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SDG Impact Accelerator Feasibility Report



REPUBLIC OF TURKEY
MINISTRY OF FOREIGN AFFAIRS

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EXECUTIVE SUMMARY

The scale and breadth of market-based solutions to the broad development challenges we face today are currently insufficient to be considered as major drivers of social change. It is clear that to work effectively, market-based solutions require access to information and coordination of different stakeholders in order to provide necessary inputs to the markets.

The main thesis of the feasibility study is that “**market-creating innovations**” can not only create sustainable business models *per se*, but also catalyze broader change in the market, in the economy and in the society that enable access to products or services that were previously unavailable or unaffordable to large portions of society, especially refugees and least-developed country (LDC) populations. Market-creating innovations should be executed not by focusing on a particular solution, but by mobilizing different stakeholders to catalyze systems change.

The SDG Impact Accelerator aims to accelerate “**systems entrepreneurs**” for market-creating innovations, initially for refugee populations, and in turn for the LDCs. The systems entrepreneurs will not exclusively include the startups that work towards systems change, but also innovators that work through existing organizations, large for-profit companies, and their networks.

This feasibility study was initiated by the Government of Turkey. Its first stage was jointly funded by the Bill & Melinda Gates Foundation and UNDP.

LOCATION

Throughout history, Turkey has been the frontier between the East and the West, and now as an emerging donor – the 6th largest Official Development Assistance (ODA) donor among the OECD nations – it also acts as a frontier between the Global North and the Global South. Moreover, Turkey’s private sector is also active globally. For instance, Turkish Engineering-Procurement-Construction companies are the largest group after China among top 250 companies. In addition, Turkey hosts relevant international organizations, such as the newly established **UN Technology Bank for the Least Developed Countries**. These are the key reasons that the SDG Impact Accelerator will be established in Turkey.

The SDG Impact Accelerator will be one of the pioneer global initiatives in line with **UNDP’s “platform-based strategy”** in its 2018-2021 Strategic Plan. The SDG Impact Accelerator will be based in Istanbul and will be at its core a global multi-stakeholder platform for knowledge sharing, empowerment and scaling.

IMPACT

The first target beneficiary of the SDG Impact Accelerator will be “displaced people under temporary protection” hosted in Turkey. Since the start of the Syrian conflict in 2011, Turkey has become the largest refugee-hosting nation in the world, with over 4 million displaced people including 3.6 million Syrians and a total spending of over 30 billion USD. In total the EU has committed €6bn to support refugee-focused programs in Turkey, the second tranche of which will be released soon. The objectives of the SDG Impact Accelerator largely coincide with the purposes of this EU program (FRIT-II) in terms of contributing to the livelihood opportunities of the refugees by developing innovative socio-economic development solutions.

KEY FEATURES

The SDG Impact Accelerator will have the following key features:

- It will adopt a “**systems acceleration**” approach. The full-fledged systems accelerator will include:
 - › **Systems Lab** to provide access to insights and information, in particular through human-centred design techniques and systems tools, and a focus on specific grand challenges,
 - › **Accelerator** with a cohort structure to bring different stakeholders together around specific grand challenges and provide challenge-focused – instead of generic – acceleration services towards systems change by utilizing lean enterprise methods,
 - › **Impact Investment Fund** to provide alumni with direct access to flexible funding to scale-up.
- It will be uniquely positioned to connect global knowledge with beneficiaries in **refugees and LDC populations** through a hub in Turkey. The first year will focus on refugees in Turkey. In the following years, solutions will be scaled to refugee populations around the world and specific local applications will be developed in the LDCs by utilizing a “**sister city network**” and UNDP’s SDG Accelerator Labs.

- It will be a **learning organization** with conventional impact key performance indicators (KPIs) as well as KPIs to measure value generation on a larger scale. The SDG Impact Accelerator’s continuous interaction with both the field and accelerator alumni will not only help to refine its acceleration model, but also contribute to the dialogue on the international humanitarian, economic development and peace agenda.
- It will also feature **participatory governance** aligning the work of the Accelerator with the strategic objectives of its partners, including corporates, aid agencies, multilateral financial institutions, philanthropic foundations and impact investors.

THE PILOTS

The second phase of the study will commence in April 2019 and involve application of pilot projects. Funding will be provided by UNDP and Limak Holding, a Turkish infrastructure investor, amongst others. **Two pilot projects** have already been planned with the stakeholders. Two working groups involving the relevant Turkish Ministries and other solution partners will be formed to design and implement the pilot projects.

- The first pilot will be on implementing a new **non-sewage portable toilet** design. This pilot will bring together, as “challenge owners”, Bill & Melinda Gates Foundation’s Water, Sanitation Hygiene (WASH) team, which is working on non-sewage sanitation technologies, and Eczacibasi Vitra, a major sanitation systems manufacturer based in Turkey. The pilot project will run a challenge to invite systems entrepreneurs to combine both global and local technology and design, and test commercialization of user-friendly non-sewage toilet systems in seasonal agricultural worker camps. Significant portion of these workers are refugees.
- The second pilot will be on developing new applications on a **digital identification** ecosystem to provide access to basic services and livelihood opportunities to a selected group of refugees and will be conducted in cooperation with UNDP. It will combat the challenges surrounding the lack of formal identification, allowing refugees to access services, job opportunities and provide employers information of expertise and accreditation.

The feasibility report and the progress achieved in the pilot phase as well as the full structure of the SDG Impact Accelerator will be announced at the **UN High Level Political Forum (HLPF)** in July and/or September in 2019 as well as at the **World Economic Forum** meeting in Davos in January 2020.

FEASIBILITY STUDY TEAM

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- Alexandra Alden
- Dogan Taskent
- Filippo Addarii
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Foreword by

Ambassador Faruk Kaymakcı

*Deputy Minister of Foreign Affairs and Director for
EU Affairs of the Republic of Turkey*



The Sustainable Development Goals (SDGs) were adopted by the Member States of the United Nations in 2015 and set out an ambitious agenda until 2030. The SDGs address the grandest challenges facing humanity. The World Bank firmly states that the only way to achieve these comprehensive goals is to mobilize both public and private resources through partnerships. However, financial resources alone will not be sufficient to rise to the challenge. Governments need to tap into the dynamism and the capabilities of innovative entrepreneurs to come up with solutions using new technologies to tackle entrenched problems. To do that, vibrant ecosystems should be created to support an entrepreneurial and human-centred culture.

Turkey has a track record of exploring the ways in which effective development assistance can be delivered to the communities who need it most. To that end, we have developed new partnerships and launched innovative projects. United Nations Technology Bank for Least Developed Countries (LDCs) in Gebze, Turkey and SDG Impact Accelerator are the most recent examples of these projects. While the Technology Bank will develop capacity for technology transfer to the LDCs, the Accelerator will convene partners from across sectors and fields of expertise to prototype products and services for the most vulnerable groups in the world such as refugees. Turkey alone hosts over 4 million displaced people including 3.6 million Syrians and we believe our Accelerator can empower their entrepreneurship to deliver innovative and sustainable solutions to tackle the challenges they face and fulfil their potentials.

Turkey will present its second Voluntary National Review (VNR) at the High Level Political Forum in July 2019. Preparing for the VNR provides us with an opportunity to develop a comprehensive strategy for the implementation of the SDGs. The SDG Impact Accelerator will make significant contributions to this strategy by bringing various initiatives and stakeholders together in Turkey, namely UNDP's SDG Accelerator Labs, UN Technology Bank for LDCs and Turkish private sector's "Business for Goals" platform.

The SDG Impact Accelerator will create a unique enabling ecosystem for innovation and entrepreneurship that will attract even more initiatives and partners. The support of the Bill & Melinda Gates Foundation and Limak Investment to the Accelerator is a clear indication of its potential. We will also work with partners such as UNDP's SDG Impact and Turkey's Development and Investment Bank to explore the feasibility of an impact investment ecosystem in Turkey for which the SDG Impact Accelerator will be a natural home.

We are at a crunch time in the process of SDG implementation and successful establishment of the SDG Impact Accelerator in 2019 is crucial in this regard. The feasibility study clearly demonstrates the novel approach and the significant added value proposed by the Accelerator to its current and potential partners as well as to the international community who wish to see SDGs achieved by 2030.



Foreword by

Mirjana Spoljaric Egger

*Assistant Administrator and Director of
the Regional Bureau for Europe and the
Commonwealth of Independent States*

The Sustainable Development Goals (SDGs) more than anything acknowledged the complexity of our world and the need for more comprehensive development solutions. They cover a broad array of topics and require diverse actors to join hands and pool financial resources, knowledge and expertise.

UNDP is pushing the boundaries and testing solutions that lead to impact. Considering the US\$ 30 trillion funding gap to achieve the SDGs across the world, new alliances are needed between governments, businesses, think tanks and NGOs, social impact investors and citizens.

As part of the 'Next Generation UNDP', we launched the world's largest and fastest learning network of 60 Country Based Accelerator Labs around development challenges in an effort to re-imagine development for the 21st century. The purpose of the Network is to close the widening gap between the current practices of international development and accelerating challenges such as unprecedented rates of urbanization, changing climate, freedom of expression in an era of big data, unemployment and inequality in an age of artificial intelligence, just to name a few. Additionally, we have launched SDG Impact, an initiative that aims to identify clear areas where companies can generate value for shareholders and contribute to wider society at the same time and Project Catalyst meant to build capabilities for scanning the 'tomorrow's world' in terms of development choices and policies that countries must address today.

With this in mind, we are cooperating with the Government of Turkey, which is taking on an increasing role in global development, and the Bill & Melinda Gates Foundation, to design an SDG Impact Accelerator. This exciting new initiative will move beyond siloed, single-point solutions and apply systemic lens to finding innovative solutions to big challenges, such as integrating refugees or eliminating poverty and vulnerability among the Least Developed Countries.

This is an exemplary demonstration of how an emerging donor that happens to be one of the few countries exceeding the 0.7 percent target of ODA/GNI ratio can diversify and scale up its own contribution to the global development.

UNDP is pleased to be part of designing this SDG Impact Accelerator. We look forward to launching it to make a lasting contribution to sustainable development through an altogether different approach.

Foreword by

Joe Cerrell

Managing Director Global Policy and Advocacy, Bill & Melinda Gates Foundation



In 2015 the Sustainable Development Goals (SDGs) set out a vision to achieve a better and more sustainable world for all by 2030. The SDGs provide direction to ensure that the most vulnerable have equal access to healthcare, sanitation, nutrition, and other aspects of development. Many great advancements have been made in recent years, especially in reducing poverty and improving health. But the tools we have today are not sufficient to reach the world's ambitious targets. To unlock the untapped potential for progress, we need to support ambitious innovators and changemakers around the world. That's why the Bill & Melinda Gates Foundation launched our Goalkeepers initiative in 2017 as a platform to highlight, empower and invest in young people and organizations that can accelerate the pace of change.

Our partnership with the United Nations Development Programme (UNDP) and the Government of Turkey to establish an SDG Impact Accelerator aligns with this approach. There are many reasons to be excited about this initiative. Firstly, the Accelerator convenes diverse stakeholders, from donors to implementers. Secondly, Turkey's strategic location and dynamic private sector provides fertile ground for ideas to have global impact. Finally, this initiative will have linkages to the UN Technology Bank, allowing the Accelerator to support innovators beyond initial funding and incubation.

I would like to express my appreciation to the UNDP and the Government of Turkey for inviting our Foundation to join this important initiative. We look forward to seeing this plan translated into real actions that can drive progress towards reaching the SDGs.



Foreword by

Ebru Özdemir

Chair, Limak Investments & Limak Foundation

The Sustainable Development Goals (SDGs) provide a framework for all of us to anchor our activities with a lens through which to translate global needs and ambitions into business solutions across the value chain. While the scale and ambition of the SDGs demand a major change on how development is perceived and accomplished, collaboration among various actors is vital to pursue the systems changes needed in society. In that perspective multi-stakeholder partnerships have the potential to raise the integration of sustainability on the agenda, which will lead to new business opportunities and enhanced competitiveness.

Obviously, the support of the private sector in meeting the goals is critical to achieving the SDGs, turning this vision into reality. However, attaining the SDGs and harnessing the full potential they represent is beyond the reach of any single company. There also needs to be a collaborative effort of the private sector in catalyzing for change.

From that perspective I strongly believe the SDG Impact Accelerator will offer the private sector and the participating companies a unique opportunity for developing innovative solutions with a significant business potential and impact on the SDGs. The work accomplished at the Impact Accelerator will be communicated effectively to inspire other companies of the private sector and make visible how the new global agenda for sustainable development can be operationalised in a business context, creating business benefits and impact on the SDGs.

We know the clock is ticking and it demands an ever-faster move from all the actors. On behalf of Limak Group, we are pleased to support the feasibility study for the SDG Impact Accelerator, which is an important first-outcome of the Project. The question before all of us now is to establish tangible actions that we can take collectively to make this future a reality.

INTRODUCTION

The Government of Turkey and UNDP initiated the establishment of an SDG¹ Impact Accelerator that will catalyze market-creating innovations for the benefit of 70 million displaced people worldwide and people who live in the LDCs. The SDG Impact Accelerator will act as a platform to breakdown siloes to mobilize different stakeholders work together for systems change towards the SDGs. It will be located in Istanbul, Turkey -- the largest refugee hosting nation in the world, home for relevant international organizations like the UN Technology Bank for Least Developed Countries (LDCs), and an active private sector with links to LDCs. The institution will have unique combination of a Systems Lab, an Accelerator, and an Impact Fund. This feasibility study presents a suggestion for a design for the SDG Impact Accelerator and a roadmap for its establishment.

The feasibility study began in August 2018 and was implemented by a team of five international experts². It involved desk research, interviews with relevant stakeholders³, and workshops with both experts and beneficiaries. It brought together findings on the gaps in the global accelerator space, interests of potential partners, potential beneficiaries of and participants in the program.

The initial outcomes of the study were presented at a high-level side-event at the UN General Assembly in New York on 25 September 2018⁴, with keynote addresses by Mevlüt Çavuşoğlu and Tilak Marapana, Foreign Ministers of Turkey and Sri Lanka, Jens Frolich Holte, Minister of International Development of Norway, Achim Steiner, the UNDP Administrator, Sir Ronald Cohen, Chairman of the Global Steering Group for Impact Investment and Stefano Manservigi, Director General for International Cooperation and Development at European Commission. The first phase of the feasibility study was jointly funded by UNDP and the Bill & Melinda Gates Foundation. Global Good⁵ also contributed in an advisory capacity.

This report, which is the output of Phase 1 of the feasibility study is made up of five chapters: Chapter 1 discusses the reasons to establish an SDG Impact Accelerator in Turkey, Chapter 2 outlines the institutional structure, Chapter 3 proposes a sustainability and scaling strategy, Chapter 4 discusses the feasibility of the project, and Chapter 5 includes a roadmap for its establishment.

The second phase of the study will commence in April 2019 and will involve application of pilot projects. Two pilot projects have already been planned with interested stakeholders and are discussed in Chapter 5. The first will be on implementing a new non-sewage portable toilet design. The second one will be on developing new applications on a digital identification ecosystem. The second phase will be funded by UNDP and Limak Holding , among others.

1 17 Sustainable Development Goals (SDGs) are at the heart of the 2030 Agenda for Sustainable Development, adopted by all United Nations (UN) Member States in 2015, and are an urgent call for action by all countries – developed and developing – in a global partnership.

2 Ussal Sahbaz, Filippo Addarii, Indy Johar, Dogan Taskent, and Alexandra Alden.

3 Please see Appendix 1 for the list of interviewees.

4 The side event recording at UN WebTV can be watched via

<http://webtv.un.org/search/how-the-private-sector-can-align-to-the-sdgs-emerging-business-models/5840379531001/?term=Turkey&sort=date>

5 Funded by Bill Gates and focused on a shared vision with Nathan Myhrvold, Global Good develops technology to solve some of humanity's most daunting problems.



1. SDG IMPACT ACCELERATOR IN TURKEY

1.1. SYSTEMS APPROACH TOWARDS ACHIEVING THE SDGS

The 21st century is presenting the global community with challenges unprecedented in their complexity and inter-dependence. In 2017 alone, 70 million people worldwide were forcibly displaced. Many of them were either from Least Developed Countries⁷ (LDCs) or are being hosted by LDCs. In addition, populations of LDCs face daily challenges, including poor access to clean water and sanitation, primary healthcare, education, basic nutrition, and energy. The displaced people and the LDCs will be the main beneficiaries of the SDG Impact Accelerator.

The scale and breadth of market-based solutions to these broad development challenges is currently insufficient to be considered as a major driver of social change. The reasons for the ineffectiveness of these solutions are wide ranging. However, it is clear that to work effectively, market-based solutions require access to information and coordination of different stakeholders in order to provide necessary inputs to the markets. To date, efforts to address these challenges have been dispersed across a range of isolated solutions. Individual and isolated interventions with limited scope are unlikely to solve widespread, complex, multifaceted challenges. This landscape demands a radical shift in our perspective as well as our means of tackling these problems – we need structural approaches to address structural challenges.

Our approach proposes a ‘systems change’⁸ in a way that is in line with the UN SDGs. We propose to engage the systems as a whole and to mobilize the interested stakeholders in harmony, rather than making isolated interventions. Our thesis is that market-creating innovations can not only create sustainable business models *per se*, but also catalyze broader change in the market that enables access to a product or service that was previously unavailable or unaffordable⁹. The market-creating innovations generally borrow a technology successfully applied in one market and insert it into a different business model to serve disadvantaged populations. Once the business model is proven, competitors enter the market. Some of market-creating innovations –such as payment systems¹⁰, e-commerce and merchant data infrastructures¹¹, or currency hedging for microfinance¹² — create ecosystems around themselves by providing critical infrastructure for other entrepreneurs. In the end, market-creating innovations create local jobs, most of which happen to be in untradeable service industries, which do not face the pressure of global competition, resulting in low wages. The systems change catalyzed by market-creating innovators is generally more agile and faster than larger-scale institutional reform.

There is hardly a scarcity of innovative and entrepreneurial activity in the world. In an age when the diffusion of information about new technologies and business models is fast, scale barriers to entry to markets are low, and access to financing is relatively easy through venture funding as well as through new methods such as crowdfunding and initial coin offerings, *it is critical to focus and mobilize all stakeholders towards systemic positive change.*

Platform organizations serve this purpose. They form connector nodes within the system, hosting the collaborative efforts of actors around a shared mission, and make stakeholders from seemingly isolated sectors work together. These stakeholders include startups, corporates, regulators and other government departments, multilateral financial institutions, aid agencies, philanthropic foundations, and impact investors, among others. Beyond the exchange of perspectives, multi-stakeholder platforms create the grounds of transparency for convening funders and sharing of resources.

UNDP, in its Strategic Plan for 2018-2021, adopted a strategy for country support platforms that *“will help countries to design and deliver integrated solutions to complex development problems that require multi-sectoral actions across economic, social and environmental issues... help craft country and context-specific solutions... such as addressing critical bottlenecks and accelerators, supporting Governments to strengthen alignment of national development plans, budgets and implementation systems with the Sustainable Development Goals and creating effective mechanisms for multi-stakeholder, ‘whole-of-society’ approaches to the Goals”* (p.16). In December 2018, UNDP announced a strategy to establish SDG Accelerator Labs in 60 countries in addition to already existing ones¹³.

7 There are a number of categories for the level of development of countries: UN’s Least Developed Countries cover 47 countries with the lowest human development index performance. World Bank’s low-income countries include those with annual per capital income lower than 1.025 US Dollars, and lower middle-income countries cover those with annual per capital income lower than 1.026-4.035 US Dollar. For spreading innovative business models, however, many of these countries include markets with similar characteristics, that is, one innovation that works in one market could generally work in a market in another category as well. For instance, India, Pakistan, Indonesia, China, South Africa and the Philippines in combination have almost 40% of world’s poor population but are middle-income countries. Therefore, while we focus on LDCs in this study, we do not exclude similar markets in other countries for which the SDG Impact Accelerator may bring solutions.

8 Please see Appendix 2 for a glossary of the terms related to the SDG Impact Accelerator.

9 Christensen, Clayton, Karen Dilson (2018) “Cracking Frontier Markets” Harvard Business Review. December.

10 See for the example of Iyzico’s impact on e-exports, inclusive entrepreneurship and empowerment: PAL (2018). Iyzico Vaka Analizi (in Turkish).

11 See for the ecosystem around Alibaba, an e-commerce business in China: Zeng, Ming (2018) “Alibaba and the Future of Business” Harvard Business Review. September–October.

12 VC-Circle (2018), Omidyar Network invests in Series A round of news portal The Ken.
<https://www.vccircle.com/news-portal-the-ken-raises-series-a-funding>

13 A currently functional example is the SDG Accelerator established by the UNDP Nordic Representation Office and up to now accelerated products, services or business models in 30 Danish SMEs within a 6-month structured programme: www.sdg-accelerator.org. Other functional UNDP platforms are in Armenia, Moldova and Japan.

Given the global need to catalyze systems change through platform organizations and UNDP’s new platform initiative, the SDG Impact Accelerator aims to support and accelerate “systems entrepreneurs”, defined by the World Economic Forum as “innovators who are intentionally adopting systems change strategies in their efforts – either through existing organizations, large institutions, for-profit companies, or even by creating new organizations and networks,” including startups or spin-offs¹⁴.

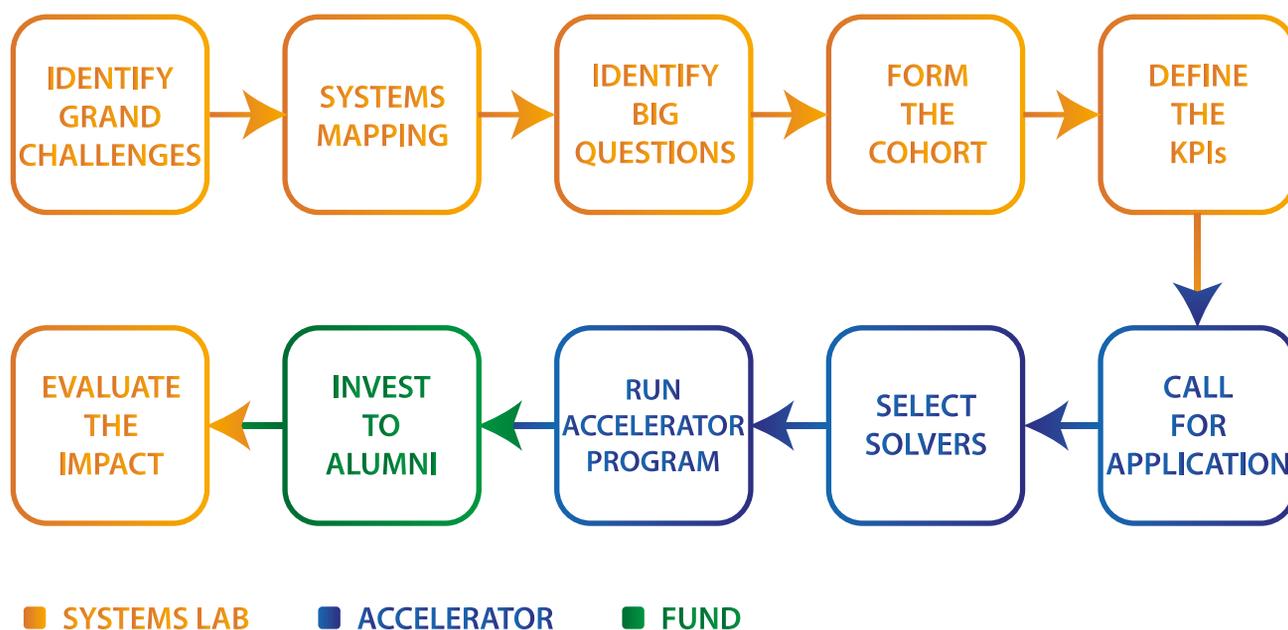
1.2. ACCELERATION APPROACH

Accelerators can be typically defined as “entities that make seed-stage investments in promising companies in exchange for equity as part of a fixed-term, cohort-based program, including mentorship and educational components, that culminates in a public pitch event, or demo day.”¹⁵ The purpose of an accelerator is to help the participants settle on a business model to be able to scale-up in a sustainable fashion. There is a focus on lean enterprise methods¹⁶, including rapid prototyping, and user trials with feedback. Acceleration is relatively a new phenomenon, with the first acceleration program launched by Y Combinator in 2005 in California, United States. The concept has since been widely replicated and is today seen as an important spur to entrepreneurship.

Accelerator programs are proliferating in high-income countries and increasingly also in both LDCs and other disadvantaged populations, such as refugees¹⁷. By looking at over 2,000 ventures from 42 accelerator programmes, a 2017 report conducted by the Global Accelerator Learning Initiative (GALI)¹⁸ shows that the impact of acceleration potential for entrepreneurs is remarkably similar across continents. However, in LDCs, mismatched goals between investors and investees might limit the effectiveness of acceleration programmes. Contrary to what market evidence shows, entrepreneurial projects in LDCs attract only about half of the early stage investment received by ventures in high-income economies. Investors consistently report having more difficulty sourcing quality deals in LDC markets. One of the main challenges in supporting early-stage ventures in LDC markets does not seem to be the actual quality of entrepreneurs, but perceptions about their skills and potential to succeed. Therefore, it is fundamentally important to overcome negative perceptions, and to close the investment gap through comprehensive acceleration programmes.

In most cases, the blueprint used to design acceleration in low income countries or for businesses targeting disadvantaged populations such as refugees, emulate elements from large, successful accelerators in high income countries. This is often highly problematic and unproductive due to the different nature of the surrounding ecosystem, infrastructural constraints, business practices and entrepreneurial culture. In addition, since the development challenges that the global community faces are highly-contextual, there is no one-size-fits-all acceleration recipe for overcoming them either. Legal, geographic, and cultural conditions result in a need for different acceleration approaches in different contexts.

Figure 1. Flow Diagram of the 3-tiered institutional approach



Source: Authors’ analysis

14 World Economic Forum (2017). Beyond Organizational Scale: How Social Entrepreneurs Create Systems Change.

15 Dempwolf, C Scott, Jennifer Auer, and Michelle Dippolito (2014). Innovation Accelerators: Defining Characteristics Among Startup Assistance Organizations.

16 Steve Blank (2015). Why the Lean Start-Up Changes Everything. Harvard Business Review. May.

17 Please see Appendix 3 for case studies of some accelerator programs that target LDCs and refugees.

18 Global Accelerator Learning Initiative (2017) Accelerating Startups In Emerging Markets: Insights From 43 Programs.

Given the above discussions about the systems approach and current accelerator space, the SDG Impact Accelerator will have the following key features:

- It will adopt a “systems acceleration” approach. The full-fledged systems accelerator will include,
 - › a systems lab to provide access to insights and information, in particular through human-centered design techniques and systems tools, and a focus on specific grand challenges,
 - › a cohort structure to bring different stakeholders together around specific grand challenges and provide challenge-focused – instead of generic – acceleration services towards systems change, utilizing lean enterprise methods,
 - › an impact investment fund to enable alumni direct access to flexible funding to scale-up.
- It will be uniquely positioned to connect global knowledge with beneficiaries in refugee populations and LDCs through a hub in Turkey. UNDP’s SDG Accelerator Labs will have a pivotal role in establishing a “sister city network” enabling the SDG Impact Accelerator to scale to LDCs. The institution will work with other organizations in different sectors and geographies to facilitate partnerships and avoid duplication of efforts, and to create context-specific acceleration solutions.
- It will be a learning organization with conventional impact key performance indicators (KPIs) as well as KPIs to measure value generation on a larger scale. The SDG Impact Accelerator’s continuous interaction with both the field and accelerator alumni will not only help to refine its acceleration model, but also contribute to dialogue on the international humanitarian, economic development and peace agenda.

The ultimate aim of the SDG Impact Accelerator is to contribute towards the long-term socio-economic development of the beneficiaries, i.e. vulnerable groups such as refugees and populations in LDCs. This will be realized by developing entrepreneurship opportunities, improving access to services and by increasing inclusion in the labor market. By doing so, it will contribute to the implementation of the United Nations’ 2030 Agenda for Sustainable Development, thus to the overarching objective of “leaving no one behind.”

1.3. THE UNIQUE POSITION OF TURKEY

While the SDG Impact Accelerator will be based in Turkey, it will connect a global group of stakeholders. Throughout history, Turkey has been the frontier between the East and the West, and now as an emerging donor – the 6th largest Official Development Assistance (ODA) donor among the OECD nations¹⁹ – it also acts as a frontier between the Global North and South. It is uniquely positioned to draw upon lessons from the traditional aid community, while also being able to actively innovate, relying on thinkers and doers from both developed and developing countries.

The Turkish private sector is entrepreneurial and increasingly active globally. For instance, Turkish Engineering-Procurement-Construction companies are the largest group after China among top 250 companies globally²⁰, demonstrating the critical importance of Turkish private sector for solutions for health, energy and transportation in LDCs. Turkey has also cultivated a network of connections in LDCs – according to UNESCO, around 89.000 foreign students study in universities in Turkey, virtually all from developing nations, including LDCs like Afghanistan and Yemen. Turkey’s embassies only in Africa reached 41 in 2018.

While the purpose of the SDG Impact Accelerator is to tap into the global inflow of solutions, it is also important to be supported by a strong local entrepreneurial ecosystem in SDG-relevant areas. Turkey’s vibrant entrepreneurial ecosystem includes a high number of startups in SDG-relevant verticals. According to Startups Watch, a local market intelligence company, there are 30 active startups in agri-tech, 394 in health-tech, 204 in energy-tech and 174 in education-tech. Most of these startups are focused on low-cost, practical and agile solutions that would be a better fit for developing country markets, rather than advanced country markets. Some of these startups are presented in Box 1.

19 Anatolian Agency (2018). Turkey: Total development assistance hits \$9.3B in 2017.

<https://www.aa.com.tr/en/todays-headlines/turkey-total-development-assistance-hits-93b-in-2017/1317697>

20 The top-250 global EPC companies list is announced by Engineering News Record:

<https://www.enr.com/toplists/2018-Top-250-International-Contractors-1>

BOX 1. STARTUP EXAMPLES BORN IN TURKEY WHICH TARGET LDC MARKETS

We present a sample of SDG-relevant startups from Turkey in education-tech, agritech, health-tech and gov-tech verticals:

MentalUp' is a company that produces personalized brain training games to support child development, improve intelligence and maintain mental fitness in everyday life. The startup was established in 2013 by two PhDs in computer science and educational systems. The company has over 2 million users and offer services in Turkey and the UK in collaboration with University College London. The impact investors see great potential in growing this company in LDCs, where public education is a critical issue.



Robosys & Solter is a startup established in Konya, a city of 2 million in Turkey's agricultural industry heartland. It offers an integrated solution for agricultural corps quality. The company has two branches (a) a drone side, (b) image processing division. They build custom made drones for specific operational conditions, but also through their 'KarbonDrone.com' an e-commerce platform, they sell spare parts for drones and allow other manufactures share theirs on this website as well. These types of practical solutions are highly critical to survive in LDCs where access to materials could pose challenges to creating a support ecosystem for drone makers. In the company's second branch, the image recognition and analysis section, they use multispectral cameras. For that they bought distribution channel rights from MicaSense, a globally known manufacturer in this domain, for Turkey. They developed 'corps analysis software' using MicaSense multispectral cameras. They also operate drones to offer services for large farmers. Robosys & Solter provides an excellent solution platform for agricultural settings with low transportation availability.



Doctorinemed is a startup that fights glaucoma. Established by three former employees of a global pharmaceutical company, it is working on eliminating the risk of blindness from glaucoma due to late diagnosis by providing an affordable and accessible option for visual perimeter tests. Glaucoma is the main cause of irreversible blindness; which will impact 76 million people in 2020, mostly in LDCs. As a progressive neurodegenerative disease, glaucoma needs to be diagnosed at early stage before vision loss grows further. To increase the early stage diagnose rate, making diagnosis tests accessible and affordable for mass screenings is crucial. The highest prevalence rate is in Africa (4.79% among those over 40). However, access to diagnostic tests is quite limited. This is both because of the costs of current visual perimeter devices (25,000 USD -30,000 USD) and also the physical conditions required for the device – which is not portable and requires a separate dark room and electrical power etc. – to operate. In order to address physical limitations, the company is developing a wearable (350gm-400gm) and portable visual perimeter device which also provides remote control over the collected data.



Kimlic is a blockchain-based decentralized identity validation structure. It is known as Know-Your-Customer (KYC) procedure for preventing money laundering and financing of terrorist activities. Kimlic Blockchain gives the user the ability to prove his/her identity to any business, without repeating the same processes. The company is located at Technopark Istanbul but has also its European base office in Tallinn, Estonia.



Source: Authors' analysis

Since 4 June 2018 Turkey also hosts the UN Technology Bank for Least Developed Countries (LDCs), a newly established UN institution, which aims to help the LDCs build the Science, Technology and Innovation (STI) capacity that they need to promote the structural transformation of their economies, eradicate poverty and foster sustainable development. It fulfills this mission by²¹,

- Attracting outside technology and facilitating technology transfer on voluntary and mutually agreed terms and conditions;
- Supporting homegrown innovation and research; and
- Bringing imported and indigenous technologies to market

UN Technology Bank will provide a bridge for adopting technologies developed for advanced markets to LDC markets by promoting and facilitating the identification and utilization of, and access to appropriate technologies by the LDCs. It will directly implement projects and activities in the LDCs, facilitate LDCs' access to existing initiatives and foster joint initiatives with private sector and relevant organizations. Situated in Gebze in the greater Istanbul area, the UN Technology Bank will be an important partner for the SDG Impact Accelerator.

In order to build local access and a knowledge-base at the UN Technology Bank, the first projects scheduled are technology and innovation reviews in Guinea, Haiti, Sudan, Timor-Leste and Uganda. The bank will also conduct technology need assessments for a selected pool of least developed markets to understand specific challenges to be resolved – these technology need assessments will have a direct overlap with the system mapping exercises that will be conducted by the Systems Lab of the SDG Impact Accelerator (Section 2.1.1). These projects, which will be conducted in cooperation with United Nations Conference on Trade and Development (UNCTAD) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) will also contribute to positioning the SDG Impact Accelerator within the UN system as a key enabler on accelerating technology transfer to the LDCs.

The role of the UN System, and of UNDP in particular, will be a crucial feature of the SDG Impact Accelerator. As explained further in Chapter 2, the system acceleration approach requires convening different types of stakeholders to collaborate and the “global convening power” of UNDP will therefore be pivotal. Turkey is the only country where UNDP enjoys a multi-level partnership: *national* through the Country Office (CO) in Ankara, *regional* through the Istanbul Regional Hub (IRH) for Europe and CIS and *global* as a voluntary contributor to the UNDP core budget. Furthermore, Turkey is the co-founder of the Istanbul International Centre for Private Sector in Development (IICPSD). In addition, Turkey is among the priority countries for the establishment of the SDG Accelerator Labs, as outlined in Section 1.1.

Since the start of the Syrian conflict in 2011, Turkey has become the largest refugee-hosting nation in the world, with over 4 million displaced people including 3.6 million Syrians²². The first target beneficiary of the SDG Impact Accelerator will be these displaced people under temporary protection in Turkey. In total the EU has committed €6bn to support refugee-focused programs in Turkey, €3bn for the years 2016/17, and then a further €3bn for the years 2018/19 through Facility for Refugees in Turkey (FRIT). The initial focus of these programs was centred around humanitarian assistance, education, migration management, health, municipal infrastructure, and socio-economic support. However, more recently there has been a shift towards a focus on economic inclusion, looking at opportunities to help refugees enter the workforce. The release of the second tranche of the EU FRIT Fund aims to create critical livelihood opportunities to develop innovative systemic solutions to the problems faced by refugees, representing a key opportunity for the SDG Impact Accelerator.

21 UN (2016). UN Technology Bank for LDCs 3-year Strategic Plan – Supporting the operationalization of the Technology Bank for the Least Developed Countries

22 Syrians in Turkey are referred to as “displaced people under temporary protection” under Turkish Law.



2. INSTITUTIONAL DESIGN

The SDG Impact Accelerator will be made up of three units around building capacity for systemic change and converting this capacity into action through experiential learning. These units are a Systems Lab, an Accelerator, and an Impact Investment Fund. Please see Figure 1 for an illustration.

2.1. SYSTEMS LAB

The Systems Lab will identify the *grand challenges* and big questions, form the cohorts around these questions, and provide measurement and evaluation for the activities of the SDG Impact Accelerator and communicate the results to the policy-makers, partners and general public.

Creating this small but permanent resource as a networked organization that can crowdsource, initiate, collaborate and fund new research on edge-of-horizon issues will enable the SDG Impact Accelerator to be a thought leader among other SDG accelerators. Our model could also provide learning opportunities for non-SDG accelerators.

2.1.1. Grand challenges, system mapping, and big questions

The identification of *grand challenges* will be based on strategic research and thinking, engaging with global experts and pioneers within research and practice in a broad range of fields including development, business, finance, and acceleration. The Systems Lab will hold workshops with stakeholders and beneficiaries, engage in international events, and commission research in order to make convincing cases for the framing of current and emerging challenges on which the well-being of the people and the planet will depend – whether in social cohesion, fundamental rights, new health challenges or environmental complexities. Each grand challenge will stem from one or more of the SDGs.

Once the challenge is identified, a *system mapping* exercise will be undertaken to reveal the inter-dependencies and to shape a shared agenda, a common language and mutual visibility among diverse stakeholders. A system map offers systems entrepreneurs knowledge beyond the technical understanding of solution X and its application to problem Y and about the systems they are trying to change²³. System mapping is a collaborative process, involving everyone with a stake in better outcomes. It provides in-depth understanding of the context. It also drives an ethnographic, visceral understanding of why these issues matter at the local level, how people are or could be affected, and draws out connections with the current mainstream policy issues. Systems mapping provides a dynamic foundation for experimentation that is open for the involvement of a wide range of stakeholders with varying fields of expertise to test and iterate ideas. This will allow any system intervention to be based on real-world evidence, permitting early stage failures to mitigate higher risks.

A core function of the Systems Lab will be to make use of diverse data sources. Understanding the inter-connected issues within the system, developing strategies and monitoring the outcomes of interventions depends on dynamic and cross-organizational data flow. While there are many existing sources of valuable data, their synthetic potential remains blocked. Only by building new trust and transparency models for data holders, we can develop predictive strategies and capture the underlying complexity of systems change. The Systems Lab will work with relevant private and governmental organizations to bring relevant data together through sharing protocols, such as open APIs. The Digital ID pilot suggested for the second phase of this feasibility study (Chapter 5) is an excellent example for this.

The next step is to frame the challenge around *big questions* that will enable a range of stakeholders to actively engage in experimentation opportunities in a collaborative way. The system map illustrates many components of a grand challenge, around which it is possible to come up with a number of questions in each grand challenge. Each question could be responded to by projects that provide systemic solutions²⁴.

Given the focus of the SDG Impact Accelerator on over 4 million displaced people under temporary protection in Turkey, in this document we focus on the grand challenge “The Rise of Displaced People” in Box 2 to demonstrate the concepts discussed thus far.

23 Kirsch, Vanessa Jim Bildner, Jeff Walker (2016). Why Social Ventures Need Systems Thinking. Harvard Business Review.

24 Our big questions resemble Mazzucato et al's missions approach: See Kattel, R., Mazzucato, M., Ryan-Collins, J., Sharpe, S. (2018). The economics of change: Policy appraisal for missions, market shaping and public purpose. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2018-06) (p. 6)

BOX 2. GRAND CHALLENGE “THE RISE OF DISPLACED PEOPLE”

GRAND CHALLENGE

We are witnessing a humanitarian crisis of migration due to a combination of often interdependent factors such as climate change, famine, protracted conflict and persistent inequality and poverty. According to the UNCHR Global Trends 2017 report, over 70 million people are displaced worldwide because of climate change, war and poverty - on a par with World War 2. This includes 40 million internally displaced people (IDPs), 25.4 million refugees and 3.1 million asylum-seekers. 10 million people have no nationality and face a lifetime of inequity and persecution. While most countries are holding displaced persons, this is not an internationally balanced picture, with 85% of the world’s refugees hosted in countries in developing regions.

The rapid rate of increase in displacement - Over the past two decades, the global population of forcibly displaced people has almost doubled from 33.9 million in 1997 to 65.6 million in 2016 – is only set to increase. While predictions for future growth varies, they virtually all expect an increase with estimates ranging from several hundred million to a billion within a generation. The Environmental Justice Fund, for example, has estimated that nearly 10% of the world’s population is at risk from displacement by climate change alone; with predictions of 150 million climate displaced persons by 2050.



SDG 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

CURRENT QUANTITATIVE DEFICIENCIES IN INSTITUTIONAL RESPONSE

This shift in both the geographies and scale of demand is matched by a long-term incapacity to find long-term solutions. In a current institutional response where 1.2 million refugees were in need of resettlement in 2017, yet UNHCR submitted 75,200 refugees, a 54% drop compared with 2016, leaving a 94% gap between needs and actual resettlement places for the year.

The lack of effective systemic response to the rise of displaced people resulted in a situation where people cannot access water, sanitation, healthcare, education - let alone the financial services and opportunities that allow them to live independent lives. This is due to a mixture of identification challenges – where refugees are either unable to access such opportunities because they are unable to identify themselves to the satisfaction of service providers or they are unwilling to do so because of the privacy and security risks associated with such disclosure – and intentional political and bureaucratic obstacles. As a result, as James C. Hathaway, Director of the Refugee and Asylum Law Program at the University of Michigan states, “most refugees are maintained by an international organization. And most refugees are emphatically not allowed to provide for their own needs”²⁵.

This in turn, creates a toxic environment where refugees lose the ability to inject their life with meaning, and citizens of the host country end up resentful of refugees. Furthermore, refugees are experiencing multiple psychological challenges including (but not limited to) trauma, grief, longing, no sense of belonging, hopelessness, fear, anger. Clearly in a current incumbent ‘solution’ 80% of refugees have stayed stuck in limbo for at least 5 years in camps - something needs to change.

SYSTEM MAPPING AND BIG QUESTION

Figure 2 demonstrates the system mapping exercise for the inter-dependencies among the stakeholders for the challenge “the rise of the displaced people”. One big question that emerges from the system mapping is

‘How might we enable displaced peoples to immediately access essential services upon arrival in a new location?’

OPPORTUNITY

Digitalization has fundamentally changed our understanding of borders, and our approaches to providing legitimacy and basic services. The task for us now is to accelerate and scale them in a systematic way, so that we have a hope of tackling the challenge.

²⁵ James C. Hathaway (2016). A global solution to a global refugee crisis. <https://www.openglobalrights.org/global-solution-to-global-refugee-crisis/>

A few examples of big questions are given below:

- What are the governance mechanisms (policies, market shifts, norms etc.) that can reduce pollution (e.g. age limits on imports of cars or new R&D budgets for electric vehicles) as well as targeting real nutritional food access?
- How can technology address the lack of highly trained health workers and support the better provision of primary care in low-resource settings?
- How might we provide hygienic toilet solutions in remote places or in moving camps (for refugee and/or agriculture/construction workers) with low resources and skills?
- How might we provide access to financial and government services to people who do not have official identification?

The last two big questions above provide a basis for the pilot projects in the second phase of the feasibility study (Chapter 5).

In addition, we provide grand challenge examples in Box 3.

BOX 3. EXAMPLES OF GRAND CHALLENGES

ADDRESSING ECOCIDE

SDG 15 *Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss*

- THE GRAND CHALLENGE & OPPORTUNITY

The impacts of climate and environmental degradation and inadequate governance of the commons is no longer ignorable. We are killing our ecological systems which in turn is killing us - a 600% increase in floods, forest fires globally, record temperature rises leading to billions lost in productivity and 250 million estimated environmental refugees by 2050. In this time of ecological genocide, when overcapacity of natural and built physical infrastructures is the 'new normal', we urgently need strategies to both regenerate our ecological assets and prepare ourselves for disasters. At the same time, planet-scale computation processes are exponentially increasing our knowledge of these interdependencies as well as helping us to cope with disasters when they do happen. We urgently need to develop these risk avoidance and reduction tools, from awareness raising through a massive scale of civic activism to predictive forecast based financings.

- EXAMPLE BIG QUESTION

How can we use linked interventions across multiple points in the system (legal, technological financial etc.) to regenerate our ecosystems and mitigate future risks?

- INNOVATIONS

A river granted legal rights, India: The Ganges river and its main tributary has become the first non-human entity in India to be accorded the status of living human entities. Similar developments have also happened in New Zealand and Colombia.

PetaBencana.id, Indonesia: An open-source, crowd-sourced platform which uses on-ground observations from residents on social media and instant messaging to integrate the informal and formal disaster-related-data.

Building a more resilient Jakarta, Indonesia: A networked, open-government approach to dealing with the fundamental risks of civic unrest, flooding and disease outbreak

PATHWAYS TO AN INCLUSIVE INDUSTRIAL REVOLUTION 4.0

SDG 8 *Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*

- THE GRAND CHALLENGE & OPPORTUNITY

The multiple technologies that comprise the 4th industrial revolution - from artificial intelligence (AI) to distributed ledgers - are driving an unprecedented rate of change. This 4th industrial revolution is bringing with it a radical transformation in our productive capacity. Developing countries in particular, having been for decades a hub of production, stand to lose a majority of their jobs - due to both jobs being replaced with AI and a re-shoring of operations to countries which now have low-cost (no- labour dependent) productive capacities. Developing countries must both position themselves at the forefront of the digital and AI revolution as well as re-invent their human development institutions and wider eco-systems - a challenge to say the least when considering the scale of education needed (e.g. in India where over 600 million people are under 25 years old) and the lack of resources.

- EXAMPLE BIG QUESTION

How can we develop a human development eco-system capable of unlocking the potential of all humans?

- INNOVATIONS

South Korea: Spent more than 4% of its GDP on research and development programs for AI, more than any other country on earth.

National Skill Development Corporation, India: India's program has helped train more than 5.2 million students, and it has also created 235 private sector partnerships and 38 Sector Skill Councils (SSC) in various industries.

Project Defy, India: A school model, which was set up for \$500 and provides free access to a 50m2 space, internet connection, refurbished computers and a simple tool set.

THE RISE OF SMART INFORMAL ECONOMY

SDG 9 *Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*

- THE GRAND CHALLENGE & OPPORTUNITY

The International Labour Organization estimates that more than 66% of total employment in Sub-Saharan African is in the informal sector. Working informally means that people are not legally registered to work, do not have health insurance, and do not have the salary protection of minimum wage of a resident. In addition, many countries' attempts to formalise these workforces have ended in failure, with limited uptake of cumbersome licensing processes and institutions that are not fit for purpose. At the same time, in advanced economies the casualisation of the labour force is disrupting traditional work paradigms - raising questions about the current standards of labour rights but also about conditions for innovation, productivity and human flourishing. According to the ILO, gig employment and casual labour comprise more than half of the global labour force and more than 90 percent of Micro and Small Enterprises (SMEs). Beyond guaranteeing fundamental rights and conditions like safety and legal protection, these trends challenge us to consider how the creativity, energy and drive of the future workforce can be harnessed in supply chains, semi-formal 'craft' practices and working conditions that bring out the best in people and socio-economic ecosystems, even in conditions of relative informality and embracing some of the opportunities this implies.

- EXAMPLE BIG QUESTION

How might we remodel our approach to the formal/informal dichotomy so that we enable the best entrepreneurial, innovative spirit while removing the basic lack of human rights?

- INNOVATIONS

Micro-businesses in Brazil: In the past five years, around 5.5 million micro-businesses have been formalised by volunteering for a package of incentives that includes simplified tax assessments and access to social protection, business development services and public markets.

Waste pickers in Colombia: In 2013, following a 20-year legal and advocacy campaign, Bogota's waste pickers, or 'recicladores' were formally recognised as public service providers and paid at fixed rates, under formal contracts, for their work. The Bogota model is now being replicated across Colombia.

Source: Dark Matter Labs (2018). Contribution to UNDP SDG Impact Accelerator report

2.1.2. Forming the cohorts

The cohort participants will be recruited through accessible open calls for each *big question*, aiming at the development of sustainable and scalable products and services addressing the particular challenge.

Each cohort will have businesses as *solvers* at the core, an inner circle of *enablers* and an outer circle of *supporters*:

Solvers. At the core will be a *solver*, a systems entrepreneur, which could be a startup, a social venture, or a spin-off from or a separate structure within a corporate or university that has a solution and a team. It is essential that the systems entrepreneurs join with a minimum viable product / prototype beyond idea stage – which could be pivoted during the accelerator cycle. In most situations, the solvers may have a pre-existing or even advanced solution for another setting, and this solution will need to be adapted for the specific conditions of use. Sometimes, the solvers may borrow a technology of an existing solution and design a new solution for the beneficiaries of the SDG Impact Accelerator. A unique opportunity for the solvers in this regard would be getting access to technologies through the UN Technology Bank based in Gebze (see section 1.3).

The critical criteria for selection to a cohort will be the willingness and capacity, both technical and business-wise, to deliver systems change. The criteria will not be based on the legal or institutional form. Additionally, the pipeline for the solvers will be global. It should be noted that solutions for the problems faced by refugee populations, solvers from both refugee and non-refugee populations will be welcome.²⁶

The solvers will be recruited through open calls by the Accelerator (see Section 3.2.1). They will get access to seed funding, a cohort structure of enablers and supporters, trainings, mentorship, collaborative office space and a peer network.

Enablers. In the *inner circle*, there will be enablers of the solution, which are context-specific stakeholders, including corporations, philanthropic organizations, development banks, aid agencies, payment solutions, mobile technology, logistical support and fast production facilitators. If regulatory issues are involved, regulators and “policy entrepreneurs” will be involved.

The enablers will be recruited by the Systems Lab through invitation as acceleration partners (Chapter 3). The Impact Investment Fund will also be involved as an enabler. Only one set of enablers will be recruited for each call to work with solvers in each cohort.

The enablers will be able to leverage their existing capacities towards for-profit or non-profit purposes by getting access to the solvers in the programme.

Supporters. In the outer *circle*, there will be *supporters* of the acceleration process, including sociologists, anthropologists, product integration and maintenance experts and domain experts. There will also be ‘problem experts’ in this circle, who are potential beneficiaries with deep exposure to the problem area, such as refugees, NGO field staff, etc. The outer circle participants will be hired by the Systems Lab as short-term advisers.

In certain cases, the Systems Lab may work with a *challenge owner*, which is an institution that proposes a specific challenge in line with the SDGs, and form the above circles together. Challenge owners will make financial or in-kind contributions to the process. Depending on the nature of the grand challenge, some cohorts could be based in multiple locations, while other cohorts may focus on one location. The partners may vary according to the grand challenge and location.

2.1.3. Documenting the lessons

A key function of the systems lab will be the measurement and evaluation of the impact of the activities of the SDG Impact Accelerator, and the strategic communication of the impact. The key performance indicators (KPIs) to be evaluated are discussed in Section 3.3. Nevertheless, the role of the Systems Lab goes beyond a classical measurement and evaluation exercise. The Systems Lab will also document lessons in each cohort and incorporate these lessons into the design of the acceleration process in the next cohort. By organizing events and publishing reports, the Systems Lab will contribute to the international humanitarian, economic development and peace agenda.

Moreover, the Systems Lab will produce research to scale up the impact by:

- Identifying the next lead markets for tested solutions, especially for solutions based on technologies tested in one market and/or available at the UN Technology Bank,
- Identifying and publishing changes that could be transferred to other markets or jurisdictions separate from the systemic solution. For instance, an enabling policy could be utilized in another jurisdiction, without necessarily transplanting the systemic solution,

²⁶ The entrepreneurs from displaced people can join the SDG Impact Accelerator as solvers (see Chapter 2) to create solutions for the problems faced by their populations. For an excellent review of the opportunities and challenges around refugee entrepreneurship, see UNCTAD, IOM and UNCHR (2018). The Policy Guide on Entrepreneurship for Refugees and Migrants.

- Providing contextual analysis for different markets and use-cases for bringing one systemic solution to the other. For example, how could a distributed solar energy solution that works in India be transferred to Tanzania, given the different circumstances in each market?

2.2. ACCELERATOR

The Accelerator will select the *solvers* into the *cohorts* designed by the Systems Lab, and accelerate the cohorts in structured and intensive program cycles.

2.2.1. Selection

Each cohort will involve up to 10 solvers. The calls for the solvers will follow a two-pronged approach. *First*, there will be an open-call where the Accelerator will release the question brief and invite attendees to apply. The calls will be open for up to two months. The applications will be received through an online platform, which will later be used for project tracking and program management. *Second*, there will be a more targeted search executed through challenge owners, enablers or supporters. These partners will have a close working relationship with the Systems Lab in the design of the grand challenges so that they can start their search for solvers even earlier than the formal call.

The selection process will be completed in two steps: Pre-selection will be made by the Accelerator team, based on an online form. Pre-selection will assess whether the applicants satisfy the requirements of becoming a solver at the Accelerator. The selection stage will take place with the potential solvers that pass this screening and will take the form of a two-day in person bootcamp. Final selection will be made by a jury assigned by the Accelerator (see Chapter 3). The jury will not necessarily evaluate the applicants in comparison with each other, but give emphasis to form a cohesive set of solvers with complimentary projects and skill sets.

2.2.2. Acceleration

Testing the minimum viable products

The Acceleration process will include cycles of building rapid prototypes, or “minimum viable products”, testing them at trials in the field, and incorporating lessons into the next cycle, so that the product finally approximates a solution to a problem in the field. The duration of the Acceleration process can be different for different solutions. For software solutions, it could be as short as three months. For hardware solutions that require extensive field trials, it could go up to nine months. Therefore, each cohort may have different solvers that will stay for different periods. However, given the details of the process discussed below, it is essential that they start simultaneously. We present the process as a journey in Box 4 using the non-sewage toilet pilot, which is further discussed in Chapter 5.

Each cycle will include two ‘all cohort’ physical conventions in Istanbul. The *kick-off convention* will be a 5-days sprint (which may be extended depending on the nature of the challenge and the composition of the solvers) where initial solutions will be presented, refined through continuous feedback from challenge owners, enablers and supporters, and the initial prototypes will be produced. The main purpose of the first convention is to set a common language and set of references among the cohort members in line with the purposes of the SDG Impact Accelerator.

In the following eight weeks, the prototypes will be tested in the field with end-users. Adapting a product to a specific market requires frequent contact and clear understanding between the solver (designer/developer) and the beneficiaries, operators and overseers in the target communities. Therefore, field visits are a critical part of the acceleration process. The purpose of these visits is not only to test the solutions, but also increase the level of solvers’ understanding of and empathy with the circumstances of the beneficiaries. Fieldwork will be run with the input of supporters. Through the fieldwork, the level of maturity in creating a feasible solution in each cohort is expected to increase.

The solvers will go through a *mentor-training program* based on SDGs, system design models, impact investment opportunities, lean methodology and soft skills. Initial consultations with impact fund managers looking to invest in private sector initiatives in developing countries have identified a trend of unbankable entrepreneurs, exiting accelerators with insufficient skills in business and finance to secure impact finance. The SDG Impact Accelerator will make sure to draw on this lesson when structuring its training programme. The content will not be limited to a general programme, but also tailored according to the specific needs of each cohort in line with the grand challenge. Some of this training may be online.

The Accelerator will provide each solver with up to 25,000 USD cash grant and travel expenses for field tests, mentoring and training. In return, the SDG Impact Accelerator will get the right to first refusal to invest in the graduating projects.

BOX 4. AN ACCELERATION PROCESS EXAMPLE ON 'NON-SEWAGE PORTABLE TOILET'

SYSTEMS LAB

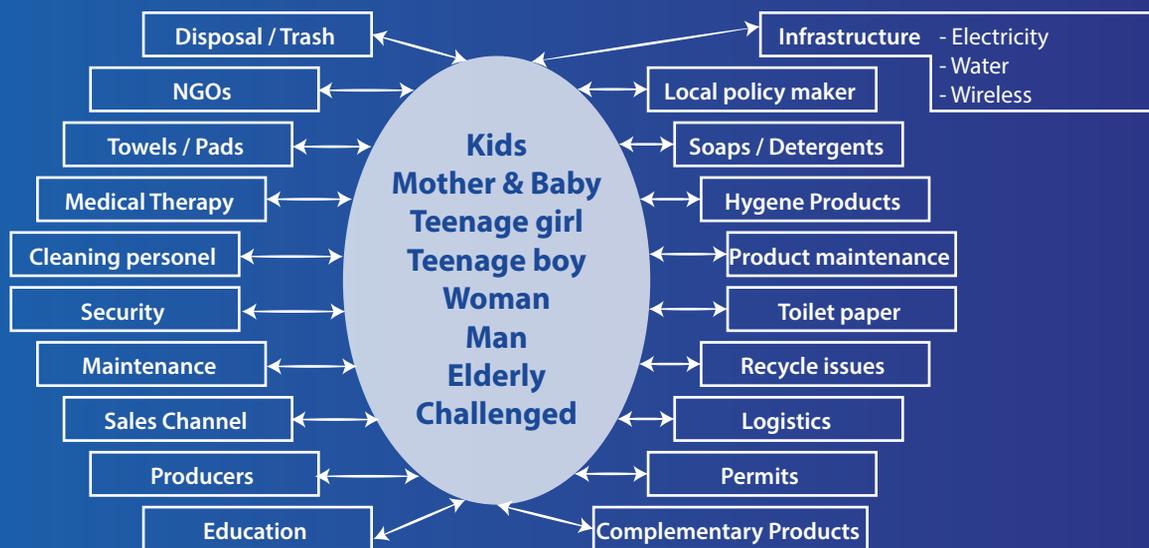
System mapping

The journey for the 'Non-sewage portable toilet' is a part of the larger sanitation domain. The target group may be selected as seasonal agricultural workers, most of whom are displaced people under temporary protection in Turkey. First the Systems Lab conducts a system mapping exercise:

- Desktop research on sanitation factors such as: clean water, hand wash, personal hygiene, wash and education, sanitation without sewage, sanitation without water, sanitation for seasonal workers, sickness related to sanitation ...
- Interviews at refugee camps with users, service providers, municipality, and health personnel will be conducted to understand the full aspect of the issue.
- Mapping of direct influencers and interdependencies. Figure 3 shows some of the players associated with the corresponding problem, here are some examples:
 - › Local policy maker - business owners who employ seasonal agricultural workers need to legally provide proper sanitation. Due to the fact that it is not followed up by the local policy maker, despite the availability of the latest technologies, no major change has been observed in the current situation.
 - › Disposal/Trash – often left behind disposals and trash creates a larger problem due to the fact that large concentration of the non-ecological disposals. Full product/service life cycle need to be considered.
 - › Education – different cultures have different habits on the WC usage, each and every solution need to be explained and users need to be trained.

Each of the below mentioned areas need to be considered in detail how they relate each other and how they affect each other.

Figure 3. Stakeholders for 'Non-sewage portable toilet'



Big question:

After a system mapping exercise, the Acceleration process starts with a big question:

How might we provide hygienic toilet solutions in remote places or in moving camps (for refugee and/or seasonal agriculture/ construction workers) with low resources and skills?

Establishing the cohort:

The Systems Lab will recruit the enablers of the cohort, including:

- Technology providers (including Bill & Melinda Gates Foundation)
- Manufacturer of toilets (for example Eczacibasi Holding)
- Corporates that conduct contracted farming with seasonal workers
- Farmers' associations

- Ministry of Labor
- Ministry of Agriculture
- Ministry of Health
- Ministry of Interior
- International organizations working in this field (such as FAO)
- Hospital and Medical Labs
- Soap and cleansing/hygiene material manufacturer
- Municipalities

The Systems Lab will recruit the supporters of the cohort, including:

- Academics who work on seasonal agricultural workers
- Humanitarian aid workers for refugees for mentoring (such as UNHCR or NGOs)
- Sociologists & Anthropologists
- Gender specialists

The challenge may be owned by the technology providers and manufacturers. In this case, they will license their technologies and/or provide funding to the challenge.

ACCELERATOR

Calls for solvers

First the Accelerator management will select the jury:

- the Accelerator CEO
- the Accelerator Manager,
- a representative of the challenge owner
- 2 independent members

Call will be announced for solvers to implement sanitation solutions in the field. Calls will invite and selectively target new players like startups, SMEs, NGOs, Corporations.

First Convention

The jury will discuss and select the applied 'solvers'. The interrelation map developed by the Systems Lab will be used as the reference map. The applied solutions need to fit the reference map or enhance it.

The 'solutions' will be selected at this stage.

The common purpose and the critical success factors of the whole system will be explained to the participants (solvers, enabler, supporters).

Solvers will be matched with enablers and supporters via mentorship model.

Field travel (all over the process)

- Cohort will travel to problem area, and will conduct interviews and workshops with local users to gain deeper understanding of the issues.
- Seminars will be run by local experts and sociologist/anthropologist to understand the local issues and social aspects.
- Pilot areas are selected with early adopters to test the interrelated projects.
- Necessary pilot infrastructure is built with local partners.

Second Convention

After completion of the field boot camp, cohort will return to the co-working space and collaboratively work on the problems.

- Reconsider the problem statement and redefine the problem
- Develop multi-dimensional hypothesis for the solution with the Cohort
- Shuffle the companies to the new projects

Developing the product (all over the process)

- 1) Project teams may need labs and production facilities to develop the solutions. They will use the challenge owner's sanitation labs and production facilities.
- 2) Develop the solutions and discuss it with other groups
- 3) Evaluating successful and failed projects in the past
- 4) Lean startup methodology taught to the project teams.
- 5) Mentoring will be given by the Enabler and Support Cohort
- 6) MVPs created at the labs of the Cohort's companies
- 7) Any solution will require some sort of education by the users/beneficiaries. Therefore, an educational program will be developed.

Pilot Test on the Field:

- MVPs executed on the field by the startups.
- Parallel to that, in the field, social and capability aspects need to be prepared. Trainings on the solutions and problem awareness trainings will be implemented.

Feedback

- 1) Necessary changes on the MVPs will be designed
- 2) For the missing parts new calls can be set in progress. This needs to be accelerated and implemented into the system rather rapidly.
- 3) Large scale deployment plans will be made, if relevant, with the assistance of outcome partners.

Demo Day

- The solvers will present the corresponding projects and outcome of the pilot tests.
- The Impact Fund and a network of co-investors will make investment decisions.
- The Systems Lab will acknowledge how the solution fits into the systems map of the grand challenge.

Source: Doğan Taşkent (2018). Contribution to the UNDP SDG Impact Accelerator report

Cross-pollination within the cohorts

A key purpose of the cohort structure is to provide cross-pollination and collective learning opportunities among solvers themselves and between solvers and the other cohort members. It could be the case that missing parts of one product will be complemented by others and new partnerships or even joint ventures arise. As mentioned above when discussing selection of the solvers, the solvers will be complimentary and form a cohesive set. One of the benefits of having cohorts that are as coherent as possible in terms of the field they operate in is that the Accelerator will be able to mobilize a specialized network to address the needs of the participants.

The second convention will be a 5-days event, in which new prototypes will be presented. At this stage there will be active opportunities for cross-solution learning and collaboration. We call this process “*growing the cohort*” through which feedback from the field and peers will catalyze emergence of new projects by merger or cross-pollination of the entrant solvers. Different solvers will be matched with different enablers, or other solvers, and new capabilities will be formed. The Accelerator will manage this process in an agile and flexible fashion. A committee of select members of the challenge owners, enablers, supporters and staff will check in with the solvers on a regular basis, where certain projects that fail to receive positive feedback towards providing a solution could be discontinued.

Collaboration in the cohorts

Collaboration and mutual learning between solvers and enablers are particularly important. For example, consider this relationship in the context of two types of enablers – regulators and corporations. The purpose of including regulators in the cohort is to enable testing and scaling of systemic innovations, and to avoid regulatory inertia by mutual learning. Two typical ways for regulators to collaborate with solvers are providing experimentation opportunities by waiving the requirement to comply with certain regulations (*regulatory sandboxes*) or by scaling certain systemic innovations that prove to be successful through its services. For any challenge in a regulated or public enterprise dominated industry, it is essential to have willing regulators and government departments in the cohort.

First, sandboxes are becoming popular with financial regulators –there are sandboxes in more than 20 jurisdictions around the world – enabling financial technology enterprises to be “able to conduct certain transactions and services within defined threshold limits, which in turn allows them to innovate while protecting consumers and the integrity of the financial system. The rationale involves businesses being required to fully comply with financial regulation after the testing phase is complete (by which time the business is more established)”²⁷. The regulatory sandbox resonates with the lean startup methodology – how otherwise would it be possible, under the regulations established for incumbent players with mature business models, to test a minimum viable product with a limited set of customers before developing and scaling to a full product? The sandbox model can be extended to other regulated industries like energy, health or transport. The regulators that will join the cohorts by providing regulatory sandboxes will be able to learn from innovations through small trials and adapt their practices through the technical assistance and network provided by the SDG Impact Accelerator.

Second, in industries dominated by the government, it is critical to induce change in policies to enable systems change to scale. For instance, Bridge International Academies offers a technology-supported curriculum in private schools in several African countries and in India. Once the model is proven to be effective in private schools, Bridge initiated a public debate to adopt similar methods in public schools, and by doing so catalyzed curriculum change through the system in Kenya and Liberia²⁸. As this example demonstrates, engaging the relevant government agencies in the cohorts can tap into cutting-edge public innovation globally to improve their services.

With regards to corporations, it is essential to create a win-win relationship between the solvers and the corporations that participate with the cohorts as enablers. For the solvers, the corporations can act as direct customers, reference customers to reach out to customers in scale, internationalization platforms to bring the solutions to subsidiaries in other markets or as sales channels. They can also provide critical assets, such as underutilized data under the possession of the corporates. Lastly, they can provide domain knowledge and mentoring. Additionally, corporations can gain access to new business model innovations and stay on top of new market developments, realign their customer focus –which is usually sharper in new enterprises compared to corporates – improve their business by positioning the solvers as new suppliers, and expose their employees to a more agile and entrepreneurial culture.²⁹

These mutual wins can only occur if both solvers and corporations approach the process with a win-win business mindset. One key way of ensuring this is to engage with the business units of a corporation in addition to or instead of innovation or corporate social responsibility units. It is also important to engage the CEOs of the corporations at some points to overcome protective reactions of middle management and ensure total institutional buy-in. The other key of ensuring this collaboration is to prepare a clear road-map at the outset on the collaboration with the corporation to get the solver’s project into the market, and monitor, evaluate, and if necessary, pivot this road-map during the cycle. For instance, if the corporation

27 Bromberg, Lev, Andrew Godwin and Ian Ramsay (2017). Fintech sandboxes: Achieving a balance between regulation and innovation. *Journal of Banking and Finance Law and Practice*, Vol.28, No. 4, pp. 314-336.

28 Bannick, Matt, Paula Goldman, Michael Kubzansky, Yasemin Saltuk (2017). *Across the Returns Continuum*. Omidyar Foundation.

29 World Economic Forum (2018). *Collaboration between Start-ups and Corporates A Practical Guide for Mutual Understanding*.

has a win-win opportunity to procure the solution and take it to the market, this monitoring and evaluation mechanism can overcome the inertia at the procurement or legal departments for experimenting with new solutions or teams. If the corporation is to provide data, the same mechanism can provide checks and balances to concerns that can be raised by the cybersecurity units. Overall, the Accelerator can become a public forum to effectively sustain the commitment of the corporations involved in the cohorts.

Physical space

The evidence points out that successful mentoring and training need to be context-embedded. It is not cost-efficient nor desirable to physically relocate selected solvers in an environment that is too far detached from the specific reality/beneficiaries they are trying to contribute to, the market they aim to penetrate and the stakeholders they need to involve. While collaborative innovation might be fostered when innovators are trained together and can learn from each other in the same physical space, this does not necessarily imply that a centralized acceleration program can coherently bring together innovators with different backgrounds and ambitions and successfully create innovation bridges between them. Therefore other than the above-mentioned meetings, physical presence in Istanbul will be required on a case by case basis.

That being said, for the physical meetings, the space has a key role in fostering innovation. Therefore there will be flexible and lean physical spaces in Istanbul, designed as open and inclusive spaces both for co-working and events, with the aim of inviting people to be the drivers of a shared mission. Having the physical space of its own designed according to its needs and identity will also strengthen the branding and community culture of the SDG Impact Accelerator.

Until its programmes reach the level of maturity and volume which requires a permanent physical space, the Accelerator can benefit from existing global framework programs, local accelerator partners and/or online acceleration platforms. For the latter, a comparative overview of some key global programs is provided in Box 5. For the global accelerator framework programs, Venturebasecamp in India, is a good example that could be a partner to scale-up the SDG Impact Accelerator.

BOX 5. ONLINE ACCELERATOR PLATFORMS

The SDG Impact Accelerator is planned to be a model that will be replicated in the future by different teams in different countries. In order to make this possible, a well-defined system and necessary tools to manage the system is necessary. Hence, choosing the right online accelerator management platform is critical.

Three platforms have been analyzed in the scope of this research. Among these three, Acceleratorapp.co and Getflitepath.com are recommended since they provide an easy to use system for selection, mentor management and startup tracking.

	Acceleratorapp.co	gust.com	Getflitepath.com
<i>Application & Selection Process</i>		✓	✓
<i>Mentor Pool Management</i>	✓		✓
<i>Mentoring Sessions</i>	✓		✓
<i>Milestone Tracking</i>	✓		✓
<i>Integration with 3rd party applications</i>		✓	
<i>Equity Management</i>		✓	
<i>Educational Content</i>			✓

Source: Authors' Analysis

2.3. IMPACT INVESTMENT FUND FOR THE ALUMNI

To underpin its unique approach, the SDG Impact Accelerator will develop an impact investment fund for its alumni. The Fund will have an independent management, with a return structure focused not only on traditional financial return but also on long-term systematic outcomes, accounting for multiple indirect outcomes as well. In the future, the Fund can be complemented with innovative instruments such as resilience bonds or block-chain enabled share structures.

The Fund will target investing in a minimum of two alumni solvers out of each cohort. According to our interviews with the impact and angel investors and venture capitalists, investment up to 250,000 USD in exchange for up to 10% shares is an appropriate ticket size at this stage. There will be funds allocated for follow-on investments as well.

The need for an in-house impact fund is a direct corollary of the economic sustainability of an accelerator. First, an accelerator that does not charge for its services can only enjoy the option value of its effort to accelerate the project only if it has funds to invest. Even when it has a share, a fund is the only way to avoid dilution in the next funding rounds. Second, an in-house fund attracts co-investors by acting as a credible screening device. Third, the fund acts as a carrot to attract better projects to the accelerator.³⁰ It is also a great opportunity to support the growth of successful alumni, given that the global impact investing industry now collectively amounts to USD 228.1 billion in assets³¹.

The Fund will be managed by a team of investment professionals with a proven track record. It is planned to have the team part-time for the establishment period, and hence not receive a management fee. When the Fund is closed, management fee will be paid according to industry standards³².

The fundraising will target impact investment funds, corporates and development banks³³. It is critical that the impact expectation of all limited partners of the Fund be aligned. There could be four major categories of financial return and impact combinations for each investment³⁴:

Category A – Commercial investments. These are investments to companies that have SDG-related impact “embedded in their business model”. These companies typically follow a model that ensures that they will deliver direct social impact simply by serving their customer base, without necessarily pursuing such impact explicitly.

- Category A1 – Investments to companies with business models validated by commercial co-investors.
- Category A2 – Investments with positive but risky financial return expectation – without validation from commercial co-investors.

Category B – Subcommercial investments. These are investments to companies that have significant SDG-related impact, but have lower expected financial returns.

- Category B1 – Investments with expectation of positive financial returns, not necessarily on a risk-adjusted basis.
- Category B2 – Investments with expectation of only preserving the capital.

While a detailed discussion of these impact targets is beyond the scope of this report, please see Section 3.3 for an outline of setting SDG-related impact targets. For the above-mentioned categories, it is possible to categorize investment impact in three groups: By investing into Category A1 projects, the investors signal to the market that the impact in this solution matters. By investing into Category A2 projects, the investors grow new or undersupplied capital markets. By investing into Category B projects, investors provide flexible capital to projects with impact.

It is critical that the Impact Investment Fund will have an SDG-related theory of change, that is, the investment strategy will be directly linked to the SDGs. This is not only a direct outcome of the SDG-focus of the Accelerator, but also a critical factor for successful fundraising. Two thirds of the impact investors to emerging markets track SDG outcomes explicitly³⁵.

At the time of the investment, the Investment Committee, by following the advice of the Systems Lab, will set impact targets with each company anchored in the SDGs. This process will involve co-creation of impact measurement and management strategies with the management teams of the portfolio companies and will also involve education of these teams on SDGs. The investment committee will monitor the impact and intervene as necessary³⁶.

An optimal portfolio of the Impact Fund will balance these categories of investments given the expectation of SDG-related impact. The incentive to establish this balanced portfolio will be the return structure of the investment management team. The management team will be compensated with a carried interest (carry) along industry standards³⁷. However, for investments with higher SDG-related impact the carry will be increased by a multiple proportionate to the impact.

As the fund will enjoy a proprietary deal flow from the Accelerator, it is expected that up to 20% of the funds raised will be contributed to the budget of the Accelerator, primarily to fund the seed investments of up to 25,000 USD per team.

30 The benefits of follow-on impact fund structure are well elaborated in the synthesis report of the G20 Sustainable Finance Working Group, July 2018 (p. 29).

31 Global Impact Investing Network – GIIN (2018). Annual Impact Investor Survey.

32 The generally accepted rate is 2-2.5% of the committed funds.

33 The investors to the fund are named as LPs, or limited partners, which is a common legal term that refers to investors in certain private investment vehicles. See footnotes 33-38 for the institutions that the team have already started discussions with.

34 Bannick, Matt, Paula Goldman, Michael Kubzansky, Yasemin Saltuk (2017). Across the Returns Continuum. Omidyar Foundation

35 Global Impact Investing Network – GIIN (2018). Annual Impact Investor Survey.

36 For concrete examples of impact investment funds and portfolio company relations towards achieving SDG-relevant impact targets, see the report: Global Impact Investing Network (2018). Financing the Sustainable Development Goals: Impact Investing in Action.

37 The generally accepted rate is 20% of the returns after the limited partners receive their full investment back.



3. SUSTAINABILITY AND SCALING

3.1. GOVERNANCE

Gaining its strength from networked actors around a shared mission, a system change calls for a new understanding and tools for distributed leadership, where a traditional top-down system of governance would fail to achieve a multi-lateral foundation for incentives.

During the pilot phase in 2019 and following the establishment period in 2020, the SDG Impact Accelerator will be established as a UNDP project implemented in collaboration with the Turkish Government. It is recommended that, after the establishment period, the legal status of the Accelerator will be transformed into a 'Foundation' under Turkish law³⁸. This will be a relatively fast and practical process in comparison to the process of establishing an international organization in Turkey. Therefore, this will enable the formation of a participatory non-profit purpose-driven organization.

3.1.1. Partnerships

There will be three partnership types for the SDG Impact Accelerator:

- **Founding partners** will be the institutions that initiated the program.
- **Outcome partners** will be the institutions that donate a pre-determined cash or in-kind contribution to the SDG Impact Accelerator budget for a period of at least one year. These will typically be philanthropic organizations, government aid agencies, or corporations that aim to bring benefits to communities that they interact with in terms of their supply chain or customer-base. Some of these institutions can be *challenge owners*. Some of them could collaborate by integrating existing challenges with seed awards with the SDG Impact Accelerator³⁹.
- **Limited partners** will be the investors of the Impact Investment Fund. They will typically be impact investors, multilateral financial institutions and corporations. Some of the outcome partners may also become limited partners.
- **Acceleration partners** will be the institutions that provide knowledge, network or implementation capacity. These are typically accelerators that run the activities in sister cities (see Section 3.2), or key enablers that contribute to multiple cohorts.

There are multiple types of partnership models that can be established with each type of institution:

- Corporations⁴⁰ can be involved in cohorts as enablers. They can also become outcome partners by sponsoring certain parts of the acceleration process or becoming challenge owners. They can also invest into the Impact Investment Fund and become limited partners.
- Aid agencies⁴¹ can become outcome partners by sponsoring certain challenges. They can also be excellent knowledge and network providers as implementation partners.
- Multilateral financial institutions⁴² can invest in the Impact Investment Fund and become limited partners. They are unlikely to sponsor the acceleration process, although they can occasionally provide knowledge or networks as implementation partners.
- Philanthropic foundations⁴³ can become outcome partners by sponsoring certain challenges. Some of them can also be positioned as limited partners.
- Impact Investors⁴⁴ can invest in the Impact Investment Fund and become limited partners.

3.1.2. Board of Trustees

The participatory governance model will be centred around a Board of Trustees that includes representatives of the relevant partners such as governments, international organizations, corporates, philanthropic organizations as well as investors, universities and alumni project owners. The Board of Trustees will be responsible for setting the strategy of the SDG Impact Accelerator and appointing key management roles. It will ensure that three units of the SDG Impact Accelerator – the Systems Lab, the Accelerator, and the Impact Investment Fund—work in a coordinated fashion towards the same strategic objectives.

38 Other alternatives under Turkish Law which are not recommended for various reasons are setting up an NGO or a company or a cooperative.

39 Bill & Melinda Gates Foundation, Limak and Eczacıbaşı are potential founding and outcome partners.

40 Potential partners among the intervieweed institutions include: Johnson&Johnson, Vodafone, Philips, Nestle.

41 Potential partners among the intervieweed institutions include: USAID, DFID, EU.

42 Potential partners among the intervieweed institutions include: World Bank, European Investment Bank, Islamic Development Bank.

43 Potential partners among the intervieweed institutions include: Rockefeller Foundation, Stichting INGKA Foundation (Ikea), Tent Foundation.

44 Potential partners among the intervieweed institutions include: Bridges, Capria, Opes Fund, Koıs Invest.

- Founding partners will each have two members on the Board of Trustees.
- Outcome partners will each one seat on the Board of Trustees.
- One limited partner, with priority given to the largest investors, will be given a seat to represent the limited partners at the Board of Trustees.
- Acceleration partners will not be represented on the Board of Trustees, but will be invited to Annual Conventions and their branding will be included in the communications.

Alumni system entrepreneurs will also be given opportunities to contribute to the Board of Trustees, thereby building on the knowledge created by each cohort. After the legal structure of the Foundation is established, the existing trustees will select one alumni representative to join the board for two years. After the completion of the pilot phase, a CEO will be appointed by the existing members and appointed as a trustee to the Board. The Impact Investment Fund will also be represented by a member of the investment committee. By way of example, a 13-member Board of Trustees in the second year after the establishment of the SDG Impact Accelerator is illustrated in Figure 4.

Figure 4. Illustration of a 13-member Board of Trustees

Founding partner	Founding partner	Founding partner	Outcome partner	Outcome partner	Outcome partner	Limited partner rep	Alumni rep	CEO	Inv. Com. rep.
2	2	2	1	1	1	1	1	1	1

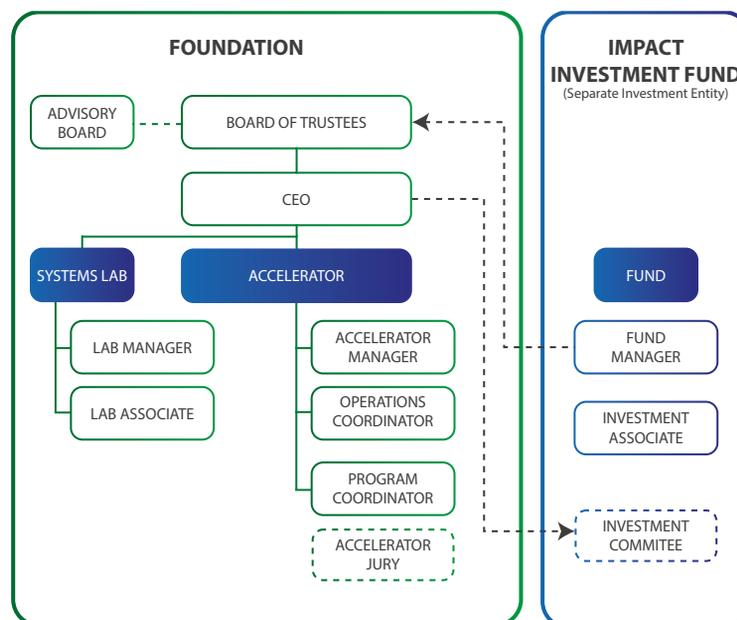
Source: Authors' Analysis

The Board of Trustees will be advised by an International Advisory Board⁴⁵ on strategic issues.

3.1.3. Administration

After the completion of the pilot phase, a CEO will be appointed by the Board of Trustees for the management of the Systems Lab and the Accelerator units. The CEO will also be a member of the Board of Trustees. It is of utmost importance that the CEO has a diverse set of experience in international development, policy-making, and entrepreneurship, coupled with excellent strategic management, communication and stakeholder management skills. The CEO will recruit and will be supported with a sufficient number of staff at each unit. The CEO will report to the Board of Trustees and could be replaced by the Board of Trustees at any time (Figure 5).

Figure 5. Governance



Source: Authors' Analysis

⁴⁵ At the moment, the international advisory board includes Michael Free (Senior Advisor Emeritus, PATH), Gifford Pinchot III (President, Pinchot & Co), David Gautschi (Dean Emeritus, Fordham University), Steven Koltai, Advanced Leadership Fellow, Harvard University, Magdalena Yesil (first investor & founding board member, Salesforce.com).

In order to ensure credibility to the investors and avoid conflicts of interest with the management of the Accelerator, the Impact Investment Fund will be managed by a professional Investment Committee of 3 to 5 investment directors with a proven track record of successful investments. The Investment Committee will make the decisions to invest in the alumni projects. Large limited partners of the Fund and the CEO will be given access to join the Investment Committee as non-voting members.

The Accelerator Jury will choose the solvers in each cohort. It will be comprised of the CEO, the Accelerator Manager, a representative of the challenge owner where relevant, and 1 or 2 independent jury members to ensure that the jury has an odd number of members.

The Board of Trustees will meet quarterly. At least two of these meetings will be conducted in person. In the first two years of operations, a more frequent meeting schedule could be preferred in order to ensure momentum in the establishment of the processes. The Investment Committee will meet as needed.

A biannual Convention will be held in Istanbul. On the margins of this large event a joint Board of Trustees and Advisory Board meeting will be organized, and the event will also feature a demo day. Furthermore, there will be a symposium on the learnings and contributions of the SDG Impact Accelerator featuring international dignitaries, partners, alumni and cohort members.

3.2. SISTER CITY NETWORK

A sister city network will enable the SDG Impact Accelerator to scale up globally. Each sister city will have an implementation partner that will form a local hub for the activities. It is critical that this implementation partner has a strong network of local stakeholders such as regulators, corporates, etc. to get involved in the cohorts, as well as an ability to mobilize local systems entrepreneurs to join the acceleration process. The local hubs will not only enjoy access to the global network of partners that SDG Impact Accelerator brings, but will also attract new partners into the process.

When it comes to structuring the sister city network, it is essential to create a mutually beneficial cooperation among all stakeholders. It will be the Systems Lab that will act as a collective knowledge hub, and hence exploring innovation models, developing a coherent vision, researching best practices, utilizing and disseminating results, as well as facilitating partnerships. For instance, the Systems Lab will support the acceleration partners in sister cities in providing design guidance for physical spaces or stakeholder management.

It is the local hubs which will run local acceleration programmes, taking into account local dynamics, accessing local communities and more effectively sourcing local talent/networks. This flexible relationship will enable the SDG Impact Accelerator to provide context-specific models for each geography it engages with. Local hubs will report outcomes to the collective knowledge hub. The latter should facilitate impact measurement and ensure the effectiveness of local hubs by providing support when needed.

The initial sister cities under consideration are Addis Ababa, Ethiopia, one of the fastest growing LDCs in Africa; and Dhaka, Bangladesh, an LDC that hosts over 1 million Rohingya refugees.

3.3. KEY PERFORMANCE INDICATORS (KPIs)

Key Performance Indicators (KPIs) are key tools for monitoring the success of the program on an ongoing basis, and making changes to the model on the basis of success and failures identified. Setting up the KPIs according to the vision and mission of the program and expectations of stakeholders is critical for successful tracking of the program. The metrics to be used will be refined by the Board of Trustees at the biannual convention and will be monitored in each meeting.

The latter will look for answers to questions such as *what would a system balance sheet look like for a city region and growth in values from youth well-being to social capital attributed and shared across a system?* These answers will respond to the calls by the systems change literature for a transition from conventional accounting mechanisms towards accepted methodologies to measure value generation on a larger scale. Besides setting the ground for mutual accountability, the clarity of this picture would unlock incentives to invest in a shared action by revealing potentials as well as pitfalls. However, until these metrics are fully developed, the following more conventional metrics will be utilized.

Effectiveness

Effectiveness of the program will be measured continuously, through interviews at the entry, at mid-program (at Istanbul Conventions) and at exit interviews. Additional post-event surveys with cohort members will serve as further indicators. The metrics to be measured will include, but not be limited to the following criteria: Program satisfaction, Matching success, Effectiveness of cohort relations, Effectiveness of partner support in sister cities, and Progress made during program cycle toward set objectives (to be measured by interviews since it varies according to the stage of the participants).

Longitudinal Analysis

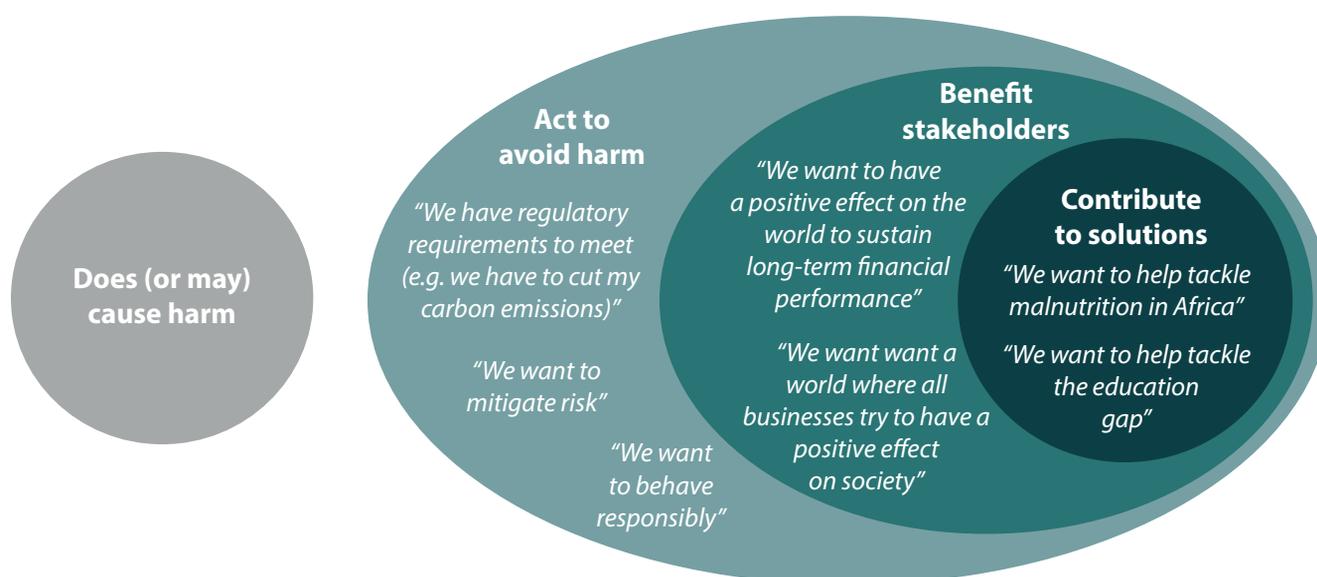
Although the immediate comments of the participants are important, the long-term success of the program is more critical. Alumni will be contacted twice in the first year post graduation, and annually in the years following their completion of the program. The format of feedback will be face-to-face or over the phone interviews/surveys.

The metrics to be measured will include, but not be limited to the following: number of companies still operating 2 years and 5 years after graduation, share of businesses that were awarded any grants, share of businesses that generated any revenue, number of jobs created, revenue growth, company survival rate, effectiveness of alumni network.

Impact Analysis

Impact analysis metrics will be defined for each cohort by the Systems Lab following the selection of the grand challenge. Furthermore, additional metrics will be defined according to selected projects/ideas of the attendees.

Figure 6. Impact classification



Source: UNDP SDG Impact Workshop, Istanbul, December 3-4, 2018

The impact assessments will be based on three different cascading types of impacts, illustrated in Figure 8:

- Avoiding harm
- Benefiting stakeholders
- Contributing to systemic solutions

Then, each solution is monitored and evaluated by posing questions: what, who and how much, and by assessing contributions and risks (Figure 7).

Figure 7. Impact measuring

	Effect classification				
	May cause harm	Does cause harm	Act to avoid harm	Benefit stakeholders	Contribute to solutions
What	Unknown	Important negative outcome(s)	Important negative outcome(s)	Important positive outcome(s)	Important positive outcome(s)
Who	Unknown	Various	Underserved	Various	Underserved
How much					
Depth	Unknown	Various	High degree of positive change	Various	High degree of positive change and/or
Scale	Unknown	Various	Various	Various	For many and / or
Duration	Unknown	Various	Various	Various	Long term
Contribution	Unknown	Various	Likely same or better	Likely same or better	Likely better
Risk	Unknown	Various	Various	Various	Various

Source: UNDP SDG Impact Workshop, Istanbul, December 3-4, 2018

Given this framework, we provide some illustrative impact metrics: Box 6 suggests some impact metrics for the “The Rise of Displaced People” challenge discussed in Section 2.1.

BOX 6. POSSIBLE IMPACT METRICS ON THE CHALLENGE “THE RISE OF DISPLACED PEOPLE”

By building on the example of the grand challenge of the “The Rise of Displaced People” (in line with the SDG Goal 16), possible impact metrics could include the following:

- Access to Health Care Services: Change in awareness about epidemics, Change in real access to health care services, Change in awareness about legal entitlement to health care, Change in the percentage of treatment in chronic health problems, Change in time required/delay in treatment, Change in awareness about and implementation of domestic hygiene practices.
- Access to Safe and Nutritious Food: Change in access to clean water, Change in access to food (distance, ease of payment/tracking methods, etc.), Change in quality of the food, Change in food and nutrition diversity, Change in the awareness and availability of healthy diets
- For any services/systems to be developed; availability, affordability and usability of the solution would be crosscutting KPIs.

Source: Authors' analysis

Box 7 builds on the non-sewage portable toilet cohort illustration in Box 5 and describes how some KPIs could be defined.

BOX 7. POSSIBLE IMPACT METRICS FOR THE NON-SEWAGE PORTABLE TOILET PILOT

The Acceleration process for the pilot (Chapter 5) non-sewage portable toilet was discussed in Box 3. Here we provide some example impact KPIs. Under the acceleration process, these KPIs will be determined in a joint discussion among all cohort members and will be finalized by the Accelerator Jury:

- 1) infections rate per 1000 population decreased by x%
- 2) 1 toilet per x hundred persons is standardized
- 3) trash is air-proof stored
- 4) trash transportation simplified
- 5) trash recycled
- 6) self-cleaning system
- 7) minimum maintenance
- 8) soap access
- 9) x liters of water available per person to wash

Source: Authors' analysis

Long-term targets

With its unique Systems Lab component, the SDG Impact Accelerator will coherently keep a long-term perspective to sustain change makers and to exponentially grow the foundations for impact. By doing so, it will become a global hub for systems change. This entails two main targets against which the long-term performance of the SDG Impact Accelerator should be evaluated:

Enabling Systems Change Capacity: To move beyond the perpetual co-ordination of immediate interventions and specific outcomes, an overarching growth of our capacity to understand and tackle the system level inter-dependency is needed. This means achieving the evolution of our mentality and tools through;

- Building cultural capacity, as a shared awareness of possibilities offered by a systemic view and co-operation,
- Building technical capacity, by leveraging catalytic technologies to operate within complex data landscapes,
- Building organizational capacity, by creating financial, technical, and human resources to co-ordinate within a network of iterative intervention.

Continuous Research and Development: While action learning produces useful practices around nodes of intervention, long-term growth of shared knowledge demands research and development infrastructures beyond the capacity of frontline organizations. Catalyzer programs are needed to build the key tools such as:

- Evaluation programmes employing data science methodologies,
- New multi-agent structures for distributed impact movements,
- New financial instruments for their accounting infrastructures.



4. FEASIBILITY

4.1. BUDGET

The SDG Impact Accelerator will be budgeted for three units:

Systems Lab will employ two people -a manager and an associate—and will have budget for events and workshops. It will also host the joint board of trustees and international advisory board meeting and the biannual convention. The Systems Lab budget is presented in Figure 8.

Figure 8. Budget for the Systems lab

COST STRUCTURE		SYSTEMS LAB ASSUMPTIONS	
STAFF & UTILITIES		MONTHLY COSTS	
Systems Lab Manager	\$60.000	Rent & utilities	\$700
Systems Lab Associate	\$48.000		
Rent & utilities	\$8.400		
	\$116.400		
PROGRAMS			
Strategic communications and advocacy	\$25.000		
Partnerships and commissioned research	\$75.000		
	\$100.000		
ADVISORY BOARD MEETING		# of members	10
	\$42.500	Travel/member	\$3.000
	\$42.500	Accomodation/member	\$250
		Accomodation days	3
		Other Event Costs	\$5.000
TOTAL	\$258.900		

The Accelerator will include the cohorts and field operations. It will employ an Accelerator Manager and Operations Communications and Program Coordinators – as well as the CEO who is accounted in this unit. It will also deploy seed investments of up to 25.000 USD for each team. The accelerator budget is presented in Figure 9.

Figure 9. Annual Budget for the Accelerator

COST STRUCTURE		ASSUMPTIONS	
STAFF & UTILITIES		MONTHLY COSTS	
CEO	\$90.000	Rent & utilities	\$700
Accelerator Manager	\$60.000		
Operations Coordinator	\$48.000		
Communications Coordinator	\$48.000		
Program Coordinator	\$48.000		
Rent & utilities	\$18.000		
	\$312.000		
PROGRAMS			
1st Convention - 5 days	\$78.750	# of attendees	50
2nd Convention - 5 days	\$78.750	Travel/attendee	\$300
Demo Day	\$27.500	Accomodation/attendee/night	\$75
40-hour Training Program	\$25.000	Rent/day	\$1.000
Cost/Cohort	\$210.000	Catering - 2 meals/attendee	\$100
Cost for 2 cohorts	\$420.000	Convention facilitation/trainings etc.	\$15.000
Strategic communications and advocacy	\$25.000	Demoday organization cost	\$5.000
	\$445.000	40-hour Training Program	\$25.000
FIELD OPERATIONS			
Travel & Logging & Food	\$85.000	# of attendees	30
Org Cost	\$5.000	Travel/attendee	\$500
Education Program	\$10.000	Accommodation//attendee/night	\$100
	\$100.000	Rent/day	\$1.000
		Catering - 2 meals/attendee	\$100
		Other Organizational Costs	\$5.000
		Educational Program	\$10
		# of beneficiary attendees	1000
		# of days at field	10
TOTAL	\$857.000		
INVESTMENT		ASSUMPTIONS	
Accelerator Investments	\$500.000	Average Investments	\$700
	\$500.000	Number of investments	20

The budget for the Impact Investment Fund is not elaborated here, since it will be designed according to international fund management practices and will vary with the size of the fund (Section 2.3).

Figure 9. Annual Budget for the Accelerator

COST STRUCTURE		ASSUMPTIONS	
STAFF & UTILITIES		MONTHLY COSTS	
CEO	\$90.000	Rent & utilities	\$700
Accelerator Manager	\$60.000		
Operations Coordinator	\$48.000		
Communications Coordinator	\$48.000		
Program Coordinator	\$48.000		
Rent & utilities	\$18.000		
	\$312.000		
PROGRAMS			
1st Convention - 5 days	\$78.750	# of attendees	50
2nd Convention - 5 days	\$78.750	Travel/attendee	\$300
Demo Day	\$27.500	Accomodation/attendee/night	\$75
40-hour Training Program	\$25.000	Rent/day	\$1.000
Cost/Cohort	\$210.000	Catering - 2 meals/attendee	\$100
Cost for 2 cohorts	\$420.000	Convention facilitation/trainings etc.	\$15.000
Strategic communications and advocacy	\$25.000	Demoday organization cost	\$5.000
	\$445.000	40-hour Training Program	\$25.000
FIELD OPERATIONS			
Travel & Logging & Food	\$85.000	# of attendees	30
Org Cost	\$5.000	Travel/attendee	\$500
Education Program	\$10.000	Accommodation//attendee/night	\$100
	\$100.000	Rent/day	\$1.000
		Catering - 2 meals/attendee	\$100
		Other Organizational Costs	\$5.000
		Educational Program	\$10
		# of beneficiary attendees	1000
		# of days at field	10
TOTAL	\$857.000		
INVESTMENT		ASSUMPTIONS	
Accelerator Investments	\$500.000	Average Investments	\$700
	\$500.000	Number of investments	20

The budget for the Impact Investment Fund is not elaborated here, since it will be designed according to international fund management practices and will vary with the size of the fund (Section 2.3).

4.2. RISKS AND MITIGATION STRATEGIES

Risks and mitigation strategies for the implementation of the SDG Impact Accelerator are outlined in Figure 10.

Figure 10. Risks and Mitigation Strategies

RISK	MITIGATION STRATEGY
Not being able to keep the balance between the target of business scalability by pursuing market-relevant opportunities, and humanitarian purposes.	The three-pronged institutional structure will ensure a balanced approach. The Systems Lab will make sure that the calls are structured around SDG-relevant big questions. The Accelerator will speak and disseminate the 'business language' and modus operandi. The performance of the Impact Investment Fund will be measured with both financial return and SDG-oriented impact metrics.
Not being able to keep the balance between technology focus and impact focus.	The Systems Lab will make sure that societal and ethical impacts of the proposed technological solutions will also be considered within the system mapping exercise. Technology will be a tool in achieving the purposes, not an end in itself.
The interdisciplinary and diverse nature of cohorts resulting in irrelevance for some members.	Spending time together at the Istanbul Conventions and the content of the trainings / mentorship will ensure that the cohort members share the same reference system, and hence the cohort structure encourages mutual learning and collaboration.
The systems enterprises may graduate but may be constrained to scale because of other structural constraints, such as the tight human resources in LDCs or within the refugee communities.	Developing supporting strategies for growth, including a human resource plan and talent strategy, will be an essential part of the cohort process. The systems enterprises will be able to utilize the sister city partner network to source talent.
The corporations that join as enablers do not fully get aligned with the acceleration process or suffer from internal misalignment between business units, or have a maturity misalignment with the solution.	The corporations will be engaged at business unit instead of innovation or corporate social responsibility units, CEO's participation will be a must. Willingness of the corporations to get involved in the cohort process will also be tested by making sure that they contribute financially or in-kind with their own resources.
Governments that join as enablers may suffer from misalignment due to administrative constraints or political infeasibility of the solutions	Priority will be given to the challenges for which willing government units exist for partnering as enablers. "Policy entrepreneurs" within the governments will be identified and will be promoted through global awards, etc. The timeline of the acceleration process will be tailored according to the political and electoral cycles, if necessary.
Investors' implicit biases (cultural, gender, class, etc.) result in an inefficient distribution of resources, i.e. "transplant" founders get more funding than "native" founders.	The Accelerator program will act as a certification mechanism. The certification will be reinforced by the investments of the Impact Investment Fund. In addition, the sister city network will be built on existing implementation partners, maximising rather than dispersing efforts in a resource-constrained environment.
Given the specificity of the grand challenges, the deal flow for the Accelerator may not be large enough to create a meaningful portfolio of growth opportunities.	Since the focus will be on growth-stage, the importance of large deal flow will be relatively low. In order to enhance the deal-flow, global acceleration partners will be utilized. Unique structure of the SDG Impact Accelerator will also ensure a high-quality process to increase the potential of alumni.
Staying as an isolated entity, not connected to the social innovation ecosystem, globally and within the relevant geographies.	No ecosystem stands alone – the social innovation ecosystem is highly co-dependent. The sister city model will utilize local partners, which will rely on active players, institutions and initiatives – among these, local university bodies and training centres.
The activities in the sister cities become too isolated from or too interdependent on the core.	Implementation partners in sister cities will be linked to the hub in Istanbul through impact measurement and interventions by the hub when necessary to ensure the effectiveness of local hubs by providing support and proposing corrective actions when needed.
Legal and political constraints faced by refugees or people in LDCs hinder their involvement, or similar constraints hinder business operations in these environments.	The relevant government departments in the beneficiary geographies will be close partners by involving in the cohorts as enablers. The convening power of the UNDP and other partners will be utilized to catalyze the involvement and support of the government departments.
Failure in fundraising from donors or limited partners.	The fundraising will utilize the concrete outcomes of the pilots, the convening power of the UNDP, and positive effect of the anchor funders which will be secured during the pilot phase.
Given the broadness of its scope and target audience, the SGD Impact Accelerator risks becoming 'yet another accelerator' with high ambitions but limited impact.	High ambitions can be a solid starting point for the implementation of large-scale solutions. This will be complemented with quick-wins through viable pilots, focus on a limited number of systemic issues, and mobilization initiatives and scaling with partners who are global players.

Source: Authors' analysis

4.3. SWOT ANALYSIS

A Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis for the SDG Impact Accelerator is presented in Figure 11.

Figure 11. SWOT Analysis



Source: Doğan Taşkent (2018). Contribution to the UNDP SDG Impact Accelerator report



H.E. Basat Öztürk, Ambassador of Turkey to Afghanistan
with local Afghan leaders in Jawzjan province (2011)

5. FIRST PILOT PROJECTS AND ESTABLISHMENT TIMELINE

The establishment of the SDG Impact Accelerator will have an integrated vision and a gradual approach. The work will commence with the two pilots of the acceleration model in Quarter 2-3 of 2019, which is discussed in Section 5.1. The other establishment steps are discussed in Section 5.2, and fundraising targets are discussed in Section 5.3.

5.1. PILOTS

Two pilots will be run from April 2019 until September 2019. The pilots were chosen according to the following criteria: First, they should be about real problems faced by displaced people. Second, they should relate to large-scale development challenges. Third, implementation should be feasible in Turkey.

In order to create cost and learning synergies, beneficiaries of both pilots can be seasonal workers of agriculture in Turkey. Estimates of the number of temporary farm workers in Turkey ranges from 300,000 to 1 million. Most of them live in tents, and do not have access to proper sanitation or electricity. A significant portion of these workers are Syrians and other displaced people under temporary protection in Turkey, and for most of them their sole income is seasonal work in agriculture. Many of the solutions to challenges faced by the temporary farm workers in Turkey could be scalable to other communities of displaced or marginalized people, including seasonal agricultural workers in other countries as well as people residing in rural areas or nomadic people living in similar conditions.

The two pilots have been discussed and positively received by the relevant national authorities and international bodies⁴⁶, which can become *enablers* in the relevant *cohorts*. However, depending on the outcomes of the field research and discussions with the potential outcome partners, the pilot challenges or the beneficiaries can be pivoted. The planned pilots are:

Non-sewage portable toilet project

Globally one in three people live without access to proper sanitation. The SDG Target 6.2 aims to “achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.” According to a study by the Bill & Melinda Gates Foundation and the Boston Consulting Group, “*there are considerable untapped opportunities for companies that come early to the new non-sewage sanitation category. The reinvented toilet market alone is conservatively estimated to become a \$6 billion global annual revenue opportunity by 2030. It could help open the door to a new, potentially larger sanitation sector and value chain supported by private and public investments in products, jobs, and services.*” The Foundation has already developed technologies in non-sewage sanitation area.

On the other hand, Eczacibasi Holding, one of the largest Turkish business conglomerates, with operations in designing, engineering and producing ceramic sanitary ware, flushing systems, toilet seats and faucets, have conducted engineering studies on a non-conventional off-grid toilet. The pilot will aim to bring together the work of these two institutions, as potential *challenge owners*, and run a challenge to invite systems entrepreneurs to combine global and local technology and design, and test commercialization of user-friendly non-sewage portable toilet systems in the farm worker camps. Companies that undertake contracted farming at scale can also join as outcome partners to the pilot.

This pilot is a typical example of a market-creating innovation that provides access to a low-cost solution for displaced people and host communities in Turkey, which could later be scaled up to other refugee populations and LDCs. It is also an example of adapting a global technology (at the Bill & Melinda Gates Foundation) into a very culture-specific local context through a partner with local design and production capabilities (Eczacibasi).

Digital identity

Globally, over 1 billion people do not have an official proof of identity. Even when there are ID infrastructures, they often are not integrated into larger ecosystems of data and service delivery to empower innovators to create new applications and ID usage models. The SDG Target 16.9 aims to “*provide legal identity to all, including birth registration, by 2030.*” Identity is not only critical in accessing to basic services and being able to travel, but also a key enabler for accessing economic opportunities and avoiding (gender) discrimination⁴⁷. According to a recent report by McKinsey Global Institute⁴⁸, for emerging economies, fully digitizing the IDs can bring an average potential per-country benefit of roughly 6% percent of GDP by 2030.

46 UNHCR, FAO, ILO, Ministry of Interior's Directorate-General for Migration, Ministry of Agriculture and Forestry, Ministry of Family, Labor and Social Services, Turkey Employment Agency (ISKUR), Ministry of Education, Ministry of Health, Red Crescent Turkey

47 For more information on the role of Digital ID systems in development please see: Asian Development Bank (2016). Identity for development in Asia and the Pacific & USAID (2016). Identity in a Digital Age: Infrastructure for Inclusive Development.

48 McKinsey (2019). Digital identification: A key to inclusive growth.

New digital technologies such as biometrics, mobile authentication, blockchain-backed ID systems, amongst others, provide tremendous opportunities to improve practical digital ID systems. Yet, it is up to the implementers of the solutions to shape a digital ID system that empowers the users, rather than a system of surveillance and disempowerment. For instance, Building Blocks in Jordan helps the World Food Programme (WFP) in distributing cash-for-food aid to over 100,000 Syrian refugees by using an adaptation of block-chain technologies and retina-scanning ID solutions⁴⁹. The same digital technologies come together with challenges around privacy and ethical concerns regarding the algorithms developed utilizing ID data. The same Building Blocks program was criticized for forcing the refugees to provide critical personal information such as retina scans⁵⁰. With regards to the utilization of new technologies, it is also important to distinguish between the ownership of the intellectual property of the technical solutions, which is generally owned by the technology provider; and the ownership of the data generated during the application (biometric profiles, demographic patterns and analytics, service delivery and process innovations, etc.) which is generally owned by the governments or individuals. A general framework for digital ID applications is presented in Box 8.

BOX 8. FOUR STEPS IN DIGITAL ID SYSTEMS

- 1) Authentication enables the system to uniquely verify the identity of an individual. This is usually done through a registration process where beneficiaries are brought into the policy's database and given some form of authentication for the entitlement, such as an ID card or an ID number.
- 2) Automation is using the ID systems as a basis to automate certain transactions. For example, direct benefits or cash subsidies are automatically transferred from the government to a beneficiary's bank account that is linked to the beneficiary's ID. Thus, the benefit transfer process bypasses the entire complex supply chain and links the benefit source directly to the target beneficiary in a transparent manner.
- 3) Monitoring and evaluation is about how successful the delivery process is. By using the ID to track the movement of benefits along the entire supply chain, it is possible to have full visibility into the execution of any scheme. The ID can be used to validate whether the beneficiary received the benefits and also to identify bottlenecks and leakage along the supply chain.
- 4) Data insights build on unique ID numbers that can function as an indexing tool for a wide variety of transactions linked to an individual. This data could be analyzed to generate insights into how various government interventions are helping individuals progress socioeconomically.

Source: Asian Development Bank (2016).

Digital ID could be an excellent example of a market-creating innovation that will enable an ecosystem of new ventures to empower refugees⁵¹. Government of Turkey has already collected identification and other information (up to 99 items per person) for 2.6 million Syrians under temporary protection on a centralized database, but have not yet established a digital ID system.

The digital ID challenge will commence with a system mapping exercise to identify the needs, the key requirements for digital ID solutions, the legal restrictions, as well as government policy priorities, and in searching potential institutions interested to partner (such as banks and employers). This exercise will be supported with an international scoping exercise to identify existing relevant solutions and initiatives to build a coalition of willing partners that could not only support the pilot project in Turkey, but also help successful solutions scale up globally. Then systems entrepreneurs will be invited to come up with solutions to integrate existing data in different departments, and augment it with new information useful for beneficiaries, such as level of Turkish language classes taken or other skills. A large number of solutions could be on financial technology innovations (fintech)⁵². The systems entrepreneurs may also be invited to establish "instrumental" ID systems to achieve an isolated, single-application objective, rather than a general infrastructural system. They will be asked to create win-win solutions for the ID provider, beneficiaries, and other stakeholders to get involved in the system while having a cautious approach to ethical and privacy concerns.

49 Juskalian, Russ (2018). Inside the Jordan refugee camp that runs on blockchain. MIT Technology Review.

50 Molinar, Petra (2018). The Contested Technologies That Manage Migration. CIGI Center for International Governance Innovation. <https://www.cigionline.org/articles/contested-technologies-manage-migration>

51 Please see Box 2 for examples of technology-based solutions towards refugee populations in and around the Digital ID ecosystem.

52 World Economic Forum (2016). A Blueprint for Digital Identity The Role of Financial Institutions in Building Digital Identity

5.2. NEXT STEPS FOR ESTABLISHMENT

These pilots will demonstrate the applicability of the systems acceleration model in 2019. In the meanwhile, the other two units –the Systems Lab and the Impact Investment Fund—will be structured:

- In the first year, the Systems Lab can be operationalized in close cooperation with the UNDP SDG Accelerator Lab in Turkey. With fundraising to self-sustain the operations, the full unit will be established in 2020. Until the System Lab becomes operational, the working groups on pilot challenges mentioned in this feasibility study will fulfil the role and functions of the Systems Lab.
- The structuring of the Accelerator will also start in cooperation with existing government-supported accelerator programs⁵³ and the innovation centers to be established as a UNDP project⁵⁴.
- During the establishment period in 2020, the Impact Investment Fund will be raised. For the alumni of the pilot cohorts, investments will be pooled from limited partners as well as donors on a deal by deal basis. The target for the first closing of the fund is January 2020, and final closing is the end of 2020. The Development and Investment Bank of Turkey has recently expressed interest in supporting the efforts to develop the Impact Investment Fund under its new mandate given by law in 2018 to develop equity investment vehicles.

The sister cities will be designated to scale up the operations globally after the establishment stage.

The process and outcomes of the pilots will be announced in key events at the United Nations: the UN High-level Political Forum (HPLF) on Sustainable Development in July and/or in September 2019. Finally the full findings of the pilots and the launch of the SDG Impact Accelerator will be announced at the World Economic Forum in Davos in January 2020. Please see Figure 12 for the timeline.

It is expected to legally incorporate the SDG Impact Accelerator in the second half of 2020 and finish the establishment stage.

Figure 12. Timeline for 2019-20

	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020
Pilots	Design	Implementation	Assessment				
Systems Lab	Fundraising		Hiring & Start of Operations				
Accelerator	Fundraising & Program Design		Hiring the CEO	Start of Operations			
Impact Investment Fund	Fundraising		First closing	Investment to pilot alums	Fundraising cont'd		Second closing
Key events		HLPF / ECOSOC	UNGA	WEF - Davos			

Source: Authors' analysis

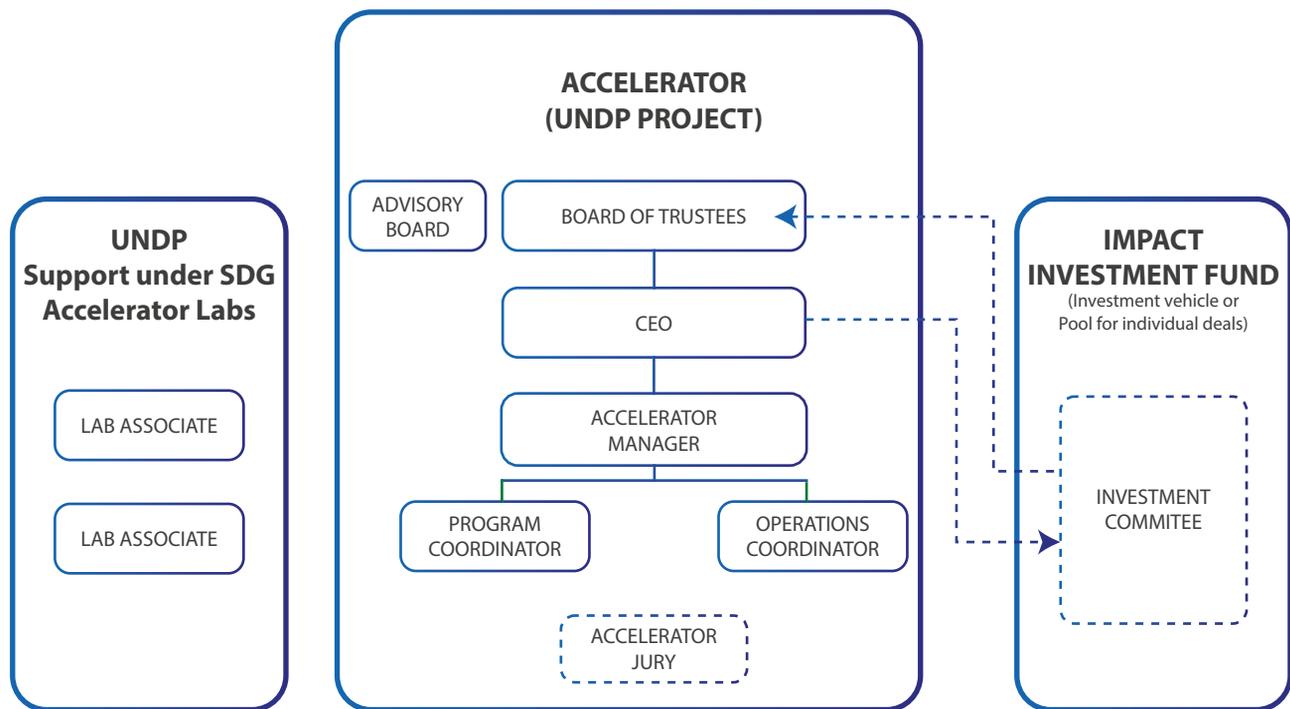
During the establishment period, before incorporating the legal body, the operations will be under a UNDP project, and during this period all references in this report to the Board of Trustees of the Foundation refers to the Steering Committee of the UNDP project.

In case of the establishment of the Systems Lab in close cooperation with the UNDP Country Office as a part of the SDG Accelerator Lab, its administration can be separated, as illustrated in Figure 13; however in this situation the Board of Trustees will ensure coordination of the units. The Impact Investment Fund will be developed as a separate legal structure, and its management will be represented in the Board of Trustees; i.e. Steering Committee.

53 TUBITAK, the Higher Council for Science and Technology of the Government of Turkey, has a network of 40 accelerator programs in universities, and is willing to cooperate with the SDG Impact Accelerator.

54 The innovation centers will be established in main metropolitan areas of Izmir, Adana and Mersin – centers densely populated with Syrian refugees.

Figure 13. Governance (Establishment Stage)



Source: Authors' Analysis

5.3. FUNDRAISING

The total amount of annual budget is estimated around USD 3 million for 2020. The breakdown of this budget is shown below:

Figure 14. Annual budget

Systems Lab	\$258,900
Accelerator	\$857,000
Subtotal	\$1,115,900
Seed investment	\$500,000 ^a
Growth (impact) investment	\$1,500,000 ^b
TOTAL	\$3,115,900

^a 2 cohorts per year, 10 teams per cohort

^b 3 investments per cohort

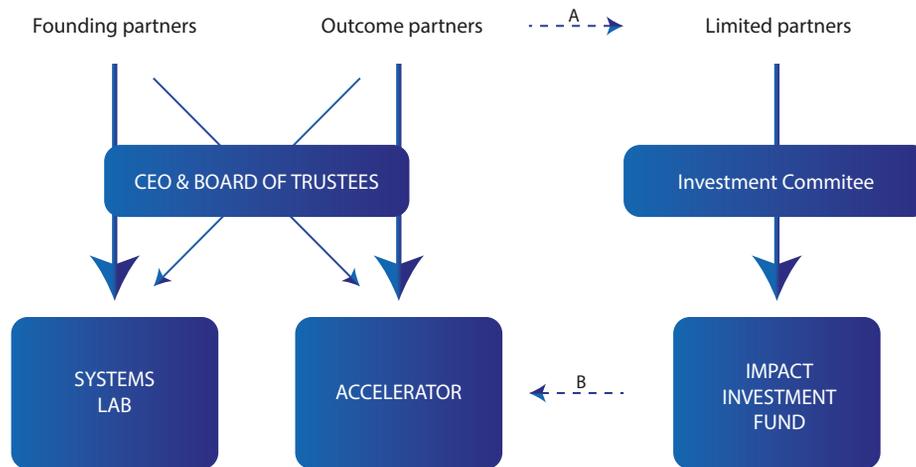
Our research indicates that the most feasible funding resource for the activities of the Systems Lab and the Accelerator is founding partners and outcome partners, while it is possible to fundraise from limited partner impact investors for the Impact Investment Fund. Some of the outcome partners, such as corporations, may also invest in the Fund and become limited partners.

Different funders will likely have different aims, particularly corporate sector sponsors. While scaling, models will be considered to allow local hubs to maintain different funding models, sponsorship arrangements and missions to maximize opportunities to work with a range of funding partners.

It is expected that the Steering Committee members during the pilot phase will also concentrate on fundraising. At the end of the pilot phase (September 2019) 1 alumni per pilot project will be invested with USD 250,000. For the establishment period in 2020, the Impact Investment Fund can invest up to 250,000 USD into 3 alumni per each cohort. The required funding to be raised for investment between September 2019 and December 2020 will be USD 2 million. This amount can be pooled from limited partners on a deal-by-deal basis.

It is expected that one third of the total annual budget of approximately USD 3 million USD (Figure 12 and 13) will be raised from founding and outcome partners, and two thirds from the limited partners.

Figure 15. Partners and funding



A Some outcome partners may become investors to the fund
 B Part of the impact investment fund will be used to fund the accelerator

Source: Authors' analysis

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APPENDIX 1 – LIST OF INTERVIEWEES

NAME	ORG
Ahmad Galal	Amen Foundation, Pakistan
Akin Altunbas	Borda Technologies, Founder
Alain Ruche	EU
Alessandro Fazio	EU
Alexis Eggermont	Accountable
Amal Dokhan	Babson Global Center
Andonis Filippidis	Dataset
Arianna Mazzeo	Harvard living lab
Azmat Isa	PPAF
Bassant Helmi	the Digital Arabia Network
Batuhan Aydagül	ERG (NGO)
Ben Rattenbury	DFID
Burak Dalgin	Darby / Templeton
Caitlin Wiesen	UNDP Vietnam
Charlie Fraser	TERN
Chris Richmond	Mygrants
Claudio Cali	EIB
Claus Haugaard Sorensen	EU
Conchita Galdón	Social Innovation Lab IE University
Conor Clancy	Refugee Entrepreneurs Denmark
Dogan Asik	UNAOC
Elena Casolari	Opes Fund
Emre Fadillioglu	Appsamurai
Ercan Erciyes	Monument
Ezgi Arslan	UNDP
Francine Pickup	UNDP India
Francois de Borchgrave	Kois Invest
Frank Welvaer	Johnson and Johnson
Gabriela Oana Evren	IKÜ - SDG based Accelerator
Giancarlo Caratti	JRC
Giulio Coppi	Fordham University
Guilherme Collares-Pereira	EDP
Ilisabe Campenhouse	BMW Foundation
Inesse Benmohammed	SINGA
Jonathan Chang	Lien Centre

NAME	ORG
Jonathan Gill	Unilever
Kevin Doyle Jones	Socap
Lea Simpson	The Brink
Léo Le Naour	INCO
Lieve Franson	Phillips
Magdalena Yesil	Broadway Angels
Mark Beam	Kaufman Foundation
Martin Bruncko	Steam Capital
Merthan Öztürk	Spirohome
Michael Brandcamp	Gründerfonds
Miray Tayfun	Vivoo
Mohit Misra	Abraaj
Neelam Azmat	Pakistan Poverty Alleviation fund
Nicolas Hazard	INCO
Niels Buning	Philips Research
Ozan Sonmez	Growth Circuit VC
Paola Ravacchioli	EIB
Phil Schmidt	MIT Lab Jordan
Roberta Ventura	SEP
Sam Doualle	Frontline Growth Consulting
Samson Ogunfuwa	TechFarm Institute
Sinan Tandoğan	TÜBİTAK
Steven Koltai	Harvard Advanced Leadership Fellows
Stuart A Bennett	Abraaj
Sylvana Q. Sinha	Praava Health, Bangladesh
Umutcan Duman	Evreka
Unjela Kaleem	UNOPS/NESTLE
Vittoria Zanuso	100R
Zsuzsanna Bódi	Enoll

In addition, a workshop was conducted with potential refugee beneficiaries in Istanbul.

APPENDIX 2 – GLOSSARY OF TERMS RELATED TO THE SDG IMPACT ACCELERATOR

Big question: Questions that emerge from the grand challenges through system mapping exercise to enable open calls to invite systems entrepreneurs to the accelerator. Our big questions resemble Mazzucato et al's mission approach: See Kattel, R., Mazzucato, M., Ryan-Collins, J., Sharpe, S. (2018). *The economics of change: Policy appraisal for missions, market shaping and public purpose. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2018-06) (p. 6)*

Cohort: A group of around 10 systems entrepreneurs (solvers) and a fixed set of relevant stakeholders with specific roles (enablers & supporters) established around each big question for the acceleration process.

Enabler: Context-specific stakeholders in each cohort, including corporations, philanthropic organizations, development banks, aid agencies, payment solution, mobile technology, logistical support and fast production facilitators.

Grand challenges: Big developmental issues of our times, each linked to an SDG, and designated by the Systems Lab as focus areas of the SDG Impact Accelerator.

Open call: Global and structured search process, often undertaken together with partners, to recruit solvers to each cohort around specific big questions.

Sister city: Hubs in LDCs and other locations to which the SDG Impact Accelerator scales its acceleration capacity and solutions, selected based on existence of a supportive stakeholder and policy environment.

Solver: Main driver of a cohort, a systems entrepreneur, which could be a startup preferably with a minimum viable product, a social venture, or a spin-off from or a separate structure within a corporate or university that has a solution and a team.

Supporter: Problem experts in a cohort, including sociologists, anthropologists, product integration and maintenance experts and domain experts.

Systems entrepreneur: Innovators who are intentionally adopting systems change strategies in their efforts – either through existing organizations, large institutions, for-profit companies, or even by creating new organizations and networks.

APPENDIX 3 – ACCELERATOR CASE STUDIES

Prepared by PlusValue as a contribution to the UNDP SDG Impact Accelerator report.

SEP JORDAN

A testimony of a social enterprise for refugees that has gone through an acceleration programme in a social impact accelerator.

Location: Headquarters in Switzerland, sells products in 9 cities and employs refugees in the Middle East.

Description

SEP produces and sells hand-embroidered accessories blending hallmarks of premium Middle-Eastern craftsmanship with Italian style. Each piece is embroidered by a single artist, namely women refugees who treasure the cross-stitch technique that has been passed down from generation to generation. In this way, SEP empowers less fortunate artists with professional, personal and economic stability. When the project first launched, the nascent business went through an acceleration programme in an impact accelerator in Italy, which specialised in mentoring and upgrading social entrepreneurial projects, but was not sector-specific.

Assessment

Success factors:

- This kind of impact accelerator with no specific target sector can be effective for those entrepreneurs with limited business background (although may be less effective for those who already have a business/commercial background and would like to test the viability of a new project).

Challenges:

- SEP founder managed to take her enterprise forward thanks to pre-existing competences. Those in her cohort who were would-be entrepreneurs rather than actors with entrepreneurial experience would have largely benefitted from a more hands-on approach to the business sector.
- The lack of sector-specific training meant that participants did not receive a service tailored to their sector-specific needs and the acceleration services were catered to talk about impact rather than viable commercial products. While impact measurement sessions were somehow useful and intellectually stimulating, they should not take priority over business training.
- SEP did not manage to access high quality legal advice through the accelerator – the Founder stresses the importance of siding business with relevant legal support especially for enterprises employing or catering the needs of displaced people.
- Mentorship was not effective and lecture style sessions were not useful. They delivered theory over practice.
- Not enough information was given on the practicalities of running a business and on how to attract investors. Building on that, proper attention should be devoted to on pitch preparation and evaluation.

Main takeaways:

- Acceleration (including acceleration for businesses with a social purpose) is more effective when sector-specific
- The accelerator needs to speak and teach the 'business language' and modus operandi.

Additional notes

By working with refugees and vulnerable population, SEP Founder reports some of the problematics of 'humanitarian accelerators', which are driven by good intentions but too often suffer from poor execution. It is important to bring in business-minded that have the right commercial drive and can help solve current inaccessibility to market-relevant opportunities.

Finally, it is worth pointing out, the SEP Jordan does not provide a tech-driven solution for refugees – its social impact derives from employment opportunities and the symbolic value of its final products, bringing socio awareness and intercultural solidarity. The buzz around tech-driven solutions for development and humanitarian crises comes from the fundamental realisation that technology has great potential for social impact if properly channelled – however, this growing enthusiasm should not overlook that non-tech-based entrepreneurship is still highly relevant, especially in simpler contexts lacking the right IT infrastructure and IT literate demand.



PAKISTAN POVERTY ALLEVIATION FUND (PPAF)

A case on effective core-periphery relationships, combining central management and de-centralised innovation hubs in rural villages.

Location: Pakistan

Description

Pakistan Poverty Alleviation Fund is a lead apex institution for community driven development in the country. Set up by the government of Pakistan, as an autonomous not-for-profit organization, PPAF enjoys facilitation and support from the Government of Pakistan, The World Bank, International Fund for Agricultural Development (IFAD), KfW Entwicklungsbank (Development Bank of Germany) and other statutory and corporate donors. PPAF aims to be the catalyst for improving the quality of life, broadening the range of opportunities and socio-economic mainstreaming of the poor and disadvantaged, especially women. The core operating units of the PPAF deliver a range of development interventions at the grassroots/ community through a network of more than 130 Partner Organizations across the country. These include social mobilization, livelihood support, access to credit, infrastructure and energy, health, education, disaster management and innovation. Externally commissioned independent studies have demonstrated positive outcomes and impact of PPAF interventions on the lives of benefiting communities related to their economic output, household incomes, assets, agricultural productivity skills and other quality of life indices.

PPAF has outreach across Pakistan (137 districts), supporting communities to access improved infrastructure, energy, health, education, livelihoods, finance and develop resilience to disasters. PPAF aims to ensure that its core values of social inclusion, participation, accountability, transparency and stewardship are built into all processes and programmes. PPAF has invested in developing the capacities of their 130 implementing partners (civil society organizations), around 133,000 organized community groups and 440,000 community credit groups.

As part of PPAF's efforts to provide last mile services, rural connectivity and promoting social enterprises, third generation platforms were piloted. Under these platforms, 80 digital hubs were launched throughout Pakistan. Each digital hub is equipped with internet, laptop, projector, speakers, digital camera, printer/scanner/fax and photo copier along with UPS to cope with power breakdowns. The digital hubs were set up in the office of the Local Support Organizations (LSOs), which were to hire a computer literate digital manager to provide technical services to communities. As pilot, PPAF saw both successes and failures over the 80 DHs and has extensive learnings from the experience. Currently, there is an assessment going on-ground to check the hubs' health and devise a way forward for them.

In May 2018, National Incubation Centre (NIC) Karachi, an initiative funded by the government (Ministry of IT&T and Ignite Fund), was launched. The incubator will connect entrepreneurs and promising startups with mentors, investors and new business opportunities. A 20-week experiential learning program aims to train entrepreneurs, who will also benefit from intensive 1-on-1 coaching programs. To further its efforts of rural connectivity and promoting social enterprises, PPAF partnered with NIC Karachi with an aim to support start-ups with rural communities as well as connecting rural enterprises and innovators with state-of-the-art tools. This partnership is expected to ultimately empower marginalised communities, which currently are solely seen as beneficiaries.

Assessment

Success factors:

- They successfully connect communities across the country but have a way to manage information centrally.
- Even when they only provide rural communities with basic IT infrastructure, they instil entrepreneurship and IT curiosity where it would have not otherwise occurred.

Challenges:

- The demand for digital solutions might be limited in rural areas.

Main takeaways:

- The reconcile local needs with a nation-wide development vision.
- They successful implement PPPs in a challenging context from social, political and economic perspectives while keeping partners and stakeholders accountable through systematic monitoring and impact measurements.



MYGRANTS

A case study on the type of tech-driven and socially oriented startups that the SDG Impact Accelerator could have recruited when the company was at its early stage.

Organisation: Mygrants (<https://mygrants.it/>)

Location: Italy

Description

Mygrants is the most used educational online platform for refugees and asylum seekers in Italy.

The enterprise aims to strengthen access to permanent education in non-formal and informal contexts; train and upskill users; turn unexpressed talent into productive resource for the community; convert State expenses in an investment toward the promotion of the economic, social, civil and cultural growth of the country.



Assessment

Success factors:

- They assist the work of largely inefficient accommodation centers and run a public service at a lower price
- They are a first mover on the market
- Placement of 917 immigrants in 2018
- Training of 44,000 immigrants in Italy and 12,000 in Africa since the app was launched
- Fomentation of entrepreneurship attitudes among the immigrant community through information and training

Challenges:

- Refugees:
 - › Refugees not seen as secure and reliable 'market' by investors
 - › Lack of opportunities to network with other social entrepreneurs
 - › Difficulties in accessing capital
 - › To find a good source of information about rights & asylum to support them in the first years of arrival in Italy
- Government:
 - › To find a reliable information and data related to immigrants and their skills and potential
 - › To have a tool or method to connect company/market needs to immigrants
- Companies:
 - › To have access to a reliable database of skills, knowledge, and potential available in the market (immigrants)

THE REFUGEE LEARNING ACCELERATOR AT THE MIT MEDIA LAB

A case on an initiative that established a living lab initiative for its capacity building / educational purpose in challenging contexts rather than with the aim of necessarily launching a viable company.

Location: USA and the Middle East

Description

The Accelerator supports engineers and computer scientists from the Middle East to create technologies for refugee learners. They provided the living lab space and services (access to learning, mentorship, and funding), however were more interested in supporting a community of innovators rather than creating sustainable companies/spinoffs. The Accelerator is a project of the Media Lab Learning Initiative at the Massachusetts Institute of Technology that designs technologies for people to create a better future.



Assessment

Success factors:

- The programme had a mix of online and off-line interactions. The first 6 weeks consisted of online modules introducing participants to new technologies and techniques. After that, teams of participants would take part in a face-to-face workshop for one week that included field trips to talk to users and main actors in the field. Finally, after prototype development, projects collaborated with non-profit organizations to test their applications with learners.
- Bridging the gap between technical expertise and appropriate design for social challenges.

Challenges:

- The tension between humanitarian efforts and the VC model for startup financing.

Main takeaways:

- The programme was built on the realisation that existing education technology applications for refugee learners were predominantly developed by western institutions and decided to come up with a programme that would empower engineers and computer scientists in the MENA region, working closely with refugees, to develop appropriate tools and solutions. Similar cohorts at different innovation hubs in different LDCs within the SDG acceleration network could come together for ad hoc boot camps.
- Accelerators (like their business) could create huge amounts of data about users/ migrant populations which should be used well to further tackles social challenges.
- There is a large scope for the SDG Impact Accelerator to support a nascent project like Mygrants when it was in its early stages. The key priorities would be access to partners and investors, as well as strategies to maximise resources.
- Model acts as proof that investment in refugees as a group can generate social impact and it is possible to create a financially sustainable business model

FRONTIER TECHNOLOGY LIVESTREAMING

A case study on applying frontier technologies to the biggest challenges in development.

Location: Programme based in the UK, across Africa, Asia & the Middle East.

Target companies: Based on the development challenge identified by the UKAid pioneer, FTL works with companies looking to implement frontier technologies in new settings in developing country contexts

Description

The programme was inspired by a research report written by the Institute of Development Studies into the opportunities for frontier technologies in five key areas. It applies these technologies – and others – to real life challenges around the world

- Manufacturing & Consumption (3D Printing, Collaborative Economy Tools, etc.)
- Connectivity (Internet of Things, Blockchain, etc.)
- Transport & Logistics (Drones, Airships, Machine Learning, etc.)
- Fresh Water (Solar Desalination, Atmospheric Water Condensers, etc.)
- Clean Energy & Air (Household scale batteries, Smog reducing tech)

FTL invests up to 100k funding in projects and, using principles inspired by lean start-up and adaptive management, ensure that each project is learning and course correcting during its lifecycle. The programme also matches DFID advisors with technologists and local/domain experts to ensure that tech experts are able to understand the development context. The programme is run in a manner similar to an activist fund, where the investor offers significant educational and training resources to investees, while actively managing results and making monthly decisions surrounding funding and exit decisions.

Assessment

Success factors:

- They are able to draw upon DFID experts to offer local and domain expertise in a large range of geographies from a central hub and have established well defined priorities maximise opportunity for impact.

Challenges:

- Acceptance from funders that some investments will fail, and that this is not to be treated as evidence of a failing programme.

Takeaways:

- The model allows for high degree of flexibility and willingness to learn from challenges and road blocks.



PHILIPS RESEARCH & INNOVATION HUB

A case on a private-led initiative in partnership with the public sector for the establishment of an innovation platform aimed at catalysing entrepreneurial projects tackling social challenges in the health sector.

Location: Kenya

Description

The Community Life Center offers a community driven holistic approach to improving primary and community care. Its aim is to collaborate to improve community and primary health across Africa, by extending new or existing health facilities into social and economic community hubs, using exciting innovative and sustainable programs, technologies and services.

In collaboration with the Kiambu County Government, Philips launched Africa's first CLC aimed at strengthening primary healthcare and enabling community health development in GithuraiLang'ata in Kenya. Philips Africa has also established an Innovation Hub in Nairobi, which is the center for developing innovations 'in Africa-for Africa', covering healthcare, and healthy living.



Assessment

Success factors:

- Collaboration and innovation partnership to ensure a financially sustainable healthcare system and advance African Healthcare Agenda
- A public private partnership as the main driver of social change
- Acknowledgement that no company or organization can solve widespread healthcare issues alone and working together is a crucial.

Challenges:

- Mentality that 'profit' is necessarily not a bad thing, even when aligned with public interest.

Takeaways:

- Private sector needs to be involved to bring capabilities & resources

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A classroom of a girls school in Afghanistan

Foto: Ali Erbaş



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