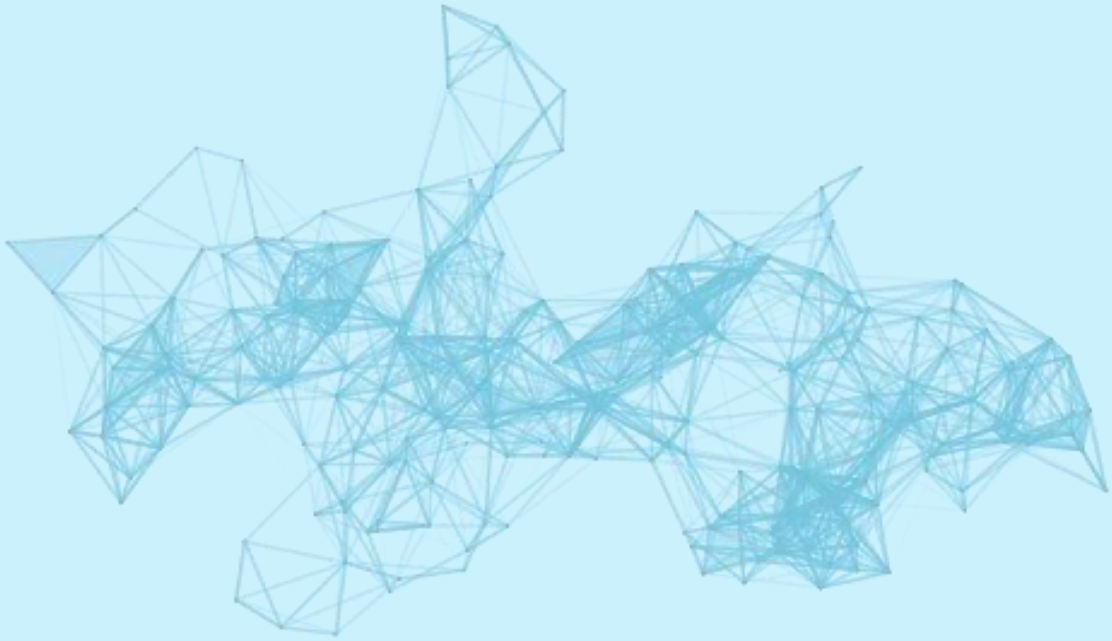
INVEST IN TÜRKİYE

UNDP

SDG Investor Map Turkey



1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

March 2021

United Nations Development Programme
Istanbul International Center for Private Sector in Development

Developed by

United Nations Development Programme (UNDP)

UNDP Turkey Country Office initiated the SDG Investor Map Turkey with the Istanbul International Center for Private Sector in Development (IICPSD), as the technical service provider implementing the methodology developed by the SDG Impact.

UNDP Turkey Country Office works for Inclusive and Sustainable Growth, Inclusive and Democratic Governance and Climate Change and Environment. For more than 50 years the UNDP has worked in close partnership with the Turkish Government and numerous national and international institutions, including NGOs, academics and the business community. UNDP Turkey aims to find practical solutions to Turkey's development challenges and manages projects together with the Turkish Government and other partners to address them. Since 1986 it has implemented over 80 programs across the country.

UNDP's Istanbul International Center for Private Sector in Development (IICPSD) was established in 2011 in partnership with the Government of Turkey. The Center's work to engage foundations and the private sector focuses on delivering policy advice and technical services in four thematic areas:

- Private sector engagement through South-South Cooperation for the SDGs
- Private sector engagement in skills development
- Impact investing
- Resilience and crisis response

The Center has vast experience in providing research and advocacy to mobilize impact investing activities for the Sustainable Development agenda. In order to expand impact investing in countries with nascent ecosystems, IICPSD developed the "Impact Investing Ecosystem Mapping" methodology to take stock of current stakeholders, opportunities and challenges. Piloted in Turkey, the methodology is being implemented in Morocco, Ukraine and Djibouti. IICPSD also implements SDG Impact's "SDG Investor Maps" in countries, with a Map for Turkey completed and a Map for Djibouti in progress.

SDG Impact is a UNDP flagship initiative designed to accelerate progress toward the SDGs with game changing tools and insights that unlock private capital and direct it to concrete SDG-enabling opportunities with a focus on developing countries. The initiative focuses on eliminating barriers and driving integrity for SDG-enabling investment at scale.

Contributors

Presidency of the Republic of Turkey Investment Office

The Investment Office of the Presidency of the Republic of Turkey is the official organization for promoting Turkey's investment opportunities to the global business community and for providing assistance to investors before, during and after their entry into Turkey. Directly reporting to the President of Turkey, the Investment Office is in charge of encouraging investments that further enhance the economic development of Turkey. To this end, the Investment Office supports high-tech, value-added, and employment-generating investments with its facilitation and follow-up services during whole processes of relevant investments.

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Background – A Global Need for Impact Intelligence

Addressing global challenges, Sustainable Development Goals (SDG) provide a blueprint to achieve a more equitable and sustainable future for all. Substantial financing is required to achieve the SDG Agenda by 2030 as US$5-7 trillion is needed annually for global investments. Developing countries alone face a massive funding gap of US$2.5 trillion annually in SDG investments.[1] To bridge this gap and alleviate the financing burden on the shoulders of governments, donor agencies and multilateral development banks, it is essential to partner with the private sector and expand SDG-related investments by unlocking private capital. Accounting for 60% of GDP, 80% of capital flows and 90% of jobs in an average developing country, private sector's engagement in development cooperation is more than vital.

Despite the potential private sector investments offer, many developing countries attract low levels of domestic and foreign investment due to reasons such as limited data and insights about investment opportunities and risks; limited capacities and networks; and high real or perceived policy and regulatory risks. Unfortunately, in addition to these challenges, the COVID-19 pandemic is estimated to cause a sharp decrease in global FDI flows, which are forecast to decrease by 40% in 2020 to below US$1 trillion from their 2019 value of US$1.54 trillion.[2] Developing countries are expected to see the largest fall in FDI given their high dependence on global value chain intensive and extractive industries and limited ability to implement effective support mechanisms. However, there is a growing interest among investors to attribute capital into activities that deliver strong financial returns while reducing poverty and inequality, advancing health and education, and protecting the environment.

In order to ensure that investor interest translates into higher levels of SDG-investments, it is vital to address the current lack of intelligence and guidance around how asset owners can help generate significant SDG impact through their transactions. A major challenge constraining SDG-investments is the difficulty of identifying bankable projects for investors. The "Annual Impact Investor Survey 2020" by GIIN finds that the lack of high-quality investment options with track record remains as a significant barrier to the growth of SDG investments.[3] With an aim to empower investors through impact intelligence products around bankable investment areas in countries with material SDG contribution, UNDP SDG Impact launched the "SDG Investor Maps".

$2.5 trillion
funding gap faced by developing countries annually in SDG investments

To bridge this gap and alleviate the financing burden, it is essential to expand SDG-related investments by **unlocking private capital.**

Global FDI flows are forecast to **decrease by 40%** in 2020 to below $1 trillion from their 2019 value of $1.54 trillion due to COVID.

There is a growing **interest among investors** in activities that deliver strong **financial returns** while generating **SDG impact.**

Recognizing the pressing need posed by lack of impact investment intelligence despite growing investor interest, the SDG Investor Map methodology has been developed to empower investors seeking investment opportunities to generate positive impact with required tools and insights. The SDG Investor Map is an impact intelligence product focused specifically on deriving SDG-aligned 'Investment Opportunity Areas' which are aligned with national policy priorities and development needs and around which private actors can perform actionable diligence and shape deals.

UNDP Istanbul International Center for Private Sector in Development (IICPSD)'s Engagement in Impact Investing and SDG-Anchored Investments

In light of the above challenges around advancing impact investments especially in least developed and developing countries, IICPSD's impact investing portfolio aims to bridge the gaps in impact intelligence, capacity and advocacy in contexts with pressing SDG needs. IICPSD offers a comprehensive service line to foster the impact and SDG investing ecosystems in countries, consisting of a set of methodologies developed to lay the ground for impact and SDG investing and identify opportunity areas to channel private investments into areas with national strategic development priorities.

IICPSD's impact and SDG investing services complement each other by identifying and promoting opportunity areas and facilitating especially private financing for these investment areas. (i) The "Impact Investing Ecosystem Study" identifies major stakeholders, opportunities and challenges in establishing a strong impact investing ecosystem in countries. (ii) SDG Investor Maps dive deeper into specific SDG investment areas which are aligned with country and development priorities to develop a detailed investment guide.

In 2019, IICPSD built the "Impact Investing Ecosystem Mapping" methodology to take stock of the current stakeholders as well as opportunities and challenges in establishing functioning impact investing ecosystems in nascent contexts. Built on a comprehensive desk research and in-depth interviews with major stakeholders, the Impact Investing Ecosystem Study aims to:

- Showcase opportunities in specific markets for international impact investors,
- Exhibit adjacent impact investing activities by institutional investors, money managers and foundations in countries and align them with the impact investing agenda,
- Enable impact enterprises to access the global pool of impact capital,
- Provide policy recommendations for public bodies to actively engage in the design of a robust impact investing framework.

The methodology has been successfully piloted in Turkey at the end of 2019 when "The Impact Investing Ecosystem in Turkey" study was published by IICPSD in collaboration with the Presidency of the Republic of Turkey Investment Office. The report identified five key areas where the highest impact may be generated in Turkey: **(i) refugee livelihoods, (ii) women's empowerment, (iii) renewable energy, (iv) health-tech and (v) financial inclusion.** The ecosystem methodology is currently being implemented in Ukraine, Morocco and Djibouti.

The Impact Investing Ecosystem Mapping methodology takes a snapshot of the current impact investing landscape in countries, identifying major opportunity areas where countries possess significant profitability potential and need further SDG progress. Market challenges and opportunities in these areas are summarized with a set of policy recommendations to help unlock private investments. Building upon the foundation laid by the Impact Investing Ecosystem Mapping methodology, SDG Investor Maps dive deeper into specific "Investment Opportunity Areas" with a detailed investor guide on specific data points for each area, including categories such as market size, return profile, investment timeframe, regulatory environment and so on.

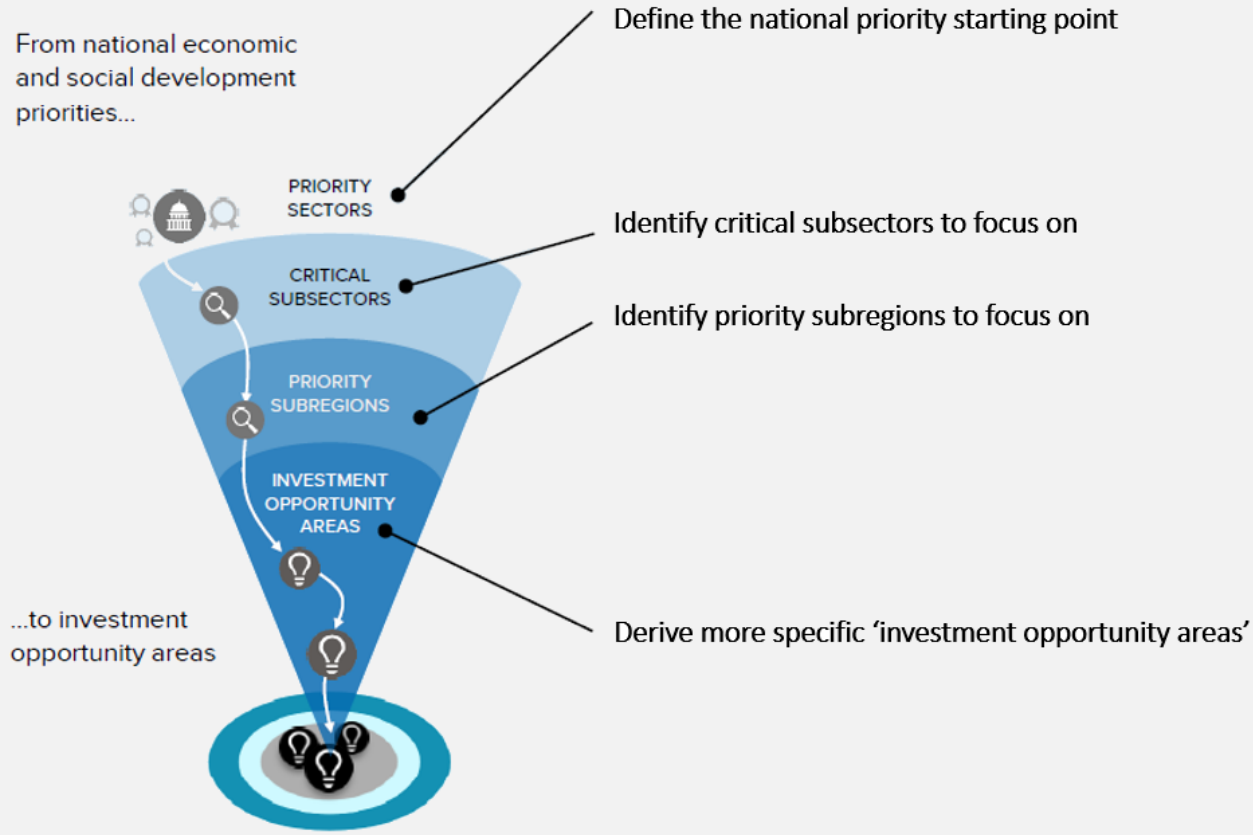
Building upon the findings of "The Impact Investing Ecosystem in Turkey" study, IICPSD conducted the "SDG Investor Map for Turkey" to advance the Center's efforts in mobilizing impact investors and a broader spectrum of investors towards marketable and SDG-aligned investment opportunities. Within the framework of the Map, IICPSD has identified 27 Investment Opportunity Areas under 9 priority sectors which are in line with national priorities and development needs.

IICPSD expands it efforts for showcasing the potential of SDG-anchored investments continuing with the implementation of the SDG Investor Map practice in Djibouti and Ukraine.

SDG Investor Maps

SDG Investor Maps are in-depth reports on SDG-enabling investment opportunities and conditions in target markets and sectors. The Maps target the gap between interest in investing in SDGs and the business models that could provide investable opportunities. Developing an SDG Investor Map requires filtering down from national priorities and development needs to derive "investment opportunity areas." The maps help delineate impact opportunity areas for each country to help tackle sub-sectoral and sub-regional development needs whilst capitalizing on policy and investment momentum, complemented by supporting information that can enable investors to perform diligence and eventually shape impactful deals.

SDG Investor Maps, which were piloted in Brazil, have been rolled out in many countries, with current implementations being in China, Jordan, Turkey, Armenia, India, South Africa, Nigeria, Kenya, Rwanda, Uganda and Ghana. As part of the successful applications to the Joint SDG Fund call opened by UN at the end of 2019, twenty to twenty-five countries have secured resources to implement SDG Investor Maps in their countries.



SDG Investor Map Turkey

Overview

Following SDG Impact's methodology, the "SDG Investor Map Turkey" aims to identify "Investment Opportunity Areas" in the country which are aligned with national priorities and SDG needs while carrying considerable investment potential. The final product provides a guide for investors who are keen on generating positive impact alongside financial returns through the way they allocate their resources.

Initiated by IICPSD in February on behalf of UNDP Turkey and supported by the Investment Office of Turkey, the "SDG Investor Map Turkey" has been developed as a guide that consists of detailed investment information on **27 investment opportunity areas identified across 9 priority sectors**. The following priority sectors have been identified for Turkey: **Technology and Communications, Transportation, Renewables and Alternative Energy, Education, Healthcare, Food & Beverage, Consumer Goods, Infrastructure and Financials.**

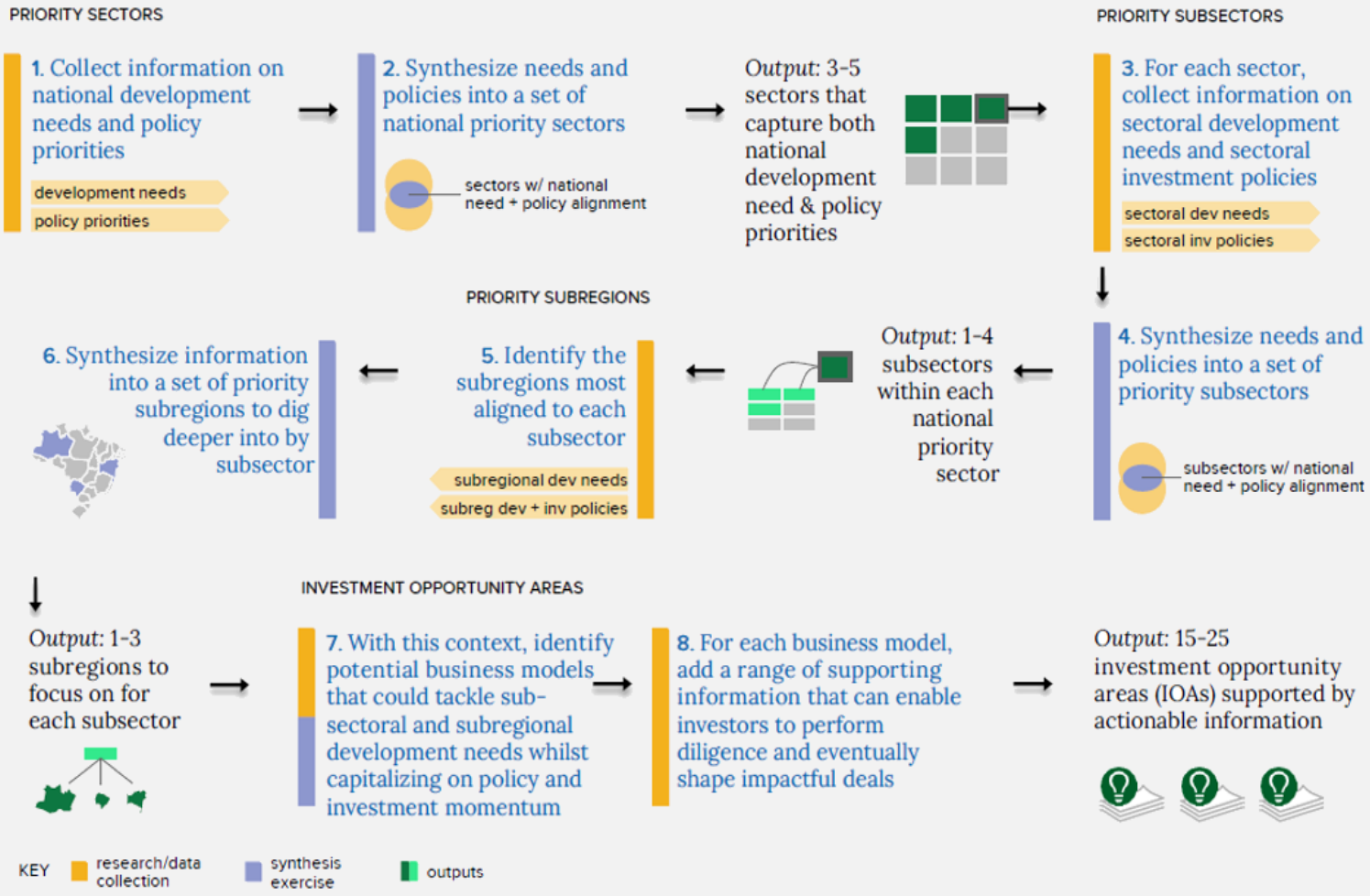
Methodology

The Map followed a rigorous literature review of national policy documents and international development assessments as well as extensive stakeholder consultations with over 35 representatives from public and private sectors.

As the first step, relevant policy priorities were deduced from a careful analysis of documents such as the 11th National Development Plan, the 2020 Investment Program, the 2020 Presidency Annual Program, the Pre-Accession Economic Reform Program (2020-2022), the 2020-2022 Investment Program Preparation Guide and Turkey's Sustainable Development Goals 2nd Voluntary National Review 2019. Moreover, in determining development needs documents such as the Human Development Report 2019 and the Human Development Report Briefing Note for Turkey by the UNDP, Turkey Economic Monitor October 2019: Charting A New Course Report by the World Bank, the Climate Change Strategy by the Ministry of Environment and Urbanization, the Regional Development Policy in Turkey 2019 by the OECD, the National Strategy Report for Regional Development 2014-2023, the National Rural Development Strategy 2014-2020 and the Turkey Sustainable Development Goals Evaluation Report by the Presidency of Strategy and Budget were consulted.

The 11th Development Plan for Turkey covering 2019-2023 is the main national policy document on country priorities, objectives and strategies, and lays the foundation for all government policies.

The Plan is based on five pillars: (i) Stable and strong economy, (i) competitive production and efficiency, (iii) qualified human capital and resilient society, (iv) sustainable cities and environment, (v) justice, democratization and good governance. In the plan, priority sectors are identified as follows: Chemical Industry, Pharmaceuticals and Medical Devices, Electronics, Machines and Electrical Equipment, Automotive, Rail Systems. In addition to priority sectors, agriculture, defense industry and tourism are identified as priority areas for development within the 11th Plan.



From the perspective of the SDG framework, Turkey's SDGs 2nd Voluntary National Review 2019 is a major document for the development needs and priorities in the country. The review takes stock of Turkey's progress towards SDGs, identifying where performance has been significant or laggard. The review puts forward SDGs which are:

i. In need of further work is needed for Turkey,
ii. Prioritized in the context of Turkey,
iii. Most relevant for Turkey to achieve the Global Goals.

The specific SDGs corresponding to the above classifications can be found below:

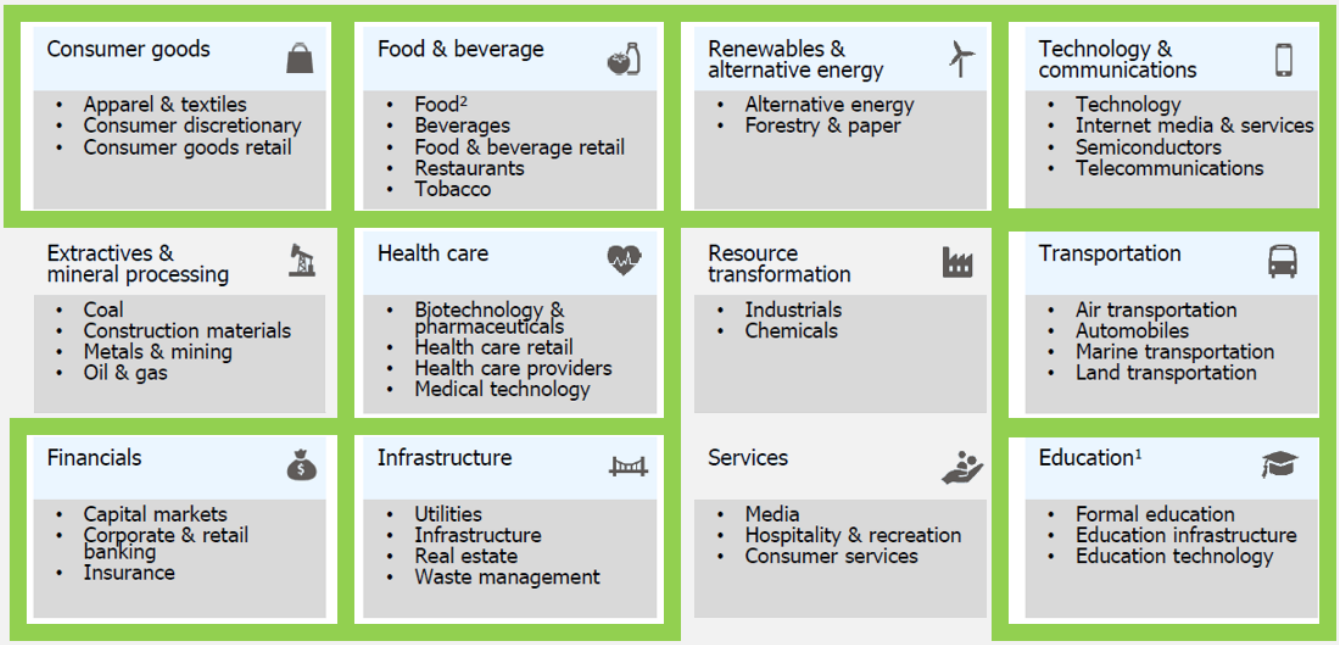
SDGs where further work is needed for Turkey:

Priority SDGs in the context of Turkey:

SDGs Most Relevant for Turkey to Achieve the Global Goals:

Public spending has also been analyzed to understand how the public budget is allocated and which sectors receive the largest resources. Investment opportunities in these areas have been identified to attract private investors towards these areas, whereby the burden on the public budget can be alleviated.

Based on this analysis, 9 sectors have been identified which showcase strong alignment between development needs and policy priorities: **Technology and Communications, Transportation, Renewables & Alternative Energy, Education, Healthcare, Food & Beverage, Consumer Goods, Infrastructure and Financials**. 27 investment opportunity areas have been further identified under these sectors.

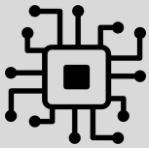


After a comprehensive process of literature review and textual analysis, interviews were commenced with the relevant stakeholders in April. The findings have been shared with the task force and validated through interviews with relevant stakeholders such as the Investment Office of the Presidency of Turkey, the Presidency of Strategy and Budget, the Ministry of Industry and Technology, the Union of Chambers and Commodity Exchanges of Turkey (TOBB), the Development and Investment Bank of Turkey, the European Bank for Reconstruction and Development (EBRD), the Islamic Development Bank and many more leading institutions.

The full list of documents reviewed, and institutions interviewed for the SDG Investor Map Turkey are provided in the Annex. The next section provides a list of 27 investment opportunity areas with proven or potential market profitability and material sustainable development contribution for Turkey. The IOAs are identified based on the below four criteria:

- **Fundamentally marketable**, i.e. investments within which a private actor could invest independently of government co-investment, and where a private actor may be able to achieve a market- or above-market return,
- **Sufficiently specific** to the realm of an 'opportunity area', i.e. a field within which diverse kinds of deals/ transactions could take place, but broad enough for an investor to decide what kind of financial vehicle is best suited to deploy,
- **Sufficiently at-scale** for investments to be able to achieve depth and duration of potential impact
- **Largely already proven in-market**, i.e. by a transaction having taken place, and return/impact begun to be calculated.

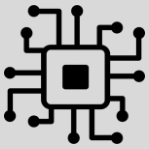
Outputs: Investment Opportunity Areas for Turkey

Priority Sector	Subsector	Investment Opportunity Area
Technology and Communications 	**Technology**	1. Tech-based energy efficiency solutions through integration of advanced technologies and digital connectivity into infrastructure of buildings and manufacturing process 2. Producing assistive technology tools for students or employees with disabilities 3. Content generation and application design for online/digital learning 4. Wearable medical devices for early action and remote monitoring
	Internet Media and Services	5. Sustainable E-Commerce
Transportation 	**Land Transportation**	6. Rail freight transportation and operation 7. The domestic production or technology transfer of subway and railway vehicles, escalators and signalization systems 8. Sustainable, Sharing Economy and Micro Mobility Models for Transportation
	Marine Transportation	9. Private marine transportation for freight shipments
Renewables and Alternative Energy 	**Alternative Energy**	10. Investments in rooftop solar energy panels for domestic or commercial use 11. Domestic solar energy component production (tempered glass, solar cell, backsheet, EVA, junction box and frames) 12. Transforming electric motors used in Organized Industrial Regions and providing/producing new motors for SMEs
Education 	**Formal Education**	13. Investments in vocational training certification programs 14. Affordable private schools for low- and middle-income groups

Healthcare 	**Biotechnology and Pharmaceuticals**	15. R&D and production of local biotechnological medicine and pharmaceuticals
	Healthcare Providers	16. Investing in hospitals/clinics to provide healthcare services for patients from medically underserved countries/regions 17. Remote diagnostic/telehealth services to increase access to healthcare services
Food and Beverage 	**Food**	18. Investing in beekeeping products and services to increase their value-added in the health and cosmetics value chains 19. Solar powered irrigation systems (combined with drip irrigation & other efficient irrigation technologies)
	Food and Beverage Retail	20. Increasing the accessibility of licensed warehouses
Consumer Goods 	**Apparel and Textiles**	21. Energy efficient and sustainable dyeing and washing technologies 22. PPE production as a response to COVID-19 pandemic and future crises: Disposable and washable face masks
Infrastructure 	**Waste Management**	23. Building and operating recycling/recovery facilities for solid waste 24. Building and operating waste collection and/or sorting facilities 25. Constructing and operating wastewater treatment facilities and innovative wastewater treatment technologies
	Utilities	26. Data-based infrastructure for smart cities through investments in connectivity technology such as smart performance meters
Financials 	**Corporate and Retail Banking**	27. Online/E-commerce payment schemes for SMEs and individual sellers

Sector Prioritization for SDG Investor Map Turkey

9 priority sectors to advance SDG-anchored investments in Turkey have been identified following a meticulous literature review of national policy documents and international development reports, as detailed below.

Priority Sector	Rationale for Sector Prioritization
Technology and Communications 	▪ The technology and communications sector is crucial for the realization of the SDGs in Turkey. Major or significant challenges still remain in science and technology expenditures, energy efficiency and youth employment, particularly in: "energy-related CO_2 emissions" (SDG 13), "expenditure on research and development, researchers & triadic patent families filed" (SDG 9), "youth not in employment, education or training (NEET)" (SDG 8) and "CO_2 emissions from fuel combustion for electricity and heating per total electricity output" (SDG 7). ▪ The importance of investing in and developing this sector is becoming increasingly evident with the outbreak of the COVID-19 pandemic, necessitating remote access to vital services such as education and health. ▪ The national documents used for sector prioritization include: the 11th Development Plan, which highlights the increasing shift to high-value added technology products and information systems as a global development trend Turkey needs to follow; The Sustainable Development Goals Evaluation Report, stressing the importance of technology and information systems for achieving all SDGs, especially SDG 9; the 2020 Annual Presidential Program, listing the adoption of digital transformation projects, R&D and innovation activities and critical technologies as crucial elements of competitive production and productivity; and the 2019-2023 Strategy Plan of the Ministry of Industry and Technology, highlighting the important and viable areas within this sector that Turkey can advance on.
Transportation 	▪ According to the Sustainable Development Report 2020, major challenges still remain in Turkey's performance on SDG 9.[4] ▪ SDG 9 is identified as one of the priority SDGs in the context of Turkey and as one of the most relevant SDGs for Turkey to achieve the Global Goals according to the VNR 2019 report.[5] ▪ Despite improvements in the logistics and transportation infrastructure in highways, there is still significant need to focus on cargo transportation and railway mode in transportation investments. There are integration and efficiency problems in Turkey's transportation system, which bear negative consequences on the development of flexible, safe, combined transportation services. There is a need to reduce logistics costs and develop combined transportation practices with higher shares of railway and maritime transportation to improve competitiveness of Turkey.[6] ▪ Turkey bears high geopolitical potential, however, the country Logistics Performance Index worsened as Turkey ranked 47th among 160 countries after being placed 34th in 2016. Connections between industrial facilities, ports and railway systems are yet to reach desired levels.[7] ▪ The government has an objective to improve an integrated transportation infrastructure covering all modes of transportation. The infrastructure is planned to ensure maximum traffic safety and serve all segments of society with a sustainable and uninterrupted transportation system.[8] ▪ The total public investment in transportation is planned as 25 billion TRY ($3.7 billion) with the largest shares going to railways (43%), highways (27%) and intracity transportation (23%).[9] ▪ Turkey has an objective to complete 2,028 km for High-Speed Trains and 228 km conventional networks for passenger and freight transport.[10] ▪ Turkey has an objective to reach 1 million electric vehicles by 2030.[11]

Priority Sector	Rationale for Sector Prioritization
Renewables and Alternative Energy 	▪ According to the Sustainable Development Report Dashboard 2020, significant challenges remain in Turkey performance on SDG 7, and this score is moderately improving. Major challenges remain in the country's performance on SDG 13; major challenges remain in particular with regards to CO_2 emissions from energy and the effective carbon rate. ▪ The 2020 Annual Presidential Program: Turkey's demand for electrical energy has been growing at an annual rate of 5%, above the global average of 3%. The Program shares the aim of increasing the share of renewable resources in total electricity production to meet the rising demand sustainably and utilizing domestic production capacities to decrease the dependency on energy imports. ▪ The 11th Development Plan highlights several measures to achieve the sustainable and stable supply of energy and reduce carbon emissions among which are increasing the share of electricity generation from renewable resources, integrating renewable energy facilities into the grid, reducing the dependence on imported sources (thereby generating employment and value domestically) and adopting energy efficient building infrastructure at a wider scale. ▪ The Sustainable Development Goals Evaluation Report from the Directorate of Strategy and Budget: The Report highlights the pressure of the growing population and the economy on energy demand in Turkey. Although Turkey has recently adopted successful incentive mechanisms and regulatory changes to maintain a stable energy supply, some challenges remain. The report makes the following recommendations: As current incentives are geared towards large-scale energy projects, supporting small-scale renewable energy projects and renewable energy cooperatives in a way that is compatible with market conditions is essential. Unlicensed electricity production through local actors or cooperatives should be encouraged by paving the way of selling surplus energy back to the grid at predetermined rates via electricity distribution companies with the government acting as a guarantor. These measures will help reduce import dependency and contribute to the regional development goals.
Education 	▪ According to the Sustainable Development Report Dashboard 2020, significant challenges remain in the provision of quality education in Turkey. This has negative bearings on the relevant indicators of SDG 8. ▪ 11th Development Plan: The plan draws attention to the importance of enhancing the human resources of the country and verifies the development goal of "training qualified people who will convert knowledge into economic and social benefit and are capable of using technology". In this context, the importance of providing accessibility for all individuals to comprehensive and qualified education and lifelong learning possibilities is emphasized. ▪ The 2020 Presidential Program: The same commitment as above towards developing the human resources of the country in a way that produces positive economic and social externalities and the importance of ensuring the accessibility of education and the availability of lifelong education opportunities are reaffirmed by the 2020 Presidential Program. ▪ Sustainable Development Goals Evaluation Report by the Directorate of Strategy and Budget: The report states that although significant strides have been made in the provision of accessible education, challenges remain in the inclusion of disadvantaged groups, compatibility of the education system with the changing labor market dynamics and the quality of the services.

Priority Sector	Rationale for Sector Prioritization
Healthcare 	▪ According to the Sustainable Development Report Dashboard of 2020, significant challenges remain in Turkey's performance on SDG 3 (Good Health and Well-being) ▪ 11th Development Plan: The reorganization of health services in the face of changing technologies is highlighted among the global development trends that Turkey needs to interact with. Pharmaceuticals and medical devices are among the priority sectors listed in the 11th Development Plan both to increase this sector's competitiveness in the global market and to improve patient health and well-being. ▪ The 2020 Presidential Program: Pharmaceuticals and medical devices are among the priority sectors listed in the 2020 Presidential Program for their competitive potential in the global market, ability to enhance scientific research throughout the country, improve patient well-being, train and engage with qualified human resources and provide secure employment throughout the country ▪ The Ministry of Health 2019-2023 Strategic Plan: The regional differences in the distribution of health personnel is highlighted as a weakness and a source of inequality. Other constraints that are touched upon are the inefficient use of information technologies, the limited scale of R&D in healthcare throughout the country, and the underemployment of health personnel resulting in an inability to meet service and institutional demands.
Food and Beverages 	▪ According to the Sustainable Development Challenges Report Dashboard 2020, significant challenges remain for Turkey in SDG 2 while major challenges remain in SDG 13 and SDG 15. The relevant indicators across SDG 1 and SDG 10 suggest that the existing measures are insufficient to reach the target levels of poverty alleviation in the country by 2023, rendering food security and price stability increasingly important. ▪ In terms of SDG 2, Turkey's 2nd Voluntary National Review on the Sustainable Development Goals highlights access to adequate food and meeting nutrition needs and increasing agricultural productivity and climate resilient agricultural practices as areas of improvement. ▪ 11th Development Plan: Agriculture has been listed among the priority fields of development in the 11th Development Plan. Agriculture contributed to 5.8% of the GDP in 2018, and this figure is expected to decrease to 5.4% by 2023. ▪ The 2019-2023 Strategic Plan of the Ministry of Agriculture: The strategic plan delineates essential development goals for this sector and the country on a macro-scale, among which are improving prosperity in rural areas and achieving sustained food security by increasing the yield and quality of agricultural products; the sustainable management of land and water resources; combatting climate change, desertification and erosion; and protecting biodiversity. ▪ New Economy Program of 2020-2022: Among the primary goals of the New Economy Program is maintaining price stability, as a sub-heading of this, decreasing the inflation in food prices is highlighted. In this context, several measures are recommended such as investments in irrigation technologies and greenhouse infrastructure and making the necessary changes regarding the legal environment surrounding agricultural production and husbandry. ▪ The 2020 Presidential Program: Agriculture is among the priority development areas highlighted by the 2020 Presidential Program, and the importance of maintaining the stability of the prices of agricultural goods is stressed.

Priority Sector	Rationale for Sector Prioritization
Consumer Goods 	▪ Sustainability Development Report 2019: score of 83.6 on SDG3, 82.6 on SDG 6, and 73.8 on SDG 8, moderately increasing but insufficient to attain goal. Decreasing score of 46.5 from SDG 9 and 73.8 from SDG 12, stagnating or increasing at less than 50% of required rate.[12] ▪ 11th Development Plan aims at technological developments in the industries as well as compliance with the environmental protection legislation, energy efficiency and waste re-use activities and cooperate with other stakeholders in the value chain (in particular machinery, fiber and technical end-use manufacturers for the textile).[13] ▪ 2020 Annual Program and New Economy Program 2020-2022 target macroeconomically balanced, innovative, productive and efficiency-focused growth.[1415]
Infrastructure 	▪ Turkey's performance on SDG 9 exhibits major challenges, and significant challenges still remain for SDG 12 according to the Sustainable Development Report 2020.[16] ▪ SDG 9 is identified as one of the priority SDGs in the context of Turkey and as one of the most relevant SDGs for Turkey to achieve the Global Goals according to the VNR 2019 report.[17] ▪ The government has a main objective to improve urban infrastructure with a focus on provision of clean drinking water, treated wastewater and an active solid waste management system.[18] ▪ Turkey's Private Participation in Infrastructure (PPI) figures show that infrastructure in ICT, integrated MSW (municipal solid waste) and treatment and disposal still needs a higher private sector engagement.[19] ▪ Given high investment and operations costs, human capital and technology resources and governance needs, some urban infrastructure services such as wastewater treatment facilities cannot reach the desired efficiency levels. New models are needed to improve efficiency in urban infrastructure.[20] ▪ The New Economy Program covering 2020-2022 emphasizes that projects on the "Zero Waste Initiative" will be extended.[21] ▪ The government has planned the following public investment amounts for urban infrastructure areas for 2020: 198 million TRY ($29 million) for urbanization, 152 million TRY ($22 million) for communication infrastructure, 71 million TRY ($10 million) for environment and 67 million TRY ($10 million) for municipal services.[22]
Financials 	▪ Turkey has an objective to develop a strong institutional financial sector to satisfy the needs of real sector and offer alternative financial investors, covering a wide spectrum of investor profiles, while positioning Istanbul as a global financial hub.[23] ▪ Turkey has a policy priority to form a safe financial technology (fintech) environment to provide equal opportunities for companies based on international good practices. There is also an objective to strengthen alternative financing mechanisms such as impact investments, venture capital and mass funding. ▪ There is a need to enhance financial capacity for Turkey to achieve SDGs with a focus on diversification of financial instruments with the contribution of private sector.[24] ▪ Turkey has a lower penetration of digital services compared to the European average. Among similarly developed economies, Turkey has a lower density of bank accounts, especially among women. The country needs to overcome the challenge of making cashless transactions more attractive and also reach out to those currently underserved.[25] ▪ Despite major improvements in financial inclusion in Turkey, the gender gap in account ownership is still wide as 30 percentage points. There is also a considerable gap between richer and poorer adults as wide as 20 percentage points, which is comparatively higher than countries with high account ownership.[26]

IOA Close Ups

Technology and Communications

IOA 1. Tech-based energy efficiency solutions through integration of advanced technologies and digital connectivity into infrastructure of buildings and manufacturing process

Turkey's building sector's energy demand is growing rapidly, at a rate of 4.4% on average, effectively rendering it the one sector with the largest energy consumption among all end-use sectors, representing around one third of the country's total final energy consumption. The sector's energy demand is characterized by a high share of gas and electricity use, with these two accounting for two-thirds of the sector's total energy demand.[27] Enhanced energy efficiency offers a unique opportunity to reconcile economic competitiveness with sustainable development, and simultaneously reduces the cost of energy and increases productivity.[28] More efficient energy standards could reduce building and industry electricity consumption by 14%.[29]

In order to promote resource efficiency and optimize energy use, investors could channel resources towards technology-based energy efficiency solutions through the integration of advanced technologies and digital connectivity into the infrastructure of buildings and the manufacturing process.

User or Beneficiary	The investment would benefit directly beneficiary companies and households that will cut down on energy costs and indirectly the general public due to reduced carbon emissions and consumption costs and increased energy efficiency.
Economic Factors	Electricity demand in Turkey will increase annually by **6.7% to 7.5%** in the next decade. The amount of saving potential in each industry is equal to 2 billion EUR in manufacturing, 5.4 billion EUR in the transport sector and 5.8 billion EUR in the household sector, adding up to a savings potential of **13.2 billion EUR**. Interviewed investors already active in the Turkish technology and energy efficiency space estimate an **IRR of 40%** for investments in this field. **Short Term:** The indicative timeframe of this model is two to five years.
Enabling Factors	The existing financial support mechanisms are the TÜBİTAK R&D Support Initiative and KOSGEB's Support for SMEs and the Project-Based Encouragement System (for projects that have an investment value above 50 million TRY (US$7.2 million). **The Ministry of Industry and Technology** and **the Development and Investment Bank of Turkey** established "The Technology and Innovation Fund" under the Turkey Development Fund to finance innovative tech-based companies/projects with a budget of 350 million TRY.
Risk Factors	Incentives in the energy efficiency area are indirect and insufficient, while tangible reduction targets are not set. The funding of most projects aiming at climate protection comes from international institutions rather than national budgets. ESCO contracts are not recognized in Turkey, which limits investments.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as this model promotes effective solutions to increase energy efficiency while reducing costs.

Technology and Communications

IOA 2. Producing assistive technology tools for students or employees with disabilities

COVID-19 has demonstrated the importance of e-learning services in Turkey. E-learning addresses many challenges faced by the education system such as a high pupil-to-teacher ratio and grants greater access to high quality learning resources. There are around 1.6 million Syrian children of schooling age in Turkey who might benefit from online learning platforms and material.[3031] In order to promote resource efficiency and optimize energy use, investors could channel resources towards technology-based energy efficiency solutions through the integration of advanced technologies and digital connectivity into the infrastructure of buildings and the manufacturing process.

User or Beneficiary	The investment would benefit directly students with disabilities and indirectly education institutions that will be better equipped to address the special needs of the students with disabilities.
Economic Factors	According to the Prime Ministry Administration for Disabled People Study, disabled people in Turkey constitute **12.29% (8,431,937)** of the population. The global assistive technology market will reach **$26 billion by 2024**, nearly doubling from $14 billion in 2015. Interviewed investors active in the Turkish technology market target an **IRR of 40%** from investments in this field. **Short to Medium Term:** These investments will generate a cash-flow between the short to medium-term as the necessary regulatory and market frameworks are already established, and as they are not highly capital intensive, depending on the level of the technology involved.
Enabling Factors	TÜBİTAK offers financial support for SMEs R&D projects regarding manufacturing a new product, development and improvement of an existing product, increasing product quality or standard or development of new techniques and new production technologies with decreased cost. (Support Limitations: Total incentive amount for each period is 500.000 TL; first three selected projects are supported at the rate of 75%) **The Ministry of Industry and Technology and The Development and Investment Bank of Turkey** established "The Technology and Innovation Fund" under the Turkey Development Fund to finance innovative tech-based companies/projects with a budget of 350 million TRY.
Risk Factors	The presence of readily available international competitors might have limited efforts to produce such technologies domestically. Technology errors and omissions risks can result in companies being held liable for an economic loss from the failure of a device to work as intended.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as assistive technologies improve the learning outcomes of students with disabilities while reducing prejudice and strengthening socio-economic integration.

Technology and Communications

IOA 3. Content generation and application design for online / digital learning

The COVID pandemic emphasize the importance of e-learning, which also addresses many challenges in equal education such as a high pupil-to-teacher ratio by granting greater access to high quality learning resources. There are around 1.6 million Syrian children of schooling age in Turkey who might benefit from online learning platforms and material.[3233] In order to promote resource efficiency and optimize energy use, investors could channel resources towards technology-based energy efficiency solutions through the integration of advanced technologies and digital connectivity into the infrastructure of buildings and the manufacturing process. Private sector subscription-based services could produce more digital learning technologies and content, which could increase access to quality education services, improve the literacy in ICT skills, promote life-long learning opportunities and minimize disruptions in the learning process in emergency scenarios such as the coronavirus pandemic.

User or Beneficiary	Students and the general public who can directly benefit from digital learning services and have internet access (especially during a pandemic), Syrian refugees who might benefit from online learning opportunities where schooling infrastructure or access to schooling is inadequate or lacking. The model will indirectly benefit teachers who will have greater access to advanced pedagogical tools.
Economic Factors	The Turkish e-learning industry is projected to achieve a **compound annual growth rate of 10.8%** in terms of revenues between 2019-2023. The global online education market is sized at **$200 billion** as of 2018 and is expected to reach **$350 billion** in 2025. Interviewed investors considering educational technology investments target an IRR of 40%. **Short Term:** This is not a capital-intensive model, and there is already a high demand after the coronavirus pandemic.
Enabling Factors	**TÜBİTAK** offers financial support up to 120 thousand liras, excluding royalty payments, to e-book and MOOC producers. "The Technology and Innovation Fund" under the **Turkey Development Fund** finances innovative tech-based companies/projects with a budget of 350 million TRY.
Risk Factors	Lack of internet or computer access throughout the broader population (for remote learning) and poor digital infrastructure at schools (for engaging with smart technologies in the classroom) might limit scale over time.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as COVID-19 has demonstrated the importance of digital learning content for educational continuity in Turkey. Remote learning systems can additionally foster life-long learning opportunities, increase access to formal education services and improve teaching outcomes.

Technology and Communications

IOA 4. Wearable medical devices for early action and remote monitoring

Wearable technologies incentivizes behavior that reduces hospital visits and re-admissions due to poorly managed personal health.[34] The COVID-19 pandemic has demonstrated the importance of wearable medical technologies and remote monitoring services for the treatment of high-risk group patients with chronic health conditions. Investments in this model could help reduce the number of hospital visits and the overall stress on the healthcare system, adopt proactive measures for disease prevention/intervention and improve outcomes in patient health and well-being and reduce healthcare costs per patient due to systematic monitoring.

User or Beneficiary	The investment would directly benefit patients with chronic health conditions, especially during viral outbreaks to which they might be particularly vulnerable and indirectly healthcare practitioners, because medical technologies might facilitate diagnosis and increase the accessibility of diagnostics data.
Economic Factors	The global wearable medical device market size is expected to reach **US$93.19 billion** by 2027. It is projected to progress at a **compound annual growth rate (CAGR) of 27.9%** during the forecast period. Interviewed investors already active in the Turkish medical technology sector target an **IRR level of 40%.** **Medium to Long Term:** Technology, after it is produced, needs to have clinical and regulatory approval. A major component of this time is the regulatory process, which varies based on the risk level of the product. The products also need to be tested and certified by accredited laboratories, separate regulatory and clinical procedures might be needed for exports.
Enabling Factors	**Ministry of Trade** provides incentives for the production of medical devices, watches with precision and optical instruments, which can benefit from tax reductions and VAT exemptions, credit and insurance support. The manufacture of medical and dentistry-related devices and equipment and the retail sale of medical and orthopedic devices in designated stores are among the sectors supported by **KOSGEB**, which provides **up to 5 million TRY** (US$716 thousand) of financial support (in total) to projects.
Risk Factors	Lack of internet or computer access throughout the broader population (for remote learning) and poor digital infrastructure at schools (for engaging with smart technologies in the classroom) might limit scale over time.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as COVID-19 has demonstrated the importance of digital learning content for educational continuity in Turkey. Remote learning systems can additionally foster life-long learning opportunities, increase access to formal education services and improve teaching outcomes.

Technology and Communications

IOA 5. Sustainable E-Commerce

According to the OECD, Turkey is among the top 20 least performing countries in terms of handling plastic waste. The excessive use of plastic is of notable concern in the cosmetics, medicine and food & beverages sectors. The per capita consumption of plastic in Turkey has increased by 10% in the last three years (2016- 2019). Of the 25.8 million tons of waste produced in Turkey, 20% is packaging waste.[35] It is predicted that the current annual industrial waste amount in the textile industry is over 590,000 tons. Moreover, there is an additional 565,000 tons of annual textile waste generated at the household level.[36]

The e-commerce industry has been growing rapidly and over-consumption is becoming a great threat considering the amount of waste created due to packaging, non-recyclables and single-use products. Due to COVID-19, there is a transformation of lifestyles globally which increases the dependency on online services, and consequently on the e-commerce industry. E-commerce might be able to provide SMEs and other enterprises with the opportunity to sell their products nationally and internationally, which will help grow their businesses and generate more jobs.

User or Beneficiary	The investment would assist directly local producers, SMEs and indirectly consumers and the general population due to the reduction of waste in the production and consumption processes and access to locally sourced ethical products.
Economic Factors	The average annual growth rate of the e-commerce sector is estimated to be **35%**, based on its performance in the past five years. According to JP Morgan 2019 Global Payments Trend Report, Turkey's e-commerce market value is around **$11.6 million**. Sustainable e-commerce also becomes preferable as the trend of environmentally conscious consumption is popular among the millennial generation. Investors and operators active in sustainable commerce and online shopping in Turkey estimate an **IRR of 20%** from investments in this field. **Short Term:** 62% of e-commerce businesses operating in Turkey and generating profits have been in the business for under 5 years.
Enabling Factors	**Ministry of Trade, KOSGEB, TÜBİTAK, İSTKA and TOBB** provides loans and grants to the companies that are part of the e-trade sector. Depending the success of the company, the capital support provided may be without refunds. The support varies between 3,000 TRY to 100,000 TRY. The Ministry also provides credit lines, consultancy and membership support to R&D projects and for the market research of e-trade companies.
Risk Factors	Shifting to new ways of production is costly. SMEs especially are struggling to take up the initial cost of digital transformation, which also increases the pricing of the products. The rapid growth of the e-trade industry is likely to increase the competition in the e-commerce market over-time. Late entrants might not have as advantageous a position as early-movers.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as supporting sustainable e-commerce will encourage more eco-friendly shopping habits. Facilitating the digital transformation of SMEs through integrated supply chains especially during the COVID-19 era will significantly help economic recovery efforts.

Transportation

IOA 6. Rail freight transportation and operation

The COVID-19 pandemic showcased the need for uninterrupted modes of transportation, bringing forward railway transportation as the most suitable mode vis-a-vis increased pressures on international trade due to disruptions in other modes of transport. Highways still present significant traffic safety issues. The dominant position of highways among transport modes persists in passenger and cargo transportation, and it is necessary to focus on cargo transportation and railway mode in transportation investments.[37] The share of railway transportation for passenger and freight transport in Turkey is below the EU-28 average.[38]

Investments in rail freight transportation and operation by private sector companies optimize freight transportation across the country and with trade partners by improving infrastructure efficiency through geometric improvements and providing an uninterrupted and sustainable mode of transportation, which is particularly vital vis-a-vis the COVID-19 outbreak. They can also reduce fuel emissions from highway freight transportation as on average, railroads are 4 times more fuel efficient than trucks, meaning that freight transportation through railways reduces GHG emissions by 75% compared to moving freight through trucks.[39]

User or Beneficiary	The investment would assist directly exporting SMEs with high logistics costs, railway supply chain workers, logistics companies and population living closed to congested and poor-air-quality areas due to heavy highway traffic. 6,675 fatalities were recorded during traffic accidents in 2018 with 307,071 people injured.
Economic Factors	Turkey's annual railway vehicle market size is **5 billion EUR**. Railway freight transport in Turkey reached a new high of **29.3 million tonnes** in 2019. Interviewed investors active in the Turkish railways market target an IRR at the 12-20% level from investments in the field. **Long Term:** Construction of new railway routes and networks take medium to long term depending on the specifics of the route planned. Licenses to operate routes are given for long-term with a minimum of 10 years.
Enabling Factors	In the 11th Development Plan, rail system vehicles are identified as a prioritized sector, and the Plan sets a goal to increase the share of railways in modes of national territorial transport systems from **5.15% to 10%.** Regional investment and project-based incentives by the **Ministry of Industry and Technology** include: VAT exemption, customs duty exemption, tax deduction (15-50%), social security premium support (employer's share -2 years), interest/profit share support (5 points: 10 for high-tech. products and 8 for others as part of TOSHP), VAT returns for investments above 500 million TRY.
Risk Factors	The lack of proper privatization figures and free market mechanisms in the railway sector, inability to compete with TCDD prices given subsidies, high investment costs in railway transportation, strict government control and regulation in the railway sector constrains investments in this field. The topography of Turkey, which requires efficient railway infrastructure in a way to prevent railway vehicles from damage and wear-and-tear; fierce competition between highway and railway transportation; dependence on foreign technology.
Impact Management	**IMP Classification C:** Investments are likely to contribute to solutions, as the business model is likely to expand a more sustainable mode of transport, railway, to reduce the share of highway transport in Turkey, also enhancing traffic safety.

Transportation

IOA 7. The domestic production or technology transfer of subway and railway vehicles, escalators and signalization systems

There is a need for electric locomotives and signalization systems in Turkey as there is an objective to reach 80-90% in electric railway systems. Currently, only 80 out of 400 locomotives are electric in Turkey.[40] On average, an electric locomotive releases 20% to 35% less carbon per passenger mile than a diesel train.[41] Highways still present significant traffic safety issues. The dominant position of highways among transport modes persists in passenger and cargo transportation, and it is necessary to focus on cargo transportation and railway mode in transportation investments.[42] The share of railway transportation for passenger and freight transport is below the EU-28 average.[43] Heavy traffic poses significant risks as 6,675 fatalities were recorded during traffic accidents in 2018 with 307,071 people injured.[44]

Investments in this IOA can help improve Turkey's intra-city transportation infrastructure and promote sustainable modes of transportation by responding to the need for nearly 10,000 new vehicles for the operation of the new underground transportation routes that are due to be in service by 2023 in Turkey.[45]

User or Beneficiary	The investment would benefit urban population (especially for whom affordable transportation is key to sustain livelihoods) and indirectly it would enhance traffic safety.
Economic Factors	Turkey's annual railway vehicle market size is **5 billion EUR**. With local production, the domestic market in Turkey is estimated to reach **20 billion EUR**. Interviewed investors active in the Turkish railways market target **an IRR at the 12-20%** level from investments in the field. A case study of PPP for railway operation projects for Indonesia calculated the IRR of such projects as ranging from **8.6-10.8%.**[46] **Long Term:** Establishing the complex production facilities of domestic subway and railway vehicles, signalization systems and subway escalators as well as meeting the domestic demand and developing a competitive potential in the international market is likely to happen in the medium to long-term timeframe.
Enabling Factors	The 11th Development Plan sets a goal to increase the share of railways in modes of national territorial transport systems from **5.15% to 10%**. Regional investment and project-based incentives by the **Ministry of Industry and Technology** include: VAT exemption, customs duty exemption, tax deduction (15-50%), social security premium support (employer's share -2 years), interest/profit share support (5 points: 10 for high-tech. products and 8 for others as part of TOSHP), VAT returns for investments above 500 million TRY.
Risk Factors	High dependence on foreign technology increases initial costs and reduces capacity to compete with international prices. The potential inability to compete with global firms already functional in this area on the price of the products due to the problems invoked by the late arrivals on the market might be a limiting factor. By setting purchase prices, TCDD and government may disrupt the free-market conditions for price and cost competition.
Impact Management	**IMP Classification C:** Investments are likely to contribute to solutions, as the business model is likely to expand a more sustainable mode of transport, railway, to reduce the share of highway transport in Turkey, also enhancing traffic safety.

Transportation

IOA 8. Sustainable, Sharing Economy and Micro Mobility Models for Transportation

Calculations show that one car emits 115 grams of CO_2 per kilometer, which could be prevented if a cycle journey is taken as an alternative. Consequently, over a five-kilometer journey, a total of 575 grams of CO_2 could be prevented through bicycle use.[47] The carbon-dioxide emissions rates caused by passenger transportation in Turkey are likely to double by 2030.[48]

Investments in this IOA can reduce CO_2 emissions from transportation and ensure traffic safety by increasing flexible and sustainable modes of transport such as cycling which can result in significant reductions in CO2 emissions and traffic accident fatalities and increase time saved on commuting[49] and increase Turkish cities' alternative intracity transportation options by improving micro-mobility solutions while improving the 1.3% person per car rate.[50]

User or Beneficiary	The investment would benefit urban population with increased access to sustainable, safe and flexible transport modes and indirectly it would enhance traffic safety.
Economic Factors	The global micro-mobility market which was valued at **$3 billion in 2018**, is projected to reach around **$9.8 billion by 2025**, at a **CAGR of 19.9%** between 2019 and 2025. Interviewed investors active in the Turkish technology space estimate **an IRR at the 12-20%** level from investments in this field. Gross margin for e-scooters as displayed by a US-based electronic scooter benchmark is around **19-33%.** **Short Term:** There are already campaigns to increase cycling and/or proven business models such as Martı in Turkey.
Enabling Factors	Turkey will undertake its first promotional campaign - "**Get Turkey Cycling!**" with a European Union (EU) fund that aims to encourage bicycle usage in urban areas. "**The Technology and Innovation Fund**" under the Turkey Development Fund finances innovative tech-based companies/projects with a budget of 350 million TRY.
Risk Factors	An optimization of routes for sustainable and/or sharing economy models is needed especially considering the steep/rugged topography of metropolitan spaces in Turkey. Increased investments in urban railway systems might suppress demand for sharing economy models.
Impact Management	**IMP Classification C:** Investments are likely to contribute to solutions as micro mobility solutions significantly help reduce CO2 emissions emanating from urban transport by providing passengers a safe and sustainable mode of transport.

Transportation

IOA 9. Private marine transportation for freight shipments

Emission grams per tonne-km for large container vessels is 3 compared to 80 in trucks and 435 in air freight.[51] Shipping is a real alternative in short distances such as straits crossing where shortsea shipping competes in total transit time (city to city) with regional airplanes, thus once again reducing GHG emissions.[52] Therefore, building a country's maritime freight transportation potential will work towards reducing overall carbon emissions. The integration, efficiency and predictability of transportation system, particularly the improvement of customs services, could not reach the desired levels and Turkey's position in Logistic Performance Index needs improvement. In this scope, there is still a need to reduce logistic costs, improve manufacturing industry and trade, develop combined transportation practices and raise the shares of railway and maritime transportation in order to strengthen the competitiveness of our country, and establish a fast, flexible, safe, reliable, predictable and integrated logistics and transportation system.[53]

Investments in this IOA can reduce logistics costs and provide a cost-effective way to move en masse goods and raw materials by improving maritime transport as it is essential to the world's economy with over 90% of the world's trade carried by sea.[54]

User or Beneficiary	The investment would benefit directly exporting and importing SMEs, maritime workers and indirectly inhabitants in areas heavily polluted due to highway or coal-combusting railway traffic.
Economic Factors	Turkish maritime sector is worth **$17.5 billion**. Maritime is the most common transport mode used for international trade in Turkey. In 2019, almost **63% of exports have been transported via waterways**. Investors active in the Turkish transportation market estimate **an IRR at the 12-20%** level for investments in this area. A global example: Cash return on invested capital (CROIC) in 2019 by Maersk in 2019 was 9.3%. **Long Term:** Investments in marine transportation including the construction of new connection routes and ports are long-term with a minimum of **7-10 years**.
Enabling Factors	The 11th Development Plan refers to the ports where construction will be completed, and actions related to provision of connectivity of some ports to manufacturing industry sectors. Turkey has put in place incentives to bolster the Turkish maritime transport such as tax exemption, exception and rate reduction. **Eximbank** offers the "**International Transport Marketing Credit Program**" to meet the financial needs with credits up to US$25 million.
Risk Factors	Heavy involvement of the state through laws and regulations as well as high initial investment costs discourage private sector from entering the market. High fuel prices, overcapacity and security problems such as piracy present challenges for maritime transport might limit scale over time.
Impact Management	**IMP Classification C:** Investments are likely to contribute to solutions as maritime activity, which is among the lowest emitting modes of transport, has a key role to play in the alleviation of extreme poverty and hunger as it already provides an important source of income and employment for many developing countries.

Renewables and Alternative Energy

IOA 10. Investments in rooftop solar energy panels for domestic or commercial use

Energy is the main contributor to climate change, it produces around 60% of greenhouse gases.[55] Solar energy generates just 20 gCO2e per kWh throughout its life cycle. For this reason, it is one of the energy technologies with the smallest carbon footprint. Technological improvements on solar energy technologies ensure that the carbon footprint of this renewable resource is continuing to decrease. A solar panel will generate 30 times the electricity needed to manufacture it throughout its life cycle.[56]

Due to economic and population growth, Turkey's demand for energy and natural resources has been increasing. Turkey exhibits the fastest growth in electricity demand among OECD members in recent years, growing at an annual rate of 5.5% since 2002. Turkey's energy use is expected to increase by 50% over the next decade.[57] Turkey is a net energy importing country, depending on imports for 73% of its energy needs.[58]

Comparing Turkey's natural annual solar potential with the electricity demand of the country in 2010, the solar energy potential exceeds the electricity demand by a factor of 68. The potential also outweighs the predicted doubling of the electricity demand for the year 2020 by a factor of 31.[59]

User or Beneficiary	Investments would benefit directly households and firms reducing their energy costs through the integration of solar panels and indirectly the general public as it cuts down on carbon emissions and energy import-dependency.
Economic Factors	Turkey had **42 GW of installed renewable power** at the end of 2018, and this is set to increase by **50%** between 2019 and 2024 to reach around **63 GW by 2024**. Solar energy facilities for commercial use have a total market sizing of **5995 MW** in Turkey, **4.6%** of this is constituted by rooftop solar energy. Investments in rooftop solar energy systems for self-consumption generate an IRR of **16.41% to 18.12%.** Small YEKA tenders for commercial use yield **an IRR of 8% in USD**. **Medium Term:** Investments in rooftop solar panels can vary in timeframe being both short-term and long-term.
Enabling Factors	**The Ministry of Energy and Natural Resources 2019-2023 Strategic Plan** aims to increase the share of the installed power from local and renewable energy sources to 65% in total electricity production. Law No. 5346 issues a purchasing guarantee to electricity generated from renewables. According to the support mechanism, licensed and unlicensed facilities generating electricity from renewables that are operational currently or will be in operation before December 31, 2020 benefit from feed-in tariffs for a maximum term of 10 years from the operation date.
Risk Factors	Inadequate incentive schemes, bureaucratic obstacles and the ambiguous legal framework behind the support mechanism (the YEKA mechanism will continue, however, it is not clear what will replace YEKDEM or whether it will be extended) might limit scale over time. The obligatory use of collateralized loans and the owner's equity can be discouraging factors.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as divesting from fossil fuels and generating clean energy reduces air pollution and carbon emissions, supporting efforts to mitigate negative effects of climate change.

Renewables and Alternative Energy

IOA 11. Domestic solar energy component production (tempered glass, solar cell, backsheet, EVA, junction box and frames)

Turkey has been experiencing rapid demand growth in all segments of the energy sector for decades due to its population and GDP growth. Turkey's energy consumption of primary energy and electricity has increased at an annual average rate of 4 to 8% in the last two decades.[60] At present, Turkey is dependent on imports for the acquisition of solar energy components such as solar cells, batteries and junction boxes. YEKA tenders are awarded with the obligation that a pre-determined share of solar energy components and production tools used in the renewable energy facilities in YEKA zones are produced domestically.

Investments in this IOA can decrease the cost of solar energy production systems through affordable domestic alternatives, and thereby increase the share of renewable energies in total energy production and consumption, reduce import dependency and generate more value in the domestic economy, contributing to economic growth and generate employment as for each MW of production, the solar energy sector provides 33 people with employment.[61]

User or Beneficiary	The investment would benefit directly through more affordable component options for solar power plants and facilities, households and indirectly through increased value from medium-to-high technology production and manufacturing in the economy; encouraging solar energy production and consumption will also work towards reducing greenhouse gas emissions.
Economic Factors	Turkey has **274 rooftop solar energy facilities and 5721 solar farms**. It has **6 GW** of installed power for rooftop solar facilities and solar farms for self-consumption. Solar energy facilities for commercial use have a total market sizing of **5995 MW** in Turkey. Small YEKA tenders for the licensed production of **600 MW generate an IRR around 8% in USD**. Benchmark investors in this area expect **8-12% on average, max. 20% IRR** levels. **Medium Term: 7-10 years** as investments require high initial capital investments and substantial financing and complex manufacturing processes. The returns for small YEKA tenders are issued in 9 years. Depending on storage capacity, this model can generate returns in longer than 15 years.
Enabling Factors	The **YEKA model** will continue to support the use of locally manufactured equipment in large scale renewable energy projects and tenders. YEKA tenders offer a renewable energy resource zone and its electrical connection capacity utilization rights to an eligible entity under the "**Allocation on the Condition of Local Manufacturing**" or "**Allocation on the Condition of Using Locally-Manufactured Equipment**" mechanisms. In this context, "under the YEKA Regulation, the use of domestically manufactured equipment is not an option for an additional tariff but an obligation«.
Risk Factors	Domestically, the strong presence of the public **ASPİLSAN** in the field provides an obstacle for the private sector. Globally, the presence of dominant international manufacturers with a competitive advantage in pricing provides an obstacle. Access to finances in the production of such technologies are also vital as they have high installment costs initially.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as this model helps produce domestic alternatives to imported solar energy production components, provide employment and reduce carbon emissions.

Renewables and Alternative Energy

IOA 12. Transforming electric motors used in Organized Industrial Regions and providing/producing new motors for SMEs

In Turkey, 47.2% of total electricity consumption is represented by the industry. A large amount of electric motors used in Turkish industry is energy inefficient and there are 15 million working electric motors in the market. It is estimated that 70% of energy consumption in industry is by electric motor-driven systems.[62] Motors in Turkey are highly energy-intensive, it is estimated that an average electric motor in Turkey consumes an amount of energy equal to its purchase cost in about 45-60 days (running for 8 hours in a single shift). A typical electric motor causes an energy cost of more than 50 times its purchase cost during its 20 years of service life. This means that energy-efficiency plays an extremely important role in the decision on which motor to purchase.[63]

Investments in this IOA can contribute 8.5 billion TRY to the Turkish economy by changing inefficient motors with efficient ones[64], and achieve 10 to 30% energy savings and reduced emission rates by decreasing the total energy use or by increasing the production rate per unit of energy used, which can be sustained by switching to energy efficient motors in the industry.[65]

User or Beneficiary	The investment would benefit directly SMEs, Organized Industrial Zones, Owners of the Industrial Facilities and indirectly the increase in energy efficiency would contribute to Turkey's energy security and reduce GHG emissions from energy-intensive old motors, therefore benefit the general population. This model will also contribute to public budgeting through reducing overall electricity consumption.
Economic Factors	There are 325 organized industrial zones in 80 cities in Turkey, creating a sizable market for the transformation of electric motors in manufacturing. This model could contribute 8.5 billion TRY to Turkish economy by replacing inefficient motors. Investors considering projects in energy efficiency in Turkey expect an IRR of 8-12% on average with a maximum of 20%. Medium Term: It will take a minimum of five years for a domestic and self-sustaining energy efficient electric motor market to develop.
Enabling Factors	The 11th Development Plan highlights the need to improve energy efficiency in the manufacturing industry. It declares that a subsidy mechanism will be established for the replacement of inefficient electric motors used in manufacturing with efficient alternatives. **Conversion of Inefficient Electric Motors Used in Industry Credit Interest Support Program**: A loan is provided up to 300.000 TRY to SMEs with 36 months of maturity without payment in the first 12 months. The Credit Guarantee Fund will be supporting SMEs through grants.
Risk Factors	High transformation costs might render this investment unfeasible for SMEs. Incentives in the energy efficiency area are indirect and insufficient.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as the transformation of electric motors is expected to contribute 8.5 billion TRY to the Turkish economy. Energy savings and emissions reductions can be achieved by 10-30% by reducing total energy use or by increasing the production rate per unit of energy used.

Education

IOA 13. Investments in vocational training certification programs

Around 143 professions in Turkey such as thermal insulation personnel, maintenance & care staff for electricity networks, electricity network scada operators, metal workers require a vocational qualification certificate.[66] The population of working age in Turkey has increased by 815 thousand (approximately 1.34%) between 2018 and 2019.[67] Vocational training offers an alternative educational path for youths and adults who wish to grow professionally, and at the same time, work towards providing the qualified manpower needed across all sectors of the economy. Certification helps provide proof of the vocational skills individuals possess and facilitates their access to the labor market.

Refugees in Turkey can obtain a work permit through their employer since 2016. Yet, very few Syrian refugees have obtained a work permit to date and the nature of their employment remains largely informal. 1 million Syrian refugees out of a working-age population of 2.16 million are estimated to participate in the labour market, mostly informally in low-skilled and low-paid jobs.[68]

User or Beneficiary	The population of working age and refugees who can benefit directly from the vocational training and certification services in documenting their skills during their search for formal employment and the labor market indirectly due to increased access to a skilled workforce.
Economic Factors	There are **229 vocational qualification centers** in Turkey with the license to provide the necessary tests and certificates for the professions that require the official vocational qualification certificate. Interviewed local service providers in this field estimate **an IRR between 20-40%** from investments in this model. **Short Term:** Investments in vocational training certification services are likely to accrue profits in less than five years as they do not require complex establishment processes or hard capital in the initial stages.
Enabling Factors	Those who possess the **Vocational Qualifications Authority** licensed Vocational Qualification Certificate can benefit from the **Unemployment Insurance Fund** up to 54 months in paying insurance premiums. Companies who employ individuals who have recently been issued a Vocational Qualifications Authority licensed Vocational Qualification Certificate can receive **up to 1500 TRY per month** (an additional 1000 TRY if the employee is a woman or under 30) within **KOSGEB Qualified Employee Support** program.
Risk Factors	Skills certificates might be insufficiently recognized and valued by employers in the labour market.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as communicating and conveying accurate information about vocational skills can improve long term labor market prospects. This will also provide formal documentation of transferable skills for the refugee population in Turkey.

Education

IOA 14. Affordable private schools for low- and middle-income groups

The population of Turkey is fairly young, which makes it essential to maintain a high level of investment in schooling to achieve universal participation in education. In 2019, there were around 18 million 108 thousand 860 students in formal education in the pre-school, primary school and middle school levels.[69] There are more than 1 million school-aged Syrian refugee children in Turkey of which approximately 640,000 are enrolled in schools. Over 400,000 children are out of school leaving them particularly vulnerable to isolation, discrimination, violence and abuse.[70]

Turkey has a private school rate of 15% within the education system. Only 8% of the students go to private schools. The share of private education within the education system is lower in Turkey compared to other OECD or European Union countries. Existing private schools operate at 50% capacity; indicating that they are accommodating fewer students at higher prices.[71] Investments in this IOA can decrease the pupil-to-teacher ratio and the pressure on individual education institutions and schools, and increase universal participation in education.

User or Beneficiary	The investment would assist low and middle income students and the wider education sector indirectly via reduced pressure on existing facilities and increased coverage.
Economic Factors	There are around **1 million 400 thousand students** going to private school in Turkey. There are **12 thousand private schools** and **70 thousand public schools** in the country. The profit margin of private schools is between **15% to 20%.** However, profit varies considerably depending on the location and the reputation of the school. Interviewed local service providers in this field estimate **an IRR between 20-40%** from investments in this model. **Medium Term:** Private school investments are likely to produce a cash-flow in the short to medium term depending on the quality and the speed of the marketing/branding process to attract pupils.
Enabling Factors	Investments in private schools can benefit from numerous incentives such **as Region 5 incentives and Region 6 incentives** based on the location of the investment. Within the scope of the investment incentives program, upon review, the government may also allocate the real estate/land for the construction of a private school from the public domain.
Risk Factors	Unaffordability or unpopularity among the target groups (despite the cost reduction) might prevent this model from reaching scale. The corona virus outbreak will affect private education services as it will reduce the citizens' capacity to send their children to private schools over other priorities
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as establishing low-cost private schools is likely to provide access to higher-quality education services for low income families and take away pressure from crowded education facilities

Healthcare

IOA 15. R&D and production of local biotechnological medicine and pharmaceuticals

Access to essential medicine and its affordability constitute a global policy concern in terms of SDG 3. The coronavirus pandemic has demonstrated the importance of medical biotechnology in the efforts to produce a vaccine.

Turkey's yearly investments in innovative drug R&D is significantly lower than the world average. While global investments in innovative drug R&D is $120 billion each year, Turkey's share is only $60 million, representing only 0.039% of global R&D. Currently, drug production in Turkey is oriented towards low value-added products, while high value-added products are imported.[72]

Investments in this IOA can increase the value added from medicine and possibly make essential pharmaceuticals more readily accessible for Turkish patients, enhance scientific research and the R&D capacity of Turkey, and increase R&D expenditure as a proportion of the GDP.

User or Beneficiary	Investments would assist directly the general public, as they will gain access to local and affordable medicine options. Biotechnology medicines and vaccines are also tested and used to treat infectious disease outbreaks such as the coronavirus pandemic and SARS. It would improve indirectly the competitiveness of the Turkish healthcare and manufacturing industries through the production of high value-added biotechnological drugs.
Economic Factors	As of 2018, The Turkish biotechnology medicine market is valued **above 5 billion TRY**. Biotechnology medicines constitute **20%** of the Turkish pharmaceutical market. Interviewed local investors interested in medical technology models target an **IRR of 20-40%** from these investments. **Long Term:** On average, the production of a new medicine takes around 12-15 years, and requires a significant amount of initial investments.
Enabling Factors	The **Central Bank of Turkey** provides grant support for advanced technology work areas, including innovative drug production and R&D activities. Companies geographically active or established in the **Technology Development Zone** will benefit from Institutions Tax Exemption (Kurumlar Vergisi İstisnası), Income Tax Exemption, Insurance Prime Support and VAT exemptions.
Risk Factors	The potential inability to compete with global firms already functional in this area on the price of the products (problems invoked by the late arrival in the market); the potential unaffordability of such drugs for the public might limit scale over-time. WHO states that some of the locally-produced drugs in Turkey are currently more expensive than foreign-made counterparts.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as production of biotechnological medicine is likely to enhance the competitive potential of the Turkish pharmaceutical sector, generate livelihoods and income and possibly make essential pharmaceuticals more readily accessible for Turkish patients.

Healthcare

IOA 16. Investing in hospitals/clinics to provide healthcare services for patients from medically underserved countries/regions

Households from the countries of conflict and developing countries, have minimum or no access to good quality healthcare services due to variety of socioeconomic reasons. Turkey is among the top ten countries for health tourism globally and offers a very developed healthcare infrastructure that can accommodate thousands of health tourists every year. The Turkish health tourism market is expected to reach $10 billion by 2023 with 1.5 million health tourists.[73] Turkey also has an important geographical location that appeals to approximately 1 billion people and 57 countries within a 4-hour flight distance.[74]

Turkey's city hospital infrastructure and mutual social security agreements with 30 countries that allow citizens of these countries to benefit from health services abroad while preserving their social security rights in both countries allow the country to become a leading player in providing cost-effective and high-quality healthcare services especially for low and middle income health tourists from countries with less developed medical infrastructure.

User or Beneficiary	Investments would assist least developed and developing countries and indirectly healthcare professionals and staff through increased employment opportunities, habitants of the city that the hospital is based in who will benefit from the development of the area.
Economic Factors	The Turkish health tourism market is expected to reach **$10 billion by 2023** with **1.5 million health tourists.** Over 660,000 health tourists visited Turkey in 2019 alone, which is a 20% increase on 2018 figures, bringing in over **$1 billion** in revenues. Interviewed investors with current portfolios in city hospitals in Turkey estimate an **IRR of 10% to 12% (EUR based).** Private hospitals accrue **15% to 20% returns** from Social Security Institution (SGK) agreements and **20% to 30% returns** if operating independently of SGK agreements. **Medium Term:** Once an investment is made to build a hospital, 2 to 3 years is needed for the construction and licensing processes. After the official opening, at least 5 years is needed for the hospital to generate profits
Enabling Factors	The government has a financial support package for international health tourism investments. The incentives include support in registration and protection; report and consultancy; documentation; advertising and marketing; foreign unit; consultancy; agency commission; translations services.
Risk Factors	The 11th Development Plan states that the legal infrastructure behind health tourism is incomplete. Medico-legal issues related to the quality of care, redress, liability and litigation might limit scale over time if the necessary quality assurances are not enforced. COVID-19 might inhibit the flow of medical tourism for the foreseeable future due to contagion effects.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as this business model is likely to generate increased employment and income from the intersection of the health & tourism sectors

Healthcare

IOA 17. Remote diagnostic/telehealth services to increase access to healthcare services

Well-designed telehealth services will improve patient engagement and monitoring, access to health services and preventive care. Telehealth will reduce the demand on crowded facilities, unnecessary admissions and readmissions can be reduced through remote consultations, allowing patients to monitor health conditions more effectively at home and thus slowing the spread of infection of contagious diseases. The COVID-19 pandemic has demonstrated the importance of remote diagnostics and telehealth services in maintaining service quality and continuity despite the pressure on health facilities

Investments in this IOA can improve access to healthcare services and reduce the pressure on healthcare facilities, minimize the risk of exposure for patients and healthcare workers during viral outbreaks.

User or Beneficiary	Investments would directly benefit disadvantaged groups such as the rural populace and refugees through increased access to healthcare services and indirectly it would cause reduced pressure on health personnel and facilities, which would lead to the improvement both patient and caregiver well-being and increase overall service quality.
Economic Factors	The global telemedicine market size was estimated at **$41.4 billion** in 2019 and is expected to witness a **CAGR of 15.1%** during the forecast period. Cost-benefit analysis of telemedicine business models and previous acquisitions in similar markets point to an **IRR range between 21-40%** for this investment area. **Short Term:** These investments are not capital-intensive and due to the increased needs emerging from the COVID-19 pandemic, are likely to generate cash-flows in the short-term.
Enabling Factors	Companies geographically active or established in the **Technology Development Zone** will benefit from Institutions Tax Exemption, Income Tax Exemption, Insurance Prime Support and VAT exemptions. **TÜBİTAK-TEYDEB** provides financial support to R&D and innovation activities on a project-by-project basis. "**The Technology and Innovation Fund**" under the Turkey Development Fund finances innovative tech-based companies/projects with a budget of 350 million TRY.
Risk Factors	This model is at odds with traditional in-person medical practices and characterized by the lack of awareness among population. Poor data protection and privacy breaches over the internet, wide-spread errors in diagnosis or miscommunication, limited access to internet and telecommunication services might limit scale over time.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as this system will work towards reducing the pressure on healthcare facilities and provide easy access to healthcare services across the country regardless of location.

Food and Beverage

IOA 18. Investing in beekeeping products and services to increase their value-added in the health and cosmetics value chains

It is estimated that between $235 and $577 billion worth of annual global food production relies on direct contributions by pollinators.[75] In rural communities where access to income is limited, small-scale beekeeping can be a vital source of livelihood. Beekeeping in Turkey directly provides income for 60 thousand people. Around 500 thousand people indirectly earn their income from this sector. It is estimated that more than 2 million people in the country are engaged in amateur or professional beekeeping activities.[76]

In total, pollinator mediated crops account for about 40% of global nutrient supply for humans. At present, an estimated 2 billion people suffer from deficiencies of micronutrients generated from cross-pollination, also known as hidden hunger. Aside from its vital function in preserving biodiversity and contributing to food security and rural livelihoods, honey and other beekeeping products such as propolis, royal jelly and bee bread possess antioxidant, anti-bacterial and therapeutic properties.[77]

User or Beneficiary	Investments would directly benefit households and small businesses occupied with beekeeping and related activities, consumers who gain access to quality nutrition, cosmetic or medicinal products, and indirectly benefit biodiversity in implementation regions and rural populations through increased employment opportunities.
Economic Factors	Turkey ranks 2nd in honey production globally (after China in terms of amount produced) and accounts for 6% of the world honey production. The contribution of the beekeeping industry to the Turkish economy is approximately **$330 million**. Investors considering similar transactions in Turkey target **an IRR between 10-15%** in this investment area. **Short Term:** Beekeping is not labour intensive, most activities in an apiary do not require large capital costs. In general, beekeeping has short-term returns on investment
Enabling Factors	**The Ministry of Agriculture and Forestry Beekeping Support Program** offers 15 TRY support per hive and other such small-scale financial assistance for beekeepers. **Ziraat Bank Beekeping Credit**: Ziraat Bank provides credit support with an upper threshold of 2.500.000 TRY and a net interest rate of 10% for beekeepers owning a minimum of 50 hives
Risk Factors	Fake honey production and lack of proper oversight have negatively impacted investors' trust in this sector. Low efficiency due to the prevalence of migratory beekeeping has prevented existing investments from scaling-up. Production is solely focused on honey as returns are sufficient. Derivative and higher value-added products are not being produced due to R&D costs and insufficient marketing and sales know-how. The adverse effects of climate change on honeybees might be detrimental for this area in the future.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as provision of high-quality beekeeping products will work towards achieving food security & encourage sustainable agricultural practices. In addition, these activities will also work towards providing livelihoods to small-scale producers producing raw material.

Food and Beverage

IOA 19. Solar powered irrigation systems (combined with drip irrigation & other efficient irrigation technologies)

Solar-powered irrigation systems provide a clean alternative to fossil fuels and enable the development of low-carbon irrigated agriculture. In areas with limited access to energy, they contribute to rural electrification and reduce irrigation-related energy costs.[78] In Turkey, agricultural irrigation constitutes 75% of total water consumption which is approximately equal to about 30% of renewable water availability. The average per capita availability of water is shrinking due to the relatively high growth rate of the population.[79]

Irrigation can also be a significant source of GHG emissions if more conventional methods are used. Solar powered irrigation systems indicate a potential reduction in GHG emissions per unit of energy used for water pumping of 95-97% as compared with pumps operated with grid electricity and 97-98% as compared with diesel pumps.[80]

Investments in this IOA can improve the accessibility of electricity needed for irrigation in farms and agricultural enterprises, especially in rural areas that are off the grid, and increase agricultural productivity and income due to improved access to water; additional cropping season, diversification of cropping pattern, higher value crops.[81]

User or Beneficiary	The investment would benefit the farming population through increased access to more efficient irrigation technologies and electricity for areas that are off-the-grid and indirectly it would contribute positively to rural development, crop yield and environment through higher water and energy efficiency.
Economic Factors	Turkey's official estimated irrigation potential is **8.5 million ha**, of which 93% from surface water resources and 7% from groundwater. Turkey is the **7th biggest agricultural economy** in the world. Academic research in the field finds that, under the current circumstances, a photovoltaic irrigation system has an **investment rate savings of 4.6%** relative to a diesel-based irrigation system. **Short Term:** Investments in small-scale or individual solar energy projects are predicted to yield returns in **4 to 5 years** for investors.
Enabling Factors	50% grant support is offered by the **Ministry of Agriculture and Forestry** for the individual use of modern pressurized irrigation technologies by farmers registered under the Farmer Registration System. **Ziraat Bankası** offers low-interest credits for investments in modern irrigation systems.
Risk Factors	Agricultural financing is not accessible for smallholder and tenant farmers. There is a lack of trust between farmers, utilities, service providers and governments to try innovative forms of financing, banks often perceive that SPIS have high risk, due to unfamiliarity with technology. The optimal operation and maintenance of solar power irrigation systems requires a certain degree of technical knowledge and skill, so farmers need to be trained and services (extension services or private service suppliers) need to be available. **67% of the Turkish farming population** only owns between **0.1-5 hectares** of land.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as this model is likely to increase the efficiency of water use (prevent waste) and provide access to more cost-effective irrigation technologies for farmers. The model is also likely to provide electricity in rural areas and increase yield per hectare, ensuring food security.

Food and Beverage

IOA 20. Increasing the accessibility of licensed warehouses

Food losses during harvests and in storage translate into lost income for small-scale farmers and into higher prices for poorer consumers.[82] Academic studies on the subject find that the total edible food loss and waste generated every year in Turkey is approximately 26.04 million tons.[83] The loss in the post-harvest handling and storage stage of the food chains range from 0.02-8% and vegetables see the highest losses (8%).[84]

Licensed warehouses work towards controlling the fluctuations in agricultural prices, especially the dip in prices due to the accumulation of supply during the harvest periods (facilitating sales throughout the year rather than directly after the harvest period) and granting access to finance in commodity exchange markets and sustainable income for small-holder farmers.[85] Investments in this IOA can improve the product preservation and monitoring processes, thereby increasing product quality and preventing formation of food waste and spoilage; and can curb the price fluctuations in agriculture by securing supply throughout the year, rather than during the harvest period.

User or Beneficiary	Investments would benefit small and medium-sized farmers, as they have more restricted access to silos and storage facilities. This model is likely to contribute to food security and price stability by controlling the fluctuation in agricultural prices and maintaining a certain quality standard. Environmental gains will be made due to reduced waste.
Economic Factors	According to the Ministry of Trade, the total storage capacity of the existing warehouses in November 2019 was **4,578,152 tons.** Interviewed investors estimate **an IRR between 15-20%** for investments in this area. **Medium Term:** Warehouse construction and commercialization are likely to generate cash-flows in the short term. However, the financialization of this model will delay this process. The warehouse receipts need to be accepted by the financial sector as a legitimate commodity trade model.
Enabling Factors	Licensed warehouses are highlighted as strategic investments for the control of price fluctuations in food and beverages by the 2020 Presidential Program. **11th Development Plan**: "Product conservation and analysis supports will be increased in order to expand the licensed warehousing system". **Licensed Warehouse Rental Support:** Warehouse rent support will be paid for 5 years starting from 17.10.2019. **Logistics and Transportation Support:** Financial support will be given to the producers who wish to carry their produce to the licensed storage sites, 25 TRY per ton up to a maximum threshold of 750 TL.
Risk Factors	In the banking system, granting loans in exchange for warehouse product receipts has not become widely available as banks resort to storing and monitoring pledged collateral on their own. Farmers do not wish to pay the warehouse rental fees which might be burdensome for small-scale producers to bear when they have access to more traditional methods of storage such as entrusting their products to local buyers/suppliers that they are acquainted with.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as licensed warehouses will ideally provide farmers with accessible storage spaces to maintain their produce and an alternative mechanism for financial inclusion while controlling price increases in agriculture by preventing spoilage, quality depreciation and securing harvests throughout the year.

Consumer Goods

IOA 21. Energy efficient and sustainable dyeing and washing technologies

It is estimated that the fashion industry consumes around 79 billion cubic meters of water annually, accounting for over 10% of water consumption by all industry types. Water consumption by the textiles industry is expected to further rise 50% by 2030.[86] For example, water consumed while producing a single cotton T-shirt equals approximately 2,700 liters, which is equivalent to 900 days of drinking water.[87] High water use especially during fabric washing and dyeing processes puts significant pressure on water resources.

Given the tremendous water as well as energy consumption during fabric manufacturing, especially washing and dyeing processes, Turkey's large textiles industry is also looking for more sustainable solutions to reduce the ecological footprint of apparel production. Sustainable dyeing and washing technologies for the textiles industry using cutting-edge innovation such as ozone treatment is a high potential IOA for Turkey to attract private capital to accelerate progress towards SDG 6.

User or Beneficiary	The investment would benefit communities living close to manufacturing areas and water disposal sites, factory workers through the decrease of toxic material in production, local companies working on conventional textile manufacturing, and indirectly it would affect sustainability-focused consumers, taxpayers and water consuming industry through a more efficient water distribution.
Economic Factors	The Turkish ready-wear and textiles sector is the **second largest exporting industry** in the country with over **$17 billio**n in exports each year. The industry and its subsectors employ over **1.7 million people** as of 2020 with the sector being as one of the key engines of growth and innovation for the country. Investors already active in the Turkish textiles field estimate a **15% investment return**, which can go **as high as 50%** depending on branding and innovation premium. **Short Term:** Benchmark activities in this field point to **a 3-4 year timeframe**.
Enabling Factors	According to the **11th Development Plan**, companies in technical will be supported to select optimum technology, comply with the environmental protection legislation, energy efficiency and waste re-use activities and cooperate with other stakeholders in the value chain. **İzmir Development Agency** plans to launch a 25 million TRY support program for energy and water efficiency projects to cover energy efficiency investors' interest costs, aiming to unlock 200-250 million TRY investments in resource efficiency.
Risk Factors	Eco-friendly textile is often sold for higher prices than conventional textiles despite reduced production costs. High pricing might limit its accessibility for a wider segment of the population.
Impact Management	**IMP classification C:** A cotton t-shirt requires 2,700 liters of water to be produced, which is equal to 900 days' worth of drinking water. Investments are likely to contribute to solutions as reduction of water consumption via energy efficient & environmentally friendly, manufacturing, dyeing and washing technologies would contribute to achieving SDG 6.

Consumer Goods

IOA 22. PPE production as a response to COVID-19 pandemic and future crises: Disposable and washable face masks

Given the COVID outbreak, World Health Organization (WHO) estimates that PPE industry must increase manufacturing by %40 to meet with increasing global demand. The COVID-19 crisis has long-term effects on people's daily life and is expected that its effects will continue for at least 2-3 years. Recovery Plans of many countries, including Turkey, requires wearing masks outside which sustains the demand of PPE products high, especially disposable and washable facemasks.

Investing in local businesses which manufacture disposable or washable face masks along with production of the necessary technology for fast manufacturing would create efficient supply of PPEs for daily life and for health workers and could increase the export volume of the industry, accommodating the global demand for these PPE products. Addressing PPE demand would block sudden demand shocks due to pandemic which would sustain the necessary protection and would decrease hospital expenses by avoiding patient intensity.

User or Beneficiary	Increase in use of PPE directly improves public health as well as health workers, apparel industry and local PPE producers. Social security systems and public health infrastructure benefit indirectly from increased protection by society.
Economic Factors	Turkey has a capacity of manufacturing **50 million disposable masks a day**, which meets the daily demand of facemasks. Textiles industry in Turkey expanded its capacity from **1 million masks a day to 50 million in less than 2 months**. The global disposable face mask market size was valued at **$792.4 million** in 2019 and is anticipated to witness a **CAGR of 5.6%** over the projected timeframe. Benchmark investments in this area are associated with **15% investment returns**. Also, global practices point to **15-25%** increases in share prices following solutions to increase productive capacity for protective equipment. **Short Term:** Use of current production facilities/infrastructure enables a very quick investment timeframe as short as 2-5 months.
Enabling Factors	**Government Incentives for Medical Products**: Interest Support, Tax exemption from Total Fixed Investment Amount, SSI Exemption from Total Fixed Investment Amount, SSI employer Premium Exemption, SSI worker Premium Exemption, VAT exemption, Customs Exemption, exemption from municipal Development Fees, exemption from stamp tax, Five-Year Real Estate Tax Exemption, State Allocation From The Treasury Lands . **KOSGEB TEKNOYATIRIM Support Program** provides up to 6 million TRY support under its SME program, from which disposable mask producers can also benefit.
Risk Factors	Domestic PPE market is mainly regulated by Turkish government with heavy involvement on quality and pricing of disposable and washable facemasks.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions. According to the WHO, the manufacturing of PPE must increase by %40 to meet the increasing global demand. COVID-19 will have a long-term effect on daily life and render the wearing of masks the new normal.

Infrastructure

IOA 23. Building and operating recycling/recovery facilities for solid waste

According to 2019 OECD Environmental Performance Review for Turkey, the country still faces insufficient recovery and recycling of municipal solid waste. Although some progress has been made in expanding waste treatment infrastructure, around 90% of municipal waste is sent to landfills and only a small quantity is recovered. Only 6% of municipal waste was collected separately in 2016. Material productivity is well below the OECD average.[88] According to the National Waste Management and Action Plan 2023 by the Ministry of Environment and Urbanization, 6% (1.5 million tonnes) of municipal waste goes to recovery plants, while 64% (17.5 million tonnes) is kept at sanitary landfills and 30% (8.1 million tonnes) goes to irregular landfills.[89] 11.9% of municipal waste such as glass, metal, paper, plastic, etc. that are collected separately by municipalities and sent to recovery facilities and other wastes sent to biogas and composting facilities.[90]

Investments in this IOA can reduce environmental pollution stemming from dumping of non-biodegradable and toxic waste into landfills, and rehabilitate wild dumping sites by increasing the share of recovery and sanitary landfills in waste disposal to 35% and 65%, respectively by 2023.[91]

User or Beneficiary	1,397 municipalities of which 30 are metropolitan and Organized Industrial Sites directly benefit from waste recovery. Taxpayers and industrial electricity consumers can benefit indirectly from biogas energy produced from organic waste.
Economic Factors	The total municipal waste is estimated to reach **33 million tonnes by 2023**. In 2018, 2,223 waste facilities, 166 disposal facilities, and 2,057 recovery facilities were active in Turkey. Investors already active in the construction of waste recovery facilities in Turkey estimate an **IRR between 20-25%.** Investors engaging in the operation of waste recovery facilities estimate **an IRR between 5-7%.** **Medium Term:** The usual timeframe for investments in constructing and operating recovery facilities for solid waste is limited with the duty periods of municipalities, which is 5 years. The tender process takes around 6 months, building the facility usually takes 1-1.5 yeas while the remaining 3 years go to operating the facility. However, longer term investments are more feasible as investments in recovery facilities pay for themselves in **8-9 years**.
Enabling Factors	As "waste recovery and disposal facilities" are a prioritized, all investments over 5 million TRY in these areas are eligible for **Region 5 incentives** regardless of location. These incentives include VAT exception, customs duty exemption, tax deduction (40% rate of contribution to investment and 50% for investments in OIZs, 80% tax deduction, social security premium support (7 years and 10 years for OIZs), land allocation etc.
Risk Factors	Waste management budgets are dependent on the population of the area, smaller population means smaller budget allotted to those municipalities. Since municipalities are subject to change via elections, waste management investments or relations with private companies tend to be short-term. Waste should be sorted at the source, whereas this is very rare in Turkey.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as solid waste recovery investments are likely to have a significant effect on environmental sustainability.

Infrastructure

IOA 24. Building and operating waste collection and/or sorting facilities

Turkey still faces insufficient recovery and recycling of municipal solid waste, according to 2019 OECD Environmental Performance Review for Turkey. Although some progress has been made in expanding waste treatment infrastructure, around 90% of municipal waste is sent to landfills and only a small quantity is recovered. Only 6% of municipal waste was collected separately in 2016. Material productivity is well below the OECD average.[92]

Local authorities currently dedicate around 40% of their income on subsidizing waste collection and disposal, which is not financially sustainable. The most prevalent method of waste collection in Turkey is through door-to-door with 58%, containers with 33% and waste collection centers with 9%.[93]Amid the COVID-19 outbreak, the increase in use of PPE resulted in increased PPE waste, especially in high-circulation areas such as shopping malls and hair salons. Safe collection of such waste is increasingly important, with higher need for sterilized solutions such as infrared waste bins.

User or Beneficiary	1,397 municipalities of which 30 are metropolitan and Organized Industrial Sites directly benefit from waste recovery, high-circulation areas such as shopping malls and hair salons with high PPE waste. The investment would assist indirectly taxpayers, metropolitan citizens suffering from garb dumps.
Economic Factors	The investments necessary to build recycling and recovery facilities and sanitary landfills in alignment with national standards varies between **1.7-2.9 billion EUR** with sanitary landfills accounting for 370-618 million EUR. Investors already operating in the waste recovery sector in Turkey estimate **an IRR between 10%-15%.** **Short Term:** The usual timeframe for investments in constructing and operating recovery facilities for solid waste is limited with the duty periods of municipalities, which is 5 years. Waste collection centers require a less technologically intense investment.
Enabling Factors	Investments over 1 million TRY in regions 1 and 2, and over 500,000 TRY in regions 3, 4, 5 and 6 are eligible for "**Regional Investment Incentives**": VAT exemption, customs duty exemption, tax deduction, social security premium support, income tax withholding support, interest/profit share support, land allocation. **The Development and Investment Bank of Turkey** signed a **3-year-nonrecourse 20-year loan agreement with KfW to finance infrastructure projects targeting sustainability.**
Risk Factors	Waste management budgets are dependent on the population of the area, smaller population means smaller budget allotted to those municipalities. Since municipalities are subject to change via elections, waste management investments or relations with private companies tend to be short-term.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as waste collection and sorting facilities significantly improve recycling capabilities, increasing material efficiency for environmental sustainability.

Infrastructure

IOA 25. Constructing and operating wastewater treatment facilities and innovative wastewater treatment technologies

Turkey is a water-stressed country. Research shows that it is possible for Turkey to face water scarcity in the near future. The annual per capita water supply is 1,365 cubic meters (cbm) in Turkey. Taking the negative impacts into consideration, this figure is projected to drop to 1,120 cbm in 2030.[94] Population access to wastewater treatment plants increased from 42% to 79% over 2005-16. Despite remarkable progress in wastewater management, 14% of residential wastewater is discharged without treatment.[95] In 2018, 11.7% of all wastewater has been discharged as untreated.[96] Household water and wastewater tariffs exceed affordability limits in many provinces. Only a small number of Turkish water utilities have potential for tariff increase to finance new investments without harming the poorest households.[97]

Investments in this IOA can reduce deterioration of surface water quality due to insufficient pollution control and improve water treatment infrastructure to ensure that sewage and wastewater treatment services are provided at 100% by 2023.[98]

User or Beneficiary	Investments would benefit 1397 municipalities of which 30 are metropolitan, Organized Industrial Sites, inhabitants living close to water resources where wastewater is discharged without treatment and population whose livelihoods depend on clean water resources where wastewater discharge without treatment is polluting.
Economic Factors	**1,422 wastewater treatment facilities** are planned to be built between 2017-2023 (1338 new facilities and 84 improvement). Approximately **27.6 billion TRY** ($4 billion) is allocated to wastewater and sewage investments by 2023. Returns from investments in construction of wastewater treatment facilities in Turkey vary between **25-30%**, while operating these facilities are usually associated with 10% losses. The overall return from investments in constructing and operating wastewater facilities is around **20%**. **Short Term:** The planning, design and construction phases of a wastewater treatment facility is completed **between 2-5 years.**
Enabling Factors	Wastewater treatment facilities are eligible to apply for **a reimbursement of energy costs up to 50% from the Ministry of Environment and Urbanization**. Firms in OIZs with central wastewater treatment facilities are eligible **for wastewater fee exemption**. Around **30 billion TRY ($4.3 billion)** in financing will be provided to investments in wastewater treatment by 2023 by the government.
Risk Factors	The national technology and R&D contribution to wastewater treatment is low. Since municipalities are subject to change via elections, waste management investments or relations with private companies tend to be short-term. Local authorities lack the financial and technical capacity to establish and operate wastewater treatment facilities, which result in non-profitable business models in wastewater treatment.
Impact Management	**IMP classification C:** Investments are likely to contribute to solutions as the outcome is likely to be positive, important and intended because wastewater treatment will could serve people with limited access to clean water and improve water quality.

Infrastructure

IOA 26. Data-based infrastructure for smart cities through investments in connectivity technology such as smart performance meters

The COVID-19 era showcased the need for remote monitoring for utilities, as countries struggled to monitor energy expenditures in-person. There is a target to facilitate advanced metering infrastructure that measures energy distributed until 2025 and which includes at least 80% of customers by 2035 as part of Turkey's Smart Grid roadmap.[99]

Investments in this IOA can enable real-time monitoring of energy consumption to improve energy and resource efficiency through smart meters using IoT technology, increase resource utilization by installing smarter energy management infrastructure and lower energy use by enabling customers to make informed decisions through data collection.

User or Beneficiary	The investment would benefit directly electricity and water users, households, grid providers and indirectly municipalities and overall urban population.
Economic Factors	There are **23,221,218 households**, **2 million smart water meters** and **10 million smart electricity meters** in Turkey. Academic research in similar contexts shows that smart metering investments generate between 11.7-17% IRR. **Medium Term:** Türk Telekom already piloted a project with BUSKİ and Baylan Water Meters to install smart water meters to remotely monitor water consumption. In order to advance 5G network and infrastructure, installation of 5G stations are expected to be finalized by 2023. Large scale installations take between **5 to 6 years**.
Enabling Factors	**Communications Technology Cluster (HTK) and TÜBİTAK** jointly run and support the **"Uçtan Uça Yerli"** and National 5G Communication Network Projects so as to develop the necessary network infrastructure and design for 5G. **Small and Medium Industry Development Organization (KOSGEB)** also supports smart digital technologies with up to 300 thousand TRY in grants and 350 thousand TRY in concessional loans.
Risk Factors	Reliance on existing underlying broadband infrastructure, which if not properly maintained could cause essential technology and service to fail. There are also potential concerns on data privacy. High capital costs might provide an obstacle for medium-sized enterprises to adopt 5G projects. IoT technologies are newly emerging and require high municipal engagement.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as the 5G connected infrastructure in smart cities will help create more integrated, sustainable and resource-efficient urban spaces in cities.

Financials

IOA 27. Online/E-commerce payment schemes for SMEs and individual sellers

Turkey has a lower penetration of digital services compared to the European average. Among similarly developed economies, Turkey has a lower density of bank accounts, especially among women. The country needs to overcome the challenge of making cashless transactions more attractive and also reach out to those currently underserved.[100] In 2019, 9.15% of SMEs in Turkey sold products online, against an EU average of 16.57 %. It is essential for SMEs to adopt new e-commerce strategies.[101]

In Turkey, there are 15,159 businesses registered where at least one partner is Syrian.[102] UNHCR estimate for the current number of refugee-owned businesses in Turkey is 8,000.[103] In a joint study conducted by EBRD and TEPAV in 2018, the major constraint facing Syrian companies in Turkey is access to finance (41.5% of respondents).[104]

Investments in online payment schemes can improve financial inclusion, increase revenues for SMEs by facilitating their access to the e-commerce market through online payment schemes and bolster e-commerce volume in Turkey and improve competitiveness.

User or Beneficiary	The investment would benefit directly SMEs, refugee owned enterprises and businesses (15,159 businesses with at least one Syrian partner, 8,000 refugee-owned businesses), individual sellers, entrepreneurs and indirectly supply chain actors such as logistics firms, SME employees, banks.
Economic Factors	Turkish e-commerce sector is worth **$11.6 billion.** The average per-capita online spend is **$334 a year**. From this low baseline, the country's e-commerce market is expected to grow at a compound annual growth rate of **12%** to 2021. Investors already active in this area estimate annual returns for innovative solutions in e-payment and digital money to be between **25-30% with a minimum range of 10-15% annual returns**. Investors can expect 3-5 times return on their investments. Successful models can generate up to 50-60% IRR as has been observed by recent exits/sales in the industry. **Short Term:** The average exit timespan for these models in Turkey is around 5 years.
Enabling Factors	Turkey has an ambition to become a cashless society by 2023. Fintech startups are eligible for support by TÜBİTAK under the "1512 Techno-Entrepreneurship Support Program (BiGG)". This is a call-based program that provides up to 200 thousand TRY in seed capital and up to 600 thousand TRY grant for R&D support.
Risk Factors	The strong banking sector, Turkey's spending culture through credit cards and implementations to boost spending through banks such as loyalty schemes prevent payment facilitators from scaling-up as banks view online payment systems as peripheral business operations.
Impact Management	**IMP classification B:** Investments are likely to benefit stakeholders as the model is likely to increase SME growth, revenues and competitiveness, helping expand the base for wealth and increasing employment. Online payment schemes also help avoid informal economy.

Annex

A1. Main Documents Reviewed to Identify National Policy Priorities and Development Needs

Policy Priorities

- 11th National Development Plan by SBB*
- 2020 Investment Program by SBB
- 2020 Presidency Annual Program by SBB
- Pre-Accession Economic Reform Program (2020-2022) by SBB
- 2020-2022 Investment Program Preparation Guide by SBB
- Intended Nationally Determined Contributions (INDCs) 2021-2030
- Turkey's Sustainable Development Goals 2nd Voluntary National Review 2019 by SBB

Development Needs

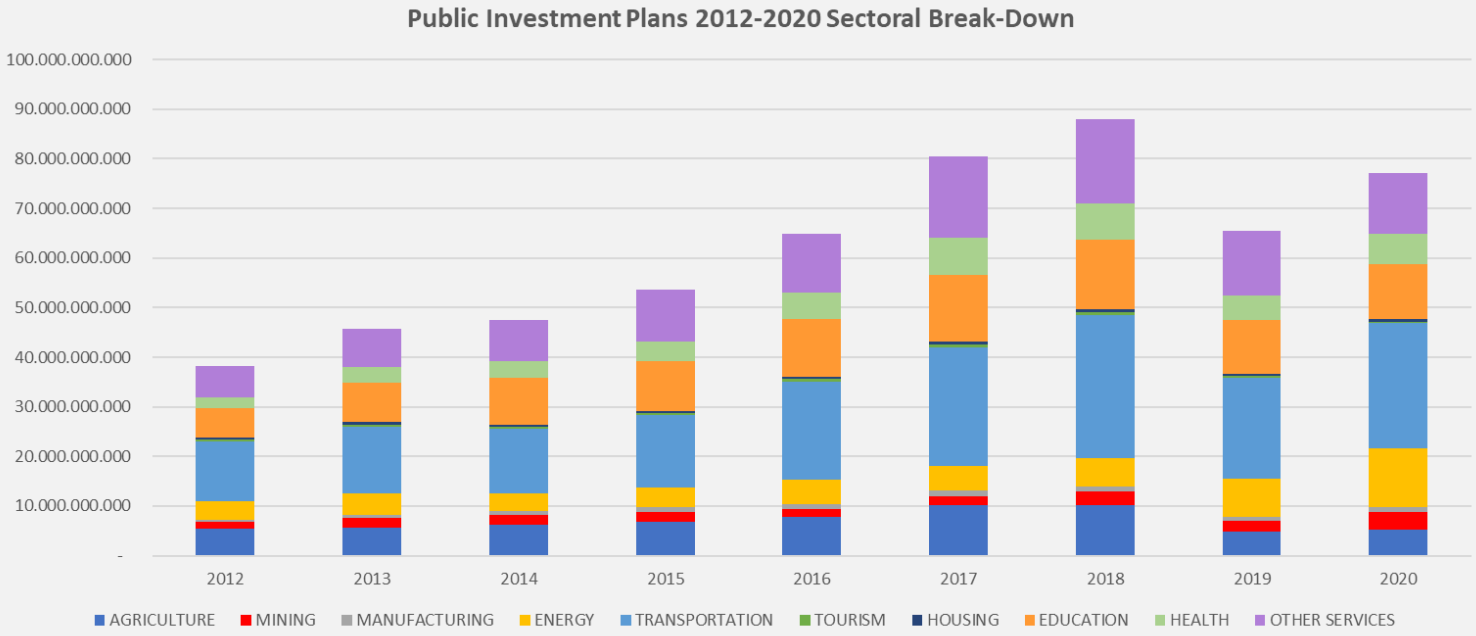
- Human Development Report 2019 by UNDP
- Human Development Report Briefing Note for Turkey by UNDP
- Turkey Economic Monitor October 2019: Charting A New Course by World Bank
- Climate Change Strategy by MoEU**
- Regional Development Policy in Turkey 2019 by OECD
- National Strategy for Regional Development 2014-2023 by MoD
- National Rural Development Strategy 2014-2020 by MoFAH***
- Turkey Sustainable Development Goals Evaluation Report by SBB

*SBB - Presidency of the Republic of Turkey Presidency of Strategy and Budget
**MoEU - Ministry of Environment and Urbanization
***MoFAH - Ministry of Food, Agriculture and Husbandry (Ministry of Agriculture and Forestry as from 2018)

A2. Public Spending – Sectoral Breakdown

Public spending has also been analyzed to understand how the public budget is allocated and which sectors receive the largest resources. Investment opportunities in these areas have been identified to attract private investors towards these areas, whereby the burden on the public budget can be alleviated.

A graph illustrating public investment plans' sectoral breakdown can be found below, based on data published by the Presidency of Strategy and Budget of Turkey.[1]



Significant public fixed investment has been allocated to transportation, followed by other services, education,energy, agriculture, and healthcare.

[1] Presidency of Strategy and Budget. 2020 Investment Program and 2020 Presidency Annual Program.

A3. Institutions/Stakeholders Interviewed for the SDG Investor Map Turkey

Institution	Profile
Presidency of the Republic of Turkey, Investment Office	Government Agency
Presidency of the Republic of Turkey, Finance Office	Government Agency
Presidency of the Republic of Turkey, Presidency of Strategy and Budget - Department of Education - Department of Environment and Sustainable Development - Department of Energy and Mining - Department of Agriculture - Department of Transportation - Department of Health - General Directorate of Economic Modeling and Conjuncture Evaluation	Government Agency
Ministry of Industry and Technology - Scientific and Technological Research Council of Turkey (TÜBİTAK) TÜSSİDE - Directorate General of Development Agencies	Government Agency
İzmir Development Agency	Government Agency
Eastern Black Sea Development Agency	Government Agency
The Union of Chambers and Commodity Exchanges of Turkey - Council of Healthcare Institutions - Council of Education - Council of Textiles Industry - Council of Transportation and Logistics – Railway - Council of Energy	NGO – Private Sector *Confederation of all local chambers of commerce and highest legal entity representing private sector*
Development and Investment Bank of Turkey	Public Investor *Public Investment and Development Bank*
European Bank for Reconstruction and Development (EBRD)	Global Investor *Development Finance Institution*
International Finance Corporation (IFC)	Global Investor *Development Finance Institution*

Institution	Profile
Islamic Development Bank – Islamic Corporation for the Development of the Private Sector (ICD)	Global Investor *Development Finance Institution*
İş Bank Turkey	Private Investor *Bank*
Garanti BBVA Turkey	Private Investor *Bank*
Turkven Private Equity	Private Investor *Private Equity Firm*
Keiretsu Forum Turkey	Private Investor *Angel Investor Network*
IdaCapital	Private Investor *Impact Investment Management Firm*
UNDP Turkey CO	International Organization
İstanbul Fatih Municipality	Local Government
Metro İstanbul	Local Government *Municipal Enterprise*
GENSED	NGO – Private Sector
Smart Energy	Private Sector
Solar 3GW	Private Sector
Figopara	Private Sector
Mükellef	Private Sector
Women in Tech Association (WTECH)	NGO
Social Sciences University of Ankara	Academia

A4. List of Policy Documents Identified and/or Consulted for Sub-Sectoral Analysis

Policy Document Name	Relevant SDG
National Employment Strategy National Youth Employment Strategy Productivity Strategy and Action Plan Climate Change Strategy International Development Cooperation Programme	
National Rural Development Strategy and Action Plan Biotechnology Strategy and Action Plan Strategy and Action Plan for Combating Agricultural Drought in Turkey Climate Change Strategy and Action Plan	
Obesity Prevention and Control Programme and National Action Plan National Cancer Control Programme National Action Plan on Mental Health Rational Medicinal Drug Use Action Plan Turkish Pharmaceutical Sector Strategy and Action Plan National Tobacco Control Strategy and Action Plan, National Anti-Drug Strategy and Action Plan Non-Communicable Diseases Multi-Stakeholder Action Plan Healthy Ageing Action Plan and Implementation Programme Road Safety Strategy and Action Plan Road Safety Implementation Policy Document	
MoNE Strategy and Action Plan Lifelong Learning Strategy Vocational and Technical Education Strategy and Action Plan Vision 2023 Teacher Strategy National Employment Strategy and Action Plan	
Basin Protection Action Plans River Basin Management Plans Basin Master Plans Water Quality Action Plans Drinking Water Basins Protection Action Plans Climate Change Action Plan (2011-2023) Turkey's Climate Change Adaptation Strategy and Action Plan Flood Management Action Plans Drought Management Action Plans Sectoral Water Allocation Plans National Basin Management Strategy Wastewater Action Plan Drinking Water Conservation Plans Action Plan for the Program on Enhancing Efficiency of Water Use in Agriculture	
National Energy Efficiency Action Plan Electrical Energy Market and Supply Security Strategy Turkey National Renewable Energy Action Plan Energy Efficiency Strategy National Climate Response Strategy Climate Action Plan Climate Adaptation Strategy and Action Plan	

Policy Document Name	Relevant SDG
Enhancing Productivity In Manufacturing Programme Turkish Industrial Strategy Document Productivity Strategy and Action Plan SME Strategy Document National Employment Strategy Female Employment Action Plan National Youth Employment Action Plan National Programme on Combating Child Labour Labour Market Efficiency Programme 2023 Export Strategy and Istanbul International Finance Centre Programme Action Plan and Financial Access Financial Education, Financial Protection of the Consumers Strategy and Action Plan Tourism Strategy 2023 and Action Plan	
2023 Turkey Export Strategy and Action Plan Information Society Strategy and Action Plan National Broadband Strategy and Action Plan Energy Efficiency Strategy SME Strategy and Action Plans Combined Transportation Strategy Turkey Public-University-Industry Collaboration (PUIC) Strategy and Action Plan Turkey Industry Strategy Transportation and Communication Strategy National Energy R&D and Innovation Strategy Efficiency Strategy and Action Plan Turkey Nanotechnology Strategy and Action Plan	
National Strategy for Regional Development (BGUS 2014-2023) Rural Development Strategy National Employment Strategy (2014-2023) Irregular Migration Strategy and Action Plan Human Trafficking Combat Strategy and Action Plan Integration Strategy and Action Plan Accessibility Strategy and Action Plan	
Integrated Urban Development Strategy and Action Plan National Rural Development Strategy Information Society Strategy and Action Plan National Intelligent Transportation Systems Strategy Species Protection Strategy and Action Plans National Earthquake Strategy and Action Plan Turkey's Climate Adaptation Strategy and Action Plan National Environmental Strategy and Action Plan National Biological Diversity Strategy and Action Plan	
National Environmental Strategy and Action Plan EU Integrated Environmental Adaptation Strategy (2007-2023) Turkey Climate Response Strategy (2010-2023) Turkey Tourism Strategy 2023 National Waste Management and Action Plan (2016-2023) Turkey Automotive Sector Strategy and Action Plan (2016-2019)	

Policy Document Name	Relevant SDG
National Climate Change Strategy Climate Change Action Plan Climate Change Adaptation Strategy and Action Plan Energy Efficiency Strategy Paper Turkey National Renewable Energy Action Plan National Energy Efficiency Action Plan Electricity Market and Supply Security Strategy Paper Turkey Disaster Response Plan Turkish Industrial Strategy Document National Intelligent Transport Systems Strategy and Action Plan National Drought Management Strategy and Action Plan Action Plan to Combat Erosion Flood Action Plan Upper Basin Flood Control Action Plan Integrated Urban Development Strategy and Action Plan (KENTGES) National Strategy and Action Plan to Combat Desertification National Biological Diversity Strategy and Action Plan National Recycling Strategy and Action Plan National Wetland Strategy and Action Plan National Strategy and Action Plan for Combatting Agricultural Drought	
National Climate Change Strategy Climate Change Adaptation Strategy and Action Plan Biological Diversity Strategy and Action Plan National Wetland Strategy Turkish National Marine Research Strategy Document	
National Climate Change Strategy and Action Plan National Forestry Programme National Strategy and Action Plan for Combating Against Desertification National Drought Management Strategy and Action Plan National Basin Management Strategy Strategy and Action Plan for Combating Agricultural Drought in Turkey National Biological Diversity Strategy and Action Plan	
Total: 92 Documents Identified	

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