Kingdom of Cambodia

Nation | Religion | King

Royal Government of Cambodia

Cambodia

Automotive and Electronics Sectors Development Roadmap

cross-cutting strategies

Business & Investor Friendliness

Human Capital & Innovation

Trade Facilitation

Infrastructure

Kingdom of Cambodia

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Automotive and Electronics Sectors Development Roadmap

Foreword

In the shade of peace and stability, over the past two decades the Royal Government of Cambodia has made many noteworthy achievements for the country, especially in maintaining high economic growth—a crucial factor contributing to the development, poverty reduction, and improvement of the people's living standards, in line with the Rectangular Strategy and the National Strategic Development Plan. Despite fruitful achievements, since the last 2 years the COVID-19 pandemic has disrupted the growth of the Cambodian economy as well as its medium- and long-term development paths, and has adversely affected pillars of the economy, especially on tourism sector—a key contributor to Cambodia's economic growth. Responding to this crisis, the Royal Government has independently introduced measures that are timely, proactive, and pragmatic-based with active participation of the Cambodian people to build herd immunity in the community. The implementation of the new health and administrative measures, and national vaccination campaigns, as well as strategies and policies aimed at protecting people's lives and health, while at the same time promoting socio-economic recovery.

However, in addition to the Covid-19 pandemic, other challenges including geopolitical competition, trade and technology wars, climate change, and inflationary pressures arose from energy, food and financial crises as the consequences of the imposed economic sanctions among superpowers triggered by the war in Ukraine, have also caused market turmoil and instability in the international financial system and disrupted global supply chains. To counter these crises as well as getting ready to capitalize on new opportunities, the Royal Government has been promoting economic diversification towards high value-added and crisis-resilient sectors to restore and strengthen the foundation for socio-economic development to become stronger, more inclusive and sustainable.

In this context, the Royal Government has identified the automotive and electronics sectors as priority sectors to attract investment and create high-skilled and high-paying jobs to contribute to the recovery and resilience of the Cambodian economy after the COVID-19 pandemic. The identification of both sectors as priorities corresponds to the **Cambodia Industrial Development Policy 2015-2025** and the **Strategic Framework and Programmes for Economic Recovery in the Context of Living with COVID-19 in a New Normal 2021-2023**. In this regard, the "**Cambodia's Automotive and Electronics Sectors Development Roadmap**" has been formulated to guide the development of the automotive and electronics sectors in Cambodia by defining the long-term vision, development pathways and concrete measures to address investors' challenges by adopting an agile and flexible approach for implementation. Having this roadmap in place, Cambodia can reap maximum benefits from window of opportunities emerging from key trends that will shift the future value chains, as well as modernize and diversify industrial base towards new production activities with higher value addition and improved skills and specialization of the Cambodian dexterous workforce.

In the name of the Royal Government of Cambodia, I would like to extend my sincere and high appreciation to the Council for the Development of Cambodia and all relevant government ministries/institutions and stakeholders for their leadership and coordination roles in producing this important roadmap with quality and efficiency in a proactive, responsible and

cooperative spirit. I would also like to express my deep gratitude to the Government of the United Kingdom for providing support and cooperation, via the Accelerated COVID-19 Economic Support Programme (ACES), to the Royal Government in preparing this roadmap. I also wish to thank the private sector and all stakeholders for providing inputs and contributing to the orientation of these two sectors development, in the spirit of close partnership.

Finally, I strongly believe that this roadmap will serve as an important guide for promoting the development of the automotive and electronics sectors to contribute to the socio-economic development of Cambodia in a sustainable, resilient, and inclusive manner. I would like to encourage all relevant ministries/institutions, private sector, and stakeholders to implement and jointly implement all the initiatives put forward in this roadmap with a strong will and a high sense of responsibility in pursuit of ensuring successful development of both sectors as expected.

Phnom Penh, 9 February 2022

Prime Minister

(Signed and Stamped)

Samdech Aka Moha Sena Padei Techo Hun Sen

Preface

Under the wise and long-term visionary leadership of **Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia**, the Royal Government of Cambodia has maintained peace and political stability and made significant progress on its development agenda in all sectors, especially in strengthening the industrial base, which is an important factor in promoting inclusive and sustainable economic growth. However, the outbreak of the COVID-19 and other uncertainties in the global economy have negatively affected key sectors that drive Cambodia's economic growth, which requires the government to embark on new policies and/or measures to respond effectively.

In this context, the need to accelerate the diversification of production base and strengthen the competitiveness of the economy by fostering the attractiveness of the targeted and high-value-added industrial activities are increasingly urgent and imperative. Based on this demand, **the Cambodia's Automotive and Electronics Sectors Development Roadmap** has been prepared as a guide to orientate and accelerate the development of the two sectors which the government has been earmarked as high-potential priority sectors for boosting economic growth, especially in the post COVID-19 pandemic era.

This roadmap has the vision of transforming Cambodia into a production hub of automotive and electronic components for export to regional and global markets, starting with the production of simple components and move up to building a skilled-based and high value-added ecosystem for automotive and electronic component suppliers in the long term. To achieve this vision, the Cambodia's Automotive and Electronics Sectors Development Roadmap has identified 20 high-impact initiatives in five (5) areas, including: 1) cross-ministerial strategies and coordination, 2) human capital and innovation, 3) infrastructure, 4) trade facilitation, and 5) business and investor friendliness.

I am of optimistic view that this roadmap will serve as an important document that will provide guidance to future workplan and how line ministries/ institutions, private sector, and all stakeholders can contribute to promoting the development of the automotive and electronics sectors in Cambodia. Concurrently, to ensure that all challenges identified in this roadmap are effectively and timely addressed require a high degree of cooperation and responsibility from all stakeholders.

Finally, on behalf of the Council for the Development of Cambodia, I would like to extend my heartfelt appreciation to all representatives of ministries/institutions, stakeholders, the CDC's Secretariat for leading and coordinating the implementation of the IDP, and the Boston Consulting Group (BCG) for actively participating in the preparation of this document. I also would like to thank the Government of the United Kingdom, through the British Embassy in Cambodia, for supporting the implementation of the Accelerated COVID-19 Economic Support Programme (ACES) to contribute to promoting Cambodia economic recovery. Furthermore, I would like to express my deepest gratitude to **H.E. Akka Pundit Sapheacha Aun Pornmoniroth** , Deputy Prime Minister, Minister of Economy and Finance and Chairman of the

Economic and Financial Policy Committee, for his unwavering support throughout the ACES programme's implementation and the development of this roadmap.

Phnom Penh, 2 December 2022

Senior Minister in charge of Special Mission

Vice Chairman of the Council for the Development of Cambodia

(Signed and Stamped)

Chin Bunsean

Contents

Executive Summary

The Automotive and Electronics sectors have been earmarked as priority sectors for Cambodia to develop. Through partnership with the private sector, these sectors have grown rapidly in recent years. Automotive component exports have more than tripled from USD 60 million in 2015 to USD 200 million in 2019, while Electronics exports have grown at 20% CAGR from around USD 400 million in 2015 to around USD 900 million in 2019. Going forward, the Royal Government of Cambodia (RGC) is committed to developing these sectors further, to drive Cambodia's economic recovery and long-term growth and transform Cambodian industry from labour-intensive to skill-based industry, and integrate into regional value chains, in line with the Cambodia Industrial Development Policy 2015-2025.

For the automotive sector in the near-term, Cambodia will focus on the on-going opportunity to grow the manufacturing of simpler, more labour-intensive Automotive components for export (e.g., wiring harnesses, seats and simpler electronics and electrical components), while increasing backward linkages for locally assembled two-wheelers. **For the electronics sector, the near-term focus will be on the on-going opportunity to grow Cambodia's presence in simple components and sub-assembly (e.g., cables and connectors, PCB assembly).** This approach takes maximum advantage of Cambodia's current sources of competitive advantage, such as its cost-competitive and dexterous workforce, strategic location close to fast-growing Automotive manufacturing and assembly hubs in Thailand and Vietnam, and favourable trade agreements with key automotive and electronics export markets.

Subsequently, Cambodia's mid-term goal will be to move up the value chain into the **manufacturing of more complex Automotive components**, and **higher value-added electronics assembly and design**. In the long run, Cambodia aims to become an **automotive component manufacturing hub**, making a wide range of low-to-medium complexity components for export, as well as an **integrated electronics production hub**, present throughout the value chain in design, components manufacturing, sub-assembly, and final assembly.

To realise this vision for Cambodia's Automotive and Electronics Sectors Development, **the RGC is committed to implementing a comprehensive cross-ministerial action plan for the two sectors that will make it easier for investors to set up operations in Cambodia, and increase the cost-competitiveness of their operations**. The combined action plan comprises 20 initiatives across the following five areas:

- **Cross-ministerial strategies and coordination:** Key initiatives include the identification of locations/SEZs for automotive and electronics sectors clusters, and strengthening cooperation with neighbouring countries like Thailand and Vietnam.
- **Human capital and innovation:** Key initiatives include the development of an automotive and electronics labour upskilling programme with the private sector, and expanding and enhancing job matching services through public-private partnership.

- **Infrastructure:** Key initiatives include reviewing electricity tariff and reliability targets, and harmonising cross-border transport regulations to reduce logistics costs.

- **Trade facilitation:** Key initiatives include implementing ratified Free Trade Agreements, adoption of automated system for public service provision and simplification of export-import procedures.

- **Business and investor friendliness:** Key initiatives include implementing the Law on Investment of the Kingdom of Cambodia which provides additional investment incentives and building up the local supplier ecosystem through a supplier match-making platform and quality improvement programme.

The RGC recognises that close partnership with the private sector is key to the effective development of the two sectors. We are keen to engage private sector partners to co-develop the sectors, from shaping the overall strategy to designing and implementing the action plan initiatives. As a start, the RGC has established the "Automotive and Electronics Sectors Development Advisory Council" that comprises key ministries and agencies, technical vocational education and training institutions, national and international business associations, and investors in these two sectors to collectively discuss and set the direction of the sectors development, and prioritisation of the initiatives.

The opportunity at hand for the sectors is significant for Cambodia, with the potential to increase exports in these sectors by around USD 2.1 billion, and to create roughly 26,000 new jobs over the next five years. Achieving this vision of building vibrant automotive and electronics sectors in Cambodia will require a commitment and close partnership between the RGC and the private sector for the implementation of the roadmap articulated herein.

Chapter 1 Introduction

1.1 Need of preparing the roadmap

Cambodia's economy has experienced solid growth over the past decade of 7% per year on average, prior to the COVID-19 pandemic. However, economic activity remains disproportionately concentrated in traditional sectors of activity, particularly the agriculture, garments footwear and travel goods, tourism, and construction sectors. The mid-term review report of the implementation of Cambodia Industrial Development Policy 2015-2025 highlighted the concentration of lower value-added manufacturing sub sector that requires diversification of industrial foundation to move toward high value-added production and strengthen skill and specialization of Cambodian labour force. Additionally, COVID-19 has further increased the urgency for Cambodia to diversify its economy and seek new sources of growth, to accelerate its recovery and maintain its resilience in the face of potential future disruption.

The automotive and electronics sectors are new sources of growth and key sectors in Cambodia's industrial development ambitions, as they offer the potential to connect to regional and global value chains, and gradually move up the value chain towards more skills-driven activities as well as improve economic growth under the context of living with COVID-19. This roadmap sets out the long-term vision and desired development pathways for the automotive and electronics sectors in Cambodia, as well as an action plan of concrete initiatives with the participation from private sector and relevant stakeholders to facilitate the development of both sectors.

This roadmap has been prepared in line with the "Cambodia Industrial Development Policy 2015-2025" which provides guidance for long-term industrial development, and the "Strategic Framework and Programs for Economic Recovery in the Context of Living with COVID-19 in a New Normal 2021-2023". The roadmap will address the main challenges and pertinent issues in order to facilitate business operation of both sectors and not intended to provide solutions to all issues.

The target of the roadmap is to expand the export of automotive sector by around USD 500 million and of the electronics sector by around USD 1.6 billion while generating around 10,000 new jobs in the automotive sector and around 16,000 new jobs in the electronics sector by 2027. Female workers are expected to be accounted for around 50% to 60% of the above newly created jobs.

On top of the COVID-19 pandemic, the on-going war in Ukraine has led to the uncertainty of global economy and geopolitics as well as the emergence of recent global trends. In this context, through the launching of the roadmap, Cambodia can seize maximum benefits created by major trends that will affect the future value chains. The roadmap is a living document that provide flexibility to relevant ministries/agencies to put forth more action plans that are related and responsive to the development of both sectors and can be amended in light of new opportunities presented by emerging trends.

1.2 The impacts of major trends on automotive and electronics sectors

The development of automotive and electronics sectors has been facing a major global trend of supply chain evolution. The geo-political tension and the disruption caused by the COVID-19 pandemic on supply chain have driven companies to diversify the location of their productions to new areas, and to create duplicated supply chains (same parts in different locations) through various suppliers who are capable and flexible in meeting the demand. Numerous companies have been searching for new locations to build more factories in order to strengthen resilience while production cost remains the main factor in investment decision making. Additionally, the construction of second manufacturing plant or nearby factories can supplement the on-going operation, mitigate risk, and enhance business sustainability. This strategy has been successfully implemented by many companies through Country "+1" strategy. This trend has presented a great opportunity for Cambodia, being strategically located in the middle of ASEAN with strong competitive advantage, to maximize benefit through Country "+1" strategy to provide foundation for companies to expand their second factories.

Aside from the above-mentioned trends, the next section illustrates other trends in each sector.

1.2.1. Automotive Sector

- **The rise of Electric Vehicles (EV):** The share of Electric Vehicles (EVs) in the automotive market is poised for rapid growth over the next decade, with EVs expected to make up 18% of new car sales globally by 2030, up from 2% in 2020. The rise of EVs will significantly transform automotive supply and value chains, with EVs requiring less complex assembly, and much fewer moving components compared to Internal Combustion Engine (ICE) vehicles. A new USD 250 billion – USD 300 billion global market for EV-exclusive components (such as batteries and EV powertrain components) is likely to emerge by 2030, and generate fundamentally different requirements for automotive components manufacturers, particularly in Electrical & Electronics (E&E) components. The less complex assembly process for EVs is also allowing for the emergence of compact, low-cost EV cars that could potentially raise the trajectory of new car demand in Cambodia and the broader ASEAN region. Such low-cost EV models, such as the Hong Guang Mini EV, are gaining rapid popularity in China (where some new low-cost EVs might cost only $4,500), and could potentially also take off in the region if the right infrastructure to support widespread EV adoption is put in place.

- **New concepts of mobility:** Beyond EVs, other technologies are influencing long-established concepts of mobility, and may reshape the automotive industry value chain. In particular, autonomous cars are likely to emerge within the next 15 years, which will accelerate the move towards shared mobility already taking place particularly in dense urban areas. Autonomous vehicle technologies could unlock the full potential of shared mobility offerings, allowing for shared autonomous vehicles (such as robotaxis) that would make mobility more affordable for many consumers (with costs per passenger for a self-driving taxi at least a third lower compared to a personal car), and help reduce the environmental impact of mobility.

- **Shifts in consumer preferences:** Consumer preferences in the automotive sector continue to evolve. Two important trends are an increased emphasis on safety, as well as an increased environmental consciousness particularly among younger consumers, which is supporting the switch towards hybrid and electric vehicles. These trends appear to be gaining momentum in many countries, but their ultimate effect on consumer purchasing behaviour is challenging to predict, as is the extent to which they will gain traction in Cambodia. However, should these trends take hold in Cambodia, they could help to accelerate Cambodia's shift away from a predominance of used cars in the local car market, towards increased demand for newer, greener and safer cars.

- **New manufacturing models:** The Industry 4.0 revolution is leading to the emergence of new automotive manufacturing models that have the potential to fundamentally disrupt global automotive supply chains. Such manufacturing models include automotive "micro-factories", enabled by high levels of automation and Artificial Intelligence, which could achieve breakeven volumes as low as 1,000 vehicles per year, compared to traditional automotive assembly plants where breakeven volume could be 50 to 100 times larger. Such micro-factories are suitable to Cambodia where demand is quite limited as it can reduce the risk and cost of setting up production. However, such manufacturing models have yet to be proven at scale, and may only gain traction towards the end of the decade and made possible by AI and other Industry 4.0 technologies.

1.2.2. Electronics Sector

- **Rising demand:** The electronics sector continues to evolve, with increasing digitisation accelerated by the pandemic. Coupled with the rising middle-affluent class population, the demand for Electronics is growing fast, especially in emerging markets like ASEAN. The global consumer electronics market is projected to reach USD 1.4 trillion by 2025, and ASEAN is the third fastest-growing market for Electronics Devices with an average annual growth of 6.5%, just behind Brazil and India, according to Euromonitor. With the rising demand of electronics already taking effect globally, this provides an increased opportunity for Cambodia to capture the market of another high growth segment.

- **Utilization of the latest mobile technologies such as 5G:** With the rollout of the 5G network, new application methods are expected to emerge. For example, Augmented Reality/Virtual Reality (AR/VR) equipment and autonomous vehicles are already a developing market, driven by the Industry 4.0 revolution. As these trends appear to be gaining momentum globally, more new generation of application methods are expected to be innovated and emerge, as the 5G network rollout becomes more widespread. While the rollout of the 5G network is ongoing, it might require a few years runway for the 5G rollout to be widespread and meaningful in terms of generating new use cases. In view of this, Cambodia is poised to capture the 5G technology market and other new generational technologies in the future.

1.3 Implications and benefits for investors

This new roadmap to develop the automotive and electronics sectors in Cambodia has the following key implications and benefits for automotive and electronics companies considering investments in Cambodia:

- **RGC's long-term commitment towards Automotive and Electronics sectors**: This roadmap for the development of the automotive and electronics sectors reflects the RGC's conviction that these sectors represent an important industrial development opportunity for Cambodia. Automotive and electronics companies considering an investment in Cambodia should be assured of the RGC's long-term commitment to implementing the initiatives needed to address key investor pain points and achieve the desired sectors development pathways.

- **Investor-centric approach towards developing both sectors**: Given the roadmap's emphasis on an investor-centric approach to developing the automotive and electronics sectors, the RGC welcomes continued feedback from automotive and electronics companies already in Cambodia, or from potential investors, on where the key investor pain points are in Cambodia. More importantly, the RGC seeks to partner with existing and potential investors to co-develop Cambodia's overall strategy to develop the automotive and electronics sectors. The RGC has established the "Automotive and Electronics Sectors Development Advisory Council" that will give interested investors an opportunity to not only better understand the RGC's plans for these sectors, but also actively shape the direction and policies for the sector.

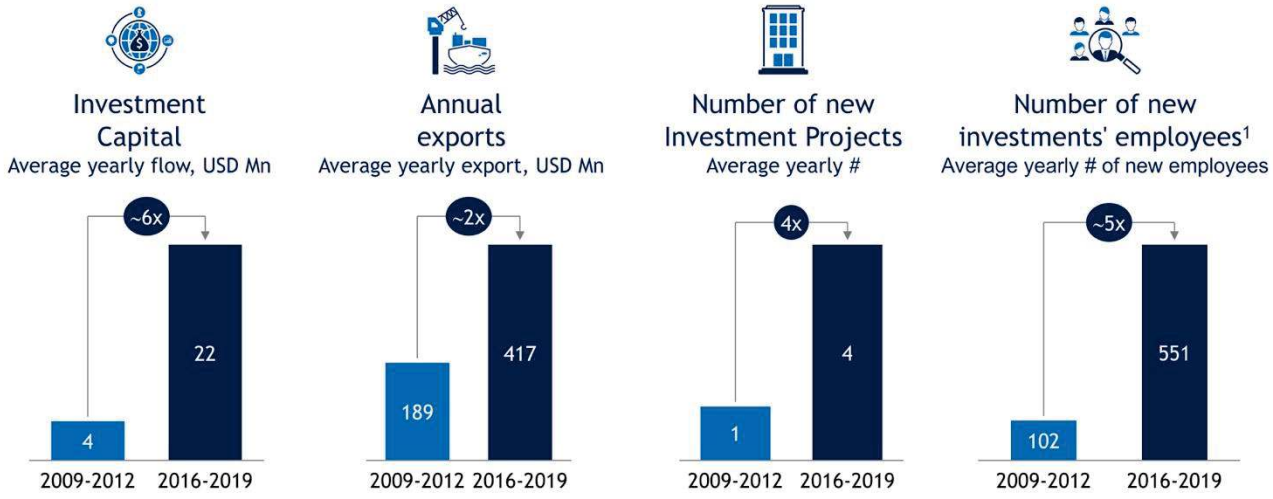
- **Concrete improvements in business environment:** Automotive and electronics companies investing in Cambodia can look forward to improvements across the key dimensions of human capital and innovation, infrastructure, trade facilitation, and business and investor friendliness, as the RGC implements its cross-ministerial action plan. In certain cases, the improvements will also come from the timely implementation of existing RGC initiatives and plans, such as investment plans in electricity and transport infrastructure. Most of the initiatives, however, are new, previously unexplored efforts to address pain points distilled from extensive consultation with both existing and potential investors in Cambodia.

Overall, the initiatives will make it easier for investors to set up operations in Cambodia, and increase the cost-competitiveness of their operations (e.g., through lower electricity, transport and logistics costs).

Chapter 2 General Overview of Automotive and Electronics Sectors Development

2.1 Automotive sector

Figure 1: Automotive sector in Cambodia today



Note: charts not in scale
Source: Council for the Development of Cambodia, and General Department of Customs and Excise (Ministry of Economy and Finance)

The automotive sector in Cambodia has been experiencing rapid growth in recent years. Average annual automotive sector exports in the period between 2016 to 2019 were double that of exports between 2009 to 2012. This was driven by higher levels of foreign investment. Cambodia received, on average, four new automotive sector investment projects per year between 2016 to 2019, representing investment capital of USD 22 million per year, compared to just USD 4 million per year in the period between 2009 to 2012. This has also generated rapid growth in the automotive workforce, with these new investments adding an average of 500 workers per year to the sector workforce, which currently stands at around 10,000 workers. Currently, Japan is a major source of investment in the automotive sector in Cambodia, while the main export markets include Thailand and Japan.

While the automotive sector has been adversely affected by the COVID-19 pandemic, with new vehicle registrations falling from 105,000 in 2019 to 86,000 in 2020, the long-term prognosis for the automotive sector in Cambodia and the wider ASEAN region remains positive, with recovery and rapid growth forecasted in the coming years, driven by the region's economic growth and fast-growing middle class.

The pandemic's impact on automotive manufacturing in Cambodia has also been mitigated by RGC's proactive and effective COVID-19 vaccination programme, which achieved the third highest rate of vaccinations in ASEAN, and vaccinated over 104% of the adult population by November 2022. This has allowed many automotive manufacturing plants to remain active throughout the pandemic.

Automotive components: Automotive components manufacturing and assembling in Cambodia have seen tremendous growth, with exports growing at a CAGR of 36% from 2015 to

2019. This growth has mainly been driven by the manufacturing and export of labour-intensive wiring harnesses. However, there are also positive signs of growth potential in higher-value-added segments such as powertrain components, which have grown to constitute 10% of automotive component exports from Cambodia in 2019.

Major automotive component manufacturers and assemblers such as Denso, Yazaki, Sumitomo, and Kyungshin have been successfully operating in Cambodia through the implementation of a Country "+1" Strategy, where labour-intensive parts are made in Cambodia for transport to assembly plants in neighbouring countries, Thailand or Vietnam.

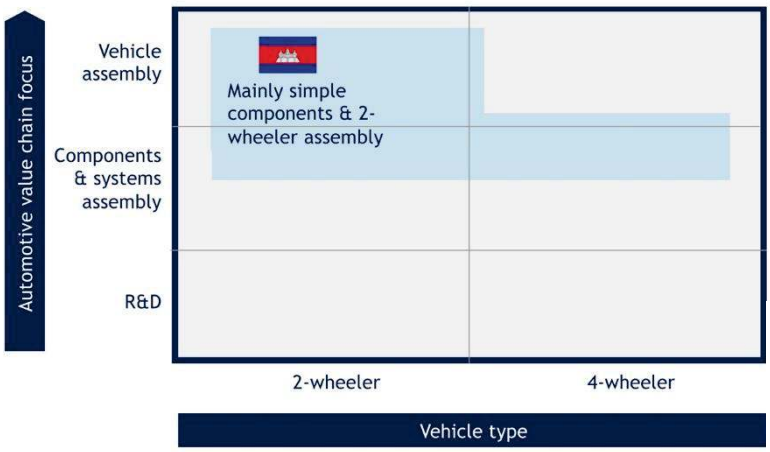
Two-wheeler assembly: There is also significant two-wheeler assembly activity in Cambodia, with more than 300,000 motorcycles assembled in 2019, mainly by Honda and Suzuki. This assembly activity feeds high local demand (540,000 new motorcycle registrations in 2019), which is expected to continue rising to an estimated 1.1 million new motorcycle sales by 2030. Unlike more developed countries in the region, where rising income levels are causing consumers to shift away from motorcycles, motorcycles remain a highly attractive transport option at current income levels in Cambodia.

While locally assembled vehicles account for more than 80% of local two-wheeler demand in Cambodia, most of the component parts for these vehicles are currently imported. Local contents make up only about a quarter of the total value of two-wheelers assembled in Cambodia, compared to over 80% for other countries in the region. This presents an opportunity for Cambodia to increase local content and strengthen its role in the two-wheeler assembly value chain, by improving the quality of the local supplier base.

Four-wheeler assembly: The four-wheeler assembly activity is present in Cambodia, but remains limited in scale due to narrow export base, high cost of production, and limited local demand for new cars due to the predominance of used cars in the market.

In spite of the all the above-mentioned challenges, companies including Ford, SsangYong, Isuzu, Hyundai, Dongfeng, and Toyota has been establishing assembly industries with the full support from the RGC. Moreover, there are also positive signs for the long-term growth potential of four-wheeler assembly in Cambodia in the form of a rising preference for new cars among Cambodians, driven by enhanced purchasing power, and increased consumer emphasis on the after-sales services and vehicle warranties available with new cars.

Figure 2: Automotive sector's value chain in Cambodia today



Source: Analysis of the Royal Government's working group and BCG based on consultation with experts in the field of automotive

2.2 Electronics sector

Figure 3: Electronics sector in Cambodia today

Note: Charts are not to scale
Source: Council for the Development of Cambodia, and General Department of Customs and Excise (Ministry of Economy and Finance)

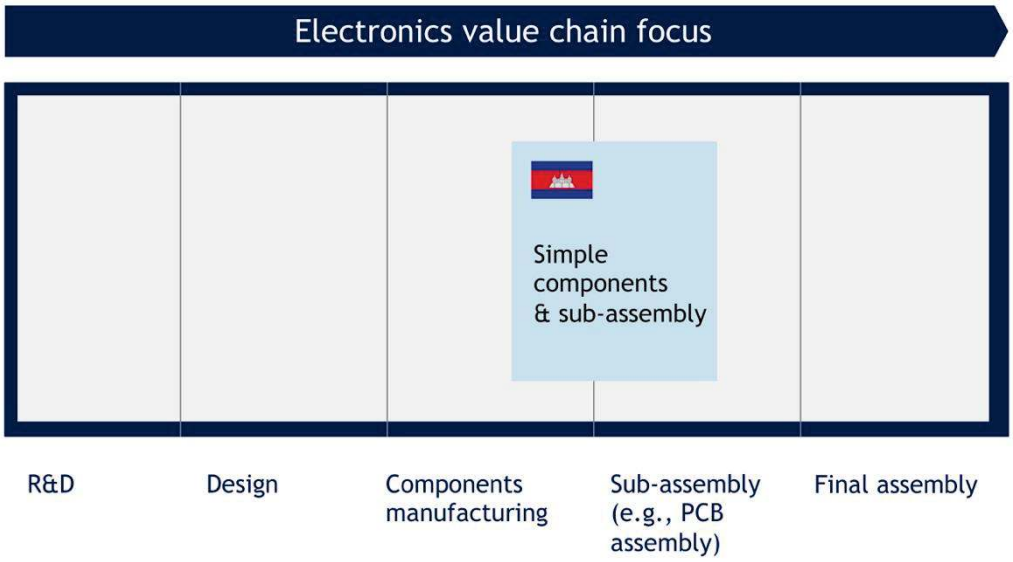
The electronics sector in Cambodia has grown rapidly in recent years. Over the last 10 years, the electronics exports have increased by 6 times, reaching around USD 923 million in 2019, while the number of Qualified Investment Projects (QIPs) increased to 89 QIPs in 2019. This has also generated rapid growth in the electronics workforce by 70 times in the last 10 years, which currently stands at around 30.000 workers. Currently, Japan and China represent the major source of electronics sector investment in Cambodia, while major export markets include United States of America, ASEAN, China, Japan and South Korea.

While the Cambodian economy has been adversely affected by the COVID-19 pandemic, the electronics sector has remained resilient. The long-term prognosis for the electronics sector remains positive, where continuous and rapid growth in Cambodia and the wider ASEAN region is forecasted in the coming years. This prognosis is driven by trends, such as increasing digitisation, which has been further accelerated by the pandemic. The pandemic's impact on electronics manufacturing in Cambodia has also been mitigated by Cambodia's proactive and effective COVID-19 vaccination programme, which achieved the third highest rate of vaccinations in ASEAN, and vaccinated over 104% of the adult population by November 2022. This has allowed many electronics manufacturing plants in Cambodia to remain active throughout the COVID-19 pandemic.

Electronics components: Electronics components manufacturing in Cambodia has seen tremendous growth, with exports growing at a CAGR of 20% from 2015 to 2019. This growth was mainly driven by the manufacturing of labour-intensive products, such as wiring-harnesses, lighting cables, motors and LED lights. However, there are also positive signs of growth potential in sub-assembly or PCB assembly, as well as the assembly of other consumer products, such as speakers and cameras.

Major electronics component manufacturers and assemblers, including Minebea, SVI and Sumitronics, have been successfully operating in Cambodia, typically located in Phnom Penh or along the Cambodia-Thailand border. These companies expanded their production activities into Cambodia as part of the Country "+1" strategy or broader supply chain diversification, leveraging on Cambodia's competitive advantages, such as its strategic location at the heart of ASEAN, and competitive cost advantage.

Figure 4: Electronics sector's value chain in Cambodia today



Source: Analysis of the RGC working group and BCG's consulting company based on consultation with experts in the field of electronics

2.3 Competitive Advantage

At present, Cambodia's competitive advantage in developing its automotive and electronics sectors include its cost-competitive labour workforce, strategic location, and favourable trade agreements with major export markets, such as ASEAN, China, Japan and the United States.

Cost-competitive workforce: Cambodia has a young and highly cost-competitive workforce ideal for automotive and electronics components manufacturing. About 64% of the 16 million populations are under 35 years old and the current minimum wage is at least 10% to 20% lower than other major manufacturing hubs in the region. Adult literacy rates also improved rapidly from 78% in 2008 to 88% in 2019, and is even higher among the young workforce. In addition, Cambodia also has the advantage of hosting a major textile, garment, footwear and bags industry, which employs around 1 million workers whose dexterity and work ethic can be used for smaller component production in automotive and electronics sectors.

Strategic Location: Cambodia is strategically located at the heart of the ASEAN region and deeply connected to the regional value chains through the Southern Economic Corridor of the Greater Mekong Subregion. In particular, Cambodia sits in close proximity to fast-growing automotive hubs, less than 400km from the automotive hub in Rayong, Thailand, and less than 100km from Ho Chi Minh City, Vietnam. This makes Cambodia an ideal location for manufacturing plants which supply to automotive assembly in Thailand and/or Vietnam. At

the same time, based on this geographical factor, Cambodia is also an ideal location to set up sub-assembly plants and various electronics components manufacturing plants supplying to the electronics manufacturing hubs of the two countries.

Favourable Trade Agreements: Cambodia has a highly open economy with favourable trade agreements for exports to major automotive and electronics markets and has also enjoyed preferential treatment provided by developed countries and some international organizations around the world for automotive and electronics exports. Cambodia is also a signatory to the multilateral free trade agreements such as ASEAN Free Trade Agreement, ASEAN Plus Trade Agreement with Australia-New Zealand, China, Hong Kong, India, Japan and South Korea and Regional Comprehensive Economic Partnership (RCEP). At the same time, Cambodia also has bilateral free trade agreement with People's Republic of China and the Republic of Korea. Cambodia is also in the process of negotiating free trade agreements with other partner countries to facilitate the integration into regional and global value chains.

Chapter 3 Vision, Development Pathway and Target

3.1 Vision

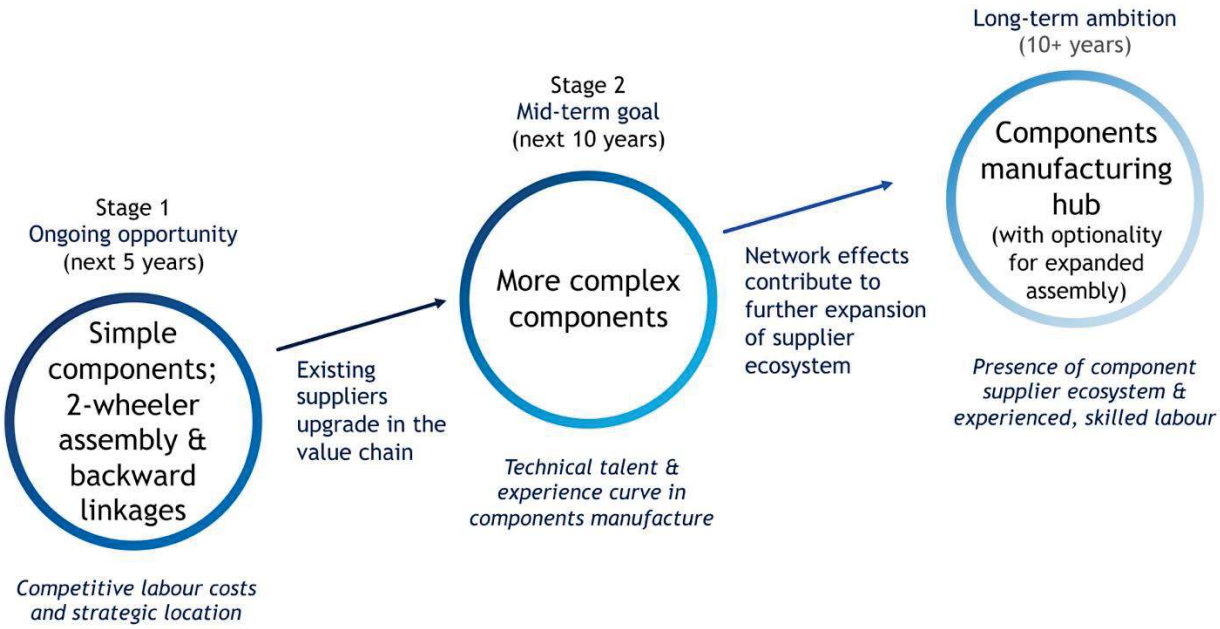
Cambodia aims to become an integrated Automotive and Electronics components manufacturing hub for export to regional and global markets. In order to achieve this vision, Cambodia will build the capabilities to move up the value chain from highly manual manufacturing and assembly of simple automotive and electronics components towards leveraging more advanced manufacturing technologies and a more highly skilled workforce to produce and assemble higher value-added components and equipment. Cambodia will also seek to encourage the adoption of a more environmentally sustainable approach in these two sectors.

The achievement of the vision will generate positive socio-economic outcomes, particularly increasing domestic value-added and economic resilience, improving industrial diversification and modernization, and providing more skilled job opportunities for Cambodian people.

3.2 Development pathway and target for Automotive sector

Cambodia will move towards its long-term vision of becoming an integrated automotive components manufacturing hub in two key stages.

Figure 5: Development pathway for Cambodia to capture Automotive sector vision



Source: Analysis of the Royal Government's working group and BCG based on consultation with experts in the field of automotive

Stage 1: Simple Components, Two-Wheeler Assembly and Backward Linkages

Focus sub-sectors: In the near-term (next 5 years), Cambodia will focus on leveraging the strengths to unlock the full potential of its ongoing opportunity in two key areas:

First, Cambodia will seek to expand its base of automotive suppliers manufacturing simpler, more labour-intensive automotive components for export. Such components include:

- Wiring harnesses
- Seats
- Simple automotive electronic and electrical (E&E) components such as sensors, switches, and basic communications devices.

Manufacturing these labour-intensive components is well-suited to Cambodia's cost-competitive workforce and requires a relatively lower level of technological complexity that is feasible for Cambodia. They are also relatively lightweight and hence feasible for cost-effective export to assembly plants outside Cambodia, particularly in neighbouring countries. Although these components make up a relatively small percentage of the value of the vehicle, they nonetheless represent an important opportunity for Cambodia as the market for many of these components has been growing rapidly, and their suppliers has also been actively seeking to diversify their production footprint, in pursuit of supply chain resilience.

Second, Cambodia will seek to grow two-wheeler assembly activity, while leveraging this to increase backward linkages and localise the component supply for these two-wheelers.

At present, the local component supplier ecosystem for two-wheelers in Cambodia is nascent, and poorly integrated with the assemblers in the country. Two-wheeler assemblers and Tier 1 component suppliers have also raised concerns about the quality of components produced by local firms. Consequently, most of the two-wheeler components are imported, with local content making up only about a quarter of the value of component parts of two-wheelers assembled in Cambodia.

There is thus a need to strengthen the local component supplier ecosystem for two-wheelers, to increase the share of local content and domestic benefits as well as to prevent the economic leakages. This will allow Cambodia to capture value added in two-wheelers through three main drivers. First, the overall demand of two-wheelers will increase at a CAGR of approximately 7% through 2025. Second is an increase in the percentage of locally assembled two-wheelers. Cambodia currently makes 82% of the two-wheelers sold in Cambodia and aims to increase this to 95% by 2025. Third is an increase in the share of local content, from the current 26% to a target of 85% by 2025, comparable to other countries in the region.

Stage 2: More complex components

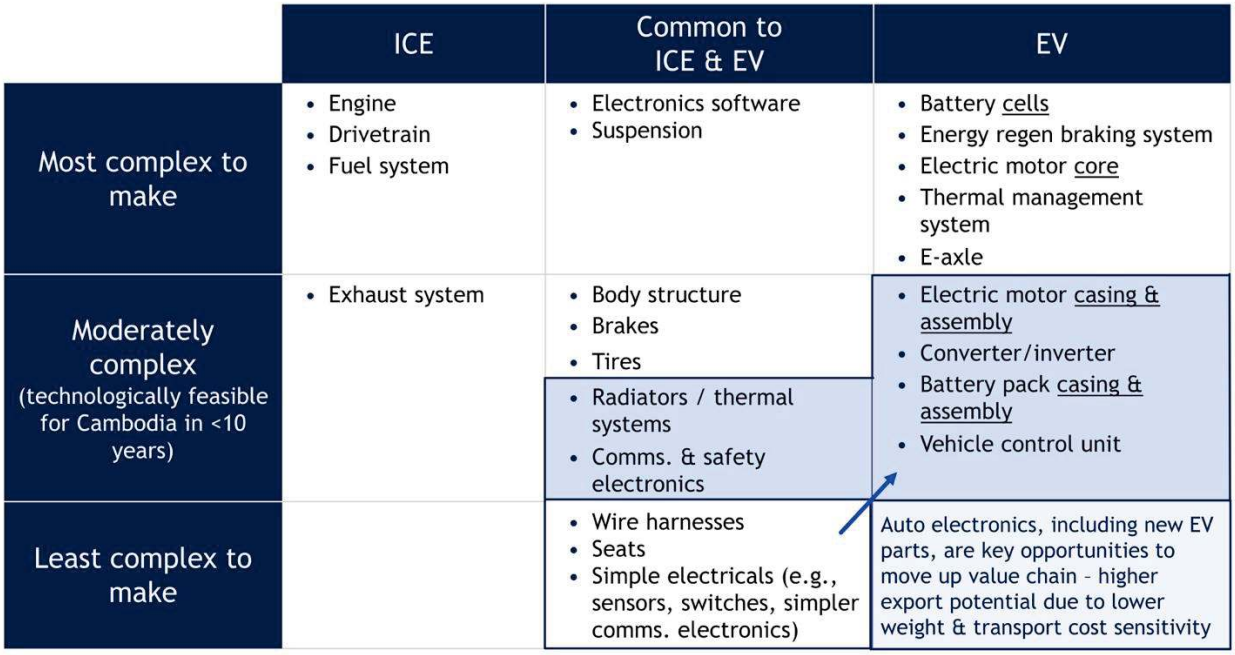
In the mid- to long-term, Cambodia's goal is to move up the automotive value chain from simple, labour-intensive components into more complex and higher value-added components.

Focus sub-sectors: In this stage of its development pathway, Cambodia will specifically seek to **attract the production of moderately complex automotive components**, particularly components that are also relatively lightweight and less sensitive to transport costs, and hence suitable for cost-competitive export to automotive assembly hubs in neighbouring countries.

Such components include:

- Radiators and thermal systems
- Communications and safety electronics
- EV convertors and invertors
- EV vehicle control units
- EV electric motor (casing & assembly)
- EV battery pack (casing & assembly)

Figure 6: More complex components that Cambodia could explore to move up Automotive value chain



Source: Analysis of the Royal Government's working group and BCG based on consultation with experts in the field of automotive

The rise of EVs and the new USD 250 billion – USD 300 billion market for EV-exclusive components that will emerge by 2030 represent an important opportunity for Cambodia to move up the components value chain. Where much of the value of traditional Internal Combustion Engine (ICE) vehicles lay in high-complex and heavy systems that would be challenging to produce in Cambodia, such as the engine and drivetrain, a significant portion of the value of an EV lies in components of moderate complexity and relatively light weight that can be produced cost-competitively in Cambodia within the next decade.

In addition, Cambodia has been able to attract a significant ecosystem of major wiring harness manufacturers, many of which are seeking to expand their portfolio of higher-value-added EV E&E components. With the right policies and incentives, these manufacturers could be

encouraged to introduce such components into their operations in Cambodia. As for two-wheelers, the local component supplier ecosystem will also be better placed to support the manufacturing of more complex components for electric two-wheelers, such as the assembly of electric two-wheeler battery packs.

Beyond the components listed above, Cambodia could also seek to attract other components of moderate production complexity but relatively higher sensitivity to transport costs, such as parts of the body structure, brakes and tires, and ICE vehicle exhaust systems for ICE vehicles.

Impact and capabilities built for both stages: In order to achieve the above vision and development pathway, the Royal Government of Cambodia set two main measurement targets as below:

- Increasing Cambodia's automotive sector export by USD 500 million by 2027
- Creating 10,000 new jobs that require low, medium and high skills by 2027.

Focusing on these areas of on-going opportunity in the short and medium term will help Cambodia attract new manufacturing capabilities and develop new sources of competitive advantage that will lead Cambodia to achieve its long-term vision of automotive sector development. These include:

- **A higher-quality local component supplier base for local two-wheeler assembly:** Cambodia will invest in initiatives to improve the quality of the local supplier base, while also seek to encourage positive technology spill-over from two-wheeler assemblers and Tier 1 suppliers.

- **An expanded pool of trained automotive workers:** Cambodia will also grow the number of managers, technicians, and operators who are familiar with automotive component manufacturers' work processes and quality requirements, and are able to operate production processes for more complex components. In addition, Cambodia will have a larger group of skilled and experienced mid-level technical talent, specifically engineers and technicians with relevant mechanical or electronics training.

- **An expanded cluster of major automotive components manufacturers in Cambodia:** Cambodia seeks to build a strong track record of support and partnership with these manufacturers starting with simple and labour-intensive components, and over time, encourage their introduction of higher-value components for manufacture in Cambodia. A key goal in particular is to start developing an ecosystem of manufacturers making automotive seats and automotive electronics, both which currently have a limited presence in Cambodia. Cambodia will seek to attract a much larger proportion of the leading global automotive components manufacturers. It would also have developed a more mature ecosystem for supporting these manufacturers, including low to mid-tier (Tier 2 and Tier 3) local suppliers.

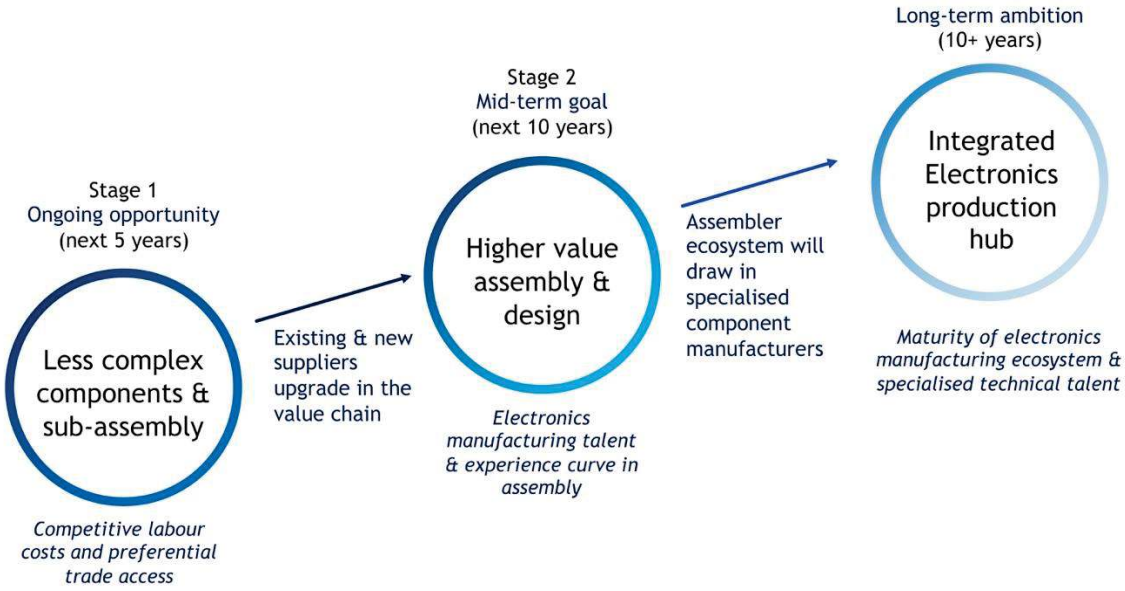
Beyond creating the conditions to support Cambodia's maturation into a full-fledged automotive component manufacturing hub, the network effects from the components manufacturing ecosystem and the experienced labour pool could also potentially allow Cambodia to attract more four-wheeler assembly activity. While limited local demand currently

makes it challenging for four-wheeler assemblers to produce at cost-efficient scale in Cambodia, placing a constraint on the extent of four-wheeler assembly activity, emerging automotive sector trends could alter this equation in the long-term. For instance, the emergence of low-cost EV models and the shift of consumer preferences could accelerate the growth of demand for new cars in Cambodia, while at the same time, new Industrial Revolution 4.0 has enabled manufacturing models such as "micro-factories" could enable cost-efficient assembly at lower scale.

3.3 Development pathway and target for the Electronics sector

Cambodia will move towards its long-term vision of becoming an Electronics components manufacturing hub in two key stages.

Figure 7: Development pathway for Cambodia to capture Electronics sector vision



Source: Analysis of the Royal Government's working group and BCG based on consultation with experts in the field of electronics

Stage 1: Simple components and sub-assembly

Focus sub-sectors: In the near-term (next 5 years), Cambodia will focus on leveraging the strengths to unlock the full potential of its ongoing opportunity. **Cambodia will seek to expand its base of electronics manufacturers, producing less complex components and sub-assembly, such as cables and connectors, and PCB assembly.** This stage aims to build upon Cambodia's current foundation of electronics manufacturers, who are already equipped with fundamental experience in these segments.

These components are relatively lightweight, making it suitable for export, in line with Cambodia's goal of building an export-oriented electronics sector. These components can also be fed into many different end products with varying degrees of complexity, and thus would make Cambodia's electronics sector more resilient to external shocks, and can be a stepping-stone for Cambodia to capture electronics segments with higher complexity.

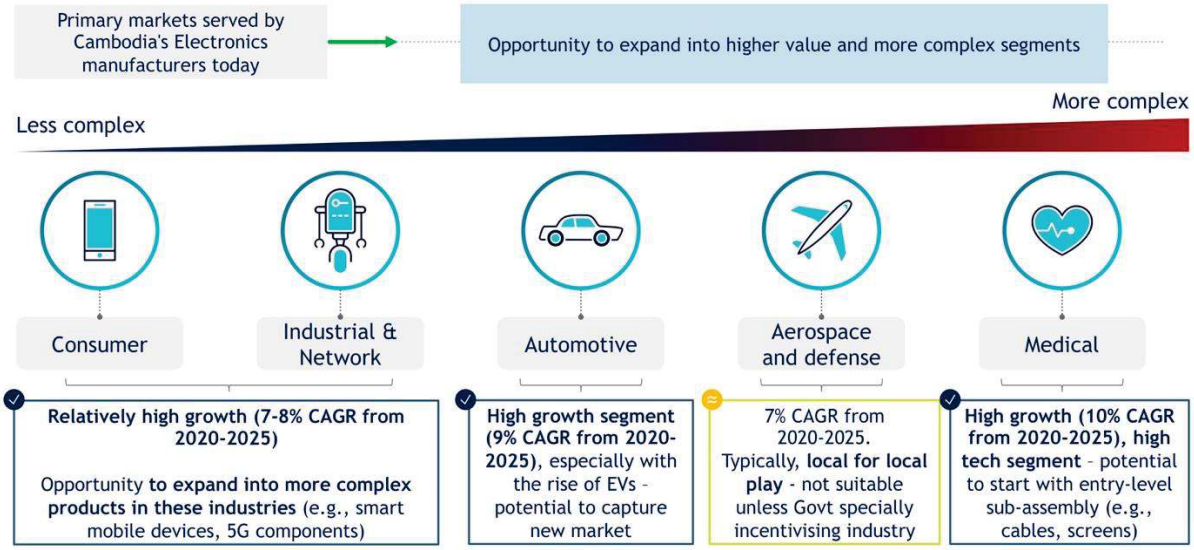
The targeted players of Cambodia's interest are EMS companies that have a diverse range of product portfolio, as well as electronics manufacturing capabilities and experience, including manufacturing of less complex components, sub-assembly and more.

Stage 2: Higher value assembly and design

Focus sub-sectors: In the mid- to long-term, Cambodia's goal is to move up the electronics value chain into higher-value assembly and design services, to serve a wider range of industry segment. Building upon this, Cambodia can consider:

- **Expansion into more complex products in the Consumer and Industrial and Network segments** to capture the large market size and high growth, especially with new growth segments generated from 5G.
- **Expansion into more advanced automotive electronics components:** The automotive electronics segment exhibits high growth and growth potential, driven by the rise of EVs and opportunities to further integrate into the regional automotive value chain.
- **Expansion of the Cambodian electronics industry into MedTech**, particularly, into the entry-level electronics components, as it is a high-growth segment and is an opportunity for Cambodia to be highly integrated in a truly global value chain. In addition to expanding manufacturing capabilities, Cambodia also seeks to leapfrog into higher value-added value chain activities, such as design services. On this front, Cambodia targets to attract more Original Design Manufacturers and Original Equipment Manufacturers who will be crucial in providing such services. Moreover, these design activities are expected to complement the growing ecosystem of manufacturers in the country.

Figure 8: Focus sub-sector that Cambodia could consider producing to move up the value chain of Electronics sector



Source: Analysis of the Royal Government's working group and BCG based on consultation with experts in the field of electronics

Impact and capabilities built for both stages: In order to achieve the above vision and development pathway, the Royal Government of Cambodia set the two main measurement targets as bellow:

- Increasing Cambodia's electronics sector exports by USD 1.6 billion by 2027
- Creating 16,000 new jobs that require low, medium and high skills by 2027.

For the short and medium term, Cambodia will develop new sources of competitive advantage that could lead Cambodia to achieve its vision of electronics sector development. These include:

- **An expanded pool of trained electronics workers:** Cambodia would have a larger group of skilled and experienced engineers, including engineers with experience in production and design. In addition, Cambodia will also grow the number of skilled labours trained in the manufacturing management, technicians and mid-level managers who are experienced in electronics production processes, such as Surface Mount Technology and assembly lines.

- **An expanded cluster of major EMS players operating in Cambodia:** Cambodia seeks to build a strong track record of support and partnership with these manufacturers in entry-level electronics components and sub-assembly. These partnerships are targeted to be concentrated especially among mid-tier EMS players. Cambodia would seek to attract a broader range of Electronic Manufacturing Services, Original Design Manufacturers, and Original Equipment Manufacturers with experience in more advanced product segments in order to strengthen manufacturer ecosystem.

Beyond creating the conditions to support Cambodia's maturation into a full-fledged Electronics manufacturing hub, the development of these capabilities could also create the potential to attract more advanced board component manufacturers. This would equip Cambodia for upstream integration of the end-to-end Electronics value chain.

Chapter 4 Challenges to Cambodia's Automotive and Electronics sectors development

There are several key challenges currently hindering the growth of Cambodia's automotive and electronics sectors. Many of these challenges affect not only these sectors, but Cambodia's industrial development in general.

4.1 Need for coordinated cross-ministerial strategies and coordination

To fully develop the automotive and electronics sectors, close cooperation and coordination is needed among multiple stakeholders, including relevant RGC ministries/agencies, international partners, as well as private sector such as business federations and investors. At present, there are gaps in the sectors development strategy and coordination that need to be addressed, including:

a. **Need for long-term sectors development strategy:** Up until now, there has been a lack of long-term vision and development pathway for the automotive and electronics sectors. The absence of such a long-term sectors development strategy has hindered the RGC from taking focused efforts to support these sectors and contributed to a lack of investor confidence in the RGC's long-term commitment to the sectors.

   The Automotive and Electronics Sectors Development Roadmap, which lays out the long-term ambition and development strategy for the sectors, is hence an important first step in addressing this gap. This strategy will continue to evolve based on feedback that the RGC will continue to gather from investors.

b. **Need for sector cluster strategy:** There has not been a clear strategy to develop automotive or electronics clusters in specific locations in Cambodia. Consequently, automotive and electronics plants are dispersed across Cambodia in various locations and Special Economic Zones (SEZs), resulting in missed opportunities to generate positive network effects from having companies in the automotive and electronics sectors respectively in closer proximity. Such positive effects include:

   - The ability to share an infrastructure and support ecosystem tailored for each sector's needs (e.g., establishing an Automotive Technical and Vocational Education and Training (TVET) and Centre of Excellence in Automotive Sector that is near to the automotive industry cluster)
   - Closer integration between companies in different parts of the sectors' value chain
   - Increased innovation from mutual learning and information sharing

   There is therefore a need for Cambodia to identify certain locations or Special Economic Zones (SEZs) to be developed as manufacturing clusters for each sector.

c. **Need for a more proactive investor engagement strategy**: Part of Cambodia's challenges in attracting foreign investments in the automotive and electronics sectors is

a lack of awareness of the investment potential, opportunities and favourable investment environment in Cambodia among potential investors.

Even as Cambodia continues to improve its investment and business environment, it is crucial to ensure that potential investors are made aware of this progress, and the opportunities that Cambodia offers, so that their investment decisions are not based on a false or dated perception of the situation in Cambodia. There is therefore a need for a more proactive campaign of investor engagement and outreach to potential investors in the automotive and electronics sectors, particularly investors in the sub-sectors prioritised in the sectors development pathway.

d. **Need for regional partnership strategy:** Cambodia's efforts to develop its automotive and electronics sectors are currently not well-integrated and coordinated with regional partners such as Thailand and Vietnam, which are key potential markets for automotive and electronics components made in Cambodia as part of Country "+1" strategies. Many investors pain points, such as cross-border transport and logistics issues, can be more effectively addressed through cross-border solutions than by the RGC on its own. Given Cambodia's export-oriented automotive and electronics strategy, it is critical that Cambodia develops a strategy to strengthen partnerships with neighbouring countries for the mutually beneficial development of each other's automotive and electronics sectors.

4.2 Human capital and innovation

Human capital is another critical bottleneck for the development of Cambodia's automotive and electronics sectors. To achieve the desired expansion of this sector, there is a need to increase the pool of trained and experienced human capital at all levels, including workers, technicians, engineers and managers.

a. **Need to expand number of suitable workers and mid-level technical talent:** One of Cambodia's competitive advantages is its highly cost-competitive labour force, compared to other countries in the region. Improvements in education have also significantly improved literacy and numeracy levels. For instance, adult literacy rates have improved rapidly from 78% in 2008 to 88% in 2019. These facts notwithstanding, investors continue to face challenges finding and retaining suitable skilled and unskilled labour in the automotive, electronics and other industrial sectors. It is therefore critical for Cambodia to take steps to rapidly grow its pool of workers and mid-level technical talent who possess the suitable skillsets and experience for productive employment in the automotive and electronics sectors.

At the most basic level, there is a need to prepare workers who may be more familiar with agricultural and service sector roles with the working habits and discipline needed in a manufacturing environment. The TVET system should at the same time equip and strengthen workers' technical skills (e.g., basic computer skills, specialised electronic and mechanical knowledge to operate and maintain production machinery), to prepare them to take on higher-skilled roles. There is also potential for Cambodia to strengthen efforts to build early Science, Technology, Engineering and Mathematics (STEM) skills among

high school students, to better prepare them for further training and education through the TVET or university system.

Furthermore, it is also crucial to strengthen job matching and recruitment services, to address the problem of geographic job market asymmetry in Cambodia, which is experiencing a shortage of suitable workers in some parts of Cambodia, and surpluses in others. What is more, there is a large pool of Cambodian workers who are currently working in the automotive and electronics sectors in neighbouring countries who possess relevant experience and skillsets, hence, there are opportunities for Cambodia to rapidly expand its pool of skilled workers by tapping on this ready labour pool.

b. **Shortage of engineering, managerial and professional talent:** Automotive and electronics investors in Cambodia also face the challenge of hiring for job roles which require higher levels of technical or professional knowledge, such as engineers, plant managers and administrative staff. A common practice is for foreign investors to bring in expatriate engineers and professionals, especially in the early stages of establishing new factories. These expatriates are a critical source of expertise in establishing the work processes in these new factories, and training and equipping Cambodians to eventually fill these higher-skilled roles.

   There is hence a need to develop policies and plans to increase Cambodia's ability to attract such highly skilled talent. This includes plans to strengthen social infrastructure such as healthcare and education, particularly in more rural parts of Cambodia, and to attract diaspora talent and Cambodian migrant workers with relevant expertise and experience in the automotive and electronics sectors to return to Cambodia.

4.3 Infrastructure

Although Cambodia's physical infrastructure has improved tremendously over the years, the most critical near-term priorities reflected by automotive and electronics investors are the improvement of electricity, transport and logistics infrastructure, while Cambodia must seek to improve its infrastructure across multiple domains, including digital infrastructure such as high-speed Internet to support its transition to a higher-skills-based economy.

a. **Need for improvement in electricity infrastructure:** A key priority, as reflected in feedback from investors, is reducing electricity prices while improving the stability of supply. Over the last 5 to 10 years, Cambodia has already made significant strides in improving electricity access and stability, while reducing prices. For instance, the index of villages receiving electricity supply significantly increased from 66.6% in 2015 to 97.4% in 2020. Electricity tariffs have also been reduced by as much as 30% over the past 5 years. In addition, more than 50% of Cambodia's domestic energy production comes from renewable sources (mainly hydropower), one of the highest percentages in the region, and a key value proposition for investors seeking to minimise their environment footprint.

   Nevertheless, electricity in Cambodia remains slightly more expensive and less stable compared to neighbouring countries. While this gap is closing, there continues to be a need for concerted effort from the RGC to ensure more competitive electricity prices and

stable electricity supply, to ensure cost-competitiveness and avoid disrupting manufacturing operations in the energy-intensive automotive and electronics sectors. Investments in new and improved electricity infrastructure, as well as the diversification towards new sources of energy generation (e.g., solar power and other renewables) are required.

b. **Need for improvement in transport and logistics infrastructure:** Another key challenge for Cambodia is to strengthen its transport and logistics infrastructure to accommodate the rapidly increasing trade volumes, and specifically to support export-oriented sectors such as the automotive and electronics sectors. The transport and logistics infrastructure in Cambodia has been significantly improved and modernised over the past decade, including through the expansion and improvement of the road network, and the expansion of the deep-sea port in Sihanoukville, including through the launch of a new multi-purpose terminal in 2018.

   Nevertheless, there is still room for improvement in Cambodia's intermodal transport and logistics infrastructure. For instance, there is a need to reduce traffic congestion between major industrial areas, such as Phnom Penh and Sihanoukville, and improve connectivity between these industrial areas and export gateways to Thailand and Vietnam. Infrastructure limitations are exacerbated by a lack of harmonisation in cross-border transport regulations. For instance, differences in maximum truck load requirements and restrictions on the number of trucks licenced to transport cargo between Cambodia and neighbouring countries increase the need for transloading at the border and contribute to congestion at border checkpoints and delivery delays. The removal of such inefficiencies in the transport network will help to reduce logistics costs for automotive and electronics manufacturers in Cambodia, particularly those transporting components to assembly plants in Thailand or Vietnam.

   While road infrastructure continues to play the most important role in trade-related logistics, Cambodia's port and airport infrastructure are becoming increasingly important in its export-oriented automotive and electronics sectors development strategies, particularly as it moves up the value chain to higher-value and lightweight components suitable for global export. Cambodia therefore needs to continue investing in its intermodal transport and logistics infrastructure and seek to harmonise relevant cross-border transport regulations, to enable more efficient and less costly transport of goods.

4.4 Trade facilitation

Trade facilitation is critical to Cambodia's export-oriented automotive and electronics sectors strategies. In this respect, several trade facilitation reforms have been implemented in recent years, including the elimination of export management fees and Certificate of Origin requirements for some countries, the provision of public services through automated system, and the institutional reform to reduce the number of institutions involved in border checkpoints processes. Nevertheless, Cambodia still needs to further improve customs clearances, reduce time and logistics costs for the export of automotive components and electronics goods, to increase transparency and predictability for investors.

4.5 Business and investor friendliness

To promote the development of the automotive and electronics sectors in Cambodia, it requires an attractive business and investment climate as well as a more conducive ecosystem for the growth of these sectors in terms of linkages across the value chain:

a. **Better communication of new enhanced investment incentives**: Prior to 2021, the RGC had identified the need to strengthen investment incentives for higher value-added and more capital-intensive sectors, including the automotive and electronics sectors. For instance, the Law on Investment prior to 2021 did not provide incentives for companies who invested in R&D, training and worker facilities, even though these contributed to the development of the sectors.

   The Law on Investment and the Law on Public-Private Partnership (PPP), promulgated at the end of 2021, address this gap through the provision of more favourable investment incentives and a stronger regulatory foundation for investments in Cambodia. Implementation sub-decrees are being developed to provide additional detail on how these new laws will be implemented, and the RGC will continue to engage the business community in Cambodia, as well as potential investors, to explain the implications and opportunities arising from these new investor-friendly laws.

b. **Need for more conducive ecosystem of linkages across the value chain:** A conducive ecosystem of linkages between different parts of the automotive and electronics value chain is currently lacking in Cambodia. For instance, while there is significant two-wheeler assembly activity in Cambodia, there are limited backward linkages between these assemblers and local SME component suppliers in Cambodia, resulting in most of these components being imported.

   Assemblers lack visibility of the many local SME component suppliers in Cambodia, and have concerns about the quality of the components being supplied. Addressing this visibility and quality gap will be key in creating a more conducive ecosystem of automotive backward linkages. Beyond such automotive backward linkages, there is also room to help Cambodian SMEs providing engineering and IT services to better plug into the automotive and electronics value chains, so that local firms can benefit from the growth of these sectors while at the same time providing a stronger supporting ecosystem of key services for these sectors.

Chapter 5 Key initiatives to develop Automotive and Electronics sectors

The RGC is committed to implementing a comprehensive cross-ministerial action plan over the next five years to address the key challenges hindering the development of Cambodia's automotive and electronics sectors. The action plan reflects two major changes to the RGC's approach in developing Cambodia as a more attractive automotive and electronics investment destination.

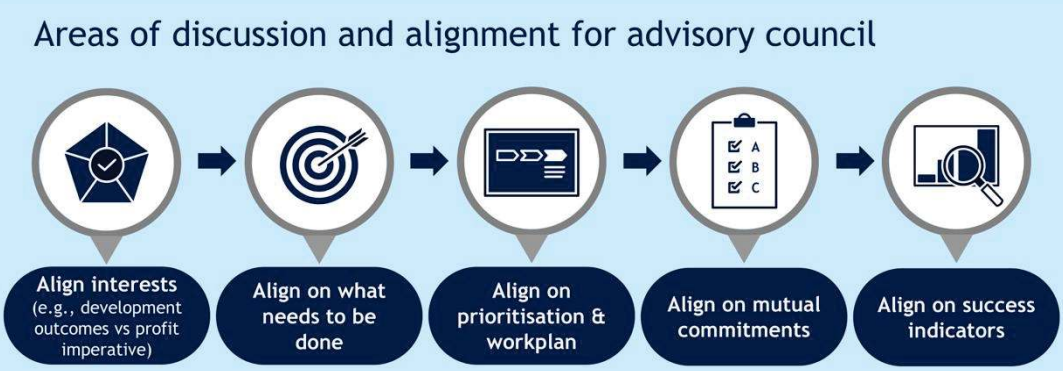
Increased coordination of cross-ministerial efforts: First, the action plan reflects the necessity of increased coordination of cross-ministerial efforts across the RGC to develop the sector, and an effort to break down bureaucratic silos that previously hindered such efforts. These efforts are to develop coherent cross-cutting strategies. In addition, while a lead ministry is accountable for each action plan initiative, the initiative implementation teams will, where relevant, include members from supporting ministries. Accelerator squad for the Automotive and Electronics sectors, led by the CDC, was established to coordinate cross-ministerial efforts and ensure the progress of the overall action plan.

Close partnership with private sector: Second, this action plan reflects the RGC's recognition that close partnership with the private sector is vital for the effective design and implementation of initiatives to develop the Automotive and Electronics sectors. In view of this, the RGC is committed to increased consultations with the private sector to understand and address investor pain points through the establishment of "Automotive and Electronics Sectors Development Advisory Council", which comprises members from public institutions, TVET and private sector including national and international business associations, to co-drive the development of the sectors.

Advisory council as key enabler for alignment and partnership with private sector

Taking reference from successful case studies of government cooperation with the private sector on sector development globally, the advisory council aims to facilitate not just tactical alignment on initiative implementation, but a broader strategic alignment between RGC and the private sector on the direction of the sector. The RGC thus invited a private sector representative to co-chair the advisory council, to ensure that the private sector has a clear seat at the table and ability to shape the development of the Automotive and Electronics sectors. The advisory council will seek to first achieve high-level alignment on the RGC's and private sector's respective interests and objectives and the overall direction of the sectors, before moving to downstream issues such as the selection and prioritisation of key initiatives, and the partners' respective roles in implementation and success indicators.

Figure 9: Areas of discussion and alignment to be included in advisory council mandate



As a start, the private sector could partner with the RGC on initiatives that require limited private sector financial commitment, such as providing input on desired worker skillsets to co-create the automotive and electronics sectors skills curriculums or sharing ecosystem requirements to co-create the automotive and electronics sectors cluster masterplans. Through a series of stepwise mutual commitments, this partnership could intensify over time to encompass initiatives requiring greater financial commitments from both parties, such as joint venture to establish new automotive and electronics TVET institutes.

The timelines for initiatives implementation to support the development of Automotive and Electronics sectors are presented in Appendix 2.

5.1. Cross-ministerial strategies and coordination

The initiatives below aim to support the overall cross-ministerial effort to develop the automotive and electronics sectors. The immediate priority is to improve communication and cooperation with stakeholders from the private sector. In view of this, the priority initiatives are as follows:

1. Produce a roadmap document, which clearly define vision, strategic framework, and action plan for automotive and electronics sectors
2. Establish "Automotive and Electronics Sectors Development Advisory Council", which comprises members from public institutions, TVET and private sector, to expedite the implementation of strategic framework and action plan
3. Strengthen proactive investor outreach efforts
4. Identify specific locations/ Special Economic Zones (SEZs) for automotive and electronics clusters
5. Establish country++ strategies by strengthening cooperation with neighbouring countries to address cross-border investor pain points
6. Attract and facilitate investment for flagship companies

5.2. Human capital and innovation

The initiatives below aim to support the development of human capital for the automotive and electronics sectors. Close partnership with the private sector will be vital to avoid the current "chicken-and-egg" problem in which the private sector is reluctant to invest in Cambodia due to the shortage of suitable human capital, while the government finds it difficult to justify large

investments in sector-specific human capital development without a clear indication of upcoming investment and job creation in these sectors. In view of this, the priority initiatives are as follows:

1. Develop Automotive and Electronics labour upskilling programme with private sector
2. Improve monitoring and evaluation governance of TVET schools
3. Develop foreign and diaspora talent attraction plan
4. Expand and enhance job matching services through public-private partnership
5. Expand TVET in priority regions.

5.3. Infrastructure

The initiatives below aim to support the development of the electricity, transport and logistics infrastructure, to support the operation of automotive and electronics plants in Cambodia. In view of this, the priority initiatives are as follows:

1. Implement electricity infrastructure investment plan
2. Review electricity tariff and reliability targets
3. Implement transport infrastructure development plan
4. Harmonise cross-border land transport regulations with neighbouring countries (e.g., Thailand, Vietnam, Laos).

5.4. Trade facilitation

The initiatives below aim to support the improvement in the trade facilitation and trade flows to and from Cambodia. In view of this, the priority initiatives are as follows:

1. Implement FTAs and trade facilitation plans, which focus on the usage of automated system to provide public services
2. Simplify export-import procedures

5.5. Business and investor friendliness

The initiatives below aim to support the creation of a more attractive environment for business and foreign direct investment, as well as a more conducive ecosystem for the growth of the automotive and electronics sectors especially in terms of linkages across the regional and global value chains. In the past decades, the RGC achieved significant progress, especially in terms of establishing new investor-friendly laws and policies such as the Law on Investment of the Kingdom of Cambodia, the PPP law, Cambodia's National Intellectual Property Policy and so forth. In view of this, the priority initiatives are as follows:

1. Implement Law on Investment and key investor-friendly laws
2. Develop local automotive and electronics component supplier match-making platform
3. Develop capability and quality improvement programme for local automotive and electronics component suppliers.

Chapter 6 Institutional mechanism for implementation and monitoring and evaluation

6.1. Institutional arrangements

The leadership and coordination institutional arrangements for the implementation of the Cambodia Automotive and Electronics Sectors Development Roadmap are designed to encourage cross-ministerial cooperation and coordination. The ministries in charge must maintain accountability for the delivery of each initiative.

a) Overall coordination and delivery of sector strategy and action plan

In accordance with the recommendations of the Economic and Finance Policy Committee (EFPC) with the high approval of Samdech Akka Moha Sena Padei Techo Hun Sen, a senior cross-ministerial steering committee was established, which comprises members from relevant ministries and institutions, whose main roles are to set the strategic direction for the implementation of the roadmap action plan and provide oversight and resourcing for the initiatives. The Secretary General of the CDC shall chair the Steering Committee, which is responsible for regular monitoring of the roadmap implementation progress. The EFPC, on the other hand, will determine the strategic orientation and review the evaluation results.

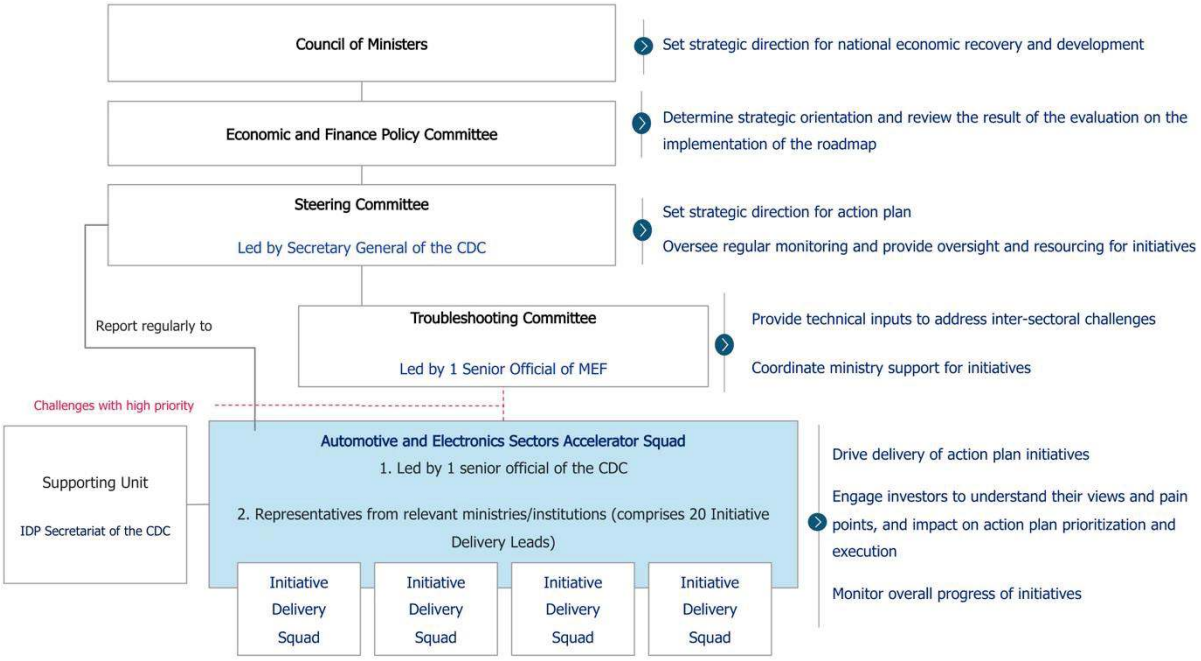
The Steering Committee will be supported by a Troubleshooting Committee of senior ministry focal points responsible for providing their respective ministry's perspective and views for troubleshooting critical, time-sensitive cross-sectoral issues, and for coordinating their ministry's support for the initiatives.

An Automotive and Electronics sector accelerator squad, led by a senior official of the CDC, is established under the umbrella of both the above committees with the aims of leading and developing action plans for the implementation of each initiative. This squad comprises technical officers from relevant ministries whose roles are to lead the implementation of each initiative and to be responsible for engaging investors in the automotive and electronics sectors to understand their views and pain points, as well as the impact on the prioritisation and execution of the action plan. Moreover, the accelerator squad will be accountable for monitoring the overall progress of the action plan.

b) Delivery of individual initiatives

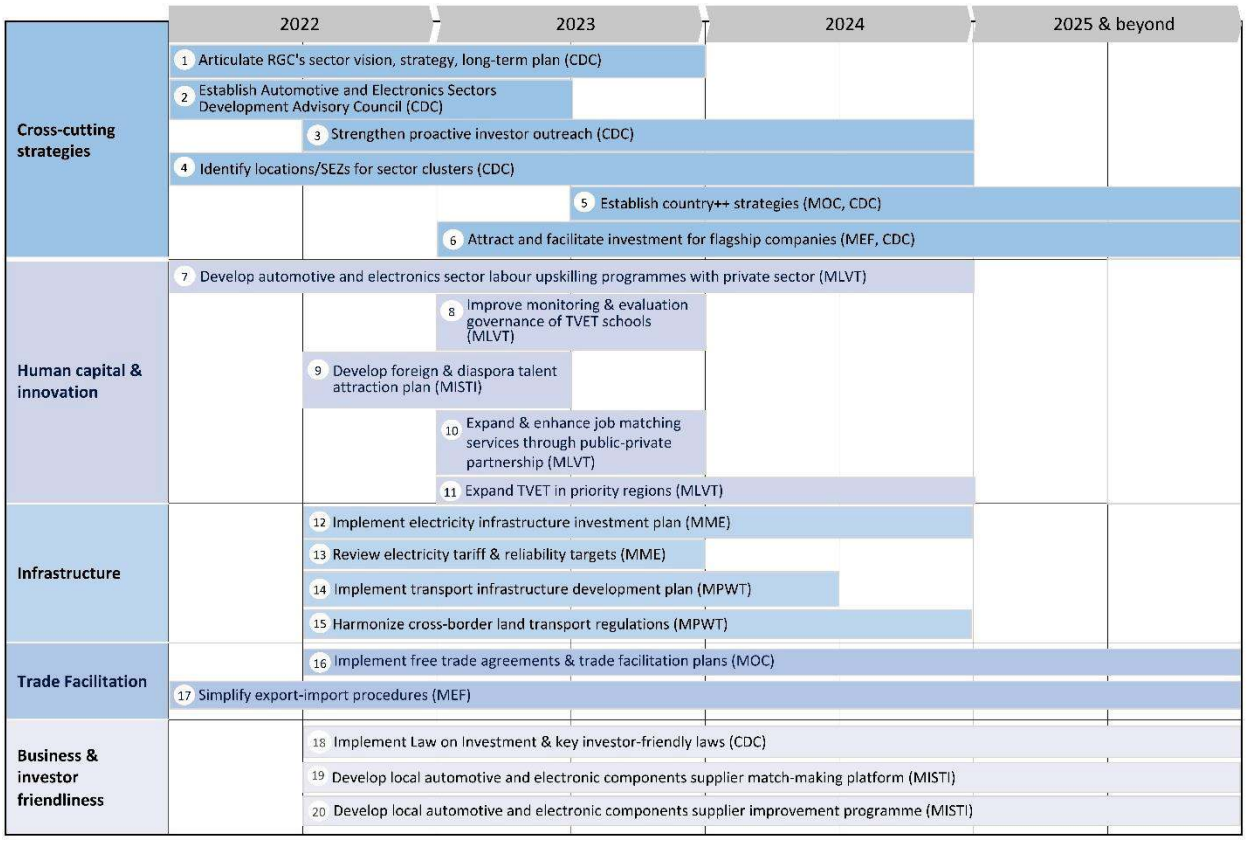
The ministry designated as the "owner" of each initiative is responsible for establishing a technical team to design and implement the initiative in coordination with the private sector partners. This implementation team will monitor the progress of the initiative, as measured against clearly defined key performance indicators and metrics, and regularly report progress once every 6 months to the steering committee through the sector accelerator squad. Where relevant, the technical team of the leading ministries can include members from supporting ministries to provide technical expertise and ensure that the initiative is well-coordinated with other efforts in their own ministries.

Figure 10: The diagram of institutional mechanism for the roadmap implementation



An indicative timeline for the implementation of the action plan has also been developed to guide the workflow of the sector accelerator squad, as shown below. This combined action plan for the automotive and electronics sectors will be almost entirely implemented within the next 3 years, in line with Cambodia Industrial Development Policy 2015-2025 timeline to promote Cambodia's industrial development and diversification.

Figure 11*:* Indicative timeline for action plan implementation (see Appendix for expanded version)



c) Majority of initiatives kickstarted in 2022

The RGC will kickstart the majority of the initiatives in the action plan by 2022, particularly as some initiatives will take longer to implement (e.g., expanding job matching services and developing the local automotive and electronics component supplier match-making platform and improvement programme). In 2022, the RGC prioritised the establishment of the "Automotive and Electronics Sectors Development Advisory Council" to anchor the RGC's engagement with the private sector on this overall action plan.

The initiatives that will be kickstarted in 2022 are:

Cross-cutting strategies

- Articulate the RGC's vision, strategy and action plan for the automotive and electronics sectors
- Establish "Automotive and Electronics Sectors Development Advisory Council" which is comprised of concerned public institutions, TVET institutions and the private sector as members
- Strengthen proactive investor outreach efforts
- Identify specific locations/Special Economic Zones (SEZs) for automotive and electronics clusters

Human capital and innovation

- Develop Automotive and Electronics sector labour upskilling programmes with private sector
- Develop foreign and diaspora talent attraction plan

Infrastructure

- Implement electricity infrastructure investment plan
- Review electricity tariff and reliability targets
- Implement the transport infrastructure development plan
- Harmonise cross-border land transport regulations

Trade facilitation

- Implement FTAs and trade facilitation plans that focus on the use of automated system for the provision of public services.
- Simplify export-import procedures

Business and investor friendliness

- Implement the Law on Investment of the Kingdom of Cambodia and key investor-friendly laws
- Develop local automotive and electronics component supplier match-making platform
- Develop local automotive and electronics component supplier improvement programme

d) Initiatives requiring greater private sector input and commitment

The remaining initiatives that require more significant private sector input and commitment will hence be kickstarted in 2023 or later, to allow sufficient time for identification of and engagement with suitable private sector partners. These initiatives are:

Cross-cutting strategies

- Establish country++ strategies
- Attract and facilitate investment for flagship companies

Human capital and innovation

- Improve monitoring and evaluation governance of TVET schools
- Expand and enhance job matching services through public-private partnership
- Expand TVET in priority regions

6.2. Monitoring and evaluation

To ensure that the measures put forth in the roadmap are implemented in a timely manner and meet the expectations, RCG mandated the CDC, of which the Secretariat, whose role is responsible for leading and coordinating the implementation of the Industrial Development Policy, to serve as an état-major in the preparation and implementation of the monitoring and evaluation framework, which includes:

- **A clear set of key performance indicators** measuring overall impact on sector exports and job creation as well as on the development of the supporting infrastructure, human capital, and trade and business environment.
- **Clear monitoring and data collection roles** across the relevant ministries, supported by structured and streamlined processes
- **A system of regular reporting to senior RGC leadership** within the Steering Committee and EFPC on the progress and challenges of roadmap implementation:
    - Report on the results of monitoring progress to be made once every 6 months to the Steering Committee
    - Report on the results of the evaluation shall be made once every two years to the EFPC meeting.

Chapter 7 Conclusion

The COVID-19 pandemic has created significant disruption to Cambodia's economy, particularly in key sectors such as tourism, and garments and textiles. This has accelerated the need to diversify Cambodia's economy and strengthen new and higher value-added sectors such as the automotive and electronics sectors as engines for economic growth and employment creation.

At this critical juncture, Cambodia Automotive and Electronics sectors Development Roadmap sets out a clear development pathway towards long-term vision of developing a vibrant automotive component manufacturing hub and an integrated electronics production hub, and an action plan to get there through concerted action across the relevant ministries and close partnership with the private sector.

The implementation of this roadmap will increase the export of US$ 500 million in automotive sector and US$ 16 billion in electronics sector by 2027, and create 10, 000 new jobs in automotive sector and 16, 000 in electronics sector by 2027. As expected, female workers will contribute about 50% to 60% of the jobs which will be created for the two sectors.

This combined action plan for developing and attracting investments in the automotive and electronics sectors will drive transformative changes in Cambodia across areas like human capital and innovation, infrastructure, trade facilitation, and business and investor friendliness, which will make Cambodia an increasingly attractive and cost-competitive location for automotive and electronics manufacturing. Through strengthening the partnership with investors from across the world, the RGC strongly believes that Cambodia can create an automotive and electronics sector that drives value for investors as well as economic growth and better jobs for the Cambodian people.

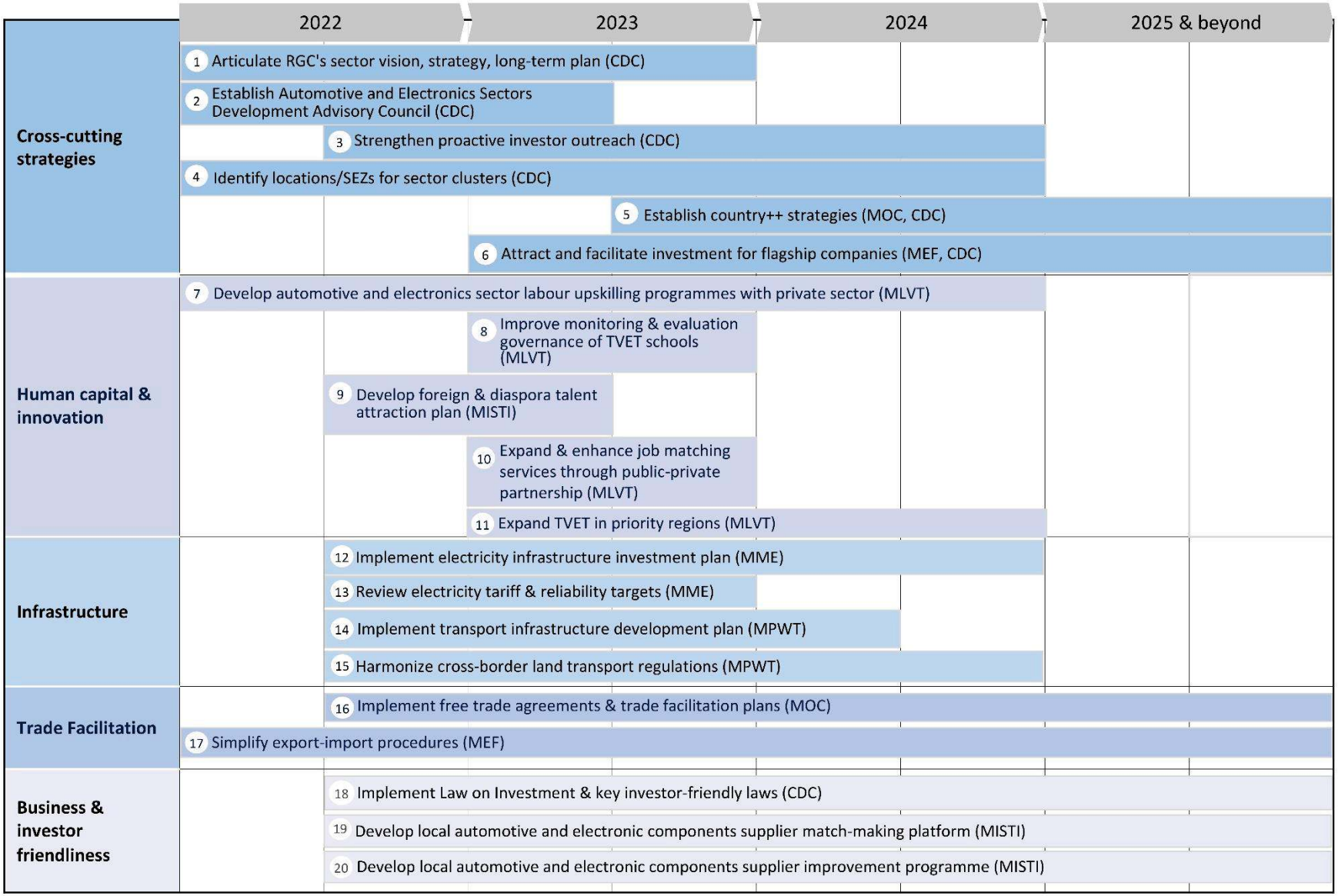
Appendix 1: Stakeholders consulted

The RGC ministries/institution involved in the development and implementation of this roadmap are as follows:

- Ministry of Interior (MOI)
- Ministry of Foreign Affairs and International Cooperation (MFAIC)
- Ministry of Economy and Finance (MEF)
- Ministry of Commerce (MOC)
- Ministry of Industry, Science, Technology and Innovation (MISTI)
- Ministry of Mines and Energy (MME)
- Ministry of Education, Youth and Sport (MoEYS)
- Ministry of Land Management, Urban Planning and Construction (MLMUPC)
- Ministry of Environment (MOE)
- Ministry of Posts and Telecommunications (MPTC)
- Ministry of Public Works and Transport (MPWT)
- Ministry of Labour and Vocational Training (MLVT)
- Council for the Development of Cambodia (CDC)

Several automotive and electronics manufacturing companies with an existing presence in Cambodia, as well as companies considering investing in Cambodia, were also consulted to understand Cambodia's comparative strengths and limitations in attracting automotive and electronics sector investments. Feedback from an industry consultation session with private sector stakeholders in Cambodia's automotive and electronics sectors, held on 1 March 2022, was also incorporated into the roadmap.

Appendix 2: Indicative timeline for action plan implementation



Appendix 3: Detailed Work Plan for the Initiatives implementation

<table>
<tr><th colspan="2">Initiative #1: Define vision, strategic framework, and action plan for automotive and electronics sectors</th></tr>
<tr><td>Responsible Ministries/Institutions: CDC</td><td>Supporting Ministries/Institutions: Relevant Ministries/Institutions</td></tr>
<tr><td colspan="2">Context:
Investors seek to understand the RGC's long-term plans and commitment to automotive and electronics sectors
The RGC seeks to strengthen its automotive and electronics sectors, but there is no common vision and framework/blueprint for ministries and institutions to refer to for implementation</td></tr>
<tr><td colspan="2">Scope and Objectives:
Define automotive and electronics vision, strategic framework, and action plan in alignment with the RGC’s priorities
Publish and disseminate the roadmap to relevant stakeholders, particularly the private sector
Establish Accelerator Unit to govern implementation</td></tr>
<tr><td>Milestones:</td><td>Implementation Timeline:</td></tr>
<tr><td>1. Consult with line ministries and institutions on the draft Automotive and Electronics Sectors Development Roadmap and seek endorsement from the Economic and Financial Policy Committee</td><td>March – November 2022</td></tr>
<tr><td>2. Publish and disseminate the roadmap to investors and relevant stakeholders</td><td>November 2022 – March 2023</td></tr>
<tr><td>3. Develop a framework for monitoring and evaluating the roadmap implementation</td><td>January – December 2023</td></tr>
</table>

<table>
<tr><th colspan="2">Initiative #2: Establish “Automotive and Electronics Sectors Development Advisory Council”</th></tr>
<tr><td>Responsible Ministries/Institutions: CDC</td><td>Supporting Ministries/Institutions: Relevant Ministries/Institutions</td></tr>
<tr><td colspan="2">Context:
Limited private sector participation in developing automotive and electronics sectors, contributing to “chicken-and-egg” issues in addressing investor pain points</td></tr>
<tr><td colspan="2">Scope and Objective:</td></tr>
</table>

Establish the "Automotive and Electronics Sectors Development Advisory Council" to co-drive sectors development strategy and initiative development workplan	
Milestones:	**Implementation Timeline:**
1. Pitch the council charter and overall partnership approach to the private sector, starting with key business federations and high-potential partners	May – July 2022
2. Conduct 1st meeting of the Advisory Council to align on priority areas to address in order to identify target outcomes for immediate terms, and develop work plan to follow up on priority areas	June – August 2022
3. Prepare legal framework, with defined objectives, composition, roles and responsibilities, to establish the council to drive sectors development strategy and initiative work plan	September 2022 – January 2023
4. Conduct 2nd meeting of the Advisory council to disseminate the legal framework on the council establishment and to address other priority agendas	January – March 2023

Initiative #3: Strengthen proactive investors outreach	
Responsible Ministries/Institutions: CDC	**Supporting Ministries /Institutions:** MOC
Context: • Misleading information causes false perception of Cambodia as a non-attractive manufacturing location • Lack of awareness about investment opportunities in Cambodia and its strengths (e.g., cost-competitive workforce, strategic location)	
Scope and Objective: Expand investor outreach channels and capabilities to increase visibility of investment opportunity in Cambodia	
Milestones:	**Implementation Timeline:**
1. Include investor-relevant data (e.g., growth in FDI, improvement in electricity prices) in the digital promotional tools for automotive and electronics investors	Q4 2022 – Q1 2023

2. Enable broader investment campaign through web media placement and create automotive and electronics promotional materials circulated to relevant diplomatic missions and business associations of target countries	Q4 2022 – Q1 2023
3. Create investment promotional videos portraying the growing automotive and electronics sectors in Cambodia as a spot that tap the industrial linkages to regional industrial hub	Q4 2022 – Q1 2023
4. Convene investment promotion outreach activities through seminars or workshops to attract investments in automotive and electronics sectors	Q4 2022 – 2024 (could be extended to subsequent years)
5. Strengthen investment facilitation mechanism to address investors' concerns throughout each phase of their investment project implementation	Q4 2022 – 2024 (could be extended to subsequent years)

Initiative #4: Identify locations/SEZs for Automotive and Electronics clusters	
Responsible Ministries/Institutions: CDC	**Supporting Ministries/Institutions:** MEF, MLVT, MISTI, MOC, MME, MPWT, MLMUPC, MOI, and MPTC
Context: • No clear locations/SEZs identified for automotive and electronics clusters, leading to missed opportunities to achieve network effects and resources in sector development	
Scope and Objectives: 1. Cooperate with the private sector to identify one or two suitable locations/SEZs for development into automotive and electronics clusters 2. Promote selected locations/SEZs to potential investors 3. Increase attractiveness of selected locations/SEZs to potential investors	
Milestones:	**Implementation Timeline:**
1. Define criteria to select suitable SEZs for automotive and electronics clusters	Q2 – Q3 2022
2. Develop initial view on potential SEZs for automotive and electronics clusters	Q2 – Q3 2022

3. Identify key gaps to fill for shortlisted SEZs to be competitive in the region	Q2 – Q3 2022
4. Identify and confirm SEZ(s) for automotive and electronics clusters	Q3 – Q4 2022
5. Develop policy measures to implement sectors clusters	Q4 2022 – Q2 2023
6. Implement and review progress of policy measures	Q3 2023 – 2024 (could be extended to subsequent years)

Initiative #5: Establish country + + strategies	
Responsible Ministries/Institutions: MOC and CDC	**Supporting Ministries/Institutions:**, MEF, MLVT, MISTI, MME, MPWT, and MPTC
Context: • Cambodia's strategies to develop the automotive and electronics sectors are not well-integrated and coordinated with Thailand and Vietnam • Closer coordination could help better address pain points such as cross-border logistics, labour flow, etc., and identify synergies in the development of these sectors (e.g., joint marketing to investors)	
Scope and Objective: Establish cooperation mechanisms with Thailand and Vietnamese governments to develop and implement initiatives to address cross-border pain points and leverage synergies in automotive and electronics sectors development	
Milestones:	**Implementation Timeline:**
1. Identify priority cooperation areas to address, in partnership with private sector, and develop pitch for cooperation to neighbouring governments	Q3 – Q4 2023
2. Start collaboration and sign Memorandum of Understanding (MoU) on sectors cooperation with neighbouring countries	Q1 – Q4 2024
3. Implement cooperation initiatives	Q4 2024 – 2025 (could be extended to subsequent years)

Initiative #6: Attract and facilitate investment for flagship companies	
Responsible Ministries/Institutions: MEF and CDC	
Context: • Investment from major player in target sub-sectors (e.g., Lear in seats, Bosch in automotive electronics) would provide test case that helps attract other investors • However, high capital requirements and risk involved in entering new country deters investment from companies new to Cambodia	
Scope and Objective: Develop mechanisms to attract and facilitate investment for flagship companies to encourage their investment in new factories in Cambodia	
Milestones:	**Implementation Timeline:**
1. Conduct feasibility study to understand key needs, pain points and major risks that flagship companies encountered in investment based on best practices of other countries	Q1 – Q4 2023
2. Consider put forth measures that provide specific supports to flagship companies, in accordance with the results of the study	Q4 2023 – Q2 2024
3. Disseminate these specific measures regularly to flagship companies directly	Q2 2024 – Q4 2025

Initiative #7: Develop Automotive and Electronics labour upskilling programme with private sector	
Responsible Ministries/Institutions: MLVT	**Supporting Ministries/Institutions:** MEF, CDC, MISTI, MoEYS, MPTC, and Development Partners
Context: • Investors expressed talent gap as one of the key barriers for investment in Cambodia • Talent gap in low skilled labour and mid-level technical talent is especially attributed to quality and relevance of training • Lack of private sector involvement throughout the upskilling journey identified as a key impediment	
Scope and Objectives: 1. Identify private sector partners to co-create labour upskilling programme and set-up Sector Skills Council	

2. Design Automotive and Electronics labour Upskilling Programme Strategy (e.g., pathway to scale up training, partnership models, training models) with private sector 3. Implement programme	
Milestones:	**Implementation Timeline:**
1. Evaluate current upskilling efforts	Q2 – Q3 2022
2. Identify private sector partners to co-create labour upskilling programme	Q2 – Q3 2022
3. Set up Sector Skills Council for automotive and electronics	Q4 2022 – Q1 2023
4. Develop Automotive and Electronics Labour Upskilling Programme with Private Sector (e.g., development of automotive and electronics skills curriculum)	Q1 – Q4 2023
5. Launch Automotive and Electronics Labour Upskilling Programme	Q3 – Q4 2023
6. Implement and review progress of labour upskilling programme	Q3 2023 – 2024 (could be extended to subsequent years)

Initiative #8: Improve monitoring and evaluation governance of TVET schools	
Responsible Ministries/Institutions: MLVT	**Supporting Ministries/Institutions:** MEF, CDC, private sector, and Development Partners
Context: • Investors expressed talent gap as one of the key barriers for investment in Cambodia • Talent gap in low skilled labour and mid-level technical talent is especially attributed to quality and relevance of training • Rigorous governance of TVET schools identified as an impediment towards ensuring quality TVET training programmes	
Scope and Objectives: 1. Design robust monitoring and evaluation model improvements (including KPIs, tools, processes, strategy, and teams) for TVET schools, that are linked to employment outcomes and clear incentives to encourage better performing TVET schools 2. Set-up and run monitoring and evaluation unit	
Milestones:	**Implementation Timeline:**
1. Design robust monitoring and evaluation improvement mechanisms (focused on automotive and electronics sectors)	Q1 – Q2 2023

2. Consult and align monitoring and evaluation mechanisms with relevant stakeholders e.g., ministries, institutions, and TVET schools	Q1 – Q2 2023
3. Launch new monitoring and evaluation model, including establishment of new monitoring and evaluation unit	Q2 – Q3 2023
4. Implement and review the new monitoring and evaluation model	Q3 – Q4 2023 (could be extended to subsequent years)

Initiative #9: Develop foreign and diaspora talent attraction plan	
Responsible Ministries/Institutions: MISTI	**Supporting Ministries/Institutions:** MLVT, MEF, CDC, and MPTC
Context: • Investors expressed talent gap as one of the key barriers for investment in Cambodia • Talent gap presents in senior managerial roles (e.g., plant managers, engineers) • Due to the nascent manufacturing landscape in Cambodia, experienced talent for these roles is limited locally	
Scope and Objectives: 1. Design the Foreign and Diaspora Talent Attraction Plan for Automotive and Electronics experienced professionals (e.g., strategy, targets, initiatives, and incentives) 2. Implement the Talent Attraction Programme	
Milestones:	**Implementation Timeline:**
1. Assess current situation on Cambodia talent attraction and study International best practices and lessons learnt from successful countries	October 2022 – February 2023
2. Co-create a talent and Cambodian diaspora attraction plan	February – March 2023
3. Co-create incentive mechanism to attract talent to Cambodia	March – April 2023
4. Develop dialogue platform to connect talent and Cambodian diaspora with government and private sector	April – June 2023
5. Conduct outreach and dissemination program	April – June 2023

Initiative #10: Expand and enhance job matching services through public-private partnership	
Responsible Ministries/Institutions: MLVT	**Supporting Ministries/Institutions:** CDC and MEF
Context: • Some automotive and electronics investors, especially in more rural regions, have found difficulty to recruit labour • MLVT also expressed that visibility and effectiveness of current National Employment Agency should be improved, such as information sharing on job opportunities	
Scope and Objectives: 1. Identify potential job matching service partners 2. Explore partnership models with the job matching service providers 3. Secure and implement partnership with job matching service providers	
Milestones:	**Implementation Timeline:**
1. Expand National Employment Agency outreach to automotive and electronics companies in Cambodia (particularly in more rural areas) to identify ways to better meet their recruitment needs	Q1 – Q2 2023
2. Cooperate and engage interested automotive and electronics companies in Cambodia to match their recruitment needs with suitable TVET graduates and other jobseekers	Q3 – Q4 2023

Initiative #11: Expand TVET schools in priority regions	
Responsible Ministries/Institutions: MLVT	**Supporting ministries/Institutions:** CDC, MEF, MOI, and MoEYS
Context: • Some automotive and electronics investors have found difficulty to recruit labour • Currently, TVET schools are concentrated in urban areas (e.g., Phnom Penh), where most manufacturing activities are • However, as more automotive and electronics factories expand to more rural provinces, supporting TVET infrastructure will be required	
Scope & objectives: 1. Identify regions underserved by TVET schools 2. Develop feasibility study on investment for TVET schools in the identified regions	

3. Secure partners to co-invest in the new TVET facilities 4. Build TVET schools in identified regions	
Milestones:	**Implementation timeline:**
1. Identify and shortlist priority regions that are underserved by TVET schools, in the current situation and for the future	Q2 – Q3 2023
2. Complete feasibility study for TVET strengthening and modernisation in identified regions	Q3 –Q4 2023
3. Pitch, explore, and negotiate partnership with potential partners e.g., private Sector, development partners	Q3 – Q4 2023
4. Secure partnership, strengthen and modernise TVET schools in the identified priority regions, and socialise progress to investors	Q4 2023 – 2024 (could be extended to subsequent years)

Initiative #12: Implement electricity infrastructure investment plan	
Responsible Ministries/Institutions: MME	**Supporting ministries/Institutions:** CDC and MEF
Context: • Electricity cost and reliability remains top recurring need and pain point raised by investors • Electricity tariffs ~20% higher than Thailand, and ~40% higher than Vietnam • Increase in number and duration of electricity outages in SEZ • Lags reliability in comparison with the fast-growing ASEAN economies based on key indicators for interruption duration and frequency	
Scope & objectives: 1. Invest in improved generation and transmission capabilities in line with Power Development Masterplan 2. Monitor progress against planned timelines	
Milestones:	**Implementation timeline:**
1. Publish Power Development Masterplan	Q4 2022 – Q1 2023
2. Implement and review progress of electricity infrastructure investments in line with Power Development Masterplan	Q1 2023 – 2024 (could be extended to subsequent years)

<table>
<tr><td colspan="2">Initiative #13: Review electricity tariff and reliability targets</td></tr>
<tr><td>Responsible Ministries/Institutions: MME</td><td>Supporting ministries/Institutions: CDC, and MEF</td></tr>
<tr><td colspan="2">Context:
Electricity cost and reliability remains top recurring need and pain point raised by investors
Electricity tariffs ~20% higher than Thailand, and ~40% higher than Vietnam
Increase in number and duration of electricity outages in SEZ
Lags reliability in comparison to fast-growing ASEAN economies based on key indicators for interruption duration and frequency</td></tr>
<tr><td colspan="2">Scope & objectives:
Review tariff reduction and reliability improvement targets (e.g., 5- year forward) with the view to strengthen competitiveness against peer countries
Promote tariff reduction and reliability improvement targets to investors
Monitor progress against targets</td></tr>
<tr><td>Milestones:</td><td>Implementation timeline:</td></tr>
<tr><td>1. Engage EAC and EDC to develop internal view on feasible targets for tariff reduction and reliability improvement as starting point for discussion with private sector</td><td>Q4 2022 – Q1 2023</td></tr>
<tr><td>2. Establish regular meetings with EAC, EDC and private sector on electricity tariff and reliability competitiveness and how that would affect their cost structure and investment calculus</td><td>Q4 2022 – Q1 2023</td></tr>
<tr><td>3. Establish regular review of targets based on (i) feasibility and (ii) impact on investor calculus</td><td>Q4 2022 – Q1 2023</td></tr>
<tr><td>4. Implement plans to achieve targets and review progress against targets</td><td>Q4 2022 – Q4 2023 (could be extended to subsequent years)</td></tr>
</table>

Initiative #14: Implement transport infrastructure development plan	
Responsible Ministries/Institutions: MPWT	**Supporting Ministries/Institutions:** MOI, MEF, and CDC
Context: • All three modes (land, sea, and air) are important to support export-oriented strategies for automotive and electronics – increased trade will require strengthening infrastructure • Main investor pain points concern land transport (congestion, queues at border checkpoints, and road deterioration)	
Scope & objectives: 1. Invest in improved transport and logistics infrastructure (e.g., new roads, border checkpoints, ports, and airports) in line with Masterplan on Intermodal Transport Connectivity and Logistics System in Cambodia 2. Monitor progress against planned timelines	
Milestones:	**Implementation timeline:**
1. Implement key road projects in line with Masterplan on Intermodal Transport Connectivity and Logistics System including Phnom Penh-Sihanoukville expressway, Phnom Penh Third Ring Road, National Road No. 5, and National Road No. 48	Q4 2022 – 2023
2. Launch new Stung Bot border checkpoint in line with Masterplan on Intermodal Transport Connectivity and Logistics System	Q4 2023 – Q1 2024
3. Launch Phnom Penh Intermodal Logistics Complex	Q4 2023 – Q1 2024
4. Sustain and review progress of other infrastructure investments	Q4 2023 – Q1 2024 (could be extended to subsequent years)

Initiative #15: Harmonise cross-border land transport regulations with neighbouring countries	
Responsible Ministries/Institutions: MPWT	**Supporting ministries/Institutions:** MOI, CDC, MEF, and MFAIC
Context: • Lack of harmonisation of land transport regulations between Cambodia and neighbouring countries lead to increasing logistics costs, and hindering Country "+1" strategy • Investors more often cite Cambodia-Thailand logistics as issue, for examples creating need for border transloading: (i) differences in maximum truck loads in Cambodia vs Thailand, and (ii) limits on the number of trucks licenced for cross-border goods transport	

Scope & objectives: 1. Alongside private sector, identify key land transport regulations that increase cross-border logistics costs, and prioritise for harmonisation 2. Engage neighbouring governments to harmonise regulations in support of stronger regional value chain integration (as part of broader Cross-Border Transport Agreement framework)	
Milestones:	**Implementation timeline:**
1. Develop longlist of land transport regulations that increase cross-border logistics costs, starting with known issues such as truck licences, time to cross border and congestion at the border gate, and flesh out with private sector input	Q4 2022 – Q1 2023
2. Prioritise regulations to address based on impact to investors	Q1 – Q2 2023
3. Engage neighbouring governments to harmonise restrictions and review impact on per-shipment costs, at least on an annual basis	Q2 2023 – 2024 (could be extended to subsequent years)

Initiative #16: Implement FTAs and trade facilitation plans	
Responsible Ministries/Institutions: MOC	**Supporting ministries/Institutions:** MEF, CDC, and MISTI
Context: • Open and favourable trade environment is important to support export-oriented strategies for automotive and electronics • Need to ensure effective implementation of ratified FTAs and increase investor awareness of implications and opportunities arising from the FTAs	
Scope & objectives: 1. Implement the ratified FTAs and other supporting trade facilitation measures 2. Increase investor awareness of Cambodia's favourable trade environment, and new opportunities arising from the FTAs	
Milestones:	**Implementation timeline:**
1. Annually review implementation progress of key FTAs such as the Cambodia-China FTA and the Cambodia-South Korea FTA	Q4 2022 – 2025
2. Implement plans to increase investor awareness of new opportunities arising from FTAs	Q4 2022 – 2025
3. Implement the ratified FTAs	Q4 2022 – 2025 (could be extended to subsequent years)

4. Sustain supporting trade facilitation measures (e.g., negotiations to simplify rules of origin & reduce non-tariff barriers)	Q4 2022 – 2025 (could be extended to subsequent years)

Initiative #17: Simplify export-import procedures	
Responsible Ministries/Institutions: MEF	**Supporting ministries/Institutions:** CDC and MOC
Context: • Clearance cost and time-to-serve remains high • Lack of consistency in the implementation of laws and regulations by the authorities • Awareness of the laws, regulations as well as compliance of the private sectors remains limited.	
Scope & objective: Improve export-import clearance procedures to enhance competitiveness and investment attraction	
Milestones:	**Implementation timeline:**
1. Use the Customs-Private Sector Partnership Mechanism and other Institutions- Private Sector Partnership Mechanism to identify private sector's pain points and provide solutions to reduce cost and time spent on export-import clearance	2022 – 2025 (could be extended to subsequent years or implement on a regular basis)
2. Increase awareness of private sector and strengthen compliance of laws and regulations through trainings and dissemination of relevant laws and regulations	2022 – 2025 (could be extended to subsequent years or implement on a regular basis)
3. Continue to improve clearance procedures through the expansion of automated system	2022 – 2025 (could be extended to subsequent years or implement on a regular basis)

Initiative #18: Implement the Law on Investment of the Kingdom of Cambodia and key investor-friendly laws	
Responsible Ministries/Institutions: CDC	**Supporting ministries/Institutions:** MEF, MOC, MLMUPC, MOE, MOI, and other relevant ministries/institutions
Context: • The Law on Investment and PPP Law were promulgated at the end of 2021 to improve investment climate	

• Investor needs clarity at granular level on impact of the Law on Investment on their production costs	
Scope & objective: Pass sub-decree on the implementation of the Law on Investment, and other relevant implementation sub-decrees to provide investors greater granularity on the impact of the Laws	
Milestones:	**Implementation timeline:**
1. Draft and pass sub-decree on the implementation of Law on Investment	Q4 2022 – Q1 2023
2. Draft and pass the Law on Special Economic Zones	Q4 2022 – Q1 2023
3. Draft and pass sub-decree on the Implementation of the PPP Law	Q4 2022 – Q1 2023
4. Continue to engage the private sector on the implementation of other investor-friendly laws and evaluate the implementation effectiveness	Q4 2022 – 2025 (could be extended to subsequent years)

Initiative #19: Develop local Automotive and Electronics component supplier match-making platform	
Responsible Ministries/Institutions: MISTI	**Supporting ministries/Institutions:** CDC, MEF, and MPTC
Context: • Cambodia has significant activities in 2-wheeler and electronics component assembly, but most components are still imported • Hence, there is an opportunity to increase further backward linkages, which is currently hindered by a "chicken-and-egg" problem • Assemblers do not source locally due to unmet quality requirements, while local SME suppliers do not invest in more advanced capabilities because of uncertain demand	
Scope & objectives: 1. Set baseline for current local SME automotive and electronics component suppliers, and define their pain points 2. Co-develop supplier match-making platform with 2-wheeler and electronics component assemblers	
Milestones:	**Implementation timeline:**
1. Set baseline for automotive and electronics component supplier ecosystem and pain points currently hindering backward linkages	Q4 2022 – Q1 2023
2. Identify private sector partners i.e., 2-wheeler and electronics component assemblers and component suppliers, to co-develop	Q1 – Q2 2023

supplier match-making platform (potentially with automotive working group of Institute of Standards of Cambodia and investors)	
3. Pitch, explore, and negotiate partnership with 2-wheeler and electronics component assemblers to co-develop supplier match-making platform	Q2 – Q4 2023
4. Co-develop supplier match-making platform (e.g., collate assembler requirements and supplier lists) with 2-wheeler and electronics component assemblers	Q4 2023 – Q4 2024
5. Implement & review progress of match-making platform	Q4 2024 – 2025 (could be extended to subsequent years)

Initiative #20: Develop local Automotive and Electronics component supplier development programme	
Responsible Ministries/Institutions: MISTI	**Supporting ministries/Institutions:** CDC, MEF, and MPTC
Context: • Cambodia has significant activities in 2-wheeler and electronics component assembly, but most components are still imported • Hence, there is an opportunity to increase further backward linkages, which is currently hindered by a "chicken-and-egg" problem • However, local component supplier base is still nascent and do not meet quality requirements of 2-wheeler and electronics component assemblers	
Scope & objectives: 1. Set baseline for current local automotive and electronics component suppliers, and define pain points 2. Develop a program to improve the capacity and quality of local automotive and electronics component suppliers 3. Implement the programme 4. Strengthen production quality of local automotive and electronics component suppliers as well as engineering and IT service providers.	
Milestones:	**Implementation timeline:**
1. Set baseline for automotive and electronics component supplier ecosystem and pain points currently hindering backward linkages	Q4 2022 – Q1 2023
2. Identify private sector partners i.e., 2-wheeler and electronics component assemblers and local component suppliers, to co-develop	Q1 – Q2 2023

local component supplier development programme (potentially with automotive working group of Institute of Standards of Cambodia)	
3. Develop programme plan with private sector partners (e.g., details of quality improvement programme, training and accreditation, investment attraction measures, especially technical training programs between MISTI and MLVT)	Q2 – Q3 2023
4. Develop quality improvement programme, and support training and accreditation	Q3 2023 – Q4 2024
5. Implement review progress of quality improvement programme	Q4 2024 – 2025 (could be extended to subsequent years)

List of Abbreviations

Government Institutions

CDC	Council for the Development of Cambodia
EFPC	Economic and Financial Policy Committee
MEF	Ministry of Economy and Finance
MISTI	Ministry of Industry, Science, Technology and Innovation
MLVT	Ministry of Labour and Vocational Training
MME	Ministry of Mines and Energy
MOC	Ministry of Commerce
MPWT	Ministry of Public Works and Transport
TVET	Technical and Vocational Education and Training

Technical Terms

AR/VR	Augmented Reality/Virtual Reality
ASEAN	Association of Southeast Asian Nations
CAGR	Compound Annual Growth Rate
EV	Electric Vehicle
FTAs	Free Trade Agreements
IDP	Cambodia Industrial Development Policy 2015-2025
LED	Light-Emitting Diode
PCB	Printed Circuit Board
PPP	Public-Private Partnership
RCEP	Regional Comprehensive Economic Partnership
RGC	Royal Government of Cambodia
STEM	Science, Technology, Engineering and Mathematics

Acknowledgements

The Council for the Development of Cambodia (CDC), acting as the "Etat-Major" of the Royal Government of Cambodia (RGC) responsible for overseeing and managing private investment, special economic zones, and development cooperation, having **H.E. Mr. Chin Bun Sean**, Senior Minister in charge of Special Mission, as its Vice Chairman has oriented the formulation of the Cambodia's Automotive and Electronics Sectors Development Roadmap, aiming to accelerate economic recovery and build resilience in line with the Cambodia Industrial Development Policy 2015 – 2025 (IDP), and the Strategic Framework and Programs for Economic Recovery in the Context of Living with the Covid-19 in a new normal 2021-2023. The Cambodia's Automotive and Electronic Sectors Development Roadmap was initiated under the support of the Accelerated Covid-19 Economic Support (ACES) Programme funded by the Foreign, Commonwealth & Development Office (FCDO) of the United Kingdom.

The ACES programme was co-led by **H.E. Mr. Sok Chenda Sophea**, Minister attached to the Prime Minister and Secretary General of the CDC and **HMA Ms. Tina Redshaw**, Former British Ambassador Extraordinary and Plenipotentiary to the Kingdom of Cambodia, with the support from 12 Line Ministries of the RGC.

The Cambodia's Automotive and Electronics Sectors Development Roadmap was developed by the Boston Consulting Group (BCG) in close collaboration with the CDC's Secretariat in Leading and Coordinating the Implementation of the IDP, the "Etat-Major" of the CDC Management in developing policies and roadmaps composed of the following individuals:

- H.E. Mr. Nut Unvoanra, Head of the IDP Secretariat
- H.E. Mr. Lim Visal, Deputy Head of the IDP Secretariat
- Mr. Houl Bonnarith, Member
- H.E. Mr. Chou Heng, Member
- Ms. Vann Sereyrath, Member
- Ms. Chea Kesorphearom, Member
- Miss. Song Rany, Member
- Mr. Be Vannarith, Member
- Miss. Rith Boramey, Member
- Miss. Bora Sunjolinet, Member
- Mr. Chhay Mengleng, Member
- Miss. Chau Pichmonyrordh, Member
- H.E. Mr. Im Sour, Deputy Head of the IDP Secretariat
- H.E. Mr. Ken Davit, Member
- Mr. Lux Rachana, Member
- Mr. Kim Lumang Bopata, Member
- Mr. Seng Sunly, Member
- Mr. Kry Sereirith, Member
- Mr. Chey Rithira, Member
- Mr. Hok Leanghak, Member
- Ms. Soun Heang, Member
- Mr. Cheap Ty, Member
- Miss. So Kimnay, Member
- Mr. Kong Kim Sry, Member

Former members of the CDC-IDP Secretariat: Messrs. Siem Pichnorak and Huy Angtola and Mss. Kong Yada and Ou Chenda.

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The Council for the Development of Cambodia

Foreign, Commonwealth & Development Office

ACCELERATED COVID-19 ECONOMIC SUPPORT PROGRAMME

In collaboration with: