ITUPublications

International Telecommunication Union

United Nations Activities on Artificial Intelligence (AI)

2022

Executive Summary

Highlights

- *40 entities participated, 281 projects presented, 84 new projects.*
- *Strong focus continues to be maintained on SDGs 3 (Good Health and Well-being), 9 (Industry, Innovation and Infrastructure), 10 (Reduced Inequalities), 16 (Peace, justice and strong institutions) and 17 (Partnership for the Goals). In 2021, SDG 13 (Climate Action) featured among the top five SDGs and while focus remains consistent on it this year as well, the number of projects reporting work on SDG 16 (Peace, Justice and Strong Institutions) has increased bringing it to the top 5 SDGs being addressed by the projects submitted in 2022.*
- *More focus continues to be needed on SDGs 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 12 (Responsible consumption and production), 14 (Life Below Water) and 15 (Life on Land). In the 2021 edition, SDG 2 (Zero Hunger) was presented as an area requiring more focus. Progress seems to have been made in this respect, and SDG 12 (Responsible consumption and production) is now an area requiring greater attention.*
- *Multi-stakeholder collaborations continue to remain a priority for the UN system with:*
    - Almost 40% of projects collaborating with entities within the UN.
    - Almost 25% of projects featuring collaborations with the academia and government, and 20% collaborating with the private sector.
- *Consistent with the findings of the 2021 edition, software tools and reports are the most common outputs of UN AI projects, which can be used to address challenges impeding progress on the SDGs.*

Urgent action is needed to achieve the Sustainable Development Goals (SDGs) by 2030. With the potential to drive progress across all 17 SDGs, the use of Artificial Intelligence (AI) can help speed and scale interventions for this purpose.

Recognizing this, the different bodies, agencies, offices and departments of the UN system have been exploring ways to leverage the potential of AI to drive change and impact across their issue areas. In 2020, the UN System Chief Executives Board for Coordination (CEB) and its High-Level Committee on Programmes (HLCP) established the interagency working group on AI (IAWG-AI), co-led by ITU and UNESCO, to bring together UN system expertise on AI in support of the CEB and HLCP workstreams on the ethics of AI (led by UNESCO) and the strategic approach and road map for supporting capacity development (led by ITU), and the related gap analysis effort carried out by ITU, informed by the UN Activities on AI Report, to identify the gaps in UN AI-related activities in order to help the UN system prioritize strategic actions.

Since 2021, the IAWG-AI has successfully galvanized expertise from across the UN system as well as external stakeholder groups to advance the responsible development and use of AI in the UN, underpinned by ethics and human rights, while driving forward the 2030 Agenda on Sustainable Development. As part of the IAWG-AI, UNESCO and OICT have led the development of the Principles for the Ethical Use of Artificial Intelligence in the United Nations System, which were

based on UNESCO's Ethics of AI Recommendation and endorsed by the HLCP at its 43rd session and the CEB in 2022.

In 2022, the AI for Good platform, organized by ITU in partnership with 40 UN Sister Agencies and co-convened with Switzerland, has reached over 260,000 online views, including an 81,000-strong multi-stakeholder community involving 180+ countries and has consistently attracted broad based international media coverage, making it the leading action-oriented, global and inclusive United Nations platform on AI.

Recently, AI for Good has launched the Neural Network: an AI-powered community networking and content platform designed to help users build connections with innovators and experts, link innovative ideas with social impact opportunities, and bring the community together to advance the SDGs using AI. AI for Good Partners can showcase their work on the Neural Network through weekly live sessions, virtual exhibitions, networking features and interactive content. UN Partners have also created "poster boards" in the "UN SDG Zone" of the platform to virtually exhibit their work on AI, viewable by all Neural Network users, and open for interaction with users via the booth wall and smart matching system. The chapters of this Report are available on the respective poster boards of the UN entities as well. Future editions of the Report will see a further integration with the Neural Network, with an aim to provide a live-action version of the Report that can be updated by the contributors in real time.

Complementary to these efforts, ITU, the UN's specialized agency on telecommunications/ICTs, has been coordinating the compilation of an annual up-to-date directory since 2018 of all the AI-related projects, initiatives, events and processes that are being carried out within the UN system in the form of the UN Activities on AI Report.

Methodology:

- Projects were updated by each of the participating UN bodies and agencies based on the 2021 UN Activities on Artificial Intelligence Report.
- For 6 entities which were not able to provide updated inputs this year, projects from the 2021 edition have been incorporated in this Report.
- The compilation of submissions received this year has been harmonized and formatted for the purpose of reproduction in the Report.
- For the Executive Summary, select data points were extracted from the submissions to develop an analysis along 5 specific indicators: SDGs addressed, multi-stakeholder collaborations, types of projects, sectoral focus, and project status.
- All inputs received by December 2022 have been included in the Executive Summary analysis.

The Report is a joint effort between ITU and 46 UN agencies and bodies, all partners of AI for Good or members of the UN Interagency Working Group on AI. It presents cases and projects run by the UN system, in areas covering all 17 SDGs and ranging from smart agriculture and food systems to transportation, financial services, and healthcare. This Report is not intended to produce an exhaustive inventory of the UN system's work on AI. Rather, it is a tool to further collaboration and build common understanding around emerging AI technologies and solutions.

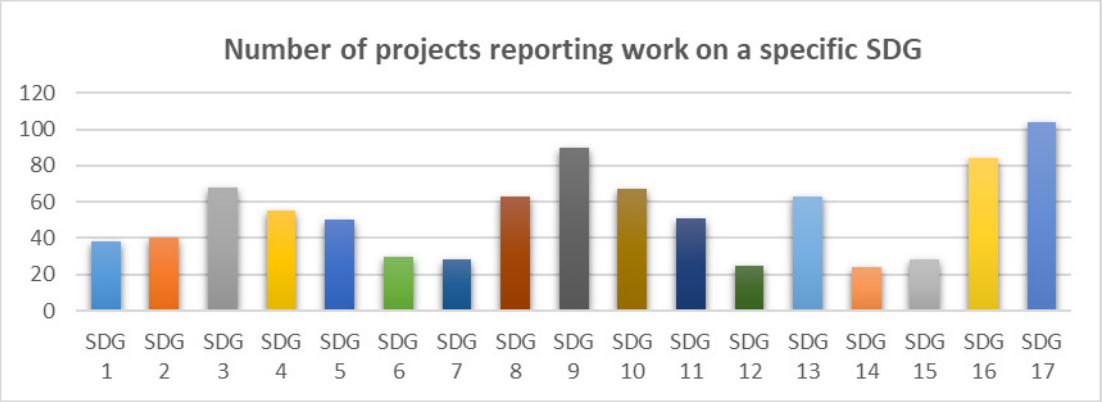
In the 2022 edition, 46 UN entities were engaged, 40 entities have sent updates, and 281 projects have been presented. A brief analysis of the key tracks and trends arising from the submissions is provided below to help provide an overview of the extensive work that is taking place within the UN system as well as to assist UN bodies and agencies to identify the areas which could benefit from increased interventions as they develop future projects.

With the increased number of projects submitted for the Report this year, along with the updates made to the existing ones, several changes can be seen across all the indicators on which these projects are analyzed in this section. There could be a number of reasons for these changes, apart from standard deviations occurring due to changes in personnel and the level of reporting annually. The increase in project numbers could signify the emphasis that is now being placed across the UN system on leveraging the potential of AI across several issue areas through concrete projects, while fluctuations on the key thematic priorities and SDGs could be a result of exercises such as this that allow entities to identify gaps in the work and design projects to fill those gaps. Future editions of the Report will aim to continue analyzing these trends to provide insight into the nature and status of the UN AI activities.

This Report is being released at the AI for Good Meeting on 16 March 2023 at WSIS Forum 2023. At the meeting, participants will discuss ongoing initiatives as well as opportunities to enhance the partnership for continued collaboration, cooperation, and coordination.

Key tracks and trends

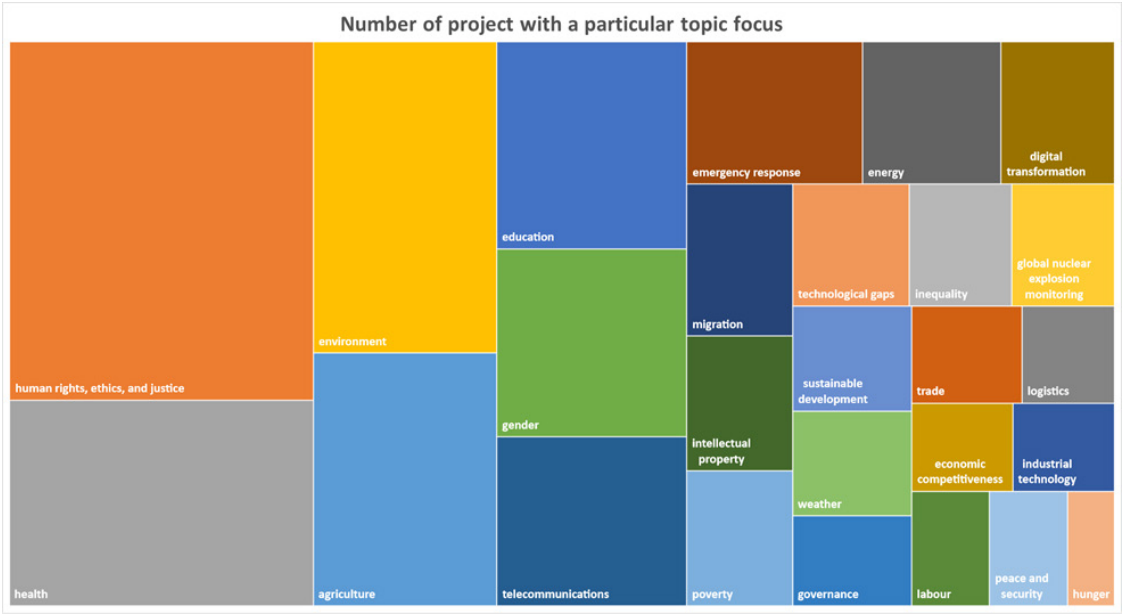
1. SDG Mapping



Over 85% of the projects have linked their projects with outcomes driving forward specific SDGs. Among them, the overwhelming majority address more than one SDG, signaling holistic, multidimensional projects.

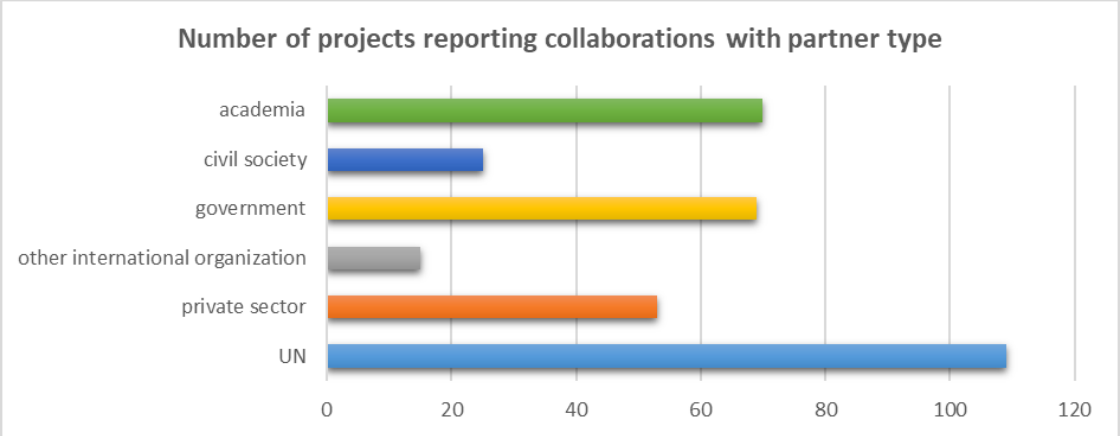
SDGs 3 (Good Health and Well-being), 9 (Industry, Innovation and Infrastructure), 10 (Reduced Inequalities), and 17 (Partnership for the Goals) continue to remain among the top five most common SDGs addressed by the UN AI initiatives. However, this year's edition reports that while focus on SDG 13 (Climate Action) remains consistent with the 2021 edition, there is an increase in the number of projects reporting on SDG 16 (Peace, Justice and Strong Institutions) bringing it up to the list of the top five most common SDGs addressed by projects this year. Focus on SDG 2 (Zero Hunger) has improved in this edition's reporting, while scope continues to remain for more targeted action to be taken across SDGs 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 12 (Responsible consumption and production), 14 (Life Below Water) and 15 (Life on Land).

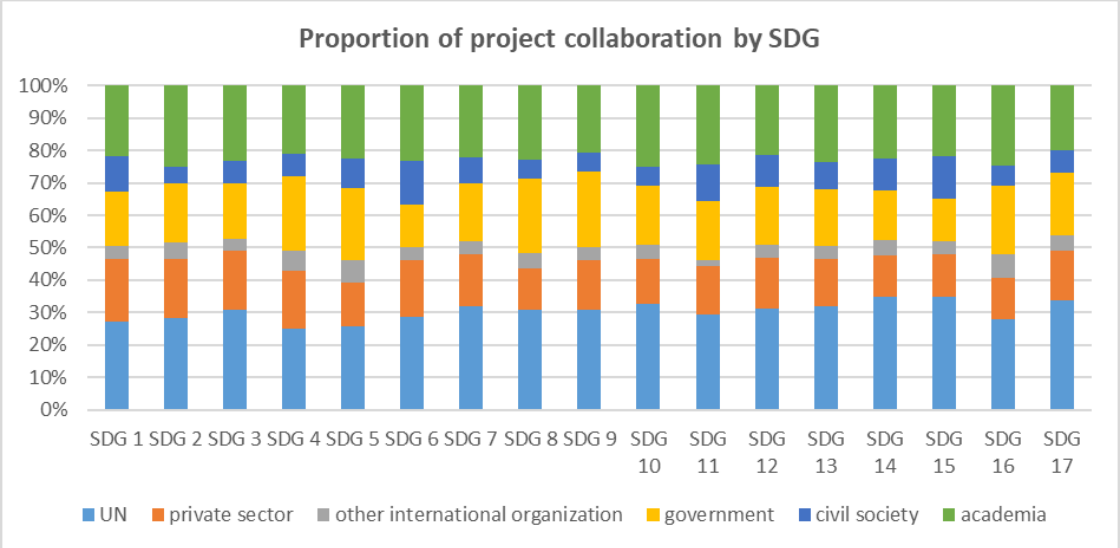
2. Project Subject Areas



In addition to the SDG mapping related to the overall outcome of the project, participants have also set out some of the issue areas within which their AI projects are operating. Nearly 84% of the projects reported their specific issue areas. In most cases, the projects are often reported as addressing multiple areas along with driving forward impact on multiple SDGs. There is an increase in reportage particularly on projects linked to human rights, ethics and justice, agriculture, and telecommunications, as compared to 2021 where "Digital Transformation" was tagged as a priority subject area. However, given the nature and status of the projects received, they would still broadly fall under the category of "Digital Transformation" although other more specific subject areas may have been indicated by the contributors in this edition. Several health-related projects have also been reported for addressing the COVID-19 pandemic.

3. Driving Multi-stakeholder Collaboration

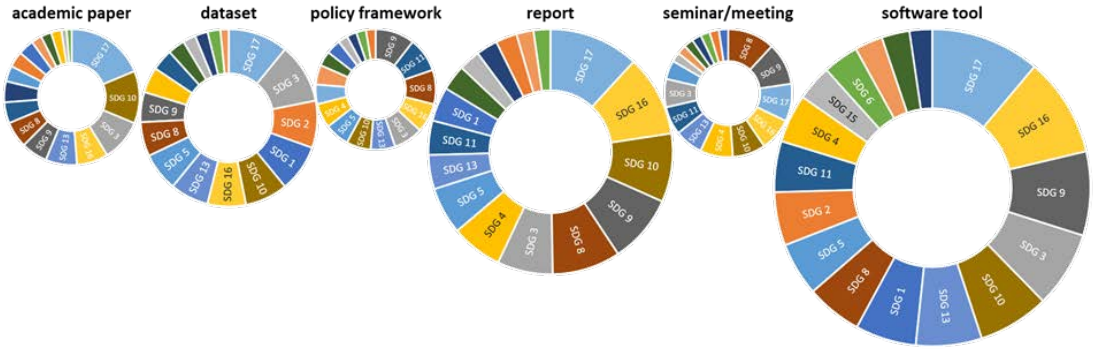




Almost two-thirds of the UN projects have reported collaborations with the UN system, the private sector, governments, civil society, academia, or with another international organization, demonstrating the UN's focus on maintaining strong partnerships with internal and external stakeholders.

4. Reports and software tools to address challenges

Project Outputs by SDGs



(Doughnut size = number of projects)

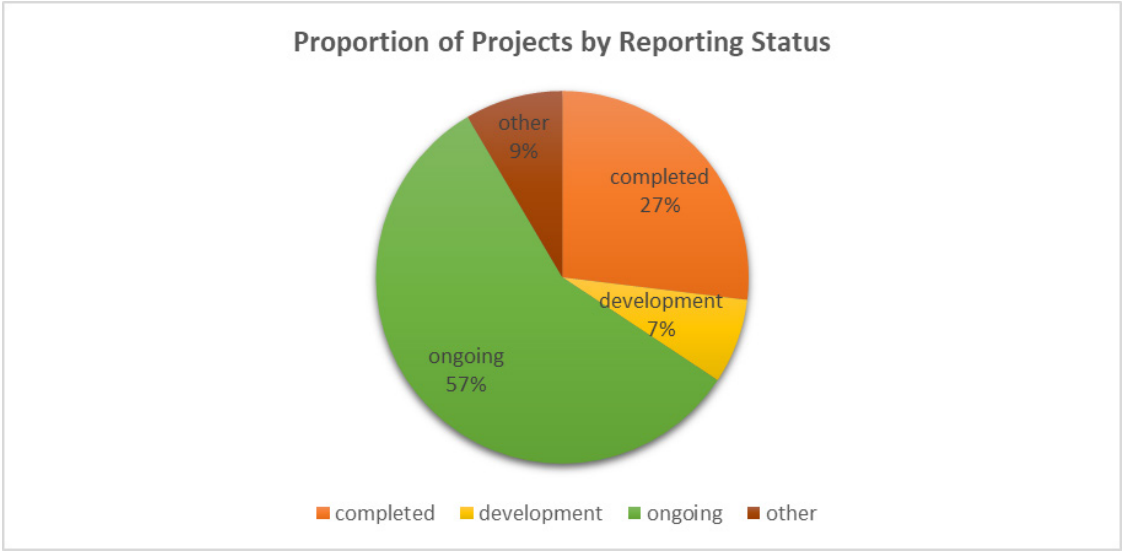
About 75% of the projects reported their project types or outputs this year. Among them, consistent with the findings of the 2021 edition, a significant number have focused on outcome-driven products and deliverables such as reports or software tools.

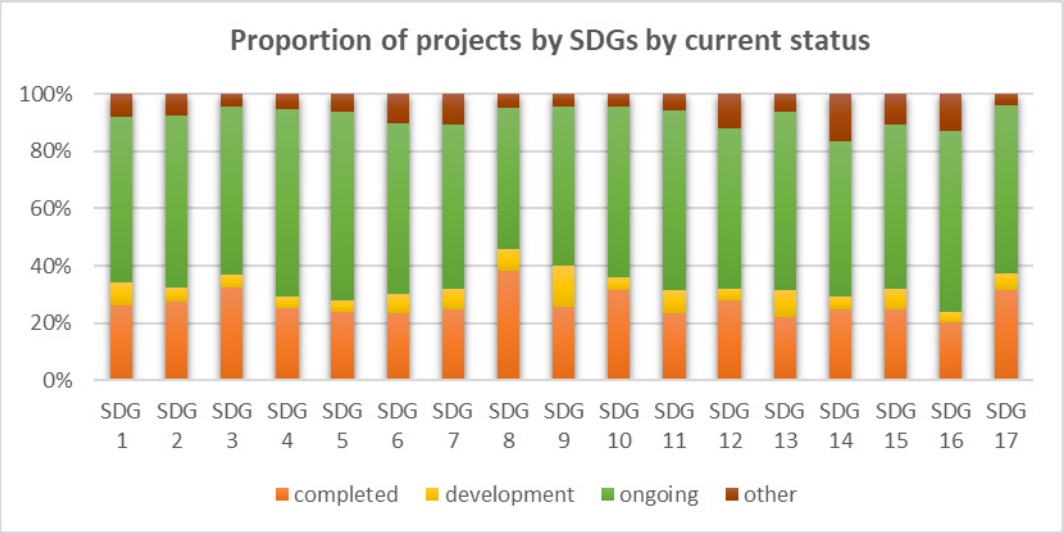
As of now, many of the current reports produced on AI relate to SDGs 10 (Reduced inequality) as compared to 2021's focus on SDG 8 (Decent Work and Economic Growth) and software tools relate to SDGs 3 (Good health and well-being) and 9 (Industry, Innovation, and Infrastructure), as compared to 2021's emphasis on SDGs 1 (No Poverty) and 2 (Zero Hunger). Focus on SDGs 16 (Peace, justice and strong institutions) and 17 (Partnership for the goals) remains strong across all the project outputs.

5. Looking forward

Project Status by SDG

About 92% of the projects reported their current status. Whereas a number of projects did not report specific end dates, or in some cases, the project duration.





In terms of status of the projects (in development, ongoing or completed), the majority of the reported UN AI projects are currently ongoing, with those related to SDG 8 (Decent work and economic growth) and SDG 17 (Partnership for the goals) reporting the most completed projects.

Of the projects in development, the majority feature software tools, working on topics such as the future of work, sustainable development, health research, and access to information.