Harnessing the Digitalization of Finance to Achieve the Sustainable Development Goals

Task Force - Framework Document

1. Purpose of Framework

The Task Force on Digital Financing of the SDGs (hereinafter "the DFTF" or "the Task Force") is mandated to identify **how digitalization will reshape finance and to identify, theorize, and propose how best this can support the financing of the SDGs**. This requires considering the broader context of finance, technology, and the SDGs, and then narrowing to those areas of SDG financing that are changing due to digitalization.

The DFTF met for the first time during in Davos on 23rd January 2019, with the aim of scoping the work and defining what would constitute success. At this meeting, the co-Chairs highlighted that the Task Force's success will ultimately depend on it delivering new insights, ideas, and concrete recommendations for specific actions by policymakers, investors, bankers, and tech entrepreneurs.

The framework set out in this document provides the basic building blocks that will underpin the work of the DFTF. It establishes the basis on which the DFTF will consider the overall opportunities in harnessing the digitalization of financing to support the realization of the SDGs. Moreover, it highlights a number of key lenses through which this opportunity will be best understood, as well as selected topics for a deeper dive to facilitate the broader analysis of opportunities and actions needed across the SDGs and associated financing needs. In combination, these approaches should enable both the opportunities to be identified and risks to be understood and best mitigated.

This Framework will be updated from time to time as work progresses and additional Task Force members perspectives are added.

2. The Context

Adequate, accessible and affordable financing is key to achieving the Sustainable Development Goals (SDGs), as set out in the Addis Ababa Action Agenda as well as the Paris Agreement on climate. Together, these global agreements from 2015 signal the need not only for more finance, but for all financial flows (and so the financial system itself) to be aligned with the needs of sustainable development.

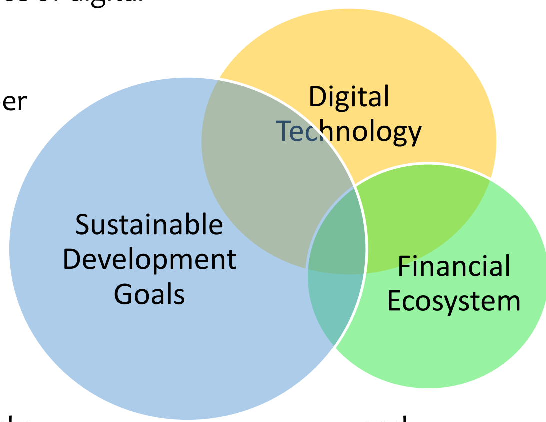
Digitalization is changing our global economy, and indeed many aspects of peoples' lives. It is changing the fundamentals of finance, from the basics of digitization in delivering cheaper and faster data to inform financing decisions, to supporting greater access to financial services and enabling citizens to be more centrally involved in every aspect of finance, to the reinvention of the meaning and role of money itself, and the ways in which our global financial system is governed.

Digitalization therefore changes how we can finance efforts to achieve the SDGs. Exemplary cases illustrate this fact in practice. Technology-driven innovations such as mobile payments systems, artificial intelligence, big data and blockchain are being innovatively deployed, for example, to accelerate financing for small and medium sized businesses, catalyze the uptake of distributed solar energy technology, and improve the carbon profile of the built environment.

Such examples inspire and inform us. But **the positive effects of digitalization of finance must scale up, rapidly, if the SDGs are to be realized by 2030. Moreover, the digitalization of finance may have downsides that need to be understood and mitigated**. Negative examples include high frequency trading which benefits those winning the technological arms race or the daily examples of cybersecurity breaches through the myriad of companies, financial and non-financial, that have access to financial data.

3. THE TASK FORCE

It is for these reasons that the *United Nations Secretary-General established a Task Force on Digital Financing of the Sustainable Development Goals (DFTF).* The Task Force is mandated to identify opportunities, challenges, and ways to advance the convergence of digital technology, the financial ecosystem and the SDGs.



The DFTF was announced by the Secretary General in September 2018 and launched on 29 November 2018. It is co-chaired by Achim Steiner, the Administrator of the United Nations Development Programme (UNDP), and Maria Ramos, until recently the Chief Executive Officer of Absa Group Limited in South Africa. It is made up of about twenty members from the private and public sector, including the heads of fintech businesses, commercial financial institutions, development banks, and business associations, as well as government ministers, central bank governors, heads of UN agencies and other experts. The DFTF is supported by a Secretariat led by the United Nations Capital Development Forum (UNCDF), and a growing number of expert partners.

The DFTF has a mandate to address four core questions:

a. **What is the current experience in harnessing the digitalization of finance in pursuit of the SDGs?**

b. **What are the high-impact opportunities for digital financing of the SDGs, today and in the future?**

c. **What are the main impediments to realizing these opportunities and the risks associated with them, and how might those impediments be overcome?**

d. **What are the actions needed by which actors, including the United Nations, to overcome impediments and realize the identified opportunities?**

The DFTF is to complete its work by early 2020, but to provide an interim report in late July 2019 to the Secretary-General in advance of the High-Level Summit on Financing and the Climate Summit, both to be held in September in New York at the time of the UN General Assembly.

In fulfilling the DFTF's mandate, its members will contribute individually and collectively in:

- Developing a framing approach and focus in addressing agreed goals.
- Providing on-going strategic guidance on the work packages needed
- Overseeing the development of, and putting forward the DFTF's findings and recommendations.

Alongside these core roles are additional possible contributions that could include specific knowledge, capabilities, and access to networks as well as any direct actions members wish to take to pursue or to demonstrate the Task Force's goals. The Secretariat has the responsibility to ensure the effective execution of guidance provided by the DFTF members and the production of interim and final products.

4. Definitional Boundaries

The pace of digital innovation, in the financial sector and beyond, creates challenges in setting boundaries for what is within, and outside of, the scope of the DFTF's work. This section provides some framing definitions as one starting point.

- ***Sustainable Development Goals***: The normative reference point of the DFTF encompasses all seventeen goals and, through SDG 13 (Climate Action), includes the goals established through the Paris Agreement on climate. These are Global Goals, adopted by all member states of the UN, and apply to all member states, implying in principle a global coverage by the DFTF.
- ***Financing***: The focus on 'digital financing' requires considering *how digitalization helps to mobilize, allocate, unlock and redirect financing flows*. This goes beyond 'digital finance'[1] as discussed below and concerns the activities, flows, and institutions of the entire financial system, including investment, lending, payments and insurance, and diverse functions such as payments systems, intermediation, and asset creation, and also the related monetary system.
- ***Digitalization***: Concerns *systemic changes to the financial ecosystem due to digital technologies,* which refers to both the increased digitization of finance-related activities, and the broader, associated changes in business models, products and services, governance, and resulting changes at the nexus between the financial system and the real economy.

[1] Digital finance is loosely defined as financial services delivered through digital processes and infrastructure.

The range of technologies in the scope of 'digital financing' include as they relate to finance: mobile payment platforms, artificial intelligence, big data, the Internet of Things (IoT), blockchain, and cryptocurrencies.

5. Analytic Lenses

The DFTF will implement its mandate by applying six specific analytic lenses.

- ### Lens 1: Focus on Financing

The focus on financing the SDGs provides a unique perspective through which to explore the digitalization of finance and to generate new knowledge and insight for use by policy makers, regulators and market actors. The focus on financing requires the DFTF to pay attention to the effects of digitalization on, for example, the:

- Mobilization and allocation of capital through the capital markets.
- Mobilization, safekeeping ,and intermediation of savings into loans by the banking sector.
- Exchange of financial assets through the capital markets and investment banking.
- Other financial services that facilitate savings, credit, investment, insurance, trade, and consumption provided through a range of bank and non-bank actors.
- Domestic resource mobilization and expenditure by governments.

Behind these functions sits a range of actors that will need to be considered. Notably, it will be important to take account of the changing and blurring of the roles of banks, investment houses, insurance companies, funds, fintechs, and the range of non-banks, not to mention the regional differences in actors and a growing "shadow banking" sector. **The DFTF will need to consider not only how digitalization changes how these functions are performed, but also who performs them and to what extent these functions themselves are now changing.** It will also be necessary to distinguish financing flows by source: the impacts of digitalization will differ between government, donor, and private capital.

Although this financing lens does not preclude financial inclusion, which is a prerequisite to enable individuals' active participation in financing their own personal, family and community development, it is more concerned with the individuals and institutions, including governments and multi-lateral institutions, engaged in financing. The Task Force recognizes that finding more ways in which financing can be done as the result of digitalization and through digital channels is part of the financial inclusion challenge. The Task Force will focus more on upstream issues of financing which, in many cases, will create more reasons for individuals to adopt digital financial services.

- ### Lens 2: Barriers to Financing the SDGs

The work of the Task Force takes place in the broader discussion of financing sustainable development. The second lens is to consider the barriers to financing the SDGs, barriers which are well documented and were discussed with members during individual interviews. Although varying in relative importance across different SDGs, some of the main barriers referred to include:

- **Public Funds**: Insufficient or poorly-used public finance to 'buy' local and global public goods from reduced carbon emissions to improved education and health.
- **Financial Returns**: Low or non-existent risk-adjusted financial returns compared to alternative sources of profit for private capital.
- **Maturity Mismatch**: Financial intermediaries, notably banks, who have short-term liabilities and are thus unable to finance long-term investments in the face of weak capital markets.
- **Metrics and Data**: Ambiguities regarding measurement of sustainability-related outcomes, and lack of associated data, which limits ability both to predict risk or measure ESG impact.
- **Short-Termism**: Financial markets actors focused on short-term returns, discounting the relevance of longer-term sustainability outcomes on themselves of others.
- **Policy Weaknesses**: Lack of appropriate policies and/or enforcement, leading to misaligned incentives for private capital.
- **Capital Concentration**: Despite historically high levels of global liquidity, investable capital is largely in a few wealthy countries (US, Europe, Japan) and largely controlled by a limited number of large companies, banks, and funds.

The challenge and opportunity are to consider whether, and if so how, digitalization of finance can help to overcome some or all of these barriers.

Lens 3: Digitalization Impact Pathways

Digitalization can impact financing decisions in a myriad of ways. Most directly, it allows for the delivery of more data about more diverse aspects of financing both more cheaply and faster. This allows risk to be better assessed and managed and so also more accurately priced in to financing decisions. It also allows financial products and services to be more extensive given the falling cost of delivery.

Building on the basics, digitalization can also impact the alignment of financing with the SDGs in one or more of the following less obvious but potentially more profound ways:

- **Externalities**: It can capture information about what have hitherto been social and environmental externalities in financing decisions, and so increase the account taken of those factors, whether for reasons of risk, impact purpose, or policy.
- **Power**: It can change the power of citizens' values and interests along the financing value chain, including for example pension policy holders and savers, and those traditionally disadvantaged in finance and economy.

- **Behaviour**: It can influence the values of key actors, shifting incentives and also behavioral outcomes in ways that better align finance with SDGs, for example by raising awareness of how financing decisions impact voters, and the owners of capital.
- **Innovation**: it can drive new business models, products and services, and markets that drive financing towards SDG outcomes, for example if the owners of capital have wider sustainable development interests.
- **Governance**: it can open spaces for new mandates, policies, regulations, standards, and norms that better align finance with SDGs.

This third lens relates to the question as to whether digitalization, through one or more of these pathways can overcome barriers to financing for the SDGs.

In addition, the DFTF members have highlighted three cross-cutting lenses that are to inform the work.

- **Lens 4: Citizens**

The empowerment (or disempowerment) of citizens resulting from the digitalization of finance is linked to the changes in power and behavior mentioned above. However, digitalization of finance has very significant potential implications on the role of the citizen across all aspects of finance.

Modern finance has always emphasized the importance of the citizen as customer, saver, investor and indeed as a political actor. Yet the citizen has been conceived of as being *outside of the functions of the financial system,* served by and subject to it rather than being an active participant. **Digitalization opens the way to the citizen being a far more active participant in the financial system itself.** Access to financial services is a key part of this change but is only a stepping stone to greater involvement. For example, crowd-sourcing, peer-to-peer lending, direct investing, digital commerce ,and simply improved information and lower-cost access all to some extent enable citizen disintermediation of some existing enterprises and financial system functions. Blockchain, including cryptocurrencies, are based on **the idea that citizens should play a greater foundational role in the economy and exert more control over their economic identities and future**. E-Gov solutions are developed to help citizens hold government accountable for effective and corruption-free public services.

The Task Force may wish to begin with "blue sky" thinking about the changing role of citizens in the financial ecosystem. Framing this topic could add value and a "human-centric" lens often lost in the technology-dominated conversation. It could help bring light to the opportunities raised by members such as: how digitalization enables customers to create their own financial services; how individuals and groups influence responsible consumption and production (or how they are influenced); and how individual investors drive SDG financing. **This could highlight steps that could be taken to avoid the "commodification" of citizens** which concerned many members.

- **Lens 5: Policy and Regulation:**

Digitalization of finance is currently at a stage where developments are largely dominated by technological and market innovations. That said, Task Force members appear to be unanimous in their recognition that policy and regulatory aspects of the challenge and opportunities need to be addressed, while acknowledging that this area has numerous actors and interested parties. These various efforts focus on the "micro" questions of unleashing digital finance at the national level, such as the G20 Global Partnership for Financial Inclusion (GPFI), the World Bank / IMF Bali Fintech Agenda, Alliance for Financial Inclusion, as well as a few that focus on more macro questions around specific issues such as the Network for Green Financing the Financial System. Other entities are addressing related issues such as digital identify through ID4D as well as public goods and digital data which will be addressed by the UN Secretary-General's High-Level Panel on Digital Cooperation.

The policy and regulatory considerations will certainly be uncovered and addressed across each of the five themes. Although it is impossible to address the myriad of policies and regulations across each country, **there may be value in a specific work package focused on policy and regulatory approaches that could have global application**, with a clear link to the benefits, to engage international and regional networks of regulators and policy makers. The Task Force may wish first to survey to efforts being made by others to avoid duplication, and in the process map current practice to identify which approaches are proving most effective in which contexts. Weaknesses and failures need to be identified whether for failure to provide incentives for the right kind of innovation and practice, or for failure to mitigate negative consequences of digitalization.

In addition, members have put forth the idea that policymakers and regulators need not be bystanders or gatekeepers to disruption; rather digitalization creates opportunities for policy and regulatory innovation that can help align financial systems to the SDGs. **A focus on the ways that digitalization of financial policy and regulation contribute to SDG financing may be worthy of investigation**, which also considers how digital can help overcome the very real resource and institutional constraints that less-developed economies may face in developing and implementing these approaches. Another approach is to look at the best collaborative methods between policy makers, regulators, private sector, and donors that accelerate enabling regulation.

- **Lens 6: Risk:**

Digitalization of finance offers the opportunity to improve the measurement, management, and valuation of risk and opportunities upon which financing decisions are evaluated. From this perspective, **digitalization should improve the alignment of financing decisions to the SDGs, which (although they are fundamentally policy objectives) are often used as a factor in risk-benefit calculations.**

At the same time, digitalization may also create risks. Illicit financial flows, for example, can be mitigated through the greater transparency afforded by digitalization but may also be made more possible because of new digital pathways for moving funds in ways that are hard to detect. Artificial intelligence and big data can reduce the costs (and increase the ease) of lending to small and medium-sized enterprises, but may also lead to profiling that excludes some classes of borrowers by virtue of their position in society rather than the merits of their business proposition. Digitalization, furthermore, raises many challenges vis-à-vis citizens' privacy, and the implications of the valorization of data.

Such risks, often although not always the unintended consequences of productive innovation, need to be well understood, notably their implications for achieving the SDGs. Moreover, the DFTF needs to provide insights into the relative importance of these risks, and about appropriate measures that could be taken to mitigate the most problematic.

6. Themes

The SDGs are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity. As a set of 17 goals, they cover issues that affect us all and are relevant and applicable to developed and developing countries alike. For the DFTF, it will be important to consider all of the SDGs. However, it may also be useful to pick out a small number, or select one or more cross-cutting issues, for deeper analysis.

For illustrative purposes, we have offered a selection of five themes below that:

1. Relate to specific SDGs and/or important enablers of financing the SDGs, and/or are key cross-cutting development challenges.
2. Are likely to point to ways to unlock significant financing opportunities through digitalization.
3. May have already been raised by members in discussion, interviews, and/or during the first DFTF meeting.
4. Are of particular importance currently in public and/or policy debate.
5. Are researchable in the time period available.

Applying these criteria to the DFTF's discussions and other inputs to date, the following suggestions are made for deep dives.

Theme 1: Climate Change. This is a specific SDG (SDG13), and has extensive, systemic implications across all of the SDGs. It is to be a major focus of the Secretary-General during 2019-2020 in the run up to the five-year recommitments in 2020 under the Paris Agreement. Climate will be one focus of the High-Level Summit on Financing and a key element of the Climate Summit, both hosted by the Secretary-General in September 2019 in New York, when the DFTF's interim report will be presented.

Theme 2: Affordable and Clean Energy. This specific SDG (SDG7) is linked to climate change. It also is a good case study of how digitalization of finance impacts financing at multiple levels, helps finance small-scale infrastructure, decentralizes systems, and blends financing. At the same time, there is a missing link between the retail-level innovations and the national and global capital markets that inhibits growing to scale. This theme would present a good case study for the interim report and is relevant to all SDG-related infrastructure that has an attached cash flow.

Theme 3: Gender Equality. This is a specific SDG (SDG5), and has both ambitious and important outcome goals, as well as extensively impacting the potential for realizing other SDGs. For women and girls, the digital revolution represents one of the biggest opportunities for, and threats to, gender equality. It is a priority of the Secretary-General, and the DFTF benefits from having as a member the Executive Director of UN Women who has stated her interest in championing this theme as one of the DFTF's focus areas. This would present the opportunity to explore gender-lens investing but also the risks associated with the gender digital divide. An alternative or complementary approach would be to focus on the broader lens of **Reducing Inequalities** (SDG10), using the initial work on gender as the entry point.

Theme 4: Decent Work and Economic Growth. This is a specific SDG (SDG8), and like the others is important as well as a key enabler of other SDGs. The world of work is a major international policy theme currently, with the International Labour Organisation (ILO) having just released its report from the Global Commission on the Future of Work. This theme offers one of the most direct routes to ensuring that the digitalization of finance is understood in the broader context of the changing global economy, and so also would support economic policy making by member states.

Theme 5: Migrants and Refugees. Associated with SDG8, this issue is clearly of enormous importance through a developmental lens, as well as in current public and policy debate and practice. Focusing on this theme would be supportive of the newly established global compacts on refugees and migrants and would feed into their work at an intergovernmental level. It also has financing implications as remittance flows increasingly support SDGs across developing countries.

To reiterate, it is proposed that the impact of digitalization of finance be explored across all SDGs, but that a small number be selected for a deeper dive, whether the ones proposed above or others. A method for exploring each of these issues is included as an annex.

6. Related Initiatives

The issue of financing the SDGs provides a unique perspective to explore the digitalization of finance in general, and to produce new knowledge and insight for use by policy makers, regulators, and market actors. In addressing this focus, the Task Force can and should take advantage of existing knowledge and initiatives related to our own, which will make our work better and also avoid duplication of efforts.

There are many initiatives and work streams that the DFTF will take into account in defining its own scope and work approach. Two interconnected domains are especially worth highlighting in this regard, both of which are being addressed by, with, and through the United Nations.

The first is the extensive work undertaken on financial inclusion. Noteworthy is the leadership of Queen Máxima of the Netherlands as the UN Secretary-General's Special Advocate on Financial

Inclusion, and we are fortunate to have a close alliance that will ensure complementarity and additionality.

The second is the broader domain of digitalization, which covers many non-financial issues from cyber warfare to privacy, but which through its over-arching nature includes finance. Noteworthy here is the UN Secretary-General's High-Level Panel on Digital Cooperation, which will produce its final report in May 2019. We are fortunate to be in close contact with the Secretariat of this work, ensuring mutual benefits in terms of two-way knowledge flows and complementary specialization.

7. Using the Framework

The framework set out in this paper is based on initial discussions with and between the DFTF members, technical experts, and other stakeholders, as well as through a review of available literature. It provides a basis to organize research and engagement, and ultimately to inform findings and ensuing recommendations. That said, the framework is not fixed in stone. It will evolve as the work of the DFTF develops.

Sample Analytical Approach for SDG-related Theme

SDG Theme

- Review the SDG Indicators to determine those relevant to financing
- Review all barriers to SDG achievement
- Identify barriers most likely to be improved by financing (and at which level)

Lens 1: Focus on Financing

- Identify financing needs and gap
- Identify current sources of financing

Lens 2: Barriers to Financing

- Identify which barriers to financing are most likely to be removed by digitalization
- Identify which alternative source(s) might be made available due to digitalization
- Quantify

Lens 3: Impact Pathways Digitalization

- Identify current impact of digitalization of finance on this SDG
- What may be the impact of digitalization of finance of this SDG based on trends (short- to medium-term) on current sources of funding? On unlocking alternative sources of funding?
- What might be the impact of digitalization of finance based on pathways (medium- to long-term) – e.g., Will digitalization allow externalities to be captured? Will it shift financier behavior? Will it empower citizens? Or shift power between actors? Will it create more risks?
- Quantify

Lens 4: Barriers and Enablers

- What are the conditions for digitalization of finance to occur?
- What is the infrastructure needed?
- What are the necessary policy and regulatory conditions?
- What protective measures need to be in place?
- What incentives need to be in place?
- What are the most common barriers and/or incentives?
- Who / which entity is responsible for these barriers/incentives?

Glossary

TERM	DESCRIPTION
Digital	Involving or relating to the use of computer technology.
Digital Finance	Financial services delivered through digital processes and infrastructure.
Digitization of Finance	The impact of digital technologies on financial functions, i.e. back office automation, transaction processing, improving "the plumbing" of financial service functions.
Digitalization of Finance	Systemic changes to the financial ecosystem due to digital technologies i.e., disintermediation of the banking and capital market sectors, shifting role of regulators due to cross-border transactions.
Disintermediation	Disintermediation is a process that provides a user or end consumer with direct access to a product, service, or information that would otherwise require a mediator such as a wholesaler, lawyer, or salesperson.
Digital Innovation	A new method, idea, or product developed through digital means.
Digital Transformation	Digital transformation is the application of digital technologies to fundamentally impact all aspects of business and society.
Financial Ecosystem	A network of players (i.e., intermediaries, regulators, money managers, risk evaluators, etc.) that interact and provide services in the form of borrowing, lending, insurance, investment and payments and others.
Fintech or "financial technology"	Computer programs and other technology used to support or enable banking and financial services, traditionally referring to the technology of back-end work of financial institutions, and more recently referring to a fast-growing sector that applies technology to improve financial activities.
Sustainable Development Goals	The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity set forth by the United Nations General Assembly in 2015.