

Policy brief

#119

June 2025

UNCTAD/PRESS/PB/2025/2 (No. 119)

Global collaboration for inclusive and equitable artificial intelligence

KEY POINTS

- Recent advances in artificial intelligence have been dominated by multinational technology giants. At the same time, rapid development and widespread diffusion have often outpaced the ability of Governments to respond to and steer artificial intelligence towards inclusive and equitable development.
- Current international governance efforts remain fragmented and led by a handful of countries. In order for the governance of artificial intelligence to be inclusive and effective, it should actively engage developing countries, in particular the least developed countries.
- Establishing an artificial intelligence public disclosure mechanism, drawing from experiences related to the environmental, social and governance (ESG) reporting framework, could help enhance accountability and ensure that global commitments lead to tangible outcomes.
- Such a mechanism, combined with international collaboration in developing shared digital public infrastructures, open innovation and capacity-building initiatives, can help foster inclusive and equitable artificial intelligence development.

Artificial intelligence can be deployed virtually anywhere, extending its influence across borders. Yet its development is largely driven by a few technology leaders. Governments therefore need to establish policies ensuring that its development serves the public interest and benefits all. International artificial intelligence governance initiatives are directed by developed countries, while many developing countries, despite having significant stakes in the future of artificial intelligence, have limited influence over its trajectory. There is a risk that such an imbalance may undermine the legitimacy and effectiveness of global governance and hinder efforts to promote artificial intelligence as a global public good.

An inclusive and multi-stakeholder approach is essential in order to ensure that artificial intelligence is accessible and beneficial for everyone, while fostering innovation to advance sustainable development. Ensuring benefits for all while fostering innovation requires incorporating accountability mechanisms into global artificial intelligence governance, to align its development with shared goals and values. In addition, international cooperation is critical, particularly with regard to the three key drivers of artificial intelligence transformation, namely, digital infrastructure, data and skills.¹

Dominance of multinational technology giants

The private sector has long driven technological innovation, but its current level of understanding of and control over artificial intelligence is unprecedented. The dominance of multinational technology leaders is significant and may be considered an oligopoly due to the concentration of market power and ongoing efforts to remain at the frontier, by investing in startups or acquiring innovative firms that offer cutting-edge technology and expertise. For example, in 2014, Alphabet acquired Deep Mind, a research laboratory based in the United Kingdom United Kingdom of Great Britain and Northern Ireland, leading in the field of deep reinforcement learning, which developed the first programme that defeated a world Go champion in 2016; and, in 2019, Microsoft formed a partnership with OpenAI, which developed ChatGPT [generative pre-trained transformer] and, in 2022, acquired, for over \$19 billion, of Nuance Communications, a company that specializes in large-scale speech applications and supported the development of the Siri voice assistant of Apple. In addition, through interactions with users and digital devices, technology leaders are building up increasingly large and valuable data sets, enabling them to extend competitive advantages beyond core business areas.

The leading frontier technology providers are among the largest corporations in the world by market capitalization (figure 1). At end-2024, Apple, Nvidia and Microsoft each had a market capitalization of over \$3 trillion, comparable to the gross domestic product (GDP) of the African continent or that of the United Kingdom, the world's sixth largest economy.² Notably, nearly all of the global top 10 listed companies are making substantial investments in artificial intelligence.

¹ This policy brief builds on the findings in chapters I and V of UNCTAD, 2025, *Technology and Innovation Report 2025: Inclusive Artificial Intelligence for Development* (United Nations publication, sales No. E.25.II.D.1, Geneva).

Note: Mention of any firm or licenced process does not imply the endorsement of the United Nations.

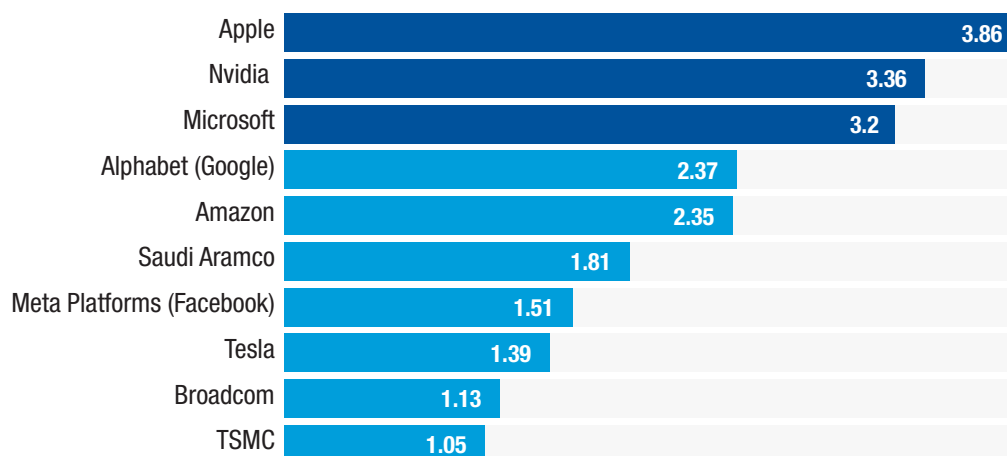
² Market capitalization data are as at end-2024; GDP figures are from the UNCTADstat database. GDP is a flow variable and market capitalization is a stock variable; the present comparison is for illustrative purposes only, to highlight the significant market size of leading technology companies.





Figure 1
Market dominance of technology leaders: Top 10 listed companies in the world by market capitalization, end-2024

(Trillions of dollars)



Source: UNCTAD, based on data from Companies Market Cap.

Private companies dominate investment in artificial intelligence, with global industry spending exceeding \$340 billion in 2021, outpacing public funding. By contrast, agencies of the United States of America Government (excluding the Department of Defense) invested \$1.5 billion and the European Commission invested \$1.1 billion.³ The Government of China has increased support to artificial intelligence-related firms through various State-backed initiatives that have amounted to \$210 billion over the past decade.⁴ In addition, private firms attract most of the leading talent; the share of graduates from universities in North America with PhDs in artificial intelligence-related fields who entered industry increased from 21 to 70 per cent in 2004–2020.⁵ The private sector is also responsible for most frontier research and produces most machine-learning models; Governments and academia are left behind with, combined, less than half the number of models released by industry.⁶

This market dominance is of particular concern in winner-takes-all environments, where the leading players gain most of the benefits and possess the resources to eliminate potential competition or control the flow of information and revenues.⁷ Their priorities may diverge from those in the public interest, potentially steering societies onto suboptimal development paths.⁸ For example, the development and adoption of artificial intelligence tend to replace human labour rather than augment

³ Owens B, 2024, Rage against machine learning driven by profit, *Nature*, 633(8030):S6–S9; UNCTAD, 2021, *Technology and Innovation Report 2021: Catching Technological Waves – Innovation with Equity* (United Nations publication, sales No. E.21.II.D.8, Geneva).

⁴ Beraja M, Peng W, Yang DY and Yuchtman N, 2024, Government as venture capitalists in artificial intelligence, Working paper No. 32701, National Bureau of Economic Research.

⁵ Ahmed N, Wahed M and Thompson NC, 2023, The growing influence of industry in artificial intelligence research, *Science*, 379(6635):884–886.

⁶ Stanford University, Institute for Human-Centred Artificial Intelligence, 2024, *Artificial Intelligence Index Report 2024* (Stanford, United States).

⁷ UNCTAD, 2021, *Digital Economy Report 2021: Cross-Border Data Flows and Development – For Whom the Data Flow* (United Nations publication, sales No. E.21.II.D.18, Geneva).

⁸ Ahmed et al., 2023; see <https://policy-practice.oxfam.org/resources/inequality-inc-how-corporate-power-divides-our-world-and-the-need-for-a-new-era-621583/>.

human capabilities, reflecting financial and commercial incentives rather than social needs.⁹ Profit-driven firms may also overlook ethical issues such as those related to bias, misinformation and lack of transparency. In addition, technology companies increasingly shape regulations and policy agendas, reversing the balance of power wherein public policy determines the playing field.

In response to market dominance and its broader social consequences, antitrust investigations have been initiated in various jurisdictions, including Germany, India, Japan, the Republic of Korea, the United Kingdom, the United States and the European Union. However, small countries, particularly developing countries, may lack institutional capacity and economic strength, making enforcement and regulation challenging. Stronger international governance and coordinated oversight could favour the development of coherent policy frameworks and help close institutional gaps across countries.

Lack of representation of developing countries in global governance

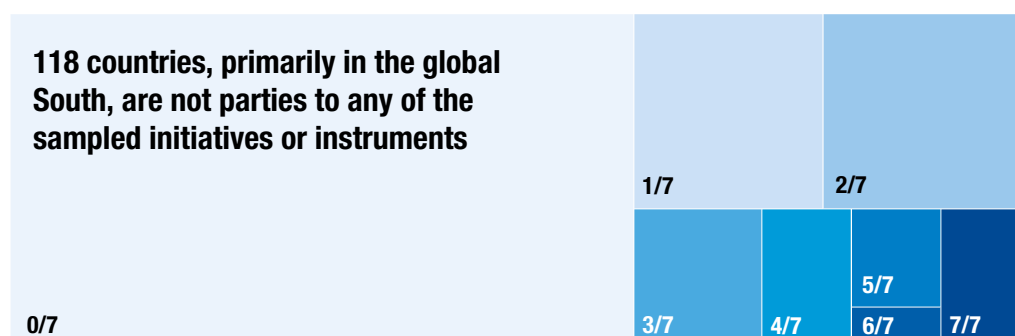
Despite growing recognition of the need for global cooperation, the current artificial intelligence governance landscape remains fragmented. Major international non-United Nations initiatives are led by Group of 7 members, and 118 countries, mostly from the Global South, are not a party to any of these initiatives (figure 2).¹⁰ The limited representation of developing countries poses significant risks to the legitimacy and effectiveness of global artificial intelligence governance.



Figure 2

International artificial intelligence governance initiatives are largely driven by Group of 7 members: Country involvement, from 0 to 7 initiatives

(Box size proportional to number of countries in each category)



Source: UNCTAD.

Note: For the initiatives considered, see UNCTAD, 2025, chapter V, available at <https://unctad.org/publication/technology-and-innovation-report-2025>.

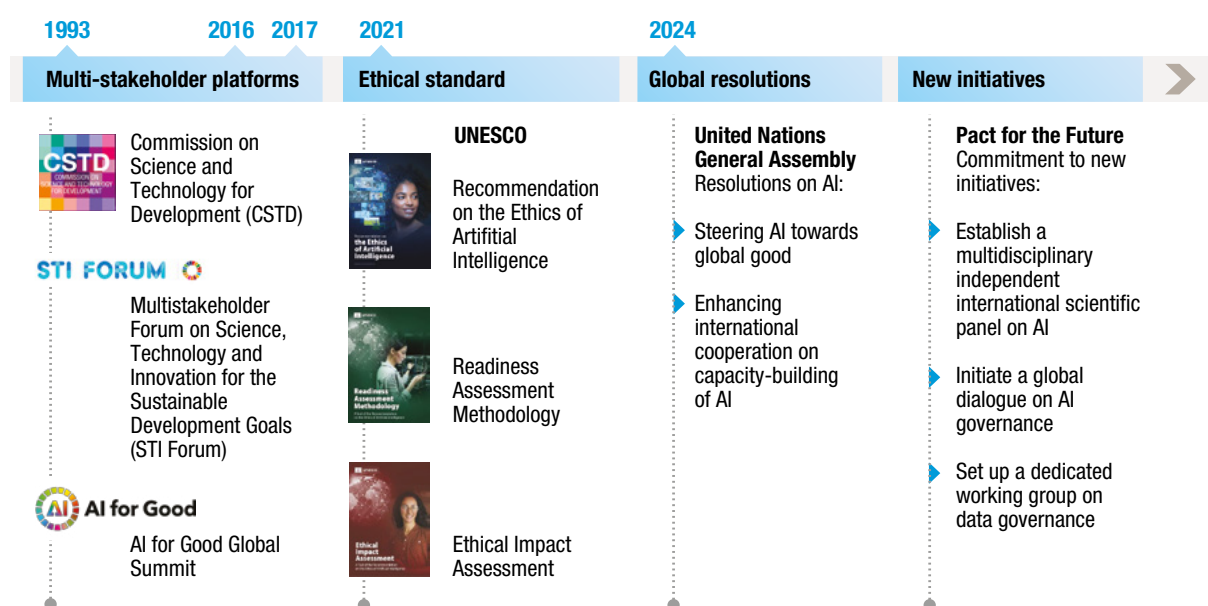
⁹ Acemoglu D and Johnson S, 2023, *Power and Progress: Our 1,000-Year Struggle Over Technology and Prosperity* (Public Affairs (Hachette), New York).

¹⁰ See https://www.un.org/sites/un2.un.org/files/governing_ai_for_humanity_final_report_en.pdf.



The United Nations has made significant contributions to global discourse on artificial intelligence governance (figure 3). In 2024, the General Assembly adopted two key resolutions on seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development and on enhancing international cooperation on capacity-building of artificial intelligence. In addition, in the Pact for the Future, Member States committed to supporting international cooperation in science, technology and innovation and strengthening the capacities of the United Nations to monitor and measure ongoing global progress to bridge the science and technology gap within and between developed and developing countries, as well as supporting the interoperability and compatibility of artificial intelligence governance approaches through sharing best practices.¹¹ Member States committed to establishing an Independent International Scientific Panel on Artificial Intelligence, to promote scientific understanding through evidence-based impact, risk and opportunity assessments, and initiating a Global Dialogue on Artificial Intelligence Governance. In addition, Member States requested the Commission on Science and Technology for Development to establish a dedicated working group to engage in a comprehensive and inclusive multi-stakeholder dialogue on data governance.¹²

Figure 3
Key United Nations efforts in global artificial intelligence governance



Source: UNCTAD.

Abbreviation: UNESCO, United Nations Educational, Scientific and Cultural Organization.

¹¹ United Nations, General Assembly, 2024, The Pact for the Future, A/RES/79/1, New York, 22 September.

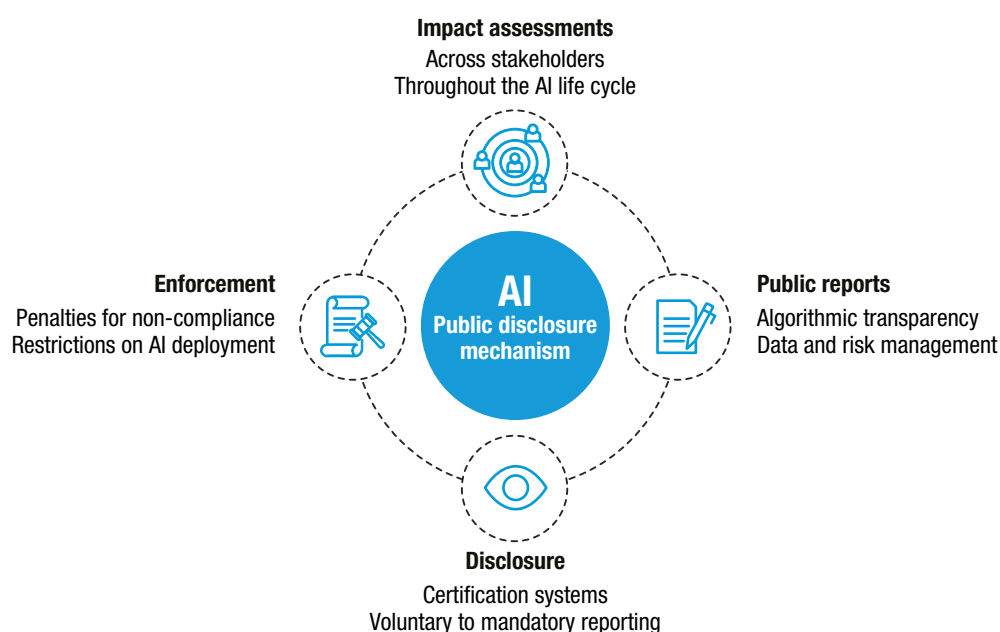
¹² See <https://unctad.org/topic/commission-on-science-and-technology-for-development/working-group-on-data-governance>.

Need for a public disclosure mechanism, to ensure accountability

To ensure fair and inclusive global artificial intelligence governance, all stakeholders involved in the development and deployment of artificial intelligence should have clearly defined roles and be held accountable for their actions. A critical step in this regard is the establishment of an artificial intelligence public disclosure mechanism, which can draw on the ESG reporting framework currently mandatory in many stock exchanges. Such a mechanism could include impact assessments conducted throughout the artificial intelligence life cycle, to evaluate the effects on the environment, human rights, employment and inclusion, including the significant level of energy consumption and water use for model training and running and the associated cooling of data centres.¹³ In addition, such a mechanism should require detailed reporting on how artificial intelligence systems function and how data are collected, used and managed. As standards and frameworks mature, disclosure requirements can evolve from voluntary to mandatory, ensuring comprehensive, standardized and transparent reporting, supported by oversight and enforcement measures (figure 4).



Figure 4
Artificial intelligence public disclosure mechanism



Source: UNCTAD.

Artificial intelligence public disclosure requirements should balance innovation with public safety and trust. Overregulation may slow down technological progress but underregulation can pose significant risks and make it difficult to hold companies

¹³ See UNCTAD, 2024, *Digital Economy Report 2024: Shaping an Environmentally Sustainable and Inclusive Digital Future* (United Nations publication, sales No. E.24.II.D.12, Geneva).



accountable. Achieving such a balance requires a multi-stakeholder approach, to incorporate diverse perspectives and flexibility while adapting to rapidly evolving technologies. Attention should be paid to vulnerable populations, who are less likely to benefit from advances in artificial intelligence but more likely to experience artificial intelligence-related harms.

Need for international cooperation in digital infrastructure, data and skills

Rapid advancements in artificial intelligence have been propelled by the following three key drivers:

- 1 Digital infrastructure**, through increasing computational power and increasingly cost-effective information transfers.
- 2 Data**, encompassing the significant, diverse and rapidly growing volumes of codified information.
- 3 Skills**, ranging from basic digital literacy to the advanced expertise required to develop and deploy sophisticated artificial intelligence models and applications.

International collaboration in these three areas is essential in order to fairly share the benefits related to artificial intelligence. Cooperation, through the pooling of resources and knowledge, can help in addressing the persistent challenges faced in many developing countries, including those related to inadequate digital infrastructure, limited access to data and shortages in digital and technical skills. Such collaboration is critical in order to prevent fragmentation, avoid the duplication of efforts and mitigate the risk that the use of artificial intelligence will increase inequalities between and within countries.



Collaboration may take place in the following areas:

➤ **Shared digital public infrastructures.**

A global shared facility, for example following the model of the European Organization for Nuclear Research (CERN), the intergovernmental organization that operates the world's largest particle physics laboratory, can provide equitable access to artificial intelligence infrastructure. A "CERN for AI" model can be based on the principles of international cooperation, open science, open access and the pooling of resources and expertise. Governments can also collaborate with the private sector through public-private partnerships, to expedite the development of digital public infrastructures for artificial intelligence in local innovation ecosystems. In addition, tailored digital public infrastructure systems can offer essential resources and services, to support the development and adoption of artificial intelligence.

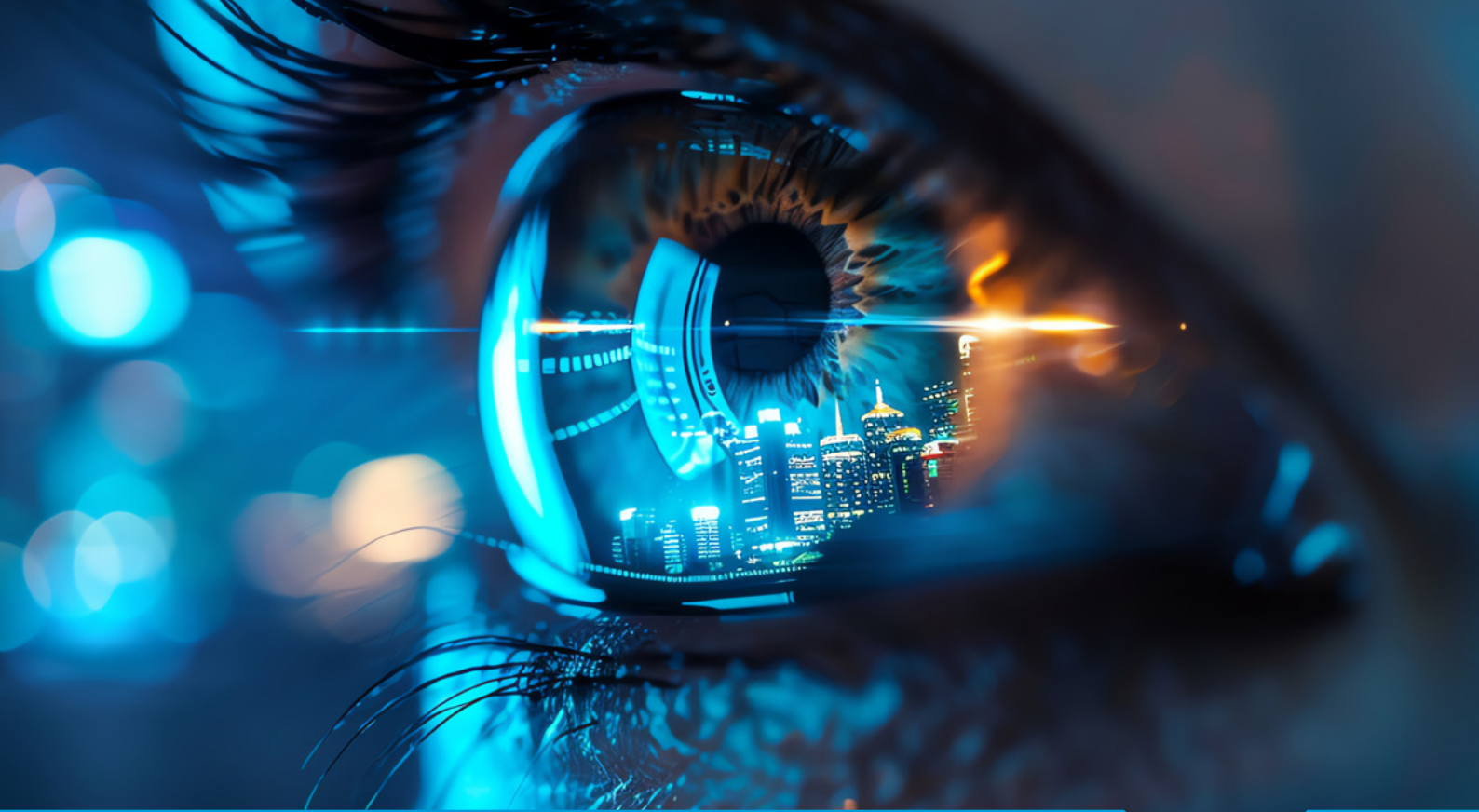
➤ **Open innovation.**

Open innovation models such as open data and open source can help democratize knowledge and resources, to foster inclusive artificial intelligence-related innovation. Coordinating and harmonizing open-source artificial intelligence efforts and adopting common standards for interoperable repositories can help strengthen the global knowledge base and improve access through trusted hubs. For example, the Manaus package issued by the Group of 20 Research and Innovation Working Group includes an open innovation strategy to foster international collaboration in science, technology and innovation, and puts forward principles, approaches and tools for inclusive and equitable open innovation initiatives. The strategy can guide the creation of global repositories, to support the wider diffusion of artificial intelligence across communities, facilitated by equitable and interoperable data governance arrangements.

➤ **Capacity-building initiatives.**

An artificial intelligence-focused centre and network modelled on, for example, the United Nations Climate Technology Centre and Network, can function as a global hub in building artificial intelligence capacity, facilitating technology transfer and coordinating technical assistance to developing countries. Regional innovation hubs and expert networks, particularly through South-South cooperation in science and technology, can further strengthen the capacity of developing countries in addressing common artificial intelligence-related challenges.





Contact



Torbjörn Fredriksson

Officer-In-Charge, Division on
Technology and Logistics, UNCTAD
41 22 917 2143
Torbjorn.Fredriksson@unctad.org

Angel Gonzalez Sanz

Officer-In-Charge, Division on
Technology and Logistics, UNCTAD
41 22 917 5508
Angel.Gonzalez-Sanz@unctad.org

Press Office

41 22 917 5828
unctadpress@unctad.org
unctad.org

