should also consider how to foster global, multi-stakeholder exchange for strategies for responsible, productive AI use at work.

We must create the appropriate frameworks to enable businesses to prosper with artificial intelligence. The Innovation and Commercialisation Working Group recommend that GPAI Members consider the merits of a formal AI regulation framework or industry guidelines, as well as training and development programmes, so there is an infrastructure to drive AI innovation responsibly, in line with OECD and GPAI principles. The Group also recommends that Members consider programmes to empower SMEs in adopting AI, so businesses of all sizes can feel the benefits of using this remarkable technology.

These recommendations from our experts demonstrate the value of this organization and the potential of GPAI as a convenor and curator of independent opinions and driver of impactful action on AI. Through our combined expertise, GPAI has established meaningful projects that produce useful, practical tools, and I am grateful to each of our experts for lending their time and efforts to our shared goals. We have learned a great deal through the creation of this report, and we intend to refine this process as we go forward to ensure that Members and experts get the most from it. The creation of the annual report is essential to

communicate the work and progress of GPAI and must become a yearly process to shape our priorities and align our efforts. The 2022 report is a starting point of what we expect to become a seminal publication over time, framing the AI-enabled future we all want to see - one that optimizes human progress and innovation for the benefit of all.

It was a privilege to serve as Chair for these governance bodies as the organization was finding its feet in the grips of the global pandemic. As I now pass on the torch to our next MEG Plenary Chair, Inma Martinez, I believe GPAI can be even bolder in its quest to be the true global convener of AI debates and to help inform and shape policies that will liberate and propagate AI as a force for good in society. We have made an excellent start on this with our 25 international members, but to cement our position, we need to be inclusive and create further collaborations, particularly with those from the Global South. As well as gaining the trust of more countries, we need to better empower our experts and enable them to contribute on a higher level to achieve more significant impact. We need to trust them, listen to them, and let their knowledge and expertise guide us. This MEG Plenary Report is indeed a first humble step in this direction.

During this time of escalating geopolitical tensions and economic instability, countries cannot afford to withdraw and make their own rules. We need a united front, and we need to speak with one voice on AI. The work of the Global Partnership for AI community matters now more than ever. Let's prove we are up to the challenge.

Baroness Joanna Shields OBE

Multistakeholder Group (MEG) Plenary Chair
Co-Chair of the Steering Committee

2. Summary of MEG priorities and recommendations for GPAI Member Governments

The MEG has organised its priorities for future planning on GPAI's work around four cross-cutting thematic pillars, illustrating the synergies between its Working Groups. The MEG's recommendations for GPAI Member Governments focus on what action Members can take to build on GPAI's work and support our shared aims for Responsible AI that responds to the UN SDGs.

Overarching recommendation for Council, Steering Committee, and GPAI Members: a call to action		
The overarching priority we would like to submit to GPAI's Council and Steering Committee is to review and take proactive steps to strengthen the relationship between the Experts and GPAI Member Governments in 2023. Our recommendation to GPAI's Members is to consider which GPAI projects under the 2023 Work Plan that they would like to adopt, by joining the respective project steering group and/or supporting the scaling and implementation phase.		
Cross-cutting thematic pillars	**Strategic planning priorities for GPAI work recommended by the MEG**	**MEG Recommendations for GPAI Member Governments**
Pillar 1: Initiating practical actions that can responsibly leverage the potential of AI to advance the UN Sustainable Development Goals	• Responsible AI for the Environment • AI for fostering Human Rights and Gender Equality • AI for Health and better living • AI for Education	• Coordinate with the MEG to scale up a series of 'Grand Challenges' for Responsible AI • Coordinate with the MEG to implement specific SDG accountability tools for the AI community
Pillar 2: Nurturing and adopting participatory governance tools that support the inclusion of communities impacted by AI	• Data Institutions focused on community engagement • Participation and empowerment of workers in the development and use of AI in the workplace • Use of AI to support inclusion of the disabled	• Make strategic investments in new and existing institutions that steward and share data • Consider how to ensure participation and co-determination in AI adoption
Pillar 3: Helping steer emerging technical frontiers so they align with the public interest and support the protection of human rights	• Advancing research and practice on data justice • Rights-preserving technologies such as Privacy Enhancing Technologies • Societal implications of Foundational Models • Regulatory Sandboxes • Frameworks and methodologies to operationalise AI ethics • Tools to evaluate companies' commitment to the OECD AI Principles	• Consider how data protection laws, economic regulation and their own practices could incorporate a broader understanding of data rights and justice • Encourage experimentation with PETs and associated technologies that are aligned with data rights and justice • Consider the merits of either a formal AI regulation framework or industry guidelines
Pillar 4: Supporting broader access to the economic benefits of AI and data technologies	• Promote a rights-based approach on economic justice in data governance frameworks. • Develop tools to help SMEs accelerate their adoption of AI solutions and navigate regulations as they expand globally. • Support SMEs' understanding of IP and data issues with respect to AI. • Support companies of all sizes to boost their usage and benefits of AI. • Evaluate the impact of regulation on innovation and commercialization	• Promote citizen awareness about potential AI applications in the workplace and their challenges, risks and benefits • Foster international/global exchange on strategies for responsible and fruitful use of AI in the workplace – especially for young professionals, students and pupils • Develop specific intervention programmes to help SMEs accelerate AI adoption • Broaden training and development programmes beyond postgraduate level to ensure collaborators, students, and the general public understand AI.

3. Working Group orientation

The Global Partnership on Artificial Intelligence (GPAI) provides a mechanism for sharing multidisciplinary research and identifying key issues among AI practitioners, with the objective of facilitating international collaboration.

To organise the MEG's outputs and deliberations, GPAI's founding members elected to form four Working Groups:

1. Responsible AI;
2. Data Governance;
3. The Future of Work;
4. Innovation & Commercialization.

To answer its mandate and collate to the priorities identified by the GPAI Council, each Working Group has shared their perspective and approach to GPAI's mission, orientated around the responsible development of AI, and grounded by the shared values and principles of the OECD Recommendation on Artificial Intelligence.

The following section presents the perspective of each Working Group to GPAI's mission.The next section then outlines what this has meant in practical terms.

3.1 Responsible AI Working Group

Ensuring responsible, ethical AI is more than designing systems whose results can be trusted. It is about the way we design them, why we design them, and who is involved in designing them.

Responsible AI is not, as some may claim, a way to give machines some kind of 'responsibility' for their actions and decisions, and in the process, discharge people and organizations of their responsibility. Rather, it is the people and human organizations and institutions that shape the AI tools, and should take responsibility and act in consideration of an ethical framework - which includes consideration for human rights - such that the overall system can be trusted by society.

In order to develop and use AI responsibly, we need to work towards technical, societal, institutional, legal methods and tools that provide concrete support to AI practitioners, as well as awareness and training to enable participation of all, to ensure the alignment of AI systems with our societies' principles, values, needs, and priorities, where the human being is at the heart of the decisions and the purposes in the design and use of AI[1].

Responsible AI is therefore becoming a main direction in AI research and practice. Governments, corporations, professional bodies and international organizations alike have come forward with more than 600 proposals, strategies, and guidelines declaring their

[1] See the Responsible AI Working Group Report 2022 for more details.

commitment to an accountable, responsible, transparent approach to AI, where human values and ethical principles are paramount[2]. A recent study of the global landscape of AI ethics guidelines shows that there is a global convergence around five ethical principles: Transparency, Justice and Fairness, Non-Maleficence, Responsibility, and Privacy[3]. Nevertheless, even though organizations agree on the need to consider these principles, how they are interpreted and applied in practice, varies significantly across the different recommendation documents.

AI is not just the automation of decisions and actions or the adaptability of digital systems to learn from data in a changing environment. It is not just about "Does this AI system produce correct answers?", but also about "What are the socio-political consequences of deploying this AI system in this context?" Answering such questions requires a multidisciplinary approach and the inclusion of all stakeholders.

A multidisciplinary stance supporting understanding and critiquing the intended and unforeseen, positive and negative, and the socio-political consequences of AI for society, is core to the responsible design of AI systems. Complementing and extending multidisciplinarity, a participatory and open approach is fundamental to understand governance, not only in terms of competences and responsibilities, but also in terms of power, trust and accountability; to analyze the societal, legal and economic functioning of socio-technical systems, providing value-based design approaches and ethical frameworks for inclusion, diversity in design, and how such strategies may inform processes and results[4].

Achieving trustworthy AI systems is a multifaceted complex process, which requires both technical and social, cultural and legal initiatives and solutions to ensure that we always align an intelligent system's goals with human values[5]. Core values, as well as the processes used for value elicitation, must be made explicit and that all stakeholders are involved in this process. Furthermore, the methods used for the elicitation processes and the decisions about who is involved in the value identification process must be clearly documented. Core to the responsible development and use of AI is governance. Approaches to governance include combinations of self/soft/hard legislation, sectoral regulations, standardization, codes of conduct and/or the creation of ethical boards or chief ethical officers. Set in the proper way, responsible AI is a stepping-stone for innovation, rather than an obstacle. True innovation is moving technology forward, not just about using existing technology "as is"; developing technology that avoids violating ethical standards and harming humans is simply better technology. There is a need to diversify the disciplinary background and expertise of those working on AI to include AI professionals with knowledge of, amongst others, philosophy, social sciences, law and economics.

As part of its mandate and shared experience, GPAI's Working Group on Responsible AI identifies which approaches are the most suitable and which areas are most pressing for

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[2] See OECD's AI Observatory https://oecd.ai/.
[3] Anna Jobin, Marcello Ienca, and Effy Vayena (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence*, 1(9):389–399.
[4] Virginia Dignum (2022). Responsible Artificial Intelligence--from Principles to Practice. *ACM SIGIR Forum 1 Vol. 56 No. 1 June 2022*; arXiv preprint arXiv:2205.10785
[5] Civil epistemologies (Jasanoff; https://sheilajasanoff.org/research/civic-epistemologies/

future actions and collaborations, especially at an international level. Of particular importance are:

A. Projects and frameworks to operationalise AI principles and ethics, in specific sectors
B. Mechanisms and processes to mitigate bias, discrimination, and inequities in AI systems (e.g., through impact and risk assessment methods or regulatory sandboxes)
C. Tools, certifications, assessments, and audit mechanisms used to evaluate AI systems for responsibility and trustworthiness based on metrics such as accountability, reliability, robustness, transparency, fairness, respect for human rights, and sustainability.

3.2 Data Governance Working Group

The use of data as training data as well as validation and testing data for AI has become a major reason for the increased demand for data worldwide, and the development of AI has become a major value that is created with the help of data. In accordance with its mandate, the Data Governance Working Group's (DG WG) overarching objective is that data used for AI-based systems is collected and managed responsibly[6], in particular considering the situation of parties that are in some way or another associated with the origin and context of the data or that may otherwise be affected by use of the data (e.g. data subjects and those belonging to communities about which data is collected). This ‚data perspective' of the DG WG is closely related to the work of the Responsible AI WG, which looks more into how to model AI development, in order for AI to be shaped and to function in a responsible manner (e.g. without any undue bias).

To build trust in AI technology, data governance needs to be rights-preserving and provide a safe and secure environment that prevents harm, mitigates risk through legitimate legal and institutional frameworks and produces just outcomes. The DG WG promotes multi-stakeholder data governance approach that takes into account that the rights and legitimate interests of different actors in data ecosystems and ensures that value, benefits and risks of data-driven innovations are distributed equally. However, it is also important to acknowledge that data governance does not come as a task isolated from other governance tasks in the context of AI, nor from the governance of ecosystems that are not data-specific.

The DG WG strives to deliver on three focal governance approaches: technical, legal, and organisational/institutional. The WG, however, also follows an integrated and holistic approach, i.e. does not consider these three approaches as closed silos but rather cross-reference and link them as required by the relevant topic. Moreover, 'good' data governance should be risk-based and adhere to the precautionary principle, as the need for data governance measures increases with the potential impact an activity may have on others, including on society and economy at large. Data governance should never be an end in itself but – if done right – create a basis for an environment that builds trust in AI-based systems that are trustworthy, and in other trustworthy data-driven technologies, among society and thus to facilitate the uptake of this new technology.

[6] See the Data Governance Working Group Report 2022 for more details.

With these objectives in mind the, DG WG will focus on the following tasks in particular:

- raising the profile of and emphasizing data rights beyond privacy, such as data sovereignty, collective rights, indigenous data rights and economic justice.
- examining existing institutional data sharing in practice, as well as novel data stewardship approaches (with a wider lens than data trusts).
- exploring the practicalities of the adoption of rights-preserving technologies such as privacy-enhancing technologies (PETs).

3.3 Future of Work Working Group

The cardinal objective guiding the Future of Work (FoW) Working Group is that of shaping an inclusive Future of Work through Artificial Intelligence (AI) benefiting everyone[7].

AI is transforming the way we live and this major technical advance has been accompanied by an expansion in the discussion of AI ethics, and the profusion of ethical statements and policy initiatives.

However, this important debate on AI ethics needs to address work design issues even more in the future. AI is already being implemented in workplace contexts across the globe, often transforming the way work is being done. Last mile delivery, warehousing, and many other labour processes have undergone massive reorganisations. Important recruitment screening processes are transferred to AI. Similarly, work allocation, promotion and remuneration decisions are increasingly managed by AI-based systems. It is now essential to integrate workers' collective voices into the debate and to specifically address the ethics of AI in the labour process.

With this context in mind, the Future of Work Working Group's mandate is to investigate how the deployment of Artificial Intelligence can affect workers and working environments, how job quality, inclusiveness, health and safety in the workplace can be preserved or even improved with the use of AI.

To carry out this mission, the Working Group identifies which approaches are most suitable to achieve its objectives. These approaches consist of recommendations for policy makers, analysis of current regulations, tools for companies and workers and real use cases.

Following the GPAI spirit of bridging the gap between theory and practice, Future of Work has taken a step-by-step approach of first observing AI in the workplace, then analysing its impact with a particular focus on specificities across sectors, gender, and geographies (AI Observation Platform project), and lastly experimenting solutions (AI Living Lab project) and producing guidelines for a fair work with AI (AI FairWork Principles).

[7] See the Future of Work Working Group Report 2022 for more details.

To achieve these very ambitious objectives, the Working Group draws upon diverse global, dynamic perspectives, complementary expertise from the scientific community, industry, civil society, and last but not least superb relations with leading policymakers.

3.4 Innovation & Commercialization Working Group

AI brings a set of technologies which can help significantly develop our economies, thus creating new potential for our companies, as well as new benefits for our societies. However, it is our belief that not only does AI need to be economically successful, it also must be respectful of our values. These two goals raise a very practical issue: what are the constraints we need to put on the development, deployment and use of AI systems to ensure it satisfies our values, while avoiding hindering innovation and economic efficiency? We think that we need to address this issue by offering practical tools and methods, gathered from best practices across GPAI Members, so that each Member can benefit from the expertise of others and apply tools to assist the deployment of AI policies in line with our values.

Following its mandate, the Innovation and Commercialization Working Group (I&C WG) is focusing on supporting companies, and Small & Medium-sized Enterprises (SMEs) in particular, to innovate in AI, deploy AI products and commercialize them in accordance with OECD values. The I&C WG works to study and recommend practical tools and methods that may assist companies to develop their business through the use of AI technology, while ensuring they are aligned with OECD values[8].

Our overarching goal is to foster sustained growth in organizations around the world, through broad adoption of AI and increased AI maturity, in accordance with OECD values.

Specifically, the tasks of this Working Group are:

- Producing practical tools and compilations of best practices for organizations to apply AI according to GPAI and OECD principles: for example, a portal to assist SMEs learning about success stories and locating AI service providers as potential partners to implement their AI projects. Such open-sourced, white-labeled tools may assist governments or governmental institutions finding the best methods to support their industries. Specific verticals of the portal is also being worked on, specifically Agro, as Agro is an important sector in many countries;
- Producing practical guidance for companies on globally relevant topics such as Intellectual Property (IP) protection.

For the past two years, the Working Group was built around a specific focus on SMEs, emphasizing their importance in the AI field. It will continue with this focus and particularize to the agricultural & farming (A&F) sector, which is essential for many of our economies.

[8] See the Innovation and Commercialization Working Group Report 2022 for more details.

4. Reviewing GPAI's outputs: delivery and impact

Launched in June 2020, GPAI is a multistakeholder initiative bringing together leading experts from science, industry, civil society, international organizations and government that share values to bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities.

We aim to provide a mechanism for sharing multidisciplinary research and identifying key issues among AI practitioners, with the objective of facilitating international collaboration, reducing duplication, acting as a global reference point for specific AI issues, and ultimately promoting trust in and the adoption of trustworthy AI.

Through the collaboration within each working groups, GPAI assesses – on a comprehensive, objective, open, and transparent basis – the scientific, technical, and socio-economic information relevant to understanding AI impacts, encouraging its responsible development and options for adaptation and mitigation of potential challenges.

GPAI experts collaborate across four working groups on the themes of responsible AI, data governance, the future of work, and innovation and commercialization.

Members and participants of GPAI are brought together first and foremost by a shared commitment to the values expressed in the OECD Recommendation on Artificial Intelligence. All GPAI activities are intended to foster responsible development of AI grounded in these principles of human rights, inclusion, diversity, innovation, economic growth while contributing to the UN Sustainable Development Goals .

The following section presents the projects and deliverables under the 2022 work plan. All were initially recommended by the Steering Committee and approved by the Council given they demonstrated alignment with GPAI's priorities of being:

- Impactful and practical
- Aligned with GPAI principles
- Aligned with GPAI mandate
- Responding to GPAI's Council priorities
- Collaborative, scalable and ambitious
- Completed ongoing projects when resources were available

The projects are presented in terms of objectives but also in terms of impact - here defined as:

- what has been achieved and delivered;
- contributing to GPAI's priorities; and
- contributing to the UN Sustainable Development Goals

4.1 Responsible AI Working Group

The Working Group on the responsible development and use of AI (RAI for short) brings together 64 experts from 25 countries (plus 11 Observers) around a shared mandate: to foster and contribute to the responsible development, use and governance of human-centred AI systems, in congruence with the UN Sustainable Development Goals.

Project 1: Responsible AI Strategy for the Environment (RAISE)

Context	Objectives	Impact
The combined fight against climate change and biodiversity loss represents one of the most pressing challenges humanity is facing. All GPAI Member countries have put this at the top of their agenda and have made strong commitments, especially through the Paris Agreement signed in 2015. As a general-purpose technology, AI can be harnessed responsibly to accelerate positive action for climate and biodiversity preservation.	To help GPAI member countries seize this opportunity, GPAI's Project RAISE has developed in 2021 an action-oriented roadmap for AI & climate and is currently implementing some of its recommendations through three applied projects: 1. Publication of a joint report with the OECD on measuring the environmental impacts of AI compute and applications 2. Dissemination of an AI readiness guidance booklet for net zero to key sectors (energy, transport, agriculture, industry)g 3. Development of an action-oriented roadmap on AI and biodiversity.	**What was achieved**: - Published AI & Climate report - Anchored report in key international institutions, such as UNEP and Brookings. - Developed first of four booklets on AI readiness guidance for net zero in electricity sector - Developed report on AI & biodiversity - Co-developed report on the environmental impacts of AI compute and applications **How it relates to GPAI's priorities**: - *Alignment*: the project aligns closely with GPAI priority on the fight against climate change - *Impactful and practical:* this project demonstrates the tangible benefits of AI to the concrete use case of AI for climate action and biodiversity preservation - *Scalable and ambitious:* this project promotes ambitious research and innovation in the sustainable AI field through its applied research agenda - *Collaborative:* this project contributes to cross-WG collaboration (DG, I&C, and RAI) **How it contributes to UN SDGs**: - The project directly contributes to the UN SDGs on the biosphere: Climate Action (13), Life Below Water (14), Life on Land (15), and Clean Water (6) - It also contributes to Affordable and Clean Energy (7) and Responsible Consumption and Production **Next steps & forward look**: - Continue to anchor RAISE's work on climate and biodiversity protection in international initiatives including IPCC, IPBES, UNFCC COPs, Climate Data Steering Committee, and others - RAISE is scaling up as several GPAI member countries have committed to fund projects - Partnership with City of Toulouse will demonstrate the use of AI for sustainable transportation - Significant funding from the United Kingdom to develop a data catalogue for net zero

Project 2: Social Media Governance		
Context	**Objectives**	**Impact**
The recommender systems deployed by social media companies are some of the most pervasive and influential AI tools in the world. Transparency about the effect of recommender systems is urgently needed to address the question of whether recommender systems move users in the direction of harmful content.	The Social Media Governance project aims to engage with social media companies to conduct fact-finding studies on the effects of recommender systems on users' attitudes towards harmful content. The project's focus has been on Terrorist and Violent Extremist Content (TVEC), so as to dovetail with existing international efforts, notably within the Christchurch Call and the Global Internet Forum to Counter Terrorism.	**What was achieved:** - The project proposed a concrete mechanism allowing social media companies to report publicly about the effects of their recommender systems on their users, and thus provide transparency on this issue to external stakeholders. The proposed mechanism safeguards the personal data of platform users, and the intellectual property of companies. The project successfully pushed for the implementation of pilot projects in international forums notably the Christchurch Call, and the Global Internet Forum to Counter Terrorism. **How it relates to GPAI's priorities:** - *Alignment:* this project aligns with GPAI's priority on AI & Human Rights. - *Impactful and practical:* the proposed technical approach is concrete and the proposed transparency studies can readily be conducted. The results of the proposed studies would be helpful in informing and guiding social media oversight legislation currently being developed in many jurisdictions. - *Scalable and ambitious:* more than half of the world's population are social media users. The proposed methods could be deployed in all social media companies, and so shed important light on the impacts of information consumption in this pervasive new medium. It could also be used to ask questions about effects in many different domains. The current focus is on TVEC, but effects on other harmful attitudes (misinformation, prejudice, polarisation) could also be studied. - *Collaborative:* this project collaborates with like-minded groups in the context of international initiatives: notably the Christchurch Call and the Global Internet Forum to Counter Terrorism. It also seeks collaboration between social media companies and external stakeholders (governments, citizens' groups, academic experts). **How it contributes to UN SDGs:** - This project is aligned with the UN SDG on Peace, Justice and Strong Institutions (16) and Partnerships for Goals (17). **Next steps & forward look:** The project plans to support a new initiative exploring Privacy Enhancing Technologies to improve platform transparency while continuing to advocate for fact-finding studies to be defined and refined through continued discussions between external parties and SM company engineers.

Project 3: Pandemic Resilience

Context	Objectives	Impact
In response to the COVID-19 pandemic, countless groups around the world — spanning industry, government, civil society, academia, and international organizations — have mobilized resources and talent to confront emergent public health challenges with novel AI solutions. AI systems are being developed to address challenges across a wide array of applications including vaccine research and development, epidemiology and government response, and clinical research, diagnosis, and treatment.	The overarching goal of this project is to directly support impactful and practical AI initiatives to help in the fight against the ongoing COVID-19 and future pandemics. It establishes, on behalf of GPAI member governments and beyond, a mechanism and process for expert-led validation of promising AI interventions to pursue that could have a positive impact in their deployment.	**What was achieved:** - Catalogued and assessed a representative set of promising initiatives relevant for the COVID-19 pandemic and beyond, summarising those initiatives with intrinsic scalability and high potential to mitigate the current and future pandemics - Compiled an accompanying living repository and are translating this into an online repository - Began collaboration with five candidate initiatives (focusing on the impact of NPIs) to establish a template for equitable, global, pandemic modelling **How it relates to GPAI's priorities:** - *Alignment:* this project focuses on the principles of human rights and innovation and on the priority of health and life sciences - *Impactful and practical:* this project demonstrates the tangible benefits of AI to the concrete use case of pandemic modelling - *Scalable and ambitious:* this project promotes innovation in the AI field by developing an adaptable template for combining local and global models - *Collaborative:* this project contributes to cross-WG collaboration (DG and RAI) **How it contributes to UN SDGs:** - This project is aligned with UN SDG 3 Good Health and Well Being (specifically target 3.d) **Next steps & forward look:** - The project will continue its collaboration efforts in 2023 to complete the technical work scope of developing a template for equitable, global, pandemic modelling, and potentially deploying it in the context of a scalable use case.

Project 4: Drug Discovery		
Context	**Objectives**	**Impact**
Current and future needs of public health, e.g., with respect to infectious diseases and pandemics, are often unmet by current drug discovery technologies and ecosystems, due to rising costs and market failures. At the same time, the use of AI to speed up and reduce those costs is a huge opportunity, but would be much more likely to succeed and would require less government funds in an open-science and data-sharing governance framework.	The objective of this project is to develop and support implementation of a set of recommendations for member countries (and the international community in general) to create an enabling international environment for open AI research towards the development of new drugs (or the repurposing of existing ones) to address public health challenges.	**What was achieved:** Phase 1: Exploration - A series of recommendations for policymakers to effectively leverage AI for the purpose of combating global public health challenges. Phase 2: - An awareness campaign with relevant stakeholders in both public and private sectors to advocate for the uptake of the recommendations made in the project's 2021 report. - Outlined a novel international initiative, tasked with deploying AI-enabling expertise and resources to impactful points of intervention throughout ongoing antibiotic and drug discovery R&D projects to address core public health challenges. **How it relates to GPAI's priorities:** - *Alignment:* this project focuses on the principles of human rights and innovation, and on the priority of health and life sciences - *Impactful and practical:* this project demonstrates the tangible advantage that AI provides to accelerate and considerably reduce the cost of the development of drugs where current market mechanisms lack appropriate incentives - *Scalable and ambitious:* this project promotes innovation in the drug discovery ecosystem by encouraging all relevant stakeholders to collaborate in a novel international initiative - *Collaborative:* this project highlights the importance of, and need for collaboration between international organisations **How it contributes to UN SDGs:** - This project is aligned with UN SDG 3 Good Health and Well Being (specifically target 3.b), and SDG 9 Industry, Innovation and Infrastructure (specifically target 9.5 and 9.b) **Next steps & forward look** - Engage with Public Health representatives from GPAI members, and other relevant stakeholders in the AI / drug discovery discovery ecosystems to get their feedback and engagement. - Determine strategic applications of AI / data science within the drug development pipeline and locate appropriate AI service providers - Define incentive structures that will be necessary to solicit interest among AI service providers along with securing and managing funding

4.2 Data Governance Working Group

The Data Governance Working Group (DG WG) brings together 43 experts, including six observers, from 22 countries with experience in technical, legal and institutional aspects of data governance. The mission of DG Working Group aims to collate evidence, shape research, undertake applied AI projects and provide expertise on data governance, to promote data for AI being collected, used, shared, archived and deleted in ways that are consistent with human rights, inclusion, diversity, innovation, economic growth, and societal benefit.

Project 1: Privacy Enhancing Technologies

Context	Objectives	Impact
Using AI for public good to address multi-stakeholder problems often requires access to data from multiple sources within and between organizations, and across geographic or jurisdictional boundaries. Individuals, researchers, corporations and governments do not necessarily have the incentives to make such data available, due to concerns around privacy, sovereignty, IP protection, data security and data travel. In order to support broader AI development with the objective of enabling desired or approved use of data, while preventing data misuse, privacy-enhancing technologies (PETs) are likely to be essential.	The PETs project has four expected outcomes. 1. Demonstration of how such technologies can help improve data availability for AI use cases, beneficial to our society 2. Guidance for analysts and data scientists on how to work with such technologies. 3. Outreach plan that yields greater awareness of confidence in technology solutions to address previously mentioned concerns among data owners, custodians, AI developers, adopters, and regulators. 4. Develop guidelines on the further development and adoption of such technologies.	**What was achieved:** Phase 1 - Two concrete use cases were selected for a technical demonstration in the next phase (Phase 2): pandemic resilience and sustainable mobility - Government adoption: partnership developed with Singapore to support the demonstrations, with additional partnerships in development - International Forum for PETs Initiatives established to facilitate communication and shared learnings between members **How it relates to GPAI's priorities:** - *Alignment:* this project focuses on the principles of human rights and innovation, and on the priorities of the fight against climate change, and health and life sciences - *Impactful and practical:* foundational work for the *practical demonstration* of the viability of AI systems in helping achieve the UN SDGs - *Scalable and ambitious*: both partnerships will *build on the WG seed funding* to implement a scaled up technical demonstration in 2023 - *Collaborative*: this project contributes to cross-WG collaboration (DG and RAI WG) **How it contributes to UN SDGs:** - Pandemic resilience use case is aligned with UN SDG 3 Good Health and Well Being (target 3.d) - Sustainable mobility use case is aligned the UN SDG 11 Sustainable Cities and Communities (specifically targets 11.2, 11.3, and 11.6) **Next steps & forward look:** - This project will continue to reflect the mission of GPAI by focusing on the development and adoption of an impactful and integrated set of technologies. Phase 2 will support innovation by demonstrating friction-less data sharing between organisations and countries for the two use cases selected, pandemic resilience and sustainable mobility.

Project 2: Enabling Data Sharing for Social Benefit Through Data Institutions		
Context	**Objectives**	**Impact**
Effective data stewardship is essential for a variety of public policy goals and for realising the wider economic value of data. Innovative new forms of collaborative data stewardship are emerging, including data trusts.	This project is supporting the creation of tools that enable data sharing for social benefit. It supports new institutions that empower individuals and communities to enact their data rights, ensuring that data sharing activities reflect the diverse interests of all in society. The end goal is to help GPAI realise the potential tools to promote the safe, fair, legal and equitable sharing of data, in service of the UN Sustainable Development Goals.	**What was achieved:** - Published a review of the 'state of the art' in the design and implementation of data trusts, as well as the legal and legislative frameworks that are in place to support the operationalisation of data trusts - Explored real-world use cases and operationalisation strategies where data trusts could offer social benefit, with a focus on climate action: City cycling in London, Small shareholder farming in India and Climate migration in Peru. **How it relates to GPAI's priorities:** - *Alignment*: the project aligns closely with GPAI priority on the fight against climate change - *Impactful and practical:* this project demonstrates the feasibility and benefits of data institutions in real-world scenarios - *Scalable and ambitious:* in the final stage, the project is partnering with stakeholder organisations to gain insight from the field, but also to operationalize learnings from the data trusts and institutions research - *Collaborative:* this project contributes to cross-WG collaboration primarily between DG and RAI (climate change and AI), but also I&C (Adoption of AI by SMEs in the Agriculture and Farming Sector) and FoW (fair work) **How it contributes to UN SDGs:** - The project directly contributes to the UN SDGs on Climate Action (13), Sustainable Cities and Communities (11), and Reduced Inequalities (10). - It also contributes to No Hunger (2) and Clean Water and Sanitation (6). **Next steps & forward look:** The project is now carrying forward the recommendation to undertake a broader exploration of how data institutions and AI applications could make a difference on climate-induced migration in the Lake Chad Basin region, engaging with local organisations and communities.

Project 3: Advancing Research and Practice for Data Justice		
Context	**Objectives**	**Impact**
Data Justice has been understood as fairness in the way that groups are made visible, represented, and empowered as beneficiaries in the collection and use of data for the development of AI systems. It promotes a broader lens than a narrower conception of data governance focused on compliance and individualised privacy; it does so by providing a framework for collective identities in view of the particular impact that AI decision-making systems can have on community level.	This project support the foundations that help enable collaboration by providing practical guidance for policymakers, developers and technical communities by pursuing novel institutional and approaches that ensure data is collected, used, shared, archived and deleted in ways that are consistent with human rights, inclusion, diversity, innovation, economic growth, and societal benefit.	**What was achieved:** Phase 1 - Exploration: - guides for Impacted Communities, Policymakers, and Developers Communities; - 12 Policy Pilot Partner reports, drawing from consultations from across Asia, Latin America, Africa, and Oceania - A video guide: 'Introducing Data Justice' - Annotated Literature Review - Repository of Use Cases - An Anotated Bibliography and Table of Organisations Phase 2 - Practical Guides: - A Data Justice Policy Brief of 10 pages, resource focused on clear recommendations for decision makers. - Two short 'Primers' on Data and Social Justice, and Data and Economic Justice - offering short introductions on these topics for policymakers considering data governance. **How it relates to GPAI's priorities** - *Alignment*: The Data Justice project closely aligns with GPAI priority on the impact of AI on human rights, especially inclusiveness. - *Impactful and practical, Scalable and ambitious: :* This project aims to help inform policymakers about the discourse on data governance in relation to AI / ML and evoke commitments that reach beyond good, responsible or beneficial AI / ML in such a way that redress digital inequalities and data exclusion, to prepare a better foundation for policies, laws and other strategies that advance social and economic justice for sustainable development, worldwide. - *Collaborative:* To support this work in its first exploratory phase, the Working Group partnered with 12 'Policy Pilot Partners' from Low and Middle Income Countries spanning Latin America, Asia, Africa, and Oceania, representing one of the widest and deepest global surveys on data justice to date. **How it contributes to UN SDGs** - This project is aligned with UN SDG 5 Gender Equality (specifically target 5.1 and 5.c), SDG 10 Reduced Inequalities (specifically target 10.2, 10.3 and 10.6), SDG 16 Peace, Justice and Strong Institutions (specifically target 16.6, 16.7, 16.8, 16.a and 16.b) and SDG 17 Partnerships For The Goals (specifically target 17.18) **Next steps & forward look** - Awareness campaign early 2023 to engage with the country members of GPAI, opening discussions on how to implement the recommendations and principles resulting from this project's work.

4.3 Future of Work Working Group

The Working Group on the responsible development and use of AI (RAI for short) brings together 64 experts from 25 countries (plus 11 Observers) around a shared mandate: to foster and contribute to the responsible development, use and governance of human-centred AI systems, in congruence with the UN Sustainable Development Goals.

Project 1: Observation Platform of AI at the workplace

Context	Objectives	Impact
To build a better future for workers collaborating with AI, to be more inclusive on various criteria such as disability, gender or ethnicity, a mandatory initial step is observation. Observation is a first crucial step to build a better and more inclusive future for workers collaborating with AI. This is achieved through the collection of use cases that will later serve as the basis for the other FoW WG projects.	The aim of this project is therefore to capture what is happening in the real context of workplaces: observe AI in the workplace, gather use cases that are as diverse as possible, conduct qualitative analyses of its impact in different situations, sectors, users. The use cases are gathered by GPAI Experts which ensures neutrality and trustworthiness but also by GPAI Junior Investigators, students involved in the work of the project, to empower the next generation in AI. This will allow the Experts of the Working Group to conduct further research and, for example, analyze the reality of using AI in companies through: (1) the impact of cultural specificities in the way AI is implemented at the workplace, and (2) the possible changes in the way in which AI systems are	**What was achieved:** - The formation of student communities, involving the younger generation in the project, and putting them in close contact with the Experts of the FoW WG who mentor them and provide an entry into the network of AI specialists. - The collection of 140 use cases over three years in more than 15 countries and across all sectors. **How it relates to GPAI's priorities** - *Alignment*: Sharing real and concrete use cases on the implementation of AI systems, is at the core of GPAI's mission on bridging "the gap between theory and practice on AI". - *Impactful and Practical*: Carried out by a group of multi-stakeholders' independent intergovernmental experts, this use case catalogue reconciles economic performance, organisational efficiency and workers' experience with real-life use cases. - *Scalable and Ambitious*: The potential of student communities is great. They can be used to launch a series of interviews with any GPAI member. - *Collaborative*: The collection of the use cases is a vast source of information for the other projects in the Working Group but also for other GPAIs Working Groups. **How it contributes to UN SDGs** - *UN SDG 3 - Good Health and Well-Being and UN SDG 8 - Decent Work and Economic Growth*, because the interviews allow to collect the core of the worker's experience with AI, and thus to identify to what extent is working with AI suitable for his well-being and if it does not pose a risk to his job. - *UN SDG 4 - Quality Education and UN SDG 5 - Gender Equality*, thanks to the agility of the questionnaire used by the interviewers, which includes a section on training and another on bias. **Next steps & forward look** - The project will continue to build student communities, the next ones are planned for 2023 with New Zealand and India. - The methodology of coaching students and interviews will be evolving, according to the feedback from

	implemented from ongoing observations.	the previous generations of students, as well following the particularities of each new Students' Community joining the work. - The use cases collected will be increasingly integrated into the platform developed by the AI Living Lab project. This, in order to make the use cases available to as many people as possible.
Project 2: AI for Fair Work		
Context	**Objectives**	**Impact**
There are no agreed-upon specific standards for fair, decent, or just work outcomes in workplaces in which humans work in tandem with AI, despite the proliferation of high-level principles for AI ethics. There is a need, which the project is intended to fill, to understand how AI systems are already shaping working conditions and ensure that AI is used to foster decent and fairer work.	The aim of this project is therefore to capture what is happening in the real context of workplaces: observe AI in the workplace, gather use cases that are as diverse as possible, conduct qualitative analyses of its impact in different situations, sectors, users. The use cases are gathered by GPAI Experts which ensures neutrality and trustworthiness but also by GPAI Junior Investigators, students involved in the work of the project, to empower the next generation in AI. This will allow the Experts of the Working Group to conduct further research and, for example, analyze the reality of using AI in companies through: (1) the impact of cultural specificities in the way AI is implemented at the workplace, and (2) the possible changes in the way in which AI systems are implemented from ongoing observations.	**What was achieved:** - This project led to the writing of the AI for Fair Work report. This report presents 10 principles for a fair AI at work, together with their implementation processes, developed through tripartite consultation. **How it relates to GPAI's priorities** - *Alignment*: By interpreting the OECD principles on AI in the context of working conditions, the project aims to create practical benchmarks against which stakeholders can assess specific uses of AI at work. - *Impactful and Practical*: Using the Fairwork methodology to conduct collaborative scoring will enable Experts to identify direct points of intervention for policy and communicate these to policymakers. - *Scalable and Ambitious*: This approach would enable repeated rounds of scoring based on the GPAI principles with a wider range of stakeholders in the future. - *Collaborative*: The proposed project is structured around three main collaborations: with the organisation featured in the case study; with the Fairwork foundation; and with the organisations scored using the Fairwork methodology and GPAI principles. **How it contributes to UN SDGs** - *UN SDG 3 - Good Health and Well-Being*, especially through Principle 7 "Improve safety" which promotes the right to healthy and safe working environments when implementing AI. - *UN SDG 5 - Gender Equality*, by Principle 4 "Strive for Equity", which aims to eliminate sources of discrimination, including those related to gender. - *UN SDG 8 - Decent Work and Economic Growth*, supported especially by this project by principle 1 "Guaranty fair work" and principle 8 "Create future-proof jobs" which tend to the creation of decent jobs **Next steps & forward look** - This project will develop one in-depth case study of principle adoption with a partner organisation. This case study will be a significant reference point for the implementation of fairer AI in the workplace which can be cited by a wide range of actors seeking to form policy or best practice. - Multi-format research outputs will be produced, shared across social and news media, detailed in academic publications and blogs for wider audience reach, and written up into a second public report specifically focused on practical implementation.

Project 3: AI Living Laboratory to Experiment Use Cases at the Workplace

Context	Objectives	Impact
The ambition of this project is to create a Living Lab that will be a place of experimentation to address societal challenges around the contribution of AI to the Future of Work. The objective is to propose both a virtual Living Lab allowing to experiment, validate, prototype AI technologies. In a second phase, a network of organizations will be created, either virtual or physical, to connect existing Living Labs, within GPAI countries and perhaps other countries. It will allow sharing applied experiments for assessing the impact of AI at both individual and company levels.	At the individual level, the Living Lab will allow workers to experience current and potential AI applications, share their experiences on AI at work, and connect with similar AI communities and individuals. At the company level, when companies connect to the virtual living lab, they will find information for effective deployment of AI, be able to conduct virtual experiments for assessing impact, find Experts for conducting experiments they already planned, and find a catalogue of guidelines for using AI in their company and/or results of experiments conducted in the workplace in similar companies.	**What was achieved:** - The project is in Phase 1, which consists of the creation of a Living Lab Minimum Viable Product (MVP). This MVP will be presented at the GPAI 2022 Summit in Tokyo. It will provide the insights and foundation for future phases. - To realise this MVP, a community of students from India was formed by the co-lead and 2 specialists. **How it relates to GPAI's priorities** - *Alignment*: Part of the GPAI's mandate being to "bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities", the Living Lab project aims to achieve this objective and foster innovation through multi-actor and network-based collaboration on the subject of AI at work. - *Impactful and Practical*: The AI Living Lab will allow users to experience AI, share their experience on AI at work, and connect with similar AI communities and individuals. The shared platform will bring forth the benefits and challenges of AI at work. - *Scalable and Ambitious*: Research work will be undertaken to analyse how Experts and companies use this platform. A creative incentivization strategy will also be considered to attract everyone to this platform. . - *Collaborative*: The proposed Living Lab may be seen as an umbrella for the studies and experimental work of the various projects proposed by FoW WG. **How it contributes to UN SDGs** - *UN SDG 4 - Quality Education*, because in addition to having a vocation of familiarisation of the AI to the greatest number, in particular for the workers, this project implied students who realised the design of the site, that it is for the technical part that aesthetic. - *UN SDG 9 - Industries, Innovation and Infrastructure*, thanks in particular to one of the sections developed in the MVP of the Living Lab, the "Build Community" part which aims to promote innovation through the work of different interdisciplinary teams on AI topics. **Next steps & forward look** - The future phases of the project will be the ramp-up of the tool, with the addition of new features related to chatbots, AR/VR, skills/learning, and tasks/skills/jobs that have the potential for international impact. - This demonstration prototype would allow the WG to contact potential partners and sponsors and to formulate the strategy to undertake next phases.

4.4 Innovation & Commercialisation Working Group

The Innovation and Commercialization Working Group (I&C for short) is composed of 42 Experts, 11 Specialists, and 6 Observers with varied backgrounds and expertise that contribute to the WG projects.The I&C Working Group studies and recommends practical tools and methods that enable private actors and research organizations to drive international collaboration on AI R&D and innovation, develop research outputs into products and processes, and transfer these results to the industry for commercialization. For the past two years, the Working Group has focused on SMEs' adoption of AI, emphasizing their importance to a country's economy.

Project 1: Broad Adoption of AI by SMEs

Context	Objectives	Impact
Small and Medium Enterprises (SMEs), Non-Profit Organizations (NGOs), and government-funded institutions typically employ 80% of a country's workforce. However, these organizations usually have low AI maturity as they often lack the resources, skills, data, or IT infrastructure to develop and adopt AI solutions. Understanding AI's capabilities, identifying AI use cases, and applying AI solutions are critical success factors for these organizations and the economies that host them. Early adopters of AI will have a critical advantage from experience with AI applications.	The project seeks to support SMEs in adopting AI to help them increase their competitiveness and ensure that their workforce will continue to be economically relevant. With the technical support of AI Singapore, the SMEs Committee has developed an 'SME Portal' as a practical tool to implement such supporting actions, namely: - Collecting quality resources to introduce AI to SMEs: by showing success stories to an SME, it can better visualize the use and impact of AI for its business; - Providing an index to measure the SME's AI maturity (AI user): the SME can understand the critical issues (e.g., linked to ethics) and evaluate its maturity level; - Providing an index to measure the AI	**What was achieved:** - The SMEs Project first established the GPAI AI Solution Portal Governance Policy. - This platform was field-tested by four Members: France, Germany, Poland, and Singapore. It will be available to Members or government initiatives willing to implement programs to boost AI adoption by SMEs. **How it relates to GPAI's priorities** - Inclusion: The outreach effort to organizations with low AI maturity ensures inclusive growth and equitable economic opportunities; no organizations are left out of the AI revolution, critical in industry 4.0. - Innovation: The project helps organizations drive innovations by assisting them to begin infusing their products, services, and business processes with AI. - Economic Growth: Organizations can create economic opportunities and growth with AI innovations. **How it contributes to UN SDG** - UN SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. - UN SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. **Next steps & forward look** The SME Committee expects to achieve the following outcomes based on the intended challenges and solutions that have been identified:

	Solution Provider's AI maturity: this index analyzes the company along various dimensions (in particular ethics/governance but also end-to-end control of AI). It serves both a pedagogical purpose (the solution provider sees where it stands and what is lacking in its offer) and a filtering purpose (only service providers mature enough are trusted on the portal); - Serving as a tool to match SMEs to qualified AI Solution providers: an SME may search for a provider to help it in its project; - Supplying a tool for SMEs to search AI use cases and identify those of interest for its business.	1. A set of best practices of outreach activities to engage enterprises, especially those who are AI Unaware and AI Aware, and encourage the adoption of AI solutions and services. 2. A Portal with an industry-focused catalogue of common AI solutions for each sector which allows SMEs to find appropriate AI solutions and AI Solution Providers. The SME Committee expects the following potential long-term outcomes: 1. Increased AI maturity of SMEs. 2. Increased AI adoption of SMEs.
Project 2: Protecting AI innovation, Intellectual Property (IP)		
Context	**Objectives**	**Impact**
Both the development and use of AI technologies have the potential to be hindered by several identified challenges when it comes to intellectual property rights (IPRs), including, for example: How to efficiently protect investment through intellectual property protection within a company developing new AI technologies? How can a company's training data set and pretrained model be protected? What	Given that the development and use of AI technologies have the potential to be hindered by intellectual property (IPR) issues, the project aims to produce an elementary guide for SMEs and startups on how to navigate and benefit from AI-related intellectual property rights. The IP Committee then identified a need to facilitate voluntary data sharing by allowing organizations to share software and content using Creative Commons,	**What was achieved:** - IP Primer: The elementary guide on IP (the IP Primer) is aimed at assisting startups and young SMEs working on developing AI-related projects. Furthermore, there is a need to facilitate voluntary data sharing along the lines that organizations currently share software and content using Creative Commons, open source and other standardized agreements. - IP Expert » Preliminary Report and Guidelines : At present, there are no standardized agreements that have been broadly adopted that expressly contemplate data sharing or address rights to trained models or outputs that are developed as a result of data sharing. This landscaping project examines emerging practices in this area, with the goal of developing recommendations to help address the need for such agreements and expand voluntary data sharing efforts.

kind of intellectual property rights will be created, and how will ownership of such IP be organized? How can a company address the different jurisdictions of IPRs, and how could this deter innovation?	open source, and other standardized agreements. The work includes a landscaping report summarizing efforts to develop standardized agreements and recommendations for advancing the work.	**How it relates to GPAI's priorities** - The IP project is aligned with GPAI's principles of inclusion, innovation, and economic growth. - Inclusion: The nature of the IP Committee uniquely presents an opportunity for international cooperation on this matter within the framework of GPAI. So far, the I&C WG has been able to leverage participation from the I&C Experts from GPAI Members, as well as increasing, active participation from Observers and Specialists from at least six countries thus far: Canada, France, Germany, Ghana, Japan, and the United States. - Innovation: Access to reliable data should help advance the development of AI. At present, there are no broadly adopted form agreements tailored for data sharing that are comparable to open source and Creative Commons agreements used for software and other copyrighted materials, respectively. The IP Committee's focus for 2023 will be on identifying paths forward to develop these form agreements, with the goal of facilitating voluntary data sharing, which in turn, should help accelerate innovation. - Economic Growth: If organizations can voluntarily share data more easily, it should accelerate economic growth for AI. **How it contributes to UN SDG** - UN SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. - UN SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels. **Next steps & forward look** This project will involve further research efforts to identify ongoing efforts to develop standardized agreements as well as interviews with leaders in this area. As part of this work, the Project plans on continuing interviews that began in 2022 with more organizations who contribute to the work being done around open data and trained model licensing.The Project Advisory Group also proposes international workshops to foster discussion and action hosted by institutions around the world.

Project 3: Broad Adoption of AI by SMEs in the Agriculture and Farming Sector		
Context	**Objectives**	**Impact**
The Agriculture & Farming (A&F) industry is an SME sector that presents specific requirements when adopting and developing AI that need to be met with appropriate strategies in order to obtain successful results. It is a sector that handles live, biological data, and it must be empowered with a commercial vision of AI development that supports not only the needs of its stakeholders (the farmers and agricultural cooperatives) but of society in general where it comes to the safety of human food chain, the welfare of animals, the optimization of crops and water resources, and the need to fight negative net migration in rural areas that will soon disappear if the young generations do not find jobs in such geographies. Today, A&F is not just about "feeding" the human race, but about managing Earth's resources for an economic prosperity based on sustainability practices that AI will help us achieve and deliver to the world, allowing Members to develop science-based policies for the sector.	This project aims to ensure that SMEs in the A&Fr are economically empowered as it relates to AI. The A&F industry is an SME sector that presents specific requirements when adopting and developing AI. Furthermore, the objective of this project is in line with the objectives of the *Broad Adoption of AI by SMEs* project, to create a dynamic and easy to consult template website of sharable resources in support of local country initiatives laying the foundations and development of AI services within the A&F industries. Setting the foundations of data-gathering and methodologies in 2022, the Agro Committee envisions that the project will be in an excellent position to achieve the 2023 milestones: 1. Reach out to AI solution providers in the Agriculture and Livestock farming sectors – issuing Requests for Information (RFI) to establish the qualification process of AI vendors; 2. Run checks on AI-readiness of small-and-medium sized farmers that could benefit from	**What was achieved:** - This Project has started to compile a resource library containing success stories, AI companies, and information about publicly available A&F data. It has started to build upon the SME Platform (from Project 1 of the I&C WG) and has begun adopting it for the specific needs of the A&F sector. - This will pave the way for future best practices and collaborative approaches among Members. **How it relates to GPAI's priorities** This project is aligned with GPAI's principles of inclusion, innovation, and economic growth. - Inclusion: The outreach effort to organizations within the SME classification which present different needs and synergies. - Innovation: The project helps industry organizations drive the adoption of AI, both sector associations and service providers in the IoT/Sensor and Agro/Farming Data Analytics. - Economic Growth: The project can address the challenges of rural communities that are hindered by unemployment, unattractiveness for young people, and low quality of life prospects if they remain analogue in nations that produce and depend on A&F products and services. **How it contributes to UN SDG** - UN SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable - UN SDG 12: Ensure sustainable consumption and production patterns **Next steps & forward look** (a) Reach out to AI solution providers in the Agriculture and Livestock farming sectors: - Issue an RFI (Request for Information) to establish the qualification process of AI vendors. - Establish the criteria for vendor selection based on Usability, scalability and success in sector optimization. (b) Run checks on AI-readiness of small and medium sized farmers that could benefit from how similarly sized counterparts in other geographies have achieved successful AI deployments. - Establish scalability criteria for AI solutions to be deployed in other geographies. - SWOT of the ecosystem of AI vendors and local farmers and incorporate into the Portal other key players or elements of success that should support it.

	how similarly sized counterparts in other geographies have achieved successful AI deployments; 3. Construct the hypotheses around the various ways in which all the informational data gathered from the case studies and the AI vendors could be queried by the future web portal users, which we assume will be fundamentally farmers, farming associations, startups and innovators wishing to discover the gaps in the sector where they could build future value, and other members of the ecosystem. 4. Build a user-friendly, natural-text based, as well as an information retrieval query facility in the Web portal and launch a minimum viable product (MVP) version in December 2023.	(c) Construct the hypotheses around the various ways in which all the informational data gathered from the case studies and the AI vendors could be queried by the future web portal users, which we assume will be fundamentally farmers, farming associations, start-ups and innovators wishing to discover the gaps in the sector where they could build future value, and other members of the ecosystem. - Run Usability test cases that will optimize the value of the Web Portal for both farmers and sector participants; Consider navigation and search modes that are likely to be used by people accessing the informational sections. (d) Build a user-friendly, natural-text based, as well as an information retrieval query facility in the Web portal and launch a minimum viable product (MVP) version in December 2023. - Define a set of users in an enclosed environment (Experts, Specialists, Farmers, Associations) that will test the first version of the portal and optimize the features as per their feedback.

5 . High-level Priorities for MEG strategic planning

The MEG welcomes the opportunity to share its priorities for its strategic planning.

Whilst we are blessed with a broad, rich and diverse portfolio across our four Working Groups, our priorities can be presented as **four cross-cutting pillars**:

1. **Initiating practical actions that can responsibly leverage the potential of AI to advance the UN Sustainable Development Goals;**

2. **Nurturing and adopting participatory governance tools** that support the inclusion of communities impacted by AI systems, from design to deployment;

3. **Helping steer emerging technical frontiers so they align with the public interest and support the protection of human rights**

4. **Supporting broader access to the economic benefits of AI and data technologies**

Our work and planning should focus on advancing these four pillars. Each of these pillars complement each other and demonstrate the synergies between the Working Groups. Together, they respond to GPAI's practical founding mission: *"to support and guide the responsible adoption of AI that is grounded in human rights, inclusion, diversity, innovation, economic growth, and societal benefit, while seeking to address the UN Sustainable Development Goals"*.

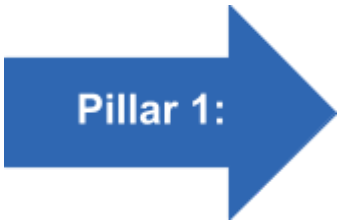
We outline the priorities that underpin these pillars below. Before we do so, we wish to present a practical, overarching priority for GPAI's Council and Steering Committee - regarding the bridge between GPAI's Experts and Member Governments:

> **The overarching priority for GPAI must be to build on the connection between Experts and Member Governments in 2023**

GPAI's mission can only be fully realised through deep and continuous practical collaboration between governments and experts at both strategic and project-level, and from conception through to implementation.

We believe the sum of GPAI's parts—a cohort of the world's leading experts on AI and data, and a group of governments representing more than 2.5 billion of the world's population, including some of the most technologically advanced—united in this mission, still offers the potential to be one of the most powerful coalitions for action on our shared mission. We now have a well developed, practical, agenda to pursue together. However, for GPAI's full potential to be fully realised, the connection between GPAI's MEG and Member Governments needs to be reviewed and strengthened in practical and meaningful ways in 2023.

We welcome the revised Terms of Reference commitment towards ensuring and fostering meaningful collaboration between Members and MEG Plenary Experts - we look forward to practical steps that can help support this collaboration at the strategic level in 2023.



Initiate practical actions that can responsibly leverage the potential of AI to advance the UN Sustainable Development Goals

The undertaking of applied AI projects within the context of the UN Sustainable Development Goals ("UN SDGs'") is at the heart of GPAI's mission. This orientation helps to ground GPAI's wider recommendations within practical, 'real-world' contexts - further reinforcing the credibility of those recommendations - as well as recognising the urgency and gravity of the challenges that the UN Sustainable Development Goals represent.

The UN SDGs therefore help to guide GPAI's wider pillars, especially when considering use case domains for novel technological or institutional approaches, as in the case of, for example, Privacy Enhancing Technologies or Data Trusts.

The GPAI framework uniquely facilitates international collaborations, and can provide incentives for other stakeholders such as industry and civil society organizations to work together. Such projects have already been launched in the past years by the RAI WG and others will be implemented for the next period.

GPAI's Responsible AI Working Group leads our priorities on the UN Sustainable Development Goals. For GPAI, it has determined the following UN SDGs as major priorities, because they present immediate challenges at the global scale and they enable to create synergies by taking advantage of international cooperation, and align with the priorities set by GPAI Members for the MEG:

- **Responsible AI for the Environment** (SDGs 6, 11, 13, 14, 15).
- **AI for fostering Human Rights and Gender Equality** (SDGs 5, 10, 16).
- **AI for Health and better living** (SDGs 1, 2, 3, 10).
- **AI for Education** (SDGs 4, 10, 1, 8)

Current flagship projects that support these priorities include the Responsible AI Working Group's projects on "Responsible AI for the Environment (Project RAISE)", social media governance, drug discovery, and pandemic resilience. In 2023, these would be complemented by the new projects proposed for 2023, including on AI and Education (by the Future of Work Working Group), and diversity & gender equality (by the Responsible AI Working Group). As noted, the other pillars and projects—such as those by the Data Governance Working Group—help establish GPAI's critical foundations for these priority SDGs.

Nurture and adopt participatory governance tools and practices that support the inclusion of communities impacted by AI systems, from design to deployment

Deeper, broader, inclusion in how AI systems and data-driven technologies are chosen, developed, and deployed, is another area where GPAI was established to make a difference. This inclusive agenda applies both *between* nations—especially in bridging the needs and power of the Global

South and Global North—and *within* nations, most pertinently at the community level with the most at stake in the impacts of AI and data driven system.

The community lens is important not only for respecting different forms of identity and organising power (e.g within tribal or indigineous communities, or workers' unions, for example), but also recognising that AI and data-driven systems can be more prone to make predictions based on group identities, as has been well documented.

Deeper, broader participation of communities has shaped much of GPAI's work thus far, especially on data justice, data institutions, and the future of work.

It will continue to do so as the Data Governance Working Group continues its foundational work on participatory data institutions: examining existing institutional data sharing in practice, as well as novel data stewardship approaches (with a wider lens that data trusts).

As our collaboration with the Open Data Institute and Aapti Institute highlights, data stewardship can be understood as an approach to data governance that is responsible, rights-preserving, and participatory in nature. It is a response to the inter-related phenomena of 'data hoarding'[9] and 'data fearing'[10] - both of which, left unchecked, could reduce the net community benefit from AI technologies.

The Data Governance Working Group's focus on data trusts identified some important characteristics and ecosystem enablers, such as financial sustainability and appropriate laws and regulation, that enable communities, nonprofits and local organizations to share data in a bottom-up way. We applied this work in the context of climate refugees in Peru, small shareholder farmers in India, and cyclists in London (UK). We are turning our attention now to the role of **data institutions** in enabling an environment of trust to ensure an effective engagement and presence of communities at different stages of the data life cycle, with a specific focus on climate refugees and INGO operations surrounding the Lake Chad Basin.

The Future of Work's priorities spotlight how these efforts can be expanded to consider algorithmic accountability and extended to workforce participation. Proposed priorities include:

- **equipping the workforce with the means to help shape AI's use in the workplace** (through rights to participate in and co-determine the development and deployment of AI technologies, including training options to do so fully);
- In connection to the above, **studying to what extent and how AI technologies could empower workers**, and enrich their work experience; and
- **exploring how AI could support better inclusion of disabled communities** in the workforce.

Through working in partnership with communities directly impacted on the ground, whether they are climate refugees or workers, we will be able to shape and determine the most effective participatory tools for AI and data governance.

[9] 'Data hoarding' relates to a scenario where organisations restrict access to data due to misperceptions about its value to their operations or the risks associated with data sharing. The benefits of data collection and use would only be enjoyed by a few, while the negative impacts of its use would affect society as a whole.

[10] 'Data fearing' relates to a scenario where data might not be collected or used to the extent it could, due to concerns about the harm that it can cause people being left unaddressed

Pillar 3: Steering emerging technical frontiers towards the public interest and the protection of human rights

GPAI's work thus far highlights how technology's governance needs to evolve in response to rising adoption of AI and data-driven technologies. GPAI's multistakeholder expert approach offers a sound platform and resource to evaluate how these emerging technologies can be steered towards the public interest and the protection of rights.

Given its centrality to GPAI's founding mission, this is a shared priority across the Working Groups, spanning how data is collected, used and shared for training AI models, through to their development and deployment:

- For example, our work on **data justice** has illustrated how we need to raise the profile of and emphasise data rights beyond privacy - including data sovereignty, collective rights, indigenous data rights and economic justice. We will continue to do so by (a) applying that data justice lens to our work more broadly, and (b) developing a series of policy briefs to support the implementation of rights-preserving and economically enabling governance and regulatory environments, with our next step being on co-generated data rights (i.e affording data rights to persons or communities that had a share in generating data).
- Meanwhile, the first high-level priority of the Responsible AI Working Group is to **address frameworks and methodologies to operationalise AI ethics principles**, including tools and mechanisms to evaluate AI systems for responsibility and trustworthiness based on metrics such as accountability, transparency, fairness, respect for human dignity and rights, and the promotion of equity.
- We also appreciate the value in ensuring these efforts reflect and recognise best practices where they exist. A priority of the Innovation & Commercialisation Working Group is to **evaluate the commitments of companies to the OECD AI Principles**. The two indices we have developed AIMIND for users of AI, SPMIND for AI service providers) include dimensions to analyze this commitment. We need to analyze whether these indices serve their purpose, how they're perceived and used by companies, and check whether they help companies progress in their commitments.

In undertaking this work, we wish to anticipate the impacts of emerging technologies in the field, and would highlight the need to explore three areas:

1. **The adoption of rights-preserving technologies such as privacy-enhancing technologies (PETs).** We need to develop further evidence to increase the adoption of technologies that help enact agreed-on principles of data governance. Our work on PETs and associated technologies will demonstrate both their potential and the reality of how they integrate with other forms of governance.
2. **The implications of the rise of Foundational Models**, based on transformer technology which are designed to build more general AI systems. An instance of such systems are large language models. Whilst these systems have showcased some impressive capabilities, they also use immense amounts of data for pretraining, are very opaque and are weakly controllable. In the wrong hands, they could present societal risks including misinformation campaigns and criminal fraud. Although there is a clear public interest in the

development of these technologies, the vast majority of technical research is currently taking place in the commercial sector, owing to the level of compute required. They raise many policy questions, including regarding liability and intellectual property.

3. AI is also creating significant advances in the deployment and adoption of the **Industrial Internet of Things** in manufacturing thanks to other emerging technologies that AI empowers, such as **Augmented Reality**, **Virtual Reality**, **Computational Vision** and **Satellite Hyperspectral** vision. In addition, we want to monitor more closely the evolution of **blockchain technology** as a complementary technology to help AI resolve the data integrity and data provenance challenges, as well as AI becoming the technology that blockchain needs to scale up.

The rise of Foundational Models in particular demonstrates the importance of supporting and developing nimble and flexible governance approaches for AI. The default legislative approach can take many years: GDPR for example was first proposed in 2011, and implemented in 2018. In the same timespan, public understanding of AI has shifted from it being 'narrow' and for repetitive (as opposed to creative tasks) in 2015, to today's models that can switch between producing code, text - or win art competitions.

New projects in 2023 will respond to this challenge for more agile governance approaches, beginning with one led by the Responsible AI Working Group on **regulatory sandboxes**. Recognising that this will likely need to be expanded, it will also shape our future project planning, whilst ensuring this is in complement and in collaboration with other international organisations such as the OECD.

Support broader access to the economic benefits of AI and data technologies

The potential of AI technologies to transform national economies has been well documented for many years. Our concern is that the benefits may not be equally shared. As with the second pillar on participation, this concern applies both within and between countries.

For this reason, the Data Governance Working Group collaborated with India-based IT for Change on its data justice workstream to develop a Primer on Economic Justice. Economic Justice is defined as "a set of moral principles for building economic institutions, the ultimate goal of which is to create an opportunity for each person to create a sufficient material foundation upon which to have a dignified, productive, and creative life beyond economics". In the context of data justice, this calls for greater recognition in law regarding the inalienable social and community embeddedness of data for AI.

The Innovation & Commercialisation Working Group has considered this pillar from the perspective of Small and Medium-sized Enterprises (SMEs), and has highlighted the following priorities:

a. **Develop tools to help SMEs accelerate their adoption of AI solutions.**
   The work primarily aims at the development of supporting tools. On the one hand, a SME platform framework provides a suite of tools such as AIMIND and SPMIND to help SMEs and AI Solution Providers determine their AI maturity. A matching feature to match SMEs to qualified AI Solution Providers. Localized AI resources assist the SME in understanding AI.

The AIMIND and SPMIND indices also provide Members with a way to better understand their country and industries AI maturity level, which can help in developing more targeted intervention programmes. In addition, individual tools for industries such as agriculture and farming are being developed to assist SMEs in that domain.

b. Develop tools to help SMEs navigate regulations as they expand globally.

Since AI is regulated in many GPAI countries through different mechanisms, it is necessary to provide tools to assist the SME in evaluating the impact of these different regulations and policies on the SME's business plans as they expand to new countries and aggregate practices to best comply with those.

c. Support SMEs' understanding of IP and data issues with respect to AI.

SMEs face challenges when developing and scaling AI solutions due to the complex landscape of AI specific IP and data law. The working group works on a set of tools and guides to help them understand the issues of data and IP at a global perspective when deploying AI using a language they can understand.

d. **Support companies of all sizes to boost their usage and benefits of AI**.

All companies can benefit from AI, but we identify 4 levels of maturity (AI Unaware, AI Aware, AI Ready and AI Competent) with our AI maturity index for users. To each of these levels, we need to propose adapted services. The SME platform addresses AI unawares, it needs to be deployed by Members; it is being specialized for the Agro & Farming sector; more vertical adaptations could be developed. More tools could also be developed to address companies at other maturity levels.

e. **Evaluate the impact of regulation on innovation and commercialization**.

Since AI is regulated in many GPAI countries through different mechanisms, it is necessary to provide tools to evaluate the impact of these different policies to better understand and give Members means to adapt and fine tune their mechanism.

6. Strategic recommendations for GPAI Members

The MEG is pleased to share 12 recommendations for GPAI Member Governments to act on. As with section 5, we begin by presenting one overarching recommendation.

As stated before, the participation and collaboration of GPAI's experts and its member governments is critical to maximising the impact of the GPAI initiative.

As France made its address as the incoming Council Chair in 2021, we were pleased to accept President Macron's invitation at Summit 2021 on behalf of GPAI Members to "be a beacon that helps us to find our way through these new technological oceans", and welcome the President's proposition that "We, heads of State and Governments, are counting on you, and it will then be up to us to decide on collective rules and to be the guarantors of them".[11]

Under Section 5, the overarching priority that we have set GPAI is to review and strengthen the collaboration between GPAI Member governments and the MEG at the strategic level. Under this section, we reinforce that priority with a parallel recommendation for GPAI's Members:

Recommendation 1: GPAI Members should consider which projects under the 2023 Work Plan that they would like to adopt, by joining the respective project steering group and/or supporting the scaling and implementation phase.

In the first two years of GPAI, we have been pleased to collaborate with GPAI Members in projects including:

- **exploring how trustworthy data institutions can help address the climate crisis** (with collaborators including the UK Government's Office for AI, the Open Data Institute, the Aapti Institute, the Data Trusts Initiative, and the refugee support organisations;
- **delivering practical demonstrations of Privacy Enhancing Technologies** in two use cases aligned with the GPAI Council priorities on health (pandemic resilience) and climate (sustainable cities), in collaboration with Singapore's IMDA, as well as exploring additional collaborations and/or partnerships;
- **advancing understanding on the research and practice of data justice** amongst policymakers, developer communities, and marginalised communities with piloted guidance (and collaborators including the UK Government's Office for AI, Research ICT Africa, IT for Change, the Alan Turing Institute, and 12 local partners to pilot the guidance across Africa, Asia, Latin America, and Oceania); and
- implementing the first recommendation from **the Responsible AI Strategy for the Environment** roadmap presented at COP26, with the construction of a **Net Zero Data Space for AI developers** (in collaboration with the UK Department for Business, Energy, and Industrial Strategy, and the Centre for AI and Climate)

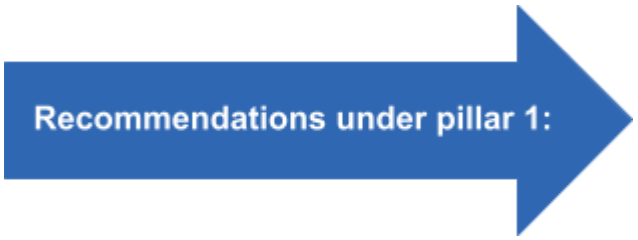
[11] Opening session of the 2021 Summit

In each case, the Working Groups have been pleased to collaborate with the GPAI Members' local institutions, as part of a networked approach.

We believe these examples of practical Member-Expert collaboration represents the path forwards for GPAI, and wish to see such collaboration take place across a broader number of projects and with a wider set of Member Governments in 2023.

The wider recommendations are presented in this section with that goal in mind, although if there is a specific project of interest to a Member Government, then Working Group Co-Chairs and project co-leads will welcome the opportunity to discuss. Please get in touch via the Centres of Expertise.

Our recommendations are organised to align with the MEG priorities and the four pillars. This is in order to provide a clear demonstration of how these actions by GPAI Members would build upon the MEG's work:



Initiate practical actions that can responsibly leverage the potential of AI to advance the UN Sustainable Development Goals

As the lead Working Group on the UN SDGs, Responsible AI has presented a series of strategic policy recommendations that policy makers can implement to foster Responsible AI (RAI) in their jurisdiction. Some of these recommendations also propose concrete measures to further develop the international collaborations needed to ensure that we achieve the full potential of RAI on a global scale and that we leave no one behind in our path. These recommendations can be found in different thematic reports on the GPAI's RAI WG webpage, the first one being "Areas for Future Action in the Responsible AI Ecosystem" (2020). A summary of the 2022 projects on climate action, global health, and social media governance, can be found in section 5 of this report.

Beyond these recommendations, we now propose two overarching actions to help governments galvanize the AI community around the specific objective of RAI to better draw on the distinctive leadership, expertise and capacities that this dynamic community has to offer. These recommendations are that GPAI Members come together to:

Recommendation 2: Launch a Series of 'Grand Challenges' for Responsible AI

Recommendation 3: Develop specific SDG accountability tools for the AI community

Recommendation 2: Launch a Series of 'Grand Challenges' for Responsible AI

Grand Challenges are a strategic instrument for advancing scientific, social or technical objectives and having an impact in a short period of time (e.g., two to three years). The Grand Challenge model is deployed in different areas, including in global health through the Bill and Melinda Gates Foundation, in defence through the DARPA program and in technological developments for impact

through the XPRIZE foundation. It is also a tool to involve multiple stakeholders towards a well-defined target or problem and stimulate creativity and innovation for its resolution. We would propose that GPAI launch a series of Grand Challenges on the specific theme of “Responsible AI”. The main purpose would be to encourage and showcase the deployment of RAI initiatives on high-priority themes for GPAI, such as climate change, misinformation, desinformation, fake news, and gender equality (see the priorities mentioned above). The RAI WG has proposed a more targeted version of such challenges in one of its 2023 project proposals called the “RAI Deployment Challenge” that aims at demonstrating criteria for success in scaling RAI solutions. This would be a first step towards better defining Grand Challenges scope and impact.

Grand Challenges work by first defining a key objective (which includes specific outcomes or outputs) that orients the contest. For instance, in the case of the DARPA program, potential participants were invited to conceive a vehicle that would autonomously drive a defined route in less than 10 hours. As another example, a grand challenge was launched to enable data-centred public health interventions through foundational tools, standards and protocols.

A Grand Challenge contest determines precise criteria for success. For a RAI Grand Challenge, these could include (for illustrative purposes):

1. Demonstrate that the proposed tool or action will improve the SDGs and Human Rights;
2. Build a collaboration between global south and global north partners;
3. Demonstrate a positive impact on gender equality and marginalized communities;
4. Improve access and knowledge around RAI for policymakers or civil society;
5. Bridge the gap between SDG principles and their practical implementation in AI;
6. Be driven by a commitment towards open science and data sharing (including for any output coming from the project);
7. Have the potential to impact the proposed objective within a time frame of 15-20 months.

The outputs from applicants can vary in nature; some can offer AI prototypes or pilot, data platforms, educational or policy tools (training materials or regulatory sandbox models for instance), concepts (exploring an idea for its feasibility to build a product, service or business model) or others. The funding can be adapted to the different types of output produced and applicants can be an individual, a team, or an organization.

The funding needed to launch a Grand Challenge is variable. It can range from a relatively small amount (for example: 250K for selected projects) to a much more substantial amount (i.e millions). The amount depends on the objectives of the Grand Challenges selected, the level of maturity required from the proposed projects (explore, growth, scale) and the resources Members and other stakeholders are willing to pull in. GPAI could manage the RAI Grand Challenge funds, e.g., through the Centres of Expertise, or other types of financial governance structures could be defined, e.g., through financing agencies in Member States. A multistakeholder and transparent jury board would need to be created for the Grand Challenges.

If done properly, such challenges can galvanize the most creative minds around the world towards a well-defined target and encourage collaborations between different communities (researchers, industries, NGOs, etc.). We encourage GPAI to further explore this option in collaboration with interested Members, the private sectors, NGOs, international organizations, or other stakeholders.

Recommendation 3: Develop specific SDG accountability tools for the AI community

The SDGs are the main internationally agreed roadmap to guide countries in achieving a better and more suitable future for all. Adopted in 2015 by 193 countries, they provide 17 goals to address global challenges such as poverty, health, environmental degradation, peace and justice. These goals are also linked to a set of targets and indicators that guide countries in benchmarking their progress with respect to the SDGs. While the potential role of digital technologies and AI in helping with (but also harming in some circumstances) the achievement of the SDGs has been recently recognized by the United Nations and the academic community[12], there is a need for additional mechanisms or tools to evaluate the specific impacts of this technology with respect to the achievement of the SDGs. States can take some collective actions to push for the development of such tools at the international level or they can do so within their own countries to guide the AI community. These mechanisms and tools can take different forms, such as crafting specific indicators and targets relevant to AI in the realization of the SDGs or developing "SDG Impact Assessments" for various sectors or projects in AI. In the case of SDG Impact Assessments, collaborative projects or efforts with UNESCO could be envisioned as the organization is currently working on developing an Ethical Impact Assessment model pursuant to the adoption in November 2021 of its Recommendation on the Ethics of Artificial Intelligence.

Ultimately, developing a robust set of accountability tools for AI applied to SDGs will create a more active and transparent dynamic of responsibility to guide and evaluate how AI helps in achieving the SDGs. This is helpful to close the gap between how AI systems are developed and used and how SDGs are achieved.

These tools that countries can develop jointly or individually can be tailored depending on the AI stakeholders they are aiming at. To have such tailored options, countries can mobilize collective know-how and experience, and engage all relevant stakeholders in the AI process towards the creation and implementation of such means of accountability. They can drive a participatory process with key AI stakeholders - like policy-makers, civil society and representative organizations of women and marginalized groups, industry, etc. - to design accountability mechanisms and ensure their relevance. States can also promote the respect of such tools by rewarding AI stakeholders that respect them in public procurement or otherwise. It should be underlined that while States are the formal duty bearers with respect to the SDGs – and therefore have the main duty to follow up and ensure their achievement – all (AI) actors can act upon them at their own scale, as the UN mentions.[13] The SDGs are an ambitious and collective endeavour.

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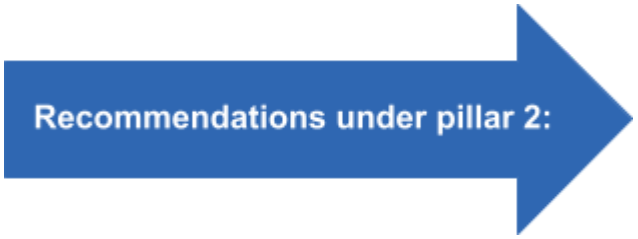
12 Bozkir Volkan in "Advances in Science, Technology Crucial for Equitable Pandemic Recovery, Global Growth, Speakers Stress, as Economic and Social Council Opens Multi-Stakeholder Forum", ECOSOC/7043, UN Press, 4th 2021. https://press.un.org/en/2021/ecosoc7043.doc.htm ; Vinuesa R, Azizpour H, Leite I, Balaam M, Dignum V, Domisch S, et al. The role of artificial intelligence in achieving the Sustainable Development Goals. Nat Commun. 13 janv 2020;11(1):233.

13 ONU, A.G, «Transformer notre monde, le Programme de développement durable à l'horizon 2023» A/RES/70\1, 25 September 2015



Nurture and adopt participatory governance tools that support the inclusion of communities impacted by AI systems, from design to deployment

As with Pillar 1, our two strategic recommendations for GPAI Members on participatory tools is an invitation to collaborate on our priorities shared under Section 5. The development and use of participatory tools and practices, so that impacted communities can help shape the design and deployment of AI technologies, is an essential step towards ensuring that AI is aligned with human flourishing. We make two complementary recommendations for how GPAI Members can contribute towards this goal:

Recommendation 4: GPAI Members and international initiatives should consider making strategic investments in new and existing institutions that steward and share data

Recommendation 5: GPAI Members should consider how they can ensure participation and co-determination is strong in enterprises regarding AI adoption

Recommendation 4: GPAI Members and international initiatives should consider making strategic investments in new and existing institutions that steward and share data

These range from established data holders such as national statistics offices through to novel data trusts, cooperatives and unions. We believe institutions are required to support data sharing for the development of AI, but they need to be financially sustainable and effectively governed.

As outlined by one of our collaborators, the Open Data Institute, data institutions are organisations whose purpose includes stewarding data on behalf of others, often towards public, educational or charitable aims. They play roles such as holding data on behalf of an organisation, person, or group; combining or linking data from different sources; creating open datasets that anyone can access, use and share to further a particular mission or cause; and developing and maintaining common data infrastructure for a sector or field.

Data institutions take many forms, from data cooperatives to data trusts or data unions to data coalitions, there is no ‘one-size-fits-all’ model. However, they have already demonstrated that they have a foundational role to play in unlocking some of AI’s most powerful benefits. The UK’s Biobank is a regularly cited example of a data institution that enabled the UK to play a leading role in early detection of COVID-19 variants through responsible stewardship of more than a million people’s data, established as part of an investment in 2006.

Meeting the challenge of the UN Sustainable Development Goals will require further such far-sighted investments in data institutions at a global level. As expressed elsewhere in this report, the nature of AI technologies in relation to their use of data, as well as GPAI’s ambition to bridge

international efforts between the Global South and North, will underline the importance of community participation and empowerment.

GPAI Members should be prepared to test novel approaches such as data trusts to see how they can help ensure community trust. However, they should also explore how existing practice on trustworthy data institutions could be applied or adapted to the great challenges represented by the UN Sustainable Development Goals.

Such a 'problem-first' approach is the direction that the Data Governance Working Group has taken, in its exploration of data institutions within the context of climate migration in the Lake Chad Basin. With the support of Thomas Nkoudou, a CEIMIA Researcher-in-Residence from Cameroon, the Working Group is consulting on the ground with both refugee support organisations and communities on their needs and expectations for a trustworthy institutional approach to the collection, use, and storage of data.

The Working Group would welcome consideration by GPAI Members on how a long-term, strategic investment in data institutions could help scale up efforts to apply AI against the UN Sustainable Development Goals, and would be happy to work alongside CEIMIA in considering how this could be developed as part of network of organisations that could be supported in this work. This would be a powerful enabling step in complement to Recommendation 2 (the Responsible AI Grand Challenge), and would likely integrate with the technical dimension of Recommendation 7 (on Privacy Enhancing Technologies and associated rights-enhancing technologies).

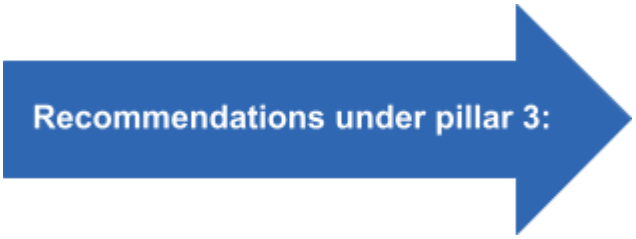
Recommendation 5: GPAI Members should consider how they can ensure participation and co-determination is strong in enterprises regarding AI application

Artificial Intelligence is transforming the way we live and the way we work.

Despite fears, AI is expected to change jobs more than destroy them. New types of jobs are also emerging, as for example new skills could be needed to adapt to the reorganization of tasks and/or the emergence of new tasks.

However, it is not yet certain that the new jobs created by AI will be enough to compensate for the transformed and lost jobs. Also, AI raises concerns about privacy and data protection, seeing that it requires the collection, storage, processing and analysis of large amounts of data.

To ensure the successful appropriation of AI by workers and businesses, an active dialogue between these two parties is needed, fueled by co-determination and participation in decision-making. The employer must inform and consult with representatives and workers about the AI systems being deployed, to understand how the technology is being used, and how it will impact hiring and firing. This balanced approach would allow for the most human-centric use of AI in the workplace.



Steering emerging technical frontiers towards the public interest and the protection of rights

We are pleased to share three recommendations for GPAI Members under this pillar:

Recommendation 6: GPAI Members should consider how data protection laws, economic regulation and their own practices could incorporate a broader understanding of data rights and justice

Recommendation 7: GPAI Members should consider encouraging experimentation with PETs and associated technologies that are aligned with data rights and justice

Recommendation 8: GPAI Members should consider the merits of either a formal AI regulation framework or industry guidelines

Recommendation 6: GPAI Members should consider how data protection laws, economic regulation and their own practices could incorporate a broader understanding of data rights and justice.

This consideration should include the individual and collective rights of those represented in and impacted by data, such as the right to benefit from it; rights of data access and portability; rights to appropriate representation in data; and rights to participation in data governance. We believe economic regulation is needed to redress the uneven distribution of opportunities, not only harms, and to ensure data access, availability, accessibility, usability, integrity and security, as well as to combat concentration of ownership.

The Data Governance Working Group's Primers on Data Justice for policy makers and on Economic Justice provide detailed recommendations on the rights that policy makers should consider including when reviewing data governance legal framework in light of AI. We recommend that GPAI Members draw upon these resources when doing so, and the Data Governance Working Group would be happy to be consulted and engaged by GPAI Members undertaking reviews of their legal frameworks on data governance.

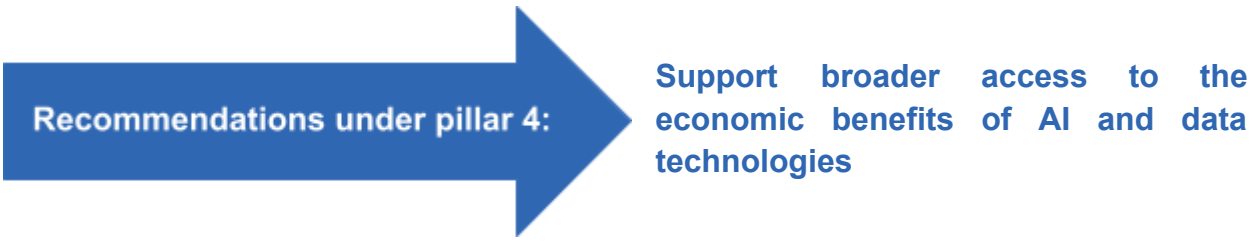
Recommendation 7: GPAI Members should consider encouraging experimentation with PETs and associated technologies that are aligned with data rights and justice.

The MEG is committed to supporting practical demonstrations for how technologies used to enhance privacy, justice or rights can help increase the availability / usability of AI systems. We aim to demonstrate technical means to safely develop and use data sets while preserving privacy, sovereignty and IP rights for public good projects.

Our efforts are complemented by wider initiatives, such as the US-UK Prize Challenge collaboration and the UN PETs Lab. A plurality of initiatives is welcome and will be mutually enriching, given that PETs represents both a range of technologies and holds application across a variety of verticals. It's important that this growing community of public institutions ready to support practical experimentation can come together to develop practical guidance for data scientists, and considers how they work together to raise awareness of, and confidence in, such technologies, and guidelines to feed into international standards and/or minimum technology specifications.

We therefore encourage GPAI Members to consider following suite, and we would be happy to collaborate further as we are pleased to do so with Singapore. We believe this will grow the evidence base for their appropriate adoption, and accelerate the development of suitable technologies.

Recommendation 8: GPAI Members should consider the merits of either a formal AI regulation framework or industry guidelines to assist companies understand proper use of AI to enable them to execute their business with considerations for the OECD/GPAI AI principles.



Recommendation 9: GPAI Members should consider how they can support broad information and citizen awareness about potential AI applications in the work place and their challenges, risks and benefits

Recommendation 10: GPAI Members should consider how they can foster international/global exchange on strategies for responsible and fruitful use of AI in the workplace – especially for young professionals, students and pupils

Recommendation 11: GPAI Members should consider specific intervention programmes to help SMEs accelerate their adoption of AI

Recommendation 12: GPAI Members should consider training and development programmes

Recommendation 9: GPAI Members should consider how they can support broad information and citizen awareness about potential AI applications in the work place and their challenges, risks and benefits

Recent developments in AI have rekindled fears about large-scale job losses and employee well-being. However, the development of AI presents us with a mix of risks, challenges and

opportunities. AI also has the potential to complement human capabilities, leading to higher productivity, greater demand for human labour and improved job quality.

Everyone should be empowered to benefit from the advantages of Artificial Intelligence in the workplace.

To ensure such an empowerment, workers need to have a clear understanding of the risks and benefits of the use of AI, to therefore be in a position to make their own, informed choices. Information and awareness will be needed in order for workers to actively participate in discussions about how and to what extent we want to use AI at the workplace and in our societies.

This can be ensured in several ways. First of all, ensuring transparency about the use of algorithms and artificial intelligence, and that workers are empowered and informed when interacting with them. Secondly, education- workers should be offered the possibility to acquire an understanding of AI and the skills needed to work with it. It is important to provide training and guidelines so that the pervasiveness of AI is accompanied by worker awareness.

Lastly, more generally access to impartial information regarding Artificial Intelligence is needed for workers to actively participate in discussions and design activities- workers and citizens need to know about the potential and limits of AI. Communication about AI can often be dominated by unrealistic narratives, and access to unbiased information and data could greatly help workers in understanding the potential and limits of AI.

Recommendation 10: GPAI Members should consider how they can foster international/global exchange on strategies for responsible and fruitful use of AI in the workplace – especially for young professionals, students and pupils

A global multistakeholder exchange is a crucial step in ensuring a human-centric, responsible and fruitful use of AI in the workplace.

In terms of design and implementation of AI, it is necessary to create and maintain a multidisciplinary and cross-stakeholder exchange, to pool together information and views in order to reach an acceptable tradeoff giving the benefit and possible risks.

However, addressing the design and implementation phase is important but not sufficient, as AI systems evolve over time.

Beyond the design of AI and its uses, it’s important to foster more broadly an awareness of AI use. This is why we promote multigenerational dialogue. Involving the younger generations in the study of the future use of AI in the workplace is of crucial importance to GPAI and the WG Future of Work. A community of students, the GPAI Junior Investigators, were brought into the Working Group in 2021. From Canada, Europe and Japan (since 2022), they have conducted interviews at companies and helped analyze the results of this work. A new community of students and researchers from India and France was also created to help build the AI Living Lab. This long-term and future-proof approach allows for students, who are going to work with AI in the future, better understand this technology and its uses. This in turn feeds into the empowerment of future generations of workers in the design and use of AI. This community will be a major strength to prepare our societies for the future.

Recommendation 11: GPAI Members should consider specific intervention programmes to help SMEs accelerate their adoption of AI, to ensure SMEs do not get left out of this new ecosystem.

Small and Medium Enterprises (SMEs), Non-Profit Organizations (NGOs), and government-funded institutions typically employ 80% of a country's workforce. However, these organizations usually have low AI maturity as they often lack the resources, skills, data, or IT infrastructure to develop and adopt AI solutions. GPAI Members should therefore consider specific intervention programmes to help SMEs.

Recommendation 12: GPAI Members should consider training and development programmes not only for Masters and PhD level, but also ensure collaborators, students, and the wider general public understand AI through general AI awareness programmes. Initiatives such as Elements of AI should be supported, scaled up, and expanded to include creative campaign partnerships including industry, academia, schools, libraries, and public broadcasters, to maximise reach, engagement and impact.

7. Call to Action & Next Steps

The MEG is pleased to see how far we've come since GPAI's launch back in June 2020 in the middle of Covid-19 pandemic. Experts have delivered a large breadth of work and increased international collaboration in AI by leveraging partnerships that have spanned every region of the globe. The hard work taken for the last two years has paid off. The MEG has a practical agenda now ready to go for scaled collaboration with GPAI Member Governments. This report helps articulate how we can ensure that GPAI initiative can bridge the gap between theory and practice and become the full sum of its parts.

Experts of the MEG have put at the heart of their work ensuring responsible, ethical and fair development of AI while supporting economic growth. The MEG strongly believes that GPAI, as a multistakeholder initiative, has a fantastic set of assets to make a difference in the responsible development of AI by bringing together world-class experts, global reach and government engagement.

AI can bring many positive changes but all of these don't just happen by themselves. We have to choose it and provide a framework for its responsible development. That's why we, the experts, are all here today. This report represents a call to action to move from recommendations to practical implementation.

Writing this report has been a valuable exercise for the MEG itself in considering the synergies that we can build on in future planning between the Working Groups. We presented an overview of our projects which address GPAI's top priorities: climate change and biodiversity preservation, the fight against pandemics and global health, and the impact of AI on human rights.

Reflecting on what has been accomplished so far, the MEG recommends that GPAI prioritize building on the connection between Experts and Member Governments in 2023. GPAI's mission can only be fully realised through deep and continuous practical collaboration between governments and experts at both strategic and project-level, and from conception through to implementation. A first step to move this forward would be for the Member Governments to adopt a project from 2023 Work Plan (see next page), or engage with the Working Groups via the Centres of Expertise on specific recommendations.

We look forward to the response and developing this work in future!

The Multistakeholder experts plenary group (MEG)[14]

[14] See Annex 1 for the full list of GPAI Experts.

2023 Work Plan Overview

For 2023, the Working Groups intend to continue nine of its current projects and initiate eight new ones that were identified through an ideation process started last January. These new proposals would focus on issues that could benefit the 'whole of society' by building momentum and a significant practical impact with GPAI's members. The Working Groups proposed the following projects for 2023 subject to GPAI Council approval at the 2022 Tokyo Summit.

Responsible AI	• **Towards Real Diversity and Gender Equality in Artificial Intelligence**: map practices that incorporate effective gender and diversity approaches throughout the AI cycle. • **Sandbox for responsible governance – a procurement scenario** : develop and test prototype sandbox to test new technologies transparently and to contribute to evidence-based lawmaking. • **RAI deployment challenge & fund** : design public challenges to propose implementations of responsible AI solutions that would be practical, beneficial and scalable. • **Responsible AI Strategy for the Environment (RAISE)**: developing AI adoption strategy for climate action and biodiversity preservation and implementing the opportunities identified with a target audience that includes GPAI member countries, international organisations and investors. • **Optimising social media recommender systems for socially positive outcomes** : conduct a fact-finding study with a social media company to explore ways of modifying recommender systems, to achieve socially positive impacts.
Data Governance	• **Privacy Enhancing and adjacent technologies for well-governed data access for AI** : demonstrate the viability of AI systems in helping achieve the UN SDGs such as global health and climate action, by providing a means to safely develop, use and share data while preserving privacy, sovereignty, personal integrity, IP rights, and security. • **Formulating transnational legal principles governing rights in co-generated data and third-party data** : review how "co-generated data" have been developed to date by reviewing existing initiatives, such as the recent EU Proposal for a Data Act, and outline how those initiatives address an AI-specific context, and what further protections legal, technical and institutiona could be required. • **The role of government as a provider of data for AI** : support governments to make decisions about whether and how to share data they steward with AI developers. • **Enabling Data Sharing trough Data Institutions in Climate Change Context** : recommendation to undertake a broader exploration of how data institutions and AI applications could make a difference on climate-induced migration in the Lake Chad Basin region, engaging with local organisations and communities.

Innovation & Commercialization	• **Broad Adoption of AI by SMEs :** create a set of best practices to operationalize the SME AI Solution Portal to reach SMEs (AI aware and AI unaware) and solution providers. • **Protecting AI innovation, Intellectual Property (IP)** : developing recommendations to help address the need to facilitate voluntary data sharing and expand voluntary data sharing. • **Broad Adoption of AI by SMEs in the Agriculture and Farming Sector** : create a dynamic and easy to consult template website of sharable resources in support of local country initiatives laying the foundations and development of AI services within the Agricultural & Farming industries. • **Boosting innovation while regulating AI** : outline concrete regulatory approaches globally as good examples for adhering to the principles for AI regulation that will be evaluated against a list of defined metrics by the I&C WG.
Future of Work	• **Observation Platform of AI at the workplace** : design the prototype of an Observation Platform that will be directly integrated into the virtual Living Lab developed by the FofW to strudy the impact of AI on at work. • **AI for Fair Work** : develop one in-depth case study of principle adoption with a partner organization to act as a significant reference point for the implementation of fairer AI in the workplace. • **AI Living Laboratory to Experiment Use Cases at the Workplace** : create a Living Lab that will be a place of experimentation to address societal challenges around the contribution of AI to the future of work. • **XAI for education** : build set of tools and techniques used to help people understand how artificial intelligence systems generate certain decisions • **CAST (Constructive Approach to Smart Technologies)** : design Framework for AI Based Solutions.

ANNEX 1

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