

**KINGDOM OF CAMBODIA
NATION RELIGION KING**

ROYAL GOVERNMENT OF CAMBODIA

**Industrial Transformation Map for Textile and Apparel Industry
2023-2027**

(Unofficial Translation)

Phnom Penh, March 2023



PREFECE

Under the umbrella of peace, territorial integrity, unity, and political stability, the Royal Government of Cambodia (RGC) has led the country and implemented key national policies including **“Win-Win” policy, Triangle Strategy, Rectangular Strategy, National Strategic Development Plan, sectoral development strategies, and other reform programs**, which have enabled Cambodia to achieve continuous development for the nation and the people at all levels in the past three decades. These foundations are the indispensable prerequisites which has allowed Cambodia to transform its image on the international community and to achieve high economic growth at an average of 7.7% annually that has significantly contributed to poverty reduction, job creation and private sector development. Indeed, the RGC's ability to manage these development and achievements has been the catalyst in enabling Cambodia to become a lower middle-income country, and to be recognized and considered by the World Bank to be one of the eight **“Olympians of Growth”** in 2015.

Textile and apparel (T&A) industry has been one of the Cambodia's priority sectors and has contributed significant to Cambodia's socio-economic development. Since 1990s, this sector has been continuously transformed into a growth pillar based on the political stability and peace, competitive wage and production cost, preferential trade access and favorable investment environment, all of which have been the industry's competitive advantage. Overall, this industry has played a key role in Cambodia's export and supported people's livelihood of at least 2.5 to 3 million people who have benefitted from this industry. For this reason, the RGC, under the wise leadership of **Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia**, has paid special attention to this area in order to improve the working environment and living standards of workers and employees and the development of the sector as a whole.

The RGC has been aware that even though the progress in this industry is evident and remarkable, the structure of this industry has not significantly transformed in the last three decades, and it is still a low value-added manufacturing hub. The integration of supporting industries into other stages of supply chains and value chains is still limited, and the government's efforts have not been sufficiently consolidated, which requires the consideration of the overall development direction of this sector.

In this regard, in order to solve both internal and external challenges that are structural in this industry, the RGC has decided to launch the **“Industrial Transformation Map for Textile and Apparel Industry 2023-2027 or T&A ITM”** in order to transform textile and apparel (T&A) industry into to build a competitive T&A industry with increased focus on value addition, sustainability, technology adoption, skills and entrepreneurship through the introduction of sharp and specific measures to support the implementation of **“Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027”** which the RGC introduced on March 21, 2022. To achieved the aboved-stated objective, this ITM set out four levers including 1. Product mix and international trade, 2. Skilling and productivity, 3. Technology and sustainability and 4. Infrastructure and governance. This ITM was designed in alignment with Cambodia's development context and changes in global and regional economic architecture. In the process of formulating this map, the RGC, under both technical and financial support of the Asian Development Bank (ADB), has reviewed and analyzed relevant documents, learned from national and international experiences, visited factories, and consulted with relevant stakeholders in the public sector, research thinktank, training providers and institutions, development partners, national and international associations as well as those in the private sector including investors, buyers, brands, and

factory managers. Though the vision is set for 2027, this ITM is a living document and operational that may be revised following Cambodia's evolving development context to ensure consistency and pragmatism in implementation.

The implementation of T&A ITM will contribute to addressing structural challenges in this industry and enable Cambodia to be ready to seize opportunities to promote sustainable and inclusive development of this industry as well as the economic growth and socio-economic development. Furthermore, achieving the this ITM's objective will be complementary and in line with the implementation of other key national policies and strategies including: 1. Rectangular Strategy - Phase IV, 2. National Strategic Development Plan 2019-2023, 3. Cambodia Industrial Development Policy 2015-2025, 4. National Employment Policy 2015-2025, 5. National Technical Vocational Education and Training Policy 2017-2025, 6. Cambodia Trade Integration Strategy 2019-2023, 7. Strategic Framework and Programs for Economic Recovery in the Context of Living with the Covid-19 in a New Normal 2021-2023, and 8. Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027.

Taking this opportunity, I would like to express my profound appreciation to **the General Secretariat of the Committee on Economic and Financial Policy** for leading and coordinating with all relevant government ministries and institutions to formulate the T&A ITM with active and thorough consultation with relevant stakeholders in both public and private sectors. I would like to also extend my gratitude to the Asian Development Bank (ADB) for the close and proactive cooperation and the provision of both technical and financial support to the RGC in developing and implementing this ITM.

Finally, with the official approval of this ITM, **the Committee on Economic and Financial Policy** will be in charge of leading the implementation across line ministries and institutions and carry out the monitoring and evaluation of the implementation of all measures set in the ITM to ensure the success and effectiveness, and to report to the RGC. In this spirit, I am convinced all relevant ministries and institutions will provide full cooperation with commitment, active and interactive participation, and high responsibility in implementing this ITM by adhering to the approaches and recommendations from **Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia**, which includes **“Self-Reflection, Showering, Dirt Scrubbing, Treatment and Surgery”**, and **“Reforming Internally and Making Friends Externally Based on a Spirit of Strengthening Independence and National Sovereignty”** to promote competitiveness, to foster the economic diversification, to respond to the people's needs and expectations and to build the necessary foundation to achieving the 2030 milestone and Cambodia Vision 2050.

Phnom Penh, 17 March 2023

**Deputy Prime Minister, Minister of Economy and Finance
And the Chairman of the Committee on Economic and Financial Policy**

(Signature and Stamp)

AKKA PUNDIT SOPHEACHA Aun Pornmoniroth

Executive Summary

The textile and apparel (T&A) industry is one of the priority sectors of the Royal Government of Cambodia (RGC), which is reflected in the key policies and strategies set by the RGC. In fact, the Cambodia Industrial Development Policy 2015-2025 was officially implemented in August 2015 in order to accelerate the development of Cambodia's industry, in which the T&A industry is a priority sector to promote economic diversification and job creation for the people of Cambodia.

Textile, apparel, footwear, and travel goods sectors are the largest employer in Cambodia employing more than 800,000 workers, and more than 80% of them being women¹. The T&A sector helped many Cambodians in alleviating poverty through direct employment and increasing other economic activities catering to the workers living around the T&A factories. The T&A industry plays a major role in Cambodia's economy, accounting for 57% of the country's total merchandise exports in 2019 and one-third of the manufacturing activities. In 2019, the T&A exports of Cambodia stood at US\$ 8.5 bn, having grown steadily at a compound average growth rate (CAGR) of 13% over the last ten years (2009-2019). This growth can be mainly attributed to apparel exports while textile export is insignificant. As a least developed country (LDC) and an ASEAN member, Cambodia enjoys market and tariff preferences under trade agreements with some developed and developing countries in the region and in the globe.

The advent of the COVID-19 pandemic caused major disruptions in the global Textile and apparel trade and ecosystem. Cambodian Textile and apparel manufacturers were also affected due to uncertain demand patterns, liquidity crunch, COVID-19 lockdowns and restrictions. Several apparel manufacturers downsized their production lines, which led to the loss of jobs and wages of the Cambodian Textile and apparel industry workers. The Royal Government of Cambodia took several relief measures, which included cash for work programs, cash assistance to workers who were suspended during the pandemic, tax relief for manufacturers and other measures to support SMEs through co-financing options and credit guarantee.

The ecosystem of the Cambodian T&A industry involves many stakeholders. Textile, Apparel, Footwear and Travel Goods Association in Cambodia (TAFTAC), founded in 1996, is the apex trade body that represents the Textile and apparel industry members in Cambodia. TAFTAC has more than 600 members, covering ~28% of the total number of textiles, apparel, and leather factories in Cambodia. As of 2020, there are 104 training institutions officially registered with the Ministry of Labor and Vocational Training (MLVT), including 37 public institutions, 41 private institutions and 26 NGOs providing technical and vocational training in Cambodia. At the same time, the RGC has been paying much attention to this sector as well.

The apparel production models for Cambodia's exports are divided into two major categories: about 70% of the capacity works on the Cut Make and Trim (CMT), which is simple and of low value added. Production of cotton and other natural fibers is very low in Cambodia. There is also less backward integration to the textile manufacturing processes (yarn spinning, fabric manufacturing). So, Cambodia needs to depend on imports for raw materials and machinery.

¹ MLVT. 2020. "MLVT 2020 Annual Report." Phnom Penh, Cambodia: Ministry of Labour and Vocational Training (Training (MLVT)). Note: The total number of employments in the Cambodian T&A sector may be higher than this number, when employment at sub-contracting factories are included.

Only packaging is produced locally. In 2019, around 90% of the fabric was imported from other countries including the People's Republic of China and Vietnam. Meanwhile, the Cambodian T&A industry still faces a number of challenges, such as a lack of skilled labor, low productivity, limited attention to environmental sustainability, limited access to new technologies and innovations, and a lack of support infrastructure.

T&A industrial transformation in Cambodia were revived and accelerated during and after the Covid-19 crisis. The Covid-19 pandemic has accelerated industrial transformation and new initiatives, including a growing focus on environmental sustainability, the industry 4.0 and technology adoption. International trade flows will change due to the increasing flow of production re-locations closer to the country of origin and efforts by major T&A producers to strengthen the autonomy of their own supply chain. Trade arrangement, such as the Vietnam-EU Free Trade Agreement, could also affect Cambodia's trade in T&A industry. On the other hand, internal factors such as the pressure of rising wages, low productivity, attitudes among young people in the T&A sector, little attention paid to environmental sustainability of the private sector still remain. The RGC has been handling those above-mentioned challenges to accelerate the development of Cambodian T&A industry.

In this regard, the formulation and implementation of the Industrial Transformation Map of T&A 2023-2027 (T&A ITM) is necessary for the Cambodian T&A industry to increase competitiveness and ensure the sustainable growth of this sector. The Cambodian T&A ITM 2023-2027 has been prepared based on an assessment of the global and Cambodian T&A sector and the Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027. This ITM serves as an executive document supporting the implementation of the GFT 2022-2027 by launching key strategic measures specific to the RGC and the private sector.

The T&A ITM 2023-2027 is complementary to the GFT 2022-2027 in the sense that it laid out the actionable measures for the RGC and relevant stakeholders for implementation. The objective for Cambodia's T&A ITM 2023-2027 is ***to build a competitive T&A industry with an increased focus on value addition, sustainability, technology adoption, skills and entrepreneurship***. It has four levers including product-mix and international trade, skilling and productivity, technology and sustainability, and infrastructure and governance.

In order to ensure the successful implementation of the T&A ITM 2023-2027, it is necessary to establish institutional mechanisms for monitoring and evaluating the implementation of the ITM measures. Inter-institutional coordination with relevant stakeholders is essential for the successful implementation of this ITM. Thus, establishment of effective and well-coordinated institutional mechanism is a pre-condition for achieving the objectives of this ITM. As the T&A ITM 2023-2027 is an executive document which supports the implementation of the GFT 2022-2027, the RGC will use the existing institutional mechanism set out in the GFT 2022-2027, which includes the Advisory Working Group on Garment Footwear and Travel Goods (GFT) Sector composed of representatives from the private sector, independent professionals, development partners, and representatives of associations and unions to provide an additional source of input to assist and facilitate the implementation of this ITM.

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List of Abbreviation

CAMFEBA	Cambodian Federation of Employers and Business Associations
CDC	Council for the Development of Cambodia
CCFTA	Cambodia-China Free Trade Agreement
CKFTA	Cambodia-Korea Free Trade Agreement
CMT	Cut, Make, and Trim
CGTI	Cambodian Garment Training Institute
CSEZB	Cambodian Special Economic Zone Board
EBA	Everything But Arm
EIA	Environmental Impact Assessment
GFT	Cambodia Garment, Footwear and Travel Goods Sector Development Strategy 2022-2027
GSP	Generalised System of Preferences
FOB	Free on Board
IDP	Cambodia Industrial Development Policy 2015-2025
ILO	International Labor Organization
ITM	Industrial Transformation Map
NTB	National Training Board
MFA	Multi-Fiber Arrangement
MFNs	Most Favored Nations
MMF	Man Made Fibers
RCEP	The Regional Comprehensive Economic Partnership
SEZ	Special Economic Zone
SSC	Sector Skills Council
STEM	Science, Technology, Engineering, and Mathematics
TAFTAC	Textile, Apparel, Footwear, and Travel Goods Association in Cambodia
T&A	Textile and Apparel
TVET	Technical and Vocational Education and Training

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1. Profile of the Cambodian Textile and Apparel Industry

1.1. Historical Development and Present Status

Investments in the Cambodian textile and apparel (T&A) industry began in the early 1990s², owing to a mix of different factors. Quota free access to the US market under Multi-Fiber Arrangement (MFA) in the mid-1990s and availability of abundant low-wage labor were two major factors behind this advent.

The Four Asian Tigers including Hong Kong, Singapore, South Korea, and Taipei, China adopted a "triangle manufacturing" strategy due to their rising wages and quota constraints. These countries received orders from the US or other international buyers and produced finished goods through their production networks in South-East Asia, including Cambodia. The textiles for making this finished apparel were imported from the Asian tigers and the finished garment was directly exported to the US or other overseas markets using the assigned quota for the producing countries.

Cambodia's apparel exports started increasing significantly after 1997 when Cambodia received the Most Favored Nation (MFN) status and the Generalized System of Preferences (GSP) from the developed countries including but not limited to the US, the EU, Canada, People's Republic of China and Japan. In 2001, Cambodia revived another preferential market access to the EU under the Everything But Arms (EBA) initiative for duty-free and quota-free market access. Preferential market access arrangements, especially to US and EU acted as major driving factors for the rise in the continued growth of Cambodian apparel exports. The strategic location of Cambodia at the heart of Southeast Asia gives it access to key global markets through the Sihanoukville seaport and has been instrumental in increasing demand for Cambodia's products in Asia.

Textile and apparel manufacturing activity in Cambodia is majorly limited to the finished product i.e., apparel. Cambodia's apparel factories are primarily based on a Cut-Make-Trim (CMT) model where, assembly of the apparel is done by Cambodia, while the raw material, method of production, and machinery are imported. Foreign players especially from the People's Republic of China (PRC), Hong Kong, Malaysia, South Korea, Thailand, Singapore etc. own most apparel factories in Cambodia. The People's Republic of China is the largest FDI investor in Cambodia, having grown its FDI share in Cambodia from 13.8% in 1994 to 66.7% in 2019.

Textile, apparel, footwear, and travel goods sectors are the largest employer in Cambodia employing more than 800,000 workers, and more than 80% of them being women³. The textile

² The textile and apparel (T&A) industry started in Cambodia in the French Colonial period, but only small-scale production happened. The industrial manufacturing of apparel took place during the Sihanouk Regime, when the state-owned enterprise, SONATEX, was established². After this period, the T&A industry was interrupted by civil wars until the early 1990s. In 1993, Cambodia had the first democratic election supported by UNTAC and adopted a free market economy.

³ MLVT. 2020. "MLVT 2020 Annual Report." Phnom Penh, Cambodia: Ministry of Labour and Vocational Training (Training (MLVT)). Note:

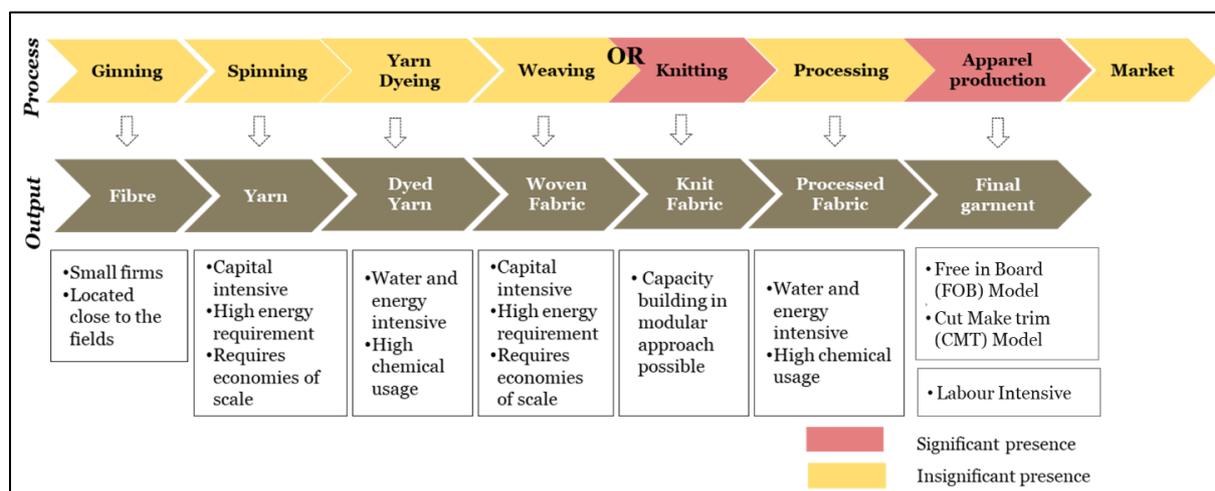
and apparel sector helped many Cambodians in alleviating poverty through direct employment and increasing other economic activities catering to the workers living around the Textile and apparel factories.

The advent of the COVID-19 pandemic caused major disruptions in the global Textile and apparel trade and ecosystem. Cambodian Textile and apparel manufacturers were also affected due to uncertain demand patterns, liquidity crunch, COVID-19 lockdowns and restrictions. Several apparel manufacturers downsized their production lines, which led to the loss of jobs and wages of the Cambodian Textile and apparel industry workers. The Royal Government of Cambodia took several relief measures, which included cash for work programs, cash assistance to workers who were suspended during the pandemic, tax relief for manufacturers and other measures to support SMEs through co-financing options and credit guarantee.

1.2. Industry Structure and Existing Value Chain

The Textile and apparel value chain starts from fiber production that is converted into yarn through the spinning process. Some of the yarn gets dyed before getting converted into fabric. Fabric is manufactured either through weaving or knitting process for conventional products. The fabric is then processed (dyeing, printing, finishing etc.) and taken for cut and sew operations. The final product might go through a processing stage again before reaching the market. This has been depicted in Figure 1. Designing, material sourcing, storing and packaging are support services associated with multiple processes.

Figure 1: Textile and Apparel Value Chain



In addition, the textile and apparel industry ecosystem consist of the following input/support industries as well:

- Agricultural input such as all-natural fibers (cotton, hemp, silk, wool, etc.)
- Industrial input such as man-made fibers (MMF), chemicals, trims, accessories, and packaging materials

The total number of employments in the Cambodian T&A sector may be higher than this number, when employment at sub-contracting factories are included.

- Support industry/sector such as logistics, financial institutions, technical and design institutes

The apparel production models for Cambodia's exports are divided into two major categories: about 70% of the capacity works on the Cut Make and Trim (CMT)⁴ model and the balance on Free on Board (FOB)⁵ model. The majority of the apparel products manufactured in Cambodia are basic in nature and priced with lower margins as compared to fashion products.

Production of cotton and other natural fibers is very low in Cambodia. There is also less backward integration to the textile manufacturing processes (yarn spinning, fabric manufacturing). So, Cambodia needs to depend on imports for raw materials and machinery. Only packaging is produced locally. In 2019, around 90% of the fabric was imported from other countries including the People’s Republic of China and Vietnam.

A broad overview of the T&A value chains of three other countries is given in the table below.

Table 1: T&A Value Chains of Vietnam, Bangladesh, and India

Country	T&A Value Chain
Vietnam	Apparel manufacturing companies account for ~70% of the total number of Textile and apparel manufacturing units in Vietnam. Earlier, these units were primarily based on the CMT model, but in recent years, there has been a shift towards the FOB model. Spinning, weaving/knitting and fabric processing units account for ~6%, ~17% and ~4% respectively of the total Textile and apparel units. Although Vietnam is still highly dependent on imported finished fabric. Ancillary industries, which include machinery/chemical/utility manufacturers account for ~3% of the total number of units.
Bangladesh	Apparel manufacturing companies account for ~63% of the total number of Textile and apparel manufacturing units in Bangladesh. Spinning, weaving/knitting and fabric processing units account for ~5%, ~22% and ~10% respectively of the total Textile and apparel units. The country has a strong presence in apparel and knit fabric manufacturing but other parts of the value chain like spinning and weaving are comparatively weaker. Though there are yarn dyeing and fabric finishing and processing units, the average size of those units is small. In general, most of the knit fabric manufacturing units have forward integrated

⁴ In CMT manufacturing, apparel buyer pays the manufacturers for the cut-make-trim process. Pre-production process like the order processing, product development, pattern making and pattern grading, and post-production process such as shipping of goods are handled by the buyer.

⁵ Under FOB manufacturing model, pre-production activities like order processing, merchandising etc. are also included. Unlike CMT, FOB factories require skillsets beyond cutting and sewing. These skills include capacity to finance, procure, develop samples for approval and communication with global brands.

Country	T&A Value Chain
	<p>to manufacturer apparel as well. Only a few big groups have full vertical integration starting from spinning to apparel manufacturing. They also have design studios in Bangladesh.</p> <p>A very limited number of Textile and apparel manufacturers have launched their own brands in the domestic market.</p>
India	<p>The Indian Textile and apparel industry has a presence in all the segments of the textile and apparel value chain from fiber production to end-product manufacturing. One of the core strengths of the Indian Textile and apparel industry is a strong production base of natural fibers (cotton, jute, etc.) as well as Man-Made Fibers. India is the world's largest producer of cotton and jute fiber and the second-largest producer of polyester and silk fibers. India's efficient and technically advanced spinning sector has enabled it to be the second-largest yarn exporter in the world after the People's Republic of China.</p> <p>In 2019-20, India's total staple fiber production stood at 9,279 million kgs, spun yarn production was 5,713 million kg, Fabric production was 7,436 million sq. meters and apparel production was estimated at 22 billion pcs in 2019-20.</p> <p>This country is also famous for its design capabilities and some of the Textile and apparel manufacturers have launched their own brand in the domestic market.</p>

Textile, apparel and leather and footwear (TAF) factories are distributed in three major zones: the capital zone, border zone and seaport zone. Most factories are in the capital zone (including Phnom Penh, Kandal Province, Kampong Speu Province and Kampong Chhnang Province, Kampong Cham Province), mainly due to the availability of supporting infrastructure and facilities, favorable living environment for foreign investors and abundant workers. TAF Factories are also concentrated around the borders with Thailand and Vietnam, in special economic zones (SEZ) and near the seaports. More factories are concentrated near the border with Vietnam than Thailand because Vietnam's border is very close to Ho Chi Minh airport and Saigon Harbour.

Table 2: Location of T&A and Leather and Footwear Factories in Cambodia in 2020

Industrial Zone	Province	Textile	Apparel	Total
Capital	Phnom Penh	289	891	1180
Capital	Kandal	39	152	191
Capital	Kampong Speu	27	69	96
Capital	Kampong Chhnang	4	17	21
Capital	Kampong Cham	3	9	12

Industrial Zone	Province	Textile	Apparel	Total
Seaport	Preah Sihanouk	25	39	64
Seaport	Kampot	1	3	4
Thailand border	Banteay Meanchey		6	6
Thailand border	Koh Kong		3	3
Thailand border	Pailin		2	2
Vietnam border	Takeo	8	34	42
Vietnam border	Svay Rieng	9	31	40
Vietnam border	Prey Veng		3	3
Vietnam border	Tbong Khmum	2	1	3
Other	Siem Reap	5	14	19
Other	Pursat	2	2	4
Other	Battambang	1		1
Other	Otdar Meanchey		1	1
Other	Ratanak Kiri			0
Grand Total		415	1277	1692

Source: Ministry of Commerce

1.3. Trade Performance

Cambodia is a significant exporter of apparel, occupying a ~1%⁶ share in the global apparel trade. US and EU are the two major markets. However, Cambodia is dependent on the People's Republic of China, Vietnam, and other Asian countries for the supply of fabric.

1.3.1. Cambodia's T&A Exports

The T&A industry plays a major role in Cambodia's economy, accounting for 57% of the country's total merchandise exports in 2019 and one-third of the manufacturing activities. In 2019, the T&A exports of Cambodia stood at US\$ 8.5 bn, having grown steadily at a compound average growth rate (CAGR) of 13% over the last ten years. This growth can be mainly attributed to apparel exports which have grown at a CAGR of 13% during the same period. Textile export is insignificant. However, the Cambodian T&A exports saw a decline in 2020, which may be attributed to the COVID-19 pandemic and trade curbs imposed by the European Union (EU).

A. Destinations of Cambodia's T&A Exports

EU and USA are the two major markets for T&A exports for Cambodia, having 32% and 27% share respectively, in the total apparel exports of Cambodia in 2019. Over the ten years (2009-2019), while USA's share has decreased from 62% to 27%, EU's share has increased from 18% to 32%, growing at 21% CAGR. This increase has partly been due to the 'Everything But Arms' initiative and the relaxation of the 'Rule of Origin'⁷. Cambodia's apparel exports to Japan have also increased significantly from \$28.5 million in 2009 to \$820 million in 2019, growing at a CAGR of 40%.

⁶ ITC Trade Map, Data Extracted in July 2021

⁷ ILO, Cambodian Garment and Footwear Sector Bulletin, Issue 5, January 2017

B. Product Mix of Cambodia's T&A Exports

In 2019, cotton-based apparel was the largest category in Cambodia's apparel exports with 42% share, followed by Man-Made Fiber (MMF) based apparel with 28% share. Over the 10 years (2009-2019), Cotton and MMF based T&A exports from Cambodia have registered growth of 11% and 7% respectively over this period.

Knitted and woven apparel have a mix of 71% and 27% respectively in Cambodia's T&A exports. In 2019, Knitted Cotton T-shirts were the most exported apparel product, having an 8% share in Cambodia's total apparel exports, followed by Knitted Cotton Sweaters and Women's Knitted trousers having a 6% and 5% share respectively.

1.3.2. Domestic T&A Imports

Cambodia majorly imports knitted and woven fabrics from other countries, especially the People's Republic of China. As a majority of the apparel manufacturing firms in Cambodia work on the CMT model, decisions on the material inputs including fabrics and accessories are taken by international buyers. Most buyers have nominated suppliers for these materials. In 2019 Cambodia's T&A imports stood at \$5.2 billion, having grown at a CAGR of 14 % over the last ten years. Cambodia imported \$300 million worth of accessories (sewing threads, zippers, buttons and fabric interlinings) in 2019, majorly from PRC, Vietnam and Thailand. The import of these accessories has grown at a CAGR of 19% from 2009 to 2019.

The top suppliers of T&A to the Cambodian market in 2019 were the People's Republic of China, Vietnam, Thailand, and the Republic of Korea. The People's Republic of China was the largest supplier of T&A to Cambodia, having a 64% (\$3.3 billion) share in total T&A imports of the country. Cambodia's T&A imports from the People's Republic of China have grown at a rate of 16% over the ten years from 2009-2019. Vietnam was the second-largest supplier of textiles to Cambodia in 2019, having moved up four spots from 2009.

1.3.3. Market Access Arrangements

As an LDC and member of ASEAN, Cambodia enjoys duty-free/preferential market access under trade agreements with several developed and developing nations, including Armenia, Australia, Canada, the European Union, Iceland, Japan, Kazakhstan, New Zealand, Norway, the Russian Federation, Switzerland, Turkey, United Kingdom, the United States of America, India, Chile, People's Republic of China, Kyrgyz Republic, Montenegro, Tajikistan, Thailand, and the Republic of Korea.

However, not all the countries above provide preferential tariffs on Cambodia's textile and clothing products. US has imposed a total ad valorem equivalent tariff of 14.31% on Cambodian T&A products (HS61). The countries in the EU provided duty-free access under the Everything But Arms (EBA) initiative, which has been partially suspended in August 2020, leading to the withdrawal of part of the tariff preferences granted to Cambodia. The partial withdrawal of Cambodia's EBA trade benefits by the EU and Vietnam-EU free trade agreement are also expected to have a negative impact on the Cambodian Textile and apparel trade in the

short and medium term.

Recent trade developments which are expected to boost Cambodia's T&A trade are:

- Post-Brexit, the UK's new Generalised Scheme of Preferences (GSP) came into effect from January 2021. It will provide Cambodia duty-free and quota-free access on exports to the UK of all goods, except arms and ammunition. This is equivalent to a complete EBA [Everything But Arms] scheme under the EU's GSP.
- The People's Republic of China and Cambodia bilateral free trade agreement (*CCFTA, signed in October 2020*), which would eliminate tariffs up to 98% of Cambodia's total exports to the People's Republic of China and 90% of China's shipments to Cambodia⁸.
- Cambodia is expected to benefit from the Regional Comprehensive Economic Partnership (*RCEP, signed in November 2020*), by having freer access to its regional markets. RCEP entered into force in 2022 and is a comprehensive free trade framework that involves ASEAN and five other partner countries with which ASEAN has a free trade agreement, namely the People's Republic of China (ACFTA), Republic of Korea (AKFTA), Japan (AJCEP) as well as Australia and New Zealand (AANZFTA).
- Cambodia and South Korea bilateral free trade agreement (*CKFTA, signed on 26 October 2021*) entered into force on 1st December 2022, in which South Korea gave preferential tariff treatment to Cambodia up to 95.03% of the total tariff lines whereas Cambodia offered in return of 89.09% of the total tariff lines. The bilateral deal provides trade benefits beyond the existing free trade agreements to which Cambodia and South Korea are parties. For example, South Korea offered only 89.98% of the total tariff lines under the ASEAN-Korean Free Trade Agreement (AKFTA) and 90.68% of the total tariff lines under the Regional Comprehensive Economic Partnership (RCEP) agreement.

1.4. Supporting Ecosystem

1.4.1. Vocational Training and Higher Education

Up to 2020, one hundred and four institutions have been registered with the Ministry of Labor and Vocational Training (MLVT), including 37 public institutes, 41 private institutes, and 26 non-governmental organizations providing technical and vocational training in Cambodia. 37 public institutes located across the country are under MLVT's supervision, providing technical vocational training related to specialized expertise in high demand today and in the future⁹.

Besides the TVET institutes, Universities such as the Institute of Technology of Cambodia (ITC) also provide education programs, such as industrial, electrical, mechanic, electronic, and chemical engineering. However, most graduates from these institutes are more likely to work in other industries rather than the textile and apparel industry.

⁸ <https://textilevaluechain.in/news-insights/cambodia-china-sign-free-trade-agreement/>, Accessed on 2 July 2021

⁹ MLVT. 2020. General Information of TVET Institutes. Phnom Penh, Cambodia: Ministry of Labor and Vocational Training

Box 1: Short and Long Course Trainings Offered by TVET Institutions in Cambodia

Short-course training programs (for one week) include Electrical Installation, Water Supply, Air Conditioning Repair, Machine Repair, Car Repair, Motorcycle Repair, Mobile Phone Repair, Computer, Food & Beverages services, Bakery, Tailor, salon, Cosmetics, Wedding embellishment, Animals Raising, Vegetables Growing, Fruits and Vegetables processed, and other skills. These short course trainings are conducted both in school and in the community.

Long-course training (one year and longer) include Architecture, Civil Construction, Electricity, Electronics, Mechanics, Air-Condition, Automotive, Entrepreneurship, Accounting, Computer Science, Information Technology, Telecommunications, Business, Tourism, and other skills.

Box 2: National Technical Vocational Education and Training Policy 2017-2025

National Technical Vocational Education and Training Policy 2017-2025 was formally approved by the government on 16 June 2017. The policy has defined the following objectives:

- *To improve TVET quality to meet national and international market demands*
- *To increase equitable access to TVET for employment generation*
- *To promote public-private partnerships (PPP) and aggregate resources from stakeholders to support the sustainable development of TVET*
- *To improve the governance of the TVET system*

More than 200,000 trainees have benefitted since 2017. Around 68,000 workers, who had lost their job due to the COVID-19 pandemic have received flexible and quality training on soft skills.

There are more than 100 TVET institutes and universities providing technical and vocational training programs in Cambodia. Cambodian Garment Training Institute (CGTI) is the only training provider specializing in training programs catering to the demands of the Textile and apparel industry. CGTI was established in 2016 by The Garment Manufacturers Association in Cambodia (TAFTAC) to provide qualitative and quantitative capacity-building goals. CGTI offers courses in the Pre-production, Production and Productivity and Compliance domains. The courses are tailored to prepare the Cambodian workforce to move up the value chain, get skilled for management-level positions and move from CMT to FOB model of apparel manufacturing. Currently, most foreign-owned factories have their patterns developed, graded and marker produced in their HQ. Most of the technical and management level positions are given to expatriates. These activities, if delivered in Cambodia, would provide good job opportunities for the Cambodian workforce, and improve the perception of the Cambodian Textile and apparel industry among the country's youth.

1.4.2. Trade Bodies

Textile, Apparel, Footwear and Travel Goods Association in Cambodia (TAFTAC), founded in 1996, is the apex trade body that represents the Textile and apparel industry members in Cambodia. TAFTAC is governed by a 25-Member Executive Committee comprising of 25 representatives from well-established factories. The committee members are accountable for advising on strategy and policy development, while the day-to-day operation is carried out by 23 professional secretarial staff. Their support includes negotiating with the government on tax and labor issues, working with global stakeholders for Textile and apparel industry initiatives, and working with the government to negotiate FTAs with other countries. TAFTAC has more than 600 members, covering ~28% of the total number of textiles, apparel, and leather factories in Cambodia.

TAFTAC plays a role as a forum for consultation and discussion among members/stakeholders of common interests and seeks to adopt strategies to grow and develop the Cambodian Textile and apparel industry. It also offers various value-added services to members such as workshops/trainings, legal updates covering government announcements and policy changes, general business information, trade fairs, networking etc. It also works closely with the government departments to lobby for better working conditions and preferential market access arrangements.

1.4.3. Government

T&A is one of the major focus sectors for the Cambodian government, which is reflected in the regular regulation and policy developments to improve the industry's competitiveness. Cambodia's **Industrial Development Policy (IDP) 2015–2025** was adopted by the Government in March and officially launched in August 2015. The government recognizes the Textile and apparel industry as a priority sector contributing to economic diversification and job creation for Cambodian labor.

Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027 was launched on 21 March 2022 serving as a roadmap and aiming at strengthening the sector's value addition and competitiveness has been adopted by the Royal Government of Cambodia. The strategy is being designed to target skills upgrades and career paths for factory workers, promote high value-added domestic and foreign investment, attract the sector's supporting industries, and diversify export markets.

A. Investment incentives in Cambodia

Based on the amended Law on Investment, the Royal Government of Cambodia provides investment incentives to projects that meet the criteria set for Qualified Investment Projects (QIP). QIPs are eligible for an income tax exemption or to use special depreciation and receive duty-free import of production equipment, construction materials, etc. The criteria for eligibility to be a QIP depends on sectors and types of investment as set in the New Investment

Law of Cambodia¹⁰. The priority sector includes, but is not exclusive to, export-oriented manufacturing firms. All firms in the designated Special Promotion Zone (SPZ) or Export Processing Zone (EPZ) are also eligible for QIP incentives.

B. Special economic zones (SEZs)

Since 2005, Special Economic Zones (SEZ) have been established across Cambodia to attract investment for export-oriented manufacturing, including the Textile and apparel sector. SEZs in Cambodia are managed by the Cambodia Special Economic Zone Board (CSEZB), a wing of the Cambodia Development Council (CDC). A firm wishing to locate in an SEZ is eligible to request government approval as a Qualified Investment Project (QIP) and obtain the same incentive and protection as a QIP. Investors in SEZs receive benefits including one-stop services through SEZ administration¹¹, well-established infrastructure and logistics, and special customs procedures.

The major SEZs in Cambodia include Manhattan SEZ (Svay Rieng Province), Preah Sihanouk SEZ (PSSEZ), Sanco Poipet SEZ (Banteay Meanchey Province), Royal Group Phnom Penh Special Economic Zone (Phnom Penh), Tai Seng Bavet SEZ (Svay Rieng Province) and Giga Resources SEZ (Svay Rieng Province).

C. Environmental and Social Compliance

Various Government ministries work to ensure that the factories comply with Cambodia's laws and regulations regarding environment, labor, and occupational health and safety.

The Ministry of Environment is responsible for environmental protection and natural resources conservation. It is responsible for inspecting the environmental compliance of factories and undertaking the Environmental Impact Assessment (EIA) for public and private projects that are likely to have an impact on the environment.

Ministry of Labor and Vocational Training (MLVT) oversees the employment, working conditions and the TVET aspects. MLVT conducts labor inspections to ensure the factories comply with the labor law. Cambodia has implemented a minimum wage negotiation mechanism that has been broadly acknowledged as a model mechanism with transparency, participation, and attention on the labor relation and workers' welfare. This mechanism engages representatives from all stakeholders, including the government, employer representatives, labor unions.

2. Challenges and Critical Factors for Success

The Cambodian T&A industry needs to take a transformational journey in almost every aspect of the business to remain competitive and grow in international markets. The **Product-mix** needs to be aligned with the global sourcing patterns and the trends. This is necessary

¹⁰ The criteria for eligibility to be a QIP for some sectors does not depend on the amount of capital investment or assets.

¹¹ One stop services include all services provided by the Ministry of Labor and Vocational Training, the Local Authority Representative, the General Department of Customs and Excise of Cambodia, CAMCONTROL, the Ministry of Commerce and the Cambodia Development Council.

for the Cambodian T&A industry to capture newer markets and increase penetration in the existing markets.

Technology absorption and adoption has a direct impact on **skilling** and **productivity**. On one side, technology adoption and upgradation help improve productivity and become cost-competitive through resource optimization. Technology has been playing an increasingly important role in skills development of through the integration of education programs and training activities, such as e-learning portals. On the other side, people need to be trained on new technologies to leverage its benefit. Otherwise, it will remain an under leveraged asset.

Since Cambodia’s T&A industry is majorly export-oriented and looking at graduating from LDC status in the coming years, focusing on trade and internalization will be crucial to maintain competitiveness. There needs to be a strong focus on identifying the alternate growing markets and newer emerging markets and developing long-term strategies for market penetration and gaining market share. Government policies will have a pivotal role to play in strengthening trade relationships and navigation.

Infrastructure, sustainability, and governance are the foundation pillars that will support industrial transformation. Efficient infrastructure, both at firm-level and industry-level (e.g., in SEZ, IPs etc.) is required for manufacturing operations, sustainability, resource-efficient cleaner production (RECP), and logistics. Sustainability has a strong interplay between infrastructure and governance. A governance mechanism is required to ensure that the infrastructures are developed and maintained as per the global standards. A strong Governance system is needed for transparency and accountability in the industry transformation initiatives. Compliance of the existing legislation with the global standards will be necessary for working with the global T&A brands and retailers. A strong monitoring and evaluation (M&E) framework is required for the enforcement of existing laws and promoting accountability among industry stakeholders.

In short, skilling, productivity, technology, product mix, innovation, trade & internationalization, sustainability, infrastructure and governance act as crucially important levers for industrial transformation for T&A industry.

2.1. Skilled Manpower

2.1.1. Production Floor Workers

Cambodian T&A workforce majorly comprises low-skilled CMT workers, primarily women from rural households, who have migrated to work in factories located in towns or cities. The literacy rates in Cambodia are low as compared to its competitors including Vietnam, the People’s Republic of China, and Thailand.

Table 3: Literacy Rates of Cambodia and Competing Nations in Asia

	Cambodia	PRC	Vietnam	Thailand	Myanmar	India	Bangladesh
Literacy Rate	87.7%	96.8%	95%	98.1%	75.6	74.4%	74.7%

Source: UNESCO data, available at: http://uis.unesco.org/en/home#tabs-0-uis_home_top_menus-3

Generally, the CMT workers and production line supervisors (who are promoted from operator-level) have basic education (1-9 standard). These workers lack basic local language and arithmetic skills, which makes it difficult for them to read and understand instructions. Most

operators are unable to write even in the local language, which hinders the smooth functioning of the factory systems. In particular, there are usually grievances or complaints boxes placed in the factory, but the operators are not able to write down and submit their complaints. Supervisors, who got promoted from operator level, lack in team management and ensuring productivity and quality. They lack in maintaining social compliances including personal and workplace hygiene, cleanliness, and orderliness (5S). Also, lack of digital literacy makes it challenging to implement ICT based training.

In Cambodia, there is no skill-matrix or nationwide skill level certification system for the workers (such as sewing operators, cutters, and packers) in the Cambodian T&A industry. This has caused challenges in maintaining uniformity in the training curriculum and assessment of operators' skill levels. On the one hand, it becomes difficult for the workers to prove the sufficiency of their skill level to other factories and thus mobility reduces. On the other hand, the factory owners are also not sure about the skill level of the applicant worker.

Most TVET institutes and universities are more likely to provide general training and education programs in engineering. There are also no known collaborations of these TVET institutes with the companies in the T&A sector for training and knowledge transfer. Operators, supervisors, and other low skilled workers, in particular, have very little pre-employment training in Cambodia. Most of the garment factories provide their own in-house training for their operators and only few have partnered with CGTI to provide sewing operator training. Most of the supervisors are internally promoted from the operator level with more experience and good working performance. Meanwhile, some of the supervisors have been trained under Better Factories Cambodia programs by the ILO covering Industrial Relations, Supervisory & Leadership Skills and improving Health & Safety Training.

In November 2020, The National Employment Agency (NEA) has conducted a survey on Rapid Assessment of Emerging Needs for Workers and Skills in times of the COVID-19 Crisis. This assessment found that when the recovery begins and/or take advantage of the opportunities in the T&A industry, the interviewed T&A companies would need more apparel manufacturing operators, textile machinery operators, mechanics, workers related to the transport sector and warehousing. All those are mostly low skilled workers. During the primary research, the stakeholders mentioned that the Cambodian skilling methodologies are stringent and outdated. The major issues are as follows: 1). Long and traditional courses, 2). Lack of industry interactions and 3). Lack of awareness amongst youth.

2.1.2. Middle Management and Senior Management

Middle and senior management positions constitute roughly 10% of the total workforce in the Cambodian T&A industry. These positions include production supervisors, production managers, industrial engineers, associate professionals, department heads and specialized technicians (e.g., repair specialist, sustainability manager, IT manager etc.). Developing local capabilities and skillsets for Middle Management and Senior Management positions is very important for Cambodia to move up the T&A value chain.

Currently, more than 90% of the T&A manufacturing facilities in Cambodia are owned by foreign investors. The investors preferred human resources of their own countries to retain the high-skilled and value-added job roles. It helps them in easier communication and to have better control of the operations. There is a growing demand for local middle management staff as that is cost-effective and sustainable in the long term. However, T&A factories face

challenges in finding skilled technical staff (e.g., technicians, industrial engineers etc.), designers, merchandisers, sales and marketing staff, business analysts/strategists etc. Besides technical skills, Cambodian human resources significantly lack soft skills (e.g., problem-solving and decision making, customer management etc.) and communicate in any language other than the mother tongue.

Although the CGTI offers technical, management and designing courses, there is a very low intake, and thus the CGTI's skills development budget remains underutilized. A combination of factors contributes to this. Since most Cambodian workers are employed at operator level positions, there is a general perception among the youth that the jobs in the T&A industry are not lucrative. A fashion institute informed that a career in fashion design is still perceived as a financially unsafe and unstable career choice. It is viewed as more of a hobby. This mindset creates roadblocks for the Cambodian youth to pursue such courses. On the other side, foreign investors are also reluctant to recruit Cambodian middle management staff due to language issues and the low availability of a skilled workforce.

There is a lack of awareness and understanding among the Cambodian management staff on advanced technologies (automation, IR 4.0) and sustainability aspects. There is also a lack of local skilled manpower with a good engineering background and/or STEM education¹². This acts as a major bottleneck for the adoption of new technologies and sustainability measures in the locally-owned factories. It is also important to note that there are no institutions in Cambodia for providing training in textile manufacturing and apparel retailing aspects. This will put a challenge for both forward and backward integration of the present major activity, i.e., garment manufacturing.

Linkage of industry and training providers and institutions in Cambodia is still limited, which indicates misalignment between training institutions and employers in their perception of graduates' preparedness for work, including skills required for entry-level roles as well as general and job-specific skill, in the labor market¹³. In particular, training institutions and industries have different perceptions on the quality of training and the readiness of graduates to enter the job market, both for specific job types and general skills. In fact, the training institutions perceive that the quality of training and readiness of the graduates is good enough to enter the job market, while the industry perceives that the quality of training and readiness of the students or trainees is still limited. This indicates the communication gap between the manufacturing sector and training providers, in which both are unaware of the requirement of the other side.

2.2. Product Mix

Cambodia's export-led growth has been driven by apparel, which comprised more than 55%¹⁴ of total merchandise exports in 2019. The rapid growth of the Cambodian apparel sector has resulted in a high degree of product and market concentration. Most of Cambodia's apparel export items are targeted towards the low-priced volume segment of the US and EU markets.

¹² ADB report on 'Reaping the Benefits of Industry 4.0 Through Skills Development in Cambodia', published in January 2021

¹³ ADB report on 'Reaping the Benefits of Industry 4.0 Through Skills Development in Cambodia', published in January 2021

¹⁴ ITC Trade Map, Accessed in July 2021

The majority of the factories in Cambodia are involved in cut-make-trim (CMT) production, and there has been a very slow movement toward full package-service free on board (FOB) production. Some of the foreign-owned companies have established FOB model factories in Cambodia. The slower movement toward FOB is likely due to the fact that the majority of garment factories in Cambodia are wholly foreign-owned. Foreign-owned manufacturing firms are mostly using Cambodia as an export location for low-cost production activities while retaining the value-added activities (designing, merchandising, finance etc.) in their own countries¹⁵. In this regard, Cambodia needs to strengthen its total designing ecosystem in order to be able to promote the diversification of fashion products, which covers access to market intelligence and trend forecasting, design, sourcing, and product development capabilities.

In addition, Cambodia is lacking skilled designers and design houses. Most global brands have overseas design houses whose designers communicate with the sample rooms in Cambodian manufacturing facilities for production sample development. Very few transnational factories have their designers stationed in Cambodia and work with the brands to make all samples. Cambodia also faces constraints related to the availability of input material, which limits its capacity to experiment with designs and products. Despite the ease of establishing wholly foreign-owned firms in Cambodia, no significant investment has been made in the backward integration of the garment manufacturing activity. This is due to the capital-intensive nature of fabric manufacturing and yarn manufacturing activities, non-availability of resources including 1. skilled manpower, 2. high cost of operation including logistics cost and 3. lengthy approval processes¹⁶.

2.3. Productivity

The average productivity of Cambodian apparel manufacturing units is low compared to most of the competing countries and it reduces the cost-competitiveness of the country even if the wage rate is economical. With the rise in minimum wages, it is becoming even more important for Cambodia to remain competitive in the global market.

Table 4: Productivity Level of the Apparel industry in Cambodia and Competing South Asian nations

	Cambodia	PRC	Vietnam	Turkey	India	Bangladesh
Productivity Level	35%-45%	>80%	50-60%	>80%	55-65%	45-55%

Source: Asian Productivity Organisation Handbook 2020 and Industry Inputs

The reasons for lower productivity can be broadly divided into four parts: 1). Education and skilling ecosystem, 2). Mindset of the investors, 3). Lower adoption of advanced technologies and 4). Lack of communication between industry stakeholders and training providers.

¹⁵ the World Bank Enterprise Survey 2016 cited from <https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/country-highlights/Cambodia-2016.pdf>, Accessed on 19 June 2021

¹⁶ ILO, IFC, 2016. The competitiveness of the garment sector in Cambodia: Initial findings from BFC research. Better Factories Cambodia.

A. Skills Development Ecosystem

The basic education level of the workers is low and that hinders the training process. Most of the workers have poor knowledge of arithmetic which makes it difficult for them to do basic calculations including an understanding of the performance-based incentive system. Most of the workers and even a major part of middle management staff find it difficult to communicate in English or any other language other than their mother tongue. As most of the textile and apparel factories have been developed by foreign investors, the investor community and their representatives find it difficult to communicate with the workers and staff. It not only hinders the training process but also causes a communication gap which negatively impacts productivity.

B. Adoption of Technology

Now we have technology available for improving productivity through semi / full automation of the processes, ERP system, machine learning etc. But the investors find it difficult to implement those technical interventions as it is difficult to find required skilled persons in Cambodia for handling those advanced technologies. Although most of the foreign owners have still implemented many of such advanced technologies and getting them operated by expatriates, advanced technology adoption is very low in T&A factories owned by local entrepreneurs. Many of such local owned factories still use manual ledgers/data collection formats to record production data.

At the same time, the level of awareness of the Industry 4.0 technology among employers in Cambodia seems to be low compared to other countries in the region, including Indonesia, the Philippines and Vietnam¹⁷. Only about one-third of employers in the Cambodian T&A industry have a high level of awareness of the Industry 4.0 and the adoption and adoption of new technologies.

C. Investors' Mindset

Investors and senior management teams of the apparel manufacturing units give low priority to skilling initiatives linked to productivity improvement. They generally prefer on-the-job training rather than investing in skills development with training institutions or stakeholders perceived as inefficient in terms of time and resources. At the same time, investors find that most workers lack soft skills, including job ownership, self-motivation, time management and responsibility. This may also reflect the limited quality of education, as soft skills are an issue related to the mindset and life skills to be trained from basic education. In this regard, Cambodia needs an in-depth and detailed analysis of the costs and benefits of skills development initiatives linked to productivity enhancement to convince the decisions makers on the importance of new skilling, upskilling, reskilling and multiskilling.

D. Industrial Linkages

Relations between the private sector and training institutions are still limited, with most parties having little awareness and understanding of the needs and requirements of the other side. In fact, the owners of T&A factories in Cambodia, mostly foreigners, do not have a clear understanding of the presence of key training institutions in Cambodia, including the CGTI,

¹⁷ ADB report on 'Reaping the Benefits of Industry 4.0 Through Skills Development in Cambodia', published in January 2021

the National University of Management (NUM), the ITC, and other educational and training institutions that are providing skills and technical training in their respective fields.

At present, Cambodia has a total of more than 200 TVET institutions, of which 56 are state-owned institutions. Among them, only the CGTI provides training in the T&A sector and has directly contributed to increasing the productivity of the Cambodian workforce in this industry¹⁸.

2.4. Sustainability

Responsible consumerism, circular economy, traceability, cleaner production, and Ethical Supply chains are some of the major global trends influencing the T&A industry over the last decade. These trends have become stronger in the last two years during the COVID-19 pandemic. As a result of increased consumer awareness, investor and regulator pressure, the global apparel brands have set ambitious sustainability targets.

Cambodian apparel manufacturers have significant dependence on US, EU and Japan markets and compliance with sustainability norms has become more stringent for all those three markets. While those countries are tightening compliance with sustainability standards, the efforts and commitment of the Cambodian T&A industry to reduce environmental impacts seem to be limited, which could affect product competitiveness¹⁹.

In Cambodia, the Environmental Protection and Natural Resource Management Law, 1996, requires that Environmental Impact Assessment (EIA) be undertaken for both public and private projects that are likely to have an impact on the environment. But the country faces a major challenge in the implementation of this law due to a lack of skilled workforce and a lack of monitoring and evaluation mechanisms. In 2015, the Ministry of Environment (MoE) began drafting the ENR Code, a sweeping piece of legislation that was meant to revolutionize the country's entire environmental law framework. However, the framework is still under development.

In this regards, it is important to educate the manufacturers and Government departments on the benefits of environmental and social sustainability measures and also the risks involved with non-compliance. The institutional mindset needs to shift from a mere compliance requirement for initial project approval to a tool for improving the business performance in long term. It was suggested by the apparel manufacturers that the Cambodian Government may consider providing subsidies to factories for adopting new technologies, importing equipment or foreign talent in cleaner production solutions.

The RGC has also been working closely with development partners to strengthen social compliance in the labor-intensive industries, especially in the T&A industry. To ensure effective social compliance, the RGC will need to consider the cessation of gender-based violence, make the workplaces accessible to all, provide safe and hygienic working conditions, women empowerment, career progression, transparent compensation structure²⁰, etc. In addition, the RGC also needs to build confidence among investors and other relevant stakeholders in terms

¹⁸ Road Map for Skills Development Cambodia (Page 19)

¹⁹ <https://www.geres.eu/en/our-actions/our-projects/promotion-sustainable-energy-practices-garment-sector-cambodia/>, Accessed on 1st July 2021

²⁰ Cambodia Garment and Footwear Sector Bulletin | Issue 8

of legal and regulatory framework stability by carefully balancing the interests of workers and investors²¹.

2.5. Technology Adoption

The overall state of technology adoption in the Cambodian T&A industry is low. Although the foreign-owned T&A manufacturing firms are using advanced technologies in some sections of their CMT operations, the technology adoption among locally owned firms is very less.

The level of technological development in the sewing and packaging operations is still limited, even in foreign-owned factories. The management staff, who operate from the investor countries, are willing to invest in digital technologies as these technologies give better visibility and help in making better-informed decisions. However, they are not eager to invest in heavy machinery and equipment for the sewing operations (e.g., automatic pocket-attach machines, robotic arms/grippers etc.), due to lack of awareness in incentive framework from the RGC. The RGC has been updating its incentive framework for investors in accordance with the Law of Investment of the Kingdom of Cambodia, which incentivize the Qualified Investment Projects (QIP) to modernize machinery, as stated in Article 27, to receive a cost deduction of up to 150% from the tax base for the modernization of machinery to serve the QIP's production line.

At meantime, the use of state-of-the-art ITC in local factories is still limited, as most of them still record transactions manually or by Microsoft Excel for the collection and keeping of information, which reflects the limitation of awareness of the benefits of digitalization and digital technology in the era of the Industry 4.0 among local factory owners and employees. Also, local investors are reluctant to invest in digitalization and digital technology, while the local workforce is not well equipped with skill to drive local factories to move towards modern technology.

2.6. Infrastructure

Since 2005, Special Economic Zones (SEZ) have been established across Cambodia to attract investment for export-oriented manufacturing, including the T&A sector. Investors in SEZs enjoy many benefits through the rights to apply for QIP status and receive the same incentives and protections as QIP. Investors in SEZs receive benefits including one-stop services, the status of QIP, well-established infrastructure and logistics, incentives on VAT exemption and special customs procedures. However, some T&A factories maintain their production locations outside the SEZ due to flexibility in selecting production locations of their preference and other favorable conditions.

On average, electricity costs contribute about 3% of the total cost of a CMT plant in Cambodia. Regarding the stability of electricity supply, the RGC, through the MME and Electricity Authority of Cambodia (EAC), has carried out its work to achieve the indicator "Guarantee of power outages not more than 12 times a year and the duration of power outages and no more than 24 hours a year." This indicator is also mentioned in the Cambodia Industrial Development Policy 2015-2025 and the key achievement indicators document for the implementation of the Rectangular Strategy Phase 4 of the RGC of the 6th Legislature of the National Assembly. The MME has also been promoting the implementation of energy efficiency policies and programs, including the training of energy auditors.

²¹ <https://survey.ituc-csi.org/Cambodia.html?lang=en#tabs-2>, Accessed on 25 June 2021

At the meantime, the logistics system in Cambodia is not yet adequate to support industrial activities to its full potential. Transport infrastructure is not adequate to meet demand due to high transportation costs, lack of transport vehicles, lack of road maintenance and lack of funding for development. These are some of the main challenges that Cambodian T&A factories are facing. In Cambodia, shipping takes longer than major regional competitors. On the other hand, most trucks in Cambodia are second-hand imports from South Korea, Japan, and the US. This increases the total transportation cost, especially for transporting goods to the ports of Vietnam and Thailand. Although the large trucking companies use IT/GPS systems to manage their fleet, its usage is low with the smaller family-run transport companies.

2.7. Trade and Internationalization

The domestic market of Cambodia is small and has a very low chance to be a major market for apparel. So, the Cambodian T&A industry needs to improve its share in global trade and strengthen its connection with the global supply chain. Cost competitiveness, better infrastructure, trade relations with major markets and supplier countries and favorable business environment will play major roles in achieving those objectives.

COVID-19 pandemic has reignited the discussion around near-shoring for the T&A industry. Global brands are planning to hedge their geographical risks, reduce inventory levels and lead times by procuring late and in lesser quantities from production bases nearer to the markets, even if the total production cost in some of those manufacturing bases is higher (e.g., Turkey for EU market) than their earlier sourcing points (e.g., Bangladesh, Myanmar, India etc.). It is posing a threat to the low-cost manufacturing destinations of South Asia, including Cambodia.

Cambodia may fully graduate of the LDC status as per the UN in the next few years, which will cause Cambodia to lose some favorable conditions in exporting its T&A products to major markets, especially the European Union. The loss of favorable (partial or complete) conditions, combined with the pressure of rising wages and low productivity of the Cambodian workforce, will have a negative impact on Cambodia's competitiveness in T&A industry.

Furthermore, Cambodia has a very high dependence on the People's Republic of China for the import of textiles. In 2019, 70% of Cambodia's total textile imports came from the People's Republic of China. But this over-dependence has caused major problems during the COVID-19 pandemic and the apparel manufacturers faced a significant shortage of fabric and other raw materials. The manufacturers are now looking to increase textile sourcing from neighboring markets in the ASEAN region to lessen their dependency on the People's Republic of China. The RGC is looking to strengthen infrastructure to be better connected with the ASEAN countries and move forward with an ASEAN 'one market' mentality.

2.8. Innovation

Foreign investors are less interested in investing in innovations in the T&A industry in Cambodia, as they perceive that such investments do not bring them much profit. At the same time, although the next generation of Cambodian entrepreneurs seems to be more interested and active in technology and innovation, most of these activities focus on the service sector rather than the industrial sector.

There are opportunities for upgrading the readymade garment industry in the following three areas. The government may encourage innovation in those three areas to improve the competitiveness of the Cambodian T&A industry.

1. Preproduction and production stages currently performed in Cambodia by foreigners,
2. Sourcing of inputs and arranging the logistics of shipments, currently carried out abroad at the headquarters of foreign multinational corporations with manufacturing locations in Cambodia, and
3. Creative design and branding, which could be done by private local firms while strengthening intellectual property rights.

2.9. Governance

Key factors in building and maintaining investors' confidence include the stability of legal and policy frameworks, transparency, strong and unbiased legal system, low level of corruption and above all skilled manpower for implementation of the acts/laws. The lack of strong coordinating and implementing mechanisms and capacity of institutions to implement new laws and regulations effectively and fairly is an issue that investors are still concerned about and can make it difficult to ensure compliance with the efficiency of business operations and promote a sustainable landscape. In this regard, Cambodia needs to strengthen the relevant institutional and regulatory framework to improve the quality of public services to support the industry, as well as strengthen the confidence of qualified investors.

3. Levers and Strategic Measure for T&A ITM

Industry transformation is crucial for the Cambodian T&A industry, owing to the changes that have happened in the external and internal environment in recent years. COVID-19 pandemic has fast-tracked a few existing business trends and initiated a few new trends. There is an increased focus on sustainability, industry 4.0, and technology adoption. The international trade flow is expected to change due to increased interest for nearshoring and efforts by major T&A manufacturing countries to become self-sustainable by building the total value chain.

The RGC adopted the **Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027** in 21 March 2022. Following pointers have been identified as focus areas for the short to medium term.

1. Strengthen human resources to increase productivity and create career paths for workers-employees
2. Improve working conditions and welfare of workers-employees
3. Promote domestic and foreign investments in high-extra value industries, and focus on expensive and unique products
4. Attract investment in supportive industry for this service sector, and
5. Promote marketing diversification of garments, footwear, and bags

Trade developments such as partial withdrawal of Cambodia's EBA trade benefits by the EU and Vietnam-EU free trade agreement are also expected to have a significant impact on the Cambodian T&A trade. Internal factors such as rising wages, low productivity, low level of interest among young people to join the T&A industry and limited focus on sustainability parameters are also posing challenges. Developing and implementing the **Industrial Transformation Map for Textile and Apparel Industry 2023-2027 (T&A ITM)** has thus become very important for the Cambodian T&A industry to maintain competitiveness and ensure sustained growth.

3.1. Objective

The **T&A ITM 2023-2027** was designed and formulated based on the evaluation of the global

and Cambodian T&A sector and the RGC’s GFT 2022-2027. The **T&A ITM 2023-2027** is complementary to the GFT 2022-2027 in the sense that it laid out the actionable measures for the RGC and relevant stakeholders for implementation. The objective for Cambodia’s T&A ITM 2023-2027 is *to build a competitive T&A industry with an increased focus on value addition, sustainability, technology adoption, skills and entrepreneurship*. It has four levers including product-mix and international trade, skilling and productivity, technology and sustainability, and infrastructure and governance.

Figure 2: Objectives and Levers of the T&A ITM 2023-2027



3.2. Strategic Levers and Measures

3.2.1. Product Mix

The Cambodian T&A industry is mainly manufacturing simple knitted apparel and the major exporting destinations are the EU, US, and Japan. It needs to align its product mix as per the international sourcing trends, backward integrate to reduce dependency on import and diversify its market mix. The business model needs to transform from the present cut-make-trim (CMT) to a more value-added Free on Board (FOB) format and policy reforms are required to improve the business environment. This strategic lever has the follow strategic measures as follows:

A. Align Product-Market Mix with International Sourcing Trends

The product mix needs to be aligned with the international sourcing trends, such as MMF made garments, which are high value-added products and in high demand in the international market instead of cotton garments. Cambodia’s top 3 apparel markets destination, namely the USA, Japan and Germany, account for 47% of its apparel export share while the top 10 markets round up 81% of Cambodia’s apparel exports. This indicates a concentrated market mix for the country which needs to be widened/diversified for better integration with the global value chain and internationalization. In this regard, Cambodia will promote the development of the textile and textile industry through the implementation of product development strategy and leveraging its present product strengths for market diversification.

B. Promote and Accelerate Backward Integration into the Textile Ecosystem

Backward integration for the manufacturing of finished fabrics and yarn needs to be encouraged. Cambodia will focus on the manufacturing of knitted fabrics (all fibers) and MMF-based woven fabrics for import substitution. In this regard, the RGC will provide fiscal and non-fiscal incentives on some of the key raw materials needed for the textile and apparel industry. In addition, the RGC will provide support to special economic zones that concentrate and focus on the development of specific value chains for textile and apparel industry. Meanwhile, the RGC will encourage investment in the manufacturing of accessories (e.g., buttons, zippers, laces, etc.) that help in the manufacturing of value-added products and become lesser dependent on imported materials. It will give the designers the flexibility to experiment with different accessories.

C. Promote the Business Transformation

The ecosystem of the Cambodian textile and textile industry includes fashion institutes, design studios, incubation centers, sample production units, and R&D centers. In this regard, all relevant stakeholders will cooperate to strengthen institutional mechanism and support the ecosystem of the textile and apparel industry to achieve the transformation of business model from CMT to FOB by promoting effective cooperation and linkage between local entrepreneurs and established fashion institutes and studios in order to promote the knowledge and know-how sharing. The RGC will also promote the engagement between the brands and retailers and encourage the setting up of buying and sourcing offices as well as design studios in Cambodia.

D. Develop Market

Market development activities need to be carried out by the Government and private sector to improve market access and support local businesses to grow. Actionable steps for market development are as below.

1. **Strategic market access arrangements:** the RGC carefully choose countries for developing and/or strengthening bilateral trade through bilateral/multilateral trade arrangements. In strategic selection, the RGC Cambodia will place more importance on key partner countries that provide GSP preferences and countries that are major markets for garment imports, such as the USA and the EU, and suppliers of raw materials.
2. **Market promotion activities:** the RGC and trade bodies will encourage major or leading trade fair organize visits to major foreign markets to strengthen trade relations, develop new sample products for exports and develop business to business or B2B aiming at expanding the prestige of Cambodia's textile and apparel products to the global brands.

E. Support New Entrepreneurs and Start-ups

The RGC, trade bodies, educational institutions and local investors take steps to facilitate start-ups and local investors through activities as follows: 1. Establish business incubation centers to create attractiveness and increasing start-up capital, 2. Strengthen the awareness of fundraising, such as the use of equity or concessional loans, 3. Identify new potential start-up to provide support for additional capacity building, help build business networks and support for market expansion, 4. Encourage joint venture between local entrepreneurs and foreign investors through tax incentives in compliance with the Law on Investment of the Kingdom of Cambodia, 5. Promote collaboration between local textile and apparel factories with well-known international design agencies and brand operating agencies, 6. Enhance the quality of fashion products and

establish more local brands to compete in the international market that can create high value-added, and 7. Incorporate entrepreneurship as a subject or course in the curriculum of CGTI and other TVET institutions.

3.2.2. Skills and Technology Development

Skills and technology are key factors in driving the success of Cambodian textile and apparel industry. In this regard, the RGC will promote the implementation of large-scale skilling to fill in the present and future skills gaps, build capacity of human resource to use ICT technologies and implement other key initiatives to improve skills-development ecosystem in textile and apparel industry. This strategic lever sets out the following key measures:

A. Develop Skills Framework for the T&A Industry

A **Skills Framework** provides up-to-date information on employment, career pathways, occupations, job roles, existing and emerging skills, and competencies, as well as relevant education and training programs. It also provides a list of training programs for upskilling. In this regard, the RGC will collaborate with the private sector in textile and apparel industry to disseminate and communicate skills development framework to employee and workers, employers, higher education institutions, technical and vocational training institutions and factories.

B. Develop National Digital and Online Learning Apps and Platform for the T&A industry

Cambodia has one of the highest penetrations of mobile phones in the world and the share of smartphones among mobile phone users is significantly high. Mobile learning can be an effective way to bring education to individuals. Standard curriculums with a full suite of training materials, preferably bite-size and stackable may be made available on the portals and through mobile apps. In this regard, the RGC in collaboration with the private sector promote the development of standard curriculums on the E-learning platform and mobile apps for the masses to learn and upskill in T&A industry. Programs available on the portal will include, but not limited to, basic literacy for Khmer and common business foreign languages, workplace numeracy, and STEM.

C. Promote the Experiential Learning and Internships

Experiential Learning Modules and internships of 3 to 6 months are the integral part of education and skilling especially for diploma and degree qualifications. In this regard, the RGC encourages the private sector to provide support through a stipend to the trainees during the internship period. Meanwhile, the RGC will provide incentives to the trainees and companies post completion of the course and placement.

D. Deepen Employer Involvement in Skill Development

Ensuring clear communication between the industry and TVET institutions is the most efficient way of ensuring that the skills development initiatives are in line with the industry's requirements. Therefore, the RGC will collaborate with the private sector to establish a strong network in order to communicate the skills in demand across the market. Employers have to involve in each phase of skilling – from conceptualization to implementation.

E. Enhance Job Portals

With the development of ITC such as big data and artificial intelligence, job websites such as

WorkNet, CamHR, Job Cambodia, etc. are an effective way to recruit and find jobs through improvement of the awareness level among the potential employers and trainees/job seekers. In this regard, Textile, Apparel, Footwear & Travel Goods Association in Cambodia (TAFTAC) and other relevant institutions in T&A industry will increase the dissemination of the above-mentioned job websites and how to use them to students, workers and employers throughout the education and training curriculum and job fairs.

F. Provide Professional Certification of Developers, Trainers and Assessors

A well-designed training and certification program for the development and upgradation of skills of training providers, developers, and assessors of the T&A industry is essential to ensure the quality of training. These courses will cover the T&A skills framework, curriculum and updating as per the industry needs, development of training materials as per the competency standards, training delivery techniques, assessment techniques, coaching, mentoring, digital marketing, etc. Trainers and assessors are required to have relevant working experience in the industry.

G. Incentivize Skills Development

The RGC has been encouraging the private sector to invest in the skills development of their employees and partners with training providers through leveraging the Skills Development Fund (SDF). Through this mechanism, employers and training providers and institutions are to submit proposals to the SDF to request incentives for technical training activities for their employees in the form of contributions to teachers 'and trainers' salaries, allowance for trainees, training materials, and other expenditures necessary for daily operations and administrative cost for trainings. In order to scale up the operations and enhance the efficiency of this mechanism, the SDF project will be to be institutionalized.

H. Establish a Sector Skills Council (SSC) for the T&A industry

The Cambodian Garment Training Institute (CGTI) currently manages a Skills Advisory Board (SAB) which comprises two officials from the MLVT and several members of the T&A industry. This SAB will be upgraded to a National Textile and Apparel Sector Skills Council—SSC and get managed by the TAFTAC with the participation of key members from relevant ministries, including the MLVT and other line ministries, and selected public and private training providers and institutions. The new SSC will focus on developing, validating and endorsing the T&A industry skilling ecosystem. Affiliated with the Government, the SSC will play a significant role in getting employers and training partners more involved in all aspects of skilling and identifying skillset demand trends by the industry, emerging job roles, skills development, research, and publications of reliable and accurate labor market information, supporting the development of qualifications and programs that meet the needs of employers at the present and in the future.

I. Develop Centers of Excellence

Cambodia needs a steady supply of highly skilled workers to boost productivity and sustain the growth momentum of the industry. Centers of Excellence (COEs) will be developed within the existing factory premises/training institutes for achieving significant improvement in the quality of training covering to raise standards and productivity and stimulate innovation and applied learning in the T&A industry. In this regard, the Ministry of Industry, Science, Technology and Innovation (MISTI) will cooperate with the CGTI to establish the Centers of

Excellence, starting the first step as a pilot project focusing on increasing the productivity of sewing machine operators to a global standard. The Centers of Excellence can also act as a factory or laboratory for testing, demonstrating and piloting products, production methods, software and new technologies. Following the successful implementation of the pilot project, the Royal Government, development partners and business associations will support and encourage the widespread implementation of this model in factories and other technical and vocational training institutes.

J. Establish and Promote Best-In-Class Collaborations for Skills Development

International collaborations with best-in-class institutions or organizations for transferring knowledge to local institutions and local trainers is one of the essential factors for the development and enhancement of competitiveness in the T&A industry. These overseas educational institutes can help speed up digital learning content acquisition through licensing, development and or partnerships. Thus, the RGC and relevant agencies will establish and promote the best-in-class collaboration with overseas well-prestigious institutions and agencies in the T&A industry in the form of collaboration or partnership between local TVET institutions and foreign training institutions to provide opportunities to local trainees and trainers for internships, study visits, production machinery and equipment development, software and/or system for vocational training, using public-private partnership mechanisms.

K. Develop Advanced Skillsets for the T&A Industry

Over the past decade, T&A industry has observed significant changes in technology levels, both at the manufacturing level and supporting system level. The Cambodian T&A industry needs to develop advanced skillsets, both in technical and soft-skill domains, to remain competitive. The RGC set the actionable measures as follows:

1. **Lean manufacturing and 5S methodology²² absorption and adoption:** The implementation of lean manufacturing and 5S methodology in production does not only contributes to the increase in productivity but also contributes to the efficient and sustainable use of resources. Thus, the RGC will support the TAFTAC and CGTI to attract experts in lean manufacturing and 5S methodology in production from foreign countries to build capacity of local experts and talents as to promote the absorption and implementation this new production method across the T&A factories in Cambodia.
2. **Strengthening education and TVET institutions:** Improving the infrastructure of education and TVET institutions is essential to development human capital in T&A industry effectively. Thus, the private sector in T&A industry, in collaboration with the RGC, needs to build higher advanced technical skills and critical core skills and develop degree apprenticeship programs necessary for high value-added production and more recruitment of local employees to middle-and senior-level management positions.

3.3. Sustainability and Innovation

Adoption of the cleaner production system is critical to remain competitive in the global market and this needs to be adopted at the firm level as well as industry level with the support of the Government. The industry needs to selectively adopt IR4.0 technologies and invest in R&D for innovations. The RGC set the following actionable measures in this lever as follows:

²² 5S Methodologies include: 1. Sort, 2. Set in order, 3. Sustain, 4. Standardize, and 5. Shine.

A. Adopt Resource Efficient Cleaner Production

1. **Strengthening environmental and social compliance legislation:** The RGC will launch law, guidelines and minimum compliance level on social and environmental aspect, in line with other competing countries and the minimum standards set by the global brands, after consultation with relevant stakeholders.
2. **Strengthening institutional and individual capacities:** The RGC will collaborate with international development agencies and industry experts for capacity development measures of institutions and individuals on environmental and social compliance.
3. **Multi-stakeholder initiative for cleaner production:** The RGC, development partner, trade bodies and training institutions will prepare and implement initiatives for resource-efficient cleaner production, in particular, reducing the usage of water, chemical and energy, and improving resource efficiency through reduce, reuse and recycle.

B. Adopt Sustainability Initiatives at Firm Level

The RGC will encourage T&A manufacturers to implement several initiatives and best practices to improve the sustainability of their operations through the following measures.

1. Establish sustainability committee, with clear roles, responsibilities and KPIs,
2. Build capacities regarding substantiality by carrying out awareness sessions across all levels and departments,
3. Carry out a baseline assessment of the performance of environmental (energy, water, waste, chemical, air emissions etc.) and social KPIs (injury rate, training hours etc.), and setting yearly improvement targets,
4. Invest in technology upgradation and resourcing saving technologies, and
5. Track the project progress with data capturing (using meters, sensors, operations data etc.) and analysis and prepare and publish or disseminate the monitoring and evaluation report to buyers and brands on the annual basis.

C. Incentivize R&D and Technology Adoption

Government will give incentives for technology adoption or setting up an R&D center at the manufacturing plant or the cluster level, following the actionable steps:

1. Facilitate and incentivize T&A industry to visit, gain experience of using new overseas technologies, and provide assistance or loans for innovation projects and the adoption of new technologies, as well as provide incentives in the form of tax credit, or certain deductions in accordance with the conditions set out
2. Promote collaborative research and development between relevant stakeholders, including manufacturers, designers, suppliers of raw materials, suppliers of technology, suppliers of chemicals and suppliers of spare parts, to share and exchange knowledge and ideas for innovation or product development and new production method and register the intellectual property right, and
3. Incentivize the installation of cleaner production technologies and practices in T&A industry through green fund established in collaboration with financial institutions, international development bodies and relevant Government departments. This fund can be used to offer soft loans to encourage the adoption of resource-efficient cleaner production by T&A manufacturers.

D. Implement Machinery Leasing Mechanism

The RGC and/or trade body will provide subsidies and develop a leasing mechanism for installment of select technologies. Under the leasing mechanism, the RGC and/or trade body may hold the ownership of the machine and install it within the manufacturing facilities of the interested investors. The investors shall pay a monthly rental to Government and/or trade body to pay back the total cost of the machinery including the interest amount if any. The Government and/or trade body shall transfer the ownership of the machinery in the name of the manufacturer after receiving the total amount. This will help the technology upgradation of those companies who are interested but finding it difficult to make such large investments.

E. Implement Selective and Gradual Adoption of Industry 4.0

The RGC will support and incentivize the selective and gradual implementation of Industry 4.0 technologies, such as 3D Virtual Sampling and prototyping, IoT sensors, Robotic process automation, big data and analytics, RFID, Blockchain Technology, Augmented reality (AR) and virtual reality (VR) applications. In order to effectively capture and implement these technologies, the RGC has put in place the following measures:

1. Strengthen the cooperation between the RGC, the TAFTAC and software integrators/EFP/MIS service providers to develop and introduce advanced ERP/ software packages among small and medium-sized manufacturers,
2. Promote collaborations between international technology suppliers and T&A manufacturers to build training bases that provide classroom and on the job training of supervisors and engineers on the latest technologies and processes by providing financial support within a specific period of time,
3. Promote and develop a knowledge dissemination center for informing the industry about the latest technological developments, which benefits them in adopting new technologies,
4. Implement pilot plant projects to test the short-term, medium- and long-term IR 4.0 technology using public-private partnership mechanisms, and
5. Collaborate with the TAFTAC to hold exchange knowledge and promote innovation in the T&A industry by awarding the prizes to the winners.

3.4. Infrastructure and Governance

Existing and upcoming industrial parks need to have required support facilities for manufacturing the products sustainably, keeping the manufacturing cost low and improving the living conditions of the inhabitants. In addition, all stakeholders need to improve the image of the industry to attract local talent and entrepreneurs. The following are the actionable measures for this lever.

A. Develop and Improve Industrial Parks

The RGC and TAFTAC will take the joint initiative to develop new industrial parks / improve the existing industrial parks with common facilities like ZLD plant, waste collection and disposal facility, and continuous supply of high-quality power, which will help the industries to reduce the overall cost of production, provide better facilities to their employees and improve the sustainability index. Moreover, the RGC have also been providing non-tax incentives for investing in special economic zones or industrial parks to attract and centralize T&A industrial activities to develop this sector.

B. Promote the Use of Renewable Sources of Energy

The RGC, through the Ministry of Mines and Energy (MME), has approved the Power Development Plan 2022-2040. Through this master plan, Cambodia will invest in modernization in the electricity sector, which will enable the grid to absorb 29% of electricity generation from solar energy, equivalent to 3,100 megawatts by 2040. To ensure the sustainable development of the electricity sector and the stability of the electricity supply, Cambodia needs to fully manage the use of solar energy. In this regard, MME is developing a regulation for permitting the use of rooftop solar in Cambodia, which is scheduled to be implemented in 2023. This regulation will enable factories to use rooftop solar in a suitable condition that can maintain the sustainability and stability of the electricity sector. Similarly, Cambodia also officially implemented the National Energy Efficiency Policy 2022-2030 in December 2022.

C. Enhance Multi-Modal Transport and Logistics System

Multi-modal transport and logistics system not only support the development of SEZs but also serves as a catalyst for the development of industry and other sectors in Cambodia. In this regard, Cambodia has been preparing a **Comprehensive Masterplan on Intermodal Transport System 2022-2030**, with the vision of continuing to improve and develop the transportation and logistics system by focusing on promoting the construction of physical and non-physical infrastructure towards a highly connected and complex transportation system that will continue to contribute to the promotion and support of national economic growth, as well as meet the socio-economic needs in a sustainable and inclusive manner. The RGC is also focusing on expanding its deep-sea port and container terminal capacities. The upcoming Phnom Penh Logistics Centre and Prey Vor-Binh Hiep international border checkpoint will help the Cambodian T&A industry to reduce the lead time & transportation costs significantly and improve its competitive position in the global market.

D. Set up and Develop Warehouse Facilities

The RGC will study the feasibility of organizing and developing a bonded warehouse facility for helping the exporters in importing and storing input materials (like yarn, fabric, dyes, chemicals, packaging materials, etc.) for production. The government will also set up a large warehouse space in rent on a long-term basis and provide that to garment exporters on a chargeable basis. The bonded warehouse facility will help the manufacturers to keep stock of regular products in the target markets and reduce the lead time significantly which in turn may help to improve Cambodia's market share in the textile and garment exports.

E. Enhance ICT Enabled Systems and Processes

The use of ICT technology in the T&A industry plays an important role for better efficiency, transparency, accountability and M&E. In this regard, the RGC and TAFTAC will carry out awareness sessions for T&A enterprises on Government's Online business registration platform "Single Portal" and KhmerSME website. At the same time, the RGC will also

strengthen the capacity of institutions and officials to promote the use of ICT and digital technology.

G. Strengthen Multi-Stakeholder Consultative Process for Effective Governance

Governance mechanisms for the T&A industry require extensive cooperation among all stakeholders to promote transparency in decision-making processes, particularly with regard to the introduction of new laws or amendments to existing laws, consistency in the application of laws or regulations to all stakeholders and other regulations regarding the use of various technologies in the production process. The RGC will strengthen the role of private sector, including TAFTAC and other relevant associations in Cambodia's Government-Private Sector Forum (G-PSF) by establishing an ad-hoc working groups for this forum. In addition, the RGC will establish an inter-ministerial working group as necessary or enhance the effectiveness of existing mechanisms to strengthen the governance of the T&A industry to address priority challenges.

H. Image enhancement of textile and apparel industry

The Government and the industry play important roles for enhancing the image of the T&A industry as an attractive choice for the workforce. In this regard, the RGC will cooperate with private sector and development partners to implement measures including: 1. Collaborate with well-established factories to raise awareness among young people about the variety of lucrative career options available in the T&A industry; 2. Organize study tours for secondary school students to model factories in the T&A industry and representative offices or branches of world-renowned brands to stir interest in their minds about potential career options in the T&A industry; 3. Promote Partnerships with the local media industry may be done to create awareness of careers in the T&A sector; and 4. Conduct community outreach programs and awareness campaigns to share the opportunities available in the T&A sector highlighting success stories across the nation.

4. Institutional Arrangement for Implementation and Monitoring and Evaluation

Cambodia's textile and apparel industry has arrived at a turning point which provides the opportunity to restructure and strengthen the base for diversification and competitiveness of the industry in a way that allows it to better contribute to the country's development goals. Failure to implement measures under this strategy to capture the aforementioned opportunities will negatively affect the economic growth and Cambodia's development in the context of rapidly changing regional and international architecture.

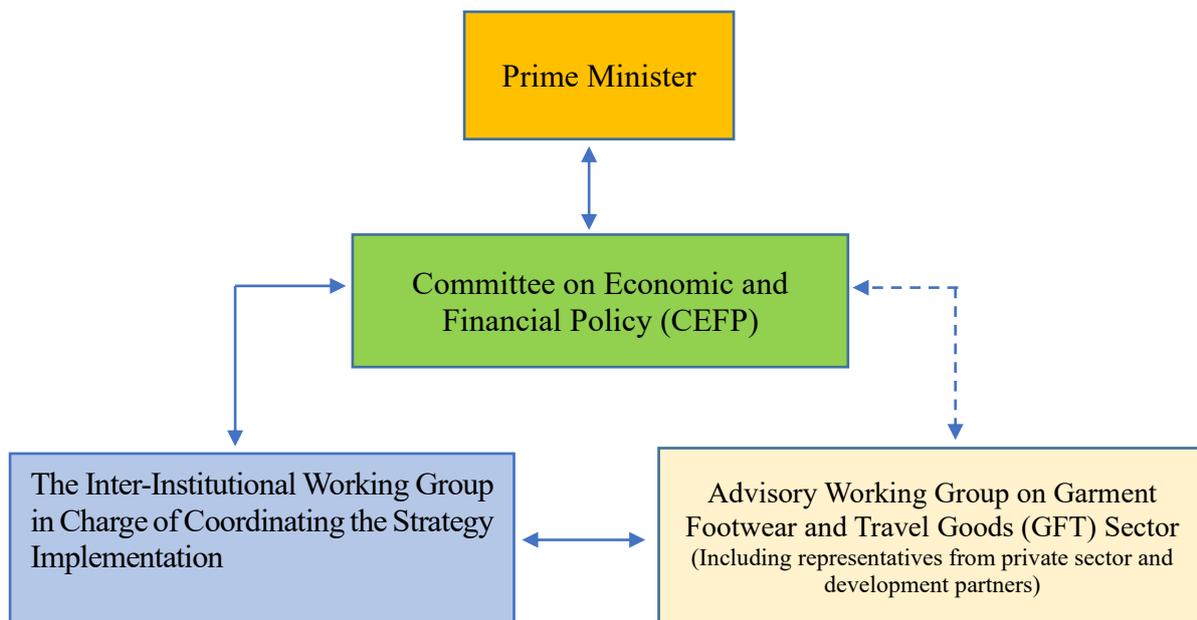
As a matter of fact, the inter-agency coordination with relevant stakeholders is essential for the successful implementation of this strategy. The formulation of a well-coordinated and interlinked institutional arrangement is the prerequisite for the strategy to reach its objective. As **T&A ITM 2023-2027** aims to serve as the implementation document for the Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027 issued in February 2022, the RGC will employ the existing inter-agency mechanism from the GFT strategy to implement this ITM.

4.1. Structure of Institutional Arrangement

The RGC has acknowledged the essence in employing the inter-agency mechanism to coordinate and monitor the implementation of this ITM under the leadership of the Committee on Economic and Financial Policy (CEFP) that will coordinate with relevant ministries and institutions on the measure implementation, recommendation, and reporting to the RGC. In the implementation phase, the responsible ministries and institutions must prepare a specific action plan with a clear timeline for each activity of the strategic measures under the monitoring of CEFP, as well as coordination from the Inter-institutional Working Group in Charge of Coordinating the ITM which is a part of the interagency mechanism.

The RGC will also employ the existing Advisory Working Group on the Garment, Footwear and Travel Goods Sector, which consists of representatives from the private sector, development partners, independent experts, associations and unions to provide an additional source of inputs aiming to facilitate the comprehensive implementation of this ITM.

Figure 3: Structure of Institutional Arrangement



4.2. The Inter-Institutional Working Group in Charge of Coordinating the ITM Implementation

The implementation of this ITM will be coordinated by the existing Inter-Institutional Working Group in Charge of Coordinating the Strategy Implementation for the Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027 or “Inter-Institutional Working Group” which was established and consisted of members from relevant ministries and institutions, while being led and coordinated by the General Secretariat of Committee on Economic and Financial Policy (GS-CEFP), with the following roles and responsibilities:

- Coordinate and promote the preparation of Key Performance Indicators (KPIs) and Timeframe of the responsible ministries and institutions to prepare a detailed Action Plan for the purpose of implementing and accomplishing the measures within this ITM,

- Collaborate with responsible ministries and institutions to provide support to CEFP in preparing the Monitoring and Evaluating Framework (M&E) for the implementation of this ITM,
- Coordinate with responsible ministries and institutions in addressing challenges in implementing this ITM and in the garments, footwear and travel goods sector through existing mechanisms, before submitting a request to CEFP for review and further procedures,
- Coordinate with **the Advisory Working Group on the Garment, Footwear and Travel Goods Sector** to discuss and address any concerns and challenges in the textile and apparel sector,
- Act as a “One-Stop Service” for public relations with relevant partners in the textile and apparel sector
- Report on work progress and the implementation of this ITM to CEFP
- Request for the review of this ITM, if necessary; and
- Perform other tasks as required.

4.3. The Advisory Working Group on the Garment, Footwear and Travel Goods Sector

In the implementation of this ITM, the RGC will employ the existing Advisory Working Group on the Garment, Footwear and Travel Goods Sector, which is an ad-hoc working group that may be established to provide another source of inputs aiming at facilitating the effective implementation of this ITM. This Advisory Working Group will act as a checks and balances and complementary system, particularly to provide recommendations to CEFP on the implementation of this strategy. This Advisory Working Group’s role and responsibilities are defined as follows:

- Provide advice and recommendations to CEFP,
- Cooperate with the Inter-Institutional Working Group and relevant ministries and institutions to provide inputs for the preparation of action plan for the implementation of this ITM;
- Contribute to the preparation of the Monitoring and Evaluating Framework (M&E) for the implementation of this ITM;
- Attend meetings to monitor progress of the implementation of this ITM;
- Mobilize necessary support from relevant stakeholders, both technical and financial, to promote the implementation of this strategy; and
- Perform other tasks as required.

5. Conclusion

To strengthen the diversification of economic base as well as competitiveness the RGC has put forward this “**the T&A ITM 2023-2027**”. The ITM provides a common direction towards more sustainable and inclusive development of the T&A industry and serves as the implementation document for the Cambodia Garment, Footwear and Travel Goods (GFT) Sector Development Strategy 2022-2027 recently issued by the RGC.

To realize the objectives of this ITM, the implementation of the measures requires enhanced inter-ministerial coordination, commitment as well as interactive and proactive participation from ministries-institutions and all relevant stakeholders, particularly textile and apparel

industry, by adhering to the approaches and recommendations of **Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia**, which includes **“Self-Reflection, Showering, Dirt Scrubbing, Treatment and Surgery”**, and **“Reforming Internally and Making Friends Externally Based on a Spirit of Strengthening Independence and National Sovereignty.”**

The achievement of this ITM will play a key role in transforming this industry into an industry that is environmentally sustainable, resilient, and high value-added, has a skilled labor force, has a decent workplace and improved productivity, is integrated into global and regional supply chains and value chains, and has a good business environment and partnership between the government, employers, unions and other stakeholders. This ITM will also contribute to the enhancement of competitiveness and economic diversification and build necessary fundamentals to achieve 2030 milestone and Cambodia Vision 2050.

Annex: Levers and Strategic Measures

Levers	Strategic Measures		Responsible Ministries/Institutions
1. Product Mix and Internationalization	2023-2027	Align product-market mix with international sourcing Trends (High value-added and high-end products)	<i>Government:</i> Ministry of Commerce, Ministry of Economy and Finance, Ministry of Industry, Science, Technology and Innovation, Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC
		Promote and accelerate backward integration into the textile ecosystem	<i>Government:</i> Ministry of Commerce, Ministry of Economy and Finance, Ministry of Industry, Science, Technology and Innovation, Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC
		Promote the business transformation of T&A industry from CMT model to FOB model.	<i>Government:</i> Ministry of Commerce, Ministry of Economy and Finance, Ministry of Industry, Science, Technology and Innovation, Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC
		Develop market for the Cambodian T&A through strategic market access arrangements and market promotion activities.	<i>Government:</i> Ministry of Commerce Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC
		Support new entrepreneurs and start-ups in T&A industry	<i>Government:</i> Ministry of Economy and Finance/ Khmer Enterprise, Ministry of Commerce, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC, CAMFEBA
	2023-2024	Develop skills framework for the T&A industry	<i>Government:</i> National Training Board /Ministry of Labor and Vocational Training, Ministry of Education, Youth and Sport, Ministry of

Levers	Strategic Measures		Responsible Ministries/Institutions
2. Skills and Technology Development			Economy and Finance, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC, CAMFEBA
	2023-2027	Develop national digital and online learning apps and platform for the T&A industry	<i>Government:</i> National Training Board/Ministry of Labor and Vocational Training, Ministry of Education, Youth and Sport, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC/CGTI, CAMFEBA
		Promote the experiential learning and internships	<i>Government:</i> Ministry of Labor and Vocational Training, Ministry of Economy and Finance, Ministry of Education, Youth and Sport <i>Private Sector:</i> TAFTAC, CAMFEBA
		Deepen employer investment in skills development	<i>Government:</i> National Training Board /Ministry of Labor and Vocational Training, Ministry of Economy and Finance, Ministry of Education, Youth and Sport, Ministry of Industry, Science, Technology and Innovation, Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC, CAMFEBA
	2023-2024	Enhance job portals	<i>Government:</i> Ministry of Labor and Vocational Training/ National Employment Agency <i>Private Sector:</i> TAFTAC, CAMFEBA
	2023-2027	Provide professional certification of developers, trainers and assessors	<i>Government:</i> Ministry of Labour and Vocational Training <i>Private Sector:</i> TAFTAC, CAMFEBA
		Incentivize skills development	<i>Government:</i> Ministry of Economy and Finance, Ministry of Labor and Vocational Training

Levers	Strategic Measures		Responsible Ministries/Institutions
			<i>Private Sector:</i> TAFTAC, CAMFEBA
	2023-2024	Establish a sector skills council (SSC) for the T&A industry	<i>Government:</i> Ministry of Labor and Vocational Training <i>Private Sector:</i> TAFTAC, CAMFEBA
		Develop centers of excellence for the T&A industry	<i>Government:</i> Ministry of Labor and Vocational Training, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC/CGTI, CAMFEBA
	2023-2027	Establish and promote best-in-class collaborations for skills development	<i>Government:</i> Ministry of Labor and Vocational Training, Ministry of Education, Youth and Sport, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC, CAMFEBA
		Develop advanced skillsets for the T&A industry focusing on lean manufacturing and 5S methodology absorption and adoption and strengthening education and TVET institutions	<i>Government:</i> Ministry of Labor and Vocational Training, Ministry of Education, Youth and Sport Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC, CAMFEBA
3. Sustainability and Innovation	2023-2027	Adopt resource efficient cleaner production by strengthening environmental and social compliance legislation, strengthening institutional and individual capacities and promoting multi-stakeholder initiative for cleaner production	<i>Government:</i> Ministry of Industry, Science, Technology and Innovation, Ministry of Environment, Ministry of Mines and Energy, Ministry of Economy and Finance <i>Private Sector:</i> TAFTAC
		Adopt sustainability initiatives at firm level	<i>Government</i> Ministry of Industry, Science, Technology and Innovation, Ministry of Economy and Finance Council for the Development of Cambodia, Ministry of Commerce

Levers	Strategic Measures		Responsible Ministries/Institutions
			<i>Private Sector:</i> TAFTAC
		Incentivize R&D and technology adoption	<i>Government:</i> Ministry of Industry, Science, Technology and Innovation, Ministry of Economy and Finance, Council for the Development of Cambodia Ministry of Commerce <i>Private Sector:</i> TAFTAC
		Implement machinery leasing mechanism	<i>Government:</i> Council for the Development of Cambodia, Ministry of Economy and Finance <i>Private Sector:</i> TAFTAC
		Implement selective and gradual adoption of industry 4.0	<i>Government:</i> Ministry of Industry, Science, Technology and Innovation Ministry of Economy and Finance <i>Private Sector:</i> TAFTAC, CAMFEBA
4. Infrastructure and governance	2023-2027	Develop and improve industrial parks	<i>Government:</i> Council for the Development of Cambodia, Ministry of Economy and Finance, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC
		Promote the use of renewable sources for energy	<i>Government:</i> Ministry of Mines and Energy, Ministry of Economy and Finance, Ministry of Environment, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC
		Enhance multi-modal transport and logistics system	<i>Government:</i> Ministry of Public Works and Transport, Ministry of Economy and Finance <i>Private Sector:</i> TAFTAC, CAMFEBA

Levers	Strategic Measures		Responsible Ministries/Institutions
		Set up and develop warehouse facilities	<i>Government:</i> Ministry of Economy and Finance, Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC
		Enhance ICT enabled system and process	<i>Government:</i> Ministry of Commerce, Ministry of Posts and Telecommunications, Ministry of Economy and Finance, Ministry of Industry, Science, Technology and Innovation <i>Private Sector:</i> TAFTAC
		Strengthen multi-stakeholder consultative process for effective governance	<i>Government:</i> Committee on Economic and Financial Policy /Ministry of Economy and Finance, Ministry of Labor and Vocational Training, Ministry of Environment, Ministry of Industry, Science, Technology and Innovation, Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC, CAMFEBA
		Promote the image enhancement of T&A industry	<i>Government:</i> Ministry of Commerce Ministry of Labor and Vocational Training Ministry of Industry, Science, Technology and Innovation, Ministry of Economy and Finance, Council for the Development of Cambodia <i>Private Sector:</i> TAFTAC, CAMFEBA

Glossary

Terms in English	Definition
MMF (Man Made Fibers)	Types of artificial fibers that have been modified chemically by incorporating physical and structural components into the manufacturing process, for example, polyester fibers.
Natural Fibers	Types of fibers directly obtainable from animals, vegetable, plants or other natural minerals that can be converted into yarn.
Polyester	A type of artificial fibers made of plastic derived from petroleum.
Ginning	The process of drying and cleaning the cotton fibers by removing seeds and debris (soil, gravel, leaves, etc.) to obtain pure cotton fibers.
Spinning	The process of twisting various fibers into sewing thread or knitting / weaving yarn.
FOB (Free-on-Board)	Responsibilities through the freight agreement that the manufacturer is responsible for the goods until it is loaded on board of the ship/aircraft nominated by the purchaser (beyond Cut-Make-Trim).
CMT (Cut-Make-Trim)	Production steps defined by Step 1 Cut: cut to pattern, Step 2 Make: sew the fabric and form a garment, and Step 3 Trim: align the edges or correct errors and require quality control and packaging.
B2B (Business-to-Business) Marketplaces	A commercial transaction that is carried out on a digital marketplace platform for the purpose of purchasing products or services carried out between businesses (as opposed to transactions between businesses and consumers).
Job Portals	Online sites where job seekers can search for jobs and employers can advertise jobs and effectively search for qualified candidates for relatively low costs.
Skilling Ecosystem	a system or an interrelation between the labor market, skills and training institutions to support sustainability, innovation and development in a given area or sector.
Centre of Excellence	A place where the highest textile and apparel standard are maintained with the team of various responsibilities uses their knowledge to help other areas by providing tips, training and research to achieve excellence.
Degree apprenticeship programs	A new route to gain a traditional degree, whilst working on the job in a role with training.
Lean Manufacturing Adoption	A production method aimed primarily at reducing wastage within the production system to maximize production efficiency.
5S Methodologies	A five-step methodology for creating a more organized and productive workspace: 1. Sort, 2. Set in order, 3. Sustain, 4. Standardize, and 5. Shine.
Resource Efficient Cleaner Production (RECP)	The continuous application of an integrated preventive environmental strategy to processes, products and services to increase efficiency and reduce risks to humans and the environment.
Ethical supply chains	A practice that focuses on the need for corporate social responsibility, working to produce products and services in a way that treats its workers and the environment ethically.
Backward Integration	A process in which a company buys or merges with other companies that supply the raw material requirements for each production process.