The UN Technology Facilitation Mechanism -
Informal note by the Secretariat on the first phase (2015-2022) and food for thought on the way forward

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1. Background

The UN Technology Facilitation Mechanism (TFM) was created by the Addis Ababa Action Agenda to support the implementation of the Sustainable Development Goals (SDGs) and launched by the 2030 Agenda on Sustainable Development in September 2015. Since 2015, the TFM has been coordinated by DESA (2015-present), UNEP (2016-17) and UNCTAD (2018-present).

The TFM facilitates multi-stakeholder collaboration and partnerships through the sharing of information, experiences, best practices, development of practical guidance, joint activities at the country level, and policy advice for and among Member States, civil society, the private sector, the scientific community, United Nations entities and other stakeholders.

The TFM comprises four components: the United Nations Interagency Task Team on Science, Technology and Innovation for the SDGs (IATT); the United Nations 10-Member Group of High-level Representatives of Private Sector, Civil Society and Scientific Community; an annual Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum), appointed by ethe Secretary General every two years, and an online platform "TFM 2030 Connect" as a gateway for information on existing science, technology and innovation initiatives, mechanisms and programs. It is designed as a one-stop-shop to resources from across the UN system and external sources and supports building partnerships and matchmaking of technology supply and demand.

Despite extremely limited resources but with many voluntary contributions, all components of the TFM have been operationalized. The IATT membership now comprises 47 UN entities (almost all STI-related UN initiatives). It brings together more than 100 expert staff who in an informal and voluntary way exchange experiences and coordinate their work. They awork closely with the 10-Member Group and representatives of the academic, business and NGO communities. Compared to the past, this is an unprecedented level of cooperation across the UN on science and technology issues. It has a global reach, scaling to international, national and subnational levels, and establishing learning and feedback capacities that offer inclusion and equal opportunities for all.

2. Quick overview of the first phase (2015-2022)

The creation of the TFM was of historic significance, as it brought back substantive STI discussions to the UN HQ, after decades of political gridlock over IPRs and technology transfer. In the past three years, the TFM has explored a new multi-stakeholder model of work for the UN system, which to-date has engaged 47 UN entities and thousands of scientists and stakeholders to facilitate STI for the SDGs.

The IATT work is organized in a number of subgroups which focus on key areas of work, including delivering joint training workshops based on resources pooled from across the UN system; support for the platform development; development of STI roadmaps for the SDGs; identification of new and emerging

technologies and the impacts of their rapid change; linking gender and STI; and performing the typical Secretariat functions. For more details, see IATT Work Updates.

2.1 STI roadmaps: STI roadmaps and action plans, to help realize the SDGs, have been among the central topics addressed in the first four STI Forums. IATT established a sub-working group for taking forward the work STI Roadmaps. It developed a joint Guidebook[1] and organized expert consultations (New York, Tokyo, Brussels, Nairobi, Guilin, and Vienna) and the support to a selected set of countries to develop national STI roadmaps for the SDGs. Also, the G20 outcome package (Osaka Leader's Declaration, 2019) contains guiding principles for the STI for SDGs roadmaps. There is strong demand for expanding this work and involving many more countries in developing STI roadmaps for the SDGs within their overall action plan to implement the SDGs. The Global Pilot Programme and the recent launch of the Partnership in Action on STI4SDGs Roadmaps are important moves, but require sustainable funding to support the activities and champions.

2.2 New and emerging technologies: The new and emerging technologies group has collected, synthesized inputs from within the UN system and external expert communities on the impacts of rapid technology change on the SDGs and coordinated the UN work on this topic. The group also substantively supported the multi-stakeholder discussions in the STI Forum on the impacts on societies caused by the disruptive effects of new technologies, such as nanotechnology, automation, robotics, artificial intelligence, quantum technologies, gene editing, big data, and 3D printing. The topic has been on the Forum's agenda since its inception. Ever since, the inputs and findings have continued to be collated, synthesized and analyzed in the form of an informal document that continues to grow. This task is of great importance, since the power, synergy and reach of cutting-edge technologies have an ever-increasing impact on inclusion, equality and sustainability. The group includes lead authors of key UN publications on STI and has shared experiences, conducted joint surveys and data collection, organized expert group meetings and prepared regular "TFM findings on the impacts of rapid technological change on the SDGs", as mandated by the General Assembly. It has mobilized contributions from a wide range of scientists and engineers, in the form of an annual call for science-policy briefs in support of agenda setting of the STI Forum. Work has also been undertaken on human-centred approaches to innovation, as well as on tech futures and scenarios.

2.3 Gender and STI: From 2018 to 2022, the Group worked on collecting the list of initiatives within the UN System on gender and science, technology and innovation (STI) from 11 contributing UN entities members of the IATT. The initiative aims to create awareness and to support empowering women and girls in the field of STI through capacity building, information sharing, policy setting and awareness raising. The group organized several events on Gender and STI issues, including on the margin of the 63rd CSW and as a part of the STI Forum.[2]

2.4 Online platform: IATT and 10 -Member Advisory Group have worked together to operationalize the platform, despite a complete lack of any funding for it. In 2018, the IATT focused on advancing the capabilities and design of a prototype of the online platform[3] and also expanded the network of partners and potential users. It also worked on outreach and advocacy, creating a "brand" for the online platform— now known as "2030 Connect"—and developed a plan to secure the funding. 2030 Connect includes an

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[1] For more details and published Guidebook, see: https://sustainabledevelopment.un.org/tfm#roadmaps
[2] For the group's work, see: https://sustainabledevelopment.un.org/womeninscience (underdevelopment)
[3] For the prototype and other related work, see: https://sustainabledevelopment.un.org/tfm#online

upgraded search function and improved connectivity across all partner databases. It provides access to a wider range of sectors and resources, ranging from publications to training opportunities to technology offers and technology requests. It represents a crucial basis for boosting collaboration, impact entrepreneurship and innovation for the SDGs. Most importantly, it brings together 27 partners from the UN system and beyond which make their technology information available through the platform.

2.5 Capacity building workshops: The IATT has pooled its members training materials and jointly conducted several subregional training workshops, including in Jordan (for the Arab region), in Panama (for the Latin America region, and in Tunis. , with more planned for the coming months, subject to funding availability. These workshops have demonstrated UN staff expert knowledge and the potential of working as "one-UN" in direct response to Member States demands. Related to these joint activities, IATT members organized various capacity building meetings which also benefitted from the joint IATT efforts (e.g., DESA organized STI capacity building meetings in Shanghai, Bangkok and Guilin. In addition, a capacity building programme on STI for LDCs as a follow up of the STI Forum is also under preparation.[4]

2.6 Convening the STI forum, partnerships and support to relevant other intergovernmental meetings and initiatives/programmes (Secretariat functions)[5]

2.6.1 *Convening the STI Forums*: To-date, thousands of scientists, innovators, technology specialists, entrepreneurs, policy makers and civil society representatives have gathered at the annual STI Forums at UN HQs to discuss and showcase science, technology and innovation solutions for achieving SDGs under review at the HLPF as well as several cross-cutting themes. STI Forum have covered a wide range of issues and collected an impressive number of recommendations from STI stakeholders. The Forum has facilitated interaction, matchmaking of technology supply and demand, as well as the creation of stakeholder networks.

2.6.2 *Linking with the HLPF*: The STI Forum also holds a special role as it reports formally to the High-level Political Forum on Sustainable Development (HLPF) in support of its review of SDG progress and its explicit function to "strengthen the science-policy interface".

2.6.3 *Working with other relevant UN initiatives*: UNCTAD and its UN Commission on Science and Technology for Development, the UN Regional Commissions, the IATF, UNEP, the World Bank, UNESCO, WIPO, ITU, FAO, the SG's Tech Envoy Office, CTCN, and many other participating UN system entities have issued documents on trends and policy options and proposed findings on science, technology and innovation in their areas of expertise. All this expertise has been used and integrated in the production of the STI for SDG roadmaps Guidebook and in the IATT.

2.6.4 *Partnerships with non-UN* global programmes and initiatives on STI for SDGs. In addition, several organizations beyond the UN system have started cooperating and contributing to the TFM work, such as the Global Sustainable Technology and Innovation Conference series (G-STIC)[6], and the Global Solution Summit and the Global Innovation Exchange.

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[4] For the details of the meetings including meeting summary, see: https://sdgs.un.org/tfm#events_and_reports

[5] For all the STI Forum websites, see: https://sdgs.un.org/tfm/sti-forum

[6] G-STIC is an initiative of non-profit, independent technological research institutes world-wide in support of the implementation of the SDGs.

2.7 In Summary

Since its beginnings in 2016, the STI Forum has attracted a lot of interest, including from academic, technologist, practitioners, NGOs and private sector communities that are not typically involved in UN debates. In fact, several thousand people have been engaged so far. In the past seven years, the TFM has explored a new multi-stakeholder model of work for the UN system. In addition, the STI Forum has catalyzed and built cooperation with related, regular conferences and Forums, such as the Global Solutions Summit and the G-STIC (Global Sustainable Technology and Innovation Conference series).

Among the most important constraints are lacking funds for the TFM activities – as many of the joint activities are not appropriately included in the participating entities work programmes. Most of the TFM activities including the mandated 10-Member Advisory Group and the online platform remain unfunded. The absence of a formal decision requesting Member States to regularly report on their efforts to incorporate STI into their reporting exercise, such as the VNR, and STI reviews, is also a major shortcoming.

3. Priorities in 2023

In 2023, the HLPF will meet both at the level of ECOSOC in July and at the level of the General Assembly in September (commonly referred to as "SDG Summit 2023"), in order to review progress towards the SDGs and the 2030 Agenda, including in terms of trends and progress on science, technology and innovation for sustainable development. In view of the SDG Summit 2023 and its mid-term review of the SDGs, next year will be a good time to take-stock of where we are with the TFM and how we shall proceed in the coming years. DESA has started working with the IATT and 10-Member-Group to carry out the Mid-Term STI Review and to develop a Global STI4SDG Roadmap to coordinate and chart the way forward to 2030 and beyond. A wide range of institutional and individual inputs will be invited and made available on the UN Website in preparation for the 2023 Forum. A UN publication is envisaged to present the global STI4SDG Roadmap, a vision statement by the 10-Member-Group, the mid-term STI review, and selected proposals.

4. Food for thought on strengthening TFM mandate implementation:

Mobilize funding that is commensurate with the objectives
The Technology Facilitation Mechanism (TFM) remains an almost entirely unfunded General Assembly mandate. At the most basic level, Member States should consider allocating adequate regular budget for core components of the TFM and its basic functioning, operations and staffing, in particular the 10-Member Group, the IATT, , and the STI Forum, commensurate with the objectives and comparable to other similar General Assembly mandated UN groups and activities. For example, the 10-Member-Group should be similarly resourced at least at the level of UN Committee for Development Policy (CDP), the IATT similar to Inter-agency Task Force on Financing for Development (IATF), the STI Forum similar to FfD Forum.

Importantly, an adequate funding model is needed for the online platform "2030 Connect". Partnerships with science and technology communities and the new UN technology and innovation labs (project offices) should be considered.

In addition, a TFM trust fund is urgently needed to support the wide range of TFM activities, including multi-stakeholder capacity building. An interagency model, such as that of UNAIDS, might be explored, and could possibly also support STI expertise among UN experts staff in support of the LDC Tech Bank.

Improve level and balance of reporting and multi-stakeholder participation
There is a need to systematically improve the level and balance of multi-stakeholder participation in all components of the TFM through formal association agreements with the most relevant conferences, forums and meetings. It is requested the UN DESA and other co-convener of the IATT to coordinate the UN system's support for the Technology Facilitation Mechanism and its formal reporting under General Assembly on STI initiatives, including pilot applications of STI for the SDGs roadmaps, key results and recommendations. This is especially important with respect to the Regional STI Forums and their inputs to the global STI Forum, and related inter-governmental process.

A major drive is needed to mobilize Member States, academia and private sector participation, using all available channels (including 10-Member Group "alumni"). Early mobilization is needed especially for the highest-level presidents of universities and industries, so that they attend not only Davos, but also the STI Forum. In this regard, institutional relations need to be expanded to invite influential academics. Another way would be Member States to host the STI Forum thereby increasing ownership and local participation.

The TFM's role to facilitate partnerships should be well-recognized among Member States and UN entities. To do so, in addition to the formal reporting, advocacy is necessary to enhance the visibility of TFM. Finally, the IATT subgroups should systematically work with stakeholder groups, including networks of incubators and the organizations engaged in the Rio+20 and SDG voluntary commitments to action.

Improve cooperation within the UN system
While the IATT has made impressive inroads in strengthening the working level cooperation among staff experts across its 46 UN entities that are members, it has lacked adequate institutional backing, formalized working structures and any kind of financial incentives to make this new one-UN and multistakeholder model work. In fact, much of the joint work is voluntary work (over and above their day jobs) undertaken by genuinely passionate UN staff experts interested to make a difference, but not always adequately valued. Written agreements are needed between entities of the UN Secretariat and all other IATT members to better define their division of labour, their joint work, the resources involved, reporting structures, and performance criteria. A first such agreement is in its final stages of approval between the co-convenors of the IATT (DESA and UNCTAD), with hopefully many more to come.

4. Possible next steps

One important lesson learned over the last 7-year's implementation of the TFM is the need for STI discussions to take place in a multi-stakeholder setting, departing from more traditional UN fora. Going forward, the technology mechanism and multi-stakeholder space should be strengthened. UN Member States would need a regular report for the General Assembly with regard to the STI review and the TFM implementation. To maintain continuity, IATT with consultation of 10-Member-Group should support the TFM reporting to the General Assembly. Next steps need to be defined in consultation with key stakeholders, including IATT and the 10-Member-Group. Next steps could include, for example:

1. Joint UN fundraising, including through involving the network of the 10-Member-Group and the co-Chairs of the STI Forum – pledge to donors, charities and nonprofits, to contribute to a fund, such as the existing Sustainable Development Trust Fund;
2. Production of guidance, including but not limited to:
   a. Further development of the STI for SDGs Roadmaps Guidebooks and related tools
   b. Further development of the online platform

  c. Make pooled training resources across the UN system available to all interested users.
3. Activities at the country level to support, including
  a. Joint UN support to pilot countries on STI roadmaps
  b. Targeted support to LDCs on STI capacity building
4. Integrated the TFM work into the overall SDG work, including through
  a. Adapting the STI Roadmap Guidebook/guidelines for the VNR
  b. Summarizing how countries report on STI in their VNRs
  c. Ensuring effective information flow and cooperation with relevant international fora such as HLPF and FfD, and relevant inter-governmental bodies in the framework of the UN work on the SDGs.
5. Building strategic partnerships through setting up a global UN alliance or compact which would
  a. Build on the [UN Secretary General's 10-Member-Group](#) network (current and former members)
  b. Build on the [Partnership in Action on STI4SDGs Roadmaps](#)
  c. Strengthen cooperation with G-STIC and emerging global alliances (Technology for Transformations (ToT)), with GSS, GESDA, the World Science Forum, Japan's STS Forum, the Scenarios Forum, FAO's S&T Forum, STI Forums of the Regional Commissions, UNESCO's World Science Forum, and many more emerging STI-relevant Fora.
  d. Closely coordinate with and complement the work of the UN Commission on Science and Technology for Development and pursue a common agenda and joint actions across the UN Secretariat.
  e. Conclude written agreements between all relevant UN entities that are IATT members (including within the UN Secretariat) to better define and institutionalize a division of labour, areas for joint work, the resources, reporting structures, and performance criteria.
  f. Ensure that STI guidance reaches all relevant inter-UN and inter-governmental working groups under the SDG framework
6. Other related matters, including support for the many STI-related proposals contained in the Secretary General's "[Our Common Agenda](#)".

Initial discussions on the next phase of the TFM have started in the context of the preparatory process for the STI Forum 2023. A mid-term review of the TFM in the context of the SDGs and a Global STI4SDG Roadmap in support of the SDG Summit 2023 is underway.

5. Division of labour and process for the STI Forum 2023

IATT and the UN Secretary-General's 10-Member-Group of High-level Representatives of Private Sector, Civil Society and Scientific Communities are mandated to organize the STI Forum and to support the TFM online platform. Preparations for STI Forum 2023 are underway, although at this time there continues to be some uncertainty about the format.

In addition to the thematic sessions for the SDGs under review in HLPF 2023 and cross-cutting sessions, inter alia, on emerging and digital technologies, the impacts of COVID-19, STI lessons from the pandemic, STI roadmaps, and youth and gender for STI, there are plans for exhibition, side events and the possibility of associated special events by partners. A preparatory expert group meeting will be held with the 10 Member Group, IATT and TFM partners at UN headquarters in New York, from 11 to 13 January 2023.

In terms of broad division of labour, the Forum co-chairs provide overall political ownership. The 10-Member-Group of High-level Representatives provide overall substantive ownership and typically moderates the sessions. The interagency IATT (47 UN entities, currently led by DESA and UNCTAD) provides organizational and substantive expert support and undertakes an intersessional work programme.