United Nations Technology Bank for Least Developed Countries

Strategic Plan, 2022-2024

Executive Summary

The process of revising and updating the Strategic Plan for 2022-2024 has taken into account the experiences and lessons learned from the first three years of the Bank's operations; the recommendations of an independent Functional Review of the Technology Bank conducted in early 2022, and the results and recommendations of an audit report on the Technology bank undertaken by the United Nations Office of Internal Oversight Services (OIOS) in early 2022. It has also factored in lessons learned from the findings and conclusions of several technology needs assessment that the Technology Bank has conducted in the least developed countries since 2019.

The value proposition of the Technology Bank is to serve as a gateway for leveraging the science, technology and innovation capacities of the Least Developed Countries and identify technological solutions to the development challenges facing the Least Developed Countries. To that end, the Technology Bank will reinforce its guiding principles of being demand-driven, partnership-oriented, agile, and focused, as well as accountable to stakeholders.

The revised Strategic Plan aligns the Technology Bank with the realistic reform agenda proposed in the functional review. As proposed in the functional review, for at least the next three years, the Bank should operate as if it is a lean business start-up, using the annual contributions from the Government of Turkey as seed funding to rapidly achieve proof of concept and demonstrate success, until it is able to mobilize additional resources to support more ambitious projects. This, in effect means, the technology Bank operating within its means; engaging in targeted needs assessment and project development and design; and initially confining its technology transfer and capacity building activities to selected thematic priority areas to prevent the limited resources of the Bank being spread too thinly.

The revised and updated three-year Strategic Plan, which covers the period 2022-2024, will be based on three complementary Strategic outcomes:

1. Strengthening the capacity of the technology Bank to conduct research and analysis and provide advisory services on science, technology and innovation-related issues with a focus on policies, incentives, regulation, and governance. This will entail improving the technology needs assessment programme by shifting the emphasis from a comprehensive assessment to targeted and more focused identification of technological solutions for specific development challenges and needs.

2. Identifying technologies and technical know-how that are relevant, appropriate, and applicable to LDCs, formulating demand-driven and bankable transfer of technology projects, and initiating their implementation in collaboration with partners, both national and international. A key indicator of a successful transfer of technology is its contribution to local science, technology, and innovation capacity building, and the ability of countries to scale up and develop the innovative capabilities.

3. Forging partnerships with key stakeholders - at national and international level and with both the public and private sector - and mobilizing additional resources to ensure effective implementation of technology transfer and technological learning and upgrading in LDCs. Creating a strong network of partnerships is essential both for mobilizing resources and leveraging the complementary knowledge and competencies that the Technology Bank needs to facilitate sustainable transfer of technology.

Within each outcome is embedded a strong commitment for inclusive technological development in line with the 2030 Agenda for Sustainable Development, particularly the seminal objective of "leaving no one behind".

To enhance the Technology Bank's result-based management practice, this Strategic Plan includes a strategic framework and a results matrix to enable monitoring, evaluation, and learning.

Contents

Acronyms and Abbreviations

ACABQ	Advisory Committee on Administrative and Budgetary Questions
ADB	Asian Development Bank
AfDB	African Development Bank
BADEA	Arab Bank for Economic Development in Africa
EIB	European Investment Bank
GII	Global Innovation Index
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
IMF	International Monetary Fund
IPoA	Istanbul Programme of Action for the Least Developed Countries for the Decade 2011-2020
LDCs	Least developed countries
OECD	Organisation for Economic Co-operation and Development
SDGs	Sustainable Development Goals
STI	Science, technology and innovation
TEP	Technology enabling platform
TIP	Technology Implementation Plan
TNA	Technology Needs Assessment
TTO	Technology Transfer Office
TWAS	The World Academy of Sciences
UN	United Nations
UNCDF	United Nations Capital Development Fund
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN-OHRLLS	United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
USAID	United States Agency for International Development

I. Strategic Setting: STI Opportunities and Challenges for Least Developed Countries

Strategic context

1. The 21st century is a period when economies and societies around the world are being reshaped by rapid technological change and the emergence of the "fourth industrial revolution". Unfortunately, as with earlier waves of technological revolution, not all countries and societies are enjoying the benefits of technological change at the same time or to the same degree. Technological gaps between low-income economies, particularly the Least Developed Countries (LDCs), and advanced and emerging countries remain wide and, in some cases, are widening further still.

2. The COVID-19 pandemic underscored this inequality, including how poorly prepared the least developed countries were to deal with the external shock generated by the pandemic and the digital transformation required to mitigate the negative impacts of Covid-19. Uneven connectivity within the group has meant that many people and businesses in LDCs could not avail themselves of high-speed networks required for remote learning, e-commerce, digital-based healthcare services, access to e-government and online business interaction. In this respect, the Covid-19 shock was a wake-up call for the least developed countries and an important lesson that they cannot afford to lag in their technological capabilities or miss active engagement in the new wave of rapid technological change.

3. Although governments and businesses in the least developed countries lack the information and knowledge necessary to identify and procure technologies that are relevant and appropriate for their development needs, they do have the power to shape the paths that the development of technologies take in their own economies and societies. These are countries with structural impediments, limited productive capacity and technological capability and low skills and knowledge base. Hence the need for special international support measures to assist them with the acquisition of technologies developed elsewhere and the development of their science, technology, and innovation capacities, which are essential requirements for promoting technological learning, assimilating acquired technologies, and upgrading local technological capability. Indeed, the UN General Assembly established the UN Technology Bank for Least Developed Countries precisely to assist LDCs build the capacity to identify and acquire technologies and enhance their ability to absorb, integrate, innovate, and scale up technologies, including through effective utilization of indigenous knowledge.

4. The mandate of the Technology Bank for the Least Developed Countries has been strengthened further recently. The Doha Programme of Action (DPoA) for the LDCs for the decade 2021-2030, which was endorsed by the General Assembly on 17 March 2022, states that the Technology Bank will serve "as a focal point for LDCs to strengthen their science, technology and innovation capacity towards building sustainable productive capacities and promoting structural economic transformation".

5. This overarching mandate serves as a framework for determining the work programme, strategic plan, and the organizational structure of the Technology Bank.

II. Learning from recent experience to shape the future

6. The Strategic Plan for 2022-2024 draws important lessons from the implementation of the previous Strategic Plan (2018-2021) and the recommendations of the Functional Review of the Technology Bank conducted in early 2022 at the request of the Governing Council of the

Technology Bank. It also draws from the results and recommendations of an audit report on the Technology Bank conducted by the United Nations Office of Internal Oversight Services (OIOS). The audit covers four areas: (a) governance and oversight mechanisms; (b) strategic and annual work plan; (c) resource mobilization; and (d) management of staff and other resources.

7. Despite the challenges on multiple fronts exacerbated by the Covid-19 pandemic, the newly established Technology Bank for LDCs has forged ahead with its operationalization, navigated the global pandemic, and demonstrated proof of concept. However, the Technology Bank has also encountered challenges in managerial operation and mobilization of resources which led to a decision by the Governing Council, at its fifth session held on 20 December 2021, to initiate a functional review of the Technology Bank and the reevaluation of the Bank's business model and strategic focus.

8. Despite the generous financial support by the Government of Turkey, it is evident that the resources currently available to the Bank are limited compared to its ambitious mandate as a focal point within the UN system for strengthening the technological capabilities of LDCs. As noted in the functional review, realistically, the Technology Bank should operate as a start-up entity using the annual contribution of $1.7 million from the Government of Turkey as seed funding to initiate bankable projects and prove its viability as an effective United Nations agency with the capacity to support the transfer and deployment of technologies in LDCs. Then, gradually the Technology Bank should develop the credibility, reputation and capacity needed to mobilize the additional resources necessary to scale-up its work in line with its mandates. The revised Strategic Plan for 2022-2024 reflects this realistic approach to organizational development or what is referred to as the 'proof of concept' in the functional review. In short, the strategic plan for 2022-2024 reflects the renewed focus of the Technology Bank on outputs, outcomes and impact-oriented activities and the need to build internal capacity progressively.

III. Key enabling principles

9. This section will identify seven key enabling principles that will guide the work of the Technology Bank, allowing the organization to operate efficiently and enabling it to achieve the outputs and outcomes specified in the Strategic Plan.

A. Demand-driven and responsive to least developed countries' STI needs

10. The activities of the Technology Bank will remain guided by the needs and priorities of the least developed countries. The Strategic Plan for 2022-2024 has been revised and updated mindful of the unique challenges and opportunities these countries face and conscious of reforms required to transform the Technology Bank into an efficient organization focused on outputs and impact. It is also grounded in the relevant data analysis and evidence, as well as in the outcomes of continued interactions with national stakeholders, to ensure that the Technology Bank's work will remain responsive to STI needs as countries move up the development ladder and towards graduation. The Technology Bank's programmes will be demand-led and will promote national ownership and leadership, strengthen domestic technological learning, and foster institutional capacity for sustainability.

B. Leveraging partnerships for impact

11. It is evident that the Technology Bank alone cannot ensure that the Least Developed Countries make significant progress towards achieving their STI development goals. Building science, technology and innovation capacity requires interaction between different actors, both national and international, and the sharing of experiences and transfer of technology and knowledge. Thus, in implementing its Strategic Plan, the Technology Bank, as a non-resident UN agency, will need to

call upon all development actors and stakeholders, including national counterparts, the private sector, philanthropist organizations and academia at every level, to collaborate and support the implementation of the Strategic Plan. Moreover, creating strategic partnership is an essential vehicle for mobilizing resources which are critical for sustaining the Technology Bank's support to LDCs.

12. All Technology Bank activities and projects will be designed to be demand-driven and complement, rather than compete with or duplicate, activities and projects already being undertaken by other UN agencies or donors. The Technology Bank recognizes other UN entities' lead role in thematic areas and sectors and will therefore continuously aim to build its programmes on synergies across existing initiatives and/or joint actions and approaches. Its unique advantage in such partnerships is its proximity to and familiarity with the specific needs and concerns of the least developed countries in the STI domain facilitated through its technology needs assessment programme.

C. Agile and strategic

13. The Technology Bank must remain agile, adaptable, pragmatic and responsive to new challenges and opportunities. Although the COVID-19 pandemic tested the Technology Bank's agility, the institution demonstrated its operational resilience not only by continuing to build new partnerships but also by proving its responsiveness to the pandemic with exploratory and bespoke initiatives. The Technology Bank will continue to retain a lean structure to react quickly and ensure that it is able to initiate processes that provide demand-driven support for prototype solutions and quick, targeted, and effective responses.

14. When designing projects and activities, the Technology Bank will ensure that adequate consideration is given to inclusive technological development, impact on the ground, especially key sustainable goals, and whether a multi-country and/or regional approach may be preferable options for achieving the desired results.

D. From transfer of technology to setting the stage for implementation

15. As technology deficient countries, LDCs rely on transfer of technology from abroad to build their domestic technological capabilities. However, while transfer of technology is an important channel for acquiring technologies, it is not, by itself, sufficient for inducing technological learning and upgrading. Effective utilization and deployment of acquired technologies and their assimilation, absorption and scaling up will depend on the level of development of domestic STI capacity and the policy and regulatory environment that supports the STI ecosystem. It is important, therefore, that the support provided by the Technology Bank is not limited to identification of technologies and designing projects only but also includes creating– in partnership with key national and international partners – the enabling environment needed to sustain local technological capability building and the development of innovative capacities, including the effective utilization of indigenous technologies. Pursuing these objectives would also require supporting the LDCs in the management of intellectual property rights.

16. Thus, the link between the transfer of technology and local technological development is not automatic. It requires a science, technology and innovation ecosystem and carefully crafted policies and incentives to entice local technological learning and create the absorptive capacity necessary to assimilate, adapt and master the acquired technology and knowledge. In short, in pursuing technological development, the desired end game is not transfer of technology per se but the development of domestic absorptive capacity, defined as the accumulation of knowledge, competencies, methods, skills and institutional capabilities. While, as a non-resident agency, there is a limit to how much support the Technology Bank can provide at the national level, it is, nevertheless, critical that the Bank facilitates the smooth transfer of technology, working with key national stakeholders and international partners that are able to take over and sustain the activities

initiated by the Technology Bank. Thus, given its size and resource constraints, in the foreseeable future, the Technology Bank will focus on project design and setting the stage for project implementation while brokering expertise, resources, and partnerships to ensure the long-term sustainability of the projects that the Bank initiates.

E. Commitment to promote inclusive technological development

17. Mainstreaming women and youth in the work of the Technology Bank is a high priority and essential for meeting the 2030 Vision of 'leaving no one behind". The Technology Bank recognizes that women have been under-represented in scientific and engineering professions, not only in least developed countries but almost everywhere. The Technology Bank also recognizes that gender equality, providing the youth in LDCs, which consist nearly 60% of the population, early opportunity for learning and access to knowledge in new technologies and the absence of discrimination in general contribute to improving the scientific quality and societal relevance of the technology and innovation generated by research. In line with its mandate, the Technology Bank will ensure its programming integrates a gender and youth-mainstreaming approach and is supportive of equal opportunities in STI.[1]

F. Communication and Outreach

18. As a newly establish international organization, the UN Technology Bank for LDCs is not widely known among key stakeholders, including governments, the private sector, and international organizations. This poses challenges for resource mobilization and the Bank's efforts to create strong partnership to implement projects. Thus, as part of its Strategic Plan 2022-2024, the Technology Bank should give priority to communication and outreach, since they will enable the results of the normative and operational work of the Technology Bank to be shared effectively. Such communication, beyond providing simple information on projects undertaken by the Technology Bank, should articulate more detailed messages and narratives on the state of STI in LDCs and their technology needs, based on a deep understanding of the technological challenges facing the LDCs as articulated through the TNAs. To this end, the Technology Bank will require a dedicated Communications Officer to support the Managing Director and the Deputy Managing Director in their efforts to increase awareness of the work of the Technology Bank, including its role as a focal point for LDCs in science, technology, and innovation-related matters. The Communications Officer will create the tools and packages that management needs to give voice to the Technology Bank and the organization's role as a driver of technological change in LDCs. Thus, during the Strategic Plan period, communication and outreach for the purposes of mobilizing resources and forging partnerships should go hand in hand to ensure that the Technology Bank is recognized as a leading UN agency for transfer and deployment of technologies in LDCs.

G. Monitoring, Evaluation, Learning and Accountability to stakeholders

19. The implementation of the Strategic Plan for 2022-2024 will be systematically monitored to ensure optimal achievement of results. In line with the recommendation of the 2022 Audit of the Technology Bank by the Office of Internal Oversight Services (OIOS), the Technology Bank will strengthen its monitoring, evaluation, reporting and learning practices to meet the expectations of least developed countries, current and prospective donors, and implementing partners. This includes assessing the effectiveness of the Technology Bank in achieving its objectives, as well as the efficiency of the Technology Bank in its use of available resources. A mid-term evaluation of the Strategic Plan for 2022-2024 will be carried out to assess performance in terms of achievement of expected accomplishments, and relevance, efficiency, effectiveness and sustainability. That will provide evidence of what is working well and what is not, and allow corrective action to be taken during the second half of the period covered by the plan. Similarly, in 2024, an end-of-strategic-plan

[1] In this regard, the Technology Bank is inspired by the Revised SADC Protocol on Gender and Development.

evaluation will be carried out, focusing on outcomes achieved, to draw lessons from the implementation and generate evidence to inform the next planning cycle.

IV. What Does Success Look Like for the Technology Bank in the long run?

20. Success will be demonstrated by the Technology Bank's ability to deliver on its value proposition as stated in the Doha Programme of Action, based on building on proof of concept over time. It is essential to envision the Technology Bank's impact in the long run beyond this Strategic Plan that should result in, for instance,

(a) enhanced awareness and relevance of the role and services of the Technology Bank in science, technology and innovation, including through strengthened capacity to demonstrate impact;

(b) increased demand for its services and endorsement from least developed countries, and expanded coverage of beneficiary/partner least developed countries;

(c) increased effectiveness in mobilizing resources to achieve financial sustainability and strengthen capacity to deliver on its mandate;

(d) improved capacity of supported LDCs in acquiring and applying productivity- and welfare-enhancing technologies, and nurturing a growing number of socially valuable and commercially successful innovations.

21. To ensure the Technology Bank is fit for its purpose, success depends on its ability to mobilize and manage resources and partnerships, its efforts to reach operational excellence, and its offerings as a thought leader for least developed countries and all stakeholders. Therefore, as recommended by the functional review, enhanced result-based management, focused selection of projects paired with follow-through execution, as well as established resource mobilization function and practices during this Strategic Plan period would be essential.

V. Strategic Framework

22. The overarching objective of the UN Technology Bank is to assist the least developed countries develop the science, technology, and innovation capabilities that they need to expand their productive capacities, eradicate poverty, promote structural transformation and attain sustainable development goals. Achieving these broad objectives under the Strategic Plan 2022-2024 will require two sets of action lines: (a) strengthening the Technology Bank's own expertise and capacity to deliver technology transfer and capacity building support to LDCs; and (b) identifying the key programmatic areas that serve as a strategic framework for organizing the 'activities', 'outcomes' and 'outputs' to be delivered under the strategic plan. The latter include three sets of programmatic areas:

(a) Strengthen the capacity to conduct research and analysis and provide advisory services on science, technology and innovation-related issues with a focus on policies, incentives, regulation, and governance. This will entail improving the technology needs assessment programme by shifting the emphasis from a comprehensive assessment to targeted and more focused identification of technological solutions for specific development challenges and needs.

(b) Identify technologies and technical know-how that are relevant, appropriate, and applicable to LDCs, formulate demand-driven and bankable transfer of technology projects, and initiate their implementation in collaboration with partners, both national and international. A key indicator of a successful transfer of technology is its contributions to local science,

technology, and innovation capacity building, and the ability of countries to scale up and develop the capacity to innovate.

(c) Forge partnerships with key stakeholders - at national and international level and with both the public and private sector - and mobilize additional resources to ensure effective implementation of technology transfer and technological learning and upgrading in LDCs. Creating a strong network of partnerships is essential both for mobilizing resources and leveraging the complementary knowledge and competencies that the Technology Bank needs to facilitate sustainable transfer of technology.

23. The future work of the Technology Bank will continue to be aligned with these objectives and overarching mandates. How the outcomes and outputs of the Technology Bank's work programmes are interrelated is illustrated below.

Outcome 1: Enhanced knowledge generation and evidence-based dialogues on science, technology and innovation in the least developed countries

24. Identifying the technological needs of least developed countries and the enabling policy environment necessary to transfer technology and develop local science, technology, and innovation capacities is a challenging task, made even more difficult by LDCs' limited capacity to conduct policy-oriented research and analysis and arrive at evidence-based policymaking on technology-related issues. This partly explains why the policies of most LDCs on science and technology tend to focus primarily on transfer of technology – mainly referring to the acquisition of technologies from abroad – and pays little attention to local technological learning, upgrading, assimilation and innovation capability building. Implicit in this policy approach is the assumption that imported technologies will automatically be embedded in the local economy and result in local technological learning and diffusion through linkages, spillover, and demonstration effects. However, the reality is that there is no automaticity in the diffusion of imported technologies into the local economy. The right policies, regulations, skills, robust legal framework, infrastructure, institutions and other elements of knowledge accumulation ecosystem must be in place to create a favorable environment for learning and the integration of imported technology into the local technological development process.

25. Furthermore, the implementation of the mandate from the Doha Programme of Action where the Technology Bank is recognized as "a focal point for LDCs" on science, technology and innovation related issues requires that the organization provides thought leadership and advocacy services on behalf of the least developed countries. This will therefore require the Technology Bank to continuously gather evidence of the STI situation and needs in these countries, and keep abreast of latest developments through research, assessments, and analysis.

26. The role of research, analysis and TNAs as instruments for identifying relevant and appropriate technologies to enable and inform evidence-based and demand driven transfer of technology and STI development projects for LDCs is therefore critical and will continue to be developed during the strategic plan period. The Technology Bank will promote substantial dissemination of its knowledge products, facilitating conversations to share findings, insights and recommendations, and informing global dialogue about the key technological challenges that the LDCs face. Furthermore, the Technology Bank will develop a knowledge management function to capitalize on the evidence generated through research, analysis, TNAs, as well as monitoring and evaluation of implemented projects, and provide thoughtful orientation to organizational programming going forward.

27. The analytical work of the Technology Bank will adopt a holistic and inclusive approach to ensure the gaps, needs and priorities of society's most vulnerable segments, including youth and

women, are put at the forefront of global dialogue, as well as mainstreamed in the Technology Bank project design and implementation.

Output 1.1 Evidence and policy based STI analyses to inform technological development

28. As a focal point for LDCs on science, technology and innovation related issues, the Technology Bank has the mandate and responsibility to support the LDCs in identifying 'best practice' policies for STI development and the latest insights on technological change and the implications for LDCs.

29. To provide this critical support to LDCs, the Technology Bank needs to strengthen its capacity to conduct research and analysis on STI-related issues. During 2022, the Technology Bank will establish a dedicated team with appropriate skills and expertise to conduct research and analysis and translate the findings and policy perspectives into concrete recommendations that inform policymakers in LDCs on the 'best practices' in promoting sustainable transfer of technology and the development of science, technology, and innovation capacities. During the Strategic Plan 2022-2024, the team responsible for research and analysis will issue quarterly 'Policy Briefs' initially based on the recently published the 'State of science, technology and innovation in the least developed countries' report but gradually conducting research and analysis focusing on priority issues highlighted in technology needs assessment reports and technical cooperation projects initiated and implemented by the Technology Bank.

Output 1.2 Technology Needs Assessments

30. The Technology Needs Assessments (TNAs) remain critical for the Technology Bank since they serve as knowledge product that provides, both the Technology Bank and beneficiary countries, with important information on the technological situation in each country and the priority technological needs. The TNAs also serve as effective instruments for identifying development challenges in LDCs that require technological solutions through targeted project design and sustainable technology transfer.

31. The Technology Bank organized a peer review workshop to explore ways in which the TNAs could be improved by learning from the experiences of other countries and institutions that have carried out technology needs assessment. The exchange of views among experts, Council members and the staff from the Technology Bank were extremely useful in identifying elements that should be taken into consideration when conducting TNAs in LDCs.

32. The Technology Bank will harmonize its TNA methodology to reflect lessons learned in the past years and the outcome of the peer review workshop. Hence, the TNA approach will be based on the following principles: i) TNAs are demand-driven and governments in least developed countries play an active role and own the TNA process; ii) TNAs show a clear and practical link between a country's key development challenges and the technologies identified to address them; iii) TNAs ensure active engagement of stakeholders at all levels throughout the process and propose technologies that have potential to address multiple challenges simultaneously, taking into consideration, environmental, social, and economic impacts, as well as the operational sustainability of the technologies; iv) TNAs promote a participatory call for action that leads to devising practical solutions and develop an agreed deployment strategy involving all relevant stakeholders; v) TNAs ensure adequate consensus is built to support follow up actions.

33. During the Strategic Plan period 2022-2024, the Technology Bank will facilitate the completion of six TNAs initiated in 2021 and conduct at least ten more TNAs based on demand by the least developed countries. Greater emphasis will also be placed on supporting the countries to develop implementation strategies especially those that completed their TNAs.

Output 1.3 Knowledge management for sustainable change

34. Knowledge is both a key output that the Technology Bank delivers to least developed countries and stakeholders in science, technology and innovation, as well as a key resource that the organization needs in order to deliver its results. In 2022-2024, the Technology Bank will develop its knowledge management function and will ensure that the knowledge and evidence generated is shared and effectively used in support of policy development, partnership building, resource mobilization, and programme development and delivery in support of sustainable change.

35. As part of this work, the information gathered through research, analysis and TNAs will be collated, synthesized and stored in a database. This will serve as a knowledge portal, positioning the Technology Bank as a repository of information on the least developed countries' technological needs, main development challenges and potential technologies available to assist their development in selected sectors. The available knowledge will provide the basis for the Technology Bank advisory and support services and capacity building of least developed countries and partners.

36. The available knowledge will also be systematically shared across all levels of the organization (e.g. through internal brainstorming sessions) to inform the formulation and development of projects responding to specific priority needs of the LDCs, provide evidence and lessons for learning, and support results-based management. To this end, the knowledge management component of the organization's work will be aligned with the monitoring, evaluation and learning (MEL) that the Bank conducts to review progress of work and produce additional evidence-based learning, which in turn feeds into the Technology Bank's thought leadership activities.

Outcome 2: Increased demand-driven transfer of identified appropriate technologies and know-how

37. A technology gap exists between the least developed countries and the rest of the world, representing the differences in technological and innovation capabilities between developing and developed nations. As a result of domestic resource constraints, inadequate backbone infrastructure, limited investment in human capital, insufficient incentive structures and institutional and policy weaknesses, technology is often inaccessible to the least developed countries. The General Assembly resolution 71/251 and the Charter of the Technology Bank reaffirm the importance of promoting and facilitating the identification and utilization of and access to appropriate technologies by the least developed countries, as well as their transfer to the least developed countries, while respecting intellectual property rights and fostering the national and regional capacity of the least developed countries for the effective utilization of technology to bring about transformative change.

38. In the years 2022-2024, the Technology Bank will revise, pilot and expand a targeted approach for the design and implementation of sustainable technology and know-how transfer to least developed countries. In this regard, the Technology Bank will adopt thematic prioritization for technology identification, based on the priority technology sectors identified by least developed countries which include agriculture, health, environment, energy, and ICT. Hence, during the proof-of-concept period, the Technology Bank will prioritize the identification and transfer of appropriate technology solutions and know-how in the areas of food systems, medical devices, digitalization, and climate resilience, including, for instance, sustainable settlements.

Output 2.1 Revised project design and development for technology transfer through needs-solutions matchmaking

39. As stressed in the functional review, the dual mandates of the Technology Bank – facilitating the transfer of much needed technologies to LDCs and supporting their efforts to build national capacities in STI - remain highly relevant and more urgent now than ever before. However, it is also evident that as an organization dependent on voluntary contributions, the Technology Bank's ability

to implement its mandates is always subject to availability of resources. This makes it essential that the Technology Bank plans its initiatives realistically and focusing on targeted activities that it can deliver, including in partnership with other stakeholders.

40. Starting from 2022 and in the coming two years, the Technology Bank will develop: (1) the capability and expertise to identify technologies appropriate and applicable to LDCs; (2) the competence to design bankable projects, including the preparation of proposals for resource mobilization; and (3) the skills set necessary to initiate projects in the field and establish working relationships with key national and international partners that support the sustainability of projects at national level. In brief, as stated in the functional review, what the Technology Bank needs is a more systematic approach to generating what might be described as "bankable" projects - that is, projects that will bring together the right partners and mobilize the necessary funds and other resources and that can stimulate STI capacity building through technology transfer. Moving in this direction will require introducing a new organizational structure and developing specialized competencies and skills, especially in project design, implementation, resource mobilization, outreach and establishing partnership.

41. Moreover, it will require adopting a new multiple-steps approach in project design, as proposed in the functional review. However, the proposed steps will be slightly modified to ensure compatibility with the Technology Bank's mandates and the rules and regulations that govern the work of intergovernmental organizations. The seven steps for designing projects that are recommended by the functional review include: (1) preparing an introductory pitch on the technology and technical know-how deemed to be appropriate, relevant and applicable for transfer to LDCs; (2) identifying potential beneficiary countries based on priorities and development challenges identified through the technology needs assessment or highlighted in national development strategies; (3) kicking-off the project design in close consultation with technology providers, funders, and other stakeholders to create a platform for maximum knowledge sharing and exchange on the selected technology; (4) conducting dialogue with the selected beneficiary country (or countries) to put them in the driver's seat and to forge tailored partnerships with key national stakeholders, mobilize resources and strengthen effective implementation; (5) identifying and matchmaking partners, particularly international organizations within the UN system, that will support the sustainability of projects in the long-term; (6) conducting multi-stakeholder consultation at national level to map out the implementation plan and ensure inclusive technological development, particularly the engagement of marginalized groups such as women, youth and residents in rural areas. At this phase, it is also important to conduct due diligence assessment to ascertain the relevance of the technology identified and the possible risks, if any; (7) initiating a resource mobilization campaign tailored to specific projects and in coordination with potential partners and governments in beneficiary countries; and finally launching the project and preparing the ground at national level for its successful implementation with the assistance of partners.

42. During 2022, the Technology Bank will pilot this revised approach through four projects based on the eight steps described above. However, the process adopted by the Technology Bank will be slightly different from the steps envisaged and proposed in the functional review. Instead of designing projects and seeking partners to implement them, the Technology Bank will be involved in setting the stage for the implementation of the projects that it helped to design. As already noted above, the purpose of initiating technology transfer is to enable countries to build their science, technology, and innovation capacities. Thus, the design of projects will incorporate two key elements: (1) to ensure sustainability, a critical component of the project design will be localization of the transferred technology through capacity building, training, training of trainers and passing knowledge and technical capability to local enterprises or individuals. In short, localization and impact will feature prominently as key performance indicators (KPIs); and (2) establishing partnerships with national and international stakeholders that are able to ensure the sustainability of

the projects and assist in the follow-up monitoring and evaluation and identification of lessons learned, including for other LDCs.

43. Going forward, project design will be guided by insights produced through research and analysis, as well as through the focused TNA outputs, which will feed into a more systematic approach to identify technologies that least developed countries need and are available and appropriate for rapid technology transfer. This process will be developed in close consultation with technology providers, funders, and other stakeholders to create a platform to forge tailored partnerships, mobilize resources and strengthen effective implementation.

44. Connecting the technology owners with seekers and providing access to patent information is the first step in facilitating technology transfer. In this regard, building on the database of needs developed through TNAs, the Technology Bank will also explore technical and funding opportunities to develop a platform aimed at facilitating technology transfer through simplified identification of technology providers and matching of interested partners. The platform will also be a one stop shop for services instrumental for technology transfer that can include financial, legal and technical services.

Output 2.2 Facilitated technology and know-how transfer

45. Least developed countries need targeted support to access technologies from abroad to grow their industrial base before they can invest in creating their own scientific and technological breakthroughs. Building on the STI needs and solutions identified through research, analysis, TNAs and subsequent project design, the Technology Bank will facilitate stakeholders' coordination for the implementation of projects to ensure effective transfer of appropriate technologies in ways that strengthen the least developed countries' STI capacity.

46. Initially, to find the most practical pathway to sustainable growth, the Technology Bank will give early priority to helping least developed countries access and deploy technologies that are well established and can provide impetus for necessary transformational change. This initial pipeline of projects will be used to help establish essential STI infrastructure that can be progressively strengthened to enable the sustainable transfer of more complex or frontier technologies.

47. In the years 2022-2024, the Technology Bank will test and implement this approach through targeted projects in the identified priority thematic areas and explore opportunities for demand-led expansion of successful initiatives to other least developed countries. Projects being piloted in 2022 include, for instance, the knowledge and technology transfer on ear care continuum in Bhutan, the development of a Technology Makers Lab in Niger, and the prototyping of sustainable and resilient rammed earth dwellings in Mozambique.

48. Work in this area will be critical to build credibility and a reputation for the Technology Bank as an effective facilitator of sustainable technology transfer.

Output 2.3 Strengthened capacities and ecosystems for technological development

49. Without rapidly building up national capacities in science, technology and innovation, the goals of eradicating widespread poverty and removing structural constraints on their economies, and thereby unleashing sustained growth and sustainable development, will remain a distant dream for the nearly a billion people living in LDCs. Combining efforts to build up national capacities in STI with the transfer of much needed technologies to LDCs is essential to achievement of the Technology Bank mandate.

50. Working in partnership and collaboration with research institutions, academia, private and public sector stakeholders, the Technology Bank will continue to facilitate and support the least developed countries in strengthening their research, scientific and technical knowledge, and decision-making capacities to respond to global challenges including attainment of the SDGs.

During the strategic plan period 2022-2024, the Technology Bank, in collaboration with the UNESCO/TWAS and ICGEB, will continue to identify opportunities to expand the awarding of fellowships to young scientists in genetic engineering and biotechnology. Funding for the first cohort of fellowships was provided by the Technology Bank with the understanding that the Technology Bank will continue to finance the second and third cohort of fellowships. However, due to financial constraints, the Technology Bank is not in a position to continue to fund the programme in the foreseeable future. Therefore, along with other partners, the Technology Bank will initiate a resource mobilization campaign to secure adequate finance for the programme. The Technology Bank will also explore the potential for raising funds to finance a training programme aimed at enhancing the capacity of experts and policymakers from LDCs on the use of satellite technologies for adaptation to climate change, extreme weather, drought, flooding, and other disasters.

51. Central to building inclusive, sustainable, and transformative innovation is helping least developed countries develop appropriate ecosystems where strategies, infrastructure and networks are strengthened in a mutually reinforcing way. The Technology Bank will seek funding and explore opportunities to support the development of national and regional innovation ecosystems that can attract outside technology, generate homegrown research and innovations, and take them to market, ensuring that entrepreneurial talents relate to the expertise, technologies, and investment capital they need to build high-growth ventures. To this aim, the Technology Bank will identify opportunities to collaborate with partners and existing initiatives (e.g., acceleration programmes, SDG-related competitions, etc.), advocating for targeted focus on entrepreneurship in the LDCs, expanding scope to hard-to-reach countries, and facilitating matching of demand and supply of funding. Finally, conditional to the availability of funding, the Technology Bank will consider developing targeted capacity-building initiatives aimed at strengthening the ecosystem's capacity to identify and nurture growth entrepreneurship (e.g. managerial and technology skills demanded by private sector; supporting local innovation hubs, incubations and acceleration programs to promote investment-ready ventures, exc.) and developing mission-oriented innovation policies. This will contribute to ensuring that least developed countries are equipped to test and scale innovative models, including in public service innovation and social innovations, while harnessing the social, economic and environmental benefits of newly available technologies, including those resulting from indigenous knowledge and innovation systems.

52. The least developed countries have difficulty in connecting innovation and research institutions with industry, funding and technical assistance because of the gaps and weaknesses in the STI ecosystem. As TNAs have highlighted, these challenges undermine opportunities for technology transfer of local innovations and inventions from universities and research centers to the market. Fully functioning technology transfer offices (TTOs) can provide services aimed at filling a number of these gaps, supporting innovators, researchers, and entrepreneurs in navigating the technology commercialization landscape, and mobilizing the necessary expertise to enable them to execute technology transfer agreements with partners. In 2023, the Technology Bank, together with TUBITAK and USIMP, will explore funding opportunities to facilitate the design, development and prototyping of national technology transfer offices appropriate for use in the least developed countries. The Gambia has already been identified as the potential pilot country and the project will include a business model development, capacity building through mentoring and training and an implementation strategy through a one-year work plan. If successful, the TTO model will be expanded to other countries, conditional on availability of adequate funding. The national TTO would then serve as a main local interlocutor of the Technology Bank on technology transfer matters.

Output 2.4 Strengthened science-policy interface

53. The Technology Bank works to foster cross-country scientific collaboration and strengthen the science-policy interface. The Technology Bank will continue to support the creation and strengthening of Academies of Science in least developed countries, including by building a

networking platform for these Academies. In this regard, the Academies will be encouraged to replicate specific initiatives to support inclusivity and gender equality in science, and to participate in data collection related to inclusiveness in science, technology, engineering, and mathematics (STEM) education. The Technology Bank will continue to identify PhD and Post-doctoral scientific fellowships and to advocate for the participation of LDCs, especially women, to strengthen scientific capacity in LDCs.

54. Addressing complex regional and global challenges benefits from a strong link between science and diplomacy where scientists provide scientific evidence to diplomats to inform decisions for foreign policy making and negotiate multilateral and regional agreements. The Technology Bank will work with other partners, such as The World Academy of Sciences (TWAS), to engage with and foster networking of scientists and diplomats from least developed countries with networks of academies of sciences, international scientific organizations, and scientific communities to collaborate and strengthen practice in integrating science into multilateral agreements and international negotiations.

Outcome 3: Resource mobilization and strengthened partnerships for inclusive growth and maximum impact

55. Least developed countries are low-income economies that are confronted with severe structural impediments, encompassing many aspects, including limited productive capacities, low level of technological development, insignificant capacity for innovation, low skills base, weak institutions, dependency on commodity exports and so on. Thus, the support that LDCs need from the international community are diverse and multidimensional and no single international institution working in isolation can provide effective support that meets all their needs. For a small organization and a newcomer to multilateral development assistance such as the Technology Bank, establishing strong and targeted partnerships and mobilizing additional resources are not choices to be made but essential necessities for effective delivery of its core mandates. Consequently, as a focal point for LDCs in science, technology, and innovation-related issues, the Technology Bank will call upon all development partners and stakeholders to support, including through voluntary contributions, the implementation of the Strategic Plan 2022-2024. More specifically, the Technology Bank will strengthen its relations with the United Nations resident coordinator system in LDCs and other UN organizations, particularly those that are present in LDCs and in a position to support the sustainability of the projects that the Bank initiates in LDCs.

Output 3.1 Cross-sector partnerships to enhance STI development

56. The Technology Bank will mobilize international partnerships to ensure that the technology transfer projects implemented are inclusive and do not neglect marginalized groups, particularly women and the youth, the aim being to mobilize complementary expertise and support in each phase of its initiatives. This approach will enable least developed countries to move a step forward towards the SDGs and “leave no one behind”.

57. As a lean, results-oriented organization, the Technology Bank will continue to work with other UN entities, including Resident Coordinators and UNCTs, as key to accelerating results towards sustainable development of the least developed countries. This will also allow the Technology Bank to explore work in emerging priority areas such as climate change, health, and connectivity through joint initiatives.

58. In addition to providing support to individual least developed countries, the Technology Bank is expected to adopt regional, subregional, and inter-regional approaches to promoting STI. The Technology Bank will work to enable least developed countries to play a meaningful role in the global knowledge-creation arena, ensuring they are well linked to expanding networks of North-South, South-South, intra-regional and inter-regional knowledge creation.

Output 3.2 Increased resources to build a solid base for self-financing

59. The UN Technology Bank was established with a clear understanding that the resources required to finance both the operational and programmatic work of the organization will be mobilized through voluntary contributions from governments, non-governmental organizations, the private sector, and other stakeholders. From the start, therefore, it was evident that the sustainability of the Technology Bank was dependent on its ability to build a reliable self-financing mechanism and a strong network of sponsors for its technology transfer and capacity building activities. However, to date, the main source funding to the Technology Bank has been the Government of Turkey, which contributed $2 million a year for 5 years and has agreed to continue funding the Technology Bank for another five years with the amount of $1.7 million (unearmarked) and an additional $200,000 earmarked for projects that can generate immediate impact in LDCs. Apart from the host country's contribution (both in kind and finance) and other contributions by a few countries (Norway $1 million; India $100,000; Guinea $50,00 and Italy financing a Junior Professional Officer position), the Technology Bank has generated very little additional funding. Indeed, at the current level of funding, starting from 2023 the only source of funding available for both operations and programmatic work is the $1.7 million pledged by the Government of Turkey. Thus, in the coming two years, the Technology Bank must intensify its resource mobilization efforts building on lessons learned from recent experience, developing organizational competency in resource mobilization, and rethinking the approach and methodology used to date to mobilize resources.

60. In the second half 2022 and as part of the ongoing reforms and restructuring process, the Technology Bank will design a new strategy for resource mobilization considering key factors that arise from the current reality facing the Technology Bank:

(i) First, based on funds currently available in the Trust Fund, the Technology Bank has sufficient resources to finance the programme of work for 2022. However, thereafter, and in the absence of significant new funding, the Technology Bank will be forced to downscale its operations. Projections show that without mobilization of additional resources, the only predictable funding available for 2023 (which is the $1.7 million pledged by the Government of Turkey) will cover less than 60% of the cost of the staff currently employed by the Bank. It is in this context that the urgency of developing a new strategy for resource mobilization should be understood. In short, the Technology Bank has a relatively short window in which it can become financially sustainable.

(ii) Second, it is evident that during 2021, the capacity of the Technology Bank was allowed to increase, and additional posts were created along with financial commitments to partners without considering the resource implications and the sustainability of the additional obligations. Correction of these recent management errors will require re-assessing the financial commitments made by the Technology Bank and re-evaluating the business model applied to identify technologies and design projects and implement activities at country level. Ensuring that the Technology Bank operates as if it is "a lean business start-up", as already proposed in the functional review, and operating within its means and using the financial support from the host country as a seed money to establish its credibility and reputation, is the most realistic orientation that the Technology Bank should follow in the foreseeable future. This strategic direction will be framed during the Strategic Plan 2022-2024.

(iii) Third, an ad-hoc and uncoordinated approach to resource mobilization where each programme manager is left to himself/herself to mobilize resources for specific project, or the Managing Director is relying on random efforts to mobilize resources based on personal contacts and chance encounters with potential donors, is not only an inefficient approach to resource mobilization but also time consuming and wasteful. The Technology Bank should establish a team solely dedicated to resource mobilization working in close synergy with other functions, especially creating and strengthening partnerships and managing the Bank's outreach and communication activities. The team will consist of staff with specialized skills, experience, and expertise in resource mobilization and outreach and

will perform its functions under the guidance and supervision of the Managing Director. By the end of 2023, the Technology Bank should mobilize additional resources that will enable the organization to finance at least 50% of the programmatic activities of the Bank. By the end of the current strategic plan in 2024, the Technology Bank should have mobilized at least additional $2 million as core funding and additional $5 million (or in-kind equivalent) for project implementation. The central objective of the new strategy for resource mobilization should be to transform the Technology Bank into a self-financing organization by 2027 - the year that the current financial agreement with the Government of Turkey ends.

(iv) Fourth, it should be acknowledged that there is a limit as to how far the generosity of the Government of Turkey can be stretched as the sole volunteer donor of the Technology Bank, a UN organization established by the General Assembly to assist the 46 Least Developed Countries. Support to LDCs is the responsibility of the international community as reaffirmed in the Doha Programme of Action for LDCs for the decade 2021-2030, which was endorsed by the UN General Assembly as a consensus document on 17 March 2022. Thus, the resources used to finance the support activities delivered by the Technology Bank should reflect that collective responsibility and vision.

61. Given this backdrop and reality, during the Strategic Plan 2022-2024, the Technology Bank will accelerate efforts to proactively reach out to various stakeholders to carry out its mission through the establishment of a resource mobilization, outreach and strategic communications team. The team will develop and roll out an executable resource mobilization strategy, in close coordination with programme staff responsible for project design. The team will operate with annual work plans including specific targets to:

(a) bring in financial contributions from potential donors, including Member States, private sector, multinational organizations, foundations and academia;

(b) mobilize in-kind support and voluntary technology transfer for the Technology Bank initiatives, programmes and activities.

(c) attract and retain contributors through timely donor reporting, progress update, problem solving, thereby establishing the Technology Bank as a trusted development partner.

62. As part of lessons learnt and new enhanced practices, a solid Bank-wide accountability mechanism for resource mobilization with established standard procedures to outreach, engage and retain contributors will be put in place to assure our donors and contributors with timely reporting and that the resources are managed properly and utilized for concrete deliverables and impact.

63. Advocacy and strategic communication will play an instrumental role towards resource mobilization. Through a dedicated communications strategy, the Technology Bank cultivates media networks, UN system partners, and prepares information and campaign materials such as programme brochures, presentations, and reports to support the resource mobilization function and raise awareness of Technology Bank’s mandate. This will support promotion of the Technology Bank’s role in science, technology and innovation, adequate dissemination of findings and knowledge products, showcasing projects results and impact and ensure stakeholder recognition.

VII. Risk Management

64. The Technology Bank has identified external and internal risks in four main categories and listed corresponding mitigation methods in brief:

(i) Structural challenges in LDCs: By definition, the least developed countries are low-income countries confronted by severe structural impediments to sustainable development. They are

highly vulnerable to economic and environmental shocks and have low levels of human assets. In this context, utilizing STIs to drive sustainable and systematic changes in LDCs requires long-term continuous investment and political will from all stakeholders.

(ii) Fragility: Many least developed countries are also fragile states. Changes in their environment have caused sometimes significant delays in the programme process. The Technology Bank must maintain its phased approach with active environment scanning when working in fragile states.

(iii) Resource constraints: Based on our current stocktaking, the Technology Bank is in urgent need of resources to finance not only its programme but also its operational costs, including staff costs. The UNTB is establishing its resource mobilization function with the hope to continuously increase its efforts and investments to outreach and retain and funders and donors.

(iv) Resource management and internal accountability: a series of audit and review recommendations have revealed significant amount of internal control and management risks started in the organization's initial operational stage that are being addressed by its current leadership. Proper accountability, administrative and programme management rules and procedures will need to be put in place to safeguard its future.

65. Based on its experience and lessons learned from the audit and functional review recommendations, in the strategic plan period 2022-2024, the Technology Bank will develop and implements its Enterprise Risk Management (ERM) system. The system will aim to ensure foresight and risk-informed decisions across all levels of the organization, addressing institutional, programmatic and contextual risk that can affect organizational objectives. The system will consist of the ERM Policy and Procedure, and an ERM Strategy and Register, in line with the UN Risk Management, Oversight and Accountability requirements.

VIII. Monitoring, Evaluation and Learning

66. To achieve the Technology Bank's objectives and continuously to improve its operations, an integrated strategic results framework has been included in this Strategic Plan to enable monitoring and evaluation (see Results Matrix in Annex 1). A further expanded M&E system at programme level will also be developed to supplement and feed into the results framework.

67. Based on the results framework for the next three years, the Technology Bank's annual work plans and their reviews will ensure programmes are tracked and any necessary revisions made.

68. In addition, the Technology Bank's annual report to the General Assembly through the Council will report on the implementation progress of the Strategic Plan.

69. An external review covering the first planning cycle, as set out in the initial three-year Strategic Plan, has already been conducted and the review's results and recommendations are reflected in the current version. An impact assessment will be completed towards the end of the 2022-2024 Strategic Plan. The findings will be publicly accessible, as will concrete institutional responses to those findings and recommendations.