Programme for
Country Partnership
Egypt

Programme for Country Partnership between UNIDO and the Arab Republic of Egypt

2020 - 2024

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

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ACRONYMS

ADB	Asian Development Bank
AFD	French Development Agency
AfDB	African Development Bank
BDS	Business Development Services
CAGR	Compound Annual Growth Rate
CAPMAS	Central Agency for Public Mobilization and Statistics
CBE	Central Bank of Egypt
CCA	Common Country Analysis
CEDARE	Centre for Environment and Development for the Arab Region & Europe
CID	Cairo for Investment and Development
COMESA	Common Market for Eastern and Southern Africa
COMFAR	Computer Model for Feasibility Analysis and Reporting
CPF	Country Partnership Framework
CRI	Cotton Research Institute
DFI	Development Finance Institution
EBRD	European Bank for Reconstruction and Development
ECO	Environmental Compliance and Sustainable Development Office
ECS	Egyptian Commercial Services
EDA	Export Development Authority
EE	Energy Efficiency
EEAA	Egyptian Environmental Affairs Agency
EFSA	Egyptian Food Safety Authority
EGP	Egyptian Pound
EIB	European Investment Bank
EJB	Egyptian Junior Business Association
EMAP	Egyptian Medicinal and Aromatic Plants
ENCPC	Egypt National Cleaner Production Centre
EPAP	Egyptian Pollution Abatement Programme
ESG	Environmental, Social and Governance
FAITC	Food and Agro-Industries Technology Centre
FDC	Food Development Centre
FEI	Federation of Egyptian Industries
FIT	Feed-in Tariff
GAFI	General Authority for Investment and Free Zones
GAP	Good Agricultural Practices
GCC	Gulf Cooperation Council
GCIP	Global Cleantech Innovation Programme
GDP	Gross Domestic Production
GEEW	Gender Equality and the Empowerment of Women
GEFF	Green Economy Financing Facility
GHG	Greenhouse Gases
GIZ	Gesellschaft für Internationale Zusammenarbeit
GOEIC	General Organization for Export and Import Control
GOPP	General Authority for Urban Planning
GoE	Government of Egypt
IBRD	International Bank for Reconstruction and Development
IDA	Industrial Development Authority
IDB	Inter-American Development Bank
IDG	Industrial Development Group
IEEF	Industrial Energy Efficiency Fund
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	International Finance Institution
IMC	Industrial Modernization Centre
IsDB	Islamic Development Bank
ISIC	International Standard Industrial Classification

ISID	Inclusive and Sustainable Industrial Development
ITPO	Investment and Technology Promotion Offices
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau
KOICA	Korea International Cooperation Agency
KPI	Key Performance Indicators
LEDS	Low Emission Development Strategy
LP	Labor Productivity
M&E	Monitoring and Evaluation
MERCOSUR	Common Market of South America
MHT	Medium- and High-Tech
MoLD	Ministry of Local Development
MoPBS	Ministry of Public Business Sector
MSME	Micro, Small and Medium Enterprises
MSMEDA	Egyptian Micro, Small and Medium Enterprises Development Agency
MTI	Ministry of Trade and Industry
MVA	Manufacturing Value Added
NCB	National Coordination Body
NCW	National Council for Women
NFSA	National Food Safety Authority of Egypt
NREA	National Renewable Energy Authority
NUCA	National Urban Community Authority
ODS	Ozone Depleting Substance
OECD	Organization for Economic Co-operation and Development,
PCP	Programme for Country Partnership
RCA	Revealed Comparative Advantage
RCREE	Regional Centre for Renewable Energy and Energy Efficiency
RECP	Resource Efficient and Cleaner Production
SCZone	General Authority For Suez Canal Economic Zone
SDG	Sustainable Development Goal
SDS	Sustainable Development Strategy
SHIP	Solar Heat for Industrial Processes
SPX	Subcontracting and Partnership Exchange
TFP	Total Factor Productivity
TVET	Technical and Vocational Education and Training
UNAFP	United Nations Agencies Funds and Programmes
UNCT	United Nations Country Team
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNGC	United Nations Global Compact
UNIDO	United Nations Industrial Development Organization
UNPDF	United Nations Partnership Development Framework
UNRC	United Nations Resident Coordinator
UNSDCF	United Nations Sustainable Development Cooperation Framework
USD	United States Dollar
VC	Value Chain
WMRA	Waste Management Regulatory Authority
4 IR	4th Industrial Revolution

FIGURES

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EXECUTIVE SUMMARY

In the framework of the Lima Declaration, Member States entrusted the United Nations Industrial Development Organization (UNIDO) with the mandate to promote Inclusive and Sustainable Industrial Development (ISID). Following the 15th General Conference, in line with the new mandate, and to accelerate the ISID, UNIDO has developed an approach for the Programme for Country Partnership (PCP), which aims to offer sustainable solutions for long-term industrial development by leveraging resources through more effective and high-level national partnerships and international commitment.

Following the launch of the PCP programme in six pilot countries: Cambodia, Ethiopia, Kyrgyzstan, Morocco, Peru and Senegal, the Government of Egypt has shown interest in the development of a PCP. The UNIDO Executive Board, following the positive assessment of the criteria for admission to the development of a PCP, approved Egypt's proposal to establish the Programme in the country. Egypt then became the second Arab country to benefit from this large-scale UNIDO programme.

A preparatory phase for the formulation of the PCP was designed and organized in the first quarter of 2019 and carried out from April 2019 to March 2020. During this phase, UNIDO, in close collaboration with the Government of Egypt, launched a country diagnostic and a national consultation process to develop the Programme and identify synergies between partner programmes and PCP interventions.

Following the UNIDO Country Diagnostics, focus areas of intervention have been identified by the Egyptian PCP counterparts in accordance with Egypt Vision 2030, Sustainable Development Goals (SDGs) and national industry related strategies and plans. The PCP technical cooperation framework resulted in the formulation of six components, namely: Industrial Policy and Governance, Investment Promotion, Green Industry, Smart Cities & Sustainable Industrial Parks, Value Chains and Mainstreaming Industry 4.0. In addition to identifying priority sectors including Chemicals, Electronics, Food, Textiles & Leather, and Furniture & Handicrafts.

The Programme for Country Partnership (PCP) is owned by the Government of Egypt, as set by establishing the PCP National Coordination Body, consisting of representatives from relevant stakeholders, including private sector, to ensure alignment of objectives and synergies with identified, ongoing and future partners' interventions.

This document is the result of a systematic and continuous process of consultation of UNIDO with its Egyptian counterparts, IFIs, DFIs, UN agencies and international donors, with a view to defining the required technical cooperation. This support framework of technical assistance will contribute to achieving the industrialization objectives of the Government set in Egypt Vision 2030, as well as the Sustainable Development Goals (SDGs) of the 2030 Agenda of the United Nations.

The Programme of technical assistance focuses on sectors with high growth potential and is planned on six components, to synergize with other industrial development programs and pool additional resources and expertise from various public and private actors, as well as international partners and ultimately, to generate the greatest impact on SDGs in Egypt.

Synergies and integrated interventions of PCP Egypt will leverage financial and non-financial resources to support the impressive progress of the country's industrial development. It will contribute to the achievement of Egypt's objective to be an active global player responding to international developments, maximizing value added, generating sustainable and productive jobs, and the real GDP per capita reaching high-middle income countries' level by 2030.

1. INTRODUCTION

During the 15th Session of the General Conference of UNIDO, Member States agreed on a new mandate for the Organization to accelerate Inclusive and Sustainable Industrial Development (ISID). In this context, UNIDO has developed a new partnership approach with Member States, namely the Programme for Country Partnership (PCP). This programme is based on a multi-stakeholder partnership and aims to provide sustainable solutions for inclusive and sustainable industrial development.

The ISID-PCP model has five main features:

- Government ownership at the highest political level;
- Clear consideration of the objectives of UNIDO ISID;
- Alignment with national industrialization priorities and national development plans;
- Focus on industrial sectors and priority intervention areas;
- Multi-stakeholder partnership and joint resource mobilization.

The 2030 Agenda for Sustainable Development highlights the need to work in partnership to mobilize the knowledge, expertise, technologies and financial resources needed to achieve the global Sustainable Development Goals (SDGs).

As such, the PCP supports a long-term development process, contributing to the achievement of SDG9 "Building resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation", and other relevant SDGs such as SDG 7 "Affordable and Clean Energy", SDG 5 "Gender Equality", SDG 17 "Partnerships for the Goals". The SDG 17 is specifically intended to call on the international community to "strengthen the means of implementation and revitalize the global partnership for sustainable development". The PCP proposes a systemic partnership model that will leverage stakeholders and resources to amplify the impact of UNIDO interventions. Egypt is the seventh country at global level and the second in the Arab region to start the implementation of this partnership development model, following the launching of PCP in six countries, namely: Cambodia, Ethiopia, Kyrgyzstan, Morocco, Peru and Senegal.

PCP Egypt has been designed, developed and will be implemented taking into account lessons learned and the best practices identified in previous PCPs. It is also tailored to fulfil the needs of the country and aligned to the objectives of Egypt Vision 2030. The UNIDO Programme for Country Partnership has been formulated and will be implemented as part of a broad process of consultation and collaboration with the Government of Egypt, the private sector and other local and international stakeholders.

A PCP Country Diagnostics was conducted by UNIDO at the outset to identify PCP main focus areas of intervention and priority sectors, which have been endorsed by the PCP National Coordination Body, established to govern and monitor the programme implementation. The Country Diagnostics is based on three main blocks. The first block focuses on the industrial diagnosis of Egypt based on desk-based data and consultations in the field and it covers economic, social and environmental performance, policy and governance issues.

The second block is the industrial roadmap blueprint that defines industrial strategic directions.

The third block translates the industrial strategy blueprint into areas of interventions; focus areas and priority sectors. The PCP Country Diagnostics represents the first step to embed the PCP operations in the current strategy and policy setting of Egypt and to facilitate the dialogue of project managers, the Government of Egypt and relevant stakeholders about the formulation of technical cooperation interventions to develop in the field.

Design and findings of the PCP Country Diagnostics have been discussed during several missions and consultations with relevant NCB stakeholders until January 2020.

As a result of the PCP Egypt Diagnostics, six components were identified for PCP Egypt, as follows:

- Industrial Policy and Governance
- Investment Promotion
- Green Industry
- Smart Cities & Sustainable Industrial Parks
- Value Chains
- Mainstreaming Industry 4.0.

The identified components will focus on the below selected priority sectors:

- Chemicals
- Electronics
- Food
- Textiles & Leather
- Furniture & Handicrafts.

During the programming phase, PCP Egypt governance has started its set-up: in June 2019, the Prime Minister gave the green light on the structure of the three-tier PCP National Coordination Body (NCB), chaired by the Prime Minister himself and consisting of the relevant Ministers and Heads of Authorities to lead and coordinate PCP Egypt developments. Following this, the first meeting of the NCB Senior Officials was held in August 2019, highlighting the importance of the PCP and its impact on ISID in Egypt. Setting a roadmap for Egypt's industrial development was addressed by the NCB as a key priority. The NCB Senior Officials held the second meeting in September 2019. It focused on the PCP Egypt Diagnostics, PCP areas of intervention and resulting PCP components.

In addition, a number of synergies have been established with UN agencies, starting from a solid basis for UNIDO contribution to the UN Country Team (UNCT) in Egypt. It is foreseen that the PCP will critically contribute to upscale joint and integrated UN operations in Egypt and increase UNIDO's portfolio within the UN Sustainable Development Cooperation Framework (UNSDCF). As a result, a stronger support has been established with the United Nations Resident Coordinator (UNRC) in Egypt, through his active participation in the consultations for PCP development. In September 2019, the UN Resident Coordinator in Egypt hosted a consultation meeting for DFIs to brief the donor and financial communities about UNIDO PCP general approach and further focusing on PCP Egypt.

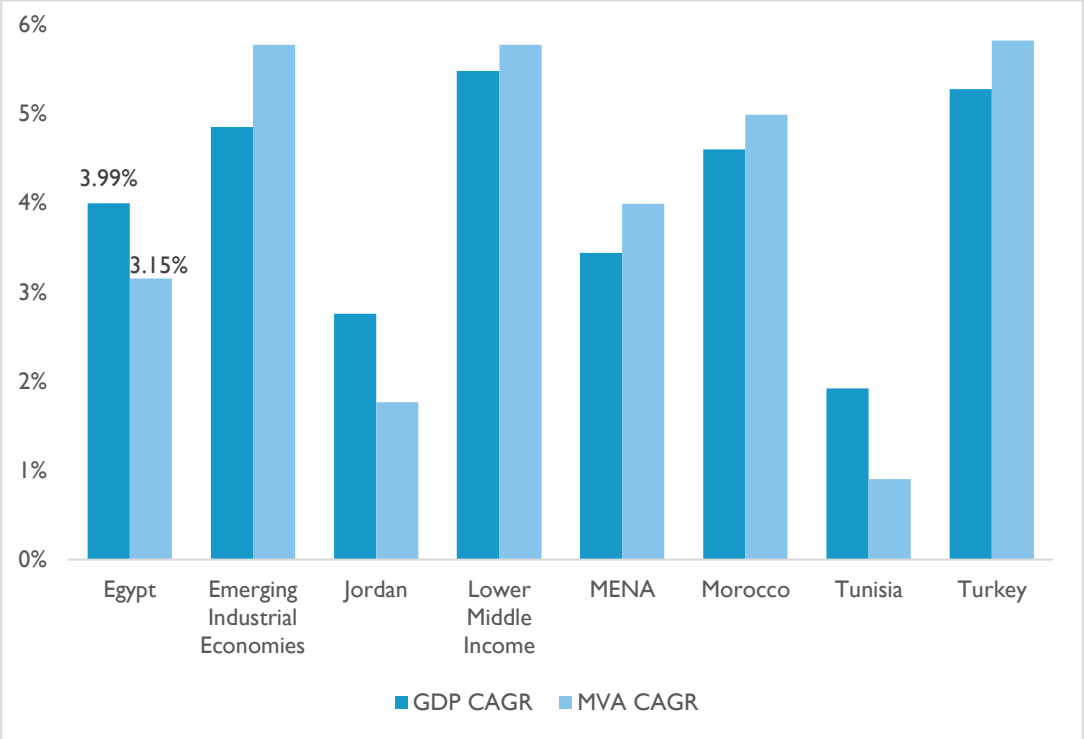
The World Bank Group, IFC, Afreximbank, EBRD, and IFAD were represented at high level. As a result, the DFIs and IFIs have expressed their full support to PCP development and adhered as partners of the PCP. In September and October 2019, consultations with United Nations Agencies Funds and Programmes (UNAFP), and donors were also organized with the intent of taking stock of relevant ongoing support and strategizing with partners on consolidation of efforts to upscale impact, through broader outreach and policy mainstreaming. Closer synergies have been also established with the Private Sector in Egypt. In June 2019, UNIDO organized a national joint consultation workshop that brought private sector together with government institutions and think-tanks to kick off a public private dialogue in the frame of PCP and to help define private sector priorities, which would be leveraged by the PCP. Following the programming phase in 2020, PCP team missions are planned to formulate the detailed technical assistance for the identified PCP components in Egypt. Furthermore, funds will be raised for individual projects per component and their implementation supposed to start by the last quarter of 2020.

2. COUNTRY CONTEXT

Egypt is a country in the lower middle-income stage with ambitious aspirations to climb the ladder of development. According to the World Development Indicators, Egypt is characterized by a 2,549 USD GDP per capita in 2018 (World Bank - World Development indicators).

Over the period 2008 - 2018, the country has experienced a 4% compound annual growth rate, which is higher than the growth rate experienced by other countries in the same region. However, almost many comparator countries have witnessed a manufacturing growth exceeding GDP growth over the same period (Figure 1).

Figure 1: GDP and MVA growth trends (2008-2018)



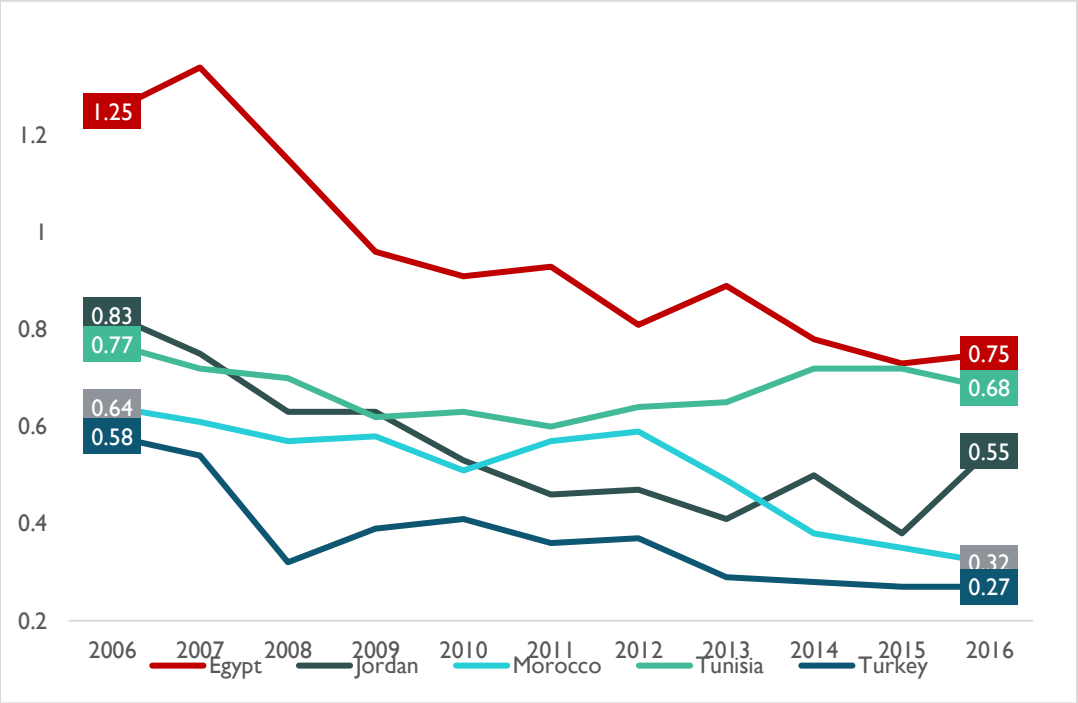
Source: World Bank, UNIDO MVA database. Extracted from the PCP Egypt Diagnostics.

Mapping governorates according to their industrialization intensity, as measured by regional manufacturing value-added per capita, and human development performance, reveals four main regional clusters. The best performing cluster consists of urban governorates: Cairo, Alexandria, Port Said and Suez, which are clearly leading in terms of industrial intensity performing far above the average in MVA per capita and consisting of more than 25%[1] of the country's industrial establishments.

They also present the best performance in terms of human development, as expected given their advanced industrialization. Upper-Egypt governorates are the least advanced, both in human development and in manufacturing intensity. Other governorates position themselves in the middle.

[1] Egypt industry and Trade Development Strategy 2016 - 2020

Figure 2: Co2 emissions intensity in the manufacturing sector



Source: World Bank, International Energy Agency. Extracted from the PCP Egypt Diagnostics. (Kilograms of CO2 per constant 2010 United States dollars)

In terms of green industry, Egypt is showing a strong decrease of emissions intensity representing the generated carbon content for each unit of produced manufacturing value added, even though the level is still higher than other comparator countries (Figure 2). The country shows huge untapped potential in terms of renewable energy production and in terms of waste use. Waste prevention and recycling could contribute to the development of local economy by increasing efficiency or by increasing the availability of production inputs at cheaper prices.

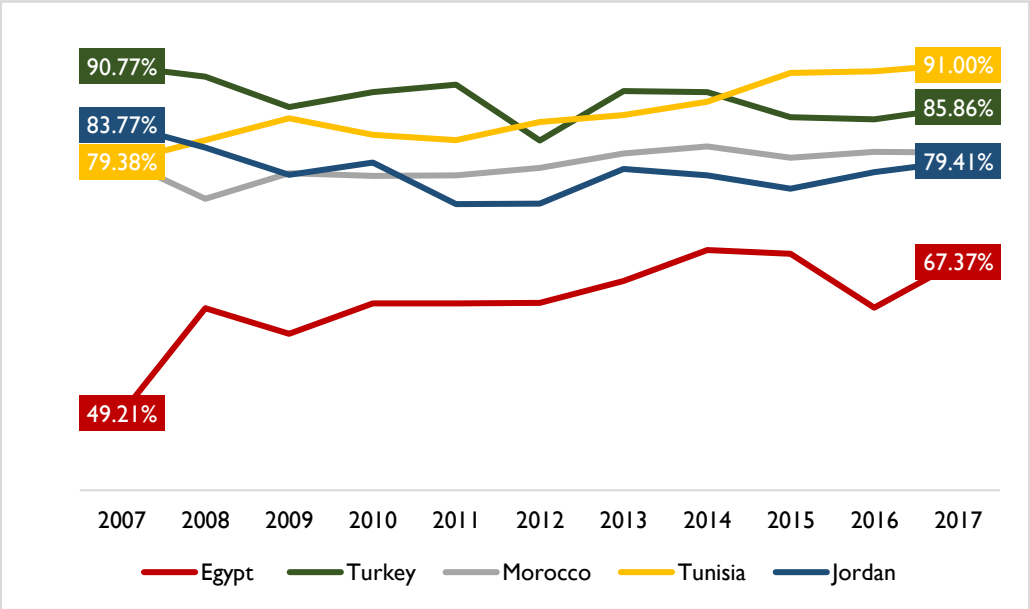
2.1 The role of industry in the economic development of Egypt

There is an overwhelming consensus at the policy-making level that manufacturing is an engine of growth. Industrialization is a vehicle of economic growth because it activates forward and backward linkages in value chains, it represents a driver of technological development and because it helps acquire the necessary capabilities, which are useful to diversify the economy.

As documented by the PCP Egypt Diagnostics, in terms of capabilities, Egypt achieved greater trade competitiveness in different sectors including among others agriculture, textiles, and chemicals / plastics with an increase in the number of revealed comparative advantages (RCAs). Manufacturing in Egypt has registered some notable achievements in the last decade. In terms of economic contribution, the share of manufacturing has been increasing in three main dimensions: employment, exports and FDI inflows.

As regards the share of manufacturing exports in total exports, the country is rapidly converging towards the levels of other comparable countries (Figure 3). These achievements were facilitated by lots of efforts deployed to improve the policy environment of the country. Egypt has implemented a number of initiatives in the last five years to support the development of the manufacturing sector.

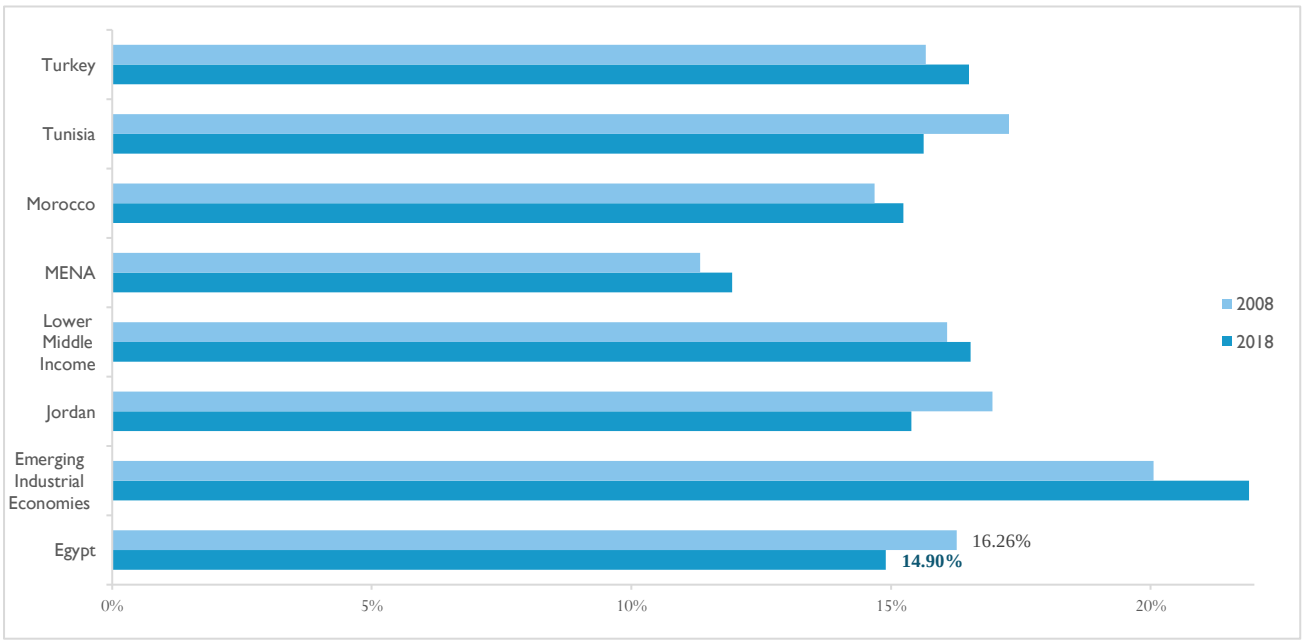
Figure 3. Share of manufacturing exports in total exports



Source: UNIDO CIP database. Extracted from the PCP Egypt Diagnostics

However, the country has not yet achieved its full potential to upgrade its manufacturing sector. The share of MVA in total GDP is still about 15%. (PCP Egypt Diagnostics and Figure 4).

Figure 4. Share of MVA in GDP (%)



Source: UNIDO MVA database. Extracted from the PCP diagnostics

As highlighted by the PCP Egypt Diagnostics, foreign direct investments in manufacturing are increasing, but in a context where FDI in all the sectors are decreasing in the most recent years.

The quality of the manufacturing production has margins of upgrading, as it is still mostly concentrated in low-tech sectors. Due to the new challenges posed by the advent of Industry 4.0, countries nowadays need to keep a high level of readiness for the challenges introduced by the new wave of technological revolution. Many firms in Egypt are still transitioning from industry 2.0 to industry 3.0[2] and an improvement of capabilities and technological intensity of the country is a necessity to fully equip for the future.

2.2 National vision and development goals

The "Vision 2030" represents the key national vision of Egypt. It was prepared through a long process of sessions and workshops with the participation of academics, private sector, government officials and international organizations. The Vision 2030 was developed: 1) to prepare the ground for short and medium development plans at national, local and sectorial level, 2) to enable Egypt to be an active global player, 3) to meet the ambitions of Egyptians to improve the efficiency of basic services 4) to set a monitoring system through objectives, KPI and targets 5) to align the Vision 2030 targets with the SDGs targets. Vision 2030 is organized on the basis of ten pillars encompassing the economic, social and environmental dimension. The PCP Egypt is relevant for the overwhelming majority of the pillars contained in Vision 2030. It is relevant as to develop manufacturing and in particular knowledge intensive capabilities for production that are related to pillar 1 about economic development, pillar 3 about knowledge, innovation and scientific research and pillar 7 about education and training. The PCP Egypt aims at promoting green industry as part of the sustainable and industrial development concept, which is related to pillar 2 about Energy and pillar 9 about Environment. The PCP also pursues inclusiveness by promoting employment and social justice that are related to pillar 5 about Social Justice and pillar 10 about Urban Development. The PCP connects to Pillar 10 on Urban Development, due to its focus towards Smart Cities and regional development. Finally, PCP Egypt is related to Pillar 4 on transparency and efficiency of institutions, as per its focus on industrial policy and governance.

Table 1: Egypt Vision 2030 pillars

First pillar: Economic development	By 2030, the Egyptian economy is a balanced, knowledge-based, competitive, diversified, market economy, characterized by a stable macroeconomic environment, capable of achieving sustainable inclusive growth. An active global player responding to international developments, maximizing value added, generating decent and productive jobs, and a real GDP per capita reaching high-middle income countries level.
Second pillar: Energy	An energy sector meeting national sustainable development requirements and maximizing the efficient use of various traditional and renewable resources contributing to economic growth, competitiveness, achieving social justice, and preserving the environment. A renewable energy and efficient resource management leader, and an innovative sector capable of forecasting and adapting to local, regional and international developments and complying with SDGs.
Third pillar: Knowledge, innovation and scientific research	A creative and innovative society producing science, technology and knowledge, within a comprehensive system ensuring the developmental value of knowledge and innovation using their outputs to face challenges and meet national objectives.
Fourth pillar: Transparency and efficient government institutions	An efficient and effective public administration sector managing State resources with transparency, fairness and flexibility. Subject to accountability, maximizing citizens, satisfaction and responding to their needs.
Fifth pillar: Social justice	By 2030, Egypt is a fair interdependent society characterized by equal economic, social, political rights and opportunities realizing social inclusion. A society that supports citizens, right in participation based on efficiency and according to law, encouraging social mobility based on skills. A society that provides protection, and support to marginalized and vulnerable groups.
Seventh pillar: Education and training	A high quality education and training system available to all, without discrimination within an efficient, just, sustainable and flexible institutional framework. Providing the necessary skills to students and trainees to think creatively, and empower them technically and technologically. Contributing to the development of a proud, creative, responsible, and competitive citizen who accepts diversity and differences, and is proud of his country's history.

[2] Source : PCP Egypt Diagnostics, 2020

Ninth pillar: Environment	Environment is integrated in all economic sectors to preserve natural resources and support their efficient use and investment, while ensuring next generations' rights. A clean, safe and healthy environment leading to diversified production resources and economic activities, supporting competitiveness, providing new jobs, eliminating poverty and achieving social justice
Tenth pillar: Urban development	A balanced spatial development management of land and resources to accommodate population and improve the quality of their lives

Source: Egypt Vision 2030

In the economic development pillar, manufacturing sector plays a considerable role and is represented by a number of KPIs including:

a) Manufacturing growth rate (10% by 2030);
b) Manufacturing value added, as percentage of GDP (18% by 2030);
c) High technology exports, as percentage of Egyptian manufacturing exports (6% by 2030);
d) High technology exports, as percentage of manufacturing exports (6% by 2030);
e) Balance of the current account, as percentage of GDP (from -3.7% in 2015 to 1% in 2030).

In line with the Vision 2030, the Industry and Trade Development Strategy 2016 – 2020 identified five integrated pillars, which are key to promote inclusive and sustainable industrial development: 1) Industrial development, 2) Micro, small and medium enterprises, 3) Exports development, 4) Development of technical and vocational training, 5) Governance and institutional development. For each pillar, the Strategy identified the relevant programmes, and consistently used Trade policy tools such as Free Trade Agreements to achieve industrial growth rates, through which the desired jobs can be created, while observing the imperatives of inclusiveness of the economic, social, environmental, technological and spatial development. Five sector strategies emerged from the Industry and Trade Development Strategy 2016-2020, namely for Chemicals, Textile, Food, Handicrafts and Building Materials sectors.

Moreover, the government has developed a new MSMEs and Entrepreneurship National Strategy (2020-2025). The vision of the strategy is to make innovative and sustainable projects MSMEs as the engine of business competitiveness, inclusive economic growth and support the path of sustainable development in Egypt. The strategy key pillars are legal and regulatory environment, access to finance, entrepreneurship promotion, integration into value chains and export, business development services, and technology.

2.3. Industry-related national policy frameworks, programmes, support institutions

Egypt is among the top 25 countries in the world in terms of the number of reforms in the 2020 (Doing Business Report 2020). This high ranking reflects the government's sustained commitment to improving the investment climate and simplifying procedures for investors. Egypt advanced six places, ranking 114th out of 190 countries, compared with 120th in 2019. (Doing Business Report 2020).

Aggressive economic reforms, including slashing subsidies, floating the national currency and massive national investment in infrastructure have all resulted in stimulating the Egyptian economy. This has strengthened Egypt's capacity to serve as a major hub for the manufacture and export of medium-technology goods and to serve as a major location for the development and delivery of value-added services in a range of sectors.

On the industry side, MTI has very aggressively consolidated systems and streamlined the procedures for industrial license issuances, reducing the entire process from stretching over 600 days in 2005 to under 7 days in 2017 for over 80% of applications, with no application requiring more than 30 days to process in all cases.

The pace of allocating industrial land has been accelerated, alongside the deployment of an Investment Map system. It will facilitate investor's comprehension of the Government of Egypt (GoE) priority geographical zones, under its spatial industrial policy. As a result, investment and industrial incentives are more enhanced so as to ensure a more inclusive economy in regions, where greater investment is needed. MTI facilitated the procedures for starting a business by abolishing the requirement to obtain a certificate of non-confusion and improving its one-stop shop and reduced the number of days required to formalize a business at Tamayouz Centres.

As a result, the industrial sector captured the majority of investment capital during 2016/2017, the industrial production growth rate peaked at 33% during 2017 (a global high) and a 17% improvement in the balance of trade between 2015 and 2017.

An effective industrial policy is possible with full complementarities across different Ministries of the Government. As showed by the PCP Egypt Diagnostics, there are margins of improvements concerning the institutional landscape, the coordination mechanisms and the capabilities for the policy-making. Egypt has successfully implemented a number of initiatives in the last 5 years to support the development of the manufacturing sector, such as: the simplification of procedures to start a business and more attractive investment incentives, through the new Investment Law, a new law on competition policy and reinforcement of powers for the Competition Authority, the simplification of industrial licensing procedures, a new collateral framework and more transparent credit information for better access to finance, an improvement in the overall quality of infrastructure (transport, ICT and utility infrastructure), a new Sovereignty Wealth Fund to attract investments and new mechanisms for public procurement. The pursue of a whole of government approach involving different stakeholders for the accomplishment of objectives involving different domains could further contribute to many other achievements.

Several programs have the potential to contribute to industrial development that cannot succinctly be summarized. A few examples are that the Egypt Central Bank is setting EGP 2 billion for the Credit Guarantee and launching a EGP 200 billion initiative to support SME financing over 4 years with low interest rate. It is creating financing schemes for medium-sized enterprises equipment investing and short-term schemes for working capital as well as an SME portal providing information on financial and non-financial services available to SMEs. Lower interest rates and loan request simplification procedures are now in place for SMEs with a particular focus on manufacturing industries. The reform implemented by the Ministry of Education and Technical Education (MoETE) known as Education 2.0 includes the TVET sector and is expected to offer skills upgrading, and correct the mismatch between demand and supply in the labour market.

The Ministry of Trade and Industry with its affiliated entities is the key actor in the formulation of the industrial strategy and policies in Egypt. Among the key affiliated entities are the following:

- The Industrial Development Authority (IDA) in charge of the necessary servicing plans and mechanisms of industrial zones, establishment of specialized industrial clusters supporting sustainable development plans, and achieving optimum usage of available resources. It has a particularly relevant role in determining land allocation for different industrial uses. The new Law n. 83/2016 grants the IDA exclusive authority over industrial land, including planning, development, installation of utilities and infrastructure;
- The Industrial Modernization Centre (IMC) established by a Presidential Decree in December 2000, to promote inclusive and sustainable industrial development and competitive Egyptian industry. The aim of IMC is to support the industrial enterprises and create an enabling business environment for the industrial sector. The IMC is governed by a Board of Directors chaired by the Minister of Trade and Industry and comprising of private sector representatives as well as public actors;

- The Export Councils were established in 1997 by Ministerial decree. The councils are organized by industrial sector and are composed by representatives of the exporters' community. They play an important role in export promotion and act as an advisory body to the Minister of Trade and Industry. Hence, they are instrumental in the Public-Private dialogue to formulate better industrial and trade policies, facilitate exporters participation in international exhibitions, in addition to providing information about international markets;
- Egypt National Cleaner Production Centre (ENCPC) is mandated to enhance the productivity and environmental performance of companies and thus to create business opportunities for industries to contribute to their long-term competitiveness on the national and global markets. The center oversees the implementation of a number of initiatives and projects related to RECP, industrial energy efficiency and industrial waste management;
- Egyptian Commercial Service (ECS): ECS is one of the Ministry's Trade arms and plays an important role in exports and industrial investment promotion with its network of commercial offices located in key countries. This international network helps Egyptian companies by disseminating information on overseas markets and business opportunities, as well as providing other trade related services;
- The Egyptian Accreditation Council (EGAC) and the Egyptian Organization for Standards & Quality (EOS) play the key role in the area of conformity assessment. EGAC is the sole national body for the assessment and accreditation of conformity assessment bodies performing testing/calibration, inspection and certification of products & systems, as well as personnel. This body also aims to achieve international recognition of the Egyptian National Quality System; to enhance the competitiveness of the Egyptian industry; and to improve the image of the Egyptian products. EOS is the competent and official body responsible for standardization activities, quality and industrial metrology aiming at increasing the competitiveness of the Egyptian products in the international and regional markets along with consumers and environment protection;
- The Export Development Authority (EDA) was established in 2017 to develop, promote and increase Egyptian exports. This is achieved through the formulation and development of export policies, as well as plans and programs necessary to implement the country's vision for the development of exports and follow-up on the implementation and performance measurement in cooperation with all governmental and non-governmental bodies.

In order to achieve better coordination, the Government has established the MSME Development Agency in April 2017, a coordinating and supporting agency, whose cross-sectoral mandate includes support to a more conducive business environment, direct and indirect enterprise-level interventions and improvement of the living standard, through community and small infrastructure development. The Agency's mandate requires the organization to become a recognized hub (Apex) institution playing the role of a facilitator and enabler, allowing all stakeholders to deliver against the Vision 2030's and National Strategy's objectives. This will be achieved by the provision of an open platform of trust, based on action-oriented knowledge translated into financial and non-financial support, allowing policy makers, socioeconomic development actors and the MSME support ecosystem to formulate and implement targeted initiatives improving: 1) the business environment, 2) the effectiveness of the support to MSMEs and entrepreneurs, as well as, 3) the resilience of communities paving the way to local socioeconomic growth. Following the establishment of MSMEDA, the parliament will endorse a new Law for MSMEs. It is expected that the new Law will grant tax and tariff incentives for MSMEs in addition to business development services. It will also create new measures to transform informal businesses into the formal economy. The General Authority for Investment and Free Zones (GAFI) is an institution, which plays a pivotal role in attracting investments to promote a competitive, balanced and diversified economy.

Some further implementation efforts could be addressed to further promote the "Environmentally Friendly Industrial Clusters" initiative aiming at establishing 22 "integrated industrial clusters". Additionally, MSMEDA, now, is coordinating an initiative to develop 13 clusters in 12 governorates, which aim at attracting industrial investments to these clusters and creating more job opportunities.

The description of the support institutional framework in Egypt is further expanded in the section 2.5.4.

2.4. Expected contribution to national objectives, ISID and SDGs

The PCP Egypt Diagnostics evidenced the potential of green industry and to alleviate regional disparities. It also emphasized a timely momentum for the PCP, with margins of improvements in terms of manufacturing development, technological intensity and the new wave of industry 4.0. Boosting industrial investments calls for a set of coordinated vertical (sectors oriented) and horizontal (across sectors) policy interventions. All these findings emerging from desk-based research and consultations work inspires the setting of strategic industrial strategy blueprint pillars for inclusive and sustainable industrial development:

a) Whole of government approach & capabilities – was added as a standalone pillar compared to the 2015 roadmap, considering the PCP Egypt Diagnostics findings on the major impact of governance on manufacturing and policy performance. The pillar aims at establishing the most efficient governance structure for manufacturing support and upgrading toward the 4IR;

b) Trade to value-added manufacturing - which builds on a sector prioritization strategy to most efficiently enhance manufacturing capabilities while leveraging existing ones;

c) 4IR readiness - added as a standalone pillar considering its strategic importance to compete globally in manufacturing and major gaps faced by Egyptian companies in this area. The pillar aims at identifying potential directions at the strategic and operational levels to support the dissemination of the 4IR, with a particular focus on traditional sectors;

d) Vertical with horizontal - which identifies priority policy areas to focus on in order to enable value-added manufacturing, industry-wide 4IR readiness and attract the right levels of domestic and foreign investment to make this happen;

e) Clean Production - added as a standalone pillar given the pressing need to further enhance the green transition of the sector and adapting it to the paradigm of the circular economy;

f) Zones to regional value-chain - which focuses on increasing the role of manufacturing in regional inclusiveness. It aims at identifying region-specific needs in terms of industrialization, while transitioning from zones to value-chains and exploring how industrial, sustainable and smart infrastructure can be leveraged to increase the attractiveness of regions.

Figure 5: Industry blueprint pillars

Strategic dimensions	Link with 2015 roadmap pillars	General vision to adopt
1. Whole of government approach & capabilities	**Added** to the blueprint as a standalone axis considering the major impact of governance on manufacturing and policy performance	The governance structure should enable **horizontal coordination** within the public sector. Stakeholders' interventions should be **rationalized, data-driven** and allow for **direct results assessment**.
2. Trade to value-added manufacturing	Aligned with two 2015 pillars*. Greater emphasis placed on **knowledge intensive sectors** with cross-cutting knowledge impact	Prioritize sectors which would most efficiently drive **knowledge manufacturing**, increase **complexity** and allow Egypt to **upgrade along GVCs** while **leveraging current** manufacturing **capabilities**.
3. 4th industrial revolution readiness	**Added** to blueprint as a standalone axis considering the major gaps faced by Egypt in this area and the significant risk to fall behind the 4IR wave.	At the **strategic** level, a paradigm shift is needed to include a 4IR **roadmap** in industrial policy including **sectorial strategies** to disseminate the 4IR in traditional sectors and **cross-sectorial enablers** such as skills.
4. Vertical with horizontal	Update from "Vertical to Horizontal" to "Vertical and Horizontal". Emphasis placed on **horizontal policy reforms** reconciled with sector specific actions	Focus on addressing **structural and policy barriers** common to all manufacturing sectors and sector specific conditions to **enhance determinants of investment attraction** toward manufacturing.
5. Clean production	**Added** to blueprint as a standalone axis given the emergency of adopting green manufacturing and circular economy principles to enable sustainable growth	Follow an **integrated framework** to enable the **green transition** of the manufacturing sector combining **regulation, firms' support, new technologies and skills enhancement** for sustainable manufacturing.
6. Zones to regional value-chains	Update of the **"zones to value-chains"** pillar to enhance spillovers between regions, integration in local value-chains and **cater to their specific needs**	The manufacturing sector should be an engine for **inclusive economic growth regionally**. **Sustainable and industrial infrastructure** development should be leveraged to enhance attractiveness of regions.

Source: UNIDO and Whiteshield Partners. Extracted from the PCP Egypt Diagnostics

These strategic pillars inspire the action for the multiyear PCP programme with specific focus areas:

a) Industrial policy and governance: the first focus area aligns with the "Whole of government approach & capabilities" pillar of the industrial blueprint. This focus area relates to the governance structure and projects to be adopted in order to enable an efficient and successful industrial policymaking process. The focus area should also emphasize capacity-building initiatives to bridge major capabilities gaps hindering the effectiveness of governance;

b) Sector focus: food, textile and leather, furniture, chemicals and plastics, electronics. The second PCP focus area relates to the vertical sector prioritization of the PCP and aligns with the trade to value-added manufacturing pillar of the industrial blueprint. The focus area revolves around the selected priority sectors: food, textile and leather, furniture, chemistry and plastics, electronics, to support the upgrading of manufacturing capabilities. It should include sector-specific projects to move along value-chains and enhance economic complexity and manufacturing value-added;

c) Mainstreaming the 4th Industrial Revolution: the third PCP focus area mirrors the 4IR readiness pillar. The focus area should include the establishment of an integrated strategic roadmap laying the ground for operational initiatives to enable the dissemination of 4IR in the Egyptian manufacturing sector;

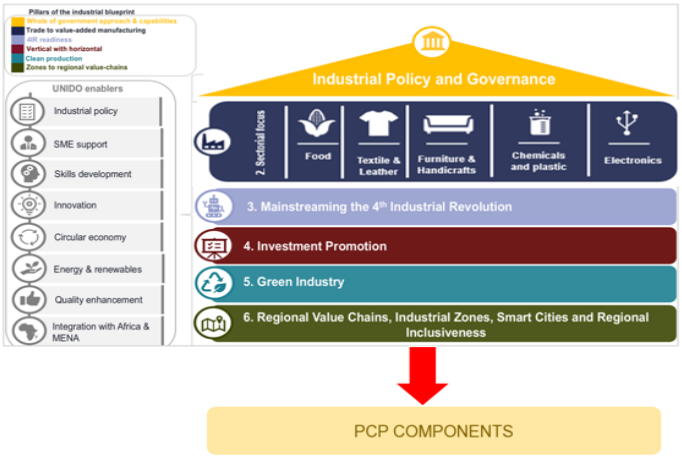
d) Investment promotion: the fourth focus area aligns with the "vertical with horizontal" pillar of the industrial blueprint. The focus area should aim at addressing structural and policy barriers common to all manufacturing sectors and sector specific conditions to enhance investment attraction – in particular FDI – towards the manufacturing sector. The focus should attract more knowledge-intensive, higher value-added FDIs enabling upgrading along GVCs, enhancement of manufacturing capabilities;

e) Green industry: the fifth focus area is linked to the "clean production" pillar of the blueprint. Projects of this focus area should build on an integrated framework to enable the green transition of Egyptian manufacturing and adapt to the circular economy model linking environmental policy with skills, innovation and technology enablers;

f) Regional value chains, industrial zones, smart cities and regional inclusiveness: the sixth focus area aligns with the "Zones to regional value-chains" pillar of the industrial blueprint. This focus area depicts the regional approach for manufacturing enhancement by adapting support strategies to the specific needs and capabilities of regions while leveraging their complementarity to support the transition toward regional value chains. The focus area should also utilize infrastructure to enhance regional industrialization and enable green and digital transitions at the regional level, through industrial zones with improved management, eco-industrial parks and Smart Cities applications.

These focus areas can be matched with the enormous set of expertise and services offered by UNIDO in terms of innovation, circular economy, industrial policy etc.

Figure 6: PCP focus areas



Source: Extracted from PCP Egypt Diagnostics, UNIDO and Whiteshield Partners, 2020

2.5 Partners interventions relevant to ISID

2.5.1. Inclusive and Sustainable Industrial Development (ISID)

During the 15th General Conference of the United Nations Industrial Development Organization, (UNIDO), in 2013, Member States have agreed in the Lima Declaration a new mandate for the Organization in order to accelerate Inclusive and Sustainable Industrial Development (ISID).

Achieving ISID requires the establishment of policies, strategies and regulatory frameworks designed to facilitate access to markets, create employment, attract foreign direct investment, modernize technology, increase exports, promote social inclusion, gender equality and ensure a sustainable environment.

UNIDO alone, as a relatively small agency, cannot achieve its mandate of Inclusive and Sustainable Industrial Development (ISID), and contribute towards the SDG 9:"Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation", a goal of particular relevance to ISID. With this recognition, UNIDO gives utmost importance to partnerships with various development actors, including other United Nations agencies, the business sector, global environmental financing mechanisms and IFIs/DFIs. In this framework, UNIDO developed a new approach for partnerships with Member States, the Programme for Country Partnership (PCP).

PCP Egypt is based on a multi-stakeholder partnership and aims at providing sustainable solutions for inclusive long-term industrial development in the country.

In November 2019, during the 18th Session of the General Conference of the United Nations Industrial Development Organization (UNIDO) held in Abu Dhabi, the United Arab Emirates, Member States recalled the "Lima Declaration: towards inclusive and sustainable industrial development", which laid the foundation for the development of Goal 9 to "build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation". They also affirmed industrial development as a central driver for economic growth, job creation, income generation, and social inclusion. In the same convened session, Member States reaffirmed their commitment to UNIDO, as a specialized agency of the United Nations with the mandate to promote international industrial cooperation and inclusive and sustainable industrial development and as central coordinator of ISID in the United Nations system. It has been welcomed UNIDO's crucial role in accelerating the achievement of Goal 9 along with all other industry-related goals of the 2030 Agenda.

In Abu Dhabi, the Programme for Country Partnership (PCP) has been also welcomed, as UNIDO's innovative and unique model for accelerating inclusive and sustainable industrial development (ISID) in Member States and recognized that the PCP supports participating States in achieving the SDGs and call on UNIDO to streamline actions towards the implementation of PCPs.

2.5.2. Sustainable Development Goals (SDGs)

In September 2015, the international community adopted the 2030 Sustainable Development Agenda, including the 17 Sustainable Development Goals (SDGs). The ambition and scope of the new Agenda requires the pooling of resources from diverse actors through multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the SDGs, in particular in developing countries. SDG 17 "strengthen the means of implementation and revitalize the global partnership for sustainable development" confirms the central role of partnerships in fulfilling the 2030 Agenda. Aligned with this understanding, through the Lima Declaration adopted at the 15th Session of the General Conference in 2013, as well as the Abu Dhabi Declaration adopted at the 18th Session of the UNIDO General Conference in 2019, UNIDO Member States called on the Organization to strengthen development partnerships. UNIDO believes that ISID harnesses the full potential of industry to contribute to lasting prosperity for all.

Partnerships for ISID are therefore an integral part of achieving UNIDO's vision and place the Organization at the helm of fulfilling the Sustainable Development Goals. Both the 2030 Agenda and the Organization's mandate for ISID place partnerships at their core. Development cooperation is no longer conducted primarily between countries and development organizations.

Figure 7: United Nations Sustainable Development Goals

New forms of collaboration are shaping between inter alia countries, civil society, international organizations, financial institutions and the business sector, leveraging resources from various actors to allow for more scalable and sustainable development results. Partnerships are vital to SDG 9 "build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation", a goal of particular importance to UNIDO and its mandate for ISID. SDG 9 stresses the relevance of industrial development for developing countries as a key source of economic growth, economic diversification and value addition. UNIDO's work links directly with many of the targets under SDG9, including raising industry's share of employment and gross domestic product, improving access to finance for small businesses, making industry clean and resource-efficient, and much more.

The Programme for Country Partnership (PCP) is UNIDO's innovative model for accelerating ISID in Member States and, as such, it is the cornerstone of UNIDO's revitalized partnership approach. The PCP provides a framework for the pooling of expertise and resources from different partners to achieve greater development impact. Aligned with the national development agenda and focused on sectors with high growth potential, the programme supports a country in achieving its industrial development goals. The PCP is a multi-stakeholder partnership that brings together the national government, United Nations agencies, financial institutions, the business sector and other development partners. It is designed to leverage additional finance and investment in priority sectors or areas essential to the government's industrial development agenda.

In particular, partnerships with International Finance Institutions (IFIs)/Development Finance Institutions (DFIs), business sector firms and business associations are important to secure the resources required for large-scale, sustainable and inclusive industrial projects. The PCP systematically incorporates partners at each stage of the process: initiation, programming, implementing, and completion, creating synergies among the different interventions.

2.5.3 The United Nations Partnership Development Framework in Egypt (UNPDF)

The United Nations Partnership Development Framework (UNPDF) 2018-2022 is the UN cooperation framework with the Government of Egypt for the upcoming five years. It helps achieve the ambitious goals highlighted in the Egyptian Sustainable Development Strategy: Egypt Vision 2030, as well as contributing to the 2030 Agenda for Sustainable Development and Sustainable Development Goals (SDGs).

The UNPDF 2018-2022 in Egypt includes four outcomes:

1) Inclusive Economic Development: It helps national efforts to adopt inclusive and sustainable development pathways and achieve agreed targets for inclusive, sustainable, resilient and job rich economic development;

2) Social Justice: It supports in regulating population growth and assure sustainable access of all people in Egypt to public services notably quality, inclusive, and rights-based social protection, health, nutrition and education services;

3) Environmental Sustainability and Natural Resource Management: It assists in managing Egypt's natural resources and its urban environments, in an inclusive, sustainable, efficient, and productive manner and mitigate environmental hazards and climate risk;

4) Women's Empowerment: It supports national efforts that aim to ensure women are fully contributing to Egypt's development and all women and girl's rights are respected, protected and responded to with no discrimination.

UNIDO role in Egypt is fully aligned with the UNPDF, through implementing programmes and projects aiming at promoting inclusive and sustainable industrial development. UNIDO is currently implementing fourteen technical cooperation projects, of which five are regional projects, with a total budget of around USD 35 million. The PCP responds to the UNPDF through six components. Additionally, the PCP will link manufacturing more closely with growth of value-added exports and transform some imports into local manufacturing opportunities. Moreover, it will leverage targeted investment promotion to ensure that Egypt benefits from all dimensions of the 4th Industrial Revolution, namely digital factories, skills transformation, and the circular economy. UNIDO through its new PCP in Egypt will contribute directly to three outcomes of the UNPDF. The below table outlines the response of PCP's components to the UNPDF Egypt 2018-2022 outcomes.

Table 2: PCP-Egypt contribution to UNPDF 2018-2022

PCP Components	UNPDF 2018-2022 Outcomes			
	Outcome 1: Inclusive Economic Development	Outcome 2: Social Justice	Outcome 3: Environmental Sustainability and Natural Resource Management	Outcome 4: Women's Empowerment
Industrial Policy and Governance	✓		✓	✓
Investment Promotion	✓			
Green Industry			✓	
Smart Cities & Sustainable Parks			✓	
Value Chains	✓			✓
Mainstreaming Industry 4.0	✓		✓	

In addition to that, the UNIDO Country Diagnostics prepared in the framework of the PCP will contribute to the preparation of the Common Country Analysis (CCA) of the new UNPDF in Egypt. The PCP Egypt Diagnostics includes a clear roadmap for inclusive and sustainable industrial development in Egypt, from which the CCA report could build evidence-based analysis and policy recommendations. Moreover, the PCP will build synergies between all UN agencies to work altogether on strategic issues related to the industrial sector in Egypt. This will ensure coherence in action and upscale mainstreaming and complementarities.

2.5.4 Egyptian institutional framework related to ISID

Many public and private sector institutions form the institutional setup of the industrial sector development in Egypt. The Prime Minister is responsible for policy making of overall economic and industrial development in coordination with all relevant stakeholders, in addition to monitoring performance of all ISID related ministries. At the same time, the Ministry of Trade and Industry (MTI) and its affiliated agencies design and implement the national industrial policies. On the other hand, the Ministry of Finance and the Ministry of Planning and Economic Development are mandated to manage the government budget including public funds allocated for industrial development projects.

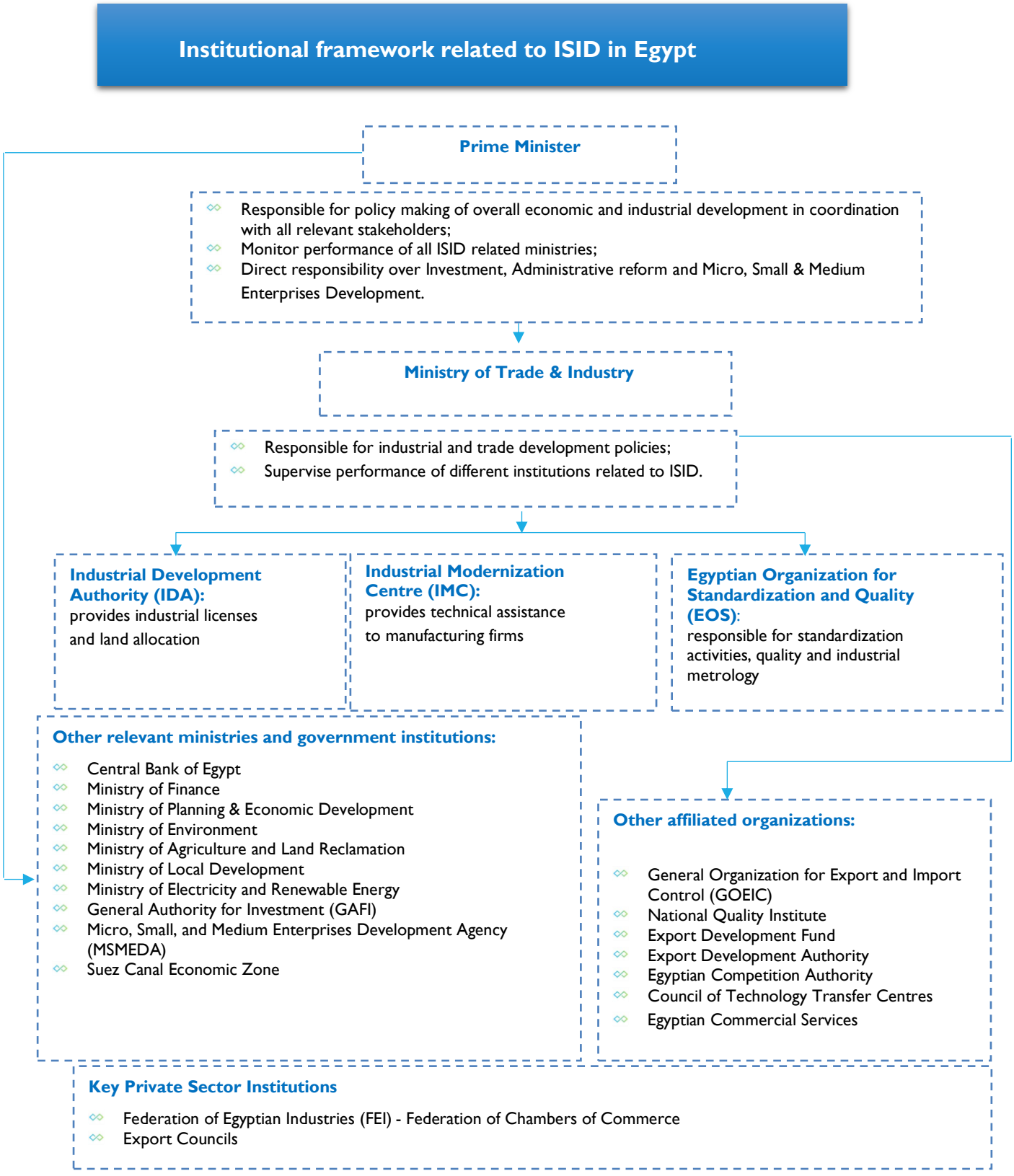
Other important ministries and public & private support institutions are related to ISID in Egypt, as listed in the below table and further schematically outlined in the sequence diagram (Figure 8):

INSTITUTION	PRIORITIES RELATED TO ISID
Ministry of Trade and Industry	The Ministry's mandate is to ensure that industrial development plays a major role in sustainable and inclusive economic development of Egypt. The Ministry's focus is to meet domestic demand and enhance exports to enable Egypt in becoming a key player in the global economy and adjusting to international developments. MTI set out industrial development strategies and priority industrial sectors, industrial growth goals and focus areas in line with national development strategies. MTI implements its policies in the areas of industrial land allocation, industrial infrastructure, private sector development, trade and industrial investment promotion, energy and green economy, and quality infrastructure through its affiliated entities listed in section 2.3 and others.
Ministry of International Cooperation	The Ministry promotes international cooperation partnerships and mechanisms towards overall economic development of the country and supporting its regional role. Core activities include engaging with international and regional organizations as well as representing a national economic advisory body.
Ministry of Public Business Sector (MoPBS)	MoPBS oversees 8 holding companies and 119 state-owned enterprises and has the mission to ensure their profitability and competitiveness. It looks at regulatory reforms, including labour and compensation policies that would allow for a more liberal sharing of profits, in turn helping encourage the cultural shift needed by creating a sense of ownership among employees, through linking compensation to performance. In 2019, the Ministry began implementing a privatization program and state-owned public companies were selected to make initial public offerings of their shares. The privatization programme plans to sell stakes in 23 state-owned companies. Under proposed amendments to the Public Enterprises Act, private-sector companies would be allowed to own stakes of just under 50 percent in the Public Enterprises Ministry's holding companies.

Ministry of Higher Education and Scientific Research	The primary function of this Ministry is to develop and monitor all the higher education-related policies. The Ministry is responsible for the educational activity in Egyptian universities, both public and private. The Ministry realizes this function through three executive bodies, namely the Supreme Council of Universities, the Supreme Council of Private Universities and the Supreme Council of Technical Institution.
Ministry of Local Development (MoLD)	The Ministry is the Egyptian government body responsible for coordination between the central government and the 27 governorates and supporting decentralization initiatives. MLD is also responsible to initiate projects aiming to raise the citizens' standard of living.
Ministry of Agriculture and Land Reclamation	This Ministry is the result of a merge between the Agrarian reform and Land reclamation Ministries and it is in charge of agriculture and land reclamation in Egypt. It is responsible to handle all agricultural matters.
Ministry of Petroleum	The Ministry's strategy is to meet domestic demand for petrochemical products and to achieve the targets of national economic growth through the optimization of natural resources. Through this strategy, the Ministry is working on a petrochemical sector expansion plan to support for the plastic industry among others. The Egyptian Petroleum Research Institute is one of the ministry's affiliates that provides research and testing services.
Central Bank of Egypt (CBE)	CBE's mandate goes beyond implementing monetary policies. CBE is currently creating incentives for banks to lend to MSMEs, and it obliged Egyptian banks to loan out 20 percent of their total portfolio to SMEs. This aims to provide 350,000 SMEs with the opportunity to access USD 12.6 billion in four years at a five percent interest rate. Furthermore, the CBE is setting up an export company, bringing in commercial banks and other partners to support Egyptian companies to reach international markets. Other initiatives of the CBE include, for example, setting up BDS hubs and vocational training centers in collaboration with government institutions, other banks, universities, and the private sector.
General Authority for Investment (GAFI)	The General Authority for Investment and Free Zones, which is mandated with investment, and free zones as well as investment promotion in general, reports directly to the Prime Minister. GAFI is the principal governmental body regulating and facilitating investments in Egypt. GAFI is the regulatory body for joint stock, limited liability and sole proprietary companies. Incorporation of these companies are conducted at GAFI and its role is also to authenticate the general assemblies and board of directors meeting minutes. GAFI's functions include, but are not limited to, investment promotion and facilitation, business matchmaking, investor aftercare, dispute settlement, research and market intelligence. Its mission is to enable and sustain Egypt's economic growth through investment promotion, facilitation, efficient business services and advocacy of investor-friendly policies and the facilitation of the growth of MSMEs through the establishment of a one-stop shop providing a wide range of services for start-ups. GAFI is a main regulatory authority for industries located in free zones and investment zones.
General Authority for Suez Canal Economic Zone	The Suez Canal Authority is a public and independent authority reporting to the Prime Minister. It has all the authorities needed for running the Suez Canal Economic Zone (SCZone). The SCZone, as one of several megaprojects in Egypt, is a top priority for the GoE and it can be regarded as a world-class free zone and trade hub along the banks of the newly-expanded Suez Canal. The SCZone is particularly targeting export-oriented investors. Products manufactured within the zone are considered "Made in Egypt" and can be sold in the local market. There are no restrictions for Egyptian companies to supply companies within the zone.
Small, Medium and Micro Enterprise Development Agency (MSMEDA)	The Micro, Small & Medium Enterprises Development Agency is affiliated to the Prime Minister and it is the entity concerned with the development of MSMEs and entrepreneurship, either directly or through the coordination of efforts of all relevant stakeholders and civil associations and initiatives, or through the establishment or participation of companies.

Egyptian Environmental Affairs Agency (EEAA)	The Agency, affiliated to the Ministry of Environment (MoE) is mandated to define environmental policies, set priorities and implement initiatives within a context of sustainable development. This includes developing and monitoring environmental projects, and implementation of pilot projects.
The Environmental Compliance and Sustainable Development Office (ECO)	ECO, affiliated to the Federation of Egyptian Industries (FEI), provides consultancy services to the industry sector in the field of environmental compatibility, environmental management systems, energy conservation and renewable energy in order to raise the efficiency of the national industry. It also introduces the principles and technologies of cleaner production, strengthens the local competencies and capabilities, and supports competitiveness. ECO worked with several development agencies and financial institutions on RECP, gender diversity in industry and renewables and compliance. Egyptian business associations and industries chambers provide platforms for businesses and industries to collectively co-ordinate with relevant government authorities and protect their combined interests.
Waste Management Regulatory Authority (WMRA)	WMRA's mandate is to plan and enforce regulations on solid waste management activities in Egypt, to achieve sustainable development.

Figure 8: Sequence Diagram of Institutional Framework related to ISID in Egypt[3]



[3] For graphic purposes, illustrative and not exhaustive representation of the Egyptian Institutional Framework related to ISID.

2.5.5. Financial institutions

UNIDO's Partnerships with Financial Institutions

Cooperation with Financial Institutions (FIs) is a key component of UNIDO's Partnership Strategy as it enables the leveraging of resources towards the achievement of its ISID mandate. In such partnerships, technical assistance interventions by UNIDO facilitate larger flow of public and private investment towards ISID and the Global Development Agenda, thereby triggering stronger impact on the ground. Moreover, UNIDO acts as neutral and honest broker, while maintaining the ability to convene relevant stakeholders. In this way, integrated partnerships enhance synergies between the works of all.

In September 2019, the UN Resident Coordinator in Egypt hosted a consultation meeting for DFIs jointly with UNIDO PCP Team on mission in Cairo to brief the donor and financial communities about the PCP general approach and further focusing on PCP Egypt. The World Bank Group, IFC, Afreximbank, EBRD, and IFAD were represented at high level. The UN Resident Coordinator stressed the importance of PCP implementation for Egypt to enter a growth-equality development path and tackling sustainable development. As a result, the DFIs and IFIs have expressed their full support to PCP development and adhered as partners of the PCP. They showed willingness to support both the programming phase, through studies previously carried out, and the implementation phase, through leveraging UNIDO efforts with soft loans for PCP components

As per preliminary research and consultations, a set of FIs were identified as the potential partners within the scope of the PCP Egypt.

PARTNER NAME	PRIORITIES
African Development Bank	The African Development Bank (AfDB) is a regional financial institution that aims to spur sustainable economic development and social progress in its regional member countries. While AfDB is expected to introduce its new Country Strategy for Egypt soon, the Bank's Country Strategy for Egypt (2015-2019) is built on two priority pillars: • Infrastructure for private sector competitiveness and sustainable and inclusive growth; • Governance for enhanced transparency, efficiency and fairness and increased private sector participation.
African Export-Import Bank	Headquartered in Cairo, the African Export-Import Bank (Afreximbank) provides financing to governments and the private sector towards the expansion and diversification of African trade. As of 2019, Afreximbank is reported to invest around USD 2.3 billion in Egypt. While there is no available information online on the priority sectors of the Bank for Egypt, according to recent news[4], energy is one of the main sectors the Bank invests in. The same news also indicates that 90% of Afreximbank's investment is addressed to Egypt's local banks, which then invests in variety of projects.
Agence française de développement - French Development Agency and Proparco	French Development Agency (AFD) is a public development bank with a mandate to help France's partners along the pathway towards a sustainable world. Proparco is the private sector lending arm of the AFD. AFD focuses on the following areas in Egypt: • Promoting renewable energies • Easing congestion in cities through modern and less polluting public transport • Increasing access to water supply and sanitation

[4] https://weetracker.com/2019/08/07/egypt-has-gotten-usd-2-3-bn-worth-of-investments-from-the-afreximbank

PARTNER NAME	PRIORITIES
European Bank for Reconstruction and Development	The European Bank for Reconstruction and Development (EBRD) is a multilateral financial institution that is owned by 67 countries from five continents, as well as the European Union and the European Investment Bank. In Egypt, the EBRD has the following priorities: • Support Egypt's private sector competitiveness through stronger value chains, improved access to finance for SMEs and increased economic opportunities for women and young people; • Improve quality and sustainability of Egypt's public utilities through private sector participation and commercialization; • Support Egypt's green economy transition; • Strengthen governance and level the playing field for all businesses; • Gender equality and youth inclusion.
European Investment Bank	The European Investment Bank (EIB) is the lending institution of the European Union (EU), owned by the EU's 28 member states. The Bank works closely with other EU institutions for the implementation of the EU policies, with the leading priority of promoting European economic development and integration. So far, the EIB supported Egypt's transition to a modern economy by financing key water, sanitation and transport infrastructure and by enhancing access to finance of SMEs. Egypt also benefits from the EIB's EU Initiative for Financial Inclusion, through which EIB invests in Egypt Mid-Cap, a private equity fund investing in local SMEs. Egypt is also eligible for the EIB's Economic Resilience Initiative, offering loans and financial products, while blending funds from the donor community with EIB Financing in areas of key infrastructure and private sector development. [5]
Export-Import Bank of Korea	The Export-Import Bank of Korea was established with aims to facilitate the development of Korea's economy and enhance economic cooperation with foreign countries through the provision of financial supports for export and import transactions, overseas investments projects, and the development of overseas natural resources. The Bank is active in Egypt in infrastructure and SME development.
Islamic Development Bank and International Islamic Trade Finance Corporation	The Islamic Development Bank (IsDB) is an international Islamic Financial Institution. Founded in 1975, the Bank has 57 member countries. IsDB aims to foster economic development and social progress of member countries and Muslim communities, in accordance with the principles of the Shari'ah (Islamic Law). IsDB provides finance to Governments of its member countries as well as the private sector. The priority areas of the IsDB investment in Egypt are: • Infrastructure; • Youth employment; • Job creation. The International Islamic Trade Finance Corporation is an autonomous entity within the Islamic Development Bank Group created with the purpose of advancing trade to improve the economic condition and livelihood of people across the Islamic world. Egypt and ITFC signed an agreement in January 2018 and part of that agreement is support to UNIDO-implemented "Better Cotton Initiative".
Export-Import Bank of China	Export-Import Bank of China is a state-owned policy bank. While the priority sectors of the Bank for Egypt are not publicly available, cooperation prospects could be explored across all components of the PCP.

[5] For more info on the Economic Resilience Initiative please refer to: https://www.eib.org/en/projects/initiatives/resilience-initiative/index.htm

PARTNER NAME	PRIORITIES
Kreditanstalt für Wiederaufbau and Deutsche Investitions- und Entwicklungsgesellschaft	Kreditanstalt für Wiederaufbau (KfW) is a development bank owned by the German government. Deutsche Investitions- und Entwicklungsgesellschaft (DEG) is the private sector lending arm of the KfW. Priority areas of KfW in Egypt are as follows: • Local water supply and irrigation, solid waste; • Promoting the energy sector; • Promoting employment and private sector development
World Bank Group	The World Bank is the world's largest Financial Institution that provides low interest lending, interest free or low interest credits, and grants to developing countries. World Bank, a part of the World Bank Group, consists of the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA). While the WB focuses on public sector finance, International Finance Corporation (IFC) is the private sector lending arm of the WBG. The WBG's current engagement is guided by the Egypt Country Partnership Framework (CPF) 2015–19, which has been extended until 2021. The CPF, comprises three interconnected strategic focus areas that are consistent with the Government of Egypt's longer-term development strategy: • Improving governance; • Improving opportunities for private sector job creation; • Social inclusion. The WBG also aims to focus at mobilizing finance for development/cascade approaches, human capital development, and enable the transition to a digital economy. The CPF supports also the key goal of the Bank's Regional Strategy, which is "the Renewal of the Social Contract". This is done by: • Addressing regional disparities through the Bank's interventions in Egypt's lagging regions; • Strengthening the country's social safety net system; • Improving accessibility to low-income housing; • Expanding access to water and sanitation services (especially in rural areas) and household natural gas; • Moving forward the implementation of the education and health reform programs.

2.5.6. Business sector

UNIDO's Partnerships with the Business Sector

Globally, the current trends of rapid digitization and related technological developments in industry are changing ways of doing business. While the 4th Industrial Revolution might pave the way for increased efficiency and growth, its impact on the employment landscape and future qualification requirements is difficult to anticipate. As entire industries adjust, some jobs are threatened by redundancy, while others grow rapidly. Furthermore, current consumption patterns are putting increasing pressure on natural resources and leading to a situation where planetary boundaries are under threat. It is therefore increasingly critical for businesses, governments and individuals to fully seize the opportunities presented by these trends and to mitigate undesirable outcomes. Today's global industry trends require new and innovative forms of development cooperation. In recent years, FDI inflows have been greater than official development assistance resources. Private investment and business sector involvement are crucial in accelerating development, as highlighted by SDG 17, which calls for multi-stakeholder partnerships to solve today's development challenges.[6]

[6] SDG Goal 17: Revitalize the global partnership for sustainable development, https://www.un.org/sustainabledevelopment/globalpartnerships/

In this context, we are also witnessing the blurring of boundaries between the public (government), private (business) and development (nonprofit) sectors as many pioneering "for-benefit" organizations are blending social and environmental aims with business objectives.

In November 2019, UNIDO adopted the Abu Dhabi Declaration, which builds on the Organization's mandate to advance ISID around the world. The Declaration underlines the crucial role of collaborative efforts with the private sector, in order to harness the full potential of the 4th Industrial Revolution (4IR), inter alia by scaling up UNIDO programmes for developing countries that support technological learning, technology transfer, and innovation, in particular for SMEs, women and the youth.[7]

According to the PCP Egypt Diagnostics, manufacturing exports have been strongly increasing in Egypt over the last decade both in absolute values and in terms of share in total exports. In terms of foreign investments, FDI inflows in Egypt have been increasing during the past 5 years. Despite this strong growth, the manufacturing sector in Egypt only attracts 10% of total inward FDIs, the large majority of which goes to the petroleum sector (67,3%). The services sector also attract a larger share of inward FDIs (11,2%)[8].

Furthermore, the manufacturing sector in Egypt, which still remains SMEs-intensive, has a significant potential to act as an engine of sustainable and inclusive growth but it has yet to achieve its full potential in economic, social and environmental performance.[9] Finally, the Report states that although an increasing trend, the integration of Egypt in Global Value Chains (GVCs) remains lower than other North African countries. Furthermore, in June 2019, UNIDO organized a national joint consultation workshop that brought private sector together with government institutions and think-tanks to kick off a public private dialogue in the frame of PCP and to help define private sector priorities, which would be leveraged by the PCP.

Based on the above issues outlined in the PCP Egypt Diagnostics, the main entry points for business sector involvement in the PCP Egypt components can be summarized as following:

- Component 1 - Industrial Policy & Governance: engaging with *national and foreign industry representations* (e.g. industry associations, chambers of commerce) for partnerships focusing on capacity building and support in policymaking processes;
- Component 2 - Investment promotion: collaborating with private sector representation focusing on enhancing investment climate, as well as partnering with the private sector and business development agencies to promote integration with Africa and Arab region and embarking on regional value chains. Collaborating with *multinational companies* for 4IR dissemination;
- Component 3 - Green industry: working jointly with *multinational enterprises* on skills, innovation and technology transfer and enabling the transfer of knowledge to *Egyptian national companies* and workforce;
- Component 4 - Smart cities and sustainable parks: collaborating with *infrastructure investors* and enterprises managing industrial zones for capacity building;
- Component 5 - Value chains: working with *national and multinational companies* on competitiveness, Environmental, Social and Governance (ESG) improvement;
- Component 6 - Mainstreaming Industry 4.0: collaborating with *private sector technology leaders* in the area of 4IR technology and knowledge transfer and investment.

[7] Abu Dhabi Declaration, https://www.unido.org/sites/default/files/files/2019-11/UNIDO_Abu_Dhabi_Declaration.pdf
[8] UNIDO, CIP database, Central Bank of Egypt
[9] Country Diagnostics Report for the Egypt Programme for Country Partnership (PCP)

PCP Egypt will implement a 3-steps filtering and scoring approach to facilitate the selection of projects and alignment of priorities of the different stakeholders and partners. One of the filtering questions examines "to what extent does the project promote better collaboration between the public and private sectors to address industrial challenges." With this question in mind and taking into account the listing of potential business sector entities presented above, the following table presents a preliminary inventory of the most potential business sector partners for PCP Egypt.

A more detailed partner-mapping plan is presented in annex 2.

At *international level*, the United Nations Global Compact (UNGC) has officially launched its local network in Egypt in 2004 consisting of 98 participants. Many of the companies are from PCP Egypt's priority sectors. UNIDO and the UN Global Compact have been cooperating closely in the past years and it is recommended to consult the *UN Global Compact Local Network in Egypt*, especially during the during the PCP formulation phase[10].

Once the partnering opportunities of PCP Egypt are known in the programming and implementation phases**,** the *foreign Chambers of Commerce* will be mobilized.

Furthermore, the following *multinational companies*, technology leaders and investors will be consulted on a bi-lateral basis[11]:

PARTNER NAME	PRIORITIES
BASF	(i) Chemicals; (ii) Materials; (iii) Industrial Solutions; (iv) Surface Technologies; (v) Nutrition & Care; (vi) Agricultural Solutions
Benetton Group	(i) Textile industries; (ii) Leather and Leather tanning industries; (iii) Value chains
Etisalat Misr	(i) Telecommunications; (ii) Information technology; (iii) Internet of Things
Export Development Bank of Egypt	(i) SMEs; (ii) Investment promotion;
Filmar S.p.A	(i) Textile industries; (ii) Leather and Leather tanning industries; (iii) Value chains
Giza Systems	(i) Internet of things; (ii) Telecommunication; (iii) Transportation; (iv) Technology infrastructure; (v) Smart building;
Huawei	(i) Information and Communications technology; (ii) Internet of things; (iii) Industry 4.0 (iv) Smart Cities; (v) Skills Development
Inditex	(i) Textile industries; (ii) Leather and Leather tanning industries; (iii) Value chains
Lenzing AG	(i) Textile industries; (ii) Leather and Leather tanning industries; (iii) Machinery, equipment and technologies; (iv) Chemicals
National Bank of Egypt	(i) Key strategic economic sectors including oil, energy, electricity, gas, telecommunications, air transportation, tourism and contracting; (ii) Support to SMEs
Siemens	(i) Smart cities; (ii) Industry 4.0; (iii) Electronics; (iv) Chemicals; (v) Power Utilities; (vi) Transportation; (vii) Machinery and Plant Construction
ZDHC Foundation	(i) Reducing industry's chemical footprint; (ii) Textile industries; (iii) Leather and Leather tanning industries; (iv) Value chains

[10] For the 98 members of the network, consult: https://www.unglobalcompact.org/engage-locally/mena/egypt
[11] This list is indicative and refers to the companies already collaborating with UNIDO.

3. THE STRUCTURE OF THE PROGRAMME AND ITS COMPONENTS

UNIDO PCP Egypt, as outlined in previous chapter 2, is aligned with Egypt Vision 2030, the UNPDF Egypt, UNIDO's ISID priorities and its technical cooperation framework.

According to UNIDO's strategy, "the main thrust behind the proposed programme approach and its business model is to mobilize multi-stakeholders" partnerships and their resources in synergy with UNIDO's technical cooperation, with the ultimate aim of contributing to accelerate the recipient countries' national programme for Inclusive and Sustainable Industrial Development".

According to the recommendations of the national counterpart, the PCP technical assistance is planned, where it is expected to have the largest impact and to create synergies with national programmes, executed by the Egyptian government and/or its partners, so that additional investments towards ISID can be leveraged from private and public sector partners.

The objective of PCP Egypt will be then in line and consistent with the UNIDO's ISID mandate to extend the impact of UNIDO's technical cooperation and accelerate inclusive and sustainable industrial development in the country. Accordingly, UNIDO's objective of PCP Egypt should carry the approach forward to foster achievement of SDG9, as it embeds the features put forward in the UN Agenda 2030 for sustainable development, i.e. country leadership and partnerships.

A preparatory phase for the formulation of the PCP programme has been implemented from April 2019 to March 2020. During this preparatory phase, UNIDO and the Government of Egypt, have initiated the partnership approach to develop the programme in order to identify synergies between partner programmes and PCP interventions.

UNIDO has established a systematic and continuous consultation process with the Egyptian counterparts, national stakeholders, international strategic donors and core partners at the international, national and local level.

This consultation process has assisted UNIDO in shaping the areas of intervention, in developing cooperation schemes within the PCP, and initiating and building up relevant partnerships for future implementation. For this purpose, UNIDO has mobilized experts from its various specialized departments: Agribusiness development, Technology Trade and Innovation, Smart Cities and Industrial Parks, Energy and Climate Change, Environmental Management and Partnerships, in order to design and further implement the Programme.

PCP Egypt, as aforementioned, will benefit of the experience and lessons learnt from previous PCPs currently implemented in six countries. Benefiting of those lessons learnt, UNIDO Guidelines on the Programme for Country Partnership (AI/2018/01) have been issued in February 2018, to support a structured intervention of PCP in new beneficiary countries.

The purpose of the new administrative instructions has been to clearly outline the different phases of the Programme for Country Partnership (PCP) and to define the tasks, roles and responsibilities of UNIDO staff throughout the lifetime of the programme in order to meet the expectations of the PCP beneficiary country.

The ownership principle is also of primary relevance in the UNIDO Technical Cooperation guidelines: "The recipients of UNIDO services bear a primary responsibility; they must ensure that the activities being promoted relate to the country's development goals and priorities. They must also assume a leading role in mobilizing funds from various sources given the decentralized nature of donor funding and country-level decision-making, as well as the importance of demonstrating ownership and the high priority the recipient country gives to the project".

UNIDO's evaluation of pilot PCPs has also raised a number of issues in the design and implementation of the programmes, which will need to be taken into account for PCP Egypt, to ensure successful impact of this programme in the country. UNIDO will keep advising and accompanying the Government in the implementation of large-scale PCP projects, however the mobilization of required investments to extend the impact of UNIDO's technical cooperation and accelerate inclusive and sustainable industrial development is the ultimate responsibility of the Government.

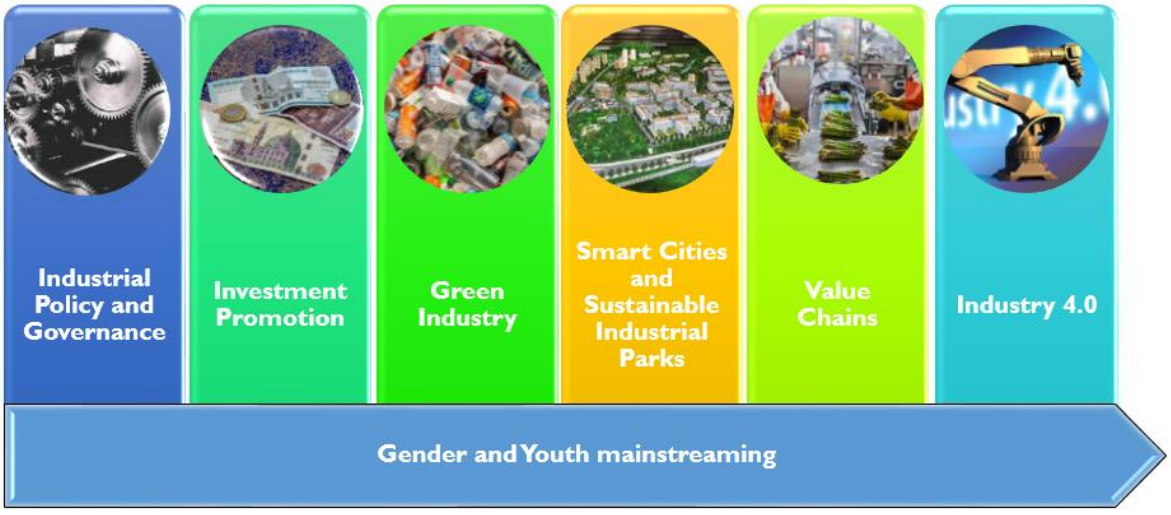
Resource mobilization is a lengthy time-consuming process and particular efforts have been deployed to create the appropriate organizational set-up to strengthen the country in the mobilization of funding, through the establishment of the three-tier National Coordination Body (NCB) that includes the resource mobilization function, as well as a UNIDO PCP Coordination Unit to support the smooth implementation of the Programme, in close cooperation with the UNIDO Regional Hub in Egypt.

Along with the recommendations of the UNIDO PCPs Evaluation, and in order for the PCP to succeed, a strong UNIDO country presence is paramount for the implementation of the Programme. The evaluation also recommended to give the private sector a stronger voice in the PCP at the country level, in order to facilitate large-scale private investments, hence its full representation in the National Coordination Body.

All PCP technical components are in line with the Government priorities and must be seen as facilitators of large-scale PCP flagship programmes, directly supporting the achievement of PCP objectives aligned with Egyptian Government priorities.

The UNIDO PCP structure will focus on priority sectors such as: chemicals, electronics, food, textiles & leather, furniture and handicraft and it is organized around six components: Industrial Policy and Governance, Investment Promotion, Green Industry, Smart Cities & Sustainable Industrial Parks, Value Chains, Mainstreaming Industry 4.0. Synergies between components are fostered at design level and will be further enhanced during the overall implementation of PCP Egypt. All components of PCP Egypt have been developed since the earlier preparatory and design phases according to a participatory approach involving national stakeholders. At this purpose, each component has been fully reviewed and finalized, as per recommendations of the focal points nominated by the Egyptian PCP counterpart. During the implementation of the Programme, the two streams of work will strengthen each other and all efforts will be made to ensure appropriate synergies and coordination of services between components at technical and regional levels. Particular attention has been paid to strengthen team relations during the whole preparatory phase, through team missions and several joint, individual and online meetings, among technical cooperation project managers, between them and respective focal points in Egypt, as well as with potential national and international partners.

Figure 9: PCP Egypt intervention through six components



As recommended by the UNIDO evaluation, interaction with DFIs will be backed by strong support from UNIDO headquarters and for this purpose, dedicated efforts will be deployed by UNIDO Partnerships services to match accountability with the necessary flexibility and availability of resources. As in the case of Partnership services, also gender and youth cross-cutting support will be embedded in PCP Coordination, to ensure mainstreaming throughout all PCP projects at awareness, planning and monitoring of implementation levels.

In order to improve the planning and monitoring of the PCP framework, a dedicated support will be also sought from UNIDO Statistics services, to support the full PCP implementation and monitoring, in defining and implementing Key Performance Indicators (KPIs) to optimize and measure results and impact, ultimately allowing management consistency, clarity and aggregated reporting of results.

The following sections provide an overview of each PCP component in the implementation phase, building on the recommendations of the Egyptian PCP counterpart and funding potentials of partners and donors.

The provided information is the outcome of several meetings between UNIDO technical departments' experts and their counterparts in the field, through direct online communications and team missions carried out since August 2019 till the beginning of March 2020, in the framework of UNIDO team mission in Egypt for the validation by the NCB of the formulated PCP programme document.

3.1 Component: Industrial Policy and Governance

The Industrial Policy and Governance component builds on the UNIDO diagnostics report produced for PCP Egypt. The PCP Egypt Diagnostics report lays out a number of policy areas, some of which will be addressed by this component and others, which will be handled by different UNIDO departments. For instance, innovation will be covered by this component, while policies relevant for clean production is dealt with by the Department of Environment.

The focus of the Industrial Policy and Governance component will therefore primarily be on horizontal policies, that is, policies with an impact across sectors and activities. An exception concerns value chains (VCs), where the Department of Policy, Research and Statistics (henceforth PRS) has accumulated considerable expertise. For VCs, also vertical policies will be addressed. At the request of the Government of Egypt, the Industrial Policy and Governance component will not only support the design of an industrial policy, but the industrial strategy as well.

The role of the state in industrial policymaking may be seen to range from passive and facilitating to that of active and interventionist. The few countries that have managed to (rapidly) move from low and middle to high-income level have tended to have an active State.[12]

An active State is associated with providing the conditions for going beyond activities dictated by the country's comparative advantage and creating activities that are technologically intense, thus building technological capabilities in the process. However, such an approach could be riskier than, solely relying on fundamentals (e.g. comparative advantage).

Three strategies for implementing the policy will be laid out. They differ in the degree of ambition and boldness, and consequently the activity degree of the State. A "strong" State, able to withhold pressure from interest groups, may opt for a strategy building on intervention. Nevertheless, a strategy carrying a combination of fundamentals and great ambitions can be adopted. Productivity growth is at the centre of rapid economic development and common across possible strategies is therefore a focus on technology and productivity.

[12] Typical successful examples refer to the so-called East Asian Miracle/Tiger economies, i.e., Republic of Korea, Singapore, Taiwan (Province of China) and Hong Kong (SAR of China).

From that, it follows that technological change and innovation are also prime concerns of industrial policy. This leads to the importance of understanding and measuring productivity, and preparing Egypt for the 4th Industrial Revolution (4IR).

Another dimension closely associated with rapid growth is expansion and diversification of exports. Exporting is a conduit for learning-by-doing and technological spillovers. In addition, a vast literature is highlighting the close relation with productivity performance, where a condition for entering export markets is strong performance. Another source of technological spillover is foreign direct investment (FDI) and actively pursuing an increase in FDI inflows would thus cater to faster productivity growth.

The Industrial Policy and Governance component will thus have a strong focus on productivity and competitiveness, 4IR and innovation, as well as VC development, investment promotion and export diversification. It is expected that the state will be an active actor and not just a facilitator.

Importantly, a focus on these topics does not necessarily suggest neglect of other areas highlighted in the PCP Egypt Diagnostics - these are without doubt crucial elements in economic development.

However, there is a need to delimit the scope and rank amongst priority areas and identify a starting point.

The impact of a successful productivity and technology strategy is that resources will be rapidly created, allowing for the inclusion and prioritization of evermore focus areas. Equal important is to note that PCP components of a more "specialized" nature will address their respective policy area, while for projects that directly feed into the Industrial Strategy objective the modus operandi will be collaboration. For instance, close collaboration is foreseen between policy and Industry 4.0 and innovation.

Before laying out the Industrial Policy and Governance component, there are a few important prerequisites to mention. The first concerns ownership. UNIDO will support the Egyptian Government in drafting the industrial policy or strategy for the government by working together with the Government. Yet the full ownership lies in the hands of the GoE. A second important consideration is that people intended for the Decision Support and Coordination Unit (see below) have the appropriate profile and attitude. To help accomplishing that, UNIDO preserves the right to be part of the selection panel.

3.1.1 Key challenges and opportunities

UNIDO Egypt Diagnostics points out that the share of manufacturing has been increasing in three important dimensions: employment, exports and FDIs. In terms of trade competitiveness, Egypt has improved in agriculture, textiles, and chemicals / plastics, as evidenced by an increase in the number of revealed comparative advantages (RCAs). However, there is less good news as well. For example, the share of medium and high tech (knowledge) manufacturing as well as the share of knowledge workers in manufacturing and economic complexity can be improved. Moreover, Egyptian firms are still far from the level of automation required to fully benefit from the 4IR, i.e., the level of preparedness is low. The share of manufacturing value-added in GDP has also to increase.

To understand further the consequences of the just described economic performance and to complement the data provided by the diagnostic report, we introduce additional indicators. The first shows Egypt's performance vis-à-vis the World Technology Frontier, while the next set of charts show two productivity measures, labour productivity (LP) and total factor productivity (TFP), the latter representing a proxy for technology, and the capital intensity. LP, TFP and capital intensity are calculated for Egypt's main comparators as well to provide a relative insight to Egypt's performance over time. The corresponding growth charts are provided as well.

Finally, in terms of better understanding the technology content of Egyptian manufacturing, aggregate manufacturing is decomposed into its sub-components at ISIC-2 level.

The Diagnostics shows that there has been considerable technological progress over time for parts of the world, but the global technology gap has increased. In the meantime, Egypt has advanced by increasing its capital intensity as well as its output per worker. The distance to the frontier, measuring how much more an economy should be able to produce at a certain level of capital intensity, appears to be more or less unchanged. Hence, the Egyptian economy has been advancing, albeit slowly. Yet, a faster pace is necessary.

A global snapshot of productivity in 2018 reveals that, out of 196 countries, Egypt ranks at 123, attaining 8% of the labour productivity of the United States, while in terms of TFP, Egypt is 108 at 22% of the US.

For both metrics, the comparators' (Turkey, Algeria, Morocco and Tunisia) performance is close to that of Egypt, with Turkey as the outlier performer. Over time, in terms of labour productivity, Egypt has caught up a little with the US (from less than 5% in 1960 to close to 10% in 2018). For capital intensity, Egypt has been catching up until about 1990 and thereafter a slight decline relative to the US level. TFP lastly, shows an upward trend relative to the US, reaching just above 20% in 2018. There is strong regional convergence, but with Turkey marching ahead of the other countries. By studying the growth trends of labour productivity, capital intensity and technology (TFP), we are able to understand whether Egypt is an investment- or innovation-driven economy. The level of labour productivity appears to be supported by a steady annual rate of 2% technological progress.

Manufacturing is usually seen as the seedbed for innovation and a driver of technological progress. In the case of Egypt, manufacturing did not witness any major change over the 60-year period. The silver lining is Egypt sustained increase in the share of medium- and high-tech (MHT) exports, as a share of total manufacturing exports over time, essentially taking off in 2007. The severe decline in the share of MHT production in total manufacturing, suggests a decrease in the technology-intensity in production and a loss in the complexity of the products and services produced. This is in line with what the productivity trends described above. Some comfort is found in the increasing share of MHT exports, which with a positive interpretation suggests that Egypt's competitiveness is linked to sophisticated products. Hence, the industrial strategy proposed below suggests a strong focus on both complex production and exports.

Further decomposing manufacturing into its (ISIC-2) subsectors and lumping the sectors into two broad groups, light (meaning low technology intense production) manufacturing and medium- and high-tech (MHT) production. Egypt suffered from a sharp fall in the former from the 1960s to 1987, but by mid-1990s the share of light manufacturing was back to above 60% and has continued to increase ever since. During this period, the share of textiles production has decreased, while food and beverages has remained an important sector in the category of light manufacturing. A large contribution comes from coke, refined petroleum products and nuclear fuel but in terms of product space, resource-based products tend to have few linkages to other industrial sectors and work in the opposite direction of economic diversification. In the proposed industrial strategy, UNIDO recommends to focus on products with many linkages to other (technology-intense) sectors. MHT manufacturing peaked around 2005, where it attained above 60% share in manufacturing, but started to decline after. This suggests that the productivity catch up witnessed at the macro level is not driven by MHT production (but maybe MHT exports). Hence, the industrial strategy needs to focus on production activities that are high in innovation and technology content, both in terms of products and services, and production process.

The final metric concerns innovation. Using data from the Global Innovation Index, it is hard to see Egypt as an innovation-driven economy (ranks 93 out of 130 countries with a score below the global median). To reverse this situation and achieve rapid and sustained growth, that growth needs to be based on innovation and technology.

The policy initiatives to support the development of the manufacturing sector mentioned in the diagnostic report, cover areas such as doing business and investment, competition, credit and infrastructure. Importantly, policy governance and capacity building of policymakers are highlighted.

There have been efforts to address selected horizontal challenges such as SME development through the creation of a cross-cutting agency, coordinating existing disparate SME initiatives driven by multiple Ministries and Agencies.

However, the institutional landscape can be further improved to enhance horizontal coordination and strengthen policy and technical capabilities to govern the manufacturing strategy. A more systematic approach is needed to address horizontal industrial challenges, namely a whole-of-government approach.

The PCP Country Diagnostics further indicates the need to strengthen monitoring and evaluation (M&E) to keep track of both progress and impact. An important subcomponent of the Industrial Policy and Governance component is therefore the embedding of an M&E system.

Governance and M&E require certain capacities and capabilities. Capacity development in evidence-based (based on data) policy and strategy crafting; prioritize of competing objectives, and monitor progress and evaluate the impact of policies using data analysis is therefore emphasized.

Once the capacities and capabilities of policymakers have been enhanced and the "soft" infrastructure is in place (Decision Support and Coordination Unit), the scope for crafting and adopting a policy and attendant strategy, which is truly transformational, is vastly increased.

3.1.2 Technical assistance contribution to national objectives and SDGs

At the national level, the program is aligned with the objectives of Egypt Vision 2030. Furthermore, the Industrial Policy and Governance component contributes to all SDG 9 targets. Achieving this SDG will also contribute to the achievement of SDGs 1, 4, 7, 8, 11 and 13. This component is at the heart of UNIDO's Inclusive and Sustainable Industrial Development (ISID), as well as its thematic areas: creating shared prosperity, improving economic competitiveness and protecting the environment.

The technical assistance of the Industrial Policy and Governance component is divided into six outputs, where the first addresses governance and coordination, next three focus on the conditions for implementing a transformational industrial policy and the last two refer to UNIDO's support to developing an industrial strategy and attendant industrial policy.

Output 1: Support to enhance governance and coordination provided

The PCP Country Diagnostics listed many laudable policy reforms.

Enhanced governance has to address fragmentation and overlaps in the institutional landscape to strengthen policy coherence and cohesion. For example, Areas (e.g., industrial zones and technology parks) with shared responsibility (across ministries) require coordination and clearly defined responsibilities across actors for successful delivery. While there has been progress made in terms of reducing distortions caused by fragmentation, lack of coordination and unclear responsibilities, there remains issues to address. Areas of fragmentation identified include skills, education and innovation. Output 1 seeks to contribute to enhanced governance.

There are also coordination and collaboration issues in public-private sector space to consider. As the private sector is a main target beneficiary of industrial policy, and an important stakeholder, the importance of the early and consistent consultations with private sector is paramount. By involving the private sector, coordination, collaboration and responsibility issues can be clarified from the outset.

Output 1 intends to create a platform for stakeholder dialogue, a coordination platform that both serves the purpose of enhancing governance and coordination. The platform could be hosted by the Cabinet to ensure proper representation of all stakeholders in the policy dialogue, including the private sector. The platform will be supported by a Secretariat hosted by MTI leveraging the Decision Support and Coordination Unit (see Output 2, below). In the dialogue between stakeholders, before the platform has been established and, if accepted by all parties, UNIDO could act as an intermediary (see Output 2) to create linkages between the different nodes. The stronger the linkages, the stronger the system, and the more efficient and effective the policy performance.

Another action foreseen is study tours to other countries to learn more about efficient mechanisms to handle governance, private-public sector coordination and collaboration, inter-ministerial coordination and other related issues.

Output 2: Decision Support and Coordination Unit established

A well capacitated "policy central" is needed. A transformational policy requires that information is centralized and not fragmented. Moreover, an effective and efficient M&E system needs an inflow of data to be analyzed and these data need a repository - the Decision Support and Coordination Unit can take that role.

The Industrial Policy and Governance component collects all these functions in one place, the Decision Support and Coordination Unit. Arguably, the best host for this Unit is MTI, building on its existing structure when deemed relevant and further enhancing it with capacity development in different functions, ranging from strategic to analytical and technical. These staff shall be carefully selected and receive intensive training during year one of the project. As the Unit's staff gain knowledge and expertise, they will be able to act as trainers of policymakers from the whole of government. Output 4 below, in more details, describes the proposed capacity development.

The Decision Support and Coordination Unit will play a central role in supporting governance and coordination. Three important areas suffering from lack of governance are allocation of industrial land, industrial investment promotion and trade enhancement. The Unit will act as the Secretariat to the coordination platform.

The functions of the Decision Support and Coordination Unit are as follows:

- Policy crafting;
- Act as a data and information repository;
- Monitor and Evaluate implementation of the policy;
- Productivity monitoring and analysis;
- Act as a Secretariat to the coordination platform;
- Act, eventually, as a trainer of policymakers from the whole of government.

Output 3: Monitoring and Evaluation (M&E) System established

A crucial function of the Decision Support and Coordination Unit is to monitor and evaluate industrial policy, that is, to develop an M&E system. Without an M&E system, it is near impossible for the government to know whether initiatives have the intended impact, let alone adjust the policy so as to fulfil its intended objectives.

Ideally, an M&E system should be designed in parallel with the development of the policy. Only by continuously keeping close track of the implementation and progress of a policy (monitoring) with the help of the right metrics that can measure both progress and impact, the government is able to adjust its policies and report on their impact.

Inter alia, this would entail data collection of specific implementation and results indicators, assessment of compliance with work plans and budgets, and answering questions such as whether policy objectives are being met.

For instance, productivity will be one of the key performance indicators (KPIs) closely monitored, since it is the objective of the industrial strategy envisaged below. If the strategy and policy are well designed and implemented, the results of the same should show up in terms of productivity gains. It is therefore of utmost importance that staff of the Decision Support and Coordination Unit is properly trained to understand productivity, both conceptually and technically, so that its progress can be closely monitored.

Evaluation, on the other hand, assesses the design, implementation and results of a policy. As such, it involves data collection on the design, implementation and results of a policy, examination of a policy's relevance, efficiency, effectiveness and sustainability, and impact assessment. Evaluation takes place on regular intervals (e.g., annually) and answers the question whether the right policy objectives were chosen.

Output 4: Capacities of the Decision Support and Coordination Unit and other addressed institutions staff developed.

The staff of the Decision Support and Coordination Unit will be capacitated on their respective tasks using UNIDO's comprehensive training program on evidence-based industrial policy. Using tools such as the Enhancing the Quality of Industrial Policies (EQuIP) and the Industrial Analytics Platform (IAP), Unit staff will be capacitated on selecting priority sectors, prioritizing amongst competing policy objectives and designing policy instruments.

A second area of training concerns development of an M&E system. A third topic that will require special training concerns productivity, both conceptually and analytically. UNIDO will train staff connect productivity - labor and total factor productivity - to the various policy areas covered. For purposes of monitoring productivity growth, emphasis will be given to technical training such as the measurement of productivity.

In principle, three modes of training will be deployed. Firstly, UNIDO will provide "traditional" or classroom lectures. Secondly, this will be coupled with important learning-on-the-job training, or learning-by-doing. For example, when data for M&E are collected, it will be done by Unit staff together with UNIDO experts.

The same training principle will apply to all the functions of the Decision Support and Coordination Unit - first together with UNIDO and thereafter by staff on its own. The aim of this is to create self-sufficiency on the part of Unit staff. Study tours are seen as an important training component.

Finally, this training is not necessarily confined to staff of the Unit. To the contrary, it is recommended to include, as much as possible, non-Unit staff from the MTI, as well as policymakers from other ministries and private sector representation bodies. This will speak to the necessity to enhance policy coordination and governance. However, it needs to be made clear that the main target of the training is staff of the Decision Support and Coordination Unit, because of their very specific and crucial tasks.

Output 5: Supported the development of an Industrial Strategy

With the capacity development done and the Decision Support and Coordination Unit in place, and some governance issues addressed, the MTI will be in a position to draft, with the support of UNIDO, an industrial strategy document with the assistance of UNIDO (emphasizing ownership again).

Thus, the tangible output under Output 5 is an industrial strategy, which will replace the 2016-2020 Strategy. The Strategy stipulates the overall development goal/objective, the intended path to reach the goal, intervention areas and timelines. Turning to the overall strategic approach, there is a plethora of possibilities. Three broad groups or approaches are presented.

A rapid and transformational policy requires an active state, but also that such an approach is fraught with more risk than is an approach based on fundamentals (e.g. comparative advantage).

The different approaches have in common that they strive for enhanced productivity and competitiveness of the economy. The transformational approach relies on an active state that will focus on addressing market failures that hinder domestic producers from entering complex industries beyond what the country's comparative advantage would dictate; a strong export orientation with ingredients of import substitution; strong competition, discipline and accountability; strong focus on innovation and technology along the development path; and collaboration between the state and the private sector. If successful, this approach will allow Egypt to relatively quickly catch up with the world technology frontier and thus with the advanced economies.

A safer, but less transformational, approach would be to focus on addressing only government failures (but not market failures) such as a non-conducive business environment, weak institutions, poor and insufficient infrastructure, with minimum state intervention. This traditional approach is firmly rooted in economic fundamentals and as such a focus on industries as dictated by the law of comparative advantage. While in principle risk-free, this approach is likely to generate steady but only slow growth.

A third approach would be based on the second approach but with active support to industries that are backed by fundamentals. It could also try to support moving a little beyond comparative advantage, to industries fairly technologically close in product space. From here on, the focus is solely on the transformational approach.

The starting point for the transformational approach is to set ambitious goals and aim for radical change. In this context, an ambitious goal could be formulated as "catching up with the world technology frontier in thirty years" or "be as productive as the OECD average in twenty years". The question that follows is, how to get there, which may translate into "what industries should be selected?". Here is where the state has an important role to play because the sector choice needs to go beyond the fundamentals and for that to work, state interventions and support will be needed. An important component of the Strategy is the creation of capabilities for relatively advanced industries. Supporting industries beyond the fundamentals implies many things, including protection of some form. While the many failed attempts of import-substitution are well known (and giving industrial policy a bad name), the successful ones had a distinct feature: competition, accountability and discipline. Performance would generate support, but domestic and foreign competition would be allowed. However, if discipline and accountability are compromised, protection could quickly turn into a failure.

Because the goal of industrial strategy is enhanced productivity and thus competitiveness, it is necessary that the policy has a strong orientation towards technology and innovation. Different types of innovation are important at different stages of development. At the beginning, the focus is overwhelmingly on technology transfer and imitation, with little focus on what may be termed "own innovation", that is, R&D based innovation.

Throughout the process, it is crucial to accumulate knowledge, experience and human capital, and learning-by-doing was a central feature in the so-called Tiger Economies in East Asia. Apart from innovation, international trade (both exports and imports) and foreign direct investment (FDI) are important channels for technology.

Along the same lines, it is clear that industrial activities (what products and services are produced, what is the process of producing, etc.) should be technologically complex (high R&D content) and thus significantly contribute to productivity. Once the economy has started producing near the world technology frontier in its product segment, as it is advancing to the next segment and new products, it should all the time try to stay close the frontier and move along it. Importantly, these increasingly complex products should be produced by domestic firms, feeding into the process of domestic technology creation.

In addition, selected industries should have strong spillover effects as well as forward and backward linkages (high content of intermediate goods). Agglomeration effects could be had as well, these too would generate productivity gains.

Addressing market failures is a central feature of the transformational approach. It is worth highlighting that an important market failure is missing out on learning externalities. For example, spillover effects from FDI and trade may not be captured by domestic firms and thus an important input to productivity growth is omitted. Another example is coordination failure, where an industry will not invest because, say, there is missing infrastructure. To be sure, the 4th Industrial Revolution, the latest technology waive, needs to be embraced. If successful, the productivity gains will be immense, but in line with what has been argued already, it will require investment in capabilities and capacities. If anything, Industry 4.0 rather strengthens the case for adopting a transformational approach.

What also needs to be emphasized here is that the industrial strategy should have one foot in fundamentals and the other in unchartered territory. Importantly, for industries supported by fundamentals and apart from acting as facilitator there might not much need for state support, but why waste an opportunity provided by the fundamentals? What the State needs to do is guide the economy towards and through the unchartered territory and, in fact, conquer it. The point is that creating capabilities change the fundamentals in such a way that what was impossible yesterday is possible tomorrow! In all of this, the State will be strongly involved and might even take the lead.

To summarize, a transformational industrial strategy should feature:

- A strong focus on technology and innovation as means to productivity growth;
- Export orientation and investment promotion;
- Address government failures;
- Seriously address market failures;
- Significant state intervention, with upholding of accountability and discipline as important ingredients;
- Encouragement of domestic and foreign competition;
- Exploitation of productivity gains from linkages, spillovers and agglomeration;
- Creation of capabilities and capacities beyond the fundamentals;
- In parallel, reaping benefits from static comparative advantage.

Output 6: Supported the development of an Industrial Policy

Once the Strategy has been spelled out, it will be crucial to design an industrial policy that speaks to how to achieve the objectives of the Strategy, the plan of concrete activities/interventions, budgetary needs, responsibilities and legitimization (political and legalization). UNIDO will support MTI in this work.

Output 6 lays out the policy objectives, and the motivation behind the same, selects a shortlist of pertinent policy areas (selected out of the 13 listed in the diagnostic report) and provides the rationale for the selection, and designs policy instruments to attain the policy objective. The way the strategy document unfolds there will an emphasis on linking with the five of the six pillars (laid out in the diagnostics report), in particular:

- Trade to value-added manufacturing: Prioritize intensive vs extensive industrial development by placing an emphasis on raising the standard of complexity across all sectors;
- 4IR readiness: Ensure that 4IR is injected into all aspects of industrial development in Egypt with a particular emphasis on traditional sectors such as agribusiness and textile;

- Innovation;
- Vertical with horizontal: Focus on addressing structural and policy barriers common to all manufacturing sectors as well as specific sectors to unlock local and foreign investment (investment promotion) in building the next generation of manufacturing;
- Zones to regional / global value chains: Move from a territorial approach to manufacturing investment to a capability-based and value-chain approach at the city, regional and global level. Sustainable and industrial infrastructure development should be leveraged to enhance attractiveness of regions. Generally, implementing policy reforms should take into consideration geographical industry intensity and capabilities.

With an industrial strategy that is transformational in nature and with the overall objective of enhancing the productivity and competitiveness of Egyptian manufacturing, the Policy will have to focus on at least:

- Addressing government and market failures;
- Increased promotion of exports of complex products and services;
- Increased domestic production;
- Protection of local industry/import substitution;
- Efficient allocation of industrial land;
- Enhanced 4IR readiness and adoption of 4IR technologies;
- Domestic technology creation through innovation, both at the system and firm-levels;
- Addressing structural and policy barriers common to all manufacturing sectors (horizontal polices) as well as specific value chains (vertical policies);
- Investment promotion to optimize technological spillovers from FDI;
- Moving from a territorial approach to manufacturing investment to a capability-based and value-chain approach at the city, regional and global level;
- Skills and human capital development;
- Exploring backward and forward linkages within value chains.

From the point of view of the PCP, it is foreseen that there will be close cooperation between the policy component and the PCP components on Industry 4.0, innovation, investment promotion, trade and selected value chains.

For other policy areas not mentioned here, these will be addressed by the respective technical departments, since they possess superior expertise in these areas. A typical example refers to clean production, which will be handled by the Department of Environment. Yet all these policy areas shall be coordinated with this component and the proposed Decision Support and Coordination Unit.

3.1.3 UNIDO comparative advantage

The United Nations post-2015 development agenda reinforces the international community's commitment to poverty eradication.

One of the major items on this agenda is Inclusive and Sustainable Industrial Development (ISID). The 2030 Agenda for Sustainable Development adopted as goal 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation", in which UNIDO takes the lead. This confirms the provisions of the Lima Declaration and the relevance of ISID for the new global development architecture.

ISID is credited with promoting value addition, realizing productivity gains and returns to scale, creating jobs and income, enhancing international competitiveness and trade, building efficient and effective productive capacity, supporting economic diversification, and building green industries.

This structural transformation unleashes an enormous development potential as it features close linkages to infrastructure development, innovation and the efficient and sustainable use of resources, as well as to a wider range of other sustainable development priorities.

In this endeavor, UNIDO provides a variety of upstream functions such as industrial intelligence, advisory services and capacity building that supports the policy making process for ISID in its Member States. In particular, it is notable that in recent years UNIDO (EPR/PRS) has been increasingly placing an emphasis on developing projects, which aim at reinforcing the industrial development strategy and policy for the Member States beyond the delivery of industrial intelligence and through this, has been accumulating its experience and knowhow in the operation of these kinds of projects. Examples of past projects where UNIDO has already provided customized advisory services related to the formulation of industrial development strategy and policy includes Ethiopia, Mongolia, Cote d'Ivoire, Viet Nam and Myanmar. There are also ongoing projects in this area for Member States such as Cambodia, Cuba, Oman, and Tanzania. UNIDO's intervention in these projects is highly appreciated by the respective beneficiary countries.

3.1.4. Mapping of potential partners

Potential partners identified for the Industrial Policy and Governance component are:

- Ministry of Trade and Industry and its affiliates;
- Ministry of Planning and Economic Development;
- Ministry of Finance;
- Ministry of Environment;
- Ministry of Housing & Urban Communities;
- Ministry of Electricity and Renewable Energy;
- Ministry of Social Solidarity;
- The Ministry of Communications and Information Technologies;
- The Ministry of Higher Education and Scientific Research;
- Ministry of Education and Technical Education ;
- Egyptian Academia;
- Micro, Small and Medium Enterprise Development Agency (MSMEDA);
- General Authority for Investment (GAFI);
- Central Bank of Egypt;
- Federation of Egyptian Industries;
- Federation of Chambers of Commerce;
- Egyptian Businessmen Association;
- Export Councils;
- Donor organizations (EU, USAID, GIZ…etc.);
- Other potential private sector partners.

For an overall view of potential partners, see section 2.5 and synoptic tables in annex 2.

3.2 Component: Investment Promotion

The GoE has implemented reforms aiming to enhance the business and investment climate. Overall guidance is provided by Egypt's vision 2030, a sustainable development plan containing target figures for all sectors, including in terms of investment and finance. Table 3 contains selected indicators to highlight the ambitious targets the GoE has set for the country.

Table 3: Egypt's Vision 2030 - Selected national targets

Indicator	Current Value	2020 target	2030 target
Ease of doing business index (rank)	131	100	30
Companies innovation capacity index (rank)	132	100	60
Global competitiveness index (rank)	116	90	30
Manufacturing value added as percentage of GDP (percent)	12.5	15	18
High-technology exports as % of Egyptian manufactured exports (percent)	1	3	6
Net foreign direct investment (billion USD)	6.37	15	30
Ratio of private sector contribution to GDP (percent)	60	65	75

Source: Vision 2030 Egypt

Enhancing FDI attraction is a target in its own right, and FDI has the potential to fulfill several objectives of the industrial policy including enhancing manufacturing capabilities, technology intensity and productivity and upgrading along global value chains. However, FDI promotion needs further support to reach the targets. It must be stressed that Egypt should build on the growth already achieved of domestic MSMEs to reach the targets, in particular the target of reaching private sector contribution to GDP of 75 percent. Due attention must therefore be paid to domestic investments, for example by supporting mixed Egyptian-foreign joint ventures or international technology transfer agreements to the benefit of the Egyptian private sector.

Egypt is facing a challenge in terms of attracting the volumes of inward FDI as per Egypt's Vision 2030, which targets FDI to the range of USD 15 billion in 2020 and USD 30 billion by 2030. Although the overall levels of FDI have recovered in the recent years (see table 4), the current volume of these inflows remains lower than a decade ago (FDI inflows in 2018 represented slightly more than half of inflows in 2007). Nevertheless, Egypt remains the largest recipient of inward FDI in Africa and, according to the latest statistics from the United Nations Conference on Trade and Development (UNCTAD), FDI inflows increased from USD 6.8 billion in 2018 to USD 8.5 billion in 2019, going against the global trend of diminishing FDI.

Table 4: Foreign direct investment (FDI) overview 2015-2018 (millions of USD and percent)

FDI inward flows	2015	2016	2017	2018	as % of gross fixed capital formation 2018	
Egypt	*6,925*	*8,107*	*7,409*	*6,798*		*16.8*
FDI inward stock	2015	2016	2017	2018	as % of gross domestic product in 2018	
Egypt	*94,307*	*102,324*	*109,677*	*116,385*	*Egypt*	*46.6*
As % of developing economies FDI stocks	1.104%	1.126%	1.064%	1.090%	Developing economies average	32.0
As % of world FDI stocks	0.358%	0.362%	0.336%	0.361%	World average	38.1

Source: UNCTAD, World Investment Report 2019

Total FDI inward stocks have reached a volume of more than USD 116 billion, which equals a share of only 1.1 percent in developing countries inward FDI stocks and 0.37 percent in world FDI inward stock. Both shares are stagnating".

As shown in the table 5 below, FDI inflows to Egypt go primarily to its hydrocarbons sector and have been increasing constantly since the discovery of gas reserves. FDI comes mainly from the EU, the United States and the Arab countries. The UK is by far the largest investor in Egypt. Manufacturing FDI accounts for a relatively low 10 percent, which translates into volumes between USD 700 to 800 million per year.

Table 5: FDI inflows, distribution by sectors

Main Invested Sector	2016-2017 in %
Oil Sector	66.3
Manufacturing	10.2
Construction	4.3
Communication	3.9
Real Estate	2.5
Finance	2.1

Source: Banco Santander, S.A - 2019

3.2.1 Key challenges and opportunities

Egypt's capacity, and in turn key challenges and opportunities, to attract inward Foreign Direct Investment (FDI) is analyzed along four main criteria: Ease of doing business, Industrial Performance, FDI-SMEs linkages and Megaprojects.

Ease of doing business

In 2019, Egypt ranks 114th on a global scale in the analysis of World Bank's "Ease of doing business" of 190 countries.[13] The ranking marks an improvement from Egypt's ranking of 120th on the Doing Business 2019 report. When looking at the break down of the index more closely, Egypt performs relatively well when it comes to "Dealing with Construction Permits" (74th) and "Getting Credit" (67th). To the contrary, Egypt performs poorly when it comes to "Trading across Borders" (171th)," Enforcing Contracts" (166th) and "Paying Taxes" (156th). In other words, while Egypt's permits and contracts are accessible and available, there remains to be a problem with its application and enforceability.

Yet, relative progress has been made and Egypt has improved its ranking over the last two years, from being ranked 128th in 2017. Furthermore, as highlighted earlier, FDI increased in 2019 against the global trend, so it would appear that the country's recent efforts to implement economic reforms, e.g. through the new investment law[14] from 2017, have resulted in strengthened investor confidence. Egypt also advanced on the index of the protection of small investors, jumping 15 positions from 72 to 57 due to legislative reforms. However, in order to achieve the ambitious "Ease of doing business" target of Vision 2030 (see table 3), further business climate reforms will be required.

Industrial performance

The manufacturing value-added in Egypt increased at a CAGR of 3.15 percent between 2008 and 2018, lower than the economic growth rate of the country (with the GDP increasing at a CAGR of 4 percent) and lower than average industrial growth rates of Egypt's peer income group (5.77 percent), industrialization group (5.77 percent) and region (3.98 percent).

[13] Ease of doing Business Rankings 2019: https://www.doingbusiness.org/en/data/exploreeconomies/egypt
[14] Investment Law No. 72 of 2017: https://gafi.gov.eg/English/StartaBusiness/Laws-and-Regulations/PublishingImages/Pages/BusinessLaws/New%20Investment%20Law%20in%20English.pdf

Currently, with a 15 percent contribution of industry to GDP, Egypt performs below than the average of emerging industrial countries (22 percent) and below the average of its income group (lower-middle income economies) where this share is 16.5 percent. Although higher than the average of the MENA region.[15]

It is necessary for the country to focus more on attracting manufacturing FDI, which as shown earlier is hovering at around 10 percent of yearly FDI inflows. Manufacturing FDI contributes more structurally to manufacturing value addition due to domestic supplier engagement, forward linkages/beneficiation to natural resources, and outsourcing of medium to high-tech production stages, including R&D. While recent FDI inflows to the country were driven by the oil and gas sector, major investments in the non-oil economy have emerged as well, notably in telecommunications, real estate and tourism.

Attracting investment in the high-tech segment of manufacturing is of a high priority. However, high tech companies rely not only on cutting edge technology, but are also in demand of a greater share of highly qualified staff compared to lower tech industries. Hence, any country that aims to attract high tech investment should aim to increase the access of skilled labor. According to the current investment law, the investor has the right to employ foreign workers within the limits of 10 percent of the total number of staff. This may be increased to 20 percent if it is not possible to employ nationals with required qualifications. While such moderate local content requirements are justified for investments, it's not the same case for light manufacturing, traditionally employing large number of low skilled workers. To bridge the skills gap there are examples of promising public-private collaboration such as with Siemens project named "Industry 4.0 – Are you ready?" deploying Siemens' "Business to Society" approach[16,17]. Another example is the collaboration between the Ministry of State for Environmental Affairs (MSEA)[18], the Federation of Industries and the Egypt National Cleaner Production Centre for energy efficiency in manufacturing.

FDI-SMEs linkages

In 2017, micro enterprises constituted approximately 91 percent of all firms, small and medium ones around 8 percent and large firms less than 1 percent of the total. This figure points to the predominance of micro enterprises in the country's private sector. Egyptian micro firms have little potential for expansion and suffer from a range of structural weaknesses, including but not limited to the lack of managerial skills and limited access to finance, intensive competition and low profit margins. Moreover, most micro enterprises are informal and cannot sufficiently benefit from government initiatives in support of their development.

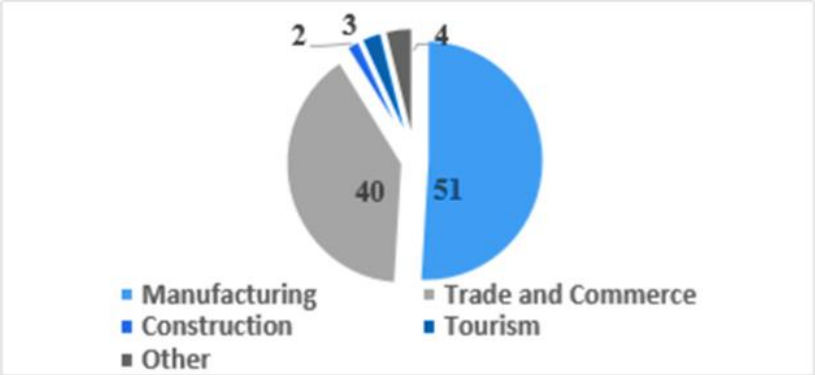
Figure 10 shows the sectoral distribution of MSMEs in the country in 2014. 51 percent and 40 percent of the total number of surveyed MSMEs are active in the manufacturing and trade sectors. However, the distribution of firms *by size* and *employment contribution* shows that large enterprises dominate the manufacturing sector, accounting for 87 percent of total production and 53 percent of total employment in manufacturing. In turn, MSMEs contribute to nearly 47 percent of total employment in the sector and account for only 13 percent of overall production.

MSMEs also suffer from the absence of effective linkages to large firms as reflected in, for example, long term and stable supplier or distribution agreements with a buyer/retailer or a raw material supplier. Large corporations have been the main target of institutional frameworks for private sector development in the country, receiving more benefits from government policies.[19]

[15] UNIDO 2020, Programme for Country Partnership Diagnostics, Egypt
[16] https://new.siemens.com/mea/en/company/stories/energy/preparing-youth-for-digital-world-emad-ghaly.html
[17] https://press.siemens.com/middleeast/en/pressrelease/siemens-showcases-smart-solutions-future-industry-40-egypt
[18] The Ministry has the mission of preparing the necessary plans for Environmental protection and Environmental development projects, following up their implementation, and undertaking Pilot Projects. See more at: http://www.eeaa.gov.eg/en-us/aboutus/projects/projectssearch.aspx
[19] EMNES 2017, Micro, Small and Medium Sized Enterprises Development in Egypt, Jordan, Morocco & Tunisia: Structure, Obstacles and Policies.

Presently, public companies are required to source 20 percent of their procurement from SMEs, the policy itself provides a good opportunity for increasing linkages between SMEs and large public enterprises, but needs further enforcement.

Figure 10: Sectoral distribution of MSMEs in Egypt



Source: International Finance Corporation, 2014.

Egypt has quite a number of so-called megaprojects, which could serve as excellent opportunities for linking SMEs to multinational companies as well as large public enterprises. For example, the development of the Suez Canal Economic Zone. The importance of the new canal is not only in its direct effect in increasing the number of the transiting ships, but in its effective role to activate the economic movement through a chain of projects related to the new canal such as upgrading about six strategic harbors: Sharq el Tafrea, Port Said, Arish, El Tour, El Shokhna and El Adabia. This is in addition to a number of expected activities, such as assembling of cars and electronics, oil refining, petrochemicals and others that will contribute to attract a large number of Egyptian job-seekers to move to the Suez Canal and Sinai. For example, the Russian Federation and Egypt signed an agreement in March 2018 to build the Russian Industrial Zone in the Suez Canal Economic Zone in Egypt. This $7 billion investment, to be undertaken in three phases, will be built by a Russian industrial developer and is expected to be finalized by 2031, providing some 35,000 direct and indirect jobs in Egypt.[20]

3.2.2 Technical assistance contribution to national objectives and SDGs

As outlined in the PCP Diagnostics sections, the PCP "Investment Promotion" component will focus on two key objectives to support the Government of Egypt to meet its national targets: (1) Enhancing Egypt's capacity to attract inward FDI in manufacturing with emphasis on attracting higher value-added, higher complexity FDI; (2) Increasing linkages between multinational corporations, large private and public enterprises and local firms to maximize the benefits from these investments.

This will be achieved through planned outputs related to the following areas of intervention:

Output 1: Egyptian investment promotion institutions' capacities enhanced for industrial FDI attraction and retention.

Investment climate

To increase overall investor confidence in Egypt, the Government should devise a focused industrial policy, demonstrating clearly how the country intends to achieve a structural transformation of the manufacturing sector. The "Investment Promotion" component will work closely with the "Industrial Policy and Governance component" of the PCP to support the development of a new industrial policy for Egypt, as well as improved governance.

[20] UNCTAD 2019, World Investment Report

The policy should serve the purpose of attracting and retaining FDI in the country and maximizing employment opportunities for attaining a balanced regional and sustainable development in line with the ambitious targets of Vision 2030.

Development and implementation of an industrial investment promotion roadmap in coordination with all investment promotion stakeholders

There are many institutions involved in investment promotion in Egypt, such as the General Authority For Investment and Free Zones (GAFI), the Industrial Development Authority (IDA), the Industrial Modernization Centre (IMC), the Ministry of Planning and Economic Development, the General Authority for Suez Canal Economic Zone (SCZone), the Egyptian Commercial Service (ECS), and the Ministry of Public Business Sector (MoPBS). Many investment related activities are currently undertaken in parallel and in isolation to each other. To make the most of all such initiatives and to provide a permanent platform for dialogue and troubleshooting, the "Investment Promotion" component will support efforts to increase coordination and collaboration between these stakeholders.

A regular dialogue between these actors would help in preparation of major future investment promotion activities, facilitating the pooling of resources for joint initiatives, sharing of information and data, reducing overlaps and as such increase the overall efficiency of Egypt's investment promotion efforts. Furthermore, the joint undertaking of the development and implementation of an industrial investment promotion roadmap, including branding of Egypt and promotion tactics, will unify the vision and align the direction of all actors. The pillars of the roadmap will be aligned to the target sectors of the PCP, following a value chain investment matching based on existing trade dynamics. Current exporters to Egypt will be approached with a view to turning a trade relationship into investments −ideally joint venture investments with an Egyptian partner enterprise− in order to substitute imports.

Improved understanding of existing investors' needs/attitudes about the investment climate, their SDG impact and future re-investment plans to support the formulation of strategies and policies

As around 75 percent of all FDI is generated by existing investors reinvesting their profits, efforts should be undertaken to understand how existing foreign direct investors perceive the investment climate in Egypt and take action based on their feedback. Existing investors are also often very important feedback sources for new investors in addition to information shared by institutions like GAFI. This is also in view of existing investors being very often the first information source for potential new FDI entrants.

GAFI has recently launched an FDI survey that is conducted every three months, which is a most encouraging initiative, and the Federation of Egyptian Industries (FEI) has prepared a reform agenda based on the inputs from its members. The "Investment Promotion" component will work with all relevant institutions to extend the content of the survey so that it may also provide an understanding of existing investors' needs/attitudes about the investment climate, their SDG impact and future investment plans. The results of such a survey combined with consultations and review of existing literature would serve as evidence-based inputs for the validation of the industrial investment promotion roadmap as well as for the development of a new industrial policy (see above).

A regular FDI survey, tentatively every second year, will provide a dynamic feedback loop to the industrial investment promotion roadmap, particularly with regards to targeting existing investors, with the aim of increasing the probability of them reinvesting profits rather than repatriating or even divest. It could also lead to revisions of existing rules and regulations aiming to improve the overall business and investment climate in Egypt. Up-to-date data about FDI firm-level activities in the country will also support the consensus-building process amongst the identified investment promotion stakeholder institutions.

Increased capacity for developing/appraising and promotion of investment proposals

Most of the investment proposals currently promoted in Egypt concern green-field and wholly foreign-owned investments.

There is a need to systematically develop and promote investment proposals also for joint ventures, effectively linking the Egyptian industry to investors that would be more comfortable in finding a local partner before embarking on a green-field investment project in Egypt. The "Investment Promotion" component will, through e-learning[21] and physical classroom trainings, develop capacities for writing technical proposals for industrial flagship projects as well as develop investment proposals together with Egyptian enterprises using UNIDO's Computer Model for Feasibility Analysis and Reporting (COMFAR)[22] within relevant institutions such as GAFI, SCZone, IMC, Egyptian Micro, Small and Medium Enterprises Development Agency (MSMEDA), MoPBS, ECS, Ministry of Local Development (MoLD) and the sovereign wealth fund of the Ministry of Planning and Economic Development.

COMFAR has been developed over the last 30 years and permits the user to simulate the short- and long-term financial and economic situation of investment projects. The software facilitates the analysis of industrial as well as non-industrial projects, whether new investments, rehabilitations, expansions, joint venture or privatization projects. Investment proposals developed will be promoted globally on digital investment platforms as well as in various investment forums. Since COMFAR is not only useful for the *preparation* of investment proposals, but can be also applied for a systematic *appraisal* of investment proposals, the capacity building can be provided with this aspect in mind, specifically for institutions that receive investment proposals, such as GAFI, MSMEDA and the SCZone.

The "Investment Promotion" component will seek to integrate and create synergies with the "Value Chains component" in order to identify target SMEs as well as with the PCP "Smart Cities and Sustainable Industrial Parks component". This capacity building will be also offered for example to developers of industrial parks that seek to promote public-private partnership opportunities.

Organization of and participation in international investment forums and trade fairs
Organizing and participating in international investment forums is considered one of the most important marketing activities, for companies and for countries alike. Such events can provide an opportunity to align three flows of investment −public, private and official development assistance (ODA) − around priority value chains or projects. The "Investment Promotion" component will support the preparation and promotion of developed investment proposals (see description above) for more informed and structured B2B interventions during such forums or fairs in Egypt.[23]

International participation will also be mobilized through outreach activities within UNIDO's global network (in particular the Investment and Technology Promotion Offices, ITPOs), the Egyptian embassy network and ECS, as well as through FEI's partner chambers. Prior positive UNIDO experiences in this regard include e.g. the first[24] and second[25] international agro-industry investment forums organized for the PCP Ethiopia, where policy makers, financiers, investors and private sector representatives were introduced to investment opportunities connected to major industrial infrastructure projects as well as investment opportunities in joint ventures.

In addition, the "Investment Promotion" component will support participation in focused international fairs/forums outside Egypt, such as the Hannover Messe in Germany[26], using such fairs as platforms to promote investment and technology transfer opportunities in (high tech) manufacturing. This intervention will be implemented in close collaboration with the "Value Chains" component.

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[21] See: https://tii.unido.org/training-modules-international-lliances
[22] More information available on COMFAR here: https://www.unido.org/resources/publications/publications-type/comfar-software
[23] For example: Invest in Africa, Made in Africa, the International Investment Conference Suez Canal Economic Zone and sector specific investment forums.
[24] Website for the first international agro-industry investment forum: https://www.unido.org/events-agro-industry-investment-forum-ethiopia-aife/aife1-general-information
[25] Website for the second international agro-industry investment forum: https://www.unido.org/events-agro-industry-investment-forum-ethiopia-aife/aife2-general-information
[26] UNIDO and Deutsche Messe have concluded a long-term partnership agreement, see: https://www.unido.org/news/unido-hannover-messe-2019

High tech investment / job opportunities promoted for the Egyptian diaspora
A different approach to meet the objective of increasing high tech investments would be to target the first and second generation of Egyptian diaspora, both by offering concrete investment opportunities in the high-tech segment to prompt their return to Egypt as "foreign" direct investors and/or to promote attractive job opportunities in Egypt for highly qualified diaspora. Such investment and job opportunities will be promoted mainly through the Egyptian Embassy network as well through the ECS. To support the Embassies and ECS with this task, the "Investment Promotion" component will provide tailor-made trainings to the staff on how to promote investment opportunities to potential diaspora investors, and facilitate the linking to interesting investment/business events in Egypt, particularly those that occur around dates when diaspora is likely to visit Egypt. As there are some 10 million Egyptian diaspora, this intervention will also work closely with the Ministry of Immigration and Egyptian Expatriates Affairs to reinforce already existing activities such as "Yes, Egypt can". Partnerships with specialized UN Agencies such as the International Organization for Migration (IOM) may also be forged to achieve more effective outreach to Egyptian diaspora.

Output 2: Linkages between FDIs, large public enterprises and local SMEs facilitated.

Given the availability of a number of megaprojects, undertaken by multinational corporations, state-owned enterprises or large domestic enterprises, there is a great and untapped opportunity to improve the linkages between these large companies/projects and Egyptian SMEs. The "Investment Promotion" component will strengthen ongoing matchmaking initiatives between large companies (buyers) and SMEs. UNIDO has a well-tested methodology embedded in its Subcontracting and Partnership Exchange (SPX) Programme[27], where buyers' needs are identified and SMEs are profiled against those needs in terms of their capacities and supply capabilities. The dual goal of the SPX is to facilitate subcontracts/outsourcing between buyers and SMEs in order to reduce imports of goods that could be sourced in Egypt, as well as to identify and address gaps in SMEs so that they can win contracts of international companies and become competitive in the global market. IMC and other institutions will be supported to complement ongoing matchmaking and supplier development initiatives prioritizing enterprises in the PCP target sectors in collaboration with the "Value Chains" component. This work stream will also be linked to the "Smart Cities and Sustainable Industrial Parks" component, whereby tenants of these parks will be actively assisted to establish backward and forward linkages with actors outside the park.

Output 3: ITPO Egypt established with the purpose of supporting Egypt's integration in Africa and Arab countries.

To support Egypt's integration in Africa and the Arab region it is proposed to establish an ITPO office.[28] Initially, the focus of the ITPO office is foreseen to support Egyptian businesses to invest in African and Arab countries, for example with the aim of securing a timely flow of inputs/supplies with desired quality for further processing in Egypt (integration in regional value chains).

Such investments should ideally improve the competitiveness of the Egyptian manufacturing industry, but likewise make a positive developmental contribution in host countries of Egyptian outward FDI.

Contribution to the national targets and the achievement of SDGs
The interventions will support Egypt's ambition in achieving its national targets as outlined in Vision 2030, as many of these targets will depend on higher levels of FDI and domestic investment.

[27] More information on the SPX available here: http://spx.unido.org/spx/default2.aspx; Notable success of the SPX methodology has been demonstrated in e.g. Cameroon, where the SPX recently reported that it had facilitated contracts between large buyers and SMEs to the value of USD 84 million. Similar positive results have been demonstrated in South Africa and Turkey.
[28] More information about UNIDO's global ITPO network: https://www.unido.org/investment-and-technology-promotion-offices-itpos

In particular, an improved public-private dialogue should initiate revisions to existing policies, rules and regulations, which in turn would improve Egypt's "Ease of doing business" ranking. Similarly, improved FDI/SME linkages combined with supplier development services will make the Egyptian industry become more competitive and innovative and that, in turn, will increase the manufacturing value added as percentage of GDP as well as the private sector contribution to GDP.

In terms of SDGs, the "Investment Promotion" component will contribute to the following SDGs: Goal 1 (Poverty eradication/no poverty), Goal 8 (Access to decent work and economic growth), Goal 9 (Resilient infrastructure, inclusive and sustainable industrialization and fostering innovation), Goal 10 (Reduced inequalities, greater productivity and stable employment), Goal 11 (industrial competitiveness, while linking local business with global markets and supply chains) and Goal 17 (International cooperation and technological exchange). The "Investment Promotion" component will also strive towards Gender Equality and the Empowerment of Women (GEEW) in line with SDG 5, by maximizing the participation of women in capacity building interventions and women-led businesses in SME-related interventions for investment promotion and linkage support.

3.2.3 UNIDO comparative advantage

- UNIDO has a unique history within the UN family in partnering with institutions as well as the private sector for upgrading, technology transfer and investment promotion, which makes the organization an ideal partner for the Government of Egypt, where investment promotion is concerned;
- Based on the fact that high-quality pre-investment advice leads to better projects, thus contributes to increasing local and foreign investments, UNIDO has equipped public and private stakeholders with tools and methodologies for project appraisal and feasibility analysis, such as UNIDO's COMFAR over the last 30 years. COMFAR is available in 19 languages including Arabic;
- UNIDO has successfully deployed tools and methodologies for FDI monitoring, including investor surveys, impact analysis for lead generation, informed investment strategies for many years;
- UNIDO has also a long history of (co-)organizing global events to foster and generate impact investment and to promote industrial opportunities;
- Over the last 25 years, UNIDO has established SPX Centres in Sub-Saharan Africa, Asia, Europe, Latin America and the Middle East (over 30 centres). SPX Centres are often hosted in private or public sector organizations and are equipped with professional capacity to assist enterprises in their development process through a range of support services including enterprise profiling, matchmaking, benchmarking and buyer engagement. A Management Information System (MIS) provides state-of-the art solutions to facilitate the supplier-buyer match-making process;
- In 1986, UNIDO introduced the very first Investment Promotion Services, which would become the UNIDO Network of Investment and Technology Promotion Offices (ITPOs). Since then, the UNIDO ITPOs have contributed to reducing development imbalances, by brokering investment and technology agreements between developed, developing countries and countries with economies in transition. Currently the ITPO network include Bahrain, Beijing and Shanghai (both China), Germany, Italy, Japan, Nigeria, Republic of Korea and Russian Federation.

3.2.4 Mapping of potential partners

Potential partners identified for the Investment Promotion component are:

- Ministry of Trade and Industry and its affiliates;
- Ministry of Military Production;

- Ministry of Local Development and its affiliates;
- Ministry of Public Business Sector;
- Ministry of Social Solidarity;
- Central Bank of Egypt (CBE);
- General Authority for Investment (GAFI);
- Micro, Small, and Medium Enterprise Development Agency (MSMEDA);
- General Authority for Suez Canal Economic Zone;
- Federation of Egyptian Industries (FEI);
- Export Councils;
- Junior Businessmen Association;
- Other potential private sector partners.

For an overall view of potential partners, see section 2.5 and synoptic tables in annex 2.

3.3 Component: Green Industry

The ongoing industrial growth trend in Egypt is expected to continue, such growth is inevitably coupled with an increase in energy and resources demand for the industrial sector. Manufacturing, specifically the energy-intensive cement and fertilizers industries, is among the top consuming sectors for natural gas in Egypt and the second largest electricity consuming sector (26% of total consumption) after the residential sector (44% of total consumption / year 2014/ 2015). A large number of the existing industrial facilities are old and use outdated, inefficient technology. It is estimated that Egyptian industries could save 10-40% of their energy consumption by relying on commercially available advanced technologies and improving operational practices (Sakr, 2016).

Egypt's Ministry of Trade and Industry and the Ministry of Environment have been working in recent years with the support of international partners to pave the way for mainstreaming green economy and sustainable consumption and production related policies, as tools to achieve sustainable development. In this regard, the Sustainable Consumption and Production Action Plan (2016) and the Green Economy Work plan and Strategy (2010) were developed in line with Egypt's 2030 Sustainable Development Strategy.

In particular, the chemicals sector, and primarily the plastics sector, are major contributors to Egypt's exports and are expected to become even more important in the future based on increasing demand in construction, agriculture and fast-moving consumer goods. The top three sources (61% in 2016) of Egypt's chemicals imports come from (in order) the EU, GCC and China. Another 15% comes from the United States and OECD countries. The majority of the sector's exports target the EU[29], the MENA region and Africa while individual sub-sectors have different markets.

Energy and resource efficiency initiatives targeting the industrial sector in Egypt were present as early as the 1990s through donor-funded projects. During 1995 – 2005, approximately 100 million USD in technical and financial assistance were provided as grants and more than 50 million USD as credits have been invested in cleaner production related activities (UNIDO, 2005). Examples of these projects are: Support for Environmental Assessment and Management (SEAM 1994 - 2005), Egyptian Pollution Abatement Project (EPAP I: 1997 - 2005), Egyptian Environment Initiatives Fund (EEIF: 1997 - 2004), Egyptian Environmental Policy Programme (EEPP/EP3: 1994 - 1999).

Other entities/programs providing on-going support and services include: (a) Egypt National Cleaner Production Centre under the Ministry of Trade and Industry (ENCPC: since 2004). (b) Environmental Compliance Office and Sustainable Development under the Federation of the Egyptian Industries (ECO: since 2001). (c) Energy Efficiency and Environment Protection Programme developed by the Industrial Modernization Centre (IMC: since 2007). (d) Egyptian Pollution Abatement Programme under Egyptian Environmental Affairs Agency (EPAP III: since 2015).

In 2016, the Government of Egypt published its first ever, *Sustainable Development Strategy: the Egypt 2030 Vision*[30]. The Strategy is aligned with the principles of the 17 Sustainable Development Goals (SDGs) of the UN, and acts as an overarching framework for all the national development strategies and policies until 2030. The strategy is based on 10 pillars: Economic Development, Energy, Knowledge, Innovation and Scientific Research, Transparency and efficient government institutions, Social justice, Health, Education and Training, Culture, Environment, and Urban Development. For each of the pillars, objectives and goals are set, KPIs are identified and key programs for implementation are described.

[29]Mainly due to firms' inability to meet standards, exports to the EU have declined from 46% in 2008 to 31% in 2016 while exports to MENA and African countries have increased from 28% to 39%.

[30] According to the 2018 National Voluntary Review on Egypt's progress towards achieving the UN 2030 SDGs report, the Egypt 2030 Vision is being reviewed and updated in an effort lead by the Ministry of Planning, Monitoring and Administrative Reform. The changes would reflect the structural adjustment program introduced in 2016, and the outcome of the 2017 national census. Adoption of a "green economy" is stated as one of the highlights of the updated Vision.

The *Industrial Development Strategy 2016 – 2020 (MTI)* establishes priorities such as the provision of jobs, increasing exports, increasing the industrial and the Micro, Small and Medium Enterprises (MSMEs) sectors' contribution to the GDP and institutional reform. One of the key projects highlighted under the Industrial Development pillar is the Green Economy development project that aims to support industries contributing to a "green economy". According to the MTI strategy, these industries comply with international environmental standards of GHG emissions, energy efficiency, chemicals use among other criteria of environmental compliance with the aim of enhancing the exportability of their products. More specifics are given on the development of "Green Economy Industries" under the *2018/2019-2021/2022 Medium-term Sustainable Development plan.* According to this plan, the green economy development plan aims to decrease GHG emissions from Egyptian industries by 15%, and to expand the scale of use of the industrial waste exchange platform established under the Industrial Waste Management and SMEs Entrepreneurship Hub (IWEX) project.

The *Integrated Energy Strategy 2035 (Ministry of Electricity and Renewable Energy)*. The Integrated Energy Strategy document has not been made available to the public; however, some of its goals could be found in secondary sources[31]. (a) Diversification of energy sources: 16% coal, 3.3% nuclear & 42% renewables in electricity mix by 2035. (b) Increase the share of generated energy from renewable energy to 20% out of the total generated energy in Egypt by 2022, and 42% by 2035. (c) Improving energy efficiency (EE) in terms of production, transmission and utilization to ensure its sustainability, to reduce GHG emissions and mitigate the effects of climate change.

The *Low Emission Development Strategy LEDS (Ministry of Environment)* was adopted by the National Council for Climate Change[32] (NCCC) in February 2019. An outline of the strategy's objectives is available on EEAA website[33]. The LEDS focus areas for the industrial sector are the following: (a) Alternative fuel substitution in the cement industry, (b) Reduction of clinker percentage in the cement industry, (c) Energy efficiency in the main industrial sectors, (d) Industrial motor efficiency improvement, (e) Using Solar Heat for Industrial Processes (SHIP), and (e) Efficient mechanised charcoal manufacture.

These policies and initiatives establish an important basis for the development of a green industry, nevertheless challenges still exist. The following sections summarizes some key challenges and opportunities identified.

3.3.1 Key challenges and opportunities

Key challenges:

- Initiatives to promote green manufacturing are fragmented and do not follow an integrated framework;
- Shortages and access to raw materials;
- Limited skilled labour;
- More strategic initiatives are needed to move beyond simple focus on renewables to adapt to the circular economy framework and leverage new technologies for green transitions;

[31] IRENA Renewable energy outlook Egypt: Key findings and recommendations, 2018.
[32] The National Council for Climate Change was established in 2015 by the Prime ministerial Decree 3005, replacing a previous council on Clean Development National Strategy. The NCCC has a mandate to formulate CC Policies, coordinate and enable climate change mitigation and adaptation efforts between different government entities, suggesting appropriate budgets for CC adaptation and mitigation among other responsibilities.
[33] LEDS PowerPoint Presentation available on EEAA website: http://www.eeaa.gov.eg/portals/0/eeaaReports/NC4Egypt/InceptionWorkshop/ppt.leds.pdf

- Compliance to local and applicable international environmental standards remains a challenge for many industrial facilities;
- Although several donor-funded projects were successful in creating awareness, building capacities, and providing some demonstration projects, there has been low uptake of cleaner production, industrial energy efficiency and the use of renewable energy from the industry side;
- Most of the initiatives revolve around renewables and energy efficiency, while direct support to green industries, eco-innovation and green skills and jobs training remains limited;
- No evidence of actively involving SMEs in the greening of the industry efforts. Moreover, SMEs generally face more challenges relating to skills deficit and resources challenges hindering their adoption of sustainability concepts and impacting their environmental compliance;
- Lack of awareness of the banking sector about the benefits of financing green industry and energy results in lack of new financial solutions for industry;
- The Feed-in Tariff (FIT), which allows investors in RE to sell electricity to end users, is restricted to mega projects; there is therefore a need to upgrade the existing regulatory framework governing renewable energy operation and market.

Key Opportunities:

- A number of programmes and policy interventions are described under the Sustainable Development Strategy: the Egypt 2030 Vision[34], particularly under the Environment pillar;
- "Development of Green Industries" is one of the main national programs under MTI's industrial development strategy;
- Several regulatory reforms and policy programs launched are heading in the right direction. In terms of regulation, measures included a Supreme Council for Energy, a new Feed-in Tariff (FIT) to encourage investment in renewable energy through long-term contracts, and the authorization of New Renewable Energy Authority (NREA), as well as allowing investors to operate renewable energy and sell electricity to end-users and government;
- The IMC and the Egypt National Cleaner Production Centre both offer green economy programs to support manufacturing firms in adopting environmental management certifications, environment-friendly processes and use of renewables (especially solar energy);
- Financial institutions in Egypt are increasingly interested to provide sustainable energy and resource efficiency financing to the industrial sector. One such initiative is EBRD's Green Economy Financing Facility (GEFF) project aiming to support Egypt's green economy transition with EUR 140 million of financing for energy efficiency and small-scale renewable energy investments. It leveraged the Central Bank of Egypt (CBE) EGP 200 billion initiative to support small and medium sized enterprises (SMEs), where the commercial banks were required to allocate 20% of their loan portfolios to SMEs at 5% interest;
- An ongoing energy efficiency dedicated fund is the Industrial Energy Efficiency Fund (IEEF), which is a collaboration between UNIDO, EEAA, and Regional Centre for Renewable Energy and Energy Efficiency (RCREE). IEEF is a financial instrument that supports the delivery of technical services to industrial facilities in Egypt to achieve energy efficiency under "Energy Management Assistance" (EnMA) service.

[34] According to the 2018 National Voluntary Review on Egypt's progress towards achieving the UN 2030 SDGs report, the Egypt 2030 Vision is being reviewed and updated in an effort lead by the Ministry of Planning, Monitoring and Administrative Reform. The changes would reflect the structural adjustment program introduced in 2016, and the outcome of the 2017 national census. Adoption of a "green economy" is stated as one of the highlights of the updated Vision. To date, no updated version of the strategy has been published. In the meantime, the detailed 2030 SDS Vision documents have been removed from the government's websites.

3.3.2 Technical assistance contribution to national objectives and SDGs

In order to tackle these challenges and take advantage of the opportunities, the green transition needs to be fully integrated to the industrial policy and its strategic goals. Sustainability and economic competitiveness should be viewed as mutually reinforcing to enable leapfrogging toward knowledge-based green manufacturing. Indeed, with the emergence of technological solutions for environmental challenges, industry can skip some phases of industrialization relying on energy-intensive processes, to reach knowledge-intensive, technology-driven, environment-friendly manufacturing activities.

At the operational level, the transformation towards green industry requires an integrated policy framework to adopt green manufacturing practices across all segments of value chains, (eco-design, alternative materials, renewable energy sources, resources efficiency and cleaner production), while promoting new business models that can lead to a circular economy. Shifting the focus from manufacturing processes and a traditional linear-chain approach to product lifecycles in order to achieve sustainability synergies across supply chains.

In terms of policy initiatives, this means moving beyond the simple promotion of environment measures to include the promotion of circular economy principles. This requires linking more effective environmental policies and other policy areas such as education (by focusing on jobs and skills needs for green transitions) or SME-support (by providing targeted support for SMEs which face higher challenges in terms of access to information, financing, etc. to face environmental requirements). A robust policy framework should also include the establishment of green industry standards, along with providing financial and manufacturing incentives.

The priorities identified for the green industry component are:

- Raising awareness on Circular Economy; establishment of a road map and capacity building for relevant institutions;
- Centre of excellence for Green industry;
- Industrial waste management policies and regulations, with special attention for electronic waste;
- Green Industry know-how transfer, including semi-automated technology, smart solutions and its hardware;
- Raising awareness and new solutions in the banking sector for special funds and soft loans for Green industry technology;
- Energy efficiency and renewable energy capacity building programs;
- Water efficiency and water fingerprint raising awareness and infrastructure programs.

For the plastic sector the priorities are:

- Facilitate access to quality raw materials;
- Develop standards for quality control;
- Improve design and maintenance of molds;
- Upgrade plastic injection technology and optimization;
- Plastic value chain cluster stakeholder capacity mapping;
- Plastic cluster development and strengthen;
- Promotion of industrial investment opportunities in the chemical sector;
- Plastic recycle process enhancement;
- Develop linkage between main industry actors, and complementary and feeding industries, and direct and indirect stakeholders.

Projects of the Green Industry component contribute to build an integrated framework to enable the green transition of Egypt manufacturing sector and adapt to the circular economy model linking environmental policy with skills, innovation and technology enablers.

Output 1: Green growth strategies developed for SME business models

Extensive assessments conducted by UNIDO in Egypt indicate that the green economy has great potential to increase both productivity and employment and preserve the environment through business innovation, technical and managerial skills, strategic planning, and improved private-public interactions. In particular, micro, small and medium sized enterprises (MSMEs) make use of resources traditionally overlooked and/or wasted and can play a crucial role in local economic development. Hence, their development brings about both economic and environmental benefits.

This output is part of an ongoing initiative financed by the Swiss Agency for Development and Cooperation (SDC). It will contribute to the efforts in the country to boost growth, productivity and job creation, while at the same time safeguarding the environment. The output will work at the policy level and directly with MSMEs and entrepreneurs, with a focus on young women and men. It aims to mainstream green growth approaches into government policies and strategies, and to build capacity on green growth approaches for MSMEs and start-ups from five value chains. This will be achieved through the following work streams:

- Start-ups and MSMEs in the five target value chains are trained to implement green growth models;
- Financial and non-financial services offered by Government and non-Government institutions in the 5 target value chains are upgraded in line with green growth models;
- At least 1,000 young people (50 % of which are women) in the target governorates (Luxor and Qena) are trained to access green jobs, based on market research and MSMEs' consultations;
- Awareness of relevant stakeholders, including private sector, civil society, MTI and MoE on the green growth model and needed legislative, regulatory and financial improvements is enhanced;
- Capacity of MTI and other relevant stakeholders such as MoE and affiliated institutions on how to include evidence based green growth elements in relevant Government's policies and strategies are strengthened.

Output 2: Industrial sector framework improved for applying energy efficiency in motors

Until recently, energy efficiency (EE) was not considered a priority for Egyptian industries due to subsidised energy prices and preference for second-hand equipment and rewinding. However, after major energy subsidies reforms, historically energy intensive industries have started to seek alternative solutions to maintain their profit margin while offering competitive market prices. This shift could open a window of opportunity for the EE market and could support the emergence and development of EE technologies local value chain. In this regard, this output aims to reduce GHG emissions in Egypt by accelerating the market penetration of high EE motor systems in the industrial sector. The output also serves to develop the market environment for the diffusion and local manufacturing of solar energy systems for industrial process heat.

This output is part of an ongoing project financed by the Global Environmental Facility (GEF) and includes the following components:

- Strengthening the domestic legislative and regulatory framework related to EE motors;
- Conducting a comprehensive public awareness programme;
- Building local technical capacity;
- Developing demonstration projects; and
- Promoting energy efficiency in electric motor systems.

Output 3: Supported ODS phasing out of Residential Air-Conditioning

The Government of Egypt has shown its commitment to reduce the consumption of ozone depleting substances (ODS) and to meet the country's obligations under the Montreal Protocol. These efforts have been led by the National Ozone Unit (NOU), within the Egyptian Environmental Affairs Agency (EEAA), which was established in 1993 with financing from the Multilateral Fund (MLF) and support from UNIDO.

Based on this longstanding cooperation, this output is part of an ongoing initiative financed by the MLF on Stage II of the HCFC Phase-out Management Plan (HPMP) of Egypt (2020-2024). It consists of conversion activities aimed at phasing out ODS from residential air-conditioning.

Output 4: Circular Economy and Resource Efficiency promoted among SMEs.

The Egyptian economy has proven resilient and achieved significant economic growth as a result of extensive administrative and economic reforms that expand productivity in line with sustainable development principles. It includes administering a robust fiscal policy, cooperative multilateral frameworks for trade. (Egyptian Ministry of International Cooperation, 2019)

Egypt has been working in recent years with the support of international partners, to pave the way for mainstreaming green economy and production-related policies, demonstration projects, capacity building and technology transfer as tools to achieve sustainable development. Scaling up resource efficiency is an essential step for the implementation of the goals stated in Egypt's 2030 Sustainable Development Strategy.

The strategy supports the creation of green industry applications, including waste to energy, waste management and water and energy savings. Additionally, removing subsidies on water and energy prices in 2015 has been a significant driver for the implementation of RECP projects. The TEST (Transfer of Environmentally Sound Technology) approach developed by UNIDO for a system implementation of RECP in industry, recently implemented in 30 industrial facilities in Egypt, is showing a growing business case for RECP within the industry in Egypt.

Within the PCP, UNIDO will develop a Circular Economy roadmap to guide the actions towards the transformation to a more circular economy based in green industry actions by upscaling resource efficiency and cleaner production implementation across the industry. The output will focus on developing the skills required to implement circular economy projects in main stakeholders. The project will focus on the implementation pilot projects related to increasing the efficiency in materials, water and energy use in industries, industrial waste management approaches, promotion and development of financial mechanisms for financing implementation of circular economy projects.

Output 5: Renewable energy and energy efficiency promoted among SMEs

The GDP growth rate level achieved by Egypt in the last years has created an increasing demand for energy for industrial applications. Target actions related to implementing renewable energy and energy efficiency actions in all industrial sectors should be done to ensuring a stable energy market to meet future economic growth. At the same time, specific energy consumption is above international expectations for most industries in Egypt, whose industrial scenario is strongly dominated by a vast majority of SMEs.

Energy efficiency has always been a low priority of the industry due to low energy prices supported by subsidies, and preference for second-hand equipment.

The output will focus on increasing the awareness for energy conservation, energy efficiency, and renewable energy applications in SMEs. There are numerous barriers to implementing energy efficiency and renewable energy options in the industry. The output will focus on:

- Awareness raising of the benefits of EE and RE among the key stakeholders to enable the implementation of the options;
- Develop national capacities for identifying and implementing actions to generate energy from renewable sources for energy use, to save energy and implement energy efficiency options focusing on the reduction of CO^2 emissions, and;
- Promote EE and RE technology transfer and financial mechanisms.

Output 6: Environmentally sustainable degradable plastics developed

Egypt is considered one of the world's largest exporters of plastic waste, which finds its way into seas, oceans and other water bodies. Marine plastic waste in Egypt ranges from 0.15 to 0.39 million tons per year, according to a recent study published in Scientific American. Plastic pollution is one of the multiple environmental problems because plastic waste takes hundreds of years to decompose, and it accumulates around us, especially in rivers and seas, threatening the lives of organisms suffocated by ingesting plastic waste.

Egypt consumes around 12 billion Egyptian pounds of plastic bags annually, and the plastics industry involves all sectors including packaging, pipes, household appliances, spare parts and engineering tools. Investment in plastics is also significant, amounting to USD 7.2 billion annually, according to the Chemicals& Fertilizers Export Council in Egypt.

This output aims to enhance the management of plastic waste especially plastic bags and plastic packaging materials by build a new mechanism for plastic waste management and collection.

This output will focus on:

- Implement projects to increase the amount of collected plastic products which ranges from 49% to 70% of total used single use plastic products; enhancing the collection cycle will decrease environmental threats directly;
- Raise public awareness of collection and handling of disposable single use plastic products;
- Incentivize the research and development for developing biodegradable plastic from natural resources (specially the resources available in Egypt environment) with competitive prices in comparison to conventional plastic;
- Incentivize the research and development to produce degradable additives for single use bags and packaging plastic materials instead of Oxo-degradable materials.

Output 7: Innovation in the plastic value chain enhanced

The current plastics economy produces waste by design; the way plastics are currently made, used and discarded fails to capture the economic benefits of a more "circular" approach. Plastic has become a ubiquitous material in the Mediterranean. It is part of people's everyday life. Every year, 0.57 million tons of plastic enters the Mediterranean waters. This is equivalent to dumping 33,800 plastic bottles into the sea every minute.

The current plastic system does not hold actors accountable for the negative consequences of their actions or incentivize them to address the negative impacts. Each step within the value chain is driven by the priorities of different stakeholders, such as producers, plastic converters, end-users, governments, and waste management actors. To address the complicated scenario Egyptian plastic value chain faces this outcome will focus on:

- Facilitate innovation through building supplier networks;
- Qualify/certify individuals in managing innovation;
- Develop a universal testing database;

- Support the transfer of know-how to local companies;
- Introduce research & design related program to promote innovation.

The Green Industry component will contribute to a number of programmes and policy interventions described under the Environment Pillar of the Sustainable Development Strategy: the Egypt 2030 Vision, including:

- Implementing a program for water rationalization in various sectors, particularly industry and agriculture;
- Developing economic incentives for encouraging the industry sector to reconcile its environmental conditions regarding the reduction of air pollution and GHG emissions;
- Developing economic policies for supporting the efforts aimed at energy conservation in all sectors;
- Developing motivating policies for the production and consumption of new and renewable energy sources, particularly wind and solar power;
- Implementing awareness programs on the development of industrial sector awareness, particularly small and medium enterprises, of the importance of environment protection and resources rationalization.

The Green Industry component is particularly relevant in contributing to the achievement of the following SDGs:

- *SDG 9* "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation";
- *SDG 12* "Ensure sustainable consumption and production patterns".

The project is also relevant to several other SDGs as well:

- *SDG 7* "Ensure access to affordable, reliable, sustainable and modern energy for all";
- *SDG 8* "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all";
- *SDG 13* "Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy".

3.3.3 UNIDO comparative advantage

UNIDO promotes the inclusive and sustainable development of global industry. It does so by providing assistance for the improvement of the environmental performance of existing industry and fostering new industries delivering environmental goods and services. This helps countries achieve sustained economic growth and human development. UNIDO assists industries to improve their resource productivity and environmental performance through the adoption of resource-efficient and cleaner production practices, methods and techniques, as well as through enhanced recycling, resource recovery and treatment of all wastes.

Additionally, UNIDO aims to the transition into a sustainable energy future under the overarching mandate of ISID, through the application of renewable energy for productive uses, adoption of the efficient use of energy by industry and the introduction of low-carbon technologies and processes.

In transitioning to a sustainable energy future, the challenges of addressing energy poverty and climate change are an integral part of the technical cooperation activities.

UNIDO will assist the implementation of this component by offering its international experience and expertise in the field of resource-efficient industrial production, chemical management, compliance with international environmental agreements, optimization of energy systems and infrastructure, and promotion of climate technologies and innovation.

In addition, UNIDO has numerous programs to strengthen SMEs in terms of sanitary safety and quality, techno-economic upgrading, as well as energy and environmental efficiency.

3.3.4 Mapping of potential partners

Potential partners identified for the Green Industry component are:

- Ministry of Trade and Industry and its affiliates;
- Ministry of Environment and its affiliates;
- General Authority for Investment (GAFI);
- Ministry of Petroleum and Mineral Resources and its affiliates;
- Micro, Small and Medium Enterprise Development Agency (MSMEDA);
- The Environmental Compliance and Sustainable Development Office (ECO) affiliated to the Federation of Egyptian Industries (FEI);
- Egyptian business associations and industries chambers;
- Bilateral and multilateral organizations/ Development Partners (e.g. GIZ, WB, IFC, AfDB, EU);
- Other potential private sector partners.

For an overall view of potential partners, see section 2.5 and synoptic tables in annex 2.

3.4 Component: Smart Cities and Sustainable Industrial Parks

Urbanization and industrialization are poised to be two critical drivers of development in the 21st century. In 2007, for the first time in human history, the world population became more urban than rural, representing a fundamental shift in how human societies are organized.[35] It is anticipated that by 2050, two thirds of the world population will live in cities with 90% of urban growth happening in Africa and Asia.[36] Alongside this mega-trend, the last two decades have seen cities emerge as the world's economic platform for production, innovation and trade, accounting for 80% of global GDP[37].

Urban areas offer significant opportunities for formal and informal employment, creating a considerable share of new private sector jobs. Urbanization has helped millions of people escape poverty through increased productivity, employment opportunities, improved quality of life and large-scale investment in infrastructure and services. Cities also create opportunities to have lower unit costs for providing public services, such as water and sanitation, education, electricity, health care, emergency service and public recreation areas. However, in order to capitalize on these opportunities and develop well-functioning cities that are sustainable, governments need to have strategies and plans in place to ensure benefits are realized and challenges associated with urbanization are overcome. Many cities already grapple with unequal access and inefficient use of public services, environmental degradation, disaster risk and vulnerability to the effects of climate change. The complexity of smart and sustainable urban development requires integrated approaches that coordinate responses at the local, national and international level. Likewise, industrialization not only creates jobs in the industrial sector, but also promotes economic growth by improving public-sector development in urban administration, infrastructure, public health and education.

Throughout the course of human civilization, these changes have always accompanied the development of industry, and they have together improved the living conditions of the urban environment. This occurs because the industrial sector itself demands educated and skilled workers, new technology to increase productivity and attractive living conditions. Cities need to consider migration in the provision and planning of city services as well as consider such urban-industrial linkages for facilitating the flow of people, capital, goods, employment, information and technologies. In particular, linkages between urban and rural areas have bearing on food security, where infrastructure and connectivity can improve access to markets, storage and food literacy, and reducing food waste. This offers opportunities to position industrial parks, as hubs for sustainable logistics and mobility in connecting the industrial park with the urban and peri-urban area. Likewise, industrial parks are perfectly suitable to host accelerators for startups and entrepreneurship, and catalyze mainstreaming of cleantech innovation, digitization, climate-smart infrastructure planning and industry 4.0.

In this context, the integration of sustainable industrial parks into the larger urban-industrial infrastructure presents unique opportunities with a transformational impact. In many places, the linkages between urban, peri-urban and rural areas are not functioning satisfactorily.

Inclusive and sustainable industrial parks are a feasible, innovative and integrated intervention, which can be used to support countries, especially developing countries and middle-income economies, in accelerating their inclusive and sustainable industrialization and structural transformation. Industrial parks help overcome business infrastructure challenges and barriers to firm entry into the markets. Industrial parks have the capacity to generate high productivity, stimulate innovation, promote investment and foster social inclusion and environmental protection. Over the past four decades, UNIDO has been promoting the establishment of industrial parks - assisting its Member States in the planning and establishment of industrial parks to support sustainable growth through industrial development.

[35] UN DESA (2015). World Urbanization Prospects: The 2014 Revision. https://esa.un.org/unpd/wup/Publications/Files/WUP2014-Report.pdf
[36] Ibid.
[37] World Bank (2015). Competitive Cities for Jobs and Growth. Retrieved from www.worldbank.org

The development of inclusive and sustainable industrial parks is instrumental in the implementation of the Programme for Country Partnership (PCP), UNIDO's innovative multi-stakeholder partnership model to accelerate ISID in Member States. UNIDO provides the technical support in infrastructure development, and complements this with appropriate policy analysis and advice to support the operationalizing of the industrial parks.

Through the PCP, UNIDO supports its member countries to mobilize diverse partners, financial resources and knowledge in order to create the synergies required to promote and implement industrial development, and to maximize development opportunities following the establishment of industrial parks.

As industrial parks create clusters of energy consuming entities, industrial park operators and enterprises can optimize energy use through "energy symbioses", by promoting energy efficiency, implementing energy management systems, using renewable energy, and industrial symbiosis where relevant. In addition, the industrial park itself offers potential for low-carbon technologies and climate-smart infrastructure planning. These could include the supply of green energy (e.g. solar) for the park and neighboring demand, act as a hub for sustainable logistics, coupled with sustainable transport systems (electric mobility, e-fleets, cold chain).

The usage of "smart cities" has been applied at times to be inclusive of social, environmental and economic sustainability – but the unifying aspect of its use is the application of information and communication technologies to the management and development of cities. Smart city solutions are being applied across basic city services including energy systems (smart grids), mobility (public transportation phone applications), waste management (incorporating sensors into waste collection to reduce amount of pick-up) and more in order to improve resource efficiency and the delivery of services.

To accommodate the inflow of people into the urban area, many cities are expanding into peri-urban and rural areas, absorbing farmland and requiring to reactively addressing increased demands for city services. Industry 4.0 includes concepts, tools and applications that are increasingly interconnected and eventually lead to a convergence of technologies that is blurring the lines between the physical, digital and biological spheres.

Emerging technologies that will play a pivotal role include artificial intelligence, robotics, the Internet of Things (IoT), autonomous vehicles, 3D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing. Alongside this development in industry, the application of big data, the IoT and information and communication technology are also being understood within the context of urban development, commonly referred to as "smart cities".

Aside from its impact on how cities provide services and develop infrastructure, Industry 4.0 has the potential to revitalize cities and create new jobs with many kinds of high-tech clean manufacturing industries emerging in recent years that allow small-scale production. Decentralized, modularized industries provide an opportunity in developing countries with premature deindustrialization and rapid urbanization to integrate modern industries in cities and leapfrog technological development.

3.4.1 Key challenges and opportunities

Key challenges and opportunities are analyzed below per main area of intervention, respectively Smart Cities and Sustainable Industrial Parks:

Smart Cities

The Ministry of Planning, Monitoring and Administrative Reform launched the "Egypt Vision 2030" initiative, which serves as the national sustainable development strategy of Egypt. This vision is built around the three pillars of sustainable development, i.e. the economic, social and environmental pillars.

For the urban context, the goal is to achieve a better spatial management of lands and resources to accommodate the population and to improve their quality of life.

The "Urban Development Pillar" in the Egypt Vision 2030 highlights the existing significant challenges in urban areas as well as the need for improved legal frameworks, capacities and governance in order to promote sustainable management in urban areas. The National Capacity Self-Assessment (NCSA) also suggests on building participatory governance and mobilizing funding for sustainable development.

Egypt faces increasing environmental pressures due to urbanization and rapid population growth, making cities critical players in supporting the country's development and efforts towards addressing climate change. The population in Egypt is presently 100 million and estimated to reach 140 million by 2050, placing increased demand on urban infrastructure and services. Fossil fuels-based transportation, high urbanization rate, population growth and gaps in urban planning are causing severe air pollution.

The main challenges for most Egyptian cities are the implementation of sound low-carbon urban policies to facilitate low-carbon infrastructure and trigger private-sector involvement in innovative climate-smart solutions.

Although legal and governance frameworks concerned with issues like urban planning and energy efficiency have improved over the past years, they are often implemented only on an irregular basis. However, Egypt's Ministry of Local Development has developed a program that aims to set an optimal framework for the management of state affairs and society. This includes participation, integration and sharing of planning, management and financing competencies between the central government and the governorates. Within this framework, clear objectives are to be achieved to implement efficient governance methodologies between national, state and city levels.

Over the last 50 years, Egypt has been preparing the country to accommodate its population growth by expanding into the desert starting by 1st up to 4th Generation of cities leading to a total of 40 new cities. On average, these cities have reached only 8% habitation out of their intended capacity. Some cities are progressing towards their planned capacity, such as 6th October city which is an inclusive city that accommodates for both car-owned segmented communities and public transportation usage, while other cities such as New Fayoum has very low population levels.

Sustainable Industrial Parks

The Ministry of Trade and Industry's (MTI) 2020 strategy for industrial development is focusing on the axes of developing small and medium enterprises and developing industrial areas, promoting entrepreneurship, achieving industrial integration, and transferring advanced technologies to Egyptian industries. MTI is currently adopting a program to deepen local manufacturing that will contribute to increasing the value-added products to the Egyptian products and enhance the competitiveness of the Egyptian product in the local and international markets.

Industrial parks form an essential instrument for the country to attract investments, increase manufacturing capacity, create jobs, and compete in foreign markets. Industrial parks help foster economic development by providing an institutional framework, modern services, and a physical infrastructure that may not be available in the rest of the country. A concentration of companies within such parks helps foster innovation, technological learning and company growth, and can reduce costs for companies. Egypt's roadmap towards a sustainable economy places industrial zones at the top of their priorities as the main engine for creating comprehensive and sustainable industrial development.

In 2007 the government launched a programme to attract private sector investment for the development of the industrial zones as sustainable industrial areas, including the use of new and renewable energy, rationalize energy consumption, reduce greenhouse gas emissions and treating sewage networks. This initiative was carried out with the major relevant stakeholders, including the National Urban Community Authority (NUCA) (responsible for the state's land) and the Industrial Development Authority (IDA) (responsible for land division, creation of facilities and tendering).

The available area totals 42 million square meters in sustainable industrial areas in which the 13 industrial zones were designed including training and business development centres, a logistical area, a service and facilities management area. To this end, the Egyptian government is currently implementing thirteen (13) new industrial parks.

Out of the 13 industrial parks consisting of a total of 4,311 units, eight (8) industrial parks have been completed, and the remaining five (5) are to be finished by April 2020. The industrial parks are; Merghem, Aswan, Luxor, Beheira, Gharbeya, Assiut, Fayoum, Menya, Suhag, Red Sea, Qena, Hurghada, Beni Suef.

Recently, the IDA has taken important steps in the improvement of industrial zones management through regulatory reforms, building capacities on management including environmental management, developing industrial zones strategic plans, outsourcing services, and the establishment of industrial zones' investors' forums. Currently, such reforms are being piloted in Qena and Sohag Governorates in the framework of the Upper Egypt Local Economic Development Programme implemented by the GoE and funded by the World Bank.

The challenges to attract enterprises in the industrial parks include: i) roads and logistical connections leading to the industrial parks, ii) industrial parks management, iii) capacity for maintenance and operation for the units/parks, iv) need for incentive schemes to motivate different target groups v) Capacity to work towards environmental sustainability and circularity approaches. Private sector participation for park ownership and management has seen encouraging results, due to their ability and agility to provide logistical and operational support, and act as a one-stop shop for regulatory requirements for its clients.

3.4.2 Technical assistance contribution to national objectives and SDGs

UNIDO's mandate of supporting inclusive and sustainable industrial development as well as its responsibility for being the lead UN agency supporting the achievement of Goal 9, "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" gives UNIDO a unique role within the UN system for how it can support the development of smart cities and sustainable industrial parks. Based on this mandate, UNIDO has developed programmes and services that well position the organization to offer interventions to member states and cities that seize the opportunities presented by urbanization and industrialization.

This component will be achieved through implementation of technical cooperation at three levels of intervention: Sustainable Industrial Parks, Smart Cities and Integrated urban-industrial approach.

Output1: Developed policy instruments and regulatory reforms for sustainable industrial parks

It will aim at developing policy instruments and regulatory reforms for sustainable industrial parks with a strategic direction and plan to leverage industrial infrastructure enhancing regional inclusiveness and regional industrialization. It will be developed in coordination with PCP components on Industrial Policy & Governance and Investment Promotion.

Output 2: Capacity of industrial parks staff developed on planning, management, design of incentive schemes and application of the eco-park model

It focuses on developing capacities of industrial parks staff in the:

- Design of new industrial parks focusing on value chain approach and regional development;
- Management and operation model of new and existing industrial parks;
- Design of tailored incentive schemes to attract the target industries and informal sector;
- Application of an Eco-Industrial Park model based on international best practices.

This intervention includes the design of a tailored incentive scheme as the basis to roll out an engagement model to increase number of private developers for the management of industrial parks and zones, and attract the informal industrial sector to work in existing and new industrial parks.

In addition, there is a need to transfer the know-how to work towards an Eco-Industrial Park model based on international best practices in the selected and targeted industries and locations taking into consideration the value chain and a cluster approach, building on the knowledge transfer on management of the industrial parks and zones.

As such, interventions progress, a control centre for the industrial zone to manage and monitor operations in utilities would be required to facilitate the implementation of Industry 4.0.

Output 3: Cleantech Innovation incubator and accelerator established in sustainable industrial parks to boost entrepreneurship and innovation

It will aim at boosting entrepreneurship and innovation in Egyptian industrial parks through the creation of cleantech innovation incubators and/or accelerators. The priority target beneficiaries will be women and youth.

Specific initiatives around cleantech innovation incubators, such as UNIDO's Global Cleantech Innovation Programme (GCIP), will be tailored towards industrial parks.

Output 4: The cities' competitiveness and environmental sustainability assisted by low-carbon and climate-smart technology infrastructure investments in a major economic or industrial sector

This output will focus on the development of pilot projects and pipeline of low-carbon investments in waste, energy and mobility to boost cities' competitiveness and environmental sustainability in Egyptian cities. The pilot target city of this intervention will be Hurghada.

Output 5: The municipality's creditworthiness is supported through the development of a climate-smart capital investment plan for low-carbon investments

The output will aim at raising creditworthiness of Egyptian municipalities through the development of a climate-smart capital investment plan for low-carbon investments. The pilot cities targeted by this intervention will be: New Administrative Capital and others to be identified.

Output 6: Integrated smart and low-carbon city infrastructure incusing: waste, mobility, digitization, and e-government supported

This output will aim at integrating smart and low carbon interventions in cities' infrastructure, including:

- *Waste:* Capacity to develop basic infrastructure strengthened, with particular focus on waste management applications and waste-to-energy applications integrating circularity, smart applications and climate-resilience for integration in the new cities still under construction. Possible target cities are El Alamein and Mansoura;
- *Mobility:* Accelerate sustainable mobility and the deployment of electric vehicles;
- *Digitization:* Smart utilities and e-government; water, electricity & gas metering systems. Technologies and tariff systems adopted to enable better use of scarce resources;
- *E-Government:* embedded in integrated technology solutions providing an ecosystem conducive for business and industry.

This integrated approach will be applied to pilot target cities including: 6th of October City, Badr City, New Alamein and the Administrative Capital.

Output 7: Improved linkages between sustainable industrial parks and urban and peri-urban areas

This intervention will aim at analyzing scenarios to integrate industrial parks into a larger urban-industrial infrastructure and further list opportunities, such as on logistics, mobility, green energy supply and define a roadmap to increase the economic, social and environmental performance of the industrial park. This approach will target pilot cities, including 6th October City and Badr City.

The implementation of tailored interventions on smart cities and sustainable industrial parks will act as a catalyst for building the capacity for a smart urban-industrial development that integrates an efficient urban transportation, decreased dependency on fossil fuels, increased local capacity and awareness with attention to key environmental challenges facing Egyptian cities.

The aforementioned requested UNIDO interventions for smart and sustainable cities would focus on the following three interconnected dimensions: e-government, circular economy and smart utilities. Interventions on using smart utilities include; i) smart parking systems, ii) sensors for electricity and water, iii) adaptive street lighting, iv) fleet management system. UNIDO is expected to formulate interventions around these dimensions, with particular focus on providing a model for waste-management applications and waste-to-energy technologies that can be integrated for the new cities still under construction. Possible target cities are El Alamein and Mansoura.

UNIDO is expected to strengthen the capacity to design, manage and operate sustainable industrial parks, to plan and to assist in the design of tailored incentive schemes to attract the target industries. Among their many positive externalities, eco-industrial parks promote resource efficiency and circular economy, making a contribution to sustainable cities. In this context, a recently initiated project in Egypt is the intervention as part of the Global Eco-Industrial Parks Programme (GEIPP). The other countries are Colombia, Peru, Ukraine and Vietnam. Each country level EIP interventions will deliver 2 outcomes - *Outcome 1:* EIP incentivized and mainstreamed in relevant policy and regulations leading to an increased role of EIP in environmental, industry and other relevant policies at the national levels in the participating Programme countries, and *Outcome 2:* EIP opportunities identified and implementation started, with environmental (e.g. resource productivity) economic and social benefits achieved by enterprises confirmed.

The implementation of EIP opportunities by enterprises and other organizations will be supported by the EIP services providers, and will lead to reduction of the environmental footprint and operational and compliance costs of businesses, and an increase in their - natural - resource productivity. Future outputs will build on the results of this intervention, and implement some of its recommendations including on appropriate incentive schemes, tailored capacity building on design, and operating and managing of eco-industrial parks.

An important element of the EIP approach is to create a more sustainable operating environment for firms, and to ensure that they are able to improve their competitiveness and create jobs. These eco-industrial parks would be designed to use resources more efficiently, and improve productivity. They would provide investors with an environment specifically adapted to support the achievement of their social responsibility goals. They would also increase market access to sustainable products, and lower exposure to climate change risks. Such interventions would greatly benefit from a clear linkage with the component on Investment Promotion, and the Policy and Governance component, "Regulations Pillars", most notably: i) Enhancing regulation to lower environmental impact of industrial parks and complexes and implement stringent control mechanism ii) Authorities role is clarified for areas related to industrial zone infrastructure and management, iii) Develop a blue print for management of public existing industrial zones and parks against privately managed industrial zones, iv) Roll out a model regarding the pricing of the industrial land and enhancing the mechanism of allocation in order to reduce the lead time.

These interventions will contribute to making Egypt one of the leading industrialized countries in the Middle East and Africa, and creating an attractive climate for Arab and foreign investments. The component will contribute to Nationally Determined Contributions (NDCs) and SDG 7, SDG 9, SDG 11, SDG 12, SDG 17.

3.4.3 UNIDO comparative advantages

UNIDO assists its Member States in achieving equitable economic growth without harmful effects to the environment, demonstrating that the creation of industries and increase in employment can go hand-in-hand with the reduction of resource use and pollution.

Over the past few decades, the creation of industrial parks has been recognized as an efficient way of bringing together industrial activities with commercial, infrastructure and services. As developing and emerging economies seek to increase industrial output, there is also a pressing need to decouple economic growth from environmental and resource inefficiency to meet wider social objectives.

As a result, UNIDO applies the concept of Eco-Industrial Parks (EIPs), which has increasingly been recognized as an effective tool to overcoming challenges related to inclusive and sustainable industrial development within the scope of Sustainable Development Goals (SDGs).

The development of sustainable industrial parks and their integration with smart cities makes a critical difference for Member States to achieve inclusive and sustainable industrial development and SDG9. In Ethiopia, UNIDO is assisting in the establishment of four integrated agro-industrial parks (IAIPs), a priority for the Government.

In Senegal, UNIDO has assisted the Government in operationalizing the first phase of Diamniadio, the country's first integrated industrial park, as part of the new city development. In Peru, UNIDO is working with the Government to develop sustainable industrial parks, and to transform existing industrial zones, integrating best available techniques and technologies in the construction, operation and management of industrial parks.

UNIDO's programmatic interventions towards smart and sustainable cities include the development of low carbon urban infrastructure and services, supporting transitions to competitive and clean urban industrial systems, and establishing hubs of innovation and opportunity. The last three objectives are reflected in the cross-cutting themes: inclusivity; resilience; and partnerships. These pillars and cross-cutting themes collectively align with UNIDO's three organizational strategic priorities: safeguarding the environment, advancing economic competitiveness and creating shared prosperity. UNIDO's fourth organizational pillar, strengthening knowledge and institutions, is reflected in the management and scaling-up of UNIDO's inputs and core functions. UNIDO offers its expertise in technical cooperation, capacity building and knowledge management for tailor-made local solutions as well as access to financial mechanisms to support the transition to sustainable cities that have climate smart infrastructure, inclusive and sustainable industries, and act as engines of prosperity and innovation.

Member States benefit from UNIDO's broad field and partner networks and the ability to leverage investment from a wide range of stakeholders, such as governments and private sector actors, in particular industry. Building on baseline initiatives, UNIDO provides countries with high impact, economically feasible and sustainable solutions to tackle today's urban environmental challenges. As the only UN agency mandated to promote industrial development, UNIDO offers innovative value chain and technology transfer capabilities that support countries and local urban areas in the transition to sustainable development. UNIDO has successfully cooperated in several completed and ongoing development projects in close collaboration with e.g. Egypt's Ministry of Trade and Industry, Ministry of Environment and national executing partners, like the Egyptian National Cleaner Production Centre (ENCPC), the Industrial Modernization Centre (IMC), the National Renewable Energy Authority (NREA) or Egyptian Environmental Affairs Agency (EEAA) as well as other business sector stakeholders.

3.4.4 Mapping of potential partners

Potential partners identified for Smart Cities and Sustainable Industrial Parks component are:

- Ministry of Trade and Industry and its affiliates;
- Ministry of Environment and its affiliates;
- Ministry of Electricity & Renewable Energy and its affiliates;
- Ministry of Finance;

- Ministry of Housing and Urban Communities and Its affiliates;
- Ministry of Planning & Economic Development;
- General Authority for Investment (GAFI);
- Engineering Authority;
- Egyptian Micro, Small and Medium Enterprises Development Agency (MSMEDA);
- Centre for Environment and Development for the Arab Region & Europe (CEDARE);
- Regional Centre for Renewable Energy and Energy Efficiency (RCREEE);
- Egyptian Industrial Associations;
- Federation of Egyptian Industries;
- Alexandria Businessmen Association;
- Egyptian Junior Businessmen Association;
- Export Councils;
- UN-HABITAT;
- United Nations Development Programme (UNDP);
- United Nations Environment Programme (UNEP);
- UN Capital Development Fund (UNCDF);
- European Bank for Reconstruction and Development (EBRD);
- World Bank Group (WBG);
- Asian Development Bank (ADB);
- Inter-American Development Bank (IDB);
- The African Development Bank (AfDB);
- Other potential private sector partners.

For an overall view of potential partners, see section 2.5 and synoptic tables in annex 2.

3.5 Component: Value Chains

Value chains constitute important opportunities for Egypt to be part of the global economy, captivate knowledge and technology, and add value to its products. Yet, many segments of the Egyptian private sector are defined by low levels of competitiveness and productivity, thus limiting private sector development, including integration into international, regional and domestic value chains. Consequently, only a small share of Egyptian firms exports to global markets. Through various past and present projects, UNIDO has supported the development of MSMEs, clusters and value chains in key productive sectors such as agro-food, textile, furniture, waste management and renewable energy. Upscaling successful interventions in these sectors is of paramount importance in order to maximize the impact on the productivity and competitiveness of the hundreds of thousands of private sector establishments that operate in the country and to capitalize on the impact on the economic participation of youth and women, while at the same time contribute to diversifying Egypt's economy.

In line with the Sustainable Development Strategy (SDS): Egypt Vision 2030 and as endorsed under the national Industry and Trade Development Strategy (in particular its Industrial Development and Expert Development Pillars), transforming the Egyptian exports' structure into high value exports is one of the main objectives, which PCP Egypt has also endorsed. Among the industries that were listed in the Strategy for enhancing the local supply chains integration and economic complexity improvement, this component focuses on priority industries supporting local supply chains, particularly rapid growth industries, which provide required job opportunities and realize economic, social, and environmental goals.

The main axes of intervention, the sectors and the priority areas are as follows:

- National Objectives: (i) Promotion of private investment and its orientation towards promising products in international markets, (ii) Development of new higher value-added products from the transformation of agricultural production, (iii) Strengthening and promoting exports in traditional markets and developing new high-growth markets and, (iv) Strengthening food safety; v) Creating new jobs including for women and youth and added value in the sector;
- Main axes: (i) Support for the creation and upgrading of agricultural product valorization units (packaging, processing, etc.), (ii) Support for the modernization of marketing channels, (iii) Support for export and market access and (iv) Cross-cutting measures (training, innovation, standardization, food safety, etc.);
- Priority areas: (i) textile industries, (ii) packaging industries, (iii) agricultural industries with selected value chains, (iv) food safety, (v) industries feeding furniture and leather manufacturing and (viii) cross-cutting measures common to all industries (innovation, training, stimulation of the local market, support to SMEs through the establishment of a Centre of Excellence for knowledge and best practices transfer).

Under the National Industry and Trade Development Strategy, textile and chemical were listed as industries required for transforming the export structure, whereas agro-industry, packaging, plastic, textile, leather and furniture were classified as industries for increasing the added value and for the integration of local value chains.

INDUSTRIES REQUIRED FOR RATIONALIZING IMPORTS AND INCREASE EXPORTS	INDUSTRIES FOR THE INTEGRATION OF LOCAL VALUE CHAINS
• Chemical Industries • Textile & Clothing Industries	• Agricultural Industries • Packaging Industries • Plastic Industries • Industries Feeding Furniture & Leather Manufacturing

The agro-industrial sector, including food and non-food products, is among the strategic sectors identified in Egypt Vision 2030, Egypt's SDS, as it is a main driver for socio-economic development in the country, tackling both export competitiveness as well as employment creation (with special regards to youth and women). The MTI has also placed the agribusiness sector as a core industry for Egypt to reach the targets set for export, employment, value-addition and SME development. Correspondingly, the CFI and the FEC have drafted their respective strategies in line with the Ministry's priority actions. In addition, the MALR, in its Sustainable Agricultural Development Strategy Towards 2030, highlights as priority areas the application of Good Agricultural Practices (GAPs), the integration of the value chain with the industrial segment and the promotion of value-addition at field level (especially in Upper Egypt).

In relation to the agriculture industries, Egypt's food and agri-food production sector represents a major sector of the economy, and serves as a major source of employment for youth and women. Yet, and despite the sector having conquered a number of markets domestically and internationally, food safety performance remains inconsistent and has impeded by rejection of products from key foreign markets, particularly European markets, due to non-compliance with hygienic production practices, and/or the excessive use of agrochemicals and other substances in conjunction with food production.

The sector has yet to reach its full potential to add value on primary production or stimulate innovation through the valorization of functional ingredients or specialty products. While Egypt is among the top producers of fresh crops in the world, the level of processing still remains low in terms of volume (around 10%) and quality (e.g. safety measures and product range) compared to other competitors. In the case of tomatoes, for example, Egypt produces about 8 million tons of fresh tomatoes per year and is the world's fifth largest producer, which can be attributed to its suitable climate, dual seasonality, and fertile lands. However, only 3–4% of the tomato crop is processed. The processing sector suffers from a lack of integration with the supply chain.

In order to enhance economic competitiveness, exploring new areas under the PCP Egypt will give the chance to UNIDO and its partners to work in innovative sectors where opportunities and impact are high, such as in the sector of sustainable and smart packaging. Egypt is consistent with MENA trends and the packaging industry is witnessing growth in line with increasing local demand for consumer goods driven by population growth. The packaging industry in Egypt has great potential but it is facing diverse and complex challenges with regard to raw material availability, design challenges, quality of technical education, standards compliance and mistrust by the larger multinationals operating in Egypt.

Smaller manufacturers on the other hand suffer from information asymmetry with regard to the availability of domestic manufacturers of affordable packaging material that suits their production requirements. Unlike the larger players, the quick solution cannot always be importing as the rising costs of imported components adversely affect domestic competitiveness. Yet this is a sector where there is room for investment of any size, and once established as a consistent performer there is an opportunity for export to Africa and the MENA region.

While supporting the Egyptian private sector to reinforce its competitive position and open new market avenues, UNIDO will also focus its efforts on establishing an excellence centre to champion the transfer of knowledge, technology and best practices to SMEs. Within the PCP, UNIDO will develop a centre of excellence that will act as a knowledge hub and service provider to the industry. The centre of excellence will be established within an existing organization that is mandated and has the capacity to play this role. Several entities will be considered, among them the Food and Agro-industries Technology Centre, the Chamber of Food Industries, the Industrial Modernization Centre and the Horticultural Export Improvement Association among others.

3.5.1 Key challenges and opportunities

The main challenges of upgrading value chains are:

- Major challenges facing the agribusiness sector is that Egypt is no longer seen as a low-cost producer and a different value proposition is needed, the sector is suffering from constrained water resources, jobs created are mostly in the informal sector, supporting lower quality jobs with low-skilled workers;
- Lack of innovation in the sector, low rate of new product development; low level of value addition;
- High losses in agriculture sector, averaging 30% depending on the product, including about a half of that from logistics (e.g., grape, tomato, onion, green beans and capsicum value chains aggregate losses of EUR 266 million annually);
- Main challenges for increasing agricultural exports are quality considerations, particularly pesticide damage and residues that disqualify Egyptian exports from meeting sanitary and phytosanitary requirements of trading partners, especially in the European Union;
- Insufficiency in terms of efficient packaging at competitive cost: the challenges of the agro-food packaging industry related to the supply of raw materials, high energy consumption, compliance with standards, as well as the research, the development and the design that affect the quality and cost of packaging;
- Unclear land rights discourage investments, particularly, in fixed assets;
- Access to finance, in particular for small-scale domestic investment is severely constrained;
- Factor markets do not operate in accordance with market mechanisms[38];
- Non-value adding intermediaries that connect farmers to exporters add a price margin in the range of 25 to 40 percent, decreasing the cost advantage of Egyptian exports and reducing farmers revenues[39];
- Barriers to SME development along the value chain, particularly for youth and women, due to weak ecosystems for access to finance, access to markets, access to networks, etc.;
- Availability of TVET schools for the furniture, leather, textile and handicrafts sectors;
- Inadequacy of manufacturing processes to international standards including quality requirements and sustainability standards;
- Access international markets due to logistical obstacles and administrative constraints in export procedures;
- Nascent place of design and innovation, lack of R&D towards digital transformation and weak linkages between non-food value chains;
- Access to raw materials and components including local raw leather and wood;
- Delayed relocation of the leather sector to Robikki Leather City is still uncertain;
- Domestic markets in the non-food sectors flooded with low cost imports.

Main key opportunities include:

- Significant reforms have taken place recently, including a shift to full float of the Egyptian pound in 2016, fiscal reforms including broadening of tax base and reduction of various subsidies.

[38] Unlocking the potential of the agricultural sector in Egypt, World Bank, 2017
[39] An agricultural policy review of Egypt, working paper, IFPRI, August 2018

Fiscal deficit has been declining though rapid inflation dampened the positive impact of devaluation on exports. The direction has reversed more recently and overall growth has returned. A new Investment Law in 2017 has also eased several requirements for investors:

- Large and growing domestic market: Egypt has the largest consumer market in the Middle East and North Africa region. Total annual spending on food is estimated to reach around USD90 billion by 2021 (up by 36 percent from 2016);
- With a geographic position strategically located on key Asia – Africa – Europe shipping routes, Egypt has an opportunity to develop as a trade hub of the Eastern Mediterranean region based on the trade that transits through the Suez Canal between Asia and Europe. In addition, the opportunity for land-based trade between the Mashreq and Maghreb countries, and between Europe and the Arabian Peninsula, to transit through Egypt can be sizeable;
- Opportunity from the exports of agri-products – including processed agri-products – appears to be under-realized. Even though the relative contribution of agribusiness (processing and other value addition activities) vis-a-vis agriculture (only cultivation) to GDP is 1.15 (higher than a majority of its lower middle income and North African peers), it is estimated that Egypt currently realizes only between 30-40% of its export potential across key agri-commodities, including at least a few in processed form;
- The availability of a growing packaging industry (despite its challenges) supported by the Industry and Trade Development Strategy where packaging is included as a main output underlining Pillars 1 and 3 namely: Industrial and Export Development. The strategy focuses on improving the quality of packaging and activating the sector development strategy to enhance industrial competitiveness as well packaging compliance with international standards to improve the quality and standards of Egyptian exports;
- Relatively low level of local training infrastructure for specialized skills for export-oriented cultivation and processing;
- Rich historical, social and cultural heritage that is reflected in Egypt's deep legacy of creative industries production including leather, handicrafts, textile and furniture production;
- The furniture industry in Egypt enjoys multiple competitive strengths including strong and recognized woodworking know-how; geographical proximity to primary export markets (MENA and Western Europe) and an attractive cost structure. Moreover, the furniture sector is capable of creating additional indirect jobs due to backward linkages with many sectors such as wood, paint, fittings, textile, and forward links with using industries such as construction, housing sector, tourism sector, etc. The tourism and construction sectors have shown particularly strong performances in recent years that might create opportunities for the furniture, handicrafts and creative industries' sectors;
- Egyptian cotton has historically represented the gold standard for the world's finest linens and clothing with opportunities to export for cotton and textile products in international markets. The global ready-made garments industry is estimated worldwide at almost 1.3 trillion USD in retail value with growth rates of over 2% per year;
- The Egyptian leather sector has many competitive advantages including: more than 70 years of cumulative experience in the tanning, processing and manufacturing of leather products; available raw material although decreasing; large domestic and ever-growing market; proximity to international markets, especially Europe; availability of youth labour and advantage of custom exemptions on its trade with countries members of the Arab Greater Free Trade Zone Agreement, COMESA, MERCOSUR, Egyptian European Partnership Agreement and Agadir Agreement.

3.5.2 Technical assistance contribution to national objectives and SDGs

At the national level, the program is aligned with the objectives of the Sustainable Development Strategy (SDS): Egypt Vision 2030, and more particularly the first pillar of economic development, which will enable Egypt to be an active global player. In terms of ISID and SDGs, the program will contribute to Goal 1 (Poverty Eradication/No poverty), Goal 8 (Access to decent jobs), Goal 9 (Build a resilient infrastructure, Promote Inclusive and sustainable industrialization and foster innovation), and Goal 12 (Responsible Consumption and Production). In terms of ISID, the program will contribute to:

i) Promote the development of the industrialization of the Arab Republic of Egypt's economy through the support of selected sectors including the agro-industrial ones, allowing these sectors to take full advantage of the benefits of the globalization of markets of industrial goods and services;

ii) Support economic, social and environmental growth through responsible, integrated and high-impact technical assistance; and

iii) Ensure inclusive development by integrating gender aspects into this Programme.

The contribution to the national objectives will be achieved through the completion of the expected outcome of the component: Improved performance and competitiveness of selected value chains through inclusive and sustainable development. In particular, the technical assistance of the value chains component is divided into nine outputs:

Output 1: Support to small and medium-sized agribusiness enterprises (SMEs) provided to significantly improve their competitiveness and performance.

The agro-industrial sector in Egypt, similar to other sectors in the country, is characterized by a shortage of medium-sized enterprises and this is mainly due to the difficulty of small firms to upgrade, in addition to the inability of upgraders to sustain their new size which leads to the 'missing middle'[40]. In this context, Egypt has a much lower rate of firm entry than other countries. Besides, young firms in Egypt age, but do not grow. After 30 years in operation, Egyptian firms have only hired, on average, 50 % more workers. In addition to financial challenges, the key limiting factors are the limited access to skilled-trained labor, technology, market research and product development. Levels of internationalization also remain very limited, with only 5% of firms engaging in export activities. Small enterprises face multiple obstacles to participate in regional and global value chains, be it directly or indirectly as suppliers. On one side, the production stages along value chains struggle to produce demanded products not only in terms of quantity, but also in terms of quality. This confirms the strong need for an excellence centre to champion the transfer of knowledge, technology and best practices in an effective way to the SMEs in the sector. The Government has set out an ambitious strategy to grow Egypt's small and medium-sized enterprises, but its success will depend on implementation.

UNIDO's contribution to developing knowledge platforms in Egypt goes back to the launch of ETRACE[41] project in 2004. Its long name "Egyptian Traceability Centre for Agro-industrial Exports" reflected the sustainability dimension of the project to be institutionalized as a centre. The project provided financial and technical assistance to support Egyptian agro-industrial enterprises in developing and implementing traceability systems, upgrading their technology and management systems and acquiring certification for their production and export facilities. It thus enabled Egyptian companies to continue exporting and maintain and expand business linkages with firms in Europe and elsewhere.

[40] The German Development Institute (2013) Which Factors Determine the Upgrading of Small and Medium-Sized Enterprises (SMEs)? The case of Egypt.
[41] Egyptian Traceability Centre for Agro-industrial Exports

The Government of Egypt decided to institutionalize the centre so that it could continue sustainably after the end of the UNIDO project. In 2009, the centre was officially registered and affiliated with the Egyptian Ministry of Trade and Industry, as the Agriculture and Agro-Industries Technology Centre, and was then merged with the already existing Food Technology Centre. The centre hosted and closely collaborated with several UNIDO value chain projects and the knowledge transfer process went effectively through national competencies whose capacities were built on the job. Apart from these projects, the centre, as an independent service provider, is constrained by its institutional setup and the financial and administrative rules and regulations, as a governmental entity.

Within the PCP, UNIDO will develop a centre of excellence that will act as a knowledge hub and service provider to the industry, for technology transfer (clean agriculture, and organic products), enhancement of processes and productivity, quality standards for food safety and traceability, efficiency of energy use, promotion of the circular economy to the food and agro business community; and capacity building for any related 4IR technologies (as applicable and affordable in Egypt). The centre of excellence will be established within an existing organization that is mandated and has the capacity to play this role. Several entities will be considered, among which the Food and Agro-industries Technology Centre, the Chamber of Food Industries, the Industrial Modernization Centre and the Horticultural Export Improvement Association, among others. UNIDO will conduct a rapid mapping and institutional assessment of potential entities to identify the partner entity/ies and will produce accordingly an institutional development plan with a business model to ensure sustainability. The centre will be equipped with the infrastructure required to run basic process and product development activities and might use other testing and laboratory infrastructure existing elsewhere. UNIDO will build the capacity of the centre's staff and associated local experts to provide extension and development services to the target enterprises. This program might also extend it services to other supporting actors who are collaborating with the centre or complementing the range of services provided.

Output 2: Supported food safety and food trade competitiveness in Egypt

The Government of Egypt has taken major steps in line with its ambitious initiative of reforming the country's food safety regulatory framework. One of the principal achievements was the establishment of the National Food Safety Authority of Egypt (NFSA). The NFSA was given the authority and mandate to be the sole regulator of food products, post-harvest and post-slaughter. Under PCP Egypt, new interventions will help the NFSA achieve its vision and fulfill its entire food regulatory mandate. More specifically, the program will:

- Develop a Food innovation agenda including a strategy to promote the functional food and nutraceutical products within the sector;
- Promote value-addition, innovation, standardization, and export potential of the food / agri-food sector through technical assistance interventions;
- Enhance the capacities of current and potential employment of the food / agri-food sector, targeting a knowledge-driven food and agri-food driven sector;
- Enhance the Innovation potential of the Agri-food production sector;
- Develop incentives for food safety and quality enhancements directed to food producers and exporters, across the supply chain, offering financial and technical assistance programs and raising awareness of the regulatory framework of NFSA.

Output 3: Supported the empowerment of socio-economic performance and sustainability of selected priority agro-industrial value chains in Egypt

- While Egypt is among the top producers of fresh crops in the world, the level of processing still remains low in terms of volume (around 10%) and quality (e.g. safety measures and product range) compared to other competitors.

The example of tomatoes is even more striking. Egypt produces about 8 million tons of fresh tomatoes per year and is the world's fifth largest producer, which can be attributed to its suitable climate, dual seasonality, and fertile lands. However, only 3–4% of the tomato crop is processed. The processing sector suffers from a lack of integration with the supply chain. This starts with primary producers, who are not fully aware of the potential for additional income they could benefit from by engaging in contract farming for the processing industry. At factory level, the opportunities to enhance production and add value are quite evident. This could be achieved by engaging in contract farming to ensure a better supply and increase production capacity, as at the moment they are operating at a maximum of around 60–70% of their capacity. Secondly, by improving skills of workers, technicians and managers to ensure a consistent quality and safety of final products. Finally, the processing tomato factories should be introduced to innovative products, such as new recipes and semi-processed products for the food service industry, including HORECA (Hotel/Restaurants/Cafés etc.).

The proposed initiative therefore focuses on creating a Pilot Training and Service Centre serving selected value chains; Tomato processing value chain as a preliminary pilot project by i) linking primary producers with the processing industry; ii) offering a set of services for the existing and new processors in processes value chains to develop their business starting by upgrading labour skills through specialized training courses and iii) by introducing clean agriculture, organic and innovative products and/or processes to compete in the internal and external markets;

- Egypt should also focus on enhancing food processing subsectors with comparative advantages that show high potential for export shifts such as dried fruits and vegetables, including dates. Medicinal and aromatic plants and their extracted substances have also demonstrated high potential. Aromatic and medicinal plants are advantageous to Egypt for a number of reasons. They can be cultivated under the majority of climates and soils available in Egypt. Relative to their value, their water consumption is low[42]. As they are mostly handled in their dry form, they do not require complex transport or handling arrangements for export (e.g. freezing or special packaging), although preliminary processing can add significant value. Being labour-intensive at grower level, they offer an opportunity for higher employment than other crops.

  Challenges to this sector include i) limited investment in innovation at grower level, partly because of weak connections along the value chain, with processors and exporters having limited influence with growers; ii) along the length of the value chain, difficulty in responding quickly to market changes and new trends) gaps in hygiene practices, especially at the initial stages of the supply chain; iv) lack of good hygiene practices in handling products also impacts the quality of the product as well as potentially the safety of workers.

  Egypt is by far the largest global producer of dates with the highest farm yields globally – 11% higher than the nation with second highest yield (Kuwait) and 360% higher than the nation with second highest production and export (Iran). Dates cultivation sustains over 1million rural livelihoods providing not just subsistence and employment but also a commercial outlet. Although cultivation of a very wide range of varieties is indicative of thriving biodiversity, commercialization and access to high value markets are limited by: (a) Low shelf life of a majority of varieties, (b) highly disaggregated and atomized production, (c) poor aggregation, post-harvest and logistics practices, (d) threat of infestation stemming from poor cultivation practices, and (e) lack of alignment with the taste, packaging and quality requirements of export markets.

Targeted initiatives to upgrade dried fruits and vegetables, medicinal and aromatic plants as well as fisheries are envisaged in the framework of PCP Egypt. This will also include analysis of regional integration potential.

[42] ILO (2015) Skills for Trade and Economic Diversification (STED) in Egypt, The case of the Food Processing Sector.

Output 4: A national packaging service centre (PSC) is set up and operational

In order to remain competitive, SMEs need high-quality packaging in terms of design and ergonomics at a competitive price that meets the needs of companies and the regulatory requirements of recipient countries. This five-year intervention aims at creating a packaging and design centre of excellence to convey all packaging solutions cross-sectorally to agribusiness industries.

The project will adopt a multi-level intervention approach aiming at improving the competitiveness of the agri-food sector by upgrading the technical competences of the packaging industry as well as improving the packaging practices of the sector. The establishment of a packaging centre lies at the core of UNIDO's intervention ensuring the provision of specialized advisory, testing, and training services and dissemination of best practices. Additionally, the project will provide technical assistance to an agro-value chain, selected as part of a consultative process, to enhance former practices through value addition and compliance. This intervention also provides for technical and management support, including capacity building for human resources, in order to ensure the proper functioning of the centre and allow it to:

- Set up a complete offer of services combining consulting, creativity and design services;
- Provide support to companies in their efforts to value their products using innovative and smart packaging solutions with a high added value;
- Produce prototypes and tests for new proposed packaging to better meet the requirements of the sector.

Additionally, the design development of a range of new packaging, including ecological and competitive packaging, will be provided to allow the start and operation of the Centre's services.

Output 5: Supported the competitiveness and access to markets opportunities of the handicrafts value chain

Egypt has a rich historical, social and cultural heritage that is reflected in its deep legacy of handicrafts practiced in all of Egypt. Rural crafts generally are practiced from home employing many women and children mostly in unregistered workshops. Handicrafts production is cluster-based. Out of 145 formally identified clusters in Egypt, 91 (62%) specialize in handicrafts; all have high rates of informality. The sector is represented by the Egyptian Export Council for Handicrafts (EECH) and the Chamber for Handicrafts Industries. The domestic market for crafts is estimated at EGP 3.3 billion in 2017, of which the tourist market is 81% (EGP 2.7 billion). Producers rely on traders and intermediaries to link them to markets, but these intermediaries have a limited vision for growth and concentrate on maximizing their own profits. The sector's exports were highest from 2008-2010 and have declined steadily since then. Stagnant design, aging crafts population, few young people entering the field, as well as systemic issues, mainly political unrest during 2010-2012 followed by foreign exchange shortages up to November 2016, contributed to the decline. However the sector faces several challenges, including, (i) the availability of skilled labor and TVET schools for handicrafts education, (ii) the difficulty in accessing quality raw materials, (iii) the inadequacy of manufacturing processes to international standards including sustainability standards, (iv) the still nascent place of design and innovations and lack of R&D in the sector

In 2018, the Egyptian Ministry of Trade and Industry developed a National Strategy for Handicrafts in order "to establish a sustainable, institutional and productive ecosystem for the handcrafts sector leading to increased decent employment, especially for women, a growing contribution to Egypt's Gross Domestic Product, stronger presence in export markets and efficient and sustainable supply chains."

The intervention will support the government of Egypt to address the strategic priorities for the handicrafts sector, including:

- Survey, monitor and evaluate the heritage and traditional industries in each region/ governorate;
- Enhance sustainable, responsible domestic supply chains adopting a cluster approach;
- Attract, train and maintain skilled workforce through the development of TVET curricula, in-factory skills development programs and entrepreneurship development programs;
- Increase and improve technology, quality and innovation through technology transfer, design, branding, development of standards and quality requirements;
- Improve access to domestic and external markets through product development, innovation and connectivity; marketing and promotion policies;
- Create a sustainable, enabling environment for the sector through institutional capacity building in key areas such as cluster policy, BDS services modules, tax and export procedures.

Output 6: Supported the socio-economic performance and sustainability of the leather value chains in Egypt

The profession of tanning and producing leather goods date back to ancient Egypt. First tannery at Magra El-Oyoun area was established in the forties, where pioneers of this profession contributed to the creation of more tanneries and mechanized factories for footwear and leather products. In 2014, the government of Egypt developed a fully-fledged strategy aiming at improving the conducive environment of the leather industry in the country. Egypt has the advantage of having a good coverage of the leather value chain and its two sub-sectors: tanning and leather products manufacturing, including footwear, accessories and garments. The total number of active tanneries reached 331 in 2013/2014, as stated by the Chamber of Leather Tanning, distributed among 7 governorates, with highest concentration in Cairo, hosting 85% of the total number, mostly relocated in the new Robbiki Leather city and another important cluster of tanneries in Alexandria. In the industrial manufacturing of leather products, the number of active enterprises including workshops and micro enterprises reach 17,000 enterprises, most of them informal.

Today, the leather industry is a global market in which the Egyptian industry has to compete according to market needs. The domestic market suffers from high competition of low-cost imported products; while the international markets are demanding quality products at competitive prices. Big tanneries are exporting worldwide the highest quality leather, while the small ones are providing to local manufacturers. Regarding leather goods, the sector used to export in the Middle East and Europe, but currently is only oriented to the home market and to some Middle East countries, like Saudi Arabia. The main challenges identified for the Egyptian leather industry, (including tanning and manufacturing segments) are: limited capacity of cluster structures and business development services providers; limited access to markets; unavailability of trained and committed labour; low productivity due outdated technology and lack of innovation; lack of control of environmental impact and adoption of main certification and management schemes, essential to export to high-end markets; poor design and lack o Egyptian brands; and lack of accessories production.

Therefore, UNIDO's intervention for the leather industry will focus on eight main pillars:

- Provide info on the leather sector along the value chain such as livestock census, quality and quantity of hides collected, and environmental compliance of tanneries;
- Initiate awareness campaigns aimed at sensitizing leather players at all levels of the value chain on the need to establish and belong to business cooperatives or clusters, through which they can easily be promoted;
- Strengthen the capacities of existing clusters, networks and public and private business development structures to efficiently act as service providers;
- Improve backwards linkages in the value chain by facilitating access to quality raw material and improving linkages between tanneries and manufacturers;

- Attract, train and maintain skilled workforce through the development of TVET curricula, in-factory skills development programs and entrepreneurship development programs;
- Upgrade the leather technical and university curricula related to the leather sector to provide appropriate skills and competences to white and blue collars on the latest developments in market trends, sustainability requirements and latest technology;
- Upgrade technological and innovation capacities through technology transfer, with a focus on environmental sustainability and the 4IR, and new product development, with a focus on design of finished products, aligned to target markets;
- Support access to new markets for Egyptian leather products by ensuring quality of the products and developing diversified marketing strategies, including sub-contracting, B2C, B2B, private labels etc.

Output 7: Supported the competitiveness and sustainability of the textile sector in local and international markets

Egypt is home to the largest and most productive cotton and textile clusters in the MENA region and African continent. The entire production process from the cultivation of the world renown Egyptian Cotton fiber, resources for the manufacturing of man-made fibers, to the production of yarns, fabrics, RMG, home textiles and technical textiles are carried out domestically, supported with FTA and preferential trade agreements with major markets worldwide, unrivaled geographic location, proximity to world consumer markets. The textile industry in Egypt is mainly cotton based, but in recent times, as the demand for man-made fibers and filaments increased, so has the Egyptian production and exports of these products. Additionally, it is important to note that the focus lies rather on downstream production whereby there are gaps in finishing, printing and dyeing.

The textile industrial production account for 2.3% of total GDP value addition, but it is the second sector for employment (12.1%, excluding cultivation of cotton) after the food industry. According to Industrial Development Agency (IDA), there are about 3,400 companies in the textile segment and 2700 companies in RMG and Home textile, located in four regions: Cairo, Alexandria, Suez Canal and the Nile Delta. On another note, Egypt has a quite important public textile sector lead by the Textile Holding Company, under the Ministry of Public business sector, which is undergoing a major renovation, worth 1,3 Billion USD including full-fledged new facilities for spinning, weaving and RMG. However, Egypt has a negative trade-balance of about 3 billion USD despite its competitive advantages. In order to achieve an improved trade balance in the textile sector, increase investment in technology innovation and upgrade, training of labor, innovation in product development and design, streamline of sustainability along the supply chain and access to services need to be ensured. Worth mentioning as well, the opportunities in the pre and post-consumer recycling, which can benefit of the vertical integration of the industry from spinning to final garments and is becoming an important component of the procurement strategies of global textile value chains.

Following the launch of the Ministry of Trade and Industry (MTI) Strategy, the development of the textile sector strategy was announced in 2018. The sector's vision is to "be a key player of sustainable and inclusive economic development in Egypt, meeting domestic demand and enhancing exports growth, for Egypt to become a key player in the global economy and capable of adjusting to international developments". Based on the priority areas identified by the Government for the textile industry and the revival of the cotton industry, supported already by the Egyptian cotton project, implemented by UNIDO since 2017, UNIDO's intervention will focus on the following areas:

- Support and promote the Egyptian cotton value chain in improving sustainability, productivity and quality of textile production from cultivation to industrial production by increasing efficiency, quality, traceability and transparency of the value chain, strengthening linkages with local and international manufacturers, brands and retailers. UNIDO will continue the main component of the Egyptian cotton project such as the rolling out of the Better Cotton initiative in Egypt;

- Identify the textile competitive challenges and its future opportunities;
- Support R&D and innovation in the textile industry through technology and know-how transfer, in partnerships with relevant research centres and specialized business organizations;
- Improve export capacities of selected textile manufacturers through capacity building on market trends, product development with focus on design and new market segments such technical textiles and active wear, differentiated marketing strategies and branding;
- Upgrade the textile technical, vocational and university curricula related to the textile sector to provide appropriate skills and competences to white and blue collars on the latest developments in market trends, sustainability requirements and latest technology;
- Provide capacity building to public and private support institutions to better support the actors of the value chain including ministries and governmental agencies, certification entities, TVET institutions, technical and technology centres to ensure quality service provision to MSMEs in the sector.

Output 8: The production of quality furniture is diversified; design and production are strengthened according to acknowledged international standards and labour skills are developed

The Egyptian furniture industry is long established and is characterized by strong woodworking skills. Egypt's geographical location also provides good access to major markets, and relatively low costs for skilled labor. The sector has been exposed to numerous influences spanning centuries, and is known for wooden furniture with a distinct style – incorporating Islamic, British and French elements. Parts of the sector also focus on producing furniture in more international and modern styles.

The sector started exporting in the 1960s and 1970s by targeting the Soviet Union and Eastern Europe. In the 1980s, it turned to Arab country markets to serve the increasing demand for furniture spurred by the region's high growth. According the Furniture Industry and Export Development Strategy (2018), the total production in the furniture sector is estimated at LE 20.6 billion accounting for 3.3% of total manufacturing production in Egypt. The total value added in the sector represented 2.4 per cent of the Egyptian manufacturing net value added (EGP 297 million).

It should be noted that the sector benefits from Egypt strategic geographical location, which provides good access to major markets and helps, ease the delivery process, in addition to relatively low cost of skilled labor. However, it is highly fragmented which hinders the sector development and poses many challenges on small enterprises concerning quality and productivity. In this respect, the furniture sector in Egypt serves individual consumers (residential) and businesses, which can be categorized into different sectors such as Health, Tourism, Education, Office, Commercial and Industrial.

Suppliers of furniture vary from manufacturers to wholesalers and retailers, and differ according to size, activity performed (i.e. role in value chain), type of product and target market. Data available is conflicting about the total number of furniture entities in Egypt, especially with the large informality in the sector, in that licensed industrial establishments are estimated at around 2,850 establishments, according to IDA. It was reported that furniture establishments amount to around 105,000 establishments in 2013. However, market investigation reveals that around 80,000 - 90,000 establishments operate in the furniture sector, as defined for the purpose of this study, to include both formal and informal industrial and commercial establishments. Physical investment in the sector is estimated at around EGP 25 billion.

These establishments are widespread throughout Egypt, with major concentration in some governorates, mainly Damietta, which is considered as the furniture capital of Egypt (35%), Greater Cairo (19%), Gharbia (9%), Dakahlia (6%), Sharkia (6%), Menoufia (4%), Alexandria (4%), Minya (4%).

In general, Egypt is a net exporter of furniture (excluding wood), in that total exports exceed total imports in 2016, implying a trade surplus estimated at USD 181 million. The furniture sector growth rate of 7% is well-below MTI's 2020 export goal of 10% growth rate. While the Egyptian furniture sector's contribution to GDP is relatively small, the sector accounts for a more significant share of workers and establishments. According to the Furniture Industry and Export Development Strategy, the sector employed 900 thousand to one million employees in addition to 440 thousand indirect jobs, across 120 thousand establishments.

This represented 11 per cent of total manufacturing employment and 27 per cent of manufacturing establishments in Egypt. There is an average of 2.6 workers per establishment, reflecting a high degree of fragmentation and very large numbers of micro-enterprises. The fragmentation and very small size of most enterprises present major challenges to developing the sector and improving its performance and productivity.

The government' strategy for the furniture sector aims at strengthening the capacity and productivity of the sector locally, as well as enhancing its reputation and positioning globally. In this respect, the mission and vision below are proposed, followed by the key principles and main pillars constituting the core of the strategy. The objective is to develop sustainable enterprises, increase value added, generate productive jobs, and create brand name for the Egyptian furniture sector locally and globally.

Based on the priority areas identified by the furniture sector strategy, UNIDO's intervention will focus on the following areas:

- Develop technical and vocational training infrastructure to support the increase of quality and efficiency of manufacturing processes;
- Provide capacity building for export, including innovation and quality enhancement; building international partnerships with distributors as well as design innovative platforms to reach new clients in international markets;
- Strengthen value chain and integrated cluster approach to build synergies among actors and increase efficiency;
- Promote investment in the industry by supporting the private sector in developing business models and accessing financing opportunities;
- Create a common identity and brand for the sector;
- Facilitate access to markets through product design and development; export support and logistics.

Output 9: Women-led entrepreneurship in selected value chains is facilitated.

Despite the Government's efforts in promoting gender equality and women's economic empowerment, including through the adoption of the first National Strategy for Women's Empowerment in 2017, women's participation in the formal labour market remains low, at 23.1 %, whereby only 2.1% are self-employed. Women are mainly concentrated in services and agriculture, however there is a dire need to close the gender gap and empower women to tap into productive opportunities. Reference is made to UNIDO's efforts in addressing this challenge in Egypt, particularly through the project Promoting Women's Empowerment in the MENA Region (PWEII), of which Egypt is one of the seven beneficiary countries. In its second phase now, the inception phase of the project included a gender-sensitive mapping of value chains with high growth and job creation potential.

Following a rigorous expert-led methodology as well as consultations with national stakeholders, two gender-sensitive value chains were recommended and appeared to gather the largest consensus among government stakeholders: (1) ready-made garments (potentially including handicrafts and hand-woven textiles), and (2) dried fruits (potentially incl. sun-dried tomatoes and dates).

Consequently, this output within the Value Chain component of the PCP is aligned with the priority areas identified, and would leverage the efforts made under PWEII, including the regional dimension of PWEII, which aims at improving the policy dialogue through improved awareness and evidence-based knowledge generation.
With regard to the latter, PWEII is conducting a survey on women entrepreneurs' access to and use of ICTs in all seven countries. Additionally, synergies will be explored with ongoing efforts in Egypt, such as through the joint UNIDO and UN Women project on women's economic empowerment.

To facilitate women-led entrepreneurship in selected value chains, key activities include, but are not limited to:

- Organize workshops for sensitization and awareness raising;
- Deliver training to financial and non-financial meso-level institutions to improve gender-responsiveness of services;
- Identify women-led business opportunities in the selected value chains for investment promotion;
- Deliver training and technical assistance to women entrepreneurs in selected value chains;
- Deliver training to female entrepreneurs in the selected value chains to improve quality and quantity of production;
- Facilitate capacitated women entrepreneurs in selected value chains in gaining access to markets.

3.5.3 UNIDO comparative advantage

- Creating a favorable food safety environment through integrating food safety into the wider context of regulatory frameworks, national quality and food safety policies as well as infrastructure development constitutes an important enabling pillar of the approach. To this end, UNIDO's Food Safety Approach is a lever that ensures that food safety-related capacity development initiatives are effective and contribute fully, in a cohesive and holistic manner, to achieving inclusive and sustainable industrial development;
- UNIDO will assist this program by offering its international experience and expertise in the field of upgrading and improving the competitiveness of SMEs. The organization has an outstanding record of supporting the creation of training centres to support technological advancement and innovation in different sectors, from agribusiness to leather and automotive industries, with good examples of public-private partnership management;
- UNIDO has a long and positive record of accomplishment in Egypt in the agribusiness sector. The ETRACE project promoted traceability systems for horticultural exporters, while EMAP and the GTI supported, respectively, export development value chains related to medicinal and aromatic plants and eight fruit and vegetable products (including tomato). Through these experiences, UNIDO gained a thorough acquaintance with institutions related to the agribusiness sector, both at a national and local level. During the GTI in particular, UNIDO supported beneficiaries in trials of new crop varieties, as well as promoting production guidelines in line with GAPs and market access through contract farming. During this project, UNIDO started to raise awareness with primary producers of the benefit of adding value (through sorting, cutting, drying etc.) and engaging new buyers such as processors, to have a more stable income throughout the season. Both activities generated new job opportunities, especially for women employed in the post-harvest handling, and increased income;
- UNIDO has extensive experience in supporting member states in the industrial processing of non-food agricultural produce, including leather, textile, wood and non-wood forest products as well as other creative industries, such as handicrafts.

UNIDO and its partners are working to enhance the Egyptian cotton value chain from cultivation of raw material, to promotion of Egyptian cotton to international brands and retailers. UNIDO has also supported the creative industries sector, mainly handicrafts, furniture and leather manufacturing through the regional project Creative Mediterranean. Through these projects, UNIDO has worked closely with the MTI and other relevant line ministries, to support non-food value chains in improving their competitiveness, their quality and design in order to access new markets to create economic opportunities along the value chain. The Creative Hub Egypt, established with the support of UNIDO and IMC, provides business development services and training focusing on design and innovation to SMEs and entrepreneurs in all value chains;

- Consistent with the actual reform of the TVET system in Egypt, in partnership with the Ministry of Trade and Industry and the Ministry of Education, UNIDO's holistic and comprehensive TVET approach aims at the development of technical and entrepreneurial competencies for the youth (men and women), by providing them with marketable skills to increase employment opportunities and income generating activities. These skills give beneficiaries the opportunity to be employed in existing enterprises or to start their own businesses (self-employment). By supporting long-term social and economic integration and improving livelihoods, the program activities will contribute to reducing unemployment;
- Over the past 20 years, UNIDO has created and promoted an industrial clusters, consortia and SME network development approach that is recognized worldwide as a leading programme both in terms of its conceptualization, tools and in the operational implementation of Technical Cooperation Projects. UNIDO has supported the development of industrial clusters in Asia, Latin America, Africa and Europe as well as in the Arab Region, covering a wide range of sectors, including food, leather, wood, textile and automotive industries. It focuses on formal industrial enterprises, especially SMEs that are linked by sector of operation and geographical proximity, where the main objectives are competitiveness and market access. In addition, UNIDO also cover micro and livelihood-driven conglomeration of micro enterprises to pursue local economic development (LED) and pro-poor income generating objectives. When focuses on micro enterprises and farms, it serves as valuable tools for tackling many dimensions of poverty as cluster initiatives generate economic opportunities for the poor to increase income and job opportunities and empower and integrate into economic activities women and youth;
- UNIDO has also international experience in setting up packaging centres, creative hubs, and sectoral studies, which will be used in this Programme. In addition, UNIDO is a signatory of a partnership framework with the World Packaging Organization to benefit from international experience and know-how, in terms of international best practices such as "smart packaging". In Egypt, UNIDO supported the establishment of the Creative Hub Egypt together with the IMC;
- With reference to youth employment and support to MSMEs and start-ups, UNIDO has also recently completed the IMKAN project, which fostered youth employment by supporting start-ups (mostly in the agro-industrial and agro-waste management sectors) in Upper Egypt, while promoting entrepreneurship, business development skills and small and medium scale investments (including drafting of pre-feasibility studies and investment teasers presented to angel investors and financial institutions);
- UNIDO has established experience in supporting the creation of enabling environments for gender equality and women's economic empowerment in the manufacturing sector, particularly in the MENA Region. Collaborating with development partners and the private sector, UNIDO has contributed to the generation of evidence-based knowledge on entrepreneurship development for women, and works with experts to identify gender-sensitive value chains that harbor significant growth and job creation potential.

3.5.4 Mapping of potential partners

Potential partners identified for the Value Chains component are:

- Ministry of Trade and Industry and its affiliates;
- Ministry of Agriculture and Land Reclamation and its affiliates;
- Ministry of Education and Technical Education;
- Ministry of Higher Education and Scientific Research;
- Ministry of Public Business Sector and its affiliates;
- Ministry of Environment and its affiliates;
- Ministry of Local Development and its affiliates;
- Small and Medium Enterprises Development Agency (MSMEDA);
- National universities and relevant faculties such as agriculture, applied arts, engineering, textiles, etc.;
- The National Food Safety Authority of Egypt (NFSA);
- Export Councils;
- The Federation of Egyptian Industries including its different industrial chambers;
- The Horticulture Export Improvement Association;
- The World Packaging Organization;
- National Council for Women (NCW);
- Damietta Furniture City;
- Cairo for Investment and Development (CID): owner, developer and manager of the Eco-Industrial Robbiki Leather cluster. CID is co-owned by the Ministry of Trade and Industry, Cairo Governorate and the Ministry of Finance; and
- Other local and international partners, including private sector UN agencies and IFIs.

For an overall view of potential partners, see section 2.5 and synoptic tables in annex 2.

3.6 Component: Mainstreaming Industry 4.0

Egypt is the most populous country in the Arab region and with a GDP of Egyptian Pound (EGP) 2,104.2 billion, the country experienced a GDP growth of 5.3% in 2018 – outperforming other countries in Northern Africa. Through the Government's continuous reforms to improve the national business climate, Egypt is expected to maintain this growth at an increasing rate, with GDP annual growth projected at 6% in 2023 [43].

Egypt has well-established manufacturing subsectors such as food & beverage, steel, pharmaceuticals, white goods, automotive, and is well positioned to become a top destination for manufacturing globally. The newly expanded Suez Canal with its proximity to Asian, African and European markets; low wages in terms of export-oriented manufacturing; and strategic geographical location – are key factors that make Egypt a very investable and attractive prospect for businesses. Further, there are multiple industrial zones and special economic zones (SEZs) across the different governorates offering investors simplified taxation and customs systems.[44]

In Egypt, the manufacturing sector has been growing both in terms of value-added and employment, this growth remains limited compared to peer-countries. Between 2008 and 2018 the manufacturing value-added in Egypt increased at a CAGR of 3,15%, which is lower than the economic growth rate of the country (with the GDP increasing at a CAGR of 4%). It is important to note that almost all peer-countries witnessed a manufacturing growth exceeding GDP growth over the same period[45]. National statistics show that the contribution of the manufacturing sector to the GDP has been decreasing in Egypt at a CAGR of -0,87% and against the general increasing trend of Egypt's peer income group (0,28%), industrialization group (0,88%) and region (0,53%). Currently, with a contribution of almost 15% in GDP, Egypt performs below than the average of emerging industrial countries (22%) and below the average of its income group (lower-middle income economies 16,5%). The underlying issue of this decreasing share of MVA in GDP is a decline in manufacturing's contribution to GDP growth.[46]

Employment due to manufacturing development in Egypt has shown positive trends with the number of employees in the manufacturing sector as well as the share of manufacturing employment in total employment increasing over the last decade. In Egypt, both the aforementioned metrics have been increasing (albeit at a lower rate) with positive growth rates for manufacturing employment (0,8%) and the number of manufacturing employees (1,8%). The manufacturing sector is the third largest employer in Egypt behind agriculture and retail. With a share of 12% of manufacturing employment in total employment, Egypt is at the average levels of its income group and higher than the average of its region and industrialization group and is outperformed by other developing and emerging industrial economies.[47] Given the aforementioned statistics, it is evident that the trends of manufacturing contribution in the GDP and employment are diverging. It is important to recognize that the growth of manufacturing value-added are driven by three variables: a growth in labour productivity, a growth in the share of manufacturing in total employment and/or a growth of total employment. The combination of labour productivity and labour share growth is identified as intensive industrialization[48] and on the other hand, the growth in MVA fueled by an increase of labour input to the total employment is referred to as extensive industrialization[49].

[43] PWC – The Future of Manufacturing – Egypt Report, 2019: https://gmisummit.com/wp-content/uploads/2019/04/GMIS_Egypt-Report.pdf
[44] Ibid.
[45] PCP Egypt Diagnostic Report, 2020
[46] PCP Egypt Diagnostic Report, 2020
[47] PCP Egypt Diagnostic Report, 2020
[48] Defined as industrialization driven by structural change strengthening the weight of the manufacturing sector in the economy.
[49] Defined as industrialization, which does not give to the manufacturing sector a position of leading sector to act as an engine of economic growth.

The UNIDO PCP Egypt Diagnostics clearly identifies that contribution of labour productivity growth to manufacturing growth has been overall declining during the last decade. During 2007-2008 labour productivity growth contributed to 47% of MVA but, negatively impacted MVA growth by 75% during 2016-2017. On the other hand, there is evidence, which proves that the overall contribution of employment and labour share in MVA have both been increasing. These are possible reasons for this divergence. In terms of intensive and extensive industrialization, this means that the decline of labour productivity as an engine of MVA is driving down the intensive industrialization compared to an increasing extensive industrialization.[50]

This divergence in manufacturing's contribution to GDP and employment are further supported by the fact that between 1990 and 2005 the CAGR of intensive industrialization stood at 3,4% compared to only 0,30% for extensive industrialization but, between 2007 and 2017, the CAGR of intensive industrialization decreased to 2,2%, while the CAGR of extensive industrialization increased to 1,15%. This alludes to fact that manufacturing growth is not driven by structural changes positioning the manufacturing sector as an engine of economic growth but more due to the availability of labour input. In other words, rather than powering economic growth, the manufacturing sector has been simply following macroeconomic trends.[51]

Egypt has witnessed a negative growth of -6% in the share of high and medium high tech in MVA, which goes against the general global trend. With a share of 14% of high and medium-tech MVA, Egypt performs below the average of its industrialization level group (37,3%). The country is also underperforming in terms of knowledge employment – where the share of knowledge workers in total employed decreased from 34% in 2012 to 30% in 2017. With a share of 20% of knowledge workers among manufacturing workers, this sector in Egypt is performing below than the average of the economy (30%) in terms of knowledge-intensive employment. In the perspective of global value chains, Egypt demonstrates high integration driven by forward linkages (index of forward linkages stands at 0,38), compared to backward linkages (index of backward linkages stands at 0,12), which can be an indication of specialization in upstream low-valued added segments of global value chains. [52]

A positive observation in Egypt has been the strong increase in manufacturing exports over the last decade both in absolute values and in terms of share in total exports, respectively at a CAGR of 8,8% and 3,2%. It bears importance that Egypt remains in a catching-up process with its share of manufacturing exports in total exports (67,37%), which is below the average of lower-middle income countries and developing/emerging industrial economies.

The PCP Diagnostic finds that majority of Egyptian firms are still transitioning or still need the transition from Industry 2.0 to Industry 3.0; while the 4th Industrial Revolution is already disseminating especially in developed industrialized countries. This represents a major challenge for manufacturing upgrading since the new technologies brought by the 4IR are built on existing automation processes and manufacturing capabilities.

There is need to recognize that the leapfrogging potential offered by the 4IR (at the firm level) is less relevant when transitioning from Industry 2.0 - especially from a technological standpoint since 4IR digitalization relies first and foremost on software applications (IoT, Cloud computing, Big Data, AI) to connect existing hardware machinery and evolve toward the Cyber-Physical model of Factory 4.0. At the level of automation in Egypt's, industrial plants are still in the emerging stages even when compared with peer countries from the MENA region. For example, the industrial robot density stands at less than 0.2 robots per thousand manufacturing workers in Egypt, it is 5 times higher in Tunisia and more than 10 times higher in Turkey. [53]

[50] PCP Egypt Diagnostics Report, 2020
[51] Ibid.
[52] Ibid.
[53] Ibid.

The *World Economic Forum's Readiness for the Future of Production Report 2018* also confirms that Egypt is currently considered a "nascent" economy, and is ranked 46th (out of 100 countries) and 3rd (out of the 13 MENA countries included), when it comes to "Structure of Production", which represents the country's current baseline of production. As for "Drivers of Production", or the key enablers that position a country to capitalize on the 4IR to transform production systems, Egypt ranked 68th (out of 100 countries) and 9th (out of the 13 MENA countries). Egypt scored a particularly low score of 1.9 (out of 10 = best) for the "Ability to Innovate" within the "Technology & Innovation" driver. According to UNIDO Competitive Industrial Performance Index Report, only 2.5% of Egypt's accumulated manufacturing exports is considered to be high-tech.[54]

Industry 4.0 has strong potential to be applied in the Engineering Sector as this industrial activity represents approximately 20% of the total industrial companies, 14% of industrial investments and 19% of the total Industrial employment. The engineering sector is increasingly attracting foreign investments and has achieved a good level of technical competence, particularly through its sub-sectors of the transportation industry, household appliances and metal forming, where these products have a competitive advantage (at the regional level) and is attracting interest from local and foreign investors.

3.6.1 Key challenges and opportunities

Key challenges:

According to the PCP Diagnostics Report the main challenges that currently hamper Egypt's potential to transition to the 4th Industrial Revolution are as follows:

- Egypt does not yet have a strategic vision to enable 4IR adoption and dissemination. Technology and innovation are still viewed as separate topics and there is no integrated framework to prepare the manufacturing sector for the future of production;
- Manufacturing firms still need to transition from Industry 2.0 to Industry 3.0 in the midst of the 4IR. Additionally, the pace of automation and 4IR readiness differs between manufacturing sectors;
- The policy diagnostic revealed that policy areas most critical for the 4IR are still behind in development such as technology infrastructure.

From an employment facet, the country is struggling to find workers with appropriate skills and is facing increasing threats of large-scale unemployment in the future. In 2017, 11.8% of the Egyptian workforce were unemployed, and the unemployment rate amongst youth (15-24 years) was even much higher sitting at 29.6%. With an apparent youth bulge (people ages 15-64 account for more than 60% of the total Egyptian population) and a population projected to reach 108.1 million in 2023, the threat of high youth unemployment rises more. According to Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS), the second largest group of unemployed people at 34% are "university graduates and above" highlighting that graduates are not well-prepared for the industry and job market.[55]

From a MSME scale up perspective, this group of beneficiaries are vulnerable to challenges such as increasing competition due to globalization, especially in traditional manufacturing sectors, as well as rising input costs. Hence, the government must assist MSMEs to offer unique value propositions with the objective of establishing "non-price competitiveness" resulting in increased opportunities for exports and internationalization. Additionally, it is imperative that through the 4th Industrial Revolution MSMEs reduce their dependence on dollar-based cost structure with an Egyptian pound revenue streamline.[56]

[54] PWC – The Future of Manufacturing – Egypt Report, 2019
[55] Ibid.
[56] Ibid.

MSMEs and startups face a wide range of challenges in comparison to large corporations, which include limited capital, limited availability of talent, and low technology capabilities. They have fewer opportunities for testing and understanding how new technological solutions fit into their operations to determine the real value of each solution. Other major challenges faced by these beneficiaries include access to customers and access to markets. [57]

Key opportunities

Despite the barriers preventing Egypt from rapidly transitioning to the 4th Industrial Revolution there are key opportunities to overcome the challenges rapidly:

- *Industry 4.0 Roadmap:* In November 2016, the Ministry of Trade and Industry launched the Industry and Trade Development Strategy 2016-2020 to promote industrialization. However, this strategy didn't outline a specific roadmap regarding advancement towards Industry 4.0. It is also important to recognize the variations in readiness for Egyptian companies to effectively harness Industry 4.0. Therefore, it is key to have a national detailed Industry 4.0 roadmap that guides them. A successful Industry 4.0 roadmap requires a dedicated, structured and multi-year approach that outlines clear goals for Egypt to achieve coupled with quantifiable and measurable targets (KPIs). Such an initiative should include stakeholders from across government entities, industries, business associations, labour groups and subject matter experts. The roadmap should shed light on and tackle all elements of the Industry 4.0 ecosystem (e.g. resources, suppliers, production, technology providers, logistics, and customers) and raise awareness about the opportunities and challenges typically associated with Industry 4.0. In addition, the roadmap should clearly outline the projects planned to promote Industry 4.0 such the set-up of cluster industrial parks, technology-focused research and development centres and innovation institutions.[58]

- *Leverage Industry 4.0 Capacities:* To increase awareness of digitization technologies, the Egyptian government should increase its activities to identify manufacturing companies specializing or possessing the desired capabilities of Industry 4.0 elements. Currently, there are good private sector initiatives in establishing Centres of Excellence (e.g. Elaraby Group's Centre of Excellence). Capitalizing on these initiatives and in partnership with other multinational and foreign companies, the Government of Egypt could build-up more Centres of Excellence in order to increase awareness of the applications of specific technologies [59];

- *Increase IT Investments:* IT represents a key foundation for Egypt's government to accelerate their digital transformation and economic diversification agendas. An upgrade of the technological infrastructure to ensure it is reliable, fast, connected and secure for exchange of real-time data will be critical to create a viable digital manufacturing sector in Egypt as well as sustained investment in improving the quality and access to wireless connectivity. In 2019, there was a collaboration between Telecom Egypt and Microsoft to extend its global cloud network to Egypt. The new enhanced network presence in Egypt will connect via Microsoft's global network to transatlantic and trans-Arabian paths, and will improve connectivity across North Africa and the Middle East [60];

- *Develop long-term skilled workforce:* One of the biggest fears of Industry 4.0 in society is the increased susceptibility of jobs to automation. However, new job opportunities requiring a different set of skills will emerge;

[57] PWC – The Future of Manufacturing – Egypt Report, 2019
[58] Ibid.
[59] Ibid.
[60] Ibid.

- Increased usage of software and data analytics amongst other digital technologies will require industry associations to work closely with academic institutions to ensure alignment of curriculum with the latest needs of the industry. [61]

- There is a lack of skilled labour, which hinders economic growth. Hence it is vital to develop the national "Technical and Vocational Education and Training (TVET)" capacity of the country. Interventions in these areas are a step in the correct direction however, both focus must be placed on current and future workforces. This entails investing in training programmes to upgrade the skills of the current workforce and prepare them for the transformation, while recognizing that different generations of the workforce would possess a different level of technology-readiness. [62]

  An increase in the participation of women in Industry 4.0 practices is required. In 2017, the ratio of female to male labour force participation rate in Egypt was only 32.9%, and unemployment among female youth was 38.3% (% of female labour force ages 15-24) compared to 25.7% for male youth in the same age group. One way to increase the proportion of women in manufacturing is by driving a focus on Science, Technology, Engineering and Mathematics (STEM) education among women across educational levels as well as increasing exposure to opportunities for female participation in manufacturing.[63] Another solution to enhance skills development governments can explore the possibility to allocate funds for opening high-tech makerspaces in the different governorates around Egypt enabling Egyptian students and science enthusiasts to have access to and explore different technologies such as 3D printing, computer numerical control (CNC) machining, etc.

  An example of such an institution Fab Lab Egypt in Cairo – a digital fabrication lab and a community-run public makerspace, where anyone can make a variety of products, from electronics to furniture and installations. School and university students, entrepreneurs and businesses materialize and prototype their ideas in the lab. Machines, tools, skills, resources and ideas are shared with the community to create new opportunities for economic and social development [64];

- *Establish MSMEs Resource Centres and Mentorship Programmes:* MSMEs and startups face a wide range of challenges in comparison to large corporations, which include limited capital, limited availability of talent, and low technology capabilities. They have fewer opportunities for testing and understanding how new technological solutions fit into their operations to determine the real value of each solution. Building MSME shared resource centres can help them to overcome these hurdles. Resource centres will provide access to Industry 4.0 tools, external knowledge, the required training, and would allow MSMEs to test, examine and apply new emerging technologies, thereby allowing them to make informed decisions. These centres can also encourage collaboration and knowledge exchange between manufacturing SMEs and digital technology companies. The launching of mentorship programmes can help MSMEs and startups enhance their business models and internal operations, and develop their own innovative strategy to drive growth. Such programmes will also help MSMEs with handling intellectual property rights (IPR) and data management issues. This is important because handling IPR and data management issues requires legal, cybersecurity, and technical expertise that often small companies cannot access [65];

- *Domestic Manufacturing Incentives:* Egypt requires assistance to support provision of financial support to its industrial stakeholders. This reflects that access to funds continues to be a chronic issue faced by Egyptian MSMEs, and hence the government and other stakeholders including banks and investors must increase collaborate further to fill this funding gap.

[61] Ibid.
[62] PWC – The Future of Manufacturing – Egypt Report, 2019
[63] Ibid.
[64] Ibid.
[65] Ibid.

The Egyptian government should offer benefits to domestic manufacturers to help them scale up such as preferential access to land, tax deductions for R&D and capital investments, import duty exemptions for capital equipment, etc. Special attention to laws and regulations affecting Egyptian-manufacturing MSMEs to allow them to flourish. For example, clear laws must be in place to protect local industries from overseas competition by imposing appropriate tariffs and quotas.[66]

3.6.2 Technical assistance contribution to national objectives and SDGs

The manufacturing sector is a cornerstone of the Egyptian government's substantive plans for economic growth. The sector has been undergoing a period of growth guided by the Sustainable Development Strategy (SDS): Egypt Vision 2030 launched in 2015 and the Industry and Trade Development Strategy 2016-2020 launched in 2016. These initiatives have a set of ambitious goals and KPIs for the manufacturing sector including increasing the manufacturing value added as percentage of GDP to 18%, increasing the manufacturing growth rate to 10%, and increasing high-technology exports as a percentage of Egyptian manufactured exports to 6% by 2030.[67]

Other relevant indicators include: unemployment rate of 5%; female labor participation reaching 35%; increasing the country's Ease of Doing Business and Competitiveness Index Rank to 30; reaching net FDI's of USD 30 billion; and increasing the ratio of private sector contribution to GDP to 75%. [68]

From an industrial perspective, the 4th Industrial Revolution has the potential to improve productivity and competitiveness, increase energy and resource efficiency and effectiveness and hence to protect the environment. It will further enable the transition to a circular economy, or industrial economy in which end of life products are reused, remanufactured and recycled. Taken together, these developments would lead to the emergence of more sustainable production and consumption patterns, and could thus provide opportunities for developed and developing countries to achieve economic growth and sustainable development in line with the 2030 Agenda for Sustainable Development.

Industry 4.0 contributes to all associated targets for SDG 9. Attainment of this SDG will also contribute to the realization of SDG 1, 4, 7, 8, 11 and 13. This component is a core of UNIDO's mandate of inclusive and sustainable industrial development (ISID) as well as its thematic areas of Creating Shared Prosperity, Advancing Economic Competitiveness and Safeguarding the Environment.

The technical cooperation agreed by UNIDO with the PCP national counterpart aim at promoting Egypt's readiness for the 4th Industrial Revolution and it is outlined below along four main areas of intervention:

Area 1 - (Outputs 1 and 2): Boosting Innovation and establishing an innovative ecosystem in Egypt

Development of National Innovation Policy: the PCP Egypt Diagnostic clearly found that the country does not have an existing innovation policy to allow government and relevant stakeholders to promote the innovation across priority sectors. The Government has stressed the necessity of an innovation policy that will foster cooperation, the transfer of knowledge and the creation of flow between stakeholders so that they can take advantage of all the elements currently available and so that they can urge the country into transition. The four key categories of players that need to be accommodated in this policy are the Financial Framework, the Government, the Industry, Research and Education.

[66] Ibid.
[67] PWC – The Future of Manufacturing – Egypt Report, 2019
[68] https://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/Egypt%20Vision%202030%20%28English%29.pdf

It is essential to establish an innovative ecosystem for process and product upgrading by creating linkages between entrepreneurs and industrial SMEs to enhance their outreach and competitiveness in global value chains. There is a need to develop the business model of existing centres of excellence to accelerate matchmaking between entrepreneur's and SME's to develop innovative solutions to crosscutting challenges related to Product Design, Marketing/Export, ICT and Finance thematic areas thus enhancing SME integration in global value chains.

The Government has placed a strong emphasis that any innovation policy should support the transfer of basic research findings into application development; address the areas of data privacy & security; and promote infrastructure development as well as vocational training and qualification opportunities. UNIDO is proposing utilizing its National System of Innovation approach to conduct a detailed study and assessment to determine the status of innovation in the country. On the basis of the results, UNIDO and partners will provide a cohesive innovation policy advice that can be used as a roadmap for the Government to boost innovation initiatives in the country.

Development of Industry 4.0 Roadmap and setting up a digital economy observatory: Egypt's readiness for the 4th Industrial Revolution is highly dependent on the development status of the region/governorate, where Industry 4.0 initiatives are envisioned for implementation. There is however, a gap between the implementation of the 4th Industrial Revolution new technologies and the innovation ecosystem. There is need to conduct an assessment on the availability of digital technologies, support the modernization and digitization of public services, and explore the application of big data applications, especially to provide new opportunities for public administrations to become more efficient and effective while reducing costs and administrative burden. The Government is keen to make use of data-driven transformation, contributing to developing information systems, networks and databases. To streamline and catalyze Egyptian's transition to this new industrial model, UNIDO and partners will develop a roadmap to guide stakeholders on the best way to integrate into Industry 4.0. Special emphasis will place on the best mechanisms to transition from Industry 2.0/3.0 to Industry 4.0. UNIDO also proposes the establishment of a Digital Economy Observatory, which will be responsible for monitoring the national level of Industry 4.0 progress in the country.

Upgrade Egypt Technology and Innovation Centres: The PCP Egypt Diagnostic states that in the past the country tried to replicate the Technology and Innovation Centres model found in Japan – as an effort to promote technological development in the country. It has been found that these centres need assistance in their operation and management to fulfil their mandate of innovation promotion hubs. UNIDO proposes to utilize and leverage its experience in establishing Investment, Promotion and Technology Networks (ITPO) to revitalize these existing Technology and Innovation Centres – with the objective of making them national nodal points to support the transition to the 4th Industrial Revolution.

Area 2 - (Outputs 3 and 4): Industry 4.0 Awareness Raising & Capacity Building

Training centres and pilot e-factories for learning (Siemens – GIZ – UNIDO Industry 4.0 Training Centre): The PCP Egypt Diagnostics has referred to a Siemens - GIZ Industry 4.0 training centre in Ain Sokhna, which is currently under conception. UNIDO aims at joining this collaborative effort to leverage its expertise and international network and to add value to this institution.

National Industry 4.0 Curricula and mass education for a digital generation: The PCP Diagnostics has made evident that capacity-building curriculum should successfully be prepared for Industry 4.0 - there is a strong need to reskill and upgrade the capacity of SMEs and youth. The Government is increasingly recognizing the importance of innovation and scientific research to the country's overall development agenda. New reforms are driven by the belief in the growing mismatch between the labor market needs and the outcomes of the education system. This justified the newly passed Science, Technology and Innovation Incentives Law (23/2018), which stressed the importance of scientific incubators, promoting scientific spin-off companies; and offering financial & tax incentives.

Key challenges that need to be overcome to support innovation development include (but not limited to): the lack of applicability of new innovations; poor spending on R&D; and the lack of scientific mentality among youth. According to Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS), the "university and above" in Egypt are the second largest group of the unemployment people with 34% of the total, which may mean employment guidance and better access to job market for the graduates are needed. To bridge the huge gap between the well-educated/skilled youth and the labor market needs, a program to discover their aptitudes, design career plans and gather information on the field of Industry 4.0 could be a supplementary measure. UNIDO is proposing the development of several "Industry 4.0 Curricula" to be introduced at all levels of Egypt's education system. The organization envisions that the curricula will be interactive to demonstrate to students the importance of technology, and how it can support industrial development in the country. UNIDO also proposes the development of a "Train the trainer" programme to promote knowledge upgrading in the country.

Potential of Industry 4.0 in the context of Smart Cities: The Government strongly notes that the concept of a Smart City should be defined, promoted and agreed upon by all parties. It is a clear that not all cities of the country are ready for such transformation; however, in some cases it may be feasible and applicable. The Government strongly suggest conducting a detailed study of the cities closest to the global definition of smart cities, while clarifying the current situation of these cities in terms of infrastructure and the intensity of the industrial and agricultural environment in these cities. This will facilitate a smooth implementation of Industry 4.0 technologies in potential Smart Cities. 6th of October located in the West of Greater Cairo and 10th of Ramadan located in the East of Greater Cairo are some of the country's oldest industrial cities where all industrial sectors are represented and hence, are potential Smart Cities candidates. The main challenges facing the implementation of Industry 4.0 concepts and mechanisms is the availability of the infrastructure required for the transition phase and the existence of virtual connections that assist the linkage between different industrial entities within the same geographic area facilitating the growth of value and supply chains.

To increase awareness on the development potential through Industry 4.0 – UNIDO is proposing to support the transformation of select cities into smart cities. In these smart cities, UNIDO wishes to demonstrate the role advanced technologies, such as AI, Big Data, Blockchain, play in creating prosperity, but also and mainly inclusiveness and environmentally friendly living places.

Area 3 - (Outputs 5 and 6): Upgrading of priority industrial sectors

Industry 4.0 technology integration into core industrial sectors as well as enterprises technology upgrading: Egypt recognizes the necessity to apply the technologies of the fourth Industrial Revolution in all industries (despite their differing maturity levels). The engineering sector remains the main priority as the return on investments has a faster impact than other industrial sectors and the strong overlap it has with other industries. Nevertheless, the application of the mechanisms of the 4th Industrial Revolution in the PCP targeted industrial sectors is essential.

The Electronics sector, which is increasingly attracting new investments, will be a "pilot sector", where Industry 4.0 integration will be explored. Through their interventions, UNIDO and partners will aim to address the key development barriers of this sector viz. inability to keep up with pace of innovation, lack of E-waste regulations & traceability; and need for a "digital savvy" workforce.

UNIDO proposes to initiate projects to facilitate the seamless integration of "fit for purpose" Industry 4.0 technologies in core industrial sectors with the objective of increasing manufacturing output and efficiencies – thereby promoting economic, environmental, and social growth. Through this output, UNIDO and partners will determine the maturity of each industry individually to accommodate Industry 4.0 mechanisms and as well as determine how these solutions can solve their most pressing problems. This output will result in an increased integration of the targeted industries to the global/regional value chains through Industry 4.0.

In connection with the integration of Industry 4.0 to the Electronics Sector, UNIDO proposes to conduct a detailed value chain analysis; develop an E-waste reduction programme, establish a Resource Management Platform, and support the country's Semi Knock Down (SKD) sub-sector.

Area 4 - (Outputs 7 and 8): Servitization of Manufacturing Sector

Integrate the 4th Industrial Revolution with Egyptian Quality Infrastructure and system: Egypt has a very strong reputation in the global quality arena and we at UNIDO strongly believe that the country's position in this area can be enhanced if 4th Industrial Revolution technologies are employed. Hence, UNIDO aims at utilizing the findings from its "Rebooting Quality Infrastructure for a Sustainable Future" to initiate projects with the objective of upgrading national quality institutions to ensure effective standards are met and implemented in key industrial sectors. UNIDO also aims at exploring the role consumers can play in supporting quality promotion.

E-commerce potential application in key value chains (link with Value Chains PCP Component): Egypt in the past two decades has developed a strong ICT sector by liberalizing the telecommunications sector, creating an environment conducive to an expansion of its information technology (IT)-enabled services industry, and cultivating an information society with wider diffusion of ICTs and the Internet. E-commerce in Egypt is still in its infancy. E-commerce business-to-consumer (B2C) activities in Egypt were estimated to have reached USD 544 million in 2015/16. Egypt, with its 30 million Internet users in 2015/2016 and a level of penetration of 37.8 per cent, has the largest population of prospective online shoppers in the Arab world. Egypt's geographical location at the crossroads of Africa, the Middle East, the Mediterranean and Europe makes it an attractive regional hub ripe for e-commerce growth. This potential remains untapped. In terms of application areas, except for engineering sector, potential application in key value chains will include other sectors as textile and leather sectors. UNIDO strongly holds the opinion that E-commerce offers many stakeholders the opportunity to jump on the 4th Industrial Revolution bandwagon. The organization aims to explore the possibilities through which E-commerce can support Egypt's value chain development. Potential sectors of interest include Egypt's Agriculture and Food sectors. UNIDO also aims to explore effective mechanism to facilitate consumer protection.

Industrial Design Development - Enterprises (start-up) Acceleration Programme: Design is a crucial component to promote industrial development and through this intervention, UNIDO aims at enhancing enterprises to think about the "design" elements of their outputs to enhance the relationship with their consumers. UNIDO is willing to assist industrial stakeholders to anticipate trends and calibrate their activities accordingly. UNIDO aims to initiate a "design thinking" programme with some partners to provide the methodological tools by which creative solutions and innovations can be developed by every person and every organization, and in a way that is systematic, replicable and goal-oriented. UNIDO will also provide advice on policies supporting startups in the field of design and the internationalization of their outcome and will recommend incentives that foster the service sector.

3.6.3 UNIDO comparative advantage

UNIDO is a specialized agency that has the capacity to promote industrial development in its Member States. More specifically, the organization niche focuses on enhancing the manufacturing and production sectors of countries. The integration of Industry 4.0 technologies such as AI, Big Data, Blockchain etc. in core sectors can increase their efficiencies and outputs. UNIDO has the relevant experience to work with partners to catalyze this integration process.

Furthermore, UNIDO can:

- Assist in establishing multi-stakeholder knowledge sharing platforms to create awareness on Industry 4.0 opportunities;
- Share available tools and methods for innovation management; design training curricula for new workforce skills requirements;
- Explore methods and best practices to support SMEs digital transformation;
- Bridge the gender digital divide;
- Convey the importance of new infrastructure, standards and policies that need to be developed or mainstreamed to correspond to the new technologies.

In terms of skills development, UNIDO possesses the convening power to bring together the private sector, decision makers, development agencies and training providers to develop and deliver demand driven industrial skills. The organization can develop small-scale, low-cost, replicable learning units, including curricula that will demonstrate the future of industrial skills.

UNIDO also has a proven record of accomplishment in developing quality infrastructure (QI) that acts as a multiplier for the efforts of developing countries and emerging countries to improve their industrial and economic performance as a basis for prosperity, health and well-being. A key example of our success in this area has been the establishment of the Arab Accreditation Cooperation (ARAC), which is a platform upon which Arab countries can build and develop their accreditation infrastructure. Thanks to the support of the SIDA-funded project, ARAC follows international best practices and Arab States can receive support from their own regional body without having to go far and seeking recognition from outside the region. Egypt continues to benefit from this UNIDO supported regional Quality System platform. In this PCP, UNIDO can facilitate the development of the priority industrial sector through complementary initiatives such as the training/qualification of lead assessors on the Innovation Management System Standards (ISO 56002), the upgrading of testing laboratories, the enhanced usage and access for SMEs to QI services, etc.

3.6.4 Mapping of potential partners

Potential partners identified for the Mainstreaming Industry 4.0 component are:

- Ministry of Trade and Industry and its affiliates;
- Ministry of International Cooperation;
- Ministry of Agriculture and Land Reclamation and its affiliates;
- Ministry of Communication and Information Technology and its affiliates;
- Ministry of Higher Education and Scientific Research;
- Egyptian Organization for Standardization & Quality;
- Egyptian Accreditation Council;
- Federation of Egyptian Industries;
- Egyptian Junior Business Association;
- International Trade Centre (ITC);
- World Bank Group;
- The Food and Agriculture Organization (FAO);
- UNCTAD;

- The United Nations Educational, Scientific and Cultural Organization (UNESCO);
- International Telecommunications Union ITU;
- European Union;
- China (CEXIM);
- GIZ;
- Germany;
- Korea (KOICA);
- Japan (JICA);
- Italy (Italian Development Cooperation);
- Switzerland;
- IsDB;
- World Technopolis Association;
- Korea Advanced Institute of Science and Technology;
- The China Academy of Information and Communications Technology (CAICT);
- Consumer Unity and Trust Society (CUTS);
- Siemens;
- Huawei;
- Festo Didactic;
- Other potential private sector partners.

For an overall view of potential partners, see section 2.5 and synoptic tables in annex 2.

3.7 Mainstreaming cross-cutting issues: Gender and Youth

The Egyptian manufacturing sector offers a significant potential in terms of social contribution, usually enabled by SMEs. More than 51% of Egyptian SMEs operate in the manufacturing sector, one of the highest percentages in the MENA Region[69]. Due to this larger concentration of SMEs in the Egyptian manufacturing sector, a higher pressure is set on industry to maximize social contribution through job creation, particularly for segments of the labour market, affected by the highest unemployment rates, such as youth and women.

Over the last decade, the share of female employment has been increasing both in total manufacturing employment and total female employment at a CAGR of 6% and 2,1% respectively. Despite this progress, there is still a significant gap between the share of female in manufacturing employment, around 10%, and the share of females in total employment of the country at around 21%.[70]

On the contrary, this progress is not clearly reflected in terms of youth employment. The share of young (15-29) manufacturing employees has been stagnating to slightly decreasing, both in total manufacturing employment and total youth employment. However, manufacturing can represent a source of employment for the youth. Actually, manufacturing performs above the Egyptian economy average in terms of youth in employment: the share of youth in manufacturing employment is around 37%, while the share of youth in total employment of the country is around 33%. This is particularly relevant for Egypt, an economy where the unemployment rate of the youth, about 30%, is significantly larger than average unemployment rate (12%). Therefore, following the outcomes of the Diagnostics capturing main sex and age disaggregated gaps, PCP Egypt will aim at fostering an equitable development and exploit gender and youth untapped potentials, and turn them into contributions to the economic growth of the country. Accordingly, cross cutting issues will be mainstreamed throughout planning and implementation of PCP Egypt components.

PCP component 5 focusing on Value Chains fully capitalizes on the impact of the economic participation of youth and women. Egypt's food and agri-food production sector, as well as textile and handicrafts, represent major sectors of the economy and major sources of employment for youth and women. The PCP component on Value Chains includes also an intervention fully dedicated to women empowerment. The programme "Promoting Women's Empowerment in the MENA Region (PWEII)", of which Egypt is one of the seven beneficiary countries, embeds a number of PCP cross-cutting activities: a gender-sensitive mapping of value chains with high growth and job creation potentials, including ICT, improved policy dialogue through enhanced awareness and evidence-based knowledge generation, and fostering opportunities for women-led entrepreneurship.

In digital economy, PCP Component 6 on Industry 4.0 aims at bridging the gender digital divide and reducing the huge gap between the well-educated/skilled youth and the labor market needs. One of the outputs will focus on developing several "Industry 4.0 Curricula" to be introduced at all levels of Egypt's education system and in turn start generating job and business opportunities.

Component 4 for the development of Smart Cities and Sustainable Industrial Parks will target women and youth to boost entrepreneurship and innovation in Egyptian industrial parks, through the creation of cleantech innovation incubators and/or accelerators.

Component 3 on Green Industry will mainstream green growth approaches into government policies and strategies and build capacity on green growth approaches for MSMEs and start-ups from value chains, with focus on young women and men.

[69] PCP Egypt Diagnostics, 2020
[70] Ibid.

PCP component 2 on Investment Promotion will also strive towards gender equality and the empowerment of women in line with SDG 5, by maximizing the participation of women in capacity building interventions and women-led businesses in SME-related interventions for investment promotion and linkage support.

With regard to PCP organizational structure gender and youth cross-cutting support will be embedded in UNIDO PCP Coordination Unit, to ensure mainstreaming throughout all PCP projects at awareness, planning and monitoring of implementation levels.

The UNIDO PCP Coordination Unit will ensure that during the development of individual project documents of PCP components, a sex-disaggregated analysis is included in the overall baseline scenario assessment, carried out to identify gender gaps and youth opportunities. Subsequently, appropriate measures will be introduced to reduce these disparities and reduce the gaps. The activities of PCP components will then address the increased role of women and youth, as target beneficiaries of PCP technical assistance. As a result, data disaggregated by sex, focusing on the livelihoods of small and medium-sized entrepreneurs and workers in industry will be included in the PCP respective components' project documents.

4. PROGRAMME ORGANIZATIONAL STRUCTURE

4.1 National Coordination Mechanisms

PCP Egypt is developed to support the implementation of the national industrial strategy, in line with Egypt Vision 2030. It is based on the principle of national ownership in order to ensure the sustainability, the scope and the effectiveness of its results.

In order to facilitate the coordination and monitoring of PCP Egypt's interventions, as well as the mobilization of resources and the establishment of partnerships, the PCP governance is set up as a three-tier PCP National Coordination Body (NCB) comprising of:

- High Level National Steering Committee (at Ministerial level);
- National Coordination Committee (at Senior officials level);
- Executive Coordination Unit (at Executive level):

4.1.1 High-Level National Steering Committee

The owner of PCP Egypt is the GoE, whereas it will provide strategic guidance from the highest political level as well as leadership in the development and implementation of the PCP. Such an ownership is represented by the High-Level National Steering Committee (NSC), to reflect effectively country leadership and policy decisions over PCP Egypt into actions on the ground.

The Committee consists of relevant Ministries and UNIDO, under the leadership of Prime Minister. The Committee provides strategic directions to ensure that the PCP is aligned to national policies and contributes to national growth targets and monitors PCP progress. The Committee synergizes with three streams of resources: public investment, including loans facilitated through financial institutions; business sector investment; and Official Development Assistance (ODA). The NSC includes the membership of the following ministries:

- Prime Minister – Chair
- Members:
  - Ministry of Trade and Industry (Secretariat);
  - Ministry of Foreign Affairs;
  - Ministry of International Cooperation;
  - Ministry of Planning & Economic Development;
  - Ministry of Finance;

- Ministry of Environment;
- Ministry of Agriculture and Land Reclamation;
- Ministry of Electricity and Renewable Energy;
- Ministry of Communications and Information Technology;
- Ministry of Education and Vocational Education;
- Ministry of Housing and Urban Communities;
- Micro, Small and Medium Enterprises Development Agency;
- General Authority for Investment
- Suez Canal Economic Zone Authority
- UNIDO.

4.1.2 National Coordination Committee

The National Coordination Committee (NCC) is led by the Prime Minister Office and observes the same composition of the High-Level National Steering Committee, but at the Senior Officials level. The Committee brings together the main stakeholders relevant to industrial development and ensures inter-ministerial coordination as well as the necessary multi sectoral vision and approach. In particular, the Committee also includes private sector representatives to ensure alignment of objectives and synergies.

- The Committee is in charge of facilitating the implementation of the PCP Egypt;
- Ensure the monitoring and control of all PCP Egypt programmes and projects and identify the mechanisms likely to contribute to their financing;
- Regularly inform and update the High Level National Steering Committee and the stakeholders about the progress of PCP Egypt;
- Contribute to the coordination between the different PCP Egypt stakeholders, to identify the appropriate adjustments, able to optimize the results of the PCP Egypt and to propose potential partnerships to be put forth in the Programme;
- Establish a National Industrial Observatory to monitor industry trends (conduct research, surveys and industry benchmarking studies) ;
- Identify and mobilize funding for the implementation of the PCP components, including international financial institutions, international cooperation and the business sector;
- Communicate to financial partners and donors the components of the PCP Egypt, ensuring their alignment with the areas of intervention of these donors;
- Identify the main national funding available opportunities and likely to contribute to financing the PCP Egypt;
- Create a platform for information sharing and better coordination for ISID;
- Organize regular Public-Private dialogue industrial development issues;
- Structure, coordinate and optimize the intervention of PCP funding sources.
- Establish, where appropriate, specific ad-hoc working groups to address particular themes.

The NCC includes additional memberships of the following entities:

- Administrative Control Authority;

- Federation of Egyptian Industries;
- Alexandria Businessmen Association;
- Egyptian Junior Businessmen Association.

4.1.3 Executive Coordination Unit

This Unit includes UNIDO and the Ministry of Trade and Industry. It ensures the operational follow-up of the PCP Egypt and will have the following functions:

- Take in charge the secretarial functions of the National Coordination Body;
- Support resource mobilization activities;
- Monitor the implementation of PCP Egypt and periodically evaluate its progress;
- Identify key partners for PCP Egypt;
- Monitor and facilitate the implementation of PCP Egypt's promotion and communication strategy;
- Ensure that projects submitted within the PCP Egypt framework include a gender and youth mainstreaming strategy;
- Submit semi-annual and annual monitoring reports.

4.2 UNIDO Coordination

Following the PCP preparatory phase, clear management responsibilities are being maintained at UNIDO Regional Hub (RH) level in Egypt, and between the RH and UNIDO HQs, in order to ensure the successful implementation of PCP Egypt.

At UNIDO Headquarters, the Division for the Arab Region will support the coordination of the Programme with UNIDO technical departments involved in the PCP, as well as to maintain external relations with the Permanent Mission of Egypt to UNIDO. The UNIDO Regional Hub will continue being the technical interface with UNIDO technical departments to ensure the arising synergies of PCP interventions, and between them for the overall PCP implementation, monitoring and reporting. The UNIDO Regional Hub in Egypt, supported by the UNIDO Division for the Arab Region, will provide administrative support in the organization of technical missions, coordination with UN organizations (UNPDF); ensure coordination and synergy within PCP projects and with other regional projects.

5. COMMUNICATION AND ADVOCACY

In order to carry out a successful implementation of the PCP Egypt it will be essential to effectively communicate and advocate so that the positive leveraging effect of the PCP is fully recognized in all its dimensions (policies, capacities, mechanisms), and accordingly supported politically and financially.

Target audiences for communications' efforts are governments and the extended group of national decision-makers and policymakers (mostly at the national and regional level), the private sector, international financial institutions, development finance institutions, other UN agencies and development agencies, bilateral and multilateral donors, elected representatives, thought leaders and influencers, including the media as well as universities and research institutions.

Due to the dynamic nature of the programme, the communication and advocacy component as here presented, will serve as a basis for the development of a more comprehensive communication strategy, developed by an established and functioning communication network, consisting of selected focal points from UNIDO and focal points identified by Egypt's PCP stakeholders.

5.1. Objective, outcomes and target audience for the communication strategy

Overall communication objective:

The PCP, UNIDO's flagship model, is nationally, regionally and internationally, recognized as a successful initiative to accelerate inclusive and sustainable industrial development in Egypt and fosters further cooperation and investments for its national implementation.

Expected communication outcomes and target audiences:

The appointed PCP Communication team should focus on the achievement of the following three outcomes:

1. *Outcome:* The potential and added value of the PCP model for the socio-economic and environment development of Egypt is successfully demonstrated, including the highlighting of the potential of the selected six priority sectors: 1. Industrial Policy and Governance, 2. Investment Promotion, 3. Green Industry 4. Smart Cities and Sustainable Industrial Parks 5. Value Chains 6. Mainstreaming of Industry 4.0, focusing on the following sectors: food, textile, leather, handicrafts, furniture, chemicals, plastic and electronics. This should lead to an increased interest in advocating for the PCP on the side of national counterparts.

   Target audience:

   - National government, government-related entities, including public bodies, agencies, other private legal entities controlled by the government etc.;
   - Private sector;
   - International Financial Institutions (IFIs) and Development Finance Institutions (DFIs);
   - National media outlets.

2. *Outcome:* The awareness of the PCP model and its positive impact on Egypt's socio-economic and environment development is raised across the region.

   Target audience:

   - MENA governments and government-related entities, including public bodies, agencies, other private legal entities controlled by the government etc.;
   - Private sector;
   - International Financial Institutions (IFIs) and Development Finance Institutions (DFIs);

- National and regional media outlets;
- National and regional research institutions and universities;
- Regional UNIDO field offices and other selected partner organizations.

3. *Outcome*: The contribution of Egypt's PCP to the achievement of the 2030 Agenda for Sustainable Development, the Paris Agreement and other international frameworks is in alignment with Egypt's Vision 2030 - Sustainable Development Strategy and this is presented globally in order to gain further recognition among the international community.

   Target audience:

   - United Nations Headquarters/ UN Member States (General Assembly and related bodies);
   - UNIDO Member States and non-Member States as well as other UNIDO stakeholders;
   - Government-related entities, including public bodies, agencies, other private legal entities controlled by the government etc.;
   - Private sector;
   - International Financial Institutions (IFIs) and Development Finance Institutions (DFIs);
   - Global research institutions and universities.

5.2 Logical Framework for Communication

PCP Egypt	Intervention logic	Objectively verifiable indicators	Source of verification	Assumptions
Overall communication objective The PCP, UNIDO's flagship model, is nationally, regionally and internationally, recognized as a successful initiative to accelerate inclusive and sustainable industrial development in Egypt and fosters further cooperation and investments for its national implementation.				
1. Outcome: The potential and added value of the PCP model for the socio-economic and environment *development of Egypt is successfully demonstrated, including the highlighting of the potential of the selected six priority sectors. This should lead to an increased interest in advocating for the PCP on the side of national counterparts.*				
1.1. Output	*Expanded awareness of and communication about the PCP by national Government and government-related entities.* (The proposed communication activities will serve as a basis for the development of a joint communication strategy and will be further defined in course of the next months*): Activities*: • Strengthened coordination among the Government's and UNIDO's technical teams and communication focal points to agree on communication channels and tools to reach policy-makers, private sector, donors, IFIs, and DFIs; • Development of efficient key messages;	• References to the PCP by policymakers and others during public appearances; • Successful establishment of coordination mechanism among involved stakeholders; • Briefing materials developed; • Online strategy implemented (e.g. Number of users on PCP website); • Number of social media	• Mid-term Independent Evaluation report on communication activities.	• Availability of resources; • Counterpart contributions; • Commitment of policymakers.

PCP Egypt	Intervention logic	Objectively verifiable indicators	Source of verification	Assumptions
	• Compilation of short briefing material explaining the PCP's potential to be shared with policy makers; • Online outreach strategies (website, social media, YouTube etc.) to be developed involving the presentation of policy makers, private sector, IFIs, and DFIs.	engagement statistics.		
1.2. Output	*Increased interest by the national business sector and development finance institutions to receive further information about the PCP and potential cooperation possibilities.* Activities*: • Compilation of briefing materials explaining the PCP's potential, tailor-made for the private sector, donors, IFIs, and DFIs; • Presentation kit to be developed for briefings and meetings; • Online strategies to be developed, targeted at private sector, donors, IFIs, and DFIs; • Briefings and other events to be conducted.	• Briefing materials and presentation kit developed; • Online strategy implemented (e.g. Number of users on PCP website, Number of social media engagement statistics) ; • Number of briefings and other events conducted (to be measured in alignment with the overall outcome of these activities).	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation report on communication activities.	• Qualitative and tangible results/data available; • Commitment of policy makers and other involved parties to advocate for PCP; • Interest of business sector and DFIs given.
1.3. Output	*Interest of media outlets to learn more about the potential and progress of the PCP for Egypt's national economic development creation of media partnerships.* Activities*: • Compilation of information package for journalists; • Press briefings to be organized; • Establishment of media database and frequent media engagement and updates.	• Information packages developed. Number of references in the media; • Number of qualitative partnerships with media outlets.	• Mid-term Independent Evaluation report on communication activities.	• Availability of resources; • Qualitative and newsworthy information available; • Interest of media given.
2. Outcome: *The awareness of the PCP model and its positive impact on Egypt's socio-economic* and environment *development is raised across the region.*				
2.1. Output	*Increased interest from other MENA governments and government-related entities to learn more about the potential of the PCP and best practices.* Activities*: • Compilation of briefing material explaining the PCP's potential to be shared with policymakers,	• Briefing material developed; • Online strategy developed (e.g. Number of users on PCP website, Number social media engagement statistics);	• Mid-term Independent Evaluation report developed by involved technical focal points;	• Availability of resources; • Counterpart contribution; • Qualitative and tangible results/data available;

PCP Egypt	Intervention logic	Objectively verifiable indicators	Source of verification	Assumptions
	private sector, donors, IFIs, and DFIs; • Conduction of briefings and events and other activities during which knowledge-exchange will take place.	• Number of briefings and other events conducted (to be measured in alignment with the overall outcome of these activities).	• Mid-term Independent Evaluation report on communication activities.	• Interest of policy makers.
2.2. Output	*National and regional* private sector, donors, IFIs, and DFIs *are keen to get involved in the programme.* Activities*: • Compilation of short briefing material explaining the PCP's potential, tailor-made for the private sector, donors, IFIs, and DFIs; • Online strategies to be developed targeted for private sector, donors, IFIs, and DFIs; • Presentation kit to be developed for briefings and meetings; • Briefings and other events to be conducted.	• Briefing material and presentation kit developed; • Online strategy implemented (e.g. Number of users on PCP website, Number social media engagement statistics); • Number of briefings and other events conducted (to be measured in alignment with the overall outcome of these activities).	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation report on communication activities.	• Availability of resources; • Qualitative and tangible results/data available; • Interest of research instructions given.
2.3. Output	*Interest of national and regional media outlets to learn more about the progress of the PCP to present it as a valuable tool for boosting a country's socio-economic and environment development expanded.* Activities*: • Compilation of information package for journalists; • Press Briefings to be organized; • Establishment of media database and frequent media engagement and updates.	• Information packages developed Number of of references by media; • Number of of qualitative partnerships with media outlets.	• Mid-term Independent Evaluation report on communication activities.	• Availability of resources; • Qualitative and newsworthy information available; • Interest of media available.
2.4. Output	*National and regional research institutions and universities are intrigued to learn more about the impact of the PCP's interventions on the country's socio-economic development expanded.* Activities*: • Compilation of background information/ statistics/analysis; • Establishment of potential partnerships to exchange	• Number of references by media; • Number of qualitative partnerships with media outlets.	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation	• Availability of resources; • Qualitative and tangible results/data available; • Interest of research instructions given.

PCP Egypt	Intervention logic	Objectively verifiable indicators	Source of verification	Assumptions
	knowledge and share best practice.		report on communication activities.	
2.5. Output	*Regional UNIDO field offices are supportive in spreading best practice examples of Egypt in other regions other selected partner organizations.* Activities*: • Compilation of background information to be shared for their information and engagement; • Involvement in communication and outreach strategies to amplify the messages.	• Number of of involved UNIDO field offices and other partners; • Separate measurement of their involvement in overall outreach strategies.	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation report on communication activities.	• Information material available; • Commitment and resources available within field offices and other organizations.
3. Outcome: The contribution of Egypt's PCP to the achievement of the 2030 Agenda for Sustainable Development, the Paris Agreement and other international frameworks is in alignment with Egypt's Vision 2030 - Sustainable Development Strategy and this is presented globally in order to gain further recognition among the international community.				
3.1. Output	*Increased interest by the United Nations Headquarters/ UN Member States (General Assembly and related bodies) to learn about the success of the PCP.* Activities*: • Compilation of briefing material explaining the success of the PCP and linking it to international development frameworks; • Conduction of briefings to policy-makers on the global level.	• Briefing material and presentation kit developed; • Number of briefings conducted (to be measured in alignment with the overall outcome of these activities).	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation report on communication activities.	• Commitment of policy makers and other involved parties to advocate for PCP
3.2. Output	*UNIDO Member States and non-Member States as well as other UNIDO stakeholders are keen to get involved in PCP programmes/developing a PCP programme in their country.* Activities*: • Compilation of briefing material explaining the success of the PCP and linking it to international development frameworks; • Conduction of briefings to UNIDO Member States and non-Member States and presentation of engagement opportunities.	• Briefing material developed; • Number of briefings conducted (to be measured in alignment with the overall outcome of these activities).	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation report on communication activities.	• Commitment of policy makers and other involved parties to advocate for PCP; • Available resources of UNIDO MS and non-MS.

PCP Egypt	Intervention logic	Objectively verifiable indicators	Source of verification	Assumptions
3.3. Output	*Expanded willingness by government-related entities to contribute/get involved in PCP-related activities.* Activities*: • Compilation of briefing material explaining the success of the PCP and linking it to international development frameworks; • Organization of events/forums to share knowledge and provide opportunities for involvement.	• Briefing material developed; • Number of events/forums conducted (to be measured in alignment with the overall outcome of these activities).	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation report on communication activities.	• Commitment of policy makers and other involved parties to advocate for PCP; • Available resources of government-related entities.
3.4. Output	*Global research institutions and universities are using PCP data for their research.* Activities*: • Compilation of background information/ statistics/analysis on the success of the PCP and its contribution to international development frameworks; • Establishment of potential partnerships to exchange knowledge and share best practice.	• Number of references by media; • Number of qualitative partnerships with media outlets.	• Mid-term Independent Evaluation report developed by involved technical focal points; • Mid-term Independent Evaluation report on communication activities.	• Qualitative and tangible results/data available.

5.3 Risks and Mitigation measures

Overall Risks	Mitigation measures
1. The communication network is not operational	Develop capacity of different stakeholder groups
2. The benefits of the PCP are not well understood	Additional information to be provided
3. The buy-in is limited	Multilevel interactions to be fostered
4. The progress is slow or uneven	Increase reporting on concrete benefits/impact

5.4 Monitoring and Evaluation

Based on the final communication strategy, including further detailed activities and campaigns, which will be developed by the communication network of the PCP Egypt, monitoring and evaluation will be undertaken on a regular basis, and if required, alternative activities suggested. Proposed key indicators as outlined in the logframe serve as a basis and might require further adaption based on the final strategy.

6. PCP LOGICAL FRAMEWORK

The intervention logic of PCP Egypt is based on a process of analysis carried out on-site by international and national experts as well as specialized Egyptian and UNIDO staff involved in the development of the identified components. On-site and on-line continuous consultations were carried out to refine and validate the planned logical framework deliverables for each component with the respective national counterpart focal points. The logical framework has a general objective and a key outcome for each component, all aligned with the Government's objectives and in particular with its country development strategies, Vision 2030 and the Industrial Development and Trade Enhancement Strategy 2016 - 2020, as well as the relevant United Nations SDGs. The planned interventions to achieve the main results of each component are translated here into "outputs", each representing tailor-made projects to be implemented during the PCP implementation phase. During the implementation, synergies will be sought between PCP components and special attention will be paid to assess respective component reference scenarios, along with the aim of defining and setting in place the ex post evaluation of the programme's impact.

6.1 Programme Objective

PCP Egypt Objective	To contribute improving economic, social and environmental performance of the Egyptian manufacturing sector, in line with national priorities and SDG 9	*Contributing respectively to:* • *The manufacturing development objectives of the Egypt Vision 2030 and Industrial Development and Trade Enhancement Strategy 2016 – 2020;* • *SDG 9 of the United Nations 2030 Agenda "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation".*

6.2 Programme Outcomes

PCP Egypt Outcomes	Industrial Policy and Governance Component	*Improved policy framework to enhance productivity and competitiveness of the manufacturing sector*
	Investment Promotion Component	*Improved investment promotion services to increase investor confidence in Egypt*
	Green Industry Component	*Increased productivity and reduced negative environmental impact in the Egyptian manufacturing sector*
	Smart Cities and Sustainable Industrial Parks Component	*Increased competitiveness, innovation and sustainability in smart cities and sustainable industrial parks in Egypt*
	Value Chains Component	*Improved performance and competitiveness of selected value chains in Egypt*
	Mainstreaming Industry 4.0 Component	*Increased integration of Industry 4.0 technologies in key industrial sectors to enhance manufacturing contribution to national economic, environmental and social development.*

6.3 Programme Logframe

PCP Egypt	Intervention logic	Objectively verifiable indicators	Sources of verification	Assumptions
Objective	To contribute improving economic, social and environmental performance of the Egyptian manufacturing sector, in line with national priorities and SDG 9.	• Increased share (%) of the manufacturing value added in GDP; • Declined (%) in greenhouse gas emissions from the energy sector; • Carbon intensity (%) reduced; • Reduced (%) of industrial waste; • Higher proportion (%) of the added-value of medium and high technology industries in the total value added • Increased manufacturing value added per capita; • Increased manufacturing employment as a proportion (%) of total employment; • Increased proportion (%) of small-scale industries in total industry value added.	• National reports related to Vision 2030 Industrial Development and Trade Enhancement Strategy 2016 – 2020; • National Statistics.	• No downturn in global economic outlook; • Political stability in the Region; • Stable global trade policies and practices.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
6.3.1 Industrial Policy and Governance Component					
	Outcome I: Improved policy framework		• Cumulative number of new or revised policies adopted by policymakers; • Increased share of Medium High Technology (MHT) products and services; • Increased share of MHT products and services exported; • Increased share of MHT based jobs • Higher percentage of labour and total factor productivity; • Increased rate of innovation.	• National Statistics; • GII report.	• All stakeholders adhere to the industrial strategy and policy; • The Decision Support and Coordination Unit is able to perform its functions and the results thereof are acknowledged and integrated into the work of all stakeholders.
		Output 1.1 Support to enhance governance and coordination provided	• Number of global fora, workshops/EGM/side events organized; • Increased number of inter-ministerial meetings for reducing fragmentation and better coordination; • Increased number of public-private sector meetings for better collaboration and enhanced engagement of private sector in the policy making process.	• Meeting reports; • Progress reports; • Coordination platform reports; • Metrics, as used in the diagnostic report.	• All stakeholders accept the coordination platform and its mandate; • Stakeholders are willing to productively collaborate.
		Output 1.2 Decision Support and Coordination Unit established	• Number of policy issues addressed and supported ; • Number of M&E analyses; • Amount of data held; • Number of productivity analysis; • Number and type of services provided; • Number of policymakers trained;	• Studies; • Training modules; • Technical reports and progress reports;	• Government is providing staff and venue.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
			• Number of partnership frameworks initiated; • Number of study tours undertaken.	• M&E project reports; • Study tour reports.	
		Output 1.3: Monitoring and Evaluation (M&E) System established	• Enhanced tracking of policies; • Increased impact of policies; • Number of "adjusted" policies; • Number of analytical outputs.	• M&E project reports; • Studies; • Technical reports.	• Government shares an interest in having policy initiatives monitored and evaluated.
		Output 1.4: Capacities of the Decision Support and Coordination Unit and other addressed institutions staff developed.	• Number of trainings given; • Number of training modules developed; • Number of manuals developed; • Number of study tours undertaken; • Number of trainers created.	• Training modules; • Training reports; • Study tour reports; • Training of trainer reports.	• Participants are able to follow the courses and increase their knowledge and skills.
		Output 1.5: Supported the development of an Industrial Strategy	• Number of industrial strategies.	• Industrial strategy; • Stakeholder meeting reports.	• Government assumes ownership; • Government readiness to transformational approach
		Output 1.6: Supported the development of an Industrial Policy	• Number of industrial policies developed by Decision Support and Coordination Unit.	• Stakeholder meeting reports; • White paper; • Green paper.	• Government assumes ownership; • Government readiness to transformational approach

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
6.3.2 Investment Promotion Component					
	Outcome 2: Improved investment promotion services and increased investor confidence in Egypt		• Number of investment-ready proposals elaborated; • Number of projects or businesses financed; • Value (USD) of new investments leveraged; • Targeted and coordinated investment promotion work executed by all concerned institutions; • Increased capacity for developing/appraising and promotion of investment proposals (Number of joint venture proposals developed and promoted internationally); • Improved evidence-based public-private investment climate policy dialogue (Number of policy reform proposals); • Industrial investment promotion roadmap exists; • Number of SMEs investing in upgrading their companies (practices, processes, technology etc.) to better meet the demands of buyers; • Number of joint ventures with Egyptian companies increasingly promoted globally; • Number and value of outsourcing/subcontracts facilitated between FDI/large national companies (public/private) and SMEs; • Regional integration in Africa and Arab countries improved.	• National Statistics; • National reports connected to the Egypt Vision 2030; • Project reports.	• The GoE is committed to the economic reform and free market orientation; • Interest of domestic and international investors; • Global economic stability.
		Output 2.1: Egyptian investment	• Number of capacity building activities provided; • Development of an industrial investment promotion roadmap and strengthened	• ToR and meeting minutes, drafts and final roadmap;	• Invest in Africa provided one good occasion where actors

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		promotion institutions' capacities enhanced for industrial FDI attraction and retention.	coordination of all stakeholders involved in investment promotion such as GAFI, IMC, Suez Canal Economic Zone & FEI (Number of coordination meetings, Number of jointly organized investment promotion initiatives/events, shared databases; the industrial investment promotion roadmap); • Improved understanding of existing investors' needs/attitudes about the investment climate, their SDG impact and future re-investment plans (nationwide FDI survey and consultations); • Number of inputs in the form of studies/papers for future revisions of the industrial investment promotion roadmap based on the FDI survey findings; • Capacity for organization / participation in international investment forums and trade fairs improved; • Number of outreach activities conducted through e.g., the Egyptian Embassy Network and ECS to promote investment and job opportunities in Egypt.	• FDI survey results; • Studies / papers / reports; • Investment profiles, certified experts and trainers in COMFAR; • Training reports (employees' training on investment promotion and developing investment profile); • Investment forum websites and reports; • Investment profiles promoted / jobs advertised.	worked in coordination; • Limited financial survey every 3 months (GAFI), reform agenda (FEI); • Meetings with selected investors; • Limited promotion of JV proposals; • Few forums of international importance • "Egypt can" annual conference with expats.
		Output 2.2: Linkages between FDIs, large public enterprises and local SMEs facilitated.	• Subcontracting and Partnership Exchange (SPX) methodology (partly of fully) introduced according to demand in order to support FDI-SME linkages undertaken by IMC and other institutions: ○ Number of buyers and their procurement needs identified (multinational and national large companies); ○ Number of SMEs profiled; ○ Number of SMEs benchmarked;	• Database with profiled SMEs and buyers' needs; • Benchmarking reports; • Matchmaking reports; • SME upgrading reports.	• IMC and others are conducting matchmaking to some extent; • Huge potential given the presence of many investors and many large SoEs; • Public companies are required to

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
			○ Number of matchmaking events between byers and SMEs conducted,		source 20% from SMEs.
		Output 2.3: ITPO Egypt established with the purpose of supporting Egypt's integration in Africa and Arab countries	• ITPO Egypt exists.	• The office itself; • ITPO annual report.	• No such office exists.
6.3.3 Green Industry Component					
	Outcome 3: Increased productivity and reduced negative environmental impact in the Egyptian manufacturing sector		• Percentage of reduced environmental impact of industries; • Number of implemented pollutions; • Number of prevention measures in industry; • Increased percentage of materials efficiency; • Number of industrial parks participating in EIP programme; • Number of RECP companies' assessments; • Tons of CO2 and other GHG emissions prevented; • Tons of agricultural waste used for productive uses; • Number of Government and non-Government institutions supporting green enterprises and jobs; • Percentage of surveyed beneficiaries reporting improved ability to cope with economic challenges; • Tons of ODS Phased out;	• National Statistics; • Project reports.	• Green industry remains a top priority in the approach of government and business sectors to achieve mitigation of and adaptation to climate change.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
			• Number of companies converted; • Percentage of increased efficiency in materials, water and energy use in industries; • Tons of CO2 emission reduced; • Percentage of reduced water consumption; • Number of financing tools offered by banks to support SMEs/industries; • Number of renewable energy projects for industrial applications; • Percentage of increased energy efficiency in target sectors; • Tons of CO2 emission reduced.		
		Output 3.1: Green growth strategies developed for SME business models.	• Number of strategies developed.	• Technical reports of companies and sector performance.	• Existing policies have been taken into account for the preparation of the focal area in close cooperation with the government. No major changes are expected.
		Output 3.2: Industrial sector framework improved for applying energy efficiency in motors.	• Number of standard(s) developed, adapted or approved; • Number of enterprise(s) supported to receive new certifications; • Number of new policy implementer(s) trained.	• M&E project reports	• Existing policies have been taken into account for the preparation of the focal area in close cooperation with the government. No major changes are expected.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		Output 3.3: Supported ODS phasing out of Residential Air-Conditioning	• Number of units supported.	• Technical reports of company and sector performance.	• Companies will take decisions for investment based on the results of the feasibility studies and government will support implementation.
		Output 3.4: Circular Economy and Resource Efficiency promoted among SMEs.	• Circular Economy roadmap developed; • Number of actors gaining skills in Green Industry; • Number of waste management policies supported; • Number of national financing institutions raised with awareness on green finance tools.	• SMEs annual reports; • Company reports; • M & E reports.	• Companies will take decisions for investment based in the results of the feasibility studies and government will support implementation.
		Output 3.5: Renewable energy and energy efficiency promoted among SMEs.	• Number of actors gaining skills in RE/IEE; • Number of renewable energy technologies transferred; • Number of guidelines developed for investors to operate RE and sell electricity to end users.	• M & E project reports; • SMEs studies; • SMEs annual reports.	• Capacity building activities respond to needs; • Companies will take decisions for investment based in the results of the feasibility studies and government will support implementation.
		Output 3.6: Environmentally sustainable	• National capacity strengthened; • Volume of plastic waste reduction; • Volume of plastic recycled;	• Annual reports; • M & E reports;	• Capacity building activities respond to needs;

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		degradable plastics developed	• National regulation for single use plastic bags.	• National statistics.	• Existing policies have been taken into account for the preparation of the focal area in close cooperation with the government. No major changes are expected.
		Output 3.7: Innovation in the plastic value chain enhanced	• Number of supplier networks built to facilitate innovation; • Number of qualified/certified individuals in managing innovation; • A universal testing database developed; • Number of local companies supported in the transfer of know-how; • A research & design related program to promote innovation introduced; • Number of plastic recycling processes enhanced among industries; • Value of new investments leveraged.	• Annual reports; • M & E reports; • Studies.	• Capacity building activities respond to needs.
6.3.4 Smart Cities and Sustainable Industrial Parks Component					
	Outcome 4: Increased competitiveness, innovation and sustainability in Smart Cities and Sustainable Industrial Parks.		• Number of investment projects in USD (pipeline, ongoing, completed) in targeted zoning; • Increase in low-carbon infrastructure (low-carbon energy, electric mobility, GHG/waste reduction) in targeted zoning; • Job creation in a sector addressed in targeted zoning.	• National Statistics; • National reports connected to the Egypt Vision 2030; • Project reports.	• The Government of Egypt is committed to the PCP and will demonstrate its leadership and its determination to industrialization by

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
					coordinating between Ministries.
		Output 4.1: Developed policy instruments and regulatory reforms for Sustainable Industrial Parks.	• Cumulative number of new or revised policies adopted by policymakers; • Cumulative number of new standards adopted or implemented; • Number of guidelines adopted by relevant actors A roadmap and implementation plan for leveraging industrial infrastructure.	• Roadmap document; progress reports of the roadmap implementation; • M&E project reports.	• The Government needs to prepare, in collaboration with the private sector, an acceptable up-to-date legal framework for Public Private Partnerships.
		Output 4.2: Capacity of industrial parks staff developed on planning, management, design of incentive schemes and application of the eco-park model.	• Target parks identified and pilot ones selected; • Number of target parks staff trained; • International best practice provided to assist in the development of tailored sets of incentives; • Action plan to attract target industries.	• Training reports; • M&E project reports; • Action plan document.	• Capacity building activities respond to needs.
		Output 4.3: Cleantech Innovation incubator and accelerator established in Sustainable	• Sustainable Industrial Parks operate as a hub for cleantech innovation and entrepreneurship; • Number of cleantech start-ups and entrepreneurs supported.	• M&E project reports; • Annual report.	• The Government of Egypt is committed to the PCP and will demonstrate its leadership and its determination in prioritizing and

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		Industrial Parks to boost entrepreneurship and innovation.			allocating public finance for investing in soft and hard infrastructure.
		Output 4.4: The cities' competitiveness and environmental sustainability assisted by low-carbon and climate-smart technology infrastructure investments in a major economic or industrial sector.	• Number of pilot projects and pipeline of low-carbon investments in waste, energy and mobility to boost key economic sectors; • Circular business models designed and integrated to tackle environmental challenges and generate green growth.	• Project annual reports; • GEF7 Project documents (subject to donor approval).	• The Government needs to prepare, in collaboration with the private sector, an acceptable up-to-date legal framework for Public Private Partnership.
		Output 4.5: The municipality's creditworthiness is supported through the development of a climate-smart capital investment plan for low-carbon investments.	• Pipelines of at least 10 commercially viable and investment-ready projects generated for the integration of climate-smart technologies and renewable energy in urban-industrial infrastructure.	• Project annual reports; • GCF Readiness Project Document (subject to counterpart and donor approval)	• Partnerships with DFIs, DPs and Private sector for coordination and implementation of the PCP will leverage a greater outreach and higher impact.
		Output 4.6: Integrated Smart and low-carbon	• Assessment carried out in target cities to identify pilot projects; • Action plan towards pilot projects developed;	• Assessment reports; • Action plans documents;	• Private Public Partnerships are an effective approach for

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		City infrastructure, including: waste, mobility, digitization and e-government supported.	• Sustainable transport services demonstrated (using ICT systems integrated with smart solutions like parking management systems and bike sharing); • Demonstrated electric mobility charging stations based on renewable electricity for public and commercial fleets based on workable business models and electronic ticketing, monitoring of bus fleets, traffic management; • Creation of monitoring units within the related governmental sectors such as water authorities and linkages with the e-government portals; • Creation of web portals connected to different governmental sectors that facilitate generation of public services such as necessary permits, licenses, payment of bills that takes off the burden from the public sector.	• M&E project reports; • Web portals.	sharing risks and benefits between the Government and Private Sector, particularly in large industrial investment schemes where the Government brings policy, security and basic infrastructure, and the private sector brings in the investments.
		Output 4.7: Improved linkages between Sustainable Industrial Parks and urban and peri-urban areas.	• Analysis of scenarios to integrate Sustainable Industrial Parks into the larger urban-industrial infrastructure; • List of concrete opportunities (e.g. on logistics, mobility, green energy supply) and roadmap to increase the economic, social and environmental performance of Sustainable Industrial Parks.	• Scenarios' analysis documents; • Roadmap document.	• Private Public Partnerships are an effective approach for sharing risks and benefits between the Government and Private Sector, particularly in large industrial investment schemes where the Government

PCP Egypt	Intervention logic	Objectively verifiable indicators	Sources of verification	Assumptions
				brings policy, security and basic infrastructure, and the private sector brings in the investments.
6.3.5 Value Chains Component				
	Outcome 5: Improved performance and competitiveness of the selected value chains.	• Improved export performance of selected sectors (volume, earnings); • Percentage of increase of exports by SMEs in the agribusiness sector; • Number of jobs created within the selected sectors (age- and sex- disaggregated); • Number of new products replacing imports; • Number of new value-added products introduced to local and export markets; • Improved income opportunities for (processed) value chain stakeholders (age- and sex-disaggregated); • Reduced losses and waste of raw material and natural resources; • Increased investments in the processed value chain; • Increased availability of skilled labour and technicians (age- and sex-disaggregated); • Increased efficiency of the services provided by clusters and other industrial networks; • Number and types of services provided to professionals; • Improved access to raw materials, • Increased availability of skilled labour and technicians;	• National Statistics; • National reports connected to the Egypt Vision 2030; • Project reports.	• Partnerships with Private sector, DFIs, DPs and for coordination and implementation of the PCP will leverage a greater outreach and higher impact.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
			• Increased job opportunities; • Increased innovations developed by textile actors; • Number of upgraded BDS developed by support institutions; • Number of regulations and policies to support the sector approved; • Increased sales in local and international markets; • Increased job opportunities, also for vulnerable segments such as women and youth (age- and sex-disaggregated); • Number of entities adopting/introducing gender-responsive practices/services; • Number of bankable business plans prepared; • Number of women accessing financial and non-financial services; • Number of women entrepreneurs reporting access to market.		
		Output 5.1: Support to small and medium-sized agribusiness enterprises (SMEs) provided to significantly improve their competitiveness and performance.	• Number of new services provided (target 5); • Number of SMEs served disaggregated by sub-sector and geographical location (target 200 in 5 subsectors and 5 governorates); • Number of new products / processes developed (target 10 products and 5 processes); • A Centre of Excellence (for knowledge, technology, and best practises transfer) is established and operational; • Level of satisfaction of target SMEs (target: high).	• Endorsed studies; • Business plans; • Project Monitoring Reports; • Project Progress Reports.	• The private sector is investing in productive capacity along the value chains in identified priority sectors.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		Output 5.2: Supported food safety and food trade competitiveness in Egypt	• Number of "Food Safety Enhancement technical assistance interventions" directed to domestic food producers and exporters; • Food / agri-food export promotion and support services towards enhanced adoption of internationally benchmarked quality management schemes provided; • Strategy to promote the functional food and nutraceutical products within the sector developed under the Food Innovation Agenda.	• NFSA reports; • Promotion and services reports; • Food Innovation Agenda document.	• Private Public Partnerships are an effective approach for sharing risks and benefits between the Government and Private Sector, particularly in large industrial investment schemes where the Government brings policy, security and basic infrastructure, and the private sector brings in the investments.
		Output 5.3: Supported the empowerment of socio-economic performance and sustainability of selected priority agro-industrial value chains in Egypt	• Number of capacity building activities provided; • Value of assets provided; • Number of toolkits and guidelines produced; • Number of new products/processes tested and introduced in the local and export markets: • Number of upgraded BDS used by the agro-food sector; • A training and service centre is set up and operational.	• Project reports; • Trade & production statistics; • Field surveys	• Private Public Partnerships are an effective approach for sharing risks and benefits between the Government and Private Sector, particularly in large industrial investment schemes where the Government brings policy, security and basic infrastructure, and the private sector brings in the investments.
		Output 5.4:	• Number of feasibility studies realized;	• Studies;	• Private Public Partnerships are an

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		A national packaging service centre (PSC) is set up and operational.	• A centre of excellence for packaging and design is set up and operational; • Number and types of services and centre services provided to professionals; • Number of partnership frameworks initiated.	• Training modules; • Technical reports; • M & E reports.	effective approach for sharing risks and benefits between the Government and Private Sector, particularly in large industrial investment schemes where the Government brings policy, security and basic infrastructure, and the private sector brings in the investments.
		Output 5.5: Supported the competitiveness and access to markets opportunities of the handicrafts value chain.	• Number of new clusters strengthened or established; • Number of new products/processes tested and introduced in the local and export markets;	• Project reports; • Trade & production statistics; • Field surveys; • M&E project reports.	• The private sector is investing in productive capacity along the value chains in identified priority sectors.
		Output 5.6: Supported the socio-economic performance and sustainability of the leather value chains in Egypt.	• Number of capacity building activities provided; • Value of assets provided; • Number of toolkits and guidelines produced; • Number of business plans developed; • Number of new products/processes tested and introduced in the local and export markets.	• Project reports; • Trade & production statistics; • Field surveys; • M&E project reports	• The private sector is investing in productive capacity along the value chains in identified priority sectors.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		Output 5.7: Supported the competitiveness and sustainability of the textile sector in local and international markets.	• Number of new products/processes tested and introduced in the local and export markets; • Number of capacity building activities provided; • Value of assets provided.	• Project reports; • Trade & production statistics; • Field surveys; • M&E project reports.	• The private sector is investing in productive capacity along the value chains in identified priority sectors
		Output 5.8: The production of quality furniture is diversified, design and production are strengthened according to acknowledged international standards, and labour skills are developed.	• Number of toolkits and guidelines produced; • Number of business plans developed; • Number of new clusters strengthened or established; • R&D and innovation mechanisms are promoted and linkages between research/academia and the private sector created; • A common brand identity for the Egyptian furniture sector is created; • Increased availability of skilled labour and technicians.	• Project reports; • Trade & production statistics; • Field surveys; • M&E project reports.	• The private sector is investing in productive capacity along the value chains in identified priority sectors.
		Output 5.9: Women-led entrepreneurship in selected value chains is facilitated.	• Number of staff of financial institutions trained; • Number of staff of non-financial institutions (incl. Women's business associations) trained; • Number of business opportunities in selected value chains identified and promoted; • Number of women entrepreneurs trained; • Number of workshops (incl. for awareness raising) organized.	• Attendance sheets for trainings; • Workshop and training reports; • Business plans submitted; • M&E project reports.	• The GoE is committed to the economic reform and to ease doing business and to encourage and support private sector led growth.

PCP Egypt	Intervention logic	Objectively verifiable indicators	Sources of verification	Assumptions
6.3.6 Mainstreaming Industry 4.0 Component				
	Outcome 6: Government and private sector increase the integration of Industry 4.0 technologies in key industrial sectors to enhance manufacturing contribution to national economic, environmental and social development.	• Improved export performance of industrial sectors (volume, earnings) addressed by I 4.0; • Increased MVA and FDI's in industrial sectors (volume, earnings) integrated with I 4.0; • Jobs created within industrial sectors addressed by I 4.0; • Increased capacity utilization in firms adopting I 4.0; • Increased number of skilled workforce in firms adopting I 4.0; • Successful development of the innovation policy on Industry 4.0; • Successful development of Industry 4.0 Roadmap and Action Plan; • First data accessible in the National Observatory on I 4.0; • Number of new investments; • Number of technology transfer conducted; • Number of firms/SMEs supported; • Capacity building reports; • Increased employment rates in I 4.0; • Number of new standards issued; • Number of products/services complying with new standards; • Number of national quality institutes using I 4.0 technologies; • Number of products/services sold on e-commerce platforms;	• National Statistics; • National reports connected to the Egypt Vision 2030; • M & E.	• Private Public Partnerships are an effective approach for sharing risks and benefits between the Government and Private Sector, particularly in large industrial investment schemes where the Government brings policy, security and basic infrastructure, and the private sector brings in the investments.

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
			• Number consumers on e-commerce platforms.		
		Output 6.1: Support to the development of innovation and digital strategy, and established the National Observatory on Industry 4.0 provided.	• Number of industrial strategies and industrial policy documents drafted / prepared; • Number of analytical and statistical publications produced; • Number of study reports and assessments.	• National Statistics; • Project reports; • National reports connected to the Egypt Vision 2030; • M & E.	• All stakeholders are committed to provide comprehensive and up-to-date data, and coordinate with monitoring activities related to PCP Egypt.
		Output 6.2: Upgraded Egypt Technology and Innovation Centres.	• Number of capacity building activities provided; • Number of centres assisted.	• National Statistics; • Project reports; • National reports connected to the Egypt Vision 2030; • Technical and Progress Reports; • M & E reports.	• All stakeholders have the willingness to upgrade existing centres.
		Output 6.3: Established a Joint Industry 4.0 Capacity Building Centre and developed national Industry 4.0 curricula.	• Number of training courses offered; • Number of trainees capacitated in I 4.0 technologies; • Volume of Training Centre yearly revenues; • Number of training course offered for the education system; • Number of students participating in courses; • Number of graduates from courses.	• Project reports; • National reports connected to the Egypt Vision 2030; • Business Plan; • Training modules and courses, selection criteria; • Technical specifications of equipment.	• Both Siemens and GIZ have great interest to collaborate with UNIDO; • The required Industry 4.0 curricula, skills and training will evolve on the basis of

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
					technological developments.
		Output 6.4: Support integration of Industry 4.0 technologies into new and planned Smart Cities.	• Number of I 4.0 technologies incorporated into Smart Cities; • Amount of data points generated from incorporated technologies.	• National Statistics; • Project reports; • National reports connected to the Egypt Vision 2030; • Technical and Progress Reports; • Business and City Plans; • Technical specifications of equipment.	• Selected pilot cities are ready for the digital transition.
		Output 6.5: Upgraded segments of the Electronic Sector: Resource Management and E-Waste Regulations & Standards.	• Successful development of value chain analysis report and action agenda; • Number of producers trained in value chain practices; • Number of awareness sessions; • Number of electronics trade facilitation initiatives; • Amount of key resources saved; • Number of users on platform • Number of firms/SMEs supported; • Number of study reports and assessments prepared; • Number of electronic items recycled; • Number of standards and quality marks developed.	• National Statistics; • Project reports; • National reports connected to the Egypt Vision 2030 • Technical and Progress Reports; • M & E.	• The targeted industrial sector has a relative sound base and upgrading demand; • Strong support from Public & Private sectors.
		Output 6.6: Support integration of Industry 4.0	• Number of SKD kits produced; • Number of SKD electronics products sold/exported; • Number of trainees capacitated.	• National Statistics; • Project reports;	• Effective public-private dialogue and a strong involvement of the

PCP Egypt	Intervention logic		Objectively verifiable indicators	Sources of verification	Assumptions
		technologies into Semi Knock Down (SKD) Industry provided.		• National reports connected to the Egypt Vision 2030 • Technical and Progress Reports; • M & E reports.	private sector for the implementation.
		Output 6.7: The National Quality Infrastructure upgraded to the requirements of Industry 4.0 technologies.	• Number of standard-setting processes with UNIDO participation; • Number of capacity building activities provided.	• National Statistics; • Project reports; • National reports connected to the Egypt Vision 2030; • Technical and Progress Reports.	• All stakeholders have the willingness to upgrade existing centres.
		Output 6.8: Support E-commerce to promote business scope, industrial design and export capacity for key value chains & SMEs provided.	• Number of stakeholders trained in e-commerce; • Number of capacity building activities provided; • Number of toolkits and guidelines produced.	• National Statistics; • Project reports; • National reports connected to the Egypt Vision 2030; • Technical and Progress Reports.	• Effective public-private dialogue and a strong involvement of the private sector for the implementation.

7. RISK ANALYSIS OF THE INTERVENTIONS

The programme has been designed in agreement with the relevant government authorities and will be presented to the various sources of funding from the Government and/or other partners with the assistance of the Government. The full participation of the major partners in the approval of the program, as well as the technical assistance provided by UNIDO, would be able to minimize any risk inherent to the implementation of the program.

The risk analysis is based on the degree of risks' effect (high, medium, and low). It outlines first the risks likely to affect the overall programme, then presents the risks identified for respective PCP components, if deemed relevant to their implementation.

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
PCP Egypt (General)	Sufficient financial resources towards PCP application in Egypt cannot be mobilized.	Governance	High	Key IFIs, DFIs, donor agencies as well as the GOE are committed to the PCP and is taking the lead for partners and resources' mobilization.	• Highlight cross cutting themes between PCP and regular public spending to ease; Government financial contribution to the PCP; • Role of NCB in resource mobilization is active and efficient; • Identify and suggest alternatives to government financial contributions.
PCP Egypt (General)	The dialogue involving public /private sector is not in place or not probably functioning. Or the objectives of the Government and the Private Sector do not coincide.	Governance	High	Private Public Partnerships are an effective approach for sharing risks and benefits between the Government and Private Sector, particularly in large industrial investment schemes where the Government brings policy, security and basic infrastructure, and the private	• On policy development, national consultations shall be carried out with the involvement of different stakeholders; • Public Private Platforms that foster dialogue and partnerships shall be created and supported.

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
				sector brings in the investments.	
PCP Egypt (General)	The business climate in Egypt is not favorable for promoting domestic and foreign investment, slowing down or hindering further investment in manufacturing plants.	Governance	Medium	The GoE is committed to the economic reform and to ease doing business and to encourage and support private sector led growth.	• Continuous stakeholders' consultation, the Government must know what private investors perceive as obstacles slowing them from investing; • Involve relevant ministries and address identified bottlenecks on central and regional level; • Involve relevant ministries and prepare and publish an improved investment incentive package.
PCP Egypt (General)	Inter-ministerial cooperation is weak and harming /delaying PCP progress.	Governance	High	The GoE is committed to the PCP and will demonstrate its leadership and its determination to industrialization by coordinating between Ministries.	• Effective inter-ministerial coordination through the joint task force for close monitoring and quick trouble-shooting; • Ensuring Country leadership to the PCP application in Egypt; • Advocate "buy in" of different authorities to the PCP Egypt.
PCP Egypt (General)	Public investments in hard industrial infrastructure is delayed / not happening, effectively	Governance	Medium	The GoE is committed to the economic reform and to ease doing business and to	• Continuous stakeholders' consultation, the Government must know what private

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
	hindering all private investment.			encourage and support private sector led growth.	investors understand as obstacles slowing them from investing further in Egypt or to even retreat from Egypt. • Involve relevant ministries and address identified bottlenecks on federal and regional level; • Involve relevant ministries and the private sector, and prepare and publish an improved investment incentive package.
PCP Egypt (General)	Multinational companies perceive investments in Egypt as too risky / not feasible.	International Environment	Medium	The private sector is investing in productive capacity along the value chains in identified priority sectors.	• The entire PCP must be well promoted to relevant enterprises, including feasibility studies, field visits to industrial sites, incentive packages and demonstrating a strong Government leadership to instill confidence.
PCP Egypt (General)	Partners have a difficulty in participating in the PCP in result to overlap with their strategic commitments with GoE or due to their internal rules / regulations.	Impact and Sustainability	High	Partnerships with DFIs, DPs and Private sector for coordination and implementation of the PCP will leverage a greater outreach and higher impact.	• Assess policy framework of Egypt and propose modifications to allow for greater participation in the PCP on an exceptional / experimental basis • Propose alternative cooperation/alignment methods to the partners

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
					coping with ongoing strategic commitment with country • If partners cannot easily work with UNIDO due to a mismatch of rules/regulations, UNIDO will assess the gaps of its internal rules / regulations and align to those of the partners if possible.
PCP Egypt (General)	Limited availability and accuracy of data.	Governance	Medium	National Stakeholders are willing and committed to share and avail all relevant data for PCP M&E.	• NCB will facilitate data provision; • Establishing National Industrial Observatory.
PCP Egypt (Policy) Enhanced governance and coordination	Stakeholders are not cooperative or are not interested in participating in dialogue with other ministries or private/public sector.	Impact and Sustainability	Medium	All relevant stakeholders have an interest in seeing less fragmentation and more collaboration and better coordination.	• Sensitization meetings with stakeholders; • Close follow up; • UNIDO acting as an intermediary.
PCP Egypt (Policy) Establishment of an Decision Support and Coordination Unit	Ministry of Trade and Industry (and other ministries) are unwilling to release staff to work in the Decision Support and Coordination Unit.	Impact and Sustainability	Medium	Ministries see value in the work of the Decision Support and Coordination Unit, a data repository and policy expertise.	• Sensitization meetings with stakeholders; • Regular demonstration of the usefulness of the activities of the Decision Support and Coordination Unit.
PCP Egypt (Policy) Monitoring and Evaluation (M&E)	Stakeholders are reluctant to have their activities monitored and evaluated;	Governance	Low	Stakeholders are committed to the transformational industrial strategy and its implications in terms of	• Government regularly explains to stakeholders the importance of honoring the public-private sector

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
System	Availability and accuracy of data.			accountability and discipline.	"contract" (government support but only against performance and accountability; • UNIDO helps to explain the industrial strategy and its conditions to stakeholders.
PCP Egypt (Policy) Capacity development	Government releases staff to policy training.	Impact and Sustainability	Medium	Government understands and appreciate the importance of training policymakers; Government also understands the link between policy expertise and probability of success of industrial strategy and policy.	• UNIDO helps to explain to Government the importance of enhancing the knowledge and expertise of policymakers.
PCP Egypt (Policy) Support to the development of an industrial Strategy	Lack of understanding as to the content and workings of the Strategy.	Impact and Sustainability	Low	Government is able to explain the Strategy to all stakeholders to gain full buy-in.	• UNIDO assist Government in explaining the Strategy; • Having coordination platform hosted by Cabinet to ensure representation of all stakeholders including private sector.
PCP Egypt (Policy) Support to the development of an Industrial Policy	Policies are not well received by stakeholders.	Impact and Sustainability	Medium	Government is able to explain the Policy to all stakeholders to gain full buy-in.	• UNIDO assist Government in explaining the Policy.

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
PCP Egypt (Green Industry)	Government priorities: they may change with regard to national investments for industry development as well as policy implementation.	Impact and Sustainability	Low	Since existing policies have been taken in to account for the preparation of the component in close cooperation with the government. No major changes are expected.	• Strong cooperation and involvement of government focal points is encouraged.
PCP Egypt (Green Industry)	Beneficiaries have difficulties absorbing capacity building activities.	Impact and Sustainability	Low	Capacity building activities respond to needs.	• Develop approaches and methodologies adapted to each beneficiary, allowing fast integration within projects.
PCP Egypt (Green Industry)	Availability and accessibility of financial sources for necessary investment during the implementation stage could limit the implementation of identified measures to support EIP development.	Impact and Sustainability	Medium	Companies will take decisions for investment based in the results of the feasibility studies and government will support implementation.	• The investment proposal will include an economic feasibility study; • Close cooperation with the government and financial institutions will enable access to existing financial mechanism.
PCP Egypt (Mainstreaming Industry 4.0) Boosting Innovation	Data collection/dissemination challenges: Comprehensive and up-to-date information is lacking, which will decrease the accuracy of the assessment via the National System of Innovation.	Impact and Sustainability	High	All stakeholders are committed to provide comprehensive and up-to-date data, and coordinate with monitoring activities related to PCP Egypt.	• Sound planning at the organizational level in place with strong inclusion of stakeholders from the outset; • Constant monitoring of activities.
PCP Egypt (Mainstreaming Industry 4.0)	Upgrade existing Technology and Innovation Centres:	Governance	Medium		• Close collaboration with partners like industry associations, platforms,

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
Boosting Innovation	• Lack of needed resources, e.g. financial resource, capabilities, etc.; • Demands from the market are insufficient; • Inefficient operational functioning.			All stakeholders have the willingness to upgrade existing centres.	financial institutions, etc.; • Utilize media channels to make the accelerator more visible; • Share best practices from in other countries.
PCP Egypt (Mainstreaming Industry 4.0) Industry 4.0 Awareness Raising & Capacity Building	Siemens-GIZ-UNIDO cooperation: weak willingness from Siemens & GIZ in terms of cooperation.	Impact and Sustainability	Low	Both Siemens and GIZ have great interest to collaborate with UNIDO.	• Identify UNIDO's role and value addition; • Establish a win-win collaboration mechanism.
PCP Egypt (Mainstreaming Industry 4.0) Industry 4.0 Awareness Raising & Capacity Building	Impact on markets regarding Curricula: Competition bias - In the case of external funding, co-funding could amount to subsidization of private sector companies' skills development needs; the curriculum is influenced by private sector partners and will directly and indirectly benefit these private firms, which otherwise would have to train new recruits within the firm.	Impact and Sustainability	Medium	The required Industry 4.0 curricula, skills and training will evolve on the basis of technological developments.	• Training is not unique to the private partner or other firms and transferable across many parts of the industry and services sector; • After training students may take up employment where they choose to, including for other, competing firms or set up their own businesses. The program can be accompanied by employment services or business training to facilitate such search; • Broader partnerships with more firms around these schools lower the risk of firm-specific advantages.

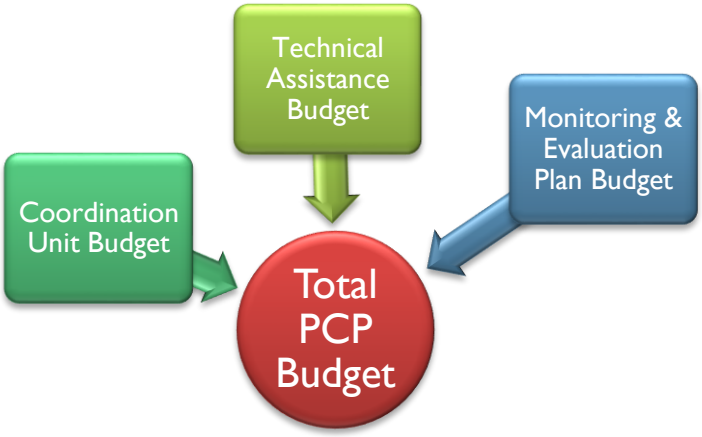
Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
PCP Egypt (Mainstreaming Industry 4.0) Industry 4.0 Awareness Raising & Capacity Building	Training: • Overlapping of training and TVET provisions and responsibilities. • Curricula do not match the market demand.	Impact and Sustainability	Low	Sufficient and effective investigation in advance.	• Establish common qualification standards; • Assessment of skills needs in advance; • Closely coordinate with related government sectors.
PCP Egypt (Mainstreaming Industry 4.0) Industry 4.0 Awareness Raising & Capacity Building	Smart City: • Lack of consumer/market trust towards the application of emerging technologies; • Infrastructure is poor and target industrial sectors are lack of readiness to adopt new technology; • Cybersecurity issues.	Beneficiaries	High	Selected pilot cities are ready for the digital transition.	• Awareness-raising activities related to safety and security; • Take appropriate regulations; • Strengthen cooperation with private sector to improve needed infrastructure, e.g. Telecom enterprises; • Ensure personnel have competencies in cybersecurity training and mitigation; • Exploit relevant laws and regulations to prevent online information leakage.
PCP Egypt (Mainstreaming Industry 4.0) Upgrading of Priority Industry Sectors	Advanced technology integration into core sectors: • Fear of losing jobs • Private sectors lack of willingness to adopt new technologies, particularly SMEs. • Challenges caused by new production model on existing management structure. • Lack of support from upstream and downstream sectors, e.g.	Beneficiaries	High	• The targeted industrial sector has a relative sound base and upgrading demand. • Strong support from Public & Private sectors.	• Awareness-raising activities; • Support policy to ensure that people won't lose their income, on the contrary, with the improved working environment, the benefits will increase; • Make available establishments to share and reduce costs for SMEs; • Establish Incubator/ Accelerator for selected

Assumptions & Risks					
Programme element	**Risk Description**	**Risk Type**	**Risk Level**	**Assumptions**	**Mitigation Measures**
	lack of access to a broad market to absorb additional productivity.				clusters. • Include innovation management in term of training curriculum; • Strongly connect with upstream and downstream sectors.
PCP Egypt (Mainstreaming Industry 4.0) Servitization of Manufacturing Sector	**Quality Infrastructure:** • Human resources limitation in certain institutions, limited availability of counterpart staff in the institutions • Lack of engagement of regional and national stakeholders • Duplication of activities with other implementing agencies	Project Management	Medium	Effective public-private dialogue and a strong involvement of the private sector for the implementation.	• Involve all stakeholders and beneficiaries during design of activities (participatory approach); • Coordinate intervention with the other implementing agencies; • Project will work closely with stakeholders and provide on the job training; focus will be mostly on the competence and technical capacity building.

8. INDICATIVE PCP BUDGET

This chapter outlines the indicative total budget to implement PCP Egypt 2020-2024 and achieve the expected results. It includes also indicative budgets for the PCP Coordination Unit and the budget of the Monitoring and Evaluation Plan.

Main PCP Budget Components



(1) The *PCP Total budget* includes all estimated figures for the detailed planning and implementation of PCP Technical Cooperation of components' interventions, Coordination and Evaluation and Monitoring. The estimated figures for technical cooperation will be detailed during the formulation phase of each component, and related projects.

(2) The *PCP Coordination Unit budget* includes coverage of a national PCP team coordinator, administrative assistant as well as national and international experts. It will include Partnerships and related support services for fund raising, Communication and Advocacy, as well as it thrives to foster synergy between PCP components and ensure Women and Youth Mainstreaming. This role also applies to (i) Egypt inward and outward missions to facilitate coordination between field and UNIDO HQs, (ii) the support to the National Coordination Body and the resource mobilization activities, (iii) implementation, national and international PCP communication and promotion and finally, (iv) to the monitoring and evaluation.

(3) The *Monitoring and Evaluation (M&E) Plan budget* includes all estimated figures to organize, plan and implement required M&E activities to ensure a smooth and successful implementation of PCP Egypt. It will entail kick-off meetings for the design of M&E Plan. Tools to collect and record data, namely (i) performance indicators, (ii) regular monitoring and analysis of these indicators, (iii) preparation of inception report, (iv) detailed action and work plans as well as (v) annual project reviews to assess project progress and performance, (vi) National Coordination Body meetings to endorse M&E reporting, (vii) visits to field sites and finally, (viii) Mid-Term Review and Terminal Project Evaluation.

Upon formulation of fully-fledged project documents related to the development of each PCP component, detailed budgets will be prepared and utilized currency adapted to the requirements of respective project donors.

8.1 The total PCP budget by budget line[71]

BL	Description	2020	2021	2022	2023	2024	Total (EUR)
11	International experts	5,608,256	5,926,489	5,216,084	4,567,193	4,357,000	25,675,022
15	Travel of national and international experts	1,092,737	1,343,689	1,245,598	1,119,265	1,078,630	5,879,919
16	UNIDO staff missions	482,470	536,466	485,646	439,378	432,280	2,376,240
17	Local experts and administrative staff	4,351,788	4,889,844	4,708,940	4,294,765	4,188,130	22,433,467
21	Subcontracts	3,542,414	7,238,767	7,613,699	7,006,740	6,027,300	31,428,920
30	In-service training, conferences, workshops	4,514,956	4,853,774	4,354,037	4,264,155	3,998,575	21,985,497
35	International Meetings	1,218,000	1,706,080	1,734,080	1,698,060	1,501,705	7,857,925
43	Premises	318,300	480,300	478,800	428,800	425,800	2,132,000
45	Equipment	2,671,900	6,587,050	6,025,830	5,342,550	5,068,280	25,695,610
51	Miscellaneous	1,476,090	969,600	822,350	720,800	681,850	4,670,690
99	**Total**	**25,276,911**	**34,532,059**	**32,685,064**	**29,881,706**	**27,759,550**	**150,135,290**
Grand total with support costs (13%)		**28,562,909**	**39,021,227**	**36,934,122**	**33,766,328**	**31,368,292**	**169,652,878**

[71] It is an indicative budget to be detailed upon formulation of individual PCP components.

8.2 Total budget for the PCP Coordination Unit[72]

BL	Description	2020	2021	2022	2023	2024	Total (EUR)
11	International experts	75,000	75,000	75,000	60,000	60,000	345,000
15	Travel of national and international experts	30,000	30,000	30,000	30,000	30,000	150,000
16	UNIDO staff missions	10,000	10,000	10,000	10,000	10,000	50,000
17	Local experts and administrative staff	90,000	90,000	90,000	90,000	90,000	450,000
21	Subcontracts	0	0	0	0	0	0
30	In-service training, conferences, workshops	10,000	10,000	10,000	10,000	10,000	50,000
35	International Meetings	0	0	0	0	0	0
43	Premises	12,000	12,000	12,000	12,000	12,000	60,000
45	Equipment	9,000	9,000	9,000	9,000	9,000	45,000
51	Miscellaneous	10,000	10,000	10,000	10,000	10,000	50,000
99	**Total**	**246,000**	**246,000**	**246,000**	**231,000**	**231,000**	**1,200,000**
Grand total with support costs (13%)		**277,980**	**277,980**	**277,980**	**261,030**	**261,030**	**1,356,000**

[72] It is an indicative budget to be detailed upon formulation of individual PCP components.

8.3 Total budget for Monitoring and Evaluation[73]

BL	Description	2020	2021	2022	2023	2024	Total (EUR)
11	International experts	15,000	15,000	30,000	15,000	100,000	175,000
15	Travel of national and international experts	10,000	10,000	10,000	10,000	40,000	80,000
16	UNIDO staff missions	10,000	5,000	10,000	10,000	20,000	55,000
17	Local experts and administrative staff	10,000	15,000	20,000	10,000	70,000	125,000
21	Subcontracts	0	0	0	0	0	0
30	In-service training, conferences, workshops	0	0	0	0	0	0
35	International Meetings	0	0	0	0	0	0
43	Premises	0	0	0	0	0	0
45	Equipment	0	0	0	0	0	0
51	Miscellaneous	5,000	5,000	10,000	5,000	10,000	35,000
99	**Total**	**50,000**	**50,000**	**80,000**	**50,000**	**240,000**	**470,000**
Grand total with support costs (13%)		**56,500**	**56,500**	**90,400**	**56,500**	**271,200**	**531,100**

[73] It is an indicative budget to be detailed upon formulation of individual PCP components.

9. PROGRAMME MONITORING AND EVALUATION

The Programme for Country Partnership (PCP) Egypt and all its components will be subject to monitoring and evaluation in line with prevailing UNIDO policies and procedures, in conformity with latest Director General's Administrative Instructions (DGB/2018/08), and UNEG/DAC norms and standards.

The Monitoring and Evaluation (M&E) strategy will include projects monitoring, field visits, regular provision of reports and data collection on an annual basis. Annual progress reports will be prepared on the status of outputs and resource mobilization and utilization. The focus will be on the achievement of indicators indicated in the Results Framework of the different components.

UNIDO will work closely with the PCP National Coordination Body to develop a monitoring and evaluation strategy for all PCP Egypt programmes and projects.

A Mid-Term Independent Evaluation will be carried out during the third year of the PCP, in collaboration with the Ministry of Trade and Industry, as well as with other PCP national stakeholders.

This review will evaluate the planning of the PCP and its achievements in terms of expected outputs. The results of the review will allow for appropriate strategic, programmatic and operational adjustments.

M & E will be designed also to report on the expected gender and youth equality results. Upon further formulation of individual project documents for PCP components, respective logframes will include, as deemed appropriate, sex and age disaggregated performance indicators and targets. UNIDO PCP Coordination will ensure that women and youth benefit equitably from PCP components' results; overlook that specific activities are incorporated to address gender and youth gaps, and meet their specific needs and priorities in Egypt. The resulting gender specific and/or sex and age disaggregated indicators, including impact indicators, will be used to monitor and evaluate progress and results.

At the end of PCP programme implementation, an in-depth independent evaluation will be carried out in collaboration with the United Nation Evaluation Group (UNEG), UNIDO Arab Regional Division, UNIDO Regional Hub in Egypt, and national PCP stakeholders. The evaluation will examine the outcomes, assess and document the overall impact of UNIDO interventions against planned outputs, will outline the lessons learnt, and define the scope of the action and make recommendations on the way forward.

Preliminary M&E Plan for the Programme for Country Partnership (PCP) Egypt

	Type of M&E activity	Responsible Parties	Time frame
Implementation phase	Organize an inception workshop to agree and endorse a detailed M&E plan	NCB	3rd quarter of 2020
	Design of the M&E plan with performance indicators and tools to collect and record data from all program components	Project Managers, PMs, of other UNIDO components, focal points of the national counterpart	3rd quarter of 2020
	Reports on the progress of the programme's components	PMs of UNIDO's components	Every 6 months

	Annual Programme Review Meeting to assess programme progress, performance, and development of annual programme work plans endorsed by the NCB.	NCB with inputs from UNIDO PMs to review program performance and recommend corrective actions	Every 12 months
	PCP Mid-Term Independent Evaluation	NCB, PMs, external consultants, and other relevant counterparts, as required	Mid of PCP implementation
Completion phase	Final programme report	NCB, PMs, Independent external consultants	Drafting to start at least one month before the end of the Programme; final report to be available at the end of PCP implementation
	PCP Independent end-of-programme evaluation	NCB, PMs, external evaluators and other relevant counterparts, as required	End of PCP Egypt

10. LEGAL CONTEXT

The Government of the Arab Republic of Egypt agrees to apply to the present Programme for Country Partnership (PCP) Egypt 2020-2024, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 19 January 1987 and entered into force on 2 July 1987.

Programme for
Country Partnership
Egypt

Programme for Country Partnership between UNIDO and the Arab Republic of Egypt

ANNEXES

2020 -2024

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Annex 1: Letter of PCP Request from the Government of Egypt

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2018/8/30 13769 :مـ
صادر مكتب الوزير مرفقات :0

Arab Republic of Egypt
Ministry of Trade and Industry
The Minister

Cairo, August , 2018

Mr. Li Young,
Director General,
United Nations Industrial Development Organization,
Vienna, Austria.

Dear Mr. Li Young,

It gives me a great pleasure to write you to acknowledge the valuable contribution of the technical cooperation services provided by the United Nation Industrial Development Organization (UNIDO) to promote and advance Inclusive and Sustainable Industrial Development (ISID) and support countries in achieving the Sustainable Development Goals in particular SDG9.

Hence the success of the Programme for Country Partnership (PCP) in pilot countries is well noted, the Government of Egypt requests UNIDO's assistance in developing and implementing a Programme for Country Partnership (PCP) in Egypt.

Allow me to highlight that PCP fits with Egypt's vision 2030 in achieving poverty reduction, high growth rates and better lives for the people. Such alignment will underpin and drive the partnering endeavor forward to translate global goals into steps that could be taken at the national level, and ensure an integrated approach.

In light of the above, The Ministry of Trade and Industry of Egypt has prepared a five-year strategy based on a clear vision focusing on industrial development to be the engine of sustainable and inclusive economic development in Egypt, which meets domestic demand and enhances exports growth. The industrial sector has been put at the forefront of government plans for economic growth that involves new industrial zones, substantive training programmes and development plans along the Suez Canal corridor, all have been committed to paper as part of strategy to boost the manufacturing sector's contribution to economic output over the next decade.

Arab Republic of Egypt
Ministry of Trade and Industry
The Minister

The Ministry's strategy focuses on five key pillars, which will be addressed in parallel to achieving the industrial growth rates to meet the expected domestic and global demand, taking into account the inclusiveness of the economic, social, environmental, and technological development. Those pillars are:

- ***Industrial Development.***
- ***Micro, Small & Medium Enterprises & Entrepreneurship Development.***
- ***Exports Development.***
- ***Development of Technical & Vocational Education & Training.***
- ***Governance & Institutional Development.***

These pillars include comprehensive initiatives that aim at creating appropriate business climate to strengthen the national economy in the following priority sectors:

- ***Automotive feeding Industries.***
- ***Engineering Industries.***
- ***Textile and Clothing Industries.***
- ***Chemicals Industries.***
- ***Building Materials Industries.***
- ***Handicrafts and Creative Industries.***

As Egypt moves forward with these reform programs, we would like to emphasize Egypt's dedication and commitment to work with all the concerned parties, whether they are relevant governmental bodies, or business community, private sector, civil society, or any development partners to ensure integration, flexibility, and consistency with Egypt's Vision 2030 and the international global economic and social standards.

Please accept my highest consideration and best regards.

Sincerely,

Eng. Amr Nassar
Minister of Trade and Industry,

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Programme for Country Partnership Egypt

Annex 2: Synoptic view of potential partners of PCP Egypt: An indicative list

(Government, Funding Partners, Financial Institutions)

	PCP EGYPT	MAIN COMPONENTS																		
		Industrial Policy and Governance			Investment Promotion			Green Industry			Smart Cities and Sustainable Industrial Parks			Value Chains			Mainstreaming Industry 4.0		
								Chemicals & Plastic						Food	Textile & Leather	Furniture	Electronics		
Government	Administrative Control Authority	Admin Contr. Auth	Admin Contr. Auth	Admin Contr. Auth	Admin Contr. Auth	Admin Contr. Auth	Admin Contr. Auth												
	Egyptian Environmental Affairs Agency (EEAA)	EEAA	EEAA	EEAA				EEAA	EEAA	EEAA	EEAA	EEAA	EEAA						
	General Authority for Investment (GAFI)				GAFI	GAFI	GAFI				GAFI	GAFI	GAFI						
	General Authority for Urban Planning (GOP)										GOP	GOP	GOP	GOP	GOP	GOP			
	Industrial Development Authority (IDA)	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA
	Industrial Modernization Center (IMC)	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC	IMC
	Information Technology Industry Development Agency (ITIDA)																ITIDA	ITIDA	ITIDA
	Micro, Small and Medium Enterprises Development Agency (MSMEDA)							MSMEDA			MSMEDA	MSMEDA	MSMEDA	MSMEDA	MSMEDA	MSMEDA	MSMEDA		
	Ministry of Education & Technical Education (METE)							METE						METE	METE	METE	METE		
	Ministry of Electricity and Renewable Energy (MERE)										MERE	MERE	MERE				MERE		
	Ministry of Environment (MoE)	MoE	MoE	MoE				MoE	MoE	MoE	MoE	MoE	MoE						
	Ministry of Finance (MoF)	MoF	MoF	MoF															
	Ministry of Higher Education & Scientific Research																MoEdu	MoEdu	MoEdu
	Ministry of Housing and Urban Communities				Min of Housing	Min of Housing	Min of Housing				Min of Housing	Min of Housing	Min of Housing						
	Ministry of International Cooperation (MIC)	MIC	MIC	MIC															
	Ministry of Local Development	MoLocDev	MoLocDev	MoLocDev				MoLocDev						MoLocDev	MoLocDev	MoLocDev	MoLocDev		
	Ministry of Planning and Economic Development (MPED)	MPED	MPED	MPED							MPED	MPED	MPED						
	Ministry of Trade and Industry (MTI)	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI	MTI
	Ministry of Transport (MoT)										MoT	MoT	MoT						
	New & Renewable Energy Authority (NREA)										NREA	NREA	NREA						
	New Urban Communities Authority (NUCA)				NUCA	NUCA	NUCA				NUCA	NUCA	NUCA						
Funding Partners	Canada							Canada						Canada	Canada	Canada	Canada		
	China							China	China	China				China	China	China	China	China	China
	European Union (EU)							EU	EU	EU				EU	EU	EU	EU	EU	EU
	Germany (to be clarified)																		
	Global Environment Facility (GEF)							GEF	GEF	GEF	GEF	GEF	GEF				GEF	GEF	GEF
	Green Climate Fund (GCF)										GCF	GCF	GCF						
	International Fund for Agricultural Development (IFAD)													IFAD	IFAD				
	Italy													Italy	Italy	Italy			
	Japan							Japan	Japan	Japan	Japan	Japan	Japan						
	Slovenia													Slovenia					
	Sweden													Sweden					
	Switzerland							SECO and SDC	SECO and SDC	SECO and SDC	SECO and SDC	SECO and SDC	SECO and SDC	SECO and SDC	SECO and SDC	SECO and SDC			
	The Netherlands														The Netherlands				
	UN Capital Development Fund (UNCDF)				UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF	UNCDF		
	USAID	USAID	USAID	USAID	USAID	USAID	USAID	USAID						USAID	USAID	USAID	USAID		
Financial Institutions	African Development Bank (AfDB)	AfDB	AfDB	AfDB	AfDB	AfDB	AfDB	AfDB			AfDB	AfDB	AfDB	AfDB	AfDB	AfDB	AfDB		
	African Export-Import Bank (AFREXIMBANK)	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK			AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK	AFREXIMBANK		
	European Bank for Reconstruction and Building (EBRD)				EBRD	EBRD	EBRD	EBRD			EBRD	EBRD	EBRD	EBRD	EBRD	EBRD	EBRD		
	European Investment Bank (EIB)				EIB	EIB	EIB	EIB	EIB	EIB	EIB	EIB	EIB						
	Export Development Bank (EDB)							EDB						EDB	EDB	EDB	EDB		
	Export-Import Bank of China (to be confirmed)																		
	Export-Import Bank of Korea				EXIM Korea	EXIM Korea	EXIM Korea	EXIM Korea			EXIM Korea	EXIM Korea	EXIM Korea	EXIM Korea	EXIM Korea	EXIM Korea	EXIM Korea		
	French Development Agency (AFD)							AFD	AFD	AFD									
	Inter-American Development Bank (IDB)										IDB	IDB	IDB						
	International Finance Corporation (IFC)	IFC	IFC	IFC	IFC	IFC	IFC	IFC	IFC	IFC									
	International Islamic Trade Finance Corporation (ITFC)				ITFC	ITFC	ITFC				ITFC	ITFC	ITFC		ITFC		ITFC	ITFC	ITFC
	Islamic Development Bank (IsDB)				IsDB	IsDB	IsDB				IsDB	IsDB	IsDB						
	KfW Development Bank																		
	World Bank Group (WBG)	WBG	WBG	WBG	WBG	WBG	WBG				WBG	WBG	WBG						

Annex 2: Synoptic view of potential partners of PCP Egypt

(Business Partners, Development Partners)

PCP EGYPT		MAIN COMPONENTS																	
		Industrial Policy and Governance			Investment Promotion			Green Industry			Smart Cities and Sustainable Industrial Parks			Value Chains			Mainstreaming Industry 4.0		
								Chemicals & Plastic						Food	Textile & Leather	Furniture	Electronics		
Business Partners	Alexandria Businessmen Association (ABA)	ABA	ABA	ABA				ABA			ABA	ABA	ABA	ABA	ABA	ABA	ABA	ABA	ABA
	American Chamber of Commerce in Egypt							US Chamber						US Chamber	US Chamber	US Chamber	US Chamber		
	BASF Egypt							BASF	BASF	BASF	BASF	BASF	BASF	BASF		BASF			
	Benetton Group								Benetton	Benetton					Benetton				
	Chamber of Chemical Industries (CCI)							CCI											
	Chamber of Engineering Industries																Chamber Eng. Ind	Chamber Eng. Ind	Chamber Eng. Ind
	Chamber of Food Industries (CFI)													CFI					
	Chamber of Information Technology & Communications																Chamber ITC	Chamber ITC	Chamber ITC
	Chamber of Leather Industry														Leather Chamber				
	Egyptian Business Women Association (EBWA/BWE21)																		
	Egyptian Businessmen Association (EBA)							EBA						EBA	EBA	EBA	EBA		
	Egyptian Junior Businessmen Association (EJB)	EJB	EJB	EJB				EJB			EJB	EJB	EJB	EJB	EJB	EJB	EJB		
	Etisalat Misr										Etisalat	Etisalat	Etisalat				Etisalat	Etisalat	Etisalat
	Export Development Bank of Egypt				Ex Dev Bank	Ex Dev Bank	Ex Dev Bank												
	Federation of Egyptian Chambers of Commerce (FECC)	FECC	FECC	FECC															
	Federation of Egyptian Industries (FEI)	FEI	FEI	FEI				FEI			FEI	FEI	FEI	FEI	FEI	FEI	FEI		
	Filmar S.p.A														Filmar				
	German Arab Chamber of Industry & Commerce							German-Arab			German-Arab	German-Arab	German-Arab	German-Arab	German-Arab	German-Arab	German-Arab		
	Giza Systems										Giza Systems	Giza Systems	Giza Systems				Giza Systems	Giza Systems	Giza Systems
	Huawei										Huawei	Huawei	Huawei				Huawei	Huawei	Huawei
	Inditex							Inditex							Inditex				
	Industrial Development Group (IDG)										IDG	IDG	IDG						
	John Lewis Foundation														John Lewis				
	Lenzing Aktiengesellschaft							Lenzing							Lenzing				
	National Bank of Egypt				Nat Bank Egypt	Nat Bank Egypt	Nat Bank Egypt												
	Siemens Egypt										Siemens	Siemens	Siemens				Siemens	Siemens	Siemens
	ZDHC Foundation							ZDHC							ZDHC				
Development Partners	Center For Environment & Development For The Arab Region & Europe (CEDARE)										CEDARE	CEDARE	CEDARE						
	Food and Agriculture Organization (FAO)													FAO					
	International Labour Organization (ILO)							ILO						ILO	ILO	ILO	ILO		
	Regional Center for Renewable Energy and Energy Efficiency (RCREEE)							RCREEE	RCREEE	RCREEE	RCREE	RCREE	RCREE						
	United Nations Development Programme (UNDP)				UNDP	UNDP	UNDP		UNDP	UNDP	UNDP	UNDP	UNDP						
	United Nations Entity for Gender Equality and the Empowerment of Women (UN Women)							UN Women						UN Women	UN Women	UN Women	UN Women		
	United Nations Environment Programme (UNEP)							UNEP	UNEP	UNEP	UNEP	UNEP	UNEP						
	United Nations Human Settlements Programme (UN-Habitat)										UN-Habitat	UN-Habitat	UN-Habitat						
	United Nations Resident Coordination Office (RCO)	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO	RCO
	United Nations Technology Innovation Labs UNTIL (UNOPS)										UNTIL	UNTIL	UNTIL				UNTIL	UNTIL	UNTIL
	World Food Programme (WFP)													WFP					