

Landscape of Science, Technology and Innovation initiatives for the SDGs

Inter-Agency Task Team for Science, Technology and Innovation for SDG (IATT-STI)¹

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Summary

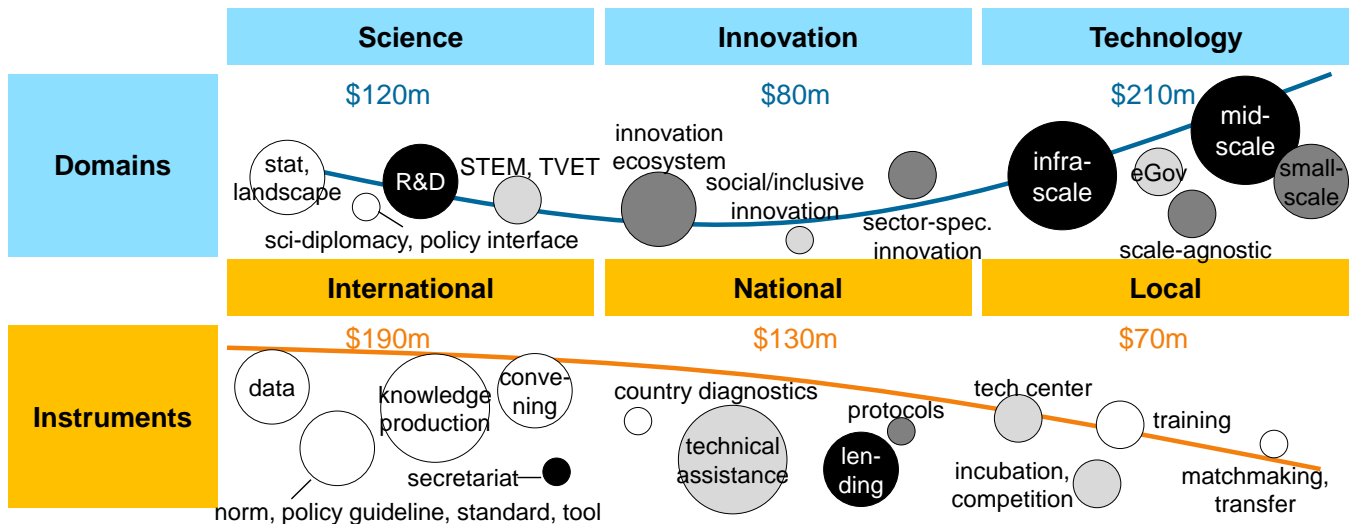
1. UN System has numerous STI initiatives and substantial resource inputs

Based on received inputs, the mapping examined 1,600 STI activities across 20 UN agencies, worth 2,600 staff full-time-equivalent, \$1 billion budget at agencies and \$120 billion for recipients (grants, trust funds, loans and credits)². Seven agencies host most of the submitted STI initiatives: World Bank, FAO, ITU, WIPO, UN Environment, UNESCO, and UNIDO. STI initiatives represent around 15% of staff and budget, and close to 30% of resources for recipients at these seven agencies.

2. A big picture view of the diversity and distribution of the UN's STI initiatives informs discussions on improving their fit for purpose in orchestrating achievement of the SDGs

Initiatives span across global forums to local actions, and from upstream research to downstream technology dissemination, mutually reinforcing to identify, adapt, and scale STI solutions. Patterns highlighted (such as level of effort, proxied by budget, on innovation much lower than on technology; local much lower than international; grants and loans concentrated in certain domains and instruments) warrant rich and granular discussions on synergies, efficiency and effectiveness in the fiscally constrained environment to fully capitalize UN System's political, intellectual, technical, financial and operational capabilities.

Table: Mix of UN STI initiatives³ (bubble size: budget at agencies, darkness: grant/loan amount for recipients)



Deeper analyses show great variance in the mix of STI initiatives per agency, country and SDGs, and indicate possible opportunities for greater coherence and synergies through robust strategies or policy frameworks for STI, at both agencies and countries sides.

¹ IATT-STI's Mapping Sub-Group, Programming and Analytics Cluster, conducted the study. Feedback to this paper may be directed to Naoto Kanehira (nkanehira@worldbank.org) and Tobias Cabani (cabani@un.org). Views expressed in this paper are of the authors and do not represent official positions of the United Nations, the World Bank Group or their Member States.

² Diversity of accounting and reporting systems across agencies caused variance in data quality, and increasing workloads constrained capacities of IATT focal points to submit detailed inputs. Resulting analysis therefore is only indicative, prone to inaccuracies in i) identification of STI activities; ii) estimation of resource inputs; and iii) interpretation of nature of the activities.

³ Detailed analysis considered only those initiatives with primary focus on STI, excluding those with STI as smaller components to achieve broader objectives. For definitions of typologies and in-depth analyses by agencies and SDGs, see the main report.

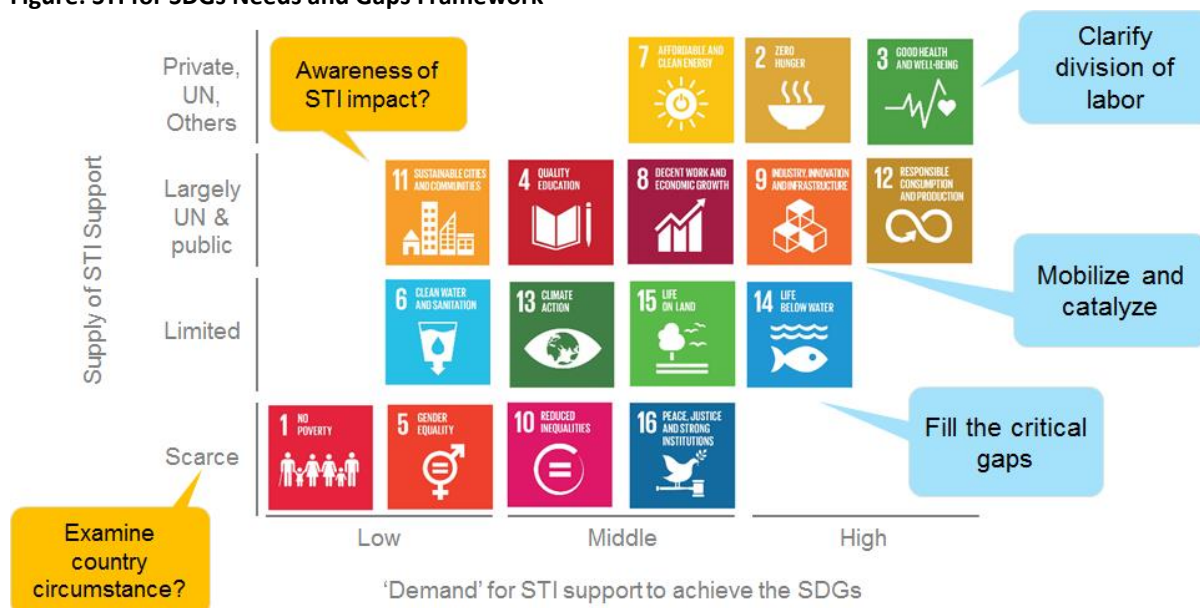
3. Non-UN public/civil actors and private sector STI initiatives show uneven level of efforts and commercial opportunities across the SDGs and UN's STI initiatives can accordingly differentiate focus and priorities, capitalizing respective comparative advantages

Four groups of the SDGs emerge from supply patterns of STI support:

- i) *Energy, food and health*, where many new technologies are emerging; businesses identify trillions of dollars of opportunities to meet the SDGs; and UN has moderate level of STI support both at international and national or local levels.
- ii) *Education, jobs/growth, industrialization/infra, cities, and sustainable consumption and production*, with fewer emerging technologies; businesses facing moderate opportunities; UN and other public/civic actors providing highest level of STI support.
- iii) *Water, climate, ocean, and forest/biodiversity*, where business potentials are yet to be unlocked, and UN support focuses on international, not national or local level.
- iv) *Poverty, gender, inequalities and institutions*, where business prospects are limited, and UN provides limited support dedicated to STI, while many efforts involve STI as a component of activities with broader scope.

With the demand for STI for SDGs as proxied by lags in SDGs progress and importance of STI (as explicit in SDGs languages), potential gap areas emerge. For high-demand, high-supply areas, what might be better a division of labor based on UN comparative advantages? For high-demand, low-supply areas, what gaps need to be filled?

Figure: STI for SDGs Needs and Gaps Framework



4. What are possible priorities and next steps for Technology Facilitation Mechanism?

Member states called for greater coherence and coordination of existing STI initiatives. The findings from the mapping, however, exemplify the challenges TFM faces in delivering on its mandates: namely, i) varying and in some cases unclear positioning of STI under UN agencies' respective strategies; ii) lack of common metrics or frame of reference on STI under countries' sustainable development strategies; and iii) emerging private sector engagement opportunities yet to be fully operationalized across the UN System. Upon co-chairs and member states' guidance, TFM's work program and specific deliverables can be planned through the inter-sessional activities to address these challenges.