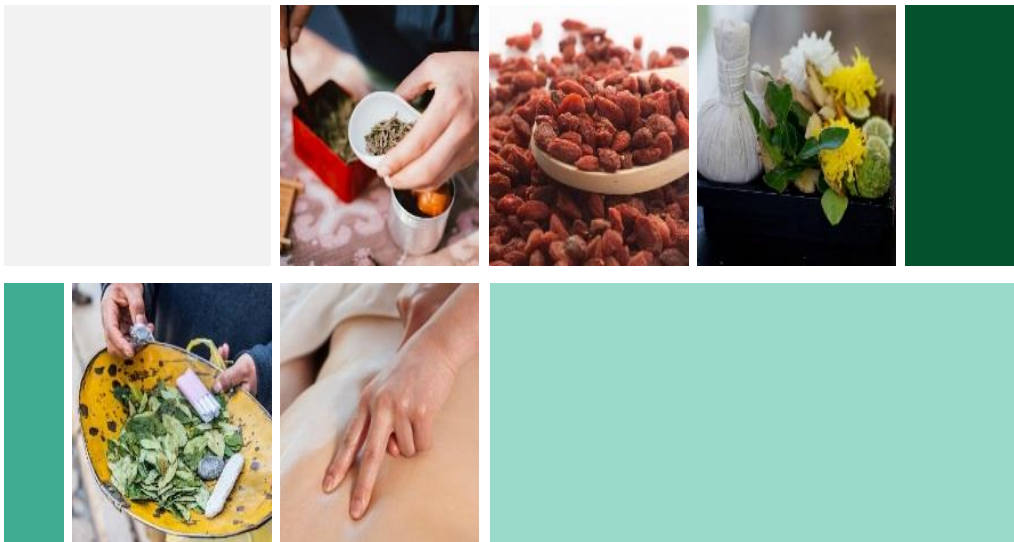




MINISTRY OF HEALTH
MALAYSIA



Traditional and Complementary Medicine (T&CM) Blueprint (Economic and Sociocultural)

Realising the potential of T&CM in Malaysia



Traditional and Complementary Medicine (T&CM) Blueprint (Economic and Sociocultural)

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Disclaimer:

This document was developed in 2018 and the information presented herein is accurate based on the prevailing conditions in 2018. Kindly note that some information, such as the names of organisations/entities has been updated as of December 2022 in this document.

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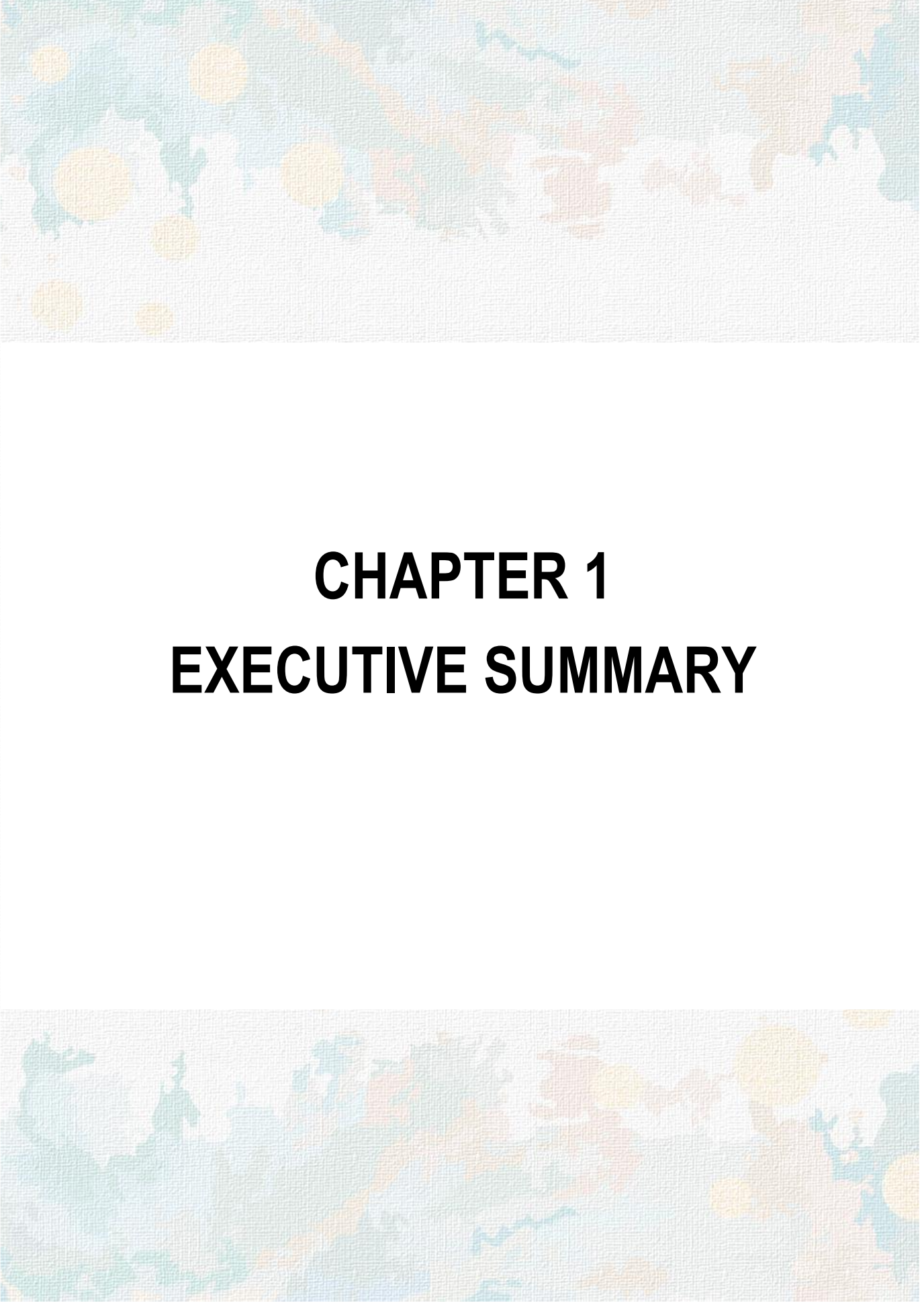
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List of Abbreviations

AGC	Attorney General Chambers
APAC	Asia-Pacific
API	active pharmaceutical ingredient
ASEAN	Association of Southeast Asian Nations
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
bn	billion
CAGR	Compound Annual Growth Rate
CDCR	Control of Drugs and Cosmetics Regulations
COE	Centre of Excellence
CPD	continuing professional development
CT	Computerized Tomography
DOSM	Department of Statistics Malaysia
EMGS	Education Malaysia Global Services
EPP	Entry Point Project
EPU	Economic Planning Unit
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investment
FRIM	Forest Research Institute Malaysia
FTE	full-time employee
GDP	Gross Domestic Product
GDV	Gross Development Value
GNI	Gross National Income
GR	genetic resources
HDO	Herbal Development Office
HMRC	Herbal Medical Research Centre
IMR	Institute for Medical Research
IMTJ	International Medical Travel Journal
IPharm	Malaysia Institute of Pharmaceuticals and Nutraceuticals
JAKIM	<i>Jabatan Kemajuan Islam Malaysia</i>
JAKOA	<i>Jabatan Kemajuan Orang Asli</i>
KeTSA	Ministry of Energy and Natural Resources
KPDNKK	Ministry of Domestic Trade, Cooperatives and Consumerism
LAMEA	Latin America, Middle East and Africa

m	million
MAFS	Ministry of Agriculture and Food Security
MARDI	Malaysian Agricultural Research and Development Institute
MATRADE	Malaysia External Trade Development Corporation
MHTC	Malaysia Healthcare Travel Council
MIDA	Malaysian Investment Development Authority
MITI	Ministry of International Trade and Industry
MOF	Ministry of Finance
MOH	Ministry of Health
MOHA	Ministry of Home Affairs
MOHE	Ministry of Higher Education
MOHR	Ministry of Human Resources
MOSTI	Ministry of Science, Technology and Innovation
MQA	Malaysia Qualifications Agency
MRI	Magnetic Resonance Imaging
MyIPO	Intellectual Property Corporation of Malaysia
MyTKDL	Malaysia Traditional Knowledge Digital Library
NATCM	National Administration of Traditional Chinese Medicine
NCD	Non-communicable disease
NHC	National Health Commission of the People's Republic of China
NIH	National Institutes of Health
NIMB	National Institutes of Biotechnology Malaysia
NKEA	National Key Economic Area
NPRA	National Pharmaceutical Regulatory Agency
NRECC	Ministry of Natural Resources, Environment and Climate Change
PMO	Programme Management Office
PIC	Prior Informed Consent
R&D	research and development
RMK-11	Eleventh Malaysia Plan
SaBC	Sabah Biodiversity Centre
SBC	Sarawak Biodiversity Centre
SC	steering committee
SEA	Southeast Asia
SEDA	Sustainable Economic Development Assessment

SEDIC	Socio-Economic Development of Indian Community
T&CM	traditional and complementary medicine
TC	technical committee
TCM	traditional Chinese medicine
TEK	Traditional Ecological Knowledge
TIM	traditional Indian medicine
TK	traditional knowledge
TMM	traditional Malay medicine
UKM	<i>Universiti Kebangsaan Malaysia</i>
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UPM	<i>Universiti Putra Malaysia</i>
USA	United States of America
USM	<i>Universiti Sains Malaysia</i>
WHO	World Health Organization



CHAPTER 1

EXECUTIVE SUMMARY

CHAPTER 1

EXECUTIVE SUMMARY

1.1 PURSUING A VISION FOR THE FUTURE OF T&CM

The Malaysian government has been working to transform the nation's Traditional and Complementary Medicine (T&CM) practices into a professionalised industry that provides widespread and measurable economic, healthcare and sociocultural benefits. Malaysia's vision for T&CM to become a RM19-28 billion economy by 2027 will require further improvements to regulation, professionalisation of talent, integration of T&CM into Malaysia's national healthcare system, clear lines of responsibility, as well as active public communication and promotion.

Three global trends have caused the use of T&CM to grow at a rate of 13% a year since 2011 (based on estimates by the Global Wellness Institute Report): the rising cost of healthcare, an increasing demand for health preservation, and an increasing need for holistic care.

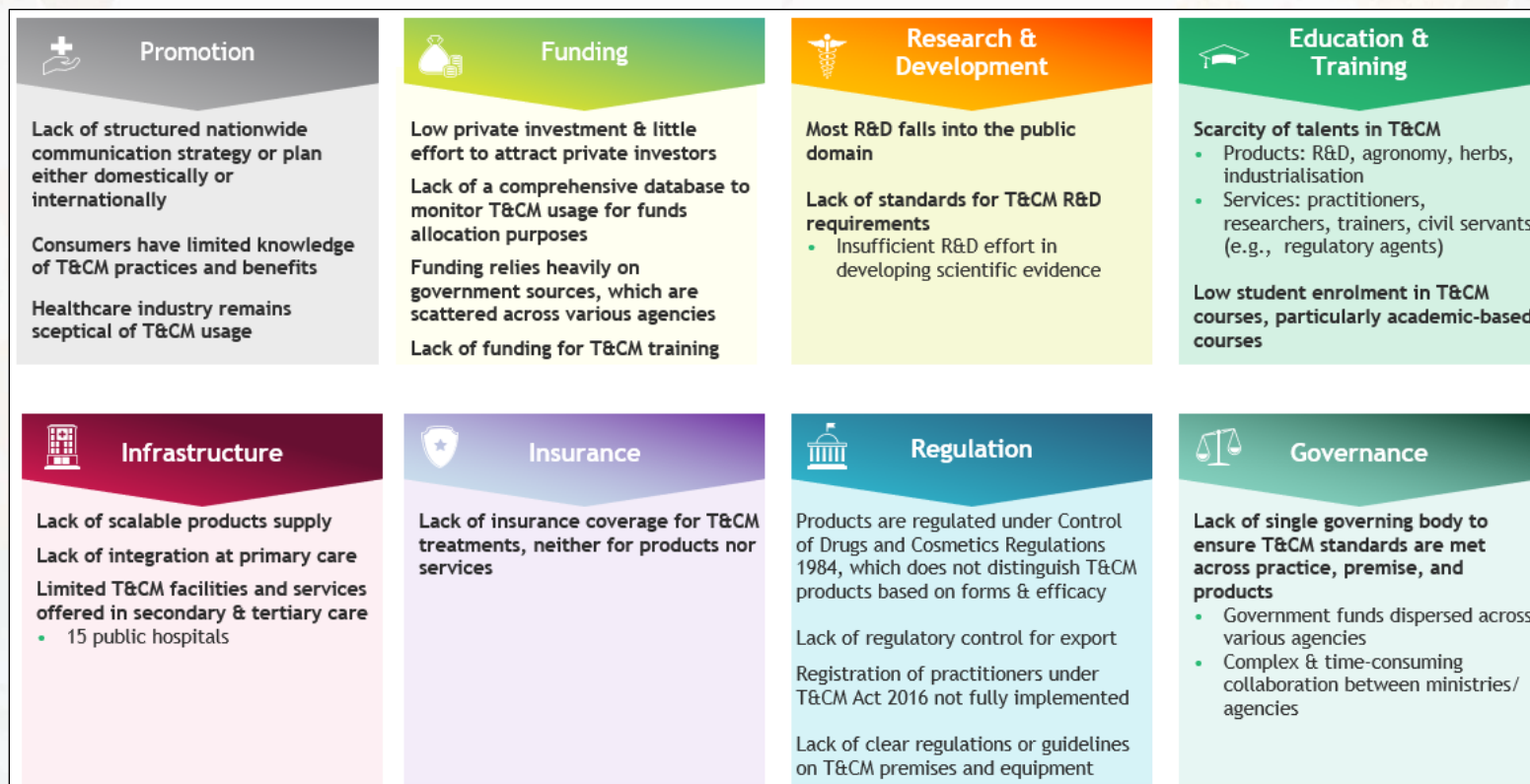
Malaysia's natural and cultural resources offer unique opportunities to succeed in this market, taking advantage of the country's rich biodiversity, the many types of T&CM practice, and a strong service economy, particularly in tourism.

Recognising this potential, the Malaysian government has already implemented several initiatives designed to foster growth in the T&CM market. The Eleventh Malaysia Plan (RMKe-11) (2016-2020) identified T&CM as a sub-sector of growth¹, in line with recommendations by the World Health Organization (WHO).

To achieve this potential, Malaysia will need to address several challenges to the T&CM industry's development and growth. These challenges fall under eight enablers **(Figure 1)**.

¹ Source: RMK-11 – Anchoring growth on people

Figure 1: Challenges across eight enablers



1.2 T&CM STRATEGIC AREAS: STRATEGIC AND CROSS-STRATEGIC OPPORTUNITIES

Addressing the challenges can promote the growth of T&CM industry especially in the three identified strategic areas guiding the continued development of the T&CM industry: economic development, healthcare integration and sociocultural enrichment. Moreover, this Blueprint has identified three strategic opportunities and two cross-strategic opportunities as follows:

1.2.1 STRATEGIC OPPORTUNITIES

The Blueprint explores three strategic opportunities for improving the economic, healthcare, and sociocultural impact of T&CM within Malaysia:

1. Malaysia aims to become a **global supplier of T&CM herbal extracts** focusing on local herbs that are highly sought after for traditional medicine, especially in China and India. This should generate an additional RM1 to 6 billion of GDP by 2027.
2. Malaysia aims to become a **global manufacturer of T&CM end products** focusing on targeted niche-specific markets, build on resources and skills already in place. This should generate an additional RM1 to 2 billion of GDP by 2027.
3. Malaysia aims to become a **highly professionalised T&CM services hub**; this strategy forms the heart of the Blueprint, since services are the industry's major growth contributor. A full range of services should be offered to the domestic market first, then to tourists for both wellness and medical purposes. This should generate an additional RM3 to 6 billion of GDP by 2027.

1.2.2 CROSS-STRATEGIC OPPORTUNITIES

The two cross-strategic opportunities, i.e., integrated healthcare system and elevated sociocultural standing are cutting across the three strategic areas. There are opportunities for collaboration and synergy between various sectors and stakeholders involved in the T&CM industry.

1.2.2.1 Integrated Healthcare System

Continue improvement and growth of T&CM products and services will deliver healthcare benefits throughout Malaysia, especially as T&CM practices become more seamlessly integrated into the healthcare system. Major goals for this strategic area include a reduction of up to RM13 billion in healthcare spending by 2027², improve health outcomes and healthcare accessibility; and preserve our unique cultural heritage. This will be a long process, as integrating T&CM into the healthcare system will require improvements in the current system.

Malaysia has already begun its efforts to integrate T&CM into the healthcare system at tertiary levels of care in the public sector, as a complement to modern medical practices. These efforts have brought some meaningful progress towards the integrated healthcare model, as evident by the increase in number of patients seeking those services over the last 10 years. However, there remains much more to be done considering that the majority of T&CM services today are being offered in the private sector. Whilst the provision of T&CM services in public hospitals is still important, the focus over the next three to five years should be on integrating T&CM into primary healthcare, especially once practitioners meet acceptable professional standards. The integration of T&CM in primary healthcare will mainly be driven by the private sector. Market demand will be a catalyst for the integration of T&CM into private medical practice, with confidence in products and practitioners supported by regulation and explicit guidelines for investors. It is envisioned that modern medicine and T&CM will harmoniously co-exist and play their respective strengths for the benefit of the patient. The government will play the role as a regulator to ensure standards and safety are upheld.

1.2.2.2 Elevated T&CM Cultural Standing

T&CM is deeply rooted in Malaysia's history, as seen in the wide range of T&CM practices in Malaysia: traditional Chinese medicine (TCM), traditional Malay medicine (TMM), traditional Indian medicine (TIM), Islamic medical

² Projected based on cost savings estimates from using T&CM over modern medicine for key conditions, calibrated based on average cost savings for each condition and the prevalence of the condition in Malaysia.

practice, homeopathy and complementary therapies including chiropractic and osteopathy. This variety of practices represents an ethnically diverse nation; T&CM is therefore important in defining and preserving Malaysia's cultural identity. The sociocultural benefits of advancing T&CM include its indispensable value as a national heritage and a repository of local cultures which can help strengthen social cohesion.

The Blueprint aims to focus efforts in the development, promotion, and propagation of the main traditional practices in Malaysia, especially TMM, TCM and TIM, while giving space for other T&CM practices to flourish as well.

Malaysia should conduct further research in T&CM practices, educate the population about their benefits, preserve this knowledge for future generations and help Malaysians accept T&CM as part of their daily lives. Preserving and celebrating Malaysia's ethnic diversity and biodiversity will help Malaysia to showcase its unique culture on an international stage, and help sustain the long-term survival of T&CM in the country.

1.3 IDENTIFYING AND BUILDING T&CM'S UNIQUE VALUE TO MALAYSIA

T&CM already offers unique value to Malaysia, but this value can be shaped and increased by building on existing strengths to achieve a lasting competitive advantage.

T&CM can be of great value to Malaysia in three areas:

- **Economic:** Generate new sources of GDP from the manufacture and export of T&CM raw materials, finished products and services. It also helps to increase employment opportunities for fellow Malaysians. Furthermore, since no global standards for quality in T&CM products currently exist, this can be an opportunity for Malaysia to distinguish itself through delivering T&CM products that are safe and have consistent quality.
- **Healthcare:** Integrating T&CM into the healthcare system will make T&CM more accessible and lead to increased demand that can help accelerate the industry's growth. The cost effectiveness of T&CM can help to reduce overall healthcare expenditure of the nation. Furthermore, by strengthening T&CM regulation and education, Malaysia can provide high-quality T&CM services, not just locally but also to foreign medical tourists.

- **Sociocultural:** Ensure the cultural heritage of Malaysia's unique multi-ethnic society is preserved, and celebrate and showcase the rich diversity of T&CM practices in Malaysia.

1.4 IMPLEMENTATION PLAN

1.4.1 EIGHT ENABLERS FOR IMPACT

The National T&CM Blueprint has identified eight enablers (**Figure 2**) that form the basis of its recommendations to address common challenges and take the greatest possible advantage of strategic opportunities. Chapter 6 describes these enablers in detail.

Incorporating contributions from all these enablers, the Blueprint identifies 23 initiatives (**Figure 3**) to grow the T&CM sector in Malaysia. The Blueprint's recommendations should pave the way to grow this sector into a RM19-28 billion industry by 2027.

Figure 2: Eight enablers for impact

Enablers	Objectives
 Governance	 Coordination body to ensure effective implementation of cross-ministerial and cross-agency efforts to grow the T&CM industry
 Regulation	 Comprehensive legal requirements to ensure compliance on safety and quality standards for product usage, service provision, healthcare facilities and exports
 Education & Training	 World-class education system that develops and attracts T&CM professionals , with sufficient locally trained and internationally trained professionals to sustain industry growth
 Funding	 One centralised budget to allocate and channel public funds among ministries and agencies, including incentives for private investment in the T&CM industry, to encourage industry development and research
 Infrastructure	 Services: Physical network of hospitals and clinics that deliver high quality and safe T&CM solutions on a standalone or integrated basis
	 Products: Structured and scalable value chain across agriculture and manufacturing to produce high quality and safe T&CM products for both local and international markets
 R&D	 Publication of scientific or outcome-based evidence that validates the safety & efficacy of T&CM products and services
 Promotion	 Holistic communication and promotion of T&CM products and services
 Insurance coverage	 The ability of a patient to receive reimbursement for T&CM products or services in either public or private healthcare facilities

Figure 3: List of prioritised initiatives for implementation

Enablers	Strategic areas	Initiatives	Owner	Priority	Proposed timeline
 Governance		0 Ensure effective collaboration across ministries/ agencies and monitor T&CM initiatives implementation	PMO	1	2019-2027
 Regulation		1 Fully implement T&CM Act 2016	T&CM Division	1	2018-2024
		2 Define T&CM premises regulation	T&CM Division	1	2018-2027
		3 Adapt product registration process for traditional medicine practices (concepts, research methods)	NPRA	1	2018-2027
		4 Review and facilitate regulations to meet requirements of export destination countries	MITI/ MATRADE	3	2022-2027
 Education & training		5 Support global talent immigration to fill capabilities gaps	T&CM Division/ MOHR	3	2022-2027
		6 Develop training to improve services	T&CM Division	1	2018-2027
		7 Develop training programmes for industry players and ensure transfer of knowledge/ technology	T&CM Division/ TalentCorp/ HRDCorp/ Bioeconomy Corporation	3	2018-2027
		8 Enhance T&CM education	MOHE/ MQA/ T&CM Division/FRIM	3	2019-2027
 Funding		9 Support T&CM practitioners career pathway development through public initiatives	T&CM Division	3	2023-2027
		10 Develop/ review incentive plan to foster private investments	MITI/ MIDA/ T&CM Division	1	2022-2027
		11 Create centrally managed industry development fund for T&CM	T&CM Division	1	2019-2027
 Infrastructure		12 Build the database required to develop T&CM industry and enable effective decision-making process	DOSM	2	2022-2027
		13 Enable T&CM products and extracts supply chain structuration	HDO	3	2018-2027
		14 Enable T&CM integration	T&CM Division	2	2022-2027
 R&D		15 Development of T&CM COE	T&CM Division	3	2023-2027
		16 Enrich T&CM practices documentation and ensure knowledge protection	HMRC /FRIM/ SBC/ SaBC/ MyIPO	3	2019-2027
		17 Enhance R&D of indigenous herbs along all steps of the value chain	HDO/ MyIPO	2	2022-2027
 Promotion		18 Enhance evidence-based research for T&CM practices	T&CM Division	2	2020-2027
		19 Launch awareness campaign of T&CM to educate and build public trust (healthcare & sociocultural)	Bioeconomy Corporation/T&CM Division	2	2023-2027
		20 Develop programmes and initiatives to showcase local heritage	National Heritage Department	3	2022-2027
 Insurance coverage		21 Promote T&CM services to tourists	MHTC	3	2022-2027
		22 Develop a list of products and services subject to reimbursement (e.g. acupuncture) based on domestic usage and benchmark with other countries (e.g. China, India)			

 Overall
  Extract
  End-product
  Service

1.4.2 IMPLEMENTATION PLAN FOR IMPACT

The Blueprint sets forth an implementation plan that follows three guiding principles:

- **Think big** by setting high goals within the Blueprint, emphasising the potential of T&CM and building an extensive list of actions to reach that vision.
- **Start small** by identifying areas of earlier effort, where Malaysia can generate a ripple effect and help the T&CM industry build on cumulative successes.
- **Act fast** by fixing the most important enablers, strengthening existing foundations before launching new ideas.

Based on the above three principles, the Blueprint recommends prioritisation on the enablers which deliver the most impact. The plan calls for three initiatives to be started in the early phase of implementation:

- Regulate and enforce standards for T&CM practices to ensure safety of both T&CM products and services.
- Improve and encourage human resources training to begin the process of professionalisation and build mutual understanding with modern medicine practitioners.
- Develop/ review incentive plan that will foster private investment.

1.5 MONITORING MECHANISMS: GOVERNANCE AND COMMITMENT

The Blueprint is cognisant of the needs for a coordinated effort to develop and grow the T&CM industry. Thus, the governance structure which monitors the implementation plan should be designed in accordance with the three identified guiding principles in the Implementation Plan - Act Fast, Start Small and Think Big.

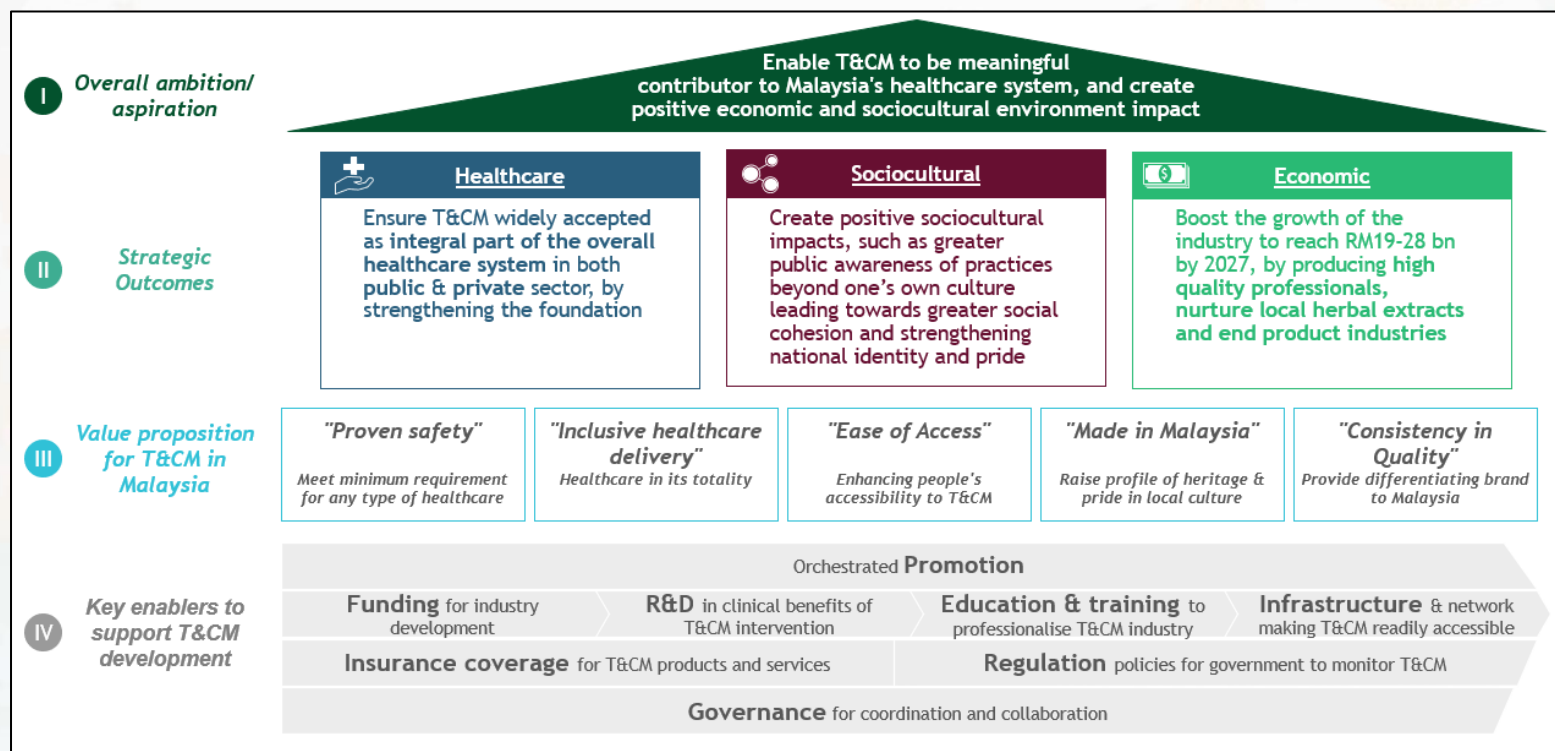
The successful implementation of the Blueprint should make Malaysia's T&CM industry more professional, highly regarded and larger in size, and delivering significant benefits to the nation's economy, health, and sociocultural identity. Looking into the future, the Blueprint envisions a Malaysia that will serve as a regional model of excellence for the T&CM industry (**Figure 4**).

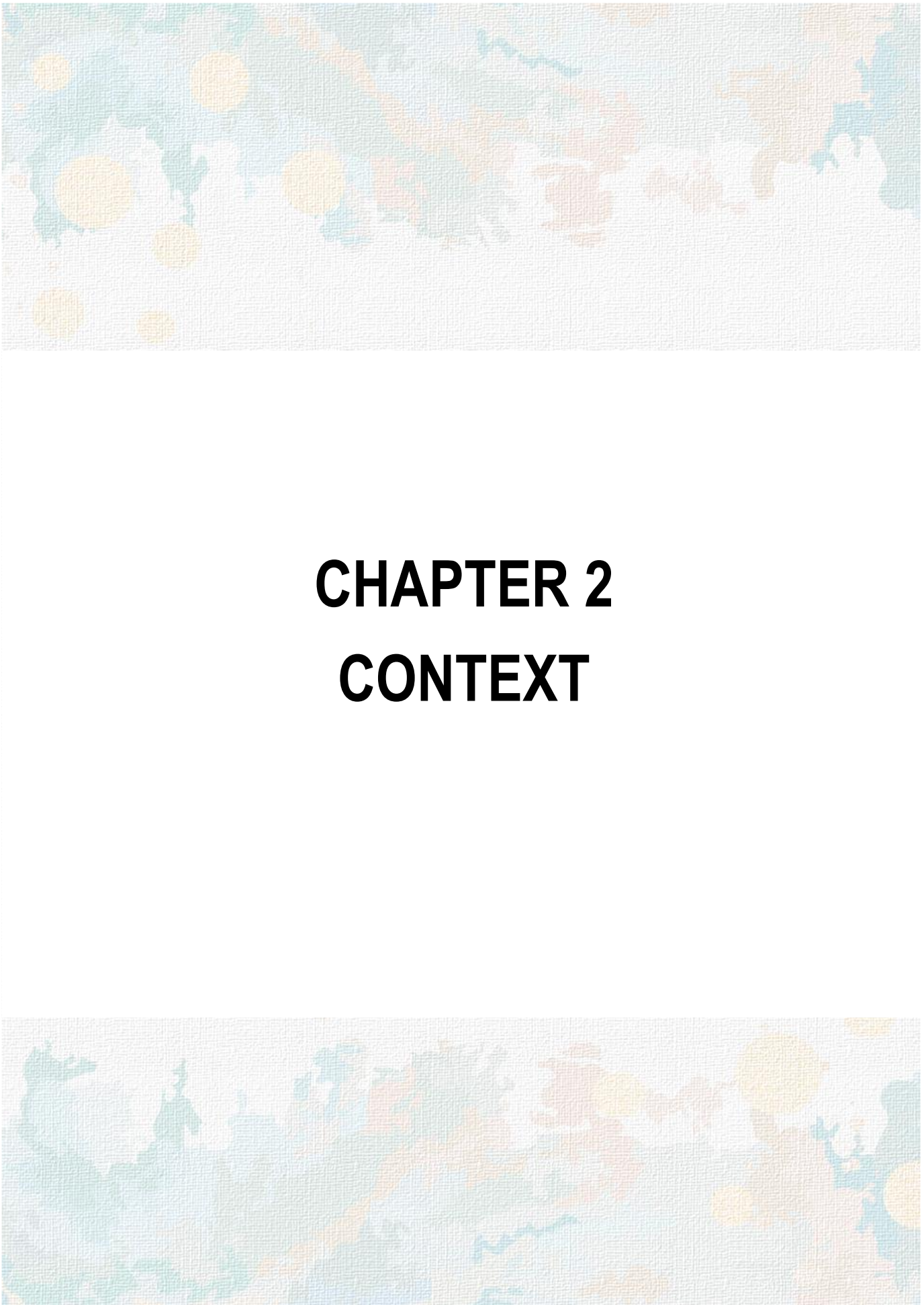
1.5.1 KEY SUCCESS FACTORS

Successful implementation of the T&CM Blueprint requires strong governance and firm commitment from all involved in advancing the T&CM industry. Strong governance should begin with firm senior leadership and formation of a committee accountable for the overall success of the T&CM industry. Senior leadership players should oversee a Programme Management Office (PMO) team responsible for directing the plan's implementation, coordinating efforts, collecting information and feedback from the various ministries and agencies, as well as communicating and meeting regularly with the relevant stakeholders. Below the PMO team, each enabler should have its own work stream chaired by senior-level working representatives of the organisations and individuals involved, recognised for expertise in their fields.

All the ministries and government agencies involved in implementing the National T&CM Blueprint need to commit fully to this effort. The implementation plan must have the wholehearted support of all parties, with agreement on responsibilities, scope, and timeline of each project. All must agree on the appropriate level of resources allocated to each project, not only for the project's execution but also at management level, for decision and validation.

Figure 4: National T&CM vision to be realised by 2027





CHAPTER 2

CONTEXT

CHAPTER 2

CONTEXT

2.1 OVERVIEW OF T&CM

T&CM is an industry with increasing growth potential both locally and globally. Malaysia is uniquely positioned to become a major player in this industry. T&CM in Malaysia comprises medicinal practices of which various ethnicities have used across multiple generations. WHO defines traditional medicine as the sum total of knowledge, skills and practices based on theories, beliefs, and experiences indigenous to different cultures used in the preservation of health as well as in diagnosis, improvement, or treatment of physical and mental illness. It defines complementary medicine as a much broader set of healthcare practices that are neither indigenous nor integrated into the dominant healthcare system³. Given the influence of culture and tradition upon its practice, definition of T&CM may vary across countries. For example, the United States of America (USA), China, and India are having different definitions of T&CM tailored to reflect each culture and setting.

In Malaysia, the Control of Drugs and Cosmetics Regulations (CDCR) 1984 defines traditional medicine as “any product used in the practice of indigenous medicines, in which the drug consists solely of one or more naturally occurring substances of a plant, animal or mineral, of parts thereof, in the unextracted or crude extract form and a homeopathic medicine”. The T&CM Act 2016 [Act 775] defines the practice of T&CM as “a form of health-related practice designed to prevent, treat or manage ailment or illness or preserve the mental and physical well-being of an individual, and includes such practices as TMM, TCM, TIM, Islamic medical practice, homeopathy, and complementary therapies” — with each practice evolving over time to adapt more fully to local culture and preferences (**Figure 5**).

³ Source: WHO Global Atlas of Traditional, Complementary and Alternative Medicine (2005)

Figure 5: Modality and historical significance

Modality	History
 Traditional Malay Medicine	- Indigenous native medicine, dating back >1000 years - influences from both Islamic philosophy and Hindu-Buddhism
 Traditional Chinese Medicine	- Introduced by migrants from China in the 15th century, during the colonial era - Most widely practiced traditional medicine in Malaysia
 Traditional Indian Medicine	Introduced by migrants from India in the 15th century, during the colonial era
 Homeopathy	Introduced via India through British Army in 1940
 Islamic Medical Practice	Introduced by Arab and Indian traders to Melaka in 15th century alongside introduction of Islam
 Complementary (chiropractic, osteopathy)	Complementary medicine started appearing on the scene during the 19th century, alongside influx of modern medicine

2.1.1 GLOBAL MEGATRENDS AFFECTING T&CM

Global Spa and Wellness Economy, 2014, indicates the wellness tourism (includes T&CM) have been growing at the rate of 13% annually since 2012⁴. **Figure 6** illustrates the estimated global T&CM market growth. The global megatrends affecting T&CM mainly due to three factors:

- Rising cost of modern medical healthcare
- Increasing demand for health preservation
- Increasing demand for holistic care

Figure 6: Estimated Global T&CM Market Growth⁵

Country	Growth(%)	Country	Growth(%)
China 	13	Thailand 	13
India 	11	Malaysia 	7
Indonesia 	13		

⁴ Source: Global Wellness Institute 'Spa & Wellness Economy Monitor' (2014)

⁵ Source: Growth in Herbal/Traditional Product annualised from 2011-2016

2.1.1.1 Rising Cost of Healthcare

Global healthcare costs have grown more than 18% in the past 10 years⁶. Adding to this burden is the rapid increase in the occurrence of chronic disease that was expected to rise by 57% by 2020⁷. Emerging markets will bear the brunt of this increase, reflecting greater population growth in these countries. In the face of these challenges, T&CM emerges as a possible intervention to complement the current organisation of care across primary, secondary and tertiary care. A study conducted in U.S. revealed that chiropractic treatment was comparable to physiotherapy in terms of effectiveness and costs for low back pain⁸. Moreover, another study showed that individuals who first sought treatment from chiropractic were less likely to have expensive imaging tests (MRI/CT Scan) and receive frequent opioid prescription compared to those who first sought treatment from other healthcare providers, leading to reduced healthcare utilisation and costs⁹. Acupuncture, which is another T&CM modality, was found to be cost-effective with significant improvement in pain when used as a complement to standard care in managing chronic low back pain as compared to standard care alone¹⁰. **Figure 7** illustrates the rising trend of healthcare expenses and highlights potential cost-saving opportunities for specific medical conditions with T&CM. However, this does not necessarily mean that T&CM will be the more cost-effective option for all illnesses, as some conditions may be better suited for treatment using modern medicine methods.

⁶ Source: WHO 'Global spending on health 2020: weathering the storm' (2020)

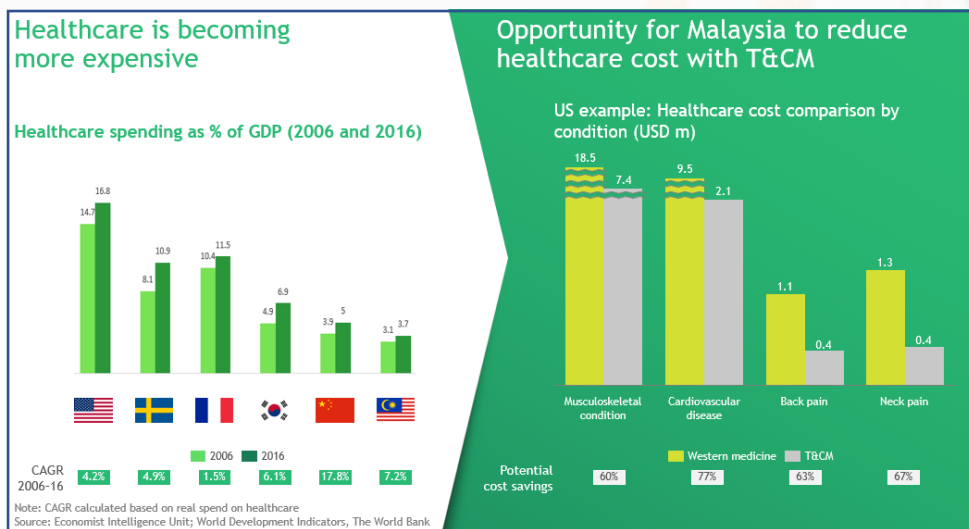
⁷ Source: WHO 'Nutrition' (2018)

⁸ Source: Khodakarami, N. 'Treatment of patients with low back pain: a comparison of physical therapy and chiropractic manipulation' (2020)

⁹ Source: Harwood, K. J., Pines, J. M., Andrilla, C. H. A., & Frogner, B. K. 'Where to start? a two-stage residual inclusion approach to estimating influence of initial provider on health care utilization and costs for low back pain in the US' (2022)

¹⁰ Source: Access Economics 'Cost effectiveness of complementary medicines' (2010)

Figure 7: Rising cost of healthcare and potential cost savings by condition



2.1.1.2 Increasing Demand for Health Preservation

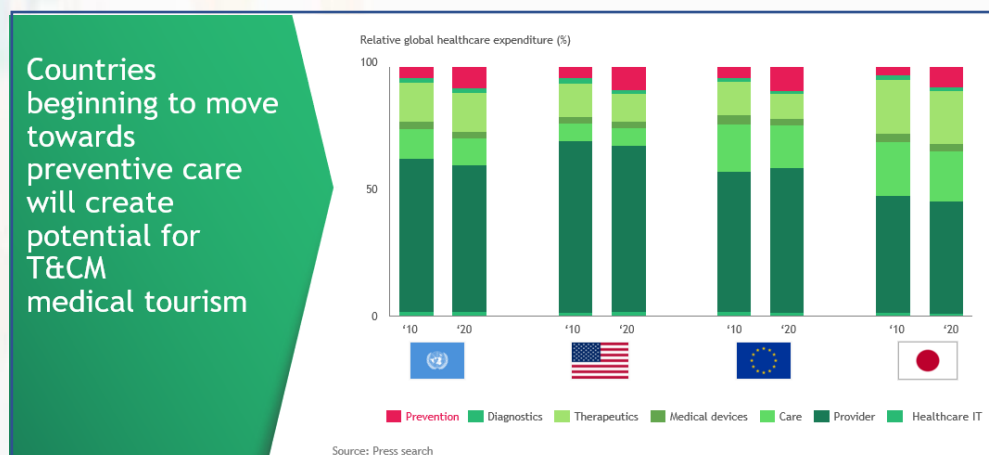
WHO estimates that 39% of the world's adults above the age of 18 are overweight, and 13% are obese¹¹. Malaysia also struggles with similar issue¹² which accounts for a considerable share of Malaysian healthcare spending for obesity between RM4.3 billion and RM8.5 billion, which is equivalent to 10-19% of Malaysia's healthcare spending in 2016¹³. If not addressed the situation will worsen, as obesity increases the risks of cardiovascular diseases, diabetes, musculoskeletal disorders and certain types of cancer. More health preservation are needed. The global shift towards health preservation, wellness and natural remedies presents an opportunity for T&CM to complement existing healthcare approaches. By offering Malaysians a wider range of healthcare options and empowering them to take control on their own health, T&CM can contribute to the preservation of good health. **Figure 8** shows the relative global healthcare spending, which also reflects the increasing emphasis on preventive care.

¹¹ Source: WHO 'Obesity and overweight' (2018)

¹² Source: New Straits Times 'Malaysians most obese in region' (2017)

¹³ Source: Global Risk Insights 'Special Report: Malaysia's healthcare sector provides a catalyst for growth' (2017)

Figure 8: Relative global healthcare spending



<i>‘... T&CM is widely used in disease prevention, health promotion and health maintenance...’</i> <i>WHO Traditional Medicine Strategy, 2014 - 2023</i>	<i>‘... TCM has been practiced for over 4,000 years... the ancient Chinese upper class saw doctors only for preventive care ...’</i> <i>Alex Keckes, Pacific College of Oriental Medicine (2014)</i>	<i>‘...more countries have gradually come to accept the contribution that T&CM can make to the health and well-being of individuals...’</i> <i>Dr. Margaret Chan, Director-General, WHO (2013)</i>
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2.1.1.3 Increasing Demand for Holistic Care

In response to an ageing population and increasing incidence of mental-related illnesses, the market for wellness related treatments is growing. This market remains grossly underserved, with WHO estimating that in developing nations, approximately 76-85% of people with mental health problems, many of whom are elderly, receive no treatment¹⁴.

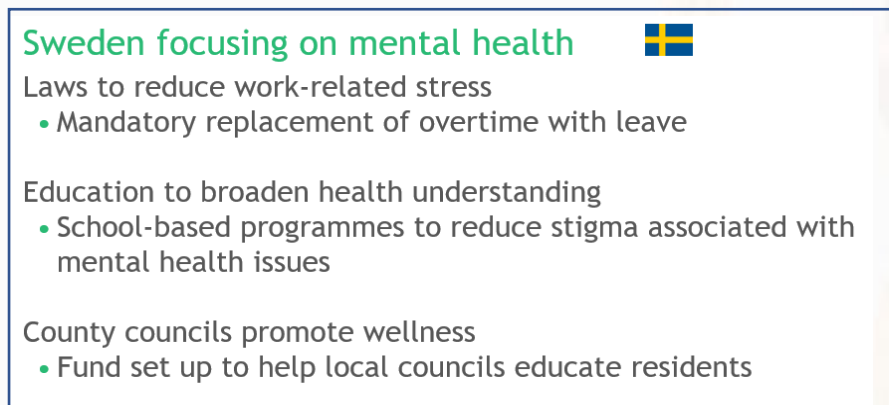
The concept of ‘holistic care’ is not something new. Countries such as Sweden (**Figure 9**) have made concerted efforts to promote wellness through an

¹⁴ Source: Mental Health Foundation: ‘Fundamental facts about Mental Health’ (2016)

improved understanding of mental health and its link to physical health and wellbeing. In this trend lies an opportunity for increased adoption of T&CM in holistic care.

T&CM addresses both mind and body to treat the patient as a whole. It complements modern medicine especially when it falls short, such as in addressing mental health. Nevertheless, T&CM should not be restricted to filling the gap of modern medicine but plays to its strengths along the patient's journey in a holistic manner.

Figure 9: Holistic care in Sweden



2.2 POISED TO BECOME MAJOR PLAYER IN T&CM ECOSYSTEM

The growth and interest in T&CM are a clear area of opportunity, and Malaysia is well placed to play a role in this industry. Malaysia's obvious strengths include its rich natural biodiversity, rich cultural heritage and position as a destination of choice for global medical tourism.

2.2.1 RICH BIODIVERSITY

Endowed with rich biodiversity and the world's oldest rainforests, Malaysia is home to approximately 1,200 plant species with medicinal value¹⁵. It is also ranked 12th

¹⁵ Source: A.B. Ramlan. Turning Malaysian into a Global Herbal Producer: a Personal Perspective (2003)

in the world, according to the National Biodiversity Index¹⁶. This abundance of raw materials sets Malaysia apart from its global counterparts by combining rich resources with the capability to develop higher value delivery systems for the T&CM industry.

2.2.2 CULTURAL HERITAGE AND UNIQUE SERVICES

Reflecting a country that is multiracial at heart, Malaysia's T&CM industry draws from a variety of traditions and cultures, although a modern healthcare system has remained at the centre of the nation's healthcare delivery. Its cultural diversity makes Malaysia home to a wide variety of T&CM practices, with the most common being TMM, TCM, TIM, Islamic medical practice, homeopathy, chiropractic and osteopathy.

2.2.3 GLOBAL MEDICAL TOURIST DESTINATION

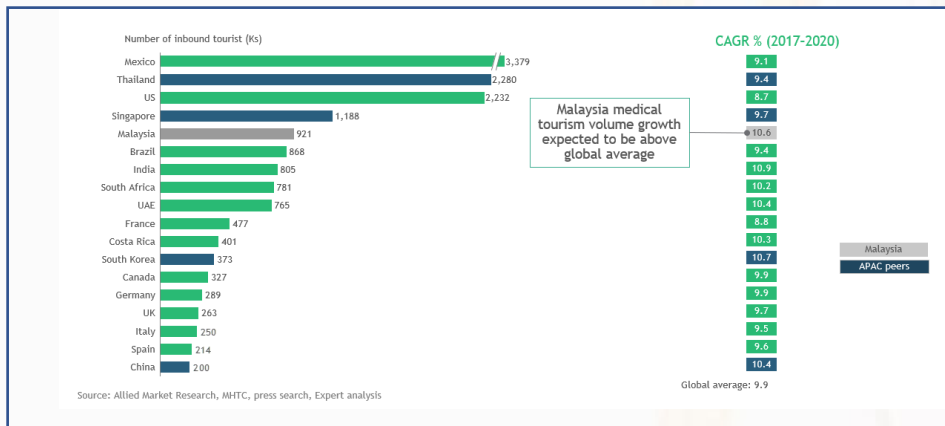
Named 'Destination of the Year' by the International Medical Travel Journal (IMTJ) consecutively from 2015 to 2017¹⁷, Malaysia stands to benefit from an increase in already rising numbers of medical tourists. Including wellness and disease prevention among the services currently offered to the 900,000 medical tourists who visited Malaysia in 2016¹⁸ is a natural next step (**Figure 10**). This aligns with the RMKe-11 to develop the T&CM industry into a regional referral centre and hub.

¹⁶ Source: Malaysia Biodiversity Information System (MyBIS). 'Background' (2015)

¹⁷ Source: NewStreamAsia. 'Malaysia Crowned 'Destination of the Year' in Medical Tourism for the Third Consecutive Year' (2017)

¹⁸ Source: Allied Market Research

Figure 10: Malaysia as medical tourist destination



2.3 RECENT DEVELOPMENTS AND CHALLENGES

Identified as a sub-sector of growth within the RMKe-11 (2016-2020), the Malaysian T&CM industry stands to gain with strategic initiatives from the Malaysian government designed to develop the products and services segments and position Malaysia as a regional referral centre and hub. Furthermore, the launch of two Entry Point Projects (EPP) under the National Key Economic Areas (NKEA), and the enforcement of the T&CM Act in 2016 are amongst other measures that have helped to lay foundations for the industry's growth.

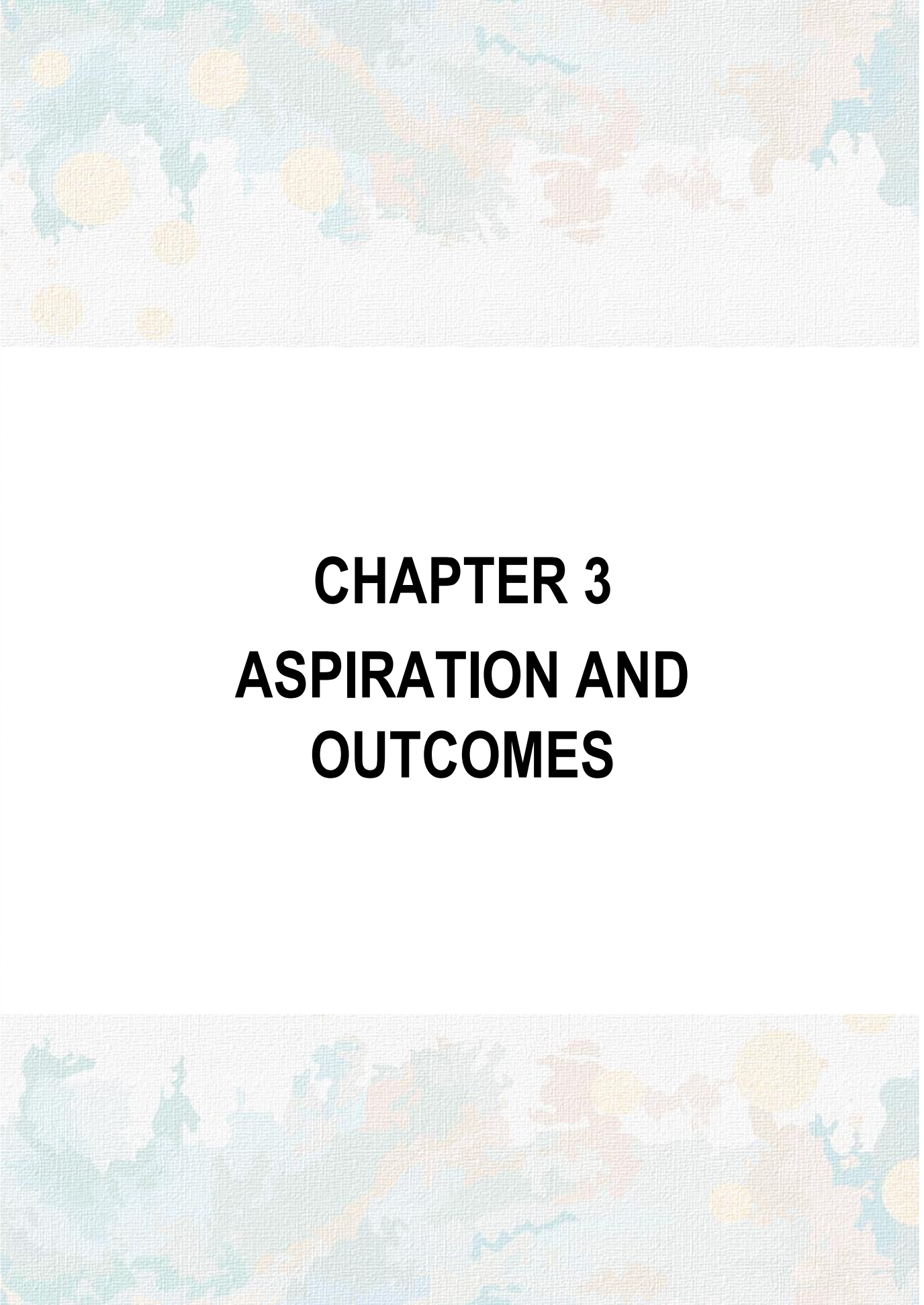
EPP 1: High Value Herbal Supplements was launched in 2011 to improve the product quality and marketing efforts of dietary and herbal supplements. It is expected to contribute an estimated RM2.2 billion to the Gross National Income (GNI) by 2020, supported in part by the increase of 1,822 new herb farmers and entrepreneurs who would benefit from government funding initiatives.

EPP 10: Fully Integrated Wellness Resorts at strategic locations seeks to tap into the booming medical tourism industry with resorts that will serve as a one-stop destination for both conventional medicine and complementary medicine. EPP 10 is expected to contribute RM 2.7 billion to GNI and create more than 22,000 jobs by 2020. The T&CM Act 2016 enforced in August 2016 was designed to provide a solid foundation for the regulation of T&CM practices through the registration of practitioners with the T&CM Council, the highest authority on T&CM practice in Malaysia.

Although many steps have been taken, several challenges remain to be addressed to ensure the development of the industry is enhanced. These challenges include:

- Absence of a single governing body to ensure T&CM standards are met. This is now slowly being addressed with the setting up of T&CM Council.
- Limited regulation of healthcare delivery and product safety.
- Limited consumer awareness and relatively low level of acceptance from practitioners of modern medicine.

These challenges must be addressed in order to build a well-defined T&CM industry that is regulated by a set of comprehensive laws, with clear requirements for safety and quality, and widely accepted by a public that understands the purpose, methods, and benefits of T&CM.



CHAPTER 3

ASPIRATION AND OUTCOMES

CHAPTER 3

ASPIRATION AND OUTCOMES

3.1 VISION

The previous chapter established the importance and significance of the T&CM industry to Malaysia. The time has come to cast a vision for its future, and a strategy to realise that future.

The Ministry of Health (MOH) has therefore directed the development of this T&CM Blueprint, in close collaboration with various industry participants and related government agencies. Building on existing initiatives, the T&CM Blueprint seeks to guide the industry towards an era of reformation and growth between 2018 and 2027. The T&CM Blueprint recognises that while both government and industry have made great efforts to nurture the T&CM industry, substantial challenges remain to be addressed.

To this end, the T&CM Blueprint has defined clear objectives and identified strategic focus areas, value propositions and enablers to meet these objectives (**Figure 4**).

The T&CM Blueprint envisions T&CM will become a RM19-28 billion industry in 2027¹⁹. By then, Malaysians will widely accept and use T&CM products and services for a broad range of purposes, including preventive, curative and rehabilitation care. At the same time, T&CM products will be exported to major Asian markets such as China and India, and T&CM services will become a major attraction for health tourism in Malaysia.

¹⁹ T&CM industry size was forecasted by assuming the growth in 3 economic areas – herbal extract, end products and services, along both domestic and export segment. Market data was obtained and estimated from Profound Market Intelligence, Euromonitor, WHO, MOH and expert interviews with forecasted range of RM19 billion (pessimistic scenario) to RM28 billion (optimistic scenario).

Three strategic areas have been identified to guide the continued development of the T&CM industry: economic development, healthcare integration and sociocultural enrichment. Within the area of economic development, three separate market development opportunities have been identified for Malaysia's T&CM industry:

- A global supplier of T&CM herbal extracts
- A global manufacturer of unique niche herbal products
- A highly professionalised T&CM services hub

To achieve this national vision, Malaysia is able to offer five unique value propositions. First, T&CM products and services should be **safe**, which is the minimum requirement for any type of healthcare. Second, Malaysia needs to provide **consistent quality**. Third, Malaysia should be able to leverage on its fundamental and unique strengths in **biodiversity** and **diversity of tradition**. Fourth, accessibility of T&CM products and services should be enhanced by **integration into the national healthcare system**. Finally, T&CM products and services should be used according to T&CM practices in its totality to reduce the overall healthcare burden.

3.2 OUTCOMES

The T&CM Blueprint sets clear primary outcomes across each of the three strategic areas (**Figure 11**).

First, the T&CM Blueprint aims to boost the growth of the industry to RM19-28 billion by 2027. Without the T&CM Blueprint, the T&CM industry is estimated to reach RM14 billion, growing at 5% annually. The T&CM Blueprint will accelerate industry development across all three areas of opportunity, doubling the growth rate to produce an additional RM14 billion. The majority of industry growth will come from expansion in the T&CM service industry.

Second, Malaysia can benefit from the savings in healthcare expenditure²⁰ achieved from integrating T&CM into the healthcare system, co-existing alongside modern medicine, reducing the nation's overall healthcare burden through enhanced quality and safety of T&CM products and services.

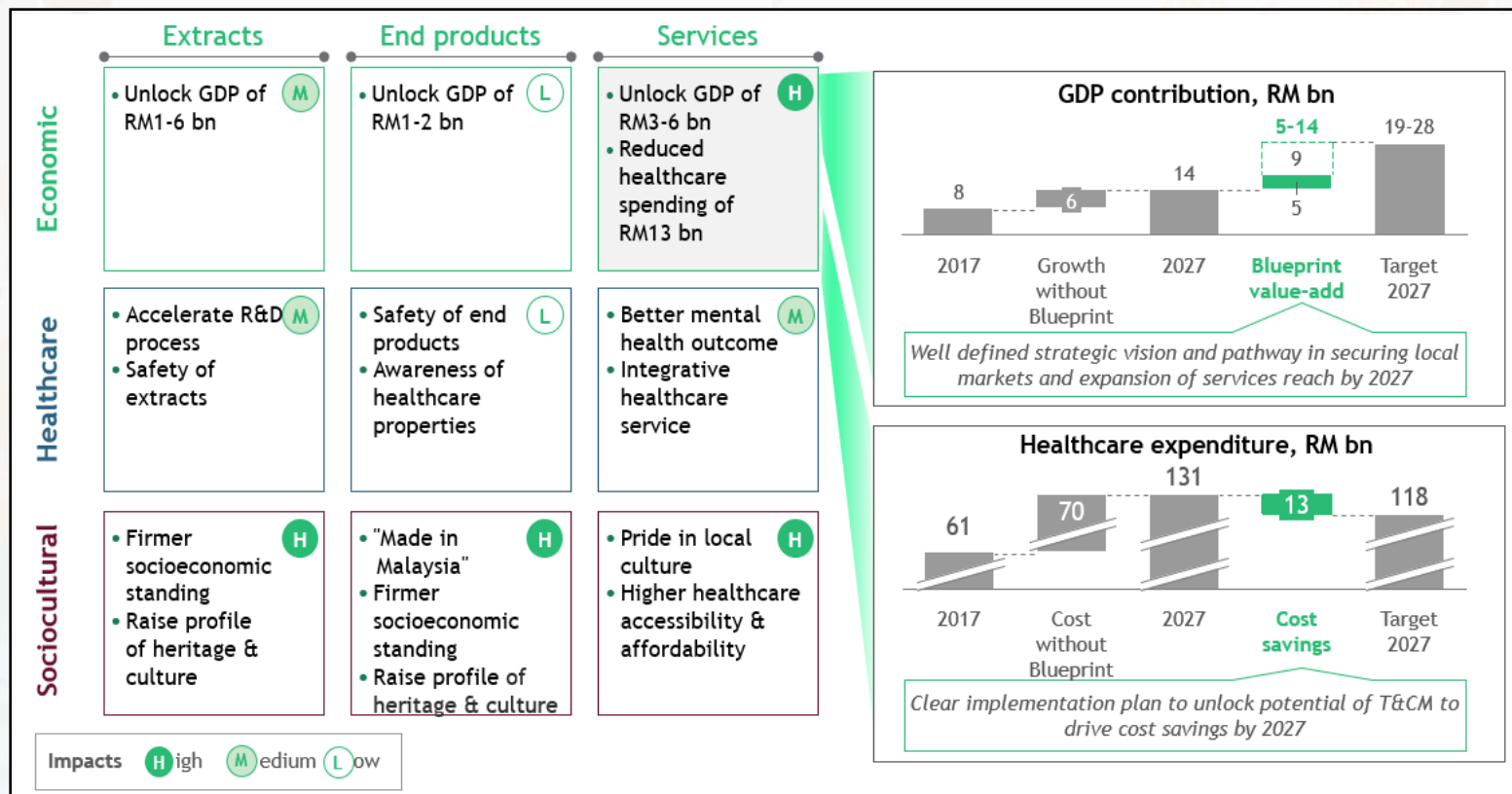
²⁰ Cost savings projected to be approximately RM13 billion (derived from cost savings estimated from using T&CM over modern medicine for key conditions, calibrated based on average cost savings for each condition and the prevalence of the condition in Malaysia).

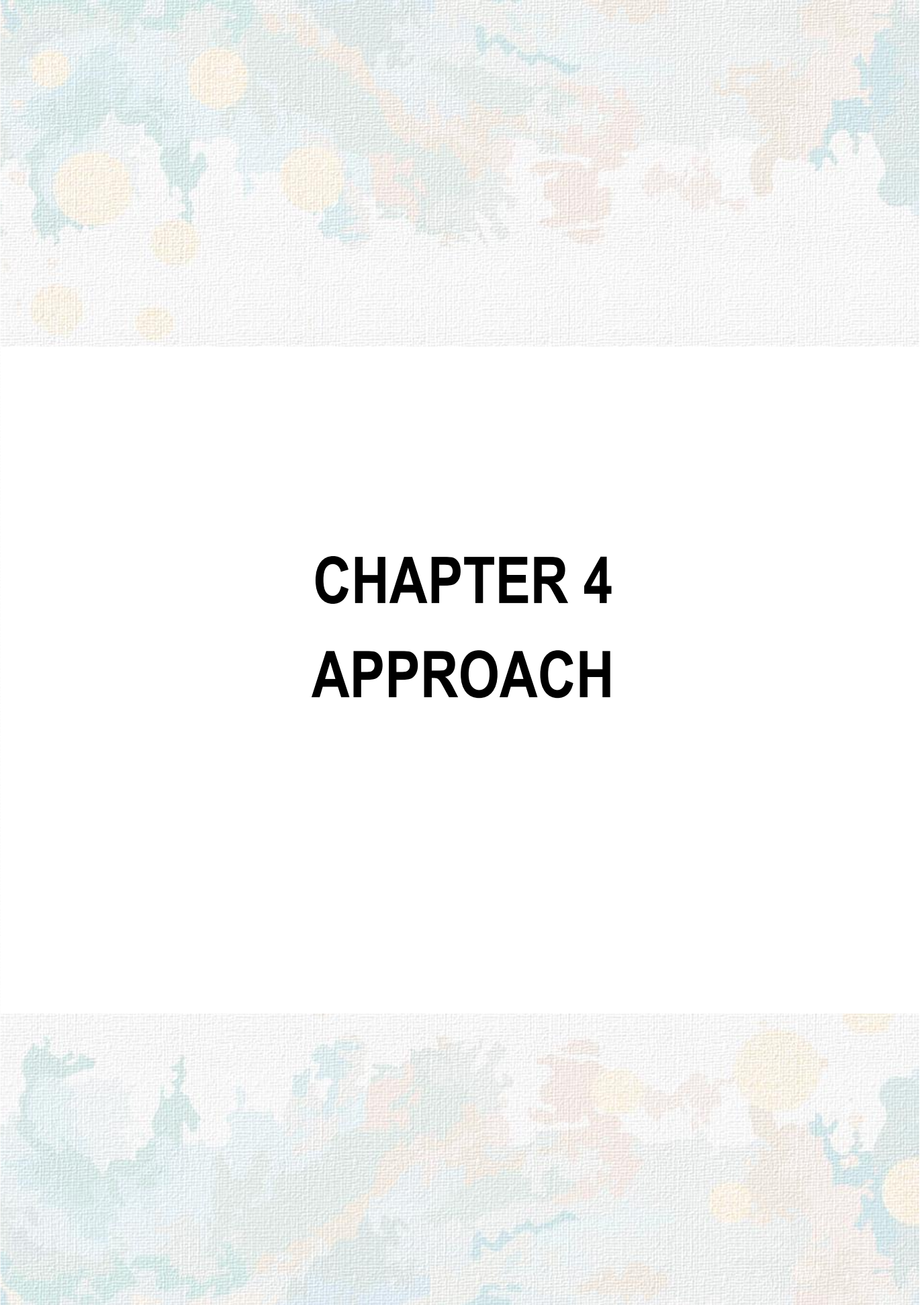
Finally, the T&CM Blueprint can create positive sociocultural impacts, such as greater public awareness of practices beyond one's own culture leading towards greater social cohesion and strengthening national identity and pride through new national and regional successes that are 'Made in Malaysia'.

3.3 ALIGNMENT WITH NATIONAL AND INTERNATIONAL AGENDA

The T&CM Blueprint has been carefully crafted to align with and support national transformation strategies, including the Eleventh Malaysia Plan (2016-2020), the Ministry of Health's Strategic Plan (2016-2020), and the National Policy on Biological Diversity (2016-2025). The T&CM Blueprint has been developed in accordance with the WHO's initiatives, such as The Regional Strategy for Traditional Medicine in the Western Pacific (2011-2020) and the WHO Traditional Medicine Strategy (2014-2023). This Blueprint also takes into account equitable sharing of benefits from biological resources, such as the Nagoya Protocol on Access and Benefit-Sharing.

Figure 11: Outcomes across each of the three strategic areas





CHAPTER 4

APPROACH

CHAPTER 4 APPROACH

4.1 OVERVIEW

The development of the T&CM Blueprint (Economic and Sociocultural) took close to six months and involved an extensive process of engagement and consultation.

This blueprint received input from government agencies; local and foreign industry participants²¹, practitioners, and academicians; professional bodies and associations, global healthcare experts, and a representative sample of Malaysians (**Figure 12**).

Figure 12: Stakeholders engaged

 16 government ministries/ agencies	 9 Practitioner bodies and associations	7 academicians 	 9 local and foreign industry players	 3 000 Malaysians
	10 practitioners 		4 global healthcare experts	

Technical Committee and Steering Committee comprise representatives from essential organisations focusing on T&CM. They were set up to oversee the Blueprint's development. Their members included representatives from the Ministry of Health (MOH), Ministry of Agriculture and Food Security (MAFS)²², Ministry of Science, Technology and Innovation (MOSTI), Ministry of Natural Resources, Environment and Climate Change (NRECC)²³, Ministry of Local Government Development (KPKT),

²¹ Industry participants refer to manufacturers and distributors of T&CM products

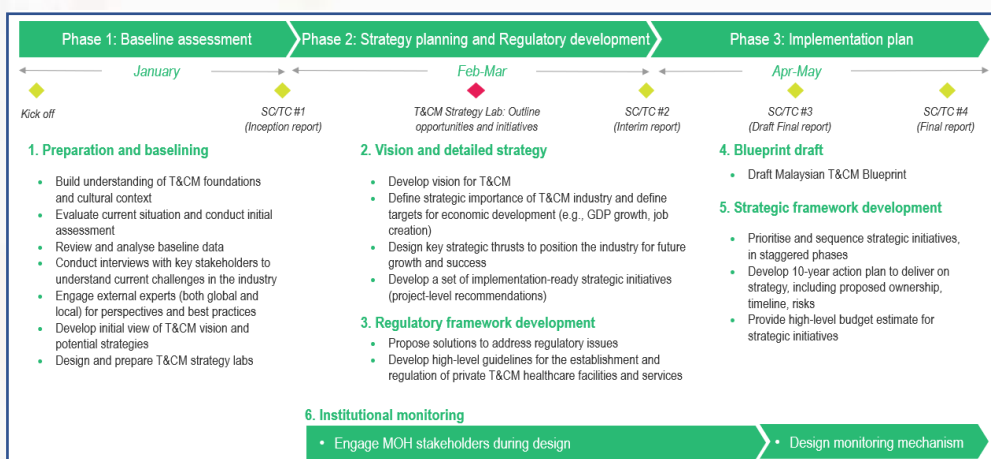
²² Previously known as Ministry of Agriculture (MOA)

²³ Previously known as Ministry of Natural Resources and Environment (NRE)

Ministry of Higher Education (MOHE), Ministry of Human Resources (MOHR), Ministry of Domestic Trade and Cost of Living (KPDN)²⁴, Ministry of International Trade and Industry (MITI), Malaysian Investment Development Authority (MIDA), Ministry of Economy²⁵, Department of Statistic Malaysia (DOSM), Ministry of Tourism, Arts and Culture (MOTAC), Sabah and Sarawak state governments.

Development of the T&CM Blueprint (Economic & Sociocultural) began in January 2018 together with a baseline assessment of the industry. After that, a national vision was crafted and specific strategies were outlined to implement a ten-year plan (**Figure 13**).

Figure 13: Project timeline and approach



4.2 PHASE 1: BASELINE ASSESSMENT

Phase 1 of the development of the T&CM Blueprint (Economic and Sociocultural) encompassed three essential steps — stakeholder engagement, a benchmarking exercise and an assessment of public interest — to provide clear context and understand the T&CM landscape in Malaysia.

²⁴ Previously known as Ministry of Domestic Trade, Cooperatives and Consumerism (KPDNKK)

²⁵ Previously known as Economic Planning Unit (EPU)

4.2.1 INPUT FROM MAJOR STAKEHOLDERS

Input from stakeholders was collected through a series of one-to-one discussions to identify gaps in delivery after comparison with international best practices. Information gathered through these discussions was used to create a first draft of the Malaysian T&CM vision and potential strategies. Many stakeholders who were interviewed during this phase had stress the importance of ensuring the right 'foundation' for future growth of the industry.

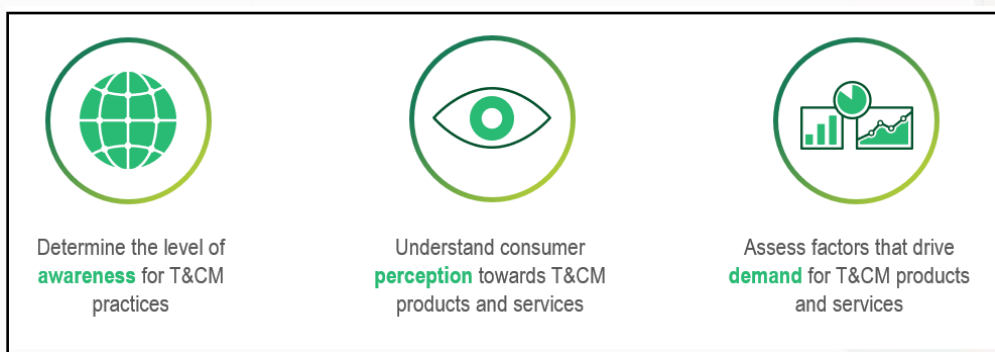
4.2.2 LESSONS FROM GLOBAL BENCHMARKS

A benchmarking exercise was conducted to identify best practices in T&CM and major lessons from different markets, including China, India, Taiwan and Indonesia amongst others. The analysis focused on the definition of T&CM, overall market size, value proposition, principal offerings and the level of integration of healthcare services. As best practices were catalogued, effort was also taken to document each country's strategies for best practices.

4.2.3 PUBLIC INTEREST IN T&CM

For a better understanding of the public's view of T&CM, a representative sample of Malaysians was selected to share their level of awareness, perception and demand for T&CM products and services (**Figure 14**). This input was subsequently collated and analysed to identify areas of potential opportunity for T&CM moving forward.

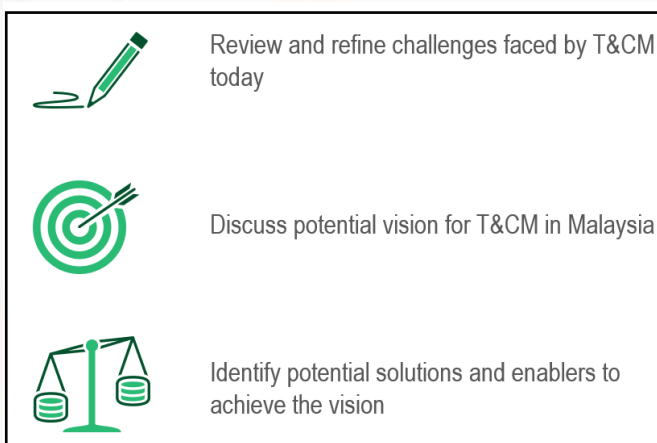
Figure 14: Objectives of Malaysia T&CM Consumer Survey 2018



4.3 PHASE 2: STRATEGY PLANNING

The second phase of development had brought stakeholders together to outline the aspirational vision of T&CM in Malaysia and develop a detailed strategy to support this vision. A T&CM Strategy Workshop was held in February 2018 serving as the forum for a comprehensive discussion with stakeholders to shape a vision for the future of the T&CM industry. Participants discussed challenges and aspirations for T&CM in Malaysia before determining potential solutions and identifying enablers to help achieve those goals (**Figure 15**).

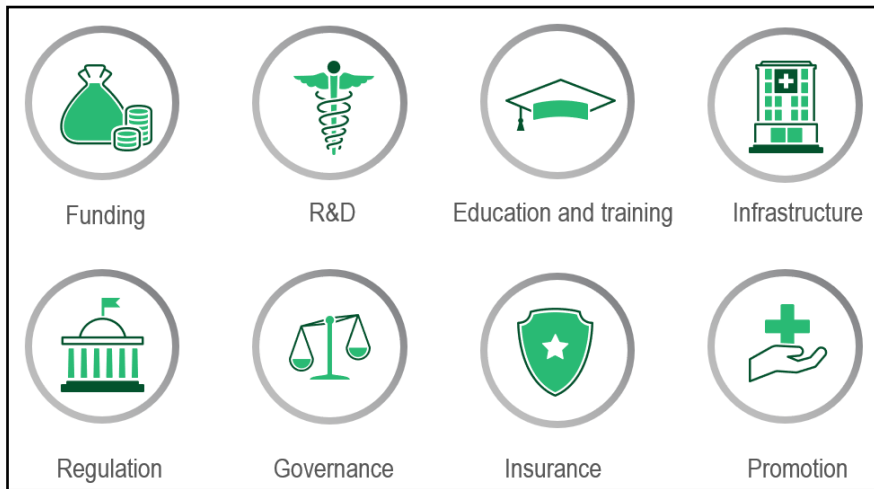
Figure 15: T&CM strategy lab objectives



Each possible strategic focus area was then evaluated across eight assessment categories. The evaluation process was based on information captured from workshops, surveys, stakeholder discussions and benchmarking analysis. Following this, the impact and benefit of each strategic focus area was estimated to map out Malaysia's economic, healthcare and sociocultural landscape.

Furthermore, key enablers were assessed (**Figure 16**) to understand potential industry challenges and devise possible improvements that would encourage growth within the T&CM industry.

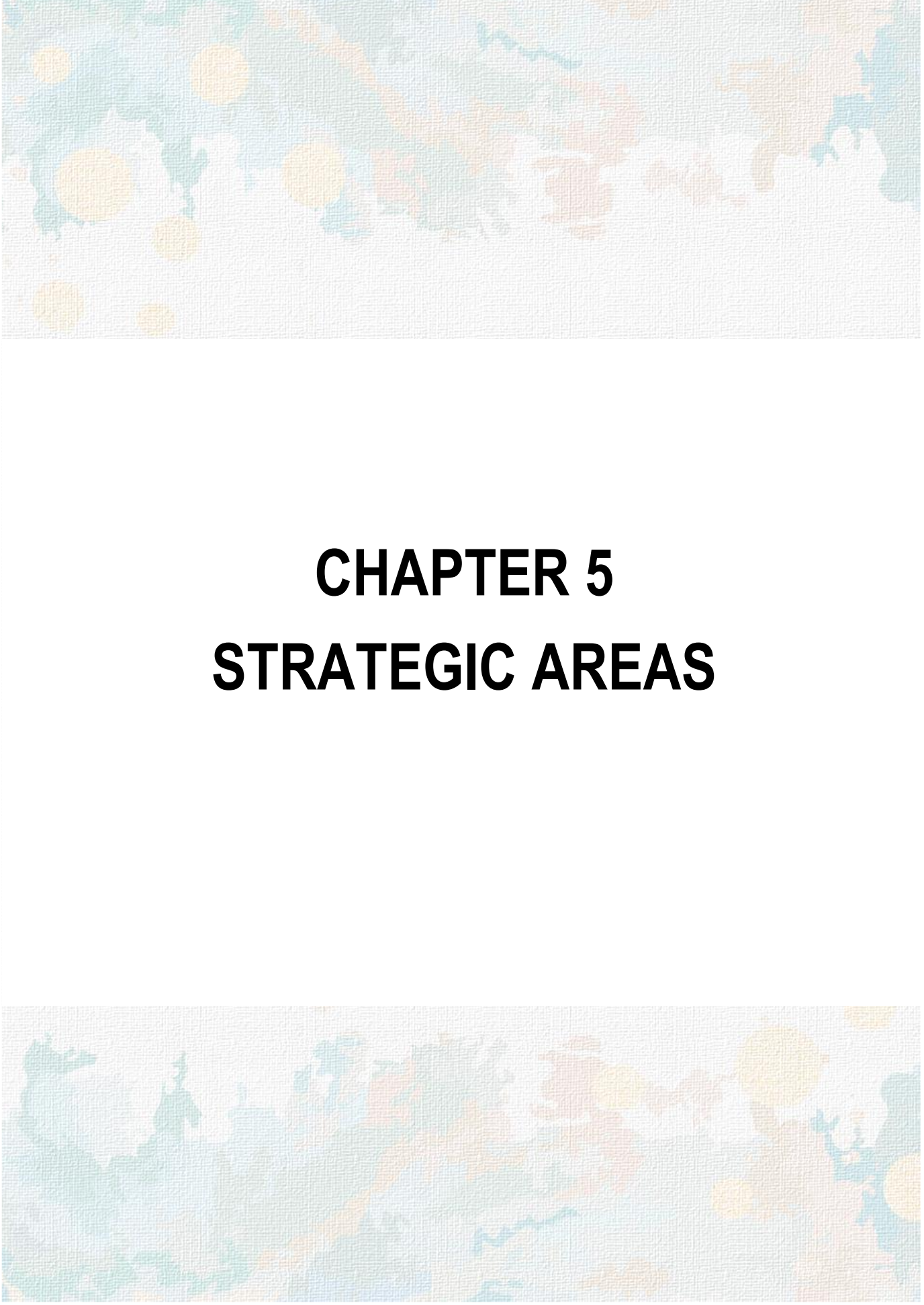
Figure 16: Enablers



4.4 PHASE 3: IMPLEMENTATION PLAN

With a vision and strategies outlined, phase 3 of development was built around the need to establish major initiatives and outline a ten-year implementation plan identifying individual stakeholders who responsible for each action plan. Principal stakeholders took part in drafting this action plan, identifying specific milestones, critical interdependencies, key performance indicators (KPIs) and resources required to ensure a successful launch. This plan included designing a monitoring mechanism, process and cadence to facilitate post-launch implementation.

The next two sections of this document will discuss the issues and recommendations for each of the T&CM Blueprint's focus areas, followed by a review of elements to be considered in the development of a monitoring mechanism and governance structure.



CHAPTER 5

STRATEGIC AREAS

CHAPTER 5

STRATEGIC AREAS

5.1 STRATEGIC OPPORTUNITIES

The T&CM Blueprint shall build on Malaysia's existing T&CM sector and foster its growth in order to reach new levels of sophistication, scale and effectiveness. The Blueprint has identified three major strategic opportunities to develop the value of T&CM products and services:

- T&CM Products: Global supplier of T&CM herbal extracts
- T&CM Products: Global manufacturer of T&CM end products
- T&CM Services: Highly professionalised T&CM services hub

Each of these three strategic opportunities has been evaluated in three steps:

1. An assessment of market fundamentals in order to understand the potential benefits for Malaysia
2. A design for strategy direction in order to set standards for success
3. An evaluation of potential economic, healthcare and sociocultural outcomes

In order for Malaysia to tap into these strategic opportunities, several strategies have been identified. Firstly, to develop the value of T&CM products, the Blueprint recommends to focus on the supply of materials needed to manufacture T&CM products — that is, the 'upstream' supply — to take advantage of Malaysia's position in the global value chain, in the tradition of major industries such as palm oil and rubber. Second, Malaysia's local T&CM manufacturers can create value by making end products that serve specific markets.

Following that, to boost the value of Malaysia's T&CM services, the Blueprint recommends that Malaysia develop T&CM infrastructures and work to professionalise T&CM practitioners, in order to establish Malaysia as a highly professionalised hub for T&CM services.

Coordinated and concerted efforts from all the public and private organisations involved in the T&CM industry are required to catalyse the development, leading to economic, healthcare and sociocultural improvements. The advancement of the T&CM products and services industry will generate greater economic activity by creating new jobs, improving wage levels of T&CM professionals and increasing consumption of T&CM products and services.

While the potential economic benefits may be easiest to quantify, the healthcare and sociocultural effects from advancing the T&CM industry are equally important. Advancing Malaysia's T&CM sector offers the opportunity to safeguard the welfare of the Malaysian population. On the product side, clear and strong enforcement will ensure safe consumption of T&CM products. Professionalising the T&CM service sector will ensure safe practices by T&CM practitioners and safe delivery of T&CM services. Expanding T&CM services, particularly towards preservation of health will reduce burden on the healthcare system by addressing health issues before they need to be treated at the more costly secondary and tertiary levels of care.

Sociocultural benefits, while less immediately obvious, illustrate the compelling need for advancement of the T&CM industry. Producing high-quality extracts and end products through the 'Made in Malaysia' brand for both local and international markets will improve the visibility of the nation, as well as the T&CM industry. This provides an opportunity to strengthen national pride as T&CM products unique to Malaysia can reach international markets. At the same time, the socioeconomic standing of T&CM professionals can be significantly improved.

5.1.1 GLOBAL SUPPLIER OF T&CM HERBAL EXTRACTS

5.1.1.1 Introduction

The T&CM Blueprint seeks to help Malaysia's T&CM herbal extract industry become a leading global supplier of high-quality extract (**Figure 17**). Major objectives for this strategic opportunity by 2027 include an increase in GDP of up to RM6 billion²⁶, an accelerated research and development (R&D) process with improved safety standards for T&CM herbal extract production, improved

²⁶ Based on incremental GDP that can be derived from domestic growth in herbal extract market and from capturing market share in China, India, and South Korea.

socioeconomic standing for farmers, and increased awareness of local traditions.

Rising global demand for T&CM herbal extracts, particularly in the Asia-Pacific (APAC) region, offers opportunities for Malaysia to capitalise on strategic advantages: not only its rich biodiversity, but its position as a central hub for Asian trade, its political and economic stability, and its business-friendly credit environment as well. Malaysia can achieve its objectives in this sector by delivering high-quality products and streamlining production channels to meet rising demand from major markets (such as China and India). Doing so ensures Malaysia is well positioned to become a global supplier of T&CM herbal extracts.

To realise the full potential of the T&CM herbal extract industry, Malaysia should focus on producing high-quality indigenous herbal extracts which are already in demand throughout important T&CM markets in Asia. This differs from the EPP 1 approach, as EPP 1 focuses on 18 indigenous herbs whose demand and usage are more specific to Malaysia. While continuing to pursue the EPP 1 approach in order to embrace and build upon our cultural heritage, Malaysia can build on broader economic opportunities for near-term success in the larger market.

Malaysia must address two critical issues in order to compete effectively in the global T&CM herbal extract market:

- Malaysia's domestic demand is small relative to countries that have an established T&CM industry, but domestic production is insufficient to meet even local demand; hence most T&CM herbal extracts are imported.
- Local suppliers lack the capacity to produce either high-quality or low-cost T&CM herbal extracts.

The Malaysian government has made great efforts to advance the T&CM herbal extract industry, but faces three challenges in implementation:

- Improving coordination among ministries to realise a common vision for a long-term strategic plan, which reduces mismatch between demand and supply

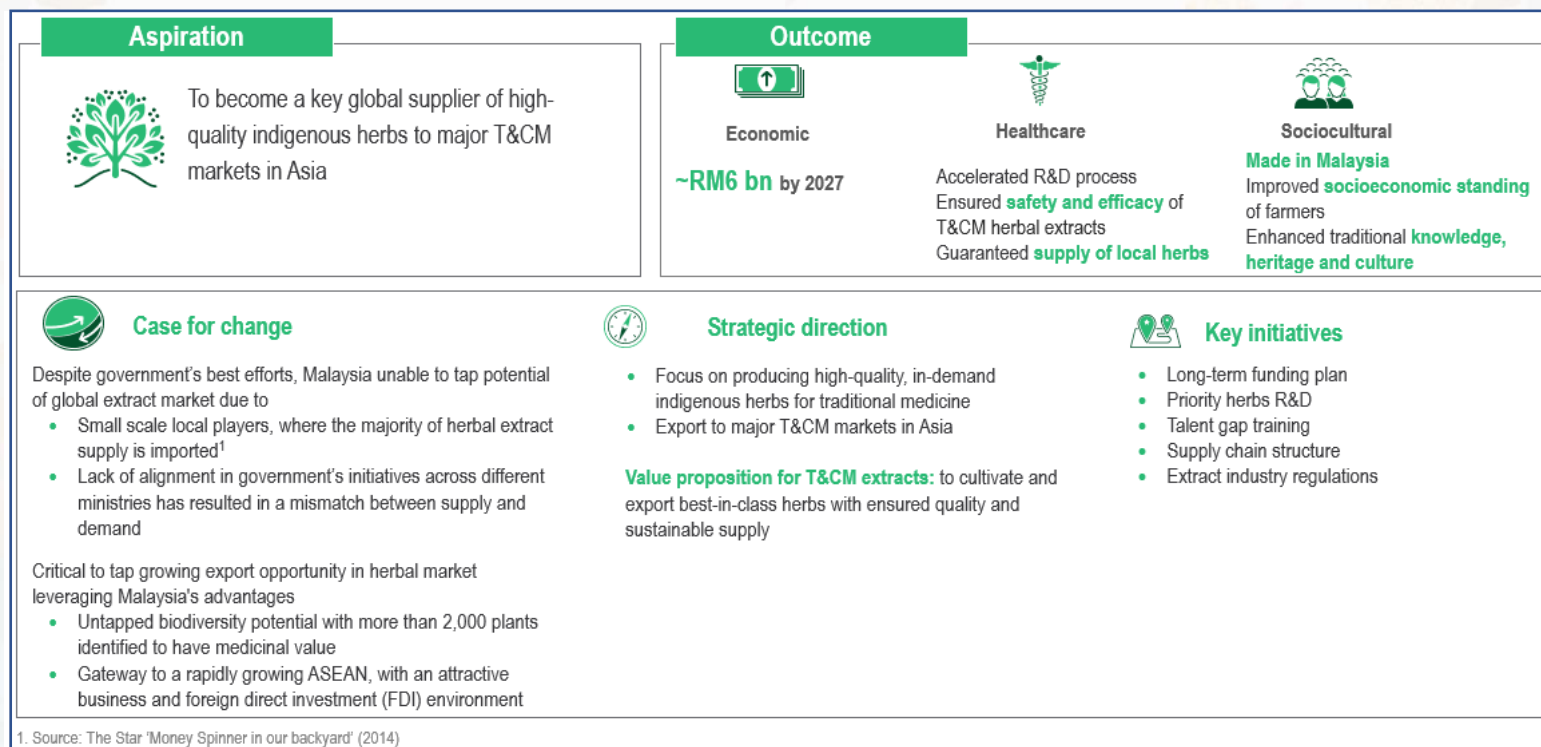
- Small-scale players in the local T&CM herbal extract industry faced challenges in expanding their size and capabilities amidst growing global competition
- Inability of upstream suppliers (such as contract farmers) to expand their operations due to uncertainty of return

The T&CM Blueprint proposes specific herbal extract-related initiatives to address these challenges, along with key initiatives covering all three strategic areas:

- Develop long-term funding plans for T&CM herbal extract industry
- Enhance R&D for top priority herbs along all steps of T&CM value chain
- Develop training programmes to fill talent gaps
- Structure supply chain from raw material production to extract manufacturing
- Develop regulations to support the growth of the T&CM herbal extract industry

These initiatives will require cooperation from public and private stakeholders to attract private investors as well as public funding, and to develop and improve training to fill talent gaps, which will in turn increase producer socioeconomic standing.

Figure 17: Overview of strategic opportunity – global supplier of T&CM herbal extracts

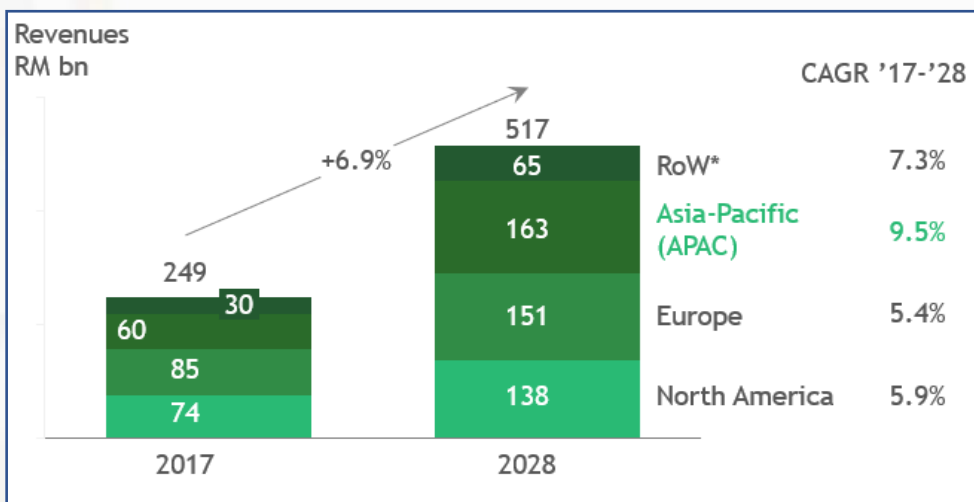


5.1.1.2 Opportunity and Challenges

Rising demand for herbal extracts presents potential export opportunity for Malaysia

The global herbal extract market is expected to grow by 7% over the next 10 years, led by the APAC region, which is expected to grow from RM60 billion in 2017 to RM163 billion in 2028²⁷ (Figure 18). Increased R&D activities combined with higher consumer acceptance and strong government support for herbal remedies have propelled the APAC region to grow by 9.5%, with the majority of growth generated by India and China (Figure 19). Malaysian markets are growing in line with other APAC countries, but remain relatively small in size; Malaysia represents only 2% of the APAC market. Malaysia could benefit from rising demand for herbal extracts in major T&CM markets such as India and China as potential export destinations.

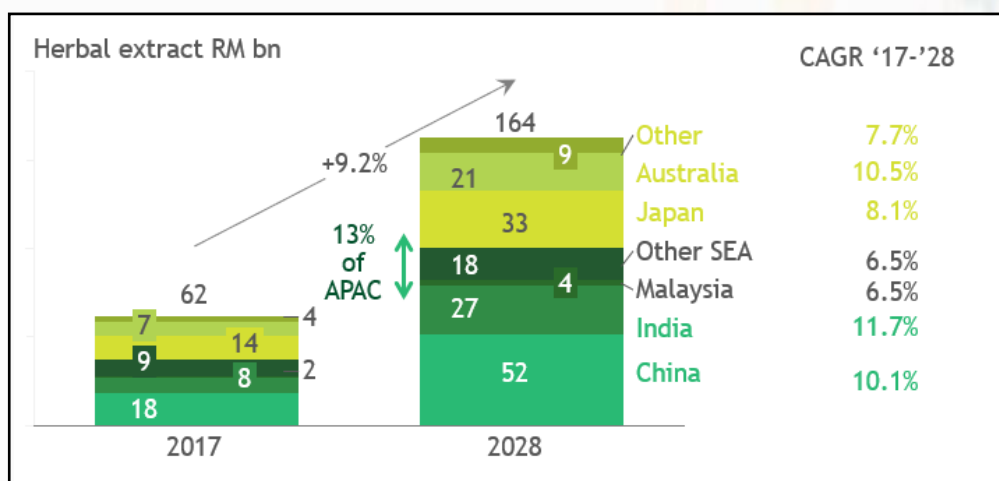
Figure 18: Global herbal extract market



*RoW (Rest-of-world) includes Brazil, the Middle East, South Africa and others

²⁷ All forms of extracts used for flavour, scent, and therapeutic properties, including flowers, leaves, roots, fruits, and vegetables;
2. Figures for 2028 obtained by applying historical market CAGR (compound annual growth rate) on 2022 figures from report;
Source: MarketsandMarkets. Herbal supplements market - global forecast to 2022

Figure 19: APAC herbal extract market



Malaysia is well-positioned to serve the global herbal extract market

As previously noted, Malaysia enjoys tremendous biodiversity, with approximately 1,200 species identified as containing medicinal value. It is also ranked 12th in the world, according to the National Biodiversity Index. Malaysia offers opportunities for resource-rich suppliers, while also possessing the capabilities to develop more high-value delivery systems.

Malaysia's industry participants struggle with growth to meet demand

Herbal extracts are a commodity whereby suppliers must generally accept the prices set by the market, as most extract processes do not require advanced technology. To survive and grow, suppliers need 'scale' or 'value chain integration'. Malaysia's current supply capacity of extracts is limited²⁸ and local players have not attained a scale that would allow the industry to grow and survive in the long term²⁹. Refer to **Figure 20** for the herbal raw material production in Malaysia.

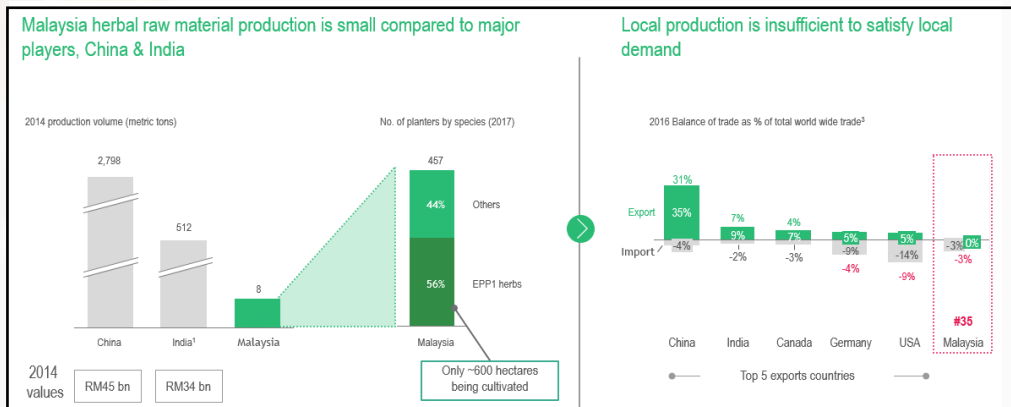
As gateway to a regional market of more than 600m people, Malaysia can also take advantage of its position as a central hub for trade in Asia, especially

²⁸ Source: WIND, FRIM Herba Xpress database, China Forestry Statistics Yearbook, EIU, Ministry of AYUSH National Medical Plants Board

²⁹ Source: Individual company reports from Suruhanjaya Syarikat Malaysia (SSM)

South East Asia. Finally, Malaysia can build upon its standing as a country that welcomes foreign direct investment (FDI), ranking fourth in Asia in FDI value³⁰. Malaysia benefits from political stability, competitive tax rates, easy access to credit, and strong investor protection policies.

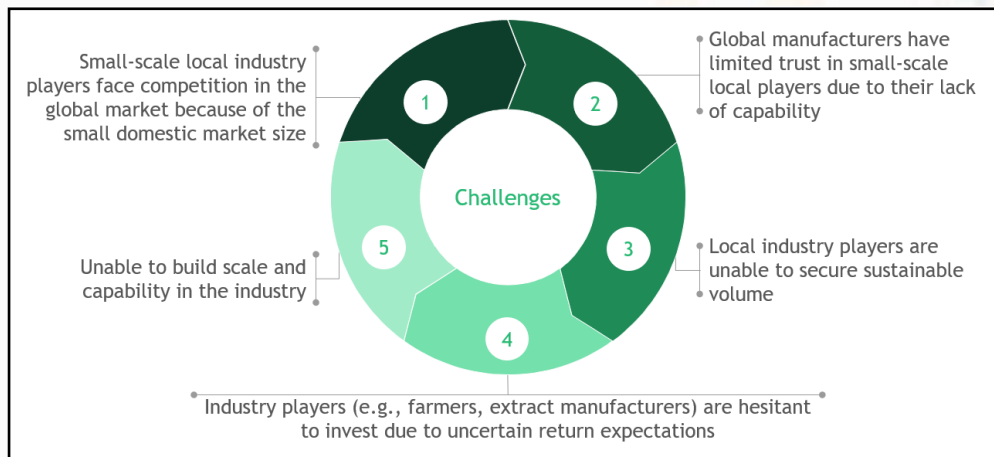
Figure 20: Herbal raw material production in Malaysia



Malaysia's local suppliers face challenges in scaling up and building capacity to compete in the global market (Figure 21).

³⁰ Source: World Bank Development Indicators: FDI net inflows (as % of GDP)

Figure 21: Challenges faced by local industry players

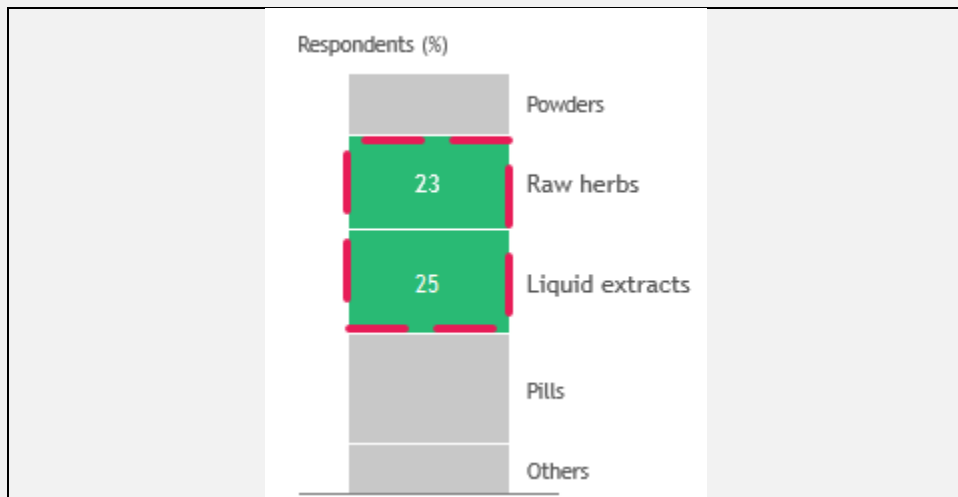


5.1.1.3 Strategic Directions

Malaysia should focus on indigenous herbs used for medicinal purposes

To take full advantage of its strengths, Malaysia should focus on producing extracts based on indigenous herbs. Well-established, large suppliers are already dominating the non-indigenous herbs market. The USA aloe vera producer Forever Living Products, for example, already earns more than RM11 billion per annum, a larger sum than the entire Malaysian herbal extract market. Although market competition is growing in the indigenous herbs market, Malaysia has natural advantages such as its climate and environmental conditions favourable for indigenous herbs cultivation. The focus on indigenous herbs will also provide the herbal extract industry with additional revenue streams beyond manufacturers, through Malaysian consumers (**Sidebar 1**).

Sidebar 1: Large domestic consumer demand for T&CM products in raw herbal forms



The T&CM Consumer Survey 2018 found that up to 48% of Malaysians purchase T&CM products in raw herbal forms, with 25% and 23% of Malaysians currently purchasing T&CM products in liquid extracts and raw herbs respectively.

a. Source : Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: What type of T&CM product(s) have you purchased or used?

c. Note: Others include Beauty, Dietary and Other supplements

Primary focus on the herbal extracts for traditional medicine

Malaysia is keen to target the herbal extracts used for traditional medicine. The health supplement segments purchasing decisions for extracts are cost-sensitive, which means Malaysian suppliers need to offer lower cost products in order to enter the market. Opportunities for growth in that segment are also limited, due to the difficulty in establishing medical claims and less focus on effectiveness. Concerns have been growing globally about the quality of the extracts used for traditional medicine. Malaysia can take advantage of this opportunity by entering the market with quality extracts. Use in traditional medicine offers higher potential value, if effectiveness can be scientifically proven and the extraction process is patented.

As mentioned previously, there is a wide range of constituents of T&CM products, being a continuum of forms from raw materials, harvested herbs, to fully-finished products and capsules.

The classification for modern medicine is well-defined - only finished products with a specific active pharmaceutical ingredient (API), concentration and form (such as tablets or capsules) can be considered drugs and sold in pharmacies.

However, the classification for T&CM is not as clear-cut, as the medication used can range from finished products to raw materials such as components of plants or decoctions.

Decoction is defined as a method of extracting the medicinal properties of a herbal plant by boiling or heating³¹. Boiling helps to dissolve the chemicals in the plant and to produce useable extract or finished products. The decoctions can be either in the form of extract or finished products.

Attention is brought to the medicinal materials used for the making of decoction, as they are major forms of medicines used in traditional medicine. The medicinal materials are also found to have high potential growth in the coming years due to increasing used of traditional medicine. For instance, the *Daodi* medicinal material³² are in high demand due to TCM practices in China.

Targeting high-demand indigenous herbs listed in foreign pharmacopoeia

With EPP 1, Malaysia has focused on indigenous herbs used in TMM. The EPP 1 approach can generate greater opportunity when consumers are successfully educated and suppliers can penetrate the market. If Malaysia can create market demand, its natural competitive advantages can lead to huge economic impact. Creating new demand outside Malaysia, however, will require considerable effort and time; it is a longer-term strategy. In the

³¹ Source: WHO guidelines on good herbal processing practices for herbal medicine (2018)

³² *Daodi* medicinal material is produced and assembled in specific geographic regions with designated natural conditions and ecological environment, with particular attention to cultivation technique, harvesting and processing
Source: ZZ Zhao et. al. The Formation of *daodi* medicinal material (2012)

meantime, Malaysia needs to look for alternative approaches to generate economic impact and start building industry participants and capacity at home.

It is important that Malaysia cultivate in demand herbs listed in foreign pharmacopoeias such as the Chinese Pharmacopoeias (**Figure 22 & 23**) in order to contribute to economic growth and reach scale in the next five years. Encourage foreign players participation and investment will help to scale up the niche industry.

Figure 22: Methodology to identify preliminary list of herbs – China

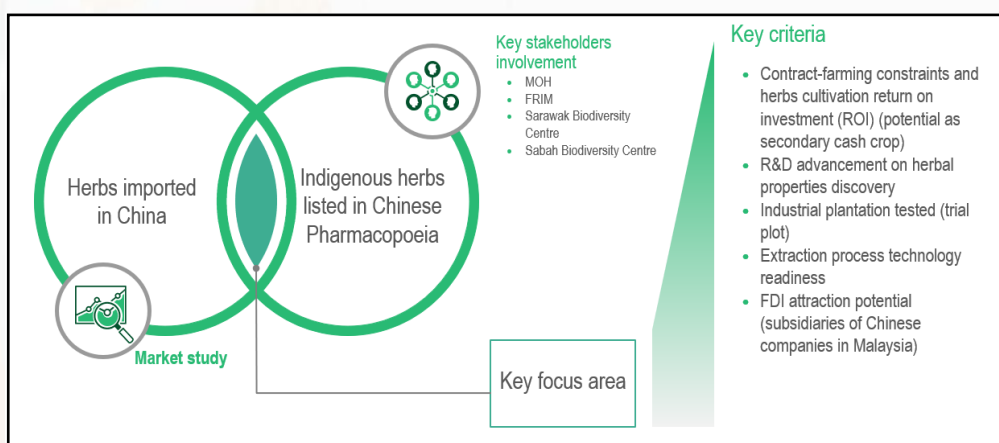
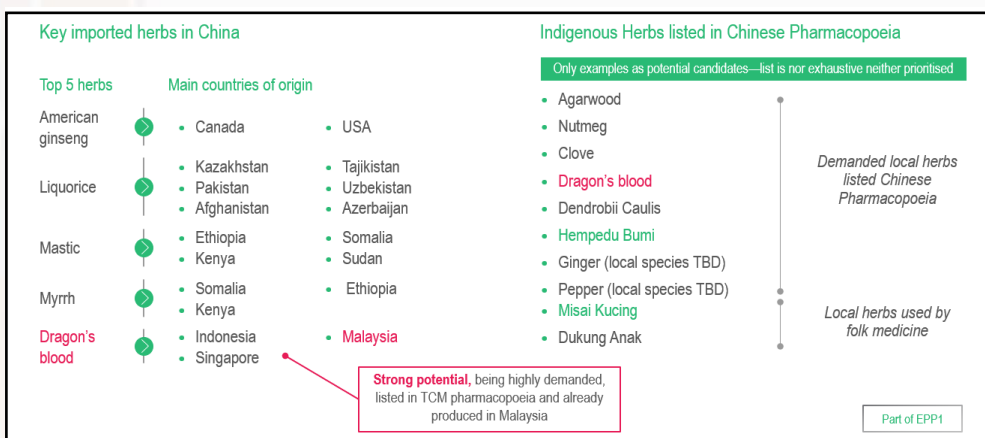


Figure 23: Examples of target herbs³³



³³ Source: Chinese Pharmacopoeia 2015, Ministry of Commerce 2016 TCM Raw Material Distribution Market Report

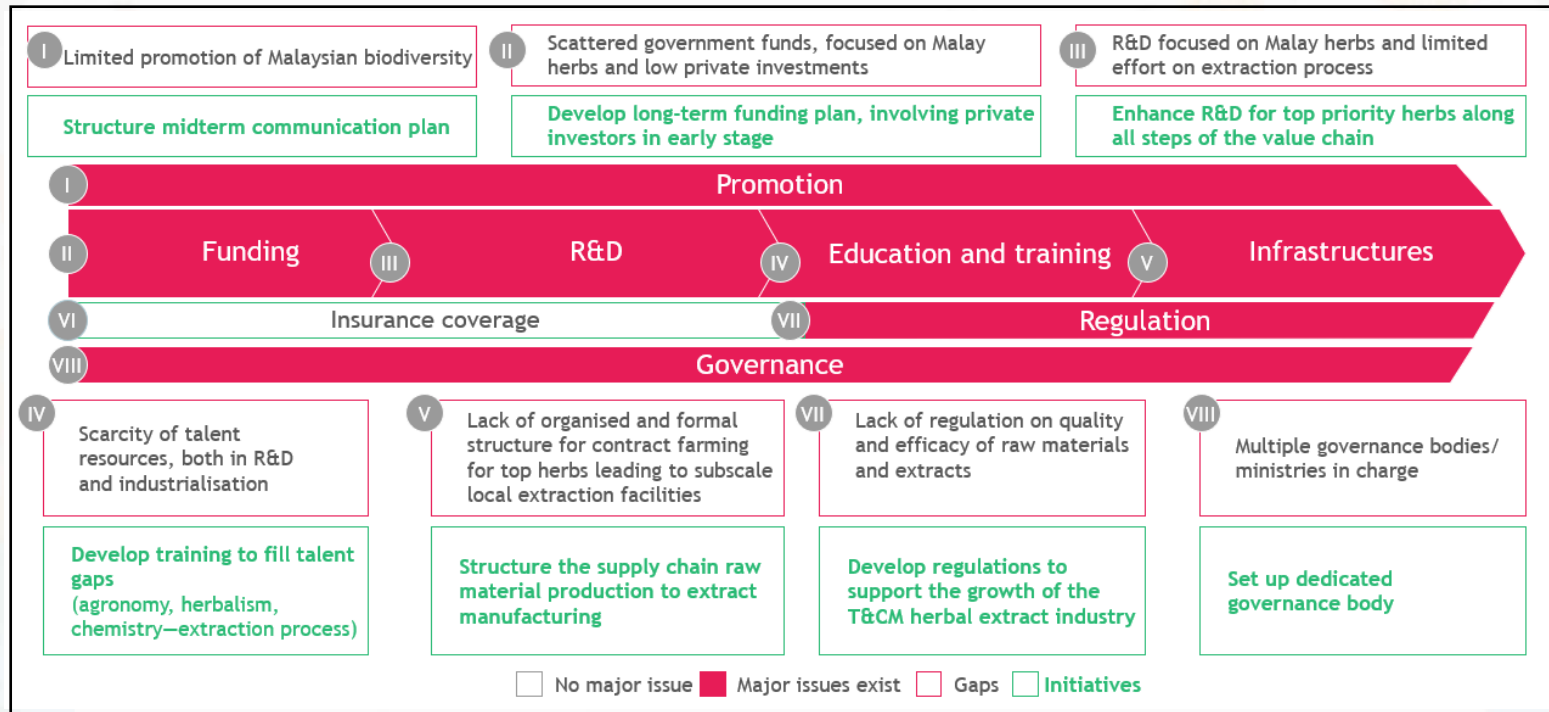
Primary focus on exporting herbal extracts to Asian markets, building on momentum of T&CM demand

Leveraging the increasing demand for T&CM products in Asia, Malaysia can consider expanding its exports to key markets such as China and India, and also Southeast Asian (SEA) countries such as Indonesia, Thailand, and Vietnam. These markets have the potential to drive growth in the T&CM herbal extract industry in Asia. Demonstrating quality excellence can help Malaysia stand out from its competitors in the industry.

5.1.1.4 Enablers

Implementing the strategy to advance the herbal extract industry will require improvements from the industry's key players. Efforts and initiatives in all three strategic areas, which has been mentioned in Section 5.1.1.1 will be necessary to establish industry fundamentals (**Figure 24**).

Figure 24: Enablers - global supplier of herbal extracts



5.1.1.5 Outcomes

The T&CM Blueprint aims to foster growth in the herbal extract industry, with the goal of contributing an additional RM1-6 billion to the GDP by 2027, growing at a rate of up to 15% per year. This objective is both ambitious and attainable, as it is focused on prioritizing the right herbs that are already in high demand to align supply with demand. To reach this target, Malaysia should concentrate on expanding exports to key markets, specifically India and China, which have a GDP growth rate of 11.1% and 9.9% respectively.

Improving the quality of herbal extracts in the market can be a key factor in promoting Malaysia's strengths and establishing its reputation for high-quality raw materials and efficient extraction processes.

The T&CM Blueprint will foster not only economic benefits, but improvements in healthcare and sociocultural aspects as well.

The emphasis on quality in the production of herbal extracts within the healthcare sector can bring numerous benefits. It will enhance the safety of locally sourced herbal extracts and strengthen the supply chain of locally grown herbs. These improvements will mitigate the potential risks of trade disruptions and its impact on healthcare costs. Additionally, it will inspire further research and development, leading to new discoveries of herbal properties, advancements in agronomy, herbalism and extraction processes.

In sociocultural terms, the implementation of this initiative has the potential to greatly enhance the standing of farmers. During the initial stages, it may offer farmers a second cash crop, which may become high-value crops once matches between demand and supply are fully established and return on investment is better known and projected. The production of high-quality herbal extracts for T&CM medicinal products will also promote national pride and cultural identity by preserving and building upon traditional knowledge and heritage.

5.1.2 GLOBAL MANUFACTURER OF NICHE HERBAL PRODUCTS

5.1.2.1 Introduction

The T&CM Blueprint envisions significant opportunities for Malaysia to become a global supplier of herbal products that cater to specific needs both domestically and internationally (**Figure 25**). Its primary goal for this strategic area by 2027 includes to enhance GDP by additional RM1.2 billion, speeding up R&D to confirm the medicinal properties of local herbs, raising cultural awareness and national pride, and improving healthcare accessibility and affordability for everyone.

The T&CM Blueprint identifies two niche markets that offer opportunities for Malaysian manufacturers to compete in an industry dominated by giant, well-established global companies: halal herbal products and Malay medicinal products. Malaysia today is a leading certifier for Halal medicine worldwide and this strong reputation and standing can be extended to support T&CM medicinal products and tap into the large and growing market of the Muslim world. Malay herbal products are already the target of the government's EPP1 programme, with pipelines established to bring clinically tested, indigenous herb-based products to market.

The Halal herbal and Malay medicinal products were identified as high-potential niche areas for Malaysia during market analysis and interviews. While these niches should be the initial focus, Malaysia should also continuously search for new potential areas in which they have a natural advantage, such as the availability of native herbs, superior quality of local herbs, or intellectual property protection.

Malaysia's strategic advantages in the herbal extract market also extend to the end product industry. These advantages include its rich biodiversity, its central location in Southeast Asia, and a favourable climate for cultivating native herbs. Additionally, herbal remedies have a strong presence in Malaysian culture, with half the population purchasing these products and 60% of these consumers using them regularly³⁴.

³⁴ Source : Malaysia T&CM Consumer Survey 2018 (unpublished)

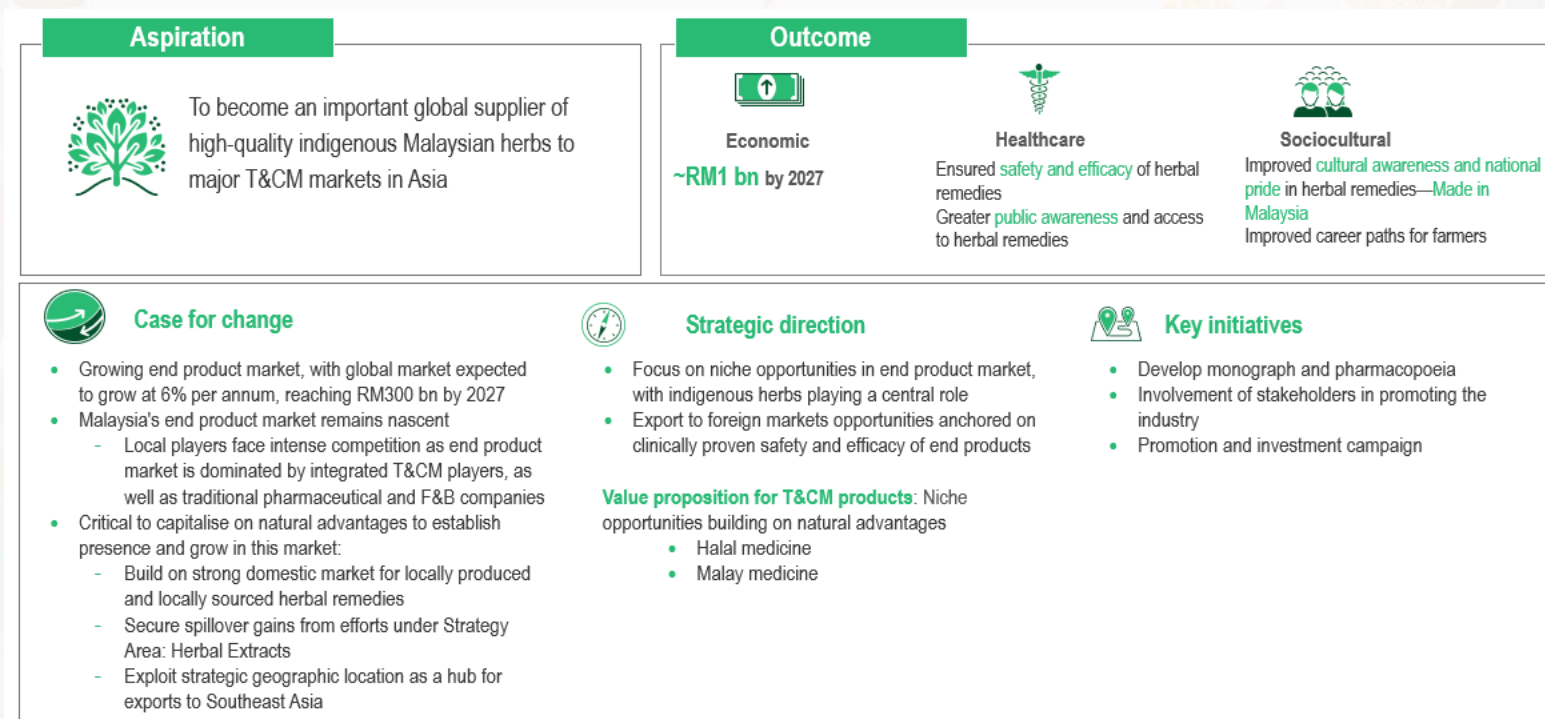
New companies entering this market do face challenges in establishing market presence abroad and Malaysia's current end product industry is not yet large enough to meet domestic demand. The challenges faced by the herbal extract industry affect the end product industry as well, including the need to build capacity and the need to coordinate objectives and performance indicators among government ministries.

The T&CM Blueprint identifies three specific initiatives to advance and promote the end product industry, in addition to those initiatives to support the herbal extract industry and overall initiatives covering all three strategic areas:

- Document medicinal materials across all modalities via monograph and pharmacopoeia development
- Involve stakeholders, including the private sector (farmer associations, manufacturers, practitioners) in promoting the industry
- Launch promotional and investment campaign to showcase Malaysian T&CM potential

These initiatives will require further improvements to the industry's enablers, building on improvements to the herbal extracts industry, with support from various government Ministries such as MOH, MAFS, NRECC, MOSTI, MITI, and related agencies under them.

Figure 25: Overview of strategic opportunity – global manufacturer of T&CM end products



5.1.2.2 Opportunity and Challenges

Steadily growing market, with opportunity to tap fast-growing APAC market

Although today's market for herbal remedies is relatively small in Malaysia and other SEA countries, this market is growing both regionally and globally. The global market for herbal remedies stood at RM160 billion in 2017, but is expected to reach RM300 billion by 2028³⁵, a compound annual growth rate (CAGR) of 6% **(Figure 26)**. This growth is driven by worldwide increase in chronic illnesses among ageing population.

The industry is further fuelled by rising preferences for natural products and supportive government policies. China and India are leading the way, followed by other APAC countries. APAC countries which formed more than 60% of the global market for herbal remedies today and expected to grow to almost 70% of the market by 2028. The APAC market for herbal remedies is projected to grow at a 7% CAGR, compared to a projected 5% CAGR for SEA countries.³⁵ **(Figure 27)**.

Malaysia thus has an opportunity for not only expanding its T&CM market domestically, but also catering to the increased demands from SEA and APAC export markets. In accordance with the information gathered from interviewing those industry experts interviewed during the development of this Blueprint, there is a growing demand for products made from indigenous herbs, such as Tongkat Ali, particularly in Europe and countries like Indonesia that shares similar cultural and herbal medicinal practices.

³⁵ Source: Eurometer Herbal/ Traditional Products in Malaysia, Herbal Supplement Market Forecast (2017)

Figure 26: Global herbal remedies market

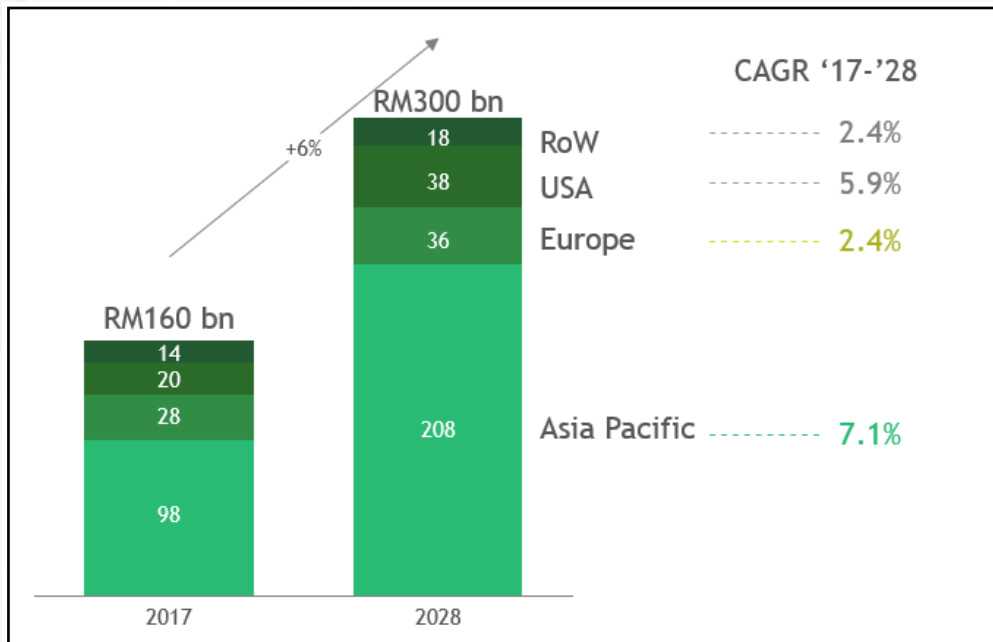
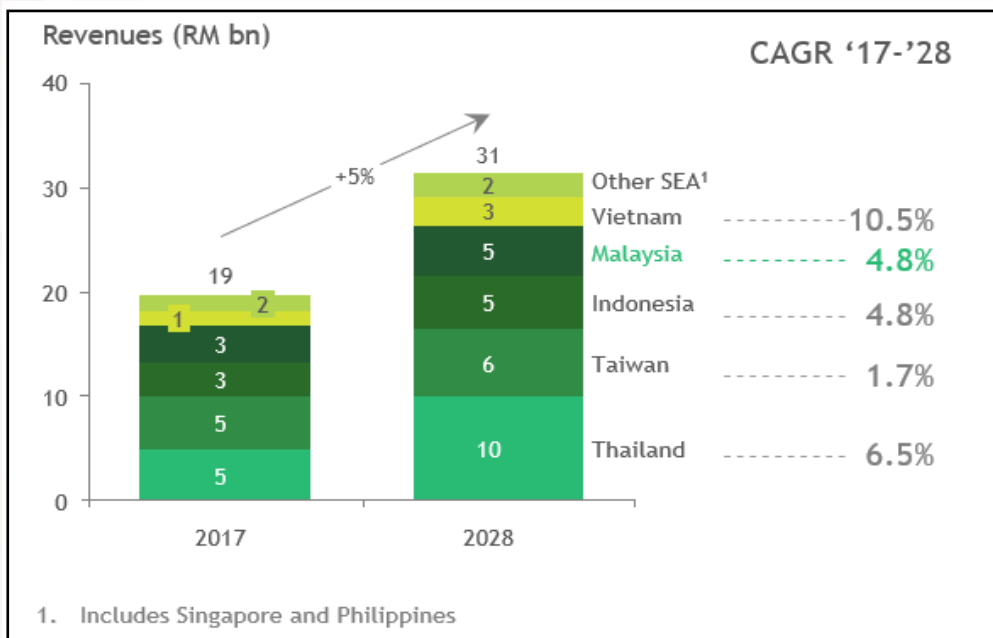


Figure 27: SEA herbal remedies market



The herbal remedies market presents significant challenges as well as opportunities

As the production of herbal remedies continues to grow in Malaysia, new manufacturer will face significant competition and intricate regulatory obstacles.

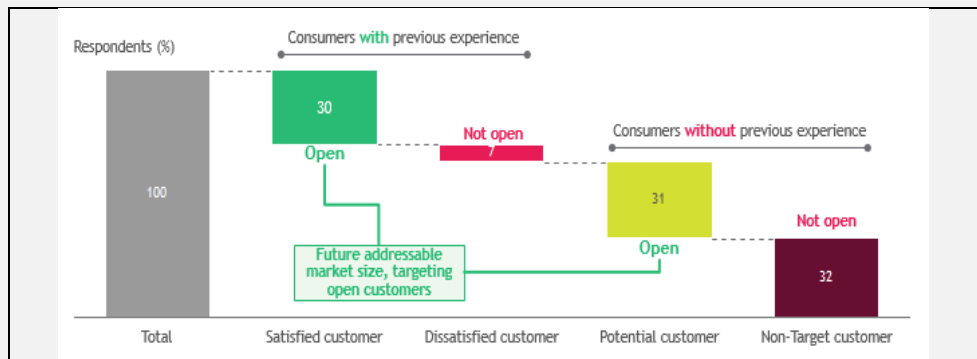
The market is dominated by large and established manufacturers of Chinese and other traditional herbal health products, who have loyal customer base and are already competing on a worldwide scale. Being attracted by the expanding market, traditional pharmaceutical companies and food and beverage corporations are also entering the field with products that incorporate herbal elements. With their well-established branding, these incumbent players have a firm grip on the herbal remedy industry. For new entrants, establishing consumer trust is crucial for success in this industry, and they may face difficulties in competing against established players.

New businesses can compete against established manufacturers by demonstrating that their products meet accepted quality standards. However, the global regulatory framework is the challenge. Safety and quality standards vary from country to country, making it difficult for new manufacturers, especially smaller scale manufacturers with limited resources, to enter foreign markets due to the absence of universally accepted standards.

Malaysia has natural advantages to establish a presence and grow in this market

To achieve further growth in both domestic and international markets, Malaysia can build on its natural advantages, beginning with the growing domestic market for herbal products. Although demand for these products is currently limited, the market presents significant growth opportunities given changing consumer preferences (**Sidebar 2**). This demand is supported by strong T&CM traditions within Malay, Chinese, and Indian communities, who use these products not only for pain management, but also for health preservation and treatment.

Sidebar 2: Changing domestic consumer preference towards greater usage of T&CM products



The T&CM Consumer Survey 2018 found that only 37% of Malaysians currently use T&CM products. Looking forward, this percentage can grow up to 61%. 30% of consumers who have purchased T&CM products before expect to keep using them, while 31% of consumers with no experience with T&CM products are open to trying them.

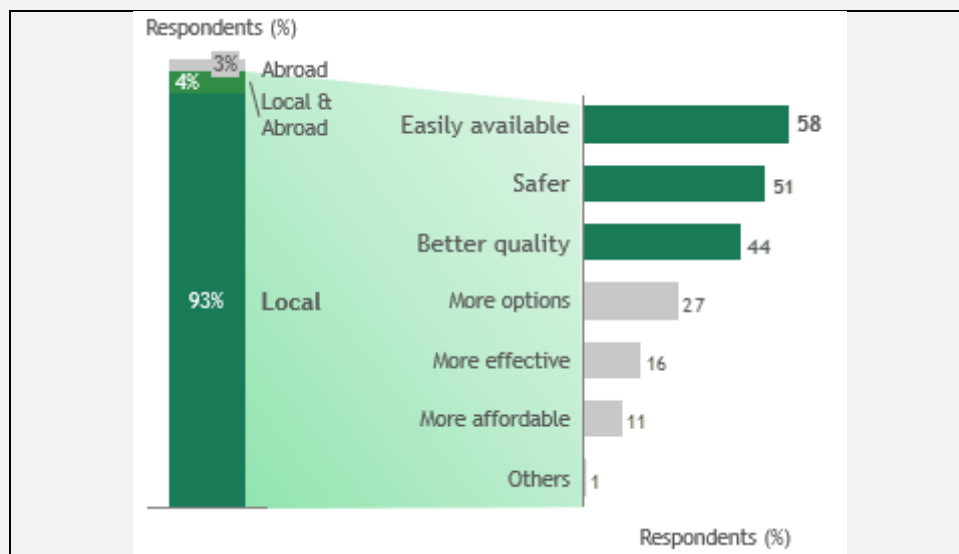
a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: Which of the following best explains your past or future interaction with T&CM products?

Many Malaysians who use herbal remedies prefer to purchase products made in Malaysia, with 95% citing the perception of higher safety and quality as the main reason for their preference (**Sidebar 3**).

Malaysia's unique location also provides greater opportunities for the export to SEA, with a regional market of over 600 million people. This large market has a cultural inclination towards the use of herbal remedies, making it a promising destination for Malaysian herbal product exports.

Sidebar 3: Malaysian consumers prefer to buy locally manufactured T&CM products



The T&CM Consumer Survey 2018 found that 93% of Malaysians currently purchase locally produced T&CM products. The top three reasons driving consumer preference for these T&CM products are that local products are more readily available, safer and are higher in quality compared to imported products.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: *Why do you buy T&CM products from Malaysia?*

5.1.2.3 Strategic Directions

Focus on niche markets

Malaysia can focus on manufacturing end products for niche markets to make the best use of its strengths and core competencies, rather than attempting to tackle the global market on a grand scale. With large established brands dominating the broader market, smaller suppliers and manufacturers can focus on specific smaller markets to avoid direct competition. The highly fragmented industry presents opportunities for Malaysian producers to identify and fill niches of their own.

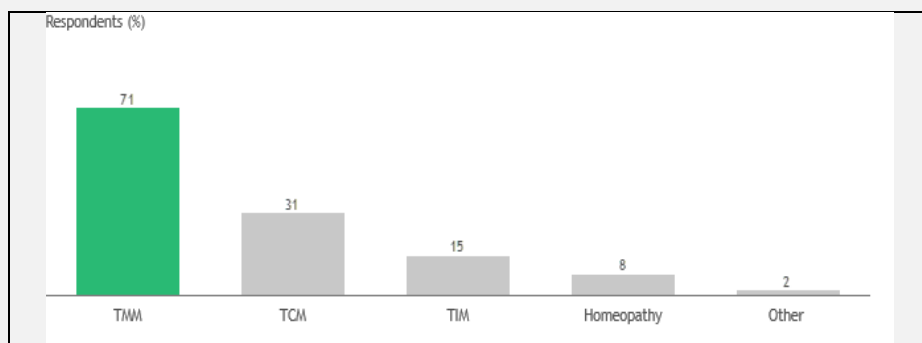
Indigenous herbs should play a central role in the production of niche products

Malaysia has a strong advantage in herbal medicine with its biodiversity ranked 12th in the world and over 1,000 plants with medicinal value. The government has established the EPP 1 initiative to support 14 anchor companies and increase the production of extracts from indigenous herbs meeting domestic and international demand for high-quality herbal products. By focusing on native plants, Malaysia can reduce its dependence on imported ingredients and take advantage of its favourable climate to cultivate and produce at a larger scale.

Two niche opportunities to build on current strengths: Halal medicine and Malay medicine

The two niche markets that have potential for Malaysian suppliers and producers to capitalise on their current market strengths are halal herbal products and Malay medicinal products. The global market for halal pharmaceuticals is growing with the expanding Muslim population, and major herbal medicine companies are entering the market. Malaysia is well-positioned to enter this market due to its reputation as a hub for halal vaccines and being the leading halal certifier in healthcare globally, with globally respected certification standards from *Jabatan Kemajuan Islam Malaysia* (JAKIM). This provides an opportunity for Malaysia to produce high-quality halal herbal products with a receptive market both domestically and abroad.

Sidebar 4: Strongest domestic demand for TMM



The T&CM Consumer Survey 2018 found that 71% of Malaysians have purchased traditional Malay medicine, indicating a higher preference compared to T&CM products from other recognised modalities

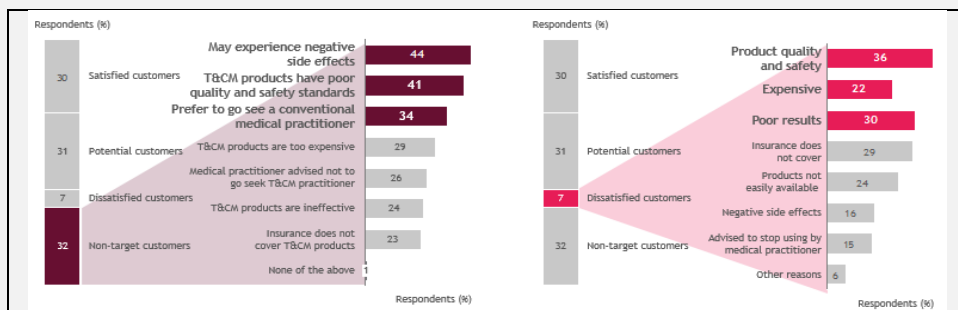
a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: *What kind of T&CM product (s) have you purchased or used?*

Domestic demand for locally made Malay medicinal products is strong and growing (**Sidebar 4**). However, there is no established data for international market. The government's EPP 1 programme supports 14 companies with 13 products in the late-stage clinical trials. Early efforts to enter foreign markets by two companies have showed potential that Malaysia's local manufacturer can be the global manufacturer of T&CM end products. Maintaining the EPP 1 effort to develop high-value herbal products is recommended.

Malaysia should capitalise on its unique indigenous herbs and create locally-produced herbal remedies to meet strong domestic demand and address consumer concerns. Carrying out more clinical trials will provide evidence of safety and effectiveness, building consumers' trust domestically and supporting exports to foreign markets (**Sidebar 5**).

Sidebar 5: Product safety, quality and efficacy key building blocks to build domestic consumers' trust



The T&CM Consumer Survey 2018 found that 39% of Malaysians were unwilling to purchase T&CM products, comprising two major categories of consumers: those who have never used T&CM products and are not likely to purchase in the future (“non-target customers”: 32%) and consumers who have used T&CM products before and are not likely to purchase in the future (“Dissatisfied customers”: 7%). Across both groups, their main concern relates directly to product quality and safety.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: What are the reasons for discontinuation of product purchase?

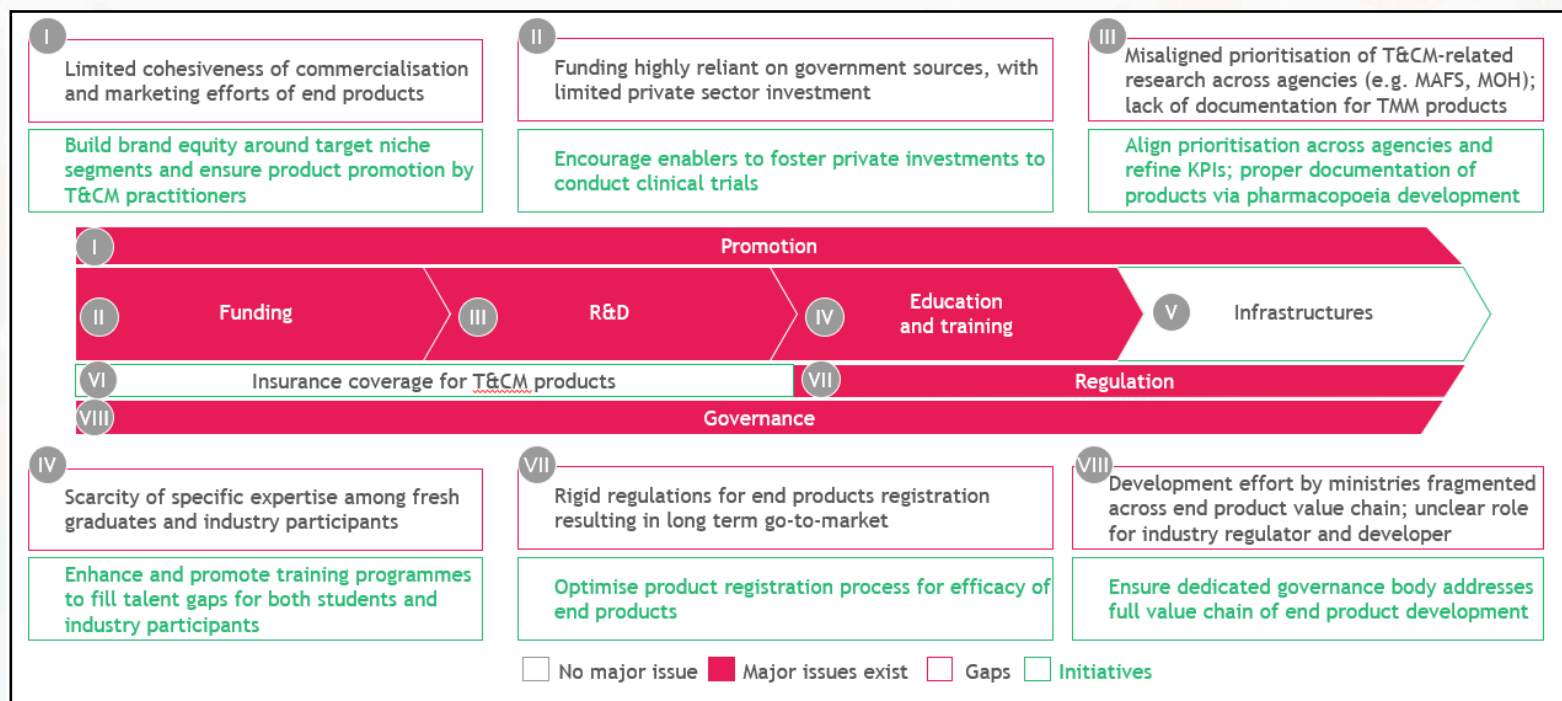
c. Question: You previously mentioned that you would not consider purchasing a T&CM product(s), can you please tell us the reason?

5.1.2.4 Enablers

Advancing the herbal product industry requires significant improvements across most of the industry’s critical enablers (**Figure 28**). Those efforts and initiatives in Section 5.1.2.1 are needed to support the end product industry.

More efforts are needed to implement initiatives for growing the T&CM product market. Education and R&D should be prioritised to gain a thorough understanding of the basic theory, philosophy, product composition, and usage guidelines for T&CM.

Figure 28: Enablers for manufacturers of T&CM end products



5.1.2.5 Outcomes

The T&CM Blueprint aims to boost the herbal product industry and target an additional RM1.2 billion in GDP by 2027. It focuses on growing manufacturers to achieve economies of scale and recommends targeting niche markets to build capacity. The focus is initially on local demand, with an expectation of RM0.8 billion in revenue, and future growth in exports, which is expected to bring an additional RM0.4 billion. The growth in the industry is predicted to increase even more after the 10-year period as T&CM practices become more widespread and the demand for herbal products is better met.

This Blueprint aims to create economic, healthcare, and sociocultural benefits. It envisions Malaysia as a manufacturer of high-quality T&CM products with higher safety and efficacy standards, and increased public awareness. The Blueprint will also accelerate R&D through prioritisation, and encourage the integration of traditional and modern medicinal methods through the emergence of new botanical drugs. It will bring social benefits such as improved career paths for farmers, increased cultural awareness, and strengthened national pride in Malaysian T&CM products. The lessons and results of EPP 1 will provide valuable insight for further development of high-value herbal remedies and competencies in clinical trials, standardisation, and regulations.

5.1.3 HIGHLY PROFESSIONALISED T&CM SERVICES HUB

5.1.3.1 Introduction

The T&CM Blueprint sees opportunities to expand healthcare services to both Malaysians and tourists through the improvement, advancement, and expansion of T&CM services (**Figure 29**). This will lead to the recognition of Malaysia as a highly professionalised hub for T&CM services.

The major targets for this strategic area by 2027 are to achieve an additional RM3-6 billion³⁶ in GDP by 2027, enhance the integration of T&CM in the private sector, and save approximately RM13 billion in healthcare spending. The establishment of Malaysia as a highly professionalised hub for T&CM services is expected to improve health outcomes, ensure safe and effective delivery of T&CM services, enhance career paths for T&CM practitioners, and provide greater accessibility to higher-quality of primary healthcare.

The major challenge of T&CM service sector is the lack of regulation until the enforcement of the T&CM Act 2016, which enabled the establishment of the T&CM Council and registration of T&CM practitioners. T&CM premises, however, remain unregulated, are subjected only to general business licensing requirements. The roles of the T&CM Council include setting standards and register practitioners. More than a third of practitioners who voluntarily registered themselves prior to the enforcement of the T&CM Act 2016 have no formal training³⁷. Although more than half of Malaysians are receptive to T&CM practices, the public lacks confidence in the safety and effectiveness of T&CM practices and premises.

The Blueprint suggests to prioritise T&CM services based on the needs for Malaysians. In accordance with their interest in preventive care, widely offering T&CM services at the primary healthcare level can help to prevent non-communicable diseases (NCDs) and expand healthcare in underserved areas. T&CM can also serve as an adjunct to modern medical treatments at secondary and tertiary healthcare levels, with better regulation and oversight, and the development of outcome-based of evidence.

Once these services are well established for Malaysians, they can be offered to tourists who are interested in the unique Malaysian health and wellness experience, which need not be tied to medical tourism. Malaysia can begin by promoting its T&CM services as part of a wellness experience, moving over time to market these services specifically to medical tourists.

³⁶ Based on incremental GDP estimated from the increase in number of T&CM practitioners and subsequent increase in patient visits/ consultations made.

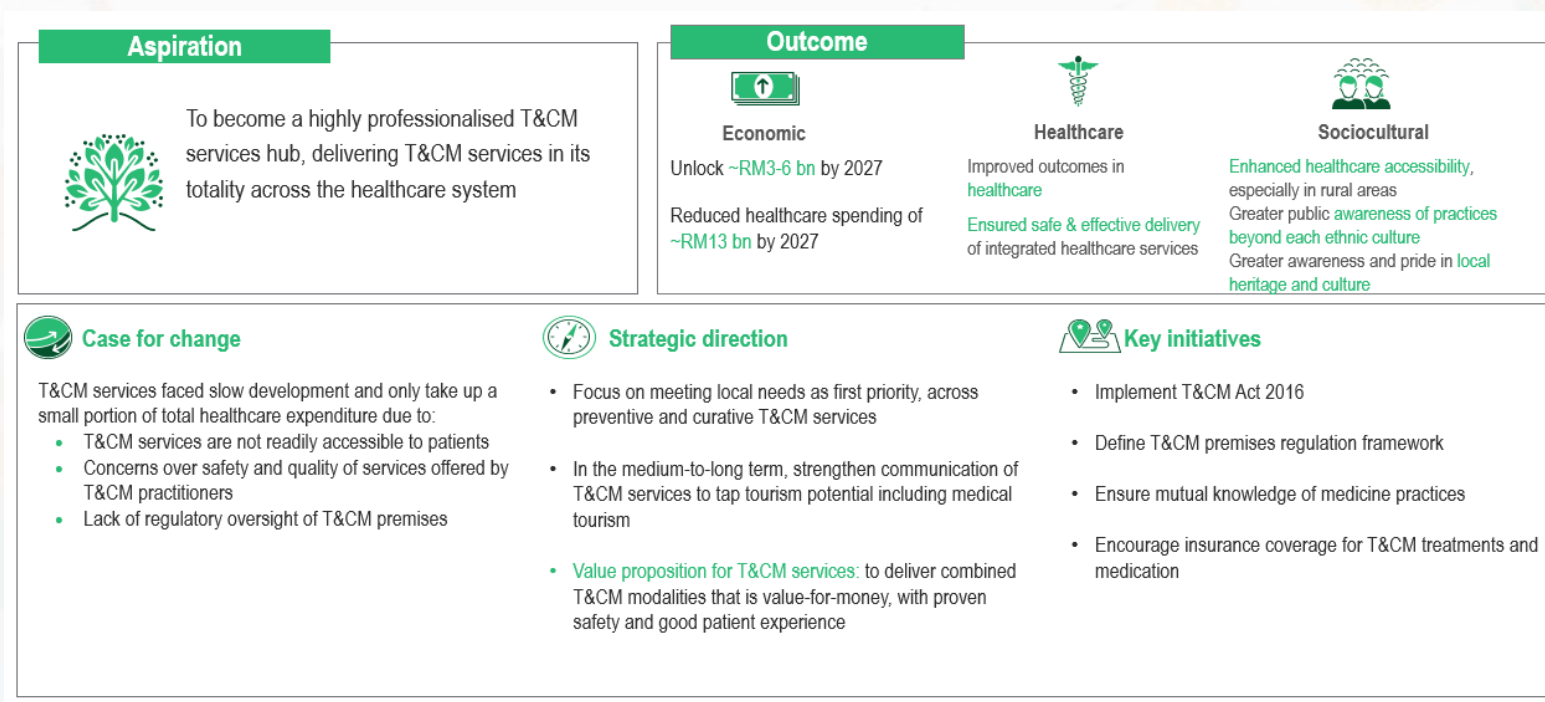
³⁷ Source: T&CM Division. T&CM practitioners voluntary registration database (2016)

The T&CM Blueprint identifies five specific initiatives to advance and promote the T&CM services sector, in addition to the overall initiatives covering all three strategic areas:

- Fully implement T&CM Act 2016
- Define T&CM premises regulation framework
- Ensure mutual understanding between T&CM practitioners and modern medical practitioners
- Encourage better insurance coverage for T&CM treatments and medications, including indemnity coverage for T&CM practitioners
- Seek opportunity to attract FDI

These initiatives will require changes and improvements to the sector's enablers, including improvements in the career track for T&CM practitioners, education about T&CM for modern medicine practitioners, and the creation of a regulatory framework for T&CM premises.

Figure 29: Overview of strategic opportunity – highly professionalised T&CM service hub



5.1.3.2 Opportunity and Challenges

Malaysian healthcare system ranks among the best in the ASEAN region, but faces long-term challenges

Malaysia has made significant progress in providing its population with access to a strong healthcare system since its independence. The country's public healthcare system offers comprehensive care at affordable costs and, provides nationwide coverage. As a result, Malaysia has made significant strides in its healthcare system, ranking 22nd on the 2014 Bloomberg Healthcare Efficiency Index and 61st on the 2017 Sustainable Economic Development Assessment (SEDA), surpassing many of its ASEAN peers in terms of healthcare performance.

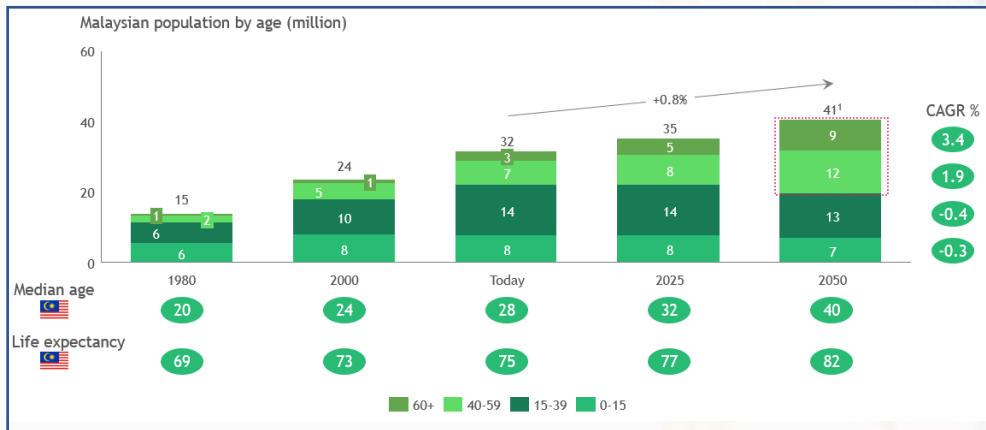
While Malaysia's healthcare system has made significant strides, there are still persistent challenges that need to be addressed. A continuing shortage of personnel in the healthcare sector creates imbalances in access to healthcare, particularly underserved area such as indigenous communities, rural areas, and the low-income communities. Although rural clinics have been established throughout the country, these health facilities are often understaffed, limiting the primary healthcare services available. Moreover, healthcare costs are rising in Malaysia, and healthcare expenditure increased significantly from 3.36% of GDP in 2005 to 4.23% of GDP in 2014³⁸.

In the more immediate term, these challenges are further burdened by Malaysians' unhealthy lifestyle: Malaysia is the fattest country in Asia, with 50% of Malaysians either obese or overweight, leading to a high rate of NCDs. In the longer term, Malaysia becoming an ageing society as healthcare costs will rise even more rapidly; 21% of the population will be 40 or older by 2050³⁹ **(Figure 30).**

³⁸ Source: Malaysia National Health Accounts. Health Expenditure Report. 1997-2019

³⁹ Source: UN world population prospects: The 2015 revision, UN statistics division, DOSM

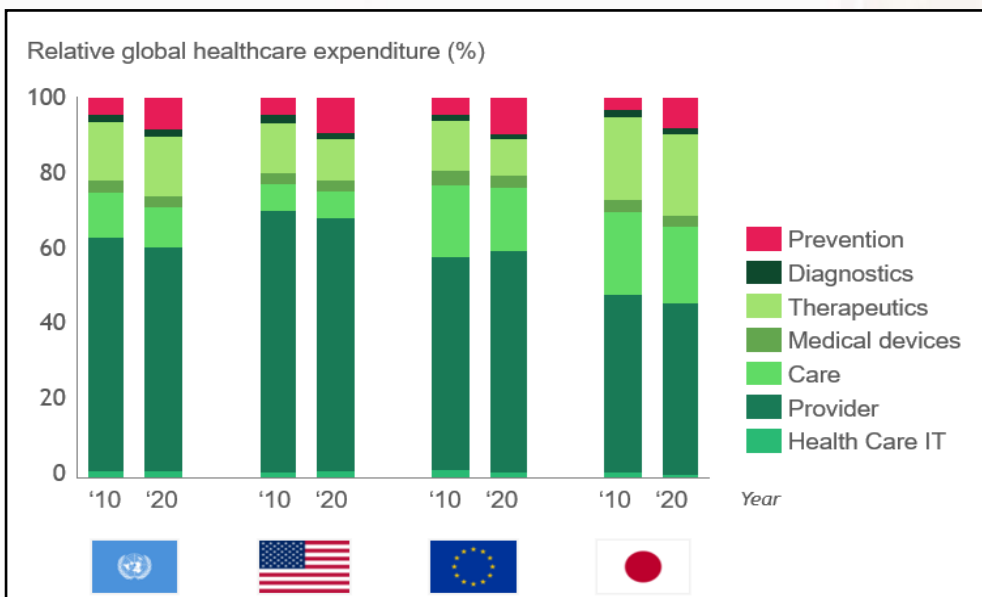
Figure 30: Malaysia to become an ageing society by 2050



T&CM has the potential to address coming healthcare challenges

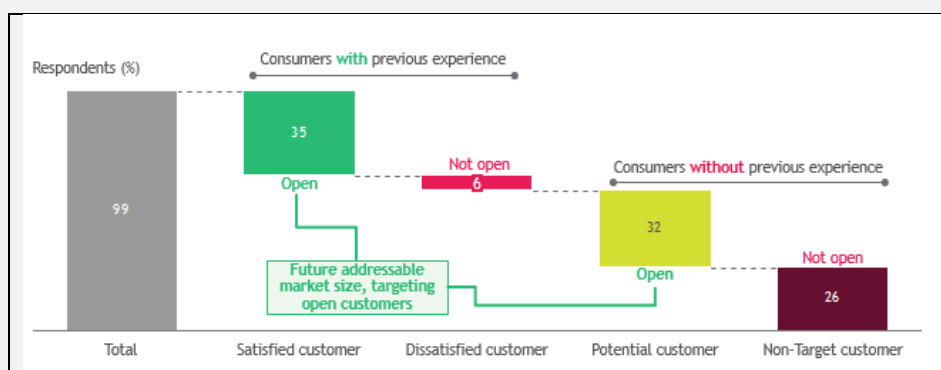
To address Malaysia's healthcare challenges, T&CM plays an important role by contributing to health preservation and promotion efforts while helping to keep healthcare costs down. The demand for preventive and cost-effective healthcare is increasing globally, as the USA, Europe, and Japan face ageing populations and rising medical expenditures (**Figure 31**).

Figure 31: Countries begins to move towards preventive care



T&CM is becoming an increasingly popular option for addressing healthcare needs. Major global health organisations have recognized T&CM as a valuable approach for supporting healthcare. The WHO Traditional Medicine Strategy: 2014-2023 highlights that “T&CM is widely used in disease prevention, health promotion and health maintenance”. Additionally, the Pacific College of Oriental Medicine noted that “TCM has been practiced for over 4,000 years”. According to reports by Alex Keckes from Pacific College, the ancient Chinese sought the expertise of TCM practitioners only for preventive care. This aligns with the findings of 2018 T&CM survey, which found that Malaysians are increasingly receptive to T&CM services (**Sidebar 6**).

Sidebar 6: Shifting domestic consumer preference towards greater usage of T&CM services



The T&CM Consumer Survey 2018 found that only 41% of Malaysians currently use T&CM services. Looking forward, this percentage can grow up to 67% — of which 35% of consumers who have purchased T&CM services previously are happy to continue using T&CM services, while 32% of consumers with no experience with T&CM are willing to try T&CM services.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: Which of the following best explains your past or future interaction with T&CM services?

At the primary healthcare level, staff shortages often lead to limited health services available, particularly among indigenous communities, rural populations and the underprivileged, as previously noted. Having trained T&CM practitioners from private sector to provide primary care could increase

the number of available medical personnel in rural areas and expand the range of health services. For example, acupuncture has been proven effective against chronic pain conditions, includes back and neck pain, osteoarthritis and chronic headache⁴⁰. At the tertiary healthcare level, T&CM practices can complement modern medical treatments.

T&CM can also contribute to Malaysia's aim of becoming a health and wellness hub

With the growing global interest in preventive healthcare and the increasing elderly population in developed countries, medical tourism has become a rapidly expanding market. It is projected to generate global revenues of USD127 billion by 2021, with a CAGR of 15.5% between 2017 and 2021⁴¹ (**Figure 32**). In the APAC region, medical tourism is expected to grow faster than most parts of the world, and Malaysia's growth rate in medical tourism is expected to exceed that of almost all other APAC countries.

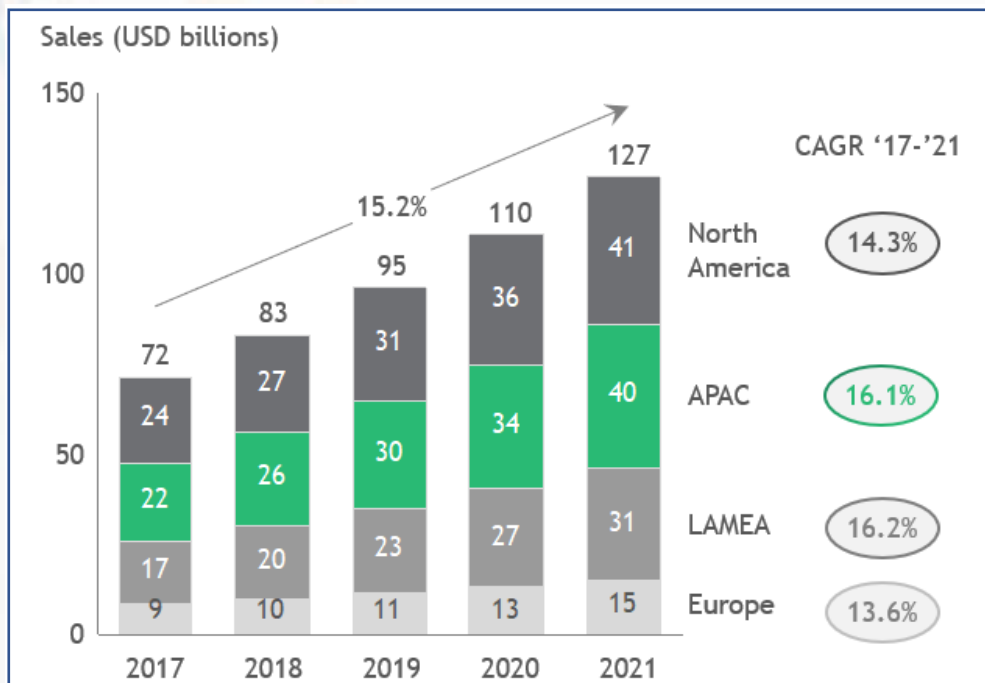
Malaysia is already an emerging hub for medical tourism and wellness, with significant government support for new wellness resorts and the establishment of privately funded healthcare and wellness clusters. In global healthcare surveys, Malaysia ranks high; for instance, in the 2014 Global Retirement Index, Malaysia's healthcare system was ranked third in the International Living category, while Prince Court Medical Centre was ranked seventh best in the world for medical tourism by the Medical Travel Quality Alliance. The combination of high-quality healthcare services, a large network of private hospitals, and significant global and regional cost advantages make Malaysia a prime medical tourism destination.

While medical tourism in Malaysia and across the APAC region mainly offers treatments for a wide range of illnesses and disorders such as health screenings, oncology and cardiology treatments, T&CM presents an opportunity to cater to unmet medical needs and offer non-surgical interventions.

⁴⁰ Source: Andrew J.V. et. al. Acupuncture for Chronic Pain: Individual Patient Data Meta-analysis (2012)

⁴¹ Source: Allied Market Research 2018

Figure 32: Growing trend of medical tourism based on region



Realising the potential benefits of T&CM has been hindered by significant challenges

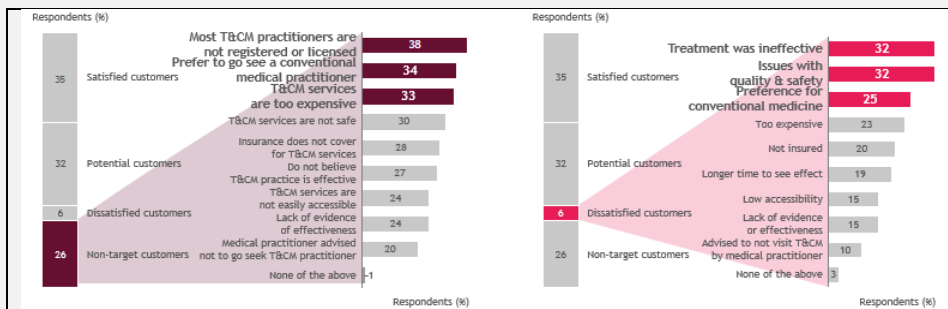
Despite its potential, T&CM accounts for only estimated 4% of total healthcare expenditure in Malaysia³⁸. Two major challenges have impeded the broader adoption of T&CM: limited availability and public concerns about safety and quality.

T&CM services are not widely available in mainstream healthcare facilities, with only two of Malaysia's 184 private hospitals and about 11% of Malaysia's public hospitals providing T&CM services. Among these services, acupuncture is the most popular treatment for chronic pain and post-stroke patients. However, demand for acupuncture is so high since the hospitals had reported waiting period for acupuncture of more than three months.

Lack of public confidence in the safety and quality of T&CM practitioners and premises arises from real and perceived weaknesses in their standards and

regulatory oversight (**Sidebar 7**). Although the T&CM Act 2016 was the first law to register T&CM practitioners, T&CM premises remain unregulated, and only a general commercial license from local authorities is required. The T&CM Council has imposed registration criteria for practitioner's skills and training. Among practitioners who voluntarily registered themselves prior to the enforcement of the T&CM Act 2016, 36% of them lacked formal training³⁷. The absence of standardisation and regulation for T&CM premises makes it difficult and less attractive for modern hospitals or clinics to include T&CM services, leaving major gaps for treatments offered in other facilities.

Sidebar 7: Malaysians not open to T&CM services due to concerns around safety, quality and efficacy



The T&CM Consumer Survey 2018 found that 32% of Malaysians were unwilling to use T&CM services. This group includes two major categories of consumers- those who have never used T&CM services and are not likely to purchase in the future (“non-target customers”: 26%) and consumers who have used T&CM services before but are not likely to use them in the future (“Dissatisfied customers”: 6%). Across both groups, among the top concerns are quality and safety of T&CM services and consumers’ preferences towards conventional medicine.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: You previously mentioned that you would NOT consider seeing a T&CM practitioner, can you please tell us the reason?

The Malaysian government has taken steps to regulate and integrate T&CM practices into the national healthcare system since 2001. The initiatives include setting broad goals for integrating T&CM into primary healthcare,

establishing T&CM program standards and the T&CM Council to regulate T&CM practitioners. The government has also supported the establishment of health and wellness clusters to attract private investment.

5.1.3.3 Strategic Directions

A two-tiered approach should focus on addressing Malaysia's local needs first

The initial step should be providing the T&CM services that are already in high demand, such as acupuncture, which have lengthy waiting lists in public hospitals. This approach will fulfil unmet needs and create a foundation for further development of T&CM services. Malaysians desire both preventive and curative healthcare services, and therefore, the goal should be offering a complete range of T&CM treatments that could cater for both preventive and curative healthcare services (**Sidebar 8**). Until existing needs are met, it is not advisable to prioritise the promotion of T&CM services to wider audiences, as it would require additional time and resources.

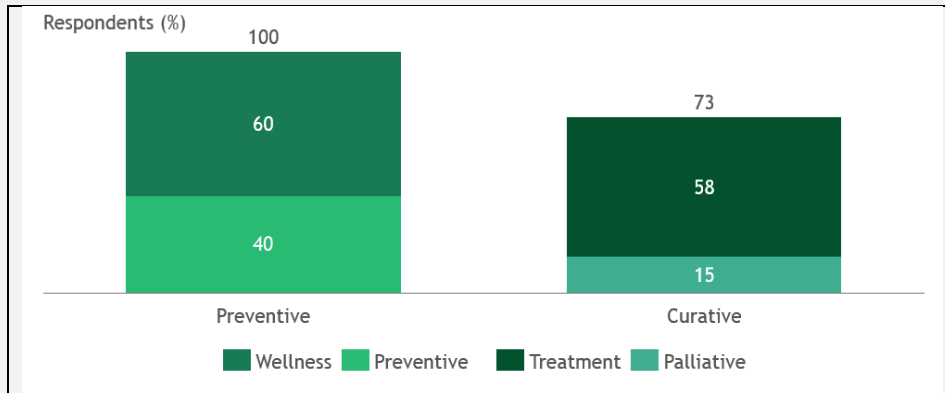
Engaging the International Market for T&CM Services: Malaysia's Next Step

In the medium-term, Malaysia can extend T&CM services to 'wellness-conscious' tourists who wanted for relaxation, exploration or entertainment. The tourist experience should include the T&CM services as part of the wellness menu.

In the longer term, as Malaysia establishes standards and reputation for T&CM, it can add T&CM products and services in order to become a health and wellness hub. Malaysia's conventional healthcare system is already being recognised in Asia and beyond for its quality and cost-effectiveness. Incorporating T&CM services should generate additional health and economic benefits with minimal effort or investment. Stronger communication and marketing efforts are needed to reach tourists who are 'open to T&CM'. Building on the T&CM services designed to meet domestic demand, Malaysia should be able to promote its health and wellness services as unique,

combining modern medicine and T&CM services across a wide range of practices.

Sidebar 8: Majority of Malaysians believe in the effectiveness of preventive and curative T&CM services



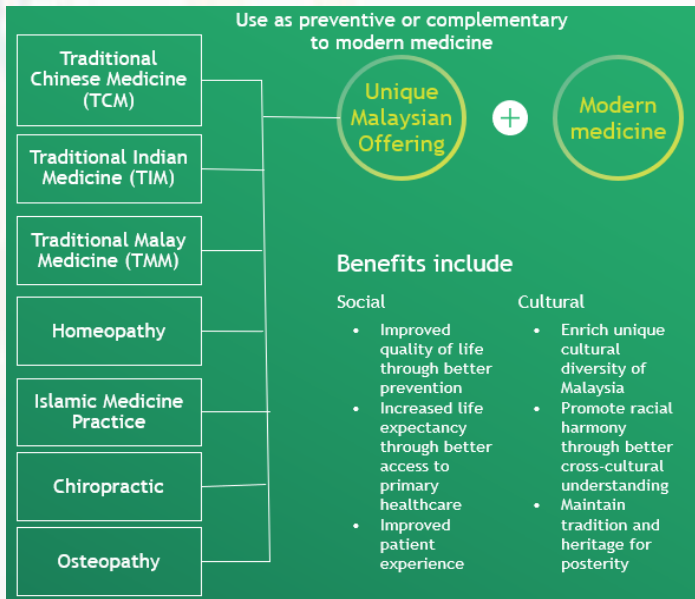
The T&CM Consumer Survey 2018 found that 100% and 73% of Malaysians believe in the effectiveness of preventive and curative T&CM services respectively. Within preventive services, Malaysians show a stronger preference for wellness services than preventive. As for curative services, Malaysians show a stronger preference for treatment services than palliative.

- a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)
b. Question: What would you see a T&CM practitioner for next time?

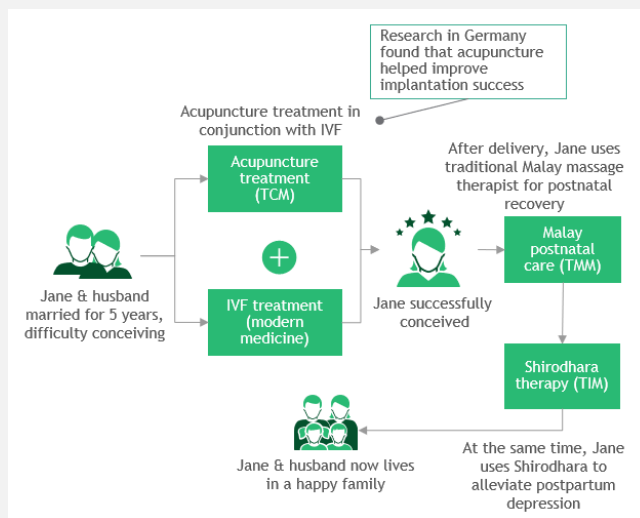
Malaysia should focus on delivering combined T&CM modalities, across both preventive and curative services

Malaysia has the potential to provide a variety of T&CM services, including TCM, TIM, TMM, homeopathy, Islamic medical practice, chiropractic, and osteopathy. This combination of modalities can complement modern medical treatments for various conditions (**Figure 33**). These practices can be used separately or together to complement modern medical treatments for conditions such as infertility (**Sidebar 9**).

Figure 33: Unique opportunity to combine T&CM offerings



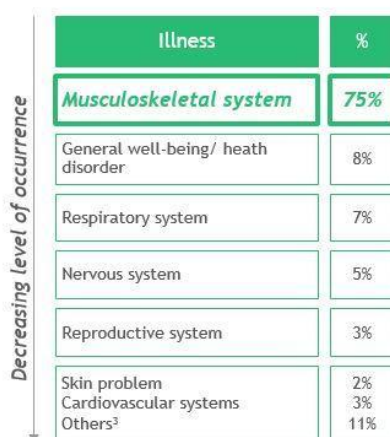
Sidebar 9: Unique Malaysian offering: The case of fertility treatment



T&CM in primary healthcare: value and safety of preventive services

Malaysia should prioritise providing T&CM services in primary healthcare settings to prevent NCDs and reduce healthcare costs. This approach aligned with the WHO's guidance and corresponds to how most Malaysians use T&CM (**Sidebar 10**). The focus on preventive T&CM services should be widely available through rural clinics and clinics to reduce the burden on the healthcare system by addressing health issues before they require more expensive secondary and tertiary care. However, ensuring the safety and affordability of these services is necessary for them to be accessible to all Malaysians.

Sidebar 10: Opportunity to utilise T&CM services to meet national healthcare needs



Illness	%
Musculoskeletal system	75%
General well-being/ health disorder	8%
Respiratory system	7%
Nervous system	5%
Reproductive system	3%
Skin problem	2%
Cardiovascular systems	3%
Others ³	11%

The T&CM Consumer Survey 2018 found that a majority of Malaysians rely on T&CM services primarily for treating musculoskeletal illnesses, at 75%, and for maintaining general wellbeing and respiratory systems, at 8% and 7% respectively.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: If you went for treatment, what disease or illness was being treated?

T&CM in secondary and tertiary care: Ensuring quality and safety

Malaysia can offer T&CM treatments as adjuncts to modern medical treatment at the secondary and tertiary healthcare levels to improve overall quality of care for the most prevalent NCDs. The focus should be on developing offerings for the domestic market first and establishing a unique T&CM value proposition for primary, secondary and tertiary healthcare. Once established, Malaysia can broaden health and wellness services for all tourists who visit the country and eventually capitalise on its recognition as a health and wellness hub to attract tourists specifically for T&CM services.

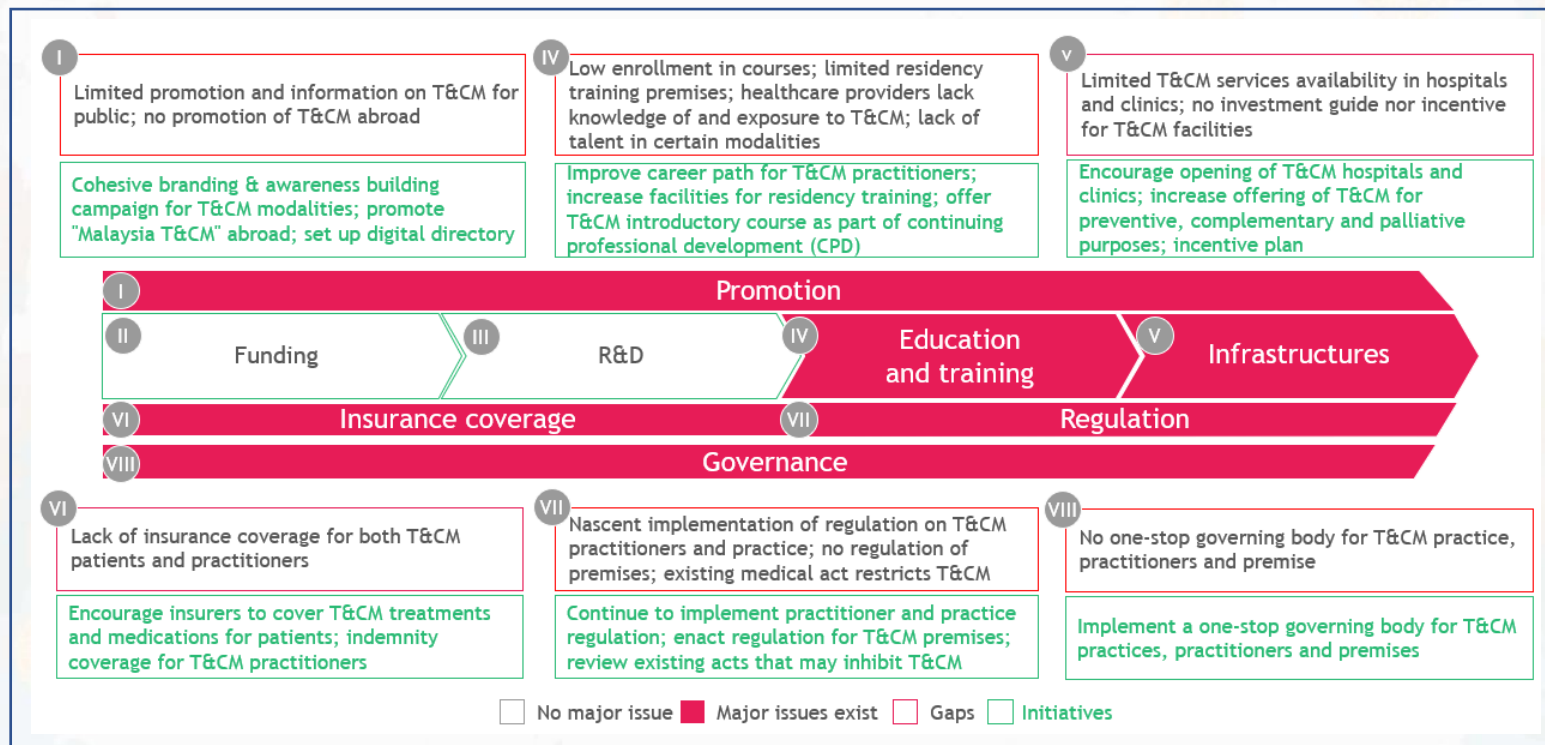
5.1.3.4 Enablers

To make Malaysia a highly professionalised hub for T&CM services, significant improvements will be required among most of the critical enablers in the sector (**Figure 34**). Efforts and initiatives mentioned in Section 5.1.3.1 will be necessary to make Malaysia a highly professionalised hub for T&CM services.

5.1.3.5 Outcomes

The T&CM services industry in Malaysia is expected to grow by RM2 billion by 2027, with an annual growth rate of 4%. The T&CM Blueprint aims to accelerate the growth of the industry and generate an additional RM3-6 billion in GDP by 2027, with an annual growth rate of 9%. The focus is on domestic demand first, via ensuring properly trained and registered T&CM practitioners provide care in a safe environment. Malaysia should extend its T&CM offerings to tourists for additional revenue. The Blueprint's strategies aim to integrate T&CM with mainstream healthcare and save approximately RM13 billion in healthcare spending. The Blueprint should also provide healthcare, sociocultural and economic benefits, including improved physical and mental health outcomes, enhanced wellness, better career paths for T&CM practitioners, cultural awareness and greater accessibility to higher-quality primary healthcare.

Figure 34: Enablers for strategic opportunity– highly professionalised T&CM services hub



5.2 CROSS-STRATEGIC OPPORTUNITIES

The section describes the critical elements needed to foster the growth of T&CM products and services sector. Each strategic opportunity will require the support of a different group of enablers, and actions that distinguish between products and services. The Blueprint has identified two of these cross-strategic opportunities: (i) integrated healthcare system; and (ii) elevated cultural standing of T&CM.

The opportunity to achieve an integrated healthcare system involves expanding T&CM services and pushing T&CM to co-exist alongside modern medicine. This can not only offer more healthcare options to patients, but also help meet underserved healthcare needs. These benefits will increase further as T&CM is integrated more fully into the healthcare system and as T&CM practices are better understood and preserved.

The opportunity to elevate the cultural standing of T&CM rests in documenting, preserving and celebrating T&CM practices. T&CM is an essential and unique feature of Malaysian culture, as each form of T&CM practice is deeply rooted in Malaysia's ethnic diversity and cultural richness. Elevating its cultural standing will ensure that Malaysia's T&CM practices and the body of knowledge of which they represent are recognised as a national treasure, thoroughly documented, and preserved accordingly with fair and equitable sharing of benefits arising from the utilisation of biological resources for the local communities. This will create a virtuous cycle for the broader T&CM industry, improving both products and services, and catalyse the development of the industry.

These cross-strategic opportunities are complex in nature, requiring greater industry sophistication and development. The T&CM Blueprint describes the steps necessary to build on the approaches used to realise strategic opportunities and secure even greater benefits.

5.2.1 INTEGRATED HEALTHCARE SYSTEM

5.2.1.1 Introduction

The T&CM Blueprint aims to support the integration of T&CM into Malaysian healthcare system holistically. The government has recognised the benefits of integration and took considerable efforts to incorporate T&CM into the

mainstream healthcare system. Integration efforts will strengthen T&CM's standing in Malaysian healthcare practices and integrate into the healthcare system, co-existing alongside modern medicine.

To gain trust and accelerate adoption through referrals from a wider pool of modern medical practitioners, dual training can be a strong enabler, while co-location of T&CM units in modern medicine facilities would expand its reach. T&CM practices need to reach a level of standards in terms of safety, quality and efficacy as those required for modern medical practices, while also adhere to reference, concepts and philosophy of T&CM.

Malaysia should continue its current efforts to integrate T&CM into modern medicine at the secondary and tertiary levels of care, while paving the way for integration at the primary healthcare level. The integration of T&CM into primary healthcare level in private practice can proceed according to local demand, with the public sector following suit. Malaysia should replicate the approaches of India and China, which focus on established therapeutic areas in order to ease integration and encourage cross-referral. In the longer term, Malaysia should aim for greater integration of T&CM into all stages of the patient journey, from preventive care to aftercare, becoming an inclusive system where both T&CM and modern medicine practices co-exist.

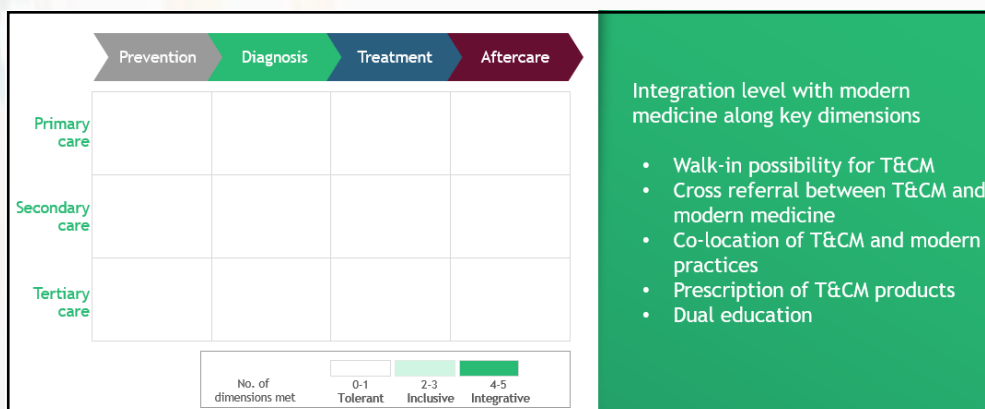
Efforts in all three strategic areas will be necessary to address existing challenges in order to establish a strong foundation for growth. Integration of T&CM into healthcare systems can be achieved through collaboration between relevant divisions within MOH, such as National Institutes of Health, Disease Control Division, Medical Development Division, Family Health Development Division, Public Health Development Division and Health Education Division, and other relevant stakeholders.

5.2.1.2 Opportunity and Challenges

Integration of T&CM into Malaysia's healthcare system still nascent

Integration is evaluated against five essential elements of patient care, according to the type of healthcare provided (**Figure 35**).

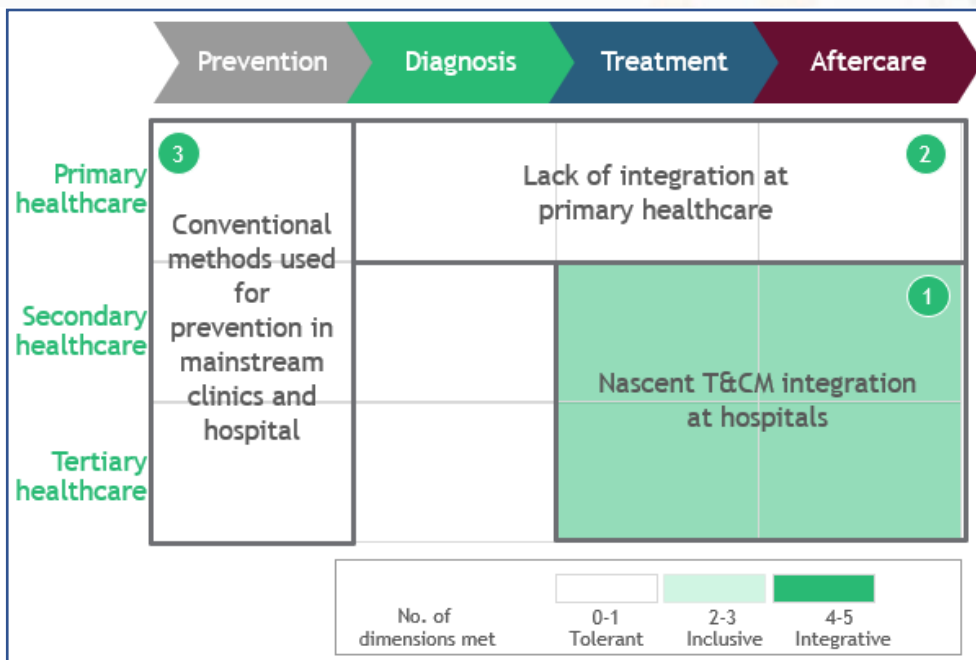
Figure 35: Integration Framework



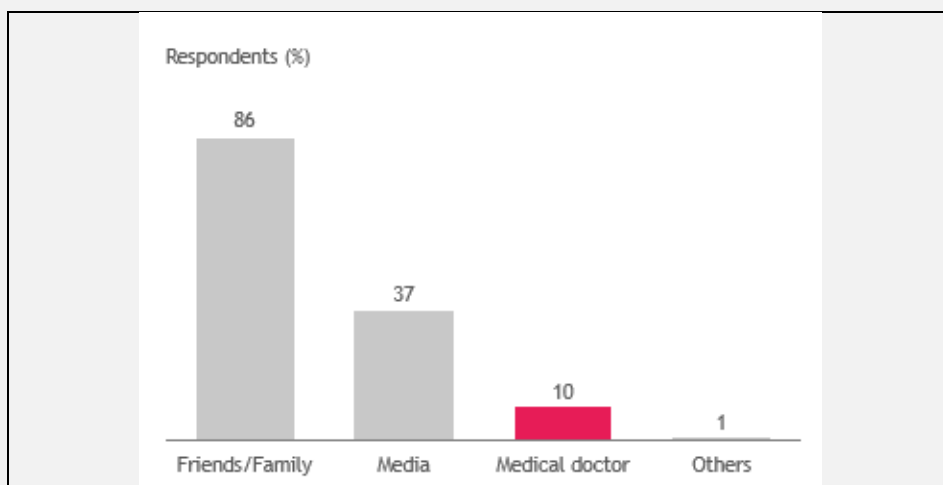
According to this framework, Malaysia is in the early stages of each of these elements (**Figure 36**). First, the availability of walk-in services is very limited. MOH hospitals, which are currently the only facilities in Malaysia's healthcare system that integrate T&CM practices, do not provide walk-in T&CM services. Nor are there any national directories available to find qualified T&CM practitioners or premises in Malaysia, which makes it difficult for patients to choose T&CM treatment. Additionally, no formal process exists for modern medicine doctors to refer patients to T&CM practitioners, and many modern medical practitioners distrust and misunderstand T&CM practices (**Sidebar 11**). In some cases, doctors even discourage patients from using T&CM. Many referrals occur only for end-stage patients, where little hope remains for effective treatment.

Regulations restrict the co-location of T&CM practices in private healthcare facilities. The available indications of T&CM services offered in the 15 MOH hospitals are limited, and no public clinics officially offer T&CM. Only four MOH hospitals with T&CM unit that have pharmacists that dispense TCM products for herbal therapy. Finally, there is lack of exposure to each other's practices in their respective education and professional training, leaving room for improvement in cross-disciplinary training.

Figure 36: Integration maturity of Malaysia



Sidebar 11: Modern medical practitioners do not typically refer patients to T&CM practitioners



The T&CM Consumer Survey 2018 found that only a small number of patients knew about T&CM services through their doctors' referral. On the other hand, the survey also found that significant majority of Malaysian consumers found out about T&CM services through family/ friends (86%) and media (37%).

- a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)
b. Question: *How do you find out about T&CM services?*

Malaysian government efforts focus on addressing basic requirements to integrate T&CM into the healthcare system

The Malaysian government has initiated several initiatives to integrate T&CM into the national healthcare system, although these measures are still in the early stages and require concerted effort to implement.

- **T&CM products**, for example, are regulated under CDCR 1984, but these regulations need to be adjusted to encompass the diversity of T&CM practices and a broader range of products, such as raw materials, granules and liquid extracts.
- **T&CM practitioners** are regulated by the T&CM Act 2016. Implementation faces challenges due to the complexity and diversity of practices.

- **T&CM education** is formalised with a syllabus in place, but course enrolment is still low.
- **T&CM research** varies in sophistication among practices. It is more established in TCM and Ayurveda, while still nascent for TMM. All T&CM practices need better documentation and additional research.
- **T&CM service delivery** are private sector driven. For public sector, T&CM services are only offered in 15 MOH hospitals without walk-in patient.

Additional gaps remain in the establishment of T&CM within the national healthcare system. As noted in Chapter 5.1.3, private T&CM facilities are unregulated. T&CM products and services are generally not covered by insurance. Reimbursement for T&CM treatments will be the final step in integrating T&CM into the national healthcare system, once these practices are well established and appropriately regulated.

Beyond addressing these basic requirements, Malaysia needs to establish clear pathways to integrate T&CM in the national healthcare system.

5.2.1.3 Strategic Directions

Three-step approach to integration

In order for T&CM to be better integrated into the national healthcare system, and co-exist with modern medicine for mutual benefit, a three-step approach is required (**Figure 37**). The first step is to establish T&CM as a fundamental part of the national healthcare system. The T&CM industry must meet six minimum requirements in order to ensure safety and appropriate use of practices:

- A national drug policy that includes regulations for registering and overseeing T&CM products
- Registration and regulation of T&CM providers (institutions or individuals), including guidelines on cross-referrals of patients
- Therapies available for all healthcare levels (primary, secondary and tertiary healthcare)
- Relevant research undertaken

- Education on T&CM should be available to healthcare practitioners
- T&CM treatment reimbursed by health insurance

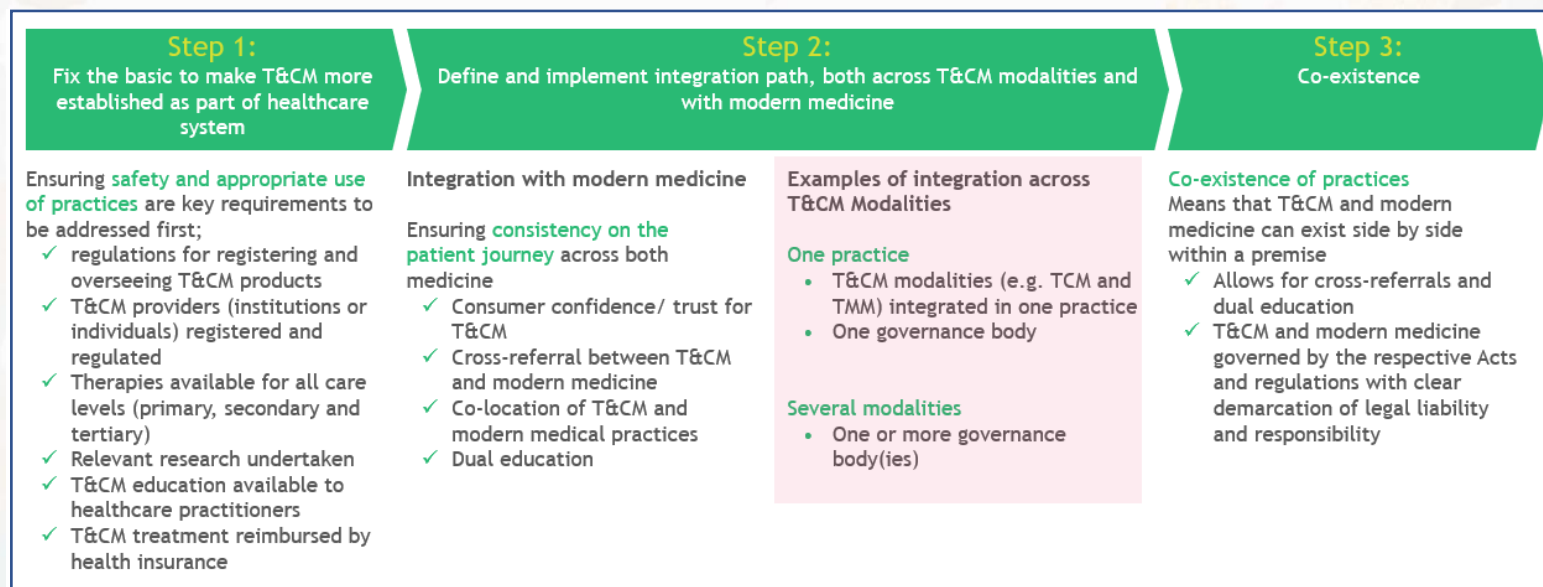
WHO definition of healthcare system

All organisations, people and actions whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well as more direct health-improving activities.

It includes private providers; behaviour change programmes; vector-control campaigns; health insurance organisations; and occupational health and safety legislation.

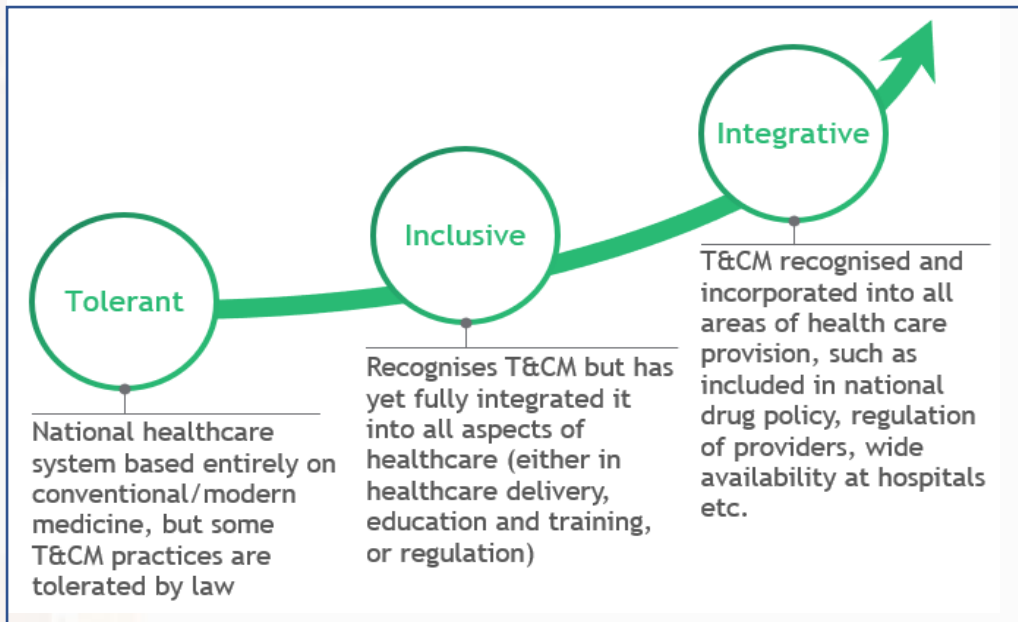
Building upon the establishment of T&CM as a fundamental part of the national healthcare system, Malaysia should consider further integration through co-location. This would enable better patient access to both T&CM and modern medicine practices while encouraging knowledge sharing among modern medical practitioners and T&CM practitioners. To facilitate this integration, there is a need to have mutual respect, which can be achieved through in-depth understanding of both practices. This understanding will encourage cross-referrals based on patients' needs and the strengths of each discipline.

Figure 37: Three-step approach towards integration



Malaysia should aim to develop an inclusive model (**Figure 38**) as per WHO definition fully enabling the co-existence of both practices – T&CM and modern medicine – along each step of the patient journey.

Figure 38: Types of health systems⁴²



Malaysia's T&CM practices follow several traditions that are integral to Malaysia's diverse culture and ethnic makeup. However, it may not be feasible to integrate these practices into one universal approach for all T&CM practices. This is because each type of T&CM practice has its own medical philosophy and set of theories, making it difficult to compare them with one another. Additionally, different classifications of disease further complicate the process of setting common standards for treatments. Therefore, Malaysia can choose to integrate only those T&CM practices that fulfil the minimum requirements, or wait until it is ready to do so.

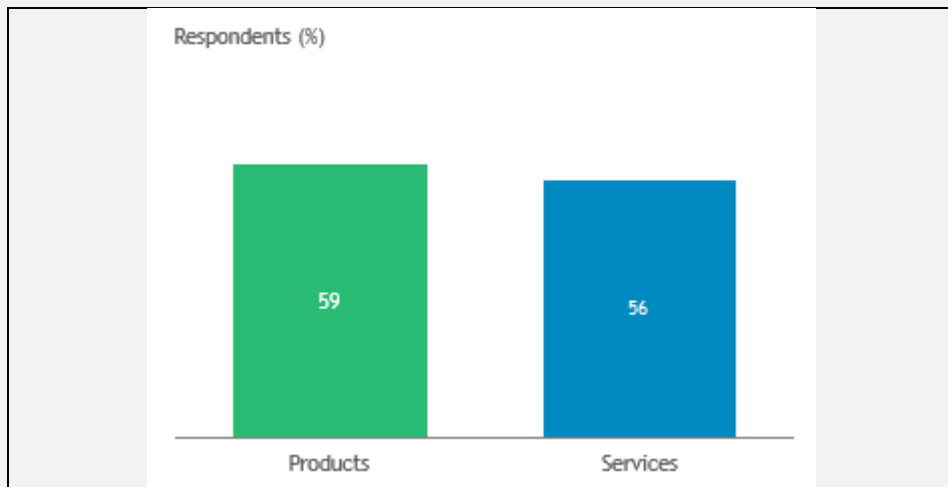
However, some consistency is necessary, and building this consistency in T&CM will require regulation of products and services, R&D requirements, and methodology guidelines that apply across modalities, enforced by a single

⁴² Source: WHO 'WHO Traditional Medicine Strategy 2002-2005' (2002)

governing body. Malaysia should continue current efforts to integrate T&CM into all levels of healthcare.

Enforcing proper regulation of T&CM practices is crucial to ensure their quality and safety. Doing so would be the first step towards developing confidence among modern medicine doctors and addressing consumer concerns about the safety of using T&CM services and products (**Sidebar 12**). Furthermore, the integration of T&CM into primary healthcare in the private sector is based on local demand.

Sidebar 12: Small majority of Malaysians trust safety of T&CM product and services

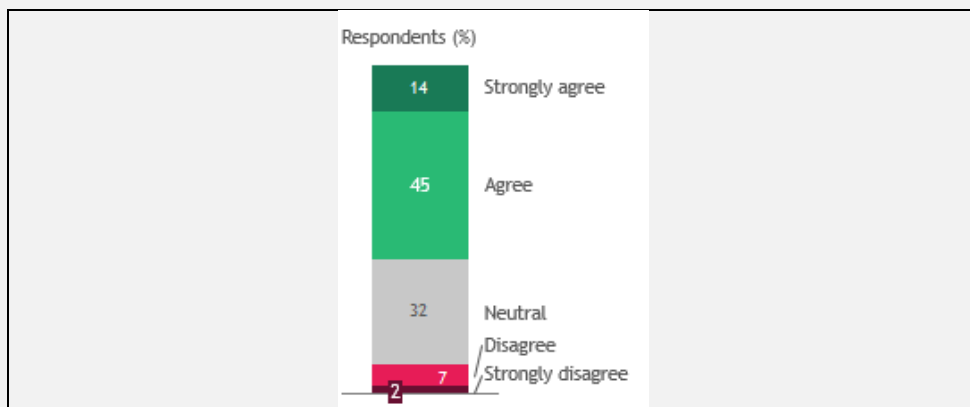


The T&CM Consumer Survey 2018 found that 59% of Malaysians trust the safety of T&CM products while only 56% of Malaysians trust the safety of T&CM services. This indicates that a significant portion of the Malaysian market for both product and services have basic concerns regarding the safety of T&CM.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: *T&CM products are safe to use and consume?* and *T&CM services are safe?*

Sidebar 13: Majority of Malaysians hope for T&CM products and services to be offered in all hospitals



The T&CM Consumer Survey 2018 found that 59% of Malaysians either agree or strongly agree that T&CM products and services should be offered in all hospitals. On the other hand, only 9% of Malaysians disagree or strongly disagree with this. This indicates strong demand from consumers to have T&CM products and services offered in all hospitals.

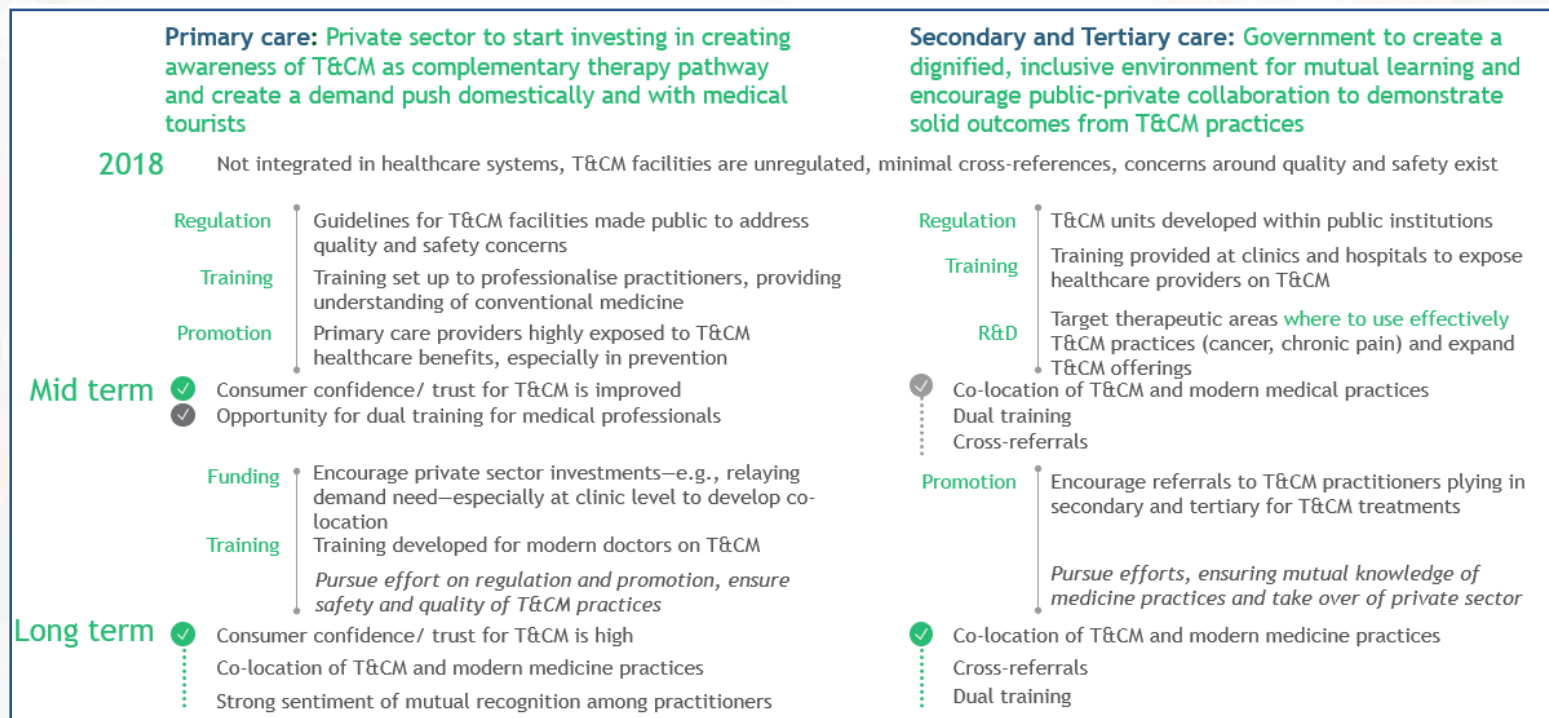
a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: *T&CM products and services should be an option provided in all hospitals?*

Finally, it could be beneficial to consider further integration of T&CM into secondary and tertiary healthcare in modern medicine healthcare facilities, following the current model provided by public hospitals. Malaysia could explore replicating successful approaches taken by countries like India and China, which focus on established therapeutic areas to ease integration while enhancing cross-referrals. Additionally, it is worth considering the establishment of new public T&CM units and enabling private hospitals to offer T&CM services that align with the needs of the Malaysian population (**Sidebar 13**).

The proposed integration journey outlined in this blueprint aims to foster greater understanding and collaboration between T&CM and modern medicine at the patient care level, with the goal of building bridges between the two practices. (**Figure 39**).

Figure 39: Integration path to reach long term target



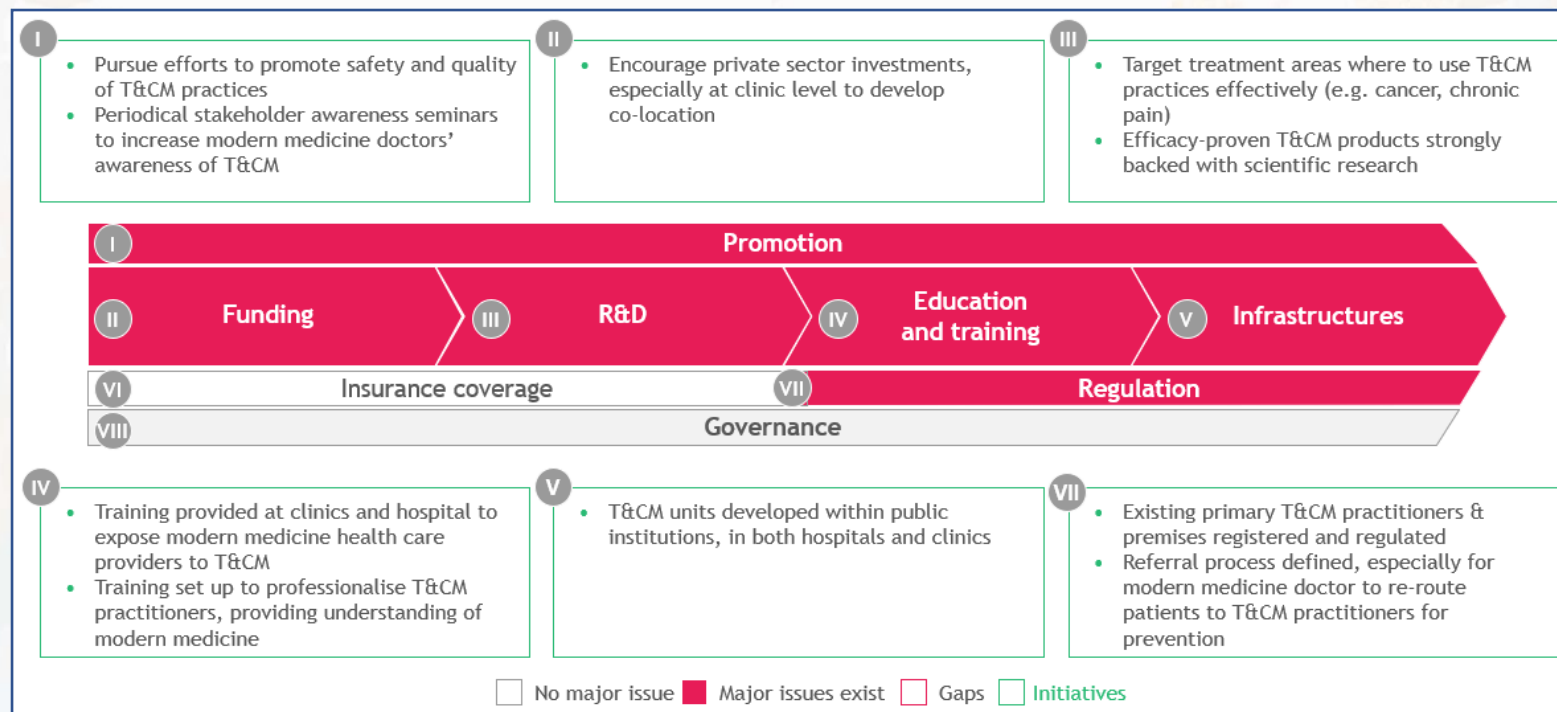
5.2.1.4 Enablers

Integrating T&CM into the healthcare system will require improvements among critical enablers of the sector (**Figure 40**). Efforts and initiatives are necessary in all five strategic areas to address basic challenges and establish a strong foundation for success.

The two systems of traditional and conventional medicine need not clash. Within the context of primary healthcare, they can blend together in beneficial harmony, using the best features of each system and compensating for certain weaknesses in each.

**Dr Margaret Chan, Director-General, WHO
(2013)**

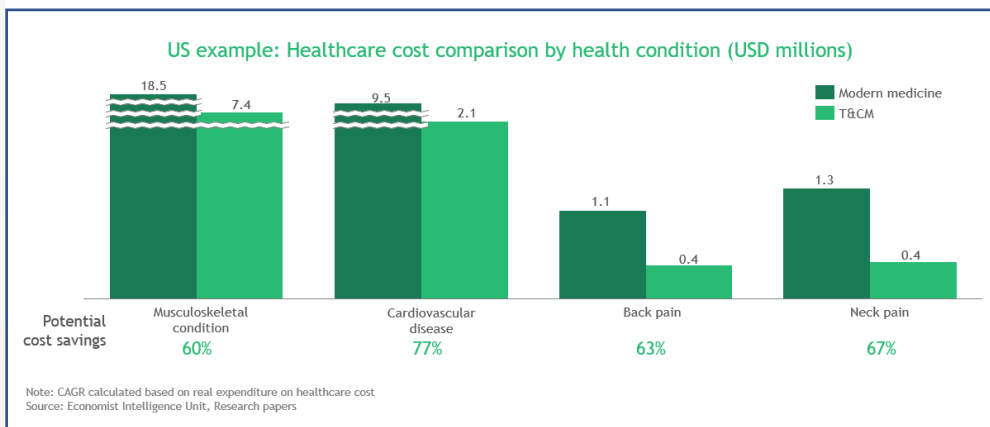
Figure 40: Enablers for cross-strategic opportunity – health integration



5.2.1.5 Outcomes

Integrating T&CM into the national healthcare system will bring economic benefits by reducing healthcare expenditures by RM13 billion beyond 2027 and improving cost efficiency (**Figure 41**) through sharing resources. Patients will also gain access to expanded service options. Moreover, integration will create sociocultural benefits by enhancing the career path for T&CM practitioners, offering better career opportunities and recognition.

Figure 41: Example of healthcare cost reduction potential



5.2.2 ELEVATED T&CM CULTURAL STANDING

5.2.2.1 Introduction

T&CM is deeply ingrained in Malaysia's identity as a multi-lingual and ethnically diverse nation. The seven recognized practice areas reflect the diversity of Malaysia's T&CM practices, including TMM, TCM, TIM, Islamic medical practice, homeopathy, chiropractic and osteopathy.

T&CM plays an important role to play in defining and preserving Malaysia's cultural identity. Celebrating and elevating T&CM's standing as a repository of national culture will create a positive outcome. As T&CM career paths gain validity and acceptance as an integral part of the healthcare system, the value of locally grown herbs will rise. The greater availability of T&CM services will

promote affordable and accessible healthcare options. Increased awareness and acceptance of T&CM will foster a sense of its value to national heritage. This will also improve social cohesion, as the cross-offering of T&CM practices becomes increasingly commonplace and synonymous with Malaysian healthcare.

5.2.2.2 Opportunity and challenges

Malaysia's T&CM strongly linked to its rich history, cultural heritage, and biodiversity

Malaysia's cultural diversity has contributed to the wide variety of T&CM practices in the country. These practices have been historically significant and remain culturally significant to ethnic groups in Malaysia, with distinct family traditions helping to preserve them.

T&CM practices in Malaysia are also products of Malaysia's unique biodiversity. From their agricultural origins, Malaysia's traditional communities have selected varieties of crops and livestock to meet a range of environmental conditions as well as diverse nutritional and social needs. This traditional knowledge of plants, animals, and their environment has been passed down over centuries, establishing a long tradition of the use of plants for medicinal purposes.

Malaysia's biodiversity has great potential to benefit its T&CM industry even further, as the country is home to more than 1,200 medicinal plant species used for T&CM by various racial and ethnic groups. This biodiversity can be potential source of new medicine, and also serve as platform to further research and development efforts on the traditional medicinal knowledge used by the indigenous communities. This can also be leveraged as an opportunity to share the traditional knowledge of our indigenous community with the rest of Malaysian population. Furthermore, the vast biodiversity also acts as an ideal environment for ecotourism and cultural activities.

Preservation of T&CM practices at risk in a rapidly changing environment

Despite the historical and cultural significance of these practices in Malaysia, the continued preservation and survival of these practices are under threat due to three major challenges.

Firstly, rapid globalisation and its accompanying sense of global citizenship are eroding the role of local culture and heritage. As advanced mode of transportation make it easier for people to travel and migrate, geographical separation becomes less significant, leading to a homogenisation of local culture. This trend has been recognised by UNESCO and warned the loss of cultural identity as traditional societies face increasing susceptibility in the face of such rapid modernisation⁴³.

The second challenge to preserve Malaysia's T&CM industry is the increasing focus on modern medicine, leading to reduced investment and research in T&CM, and a gradual decline in the use of these practices. Despite significant improvements in national healthcare, T&CM practices have not received equivalent emphasis, resulting in most Malaysians relying on modern medicine for their healthcare needs.

Moreover, the talent pool of T&CM practitioners is shrinking, partly due to the perception that T&CM is an invalid career path. The lack of clear career path, combined with lower acceptance of T&CM products and services amongst younger generation (**Sidebar 14**) has contributed to the diminishing number of T&CM practitioners. Insufficient access to information and parental distrust in T&CM as promising career path further hinder the recruitment of young talent. T&CM practitioners play a crucial role as custodians of Malaysia's traditional knowledge, and their loss may result to permanent loss of this expertise.

⁴³ UNESCO Universal Declaration on Cultural Diversity (2001)

Sidebar 14: Younger generations have lower acceptance of T&CM products and services



The T&CM Consumer Survey 2018 found a significant drop-off in acceptance for Malaysians aged below 30. On products, the T&CM Consumer Survey 2018 found only 57% and 56% of Malaysians aged 15-19 and 20-29 respectively, believe that T&CM products are safe for consumption- significantly lower than the average of 59%. On services, the T&CM Consumer Survey 2018 found only 49% and 51% of Malaysians aged 15-19 and 20-29 respectively, believe that T&CM services are safe - significantly lower than the average of 57%.

- a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)
- b. Question: Do you agree that *T&CM products are safe to use and consume*?
- c. Question: *Do you agree that T&CM services are safe*?

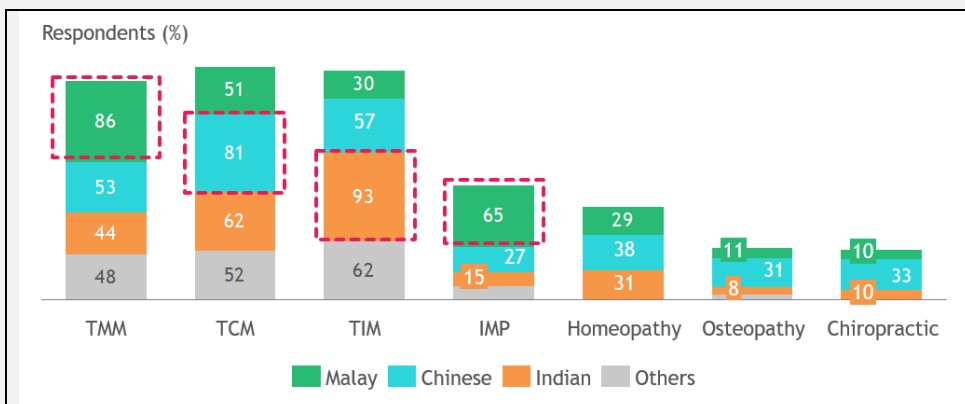
Bridging the gap to preserve Malaysian heritage and celebrate a uniquely Malaysian culture

The T&CM consumer survey 2018 result indicates that each ethnic group tends to have a greater awareness of their predominant T&CM practices (**Sidebar 15**), which may contribute to a lack of cross-cultural understanding. However, it is crucial to preserve and celebrate Malaysia's T&CM heritage, not only to improve social cohesion, but also promote public awareness and foster appreciation of cultures beyond one's ethnicity. By acknowledging the diversity of T&CM practices in Malaysia, it can be a source of national pride and

improve cultural understanding, which is especially important in a multi-ethnic and tolerant society like Malaysia.

Malaysia's T&CM industry has the potential to establish unique cultural benchmarks that are representative of Malaysia. Taking cues from China and India's experience, Malaysia has already initiated the development of herbal monograph that document the safety, effectiveness and quality of its indigenous herbs. This step will enable Malaysia to establish its own pharmacopoeia, which will serve as a testament to Malaysia's rich biodiversity and T&CM practices. Malaysia could identify each practice's unique qualities, allowing it to establish a strong brand identity and stand out in the global market.

Sidebar 15: Malaysians show higher levels of awareness about the modality commonly identified with their respective ethnicity



The T&CM Consumer Survey 2018 found that each ethnicity has greater awareness of their commonly identified traditional practice, especially for Malays, Chinese and Indians. This indicates low public awareness of practice beyond each ethnicity's own culture.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: *Which of the following T&CM products and services are you aware of in Malaysia?*

5.2.2.3 Strategic directions

Malaysia should strive to document and preserve niche practices that hold significant cultural and historical value

Besides Malay community, Malaysia's indigenous people, who make up approximately 14% of the population dispersed across Peninsular and East Malaysia have a rich knowledge of local plants and medicines. While their artistic and cultural contributions have been studied and celebrated, more efforts are needed to document their traditional medicine practices and knowledge, especially with their numbers dwindling. Such efforts not only preserve local heritage, but also promote cultural appreciation.

Promoting practices which is culturally unique to Malaysia

TMM is a unique and widely accepted form of traditional medicine that is found only in Malaysia. Based on a survey conducted in 2018⁴⁴, majority of the T&CM users (71%) in Malaysia consider TMM to be a valid healthcare practice. Given this existing demand, promoting TMM could be a viable strategy for Malaysia. Efforts to promote TMM could also help to raise awareness and appreciation of this practice within the Malaysian community. This, in turn, will contribute to the growth and development of the T&CM industry in Malaysia.

Besides TMM, other commonly sought-after T&CM practices are also found and practiced in Malaysia, making Malaysia an ideal destination for authentic T&CM experiences. To build upon this diversity, Malaysia should identify the unique values and distinctive elements of each practice as adapted for local use. This will be important as public awareness and willingness to try T&CM treatments outside their own ethnic silos increases. In the long term, Malaysia has the opportunity to provide a one-of-a-kind confluence of products and services for the benefit of its sociocultural landscape.

⁴⁴ Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

5.2.2.4 Enablers

Preserving T&CM's identification as a national heritage item and its practice as an option to complement the overall healthcare system will require significant improvements across several critical enablers to address concerns about Malaysians' awareness and perception of T&CM. The greatest efforts must focus on establishing the status of the T&CM industry, with priority given to four initiatives:

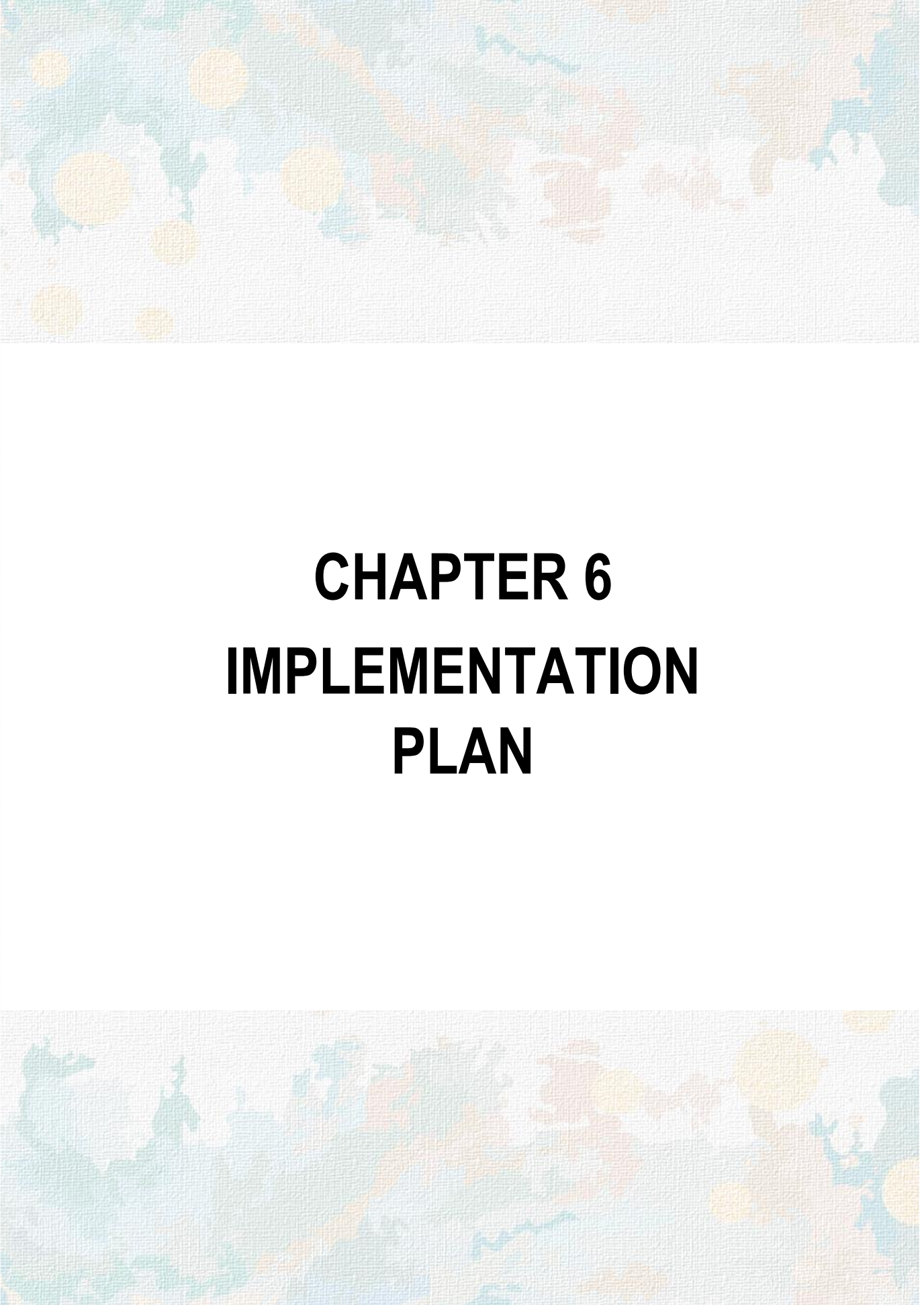
- Document traditional knowledge to ensure protection and continuity of T&CM practices
- Support T&CM career pathway by offering more opportunities for T&CM employment in public facilities
- Develop programme to showcase local heritage and establish T&CM as an integral element of Malaysian heritage
- Highlight T&CM elements in major Malaysian Festivals (e.g., Visit Malaysia tourism campaign) and lifestyle in general

Collaboration for these initiatives will be needed from agencies such as the NRECC (FRIM), KPDN (MyIPO), MAFS (HDO), MOHE, MOH, MOTAC, MOF, Sarawak Biodiversity Centre, Sabah Biodiversity Centre and the forest departments in Malaysia.

5.2.2.5 Outcomes

The T&CM industry in Malaysia has made impact beyond healthcare and economy. It contributes to Malaysia's sociocultural landscape, defining the country's national identity.

Elevating the cultural standing of T&CM can create positive outcomes with T&CM career paths gain validity, the value of locally grown herbs rising, and T&CM services becoming more widely available. This increased awareness and acceptance of T&CM can foster a sense of its value to national heritage, improving social cohesion and contributing to a greater sense of national identity and pride.



CHAPTER 6

IMPLEMENTATION

PLAN

CHAPTER 6

IMPLEMENTATION PLAN

The T&CM blueprint aims for significant growth in the T&CM sector by 2027, with benefits to national healthcare and the sociocultural environment. Chapter 6 outlines strategies and plan of actions to achieve these goals. Its central objectives are guided by three strategic principles:

- **Think big** by setting high goals within the Blueprint, emphasising the potential of T&CM and building an extensive list of actions to reach that vision
- **Start small** by identifying areas of earlier effort, where Malaysia can generate a ripple effect and help the T&CM industry build on cumulative successes
- **Act fast** by fixing the most important enablers, strengthening existing foundations before launching new ideas

This T&CM industry analysis presents a plan to overcome challenges and tap into opportunities across eight enablers. This section uses that information to set forth a comprehensive plan that is

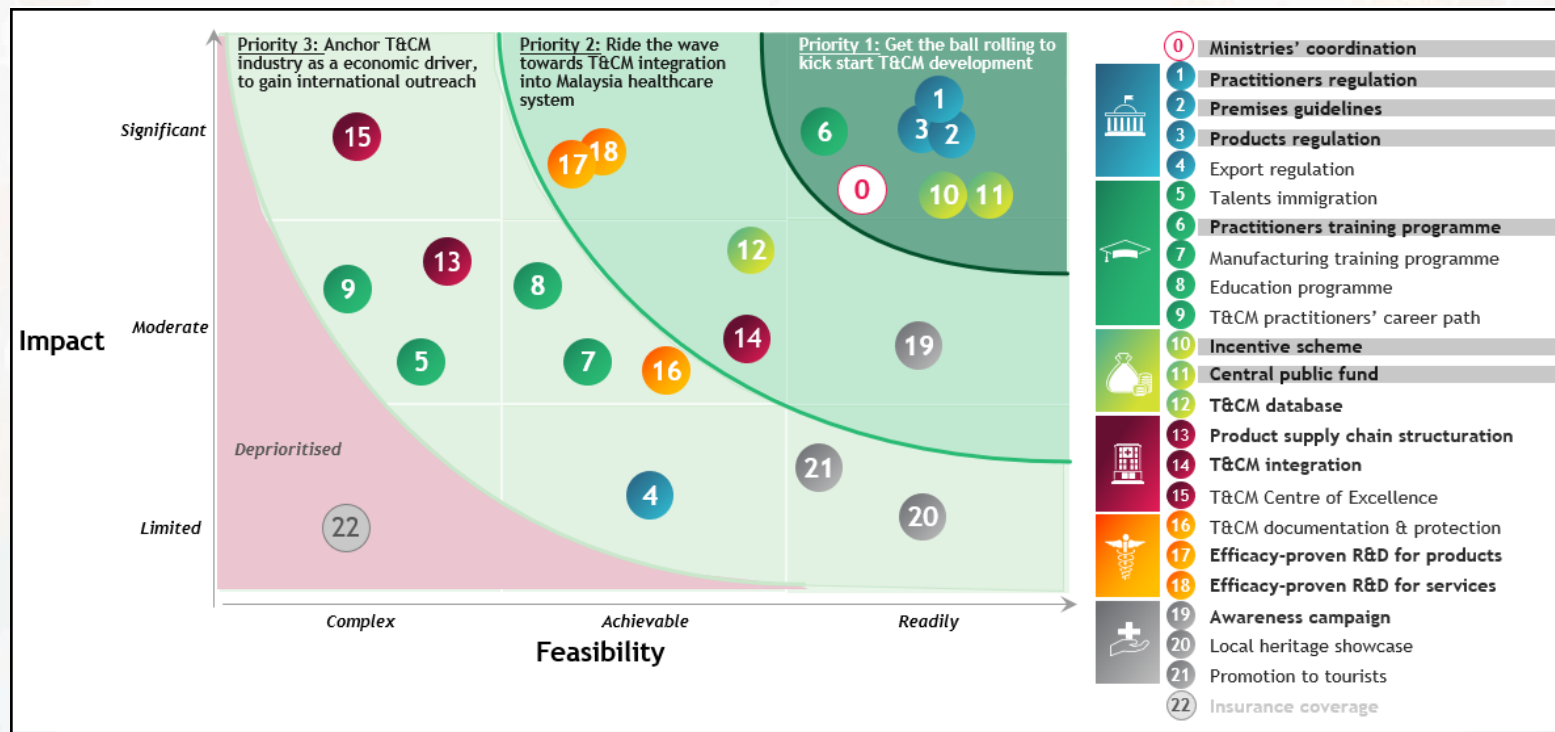
- **Exhaustive:** Planned activities target all gaps identified among each of the eight enablers.
- **Structured:** The activities have been regrouped under initiatives, each addressing one objective with a single responsible enabler. Some initiatives apply to both products and services, other are specific to one sector. This streamlining is essential to improve coordination and avoid duplication of effort.
- **Prioritised:** Constraints on resources will limit the number of actions that can be launched at one time. Success will require the best possible allocation of resources, prioritising the initiatives deemed most important.
- **Time-based:** Once priorities are identified, initiatives will be planned according to short-term, mid-term and long-term schedules.

The plan was developed through the participation over 100 individuals and organisations, including government agencies, industry representatives, practitioner bodies, universities and training institutes, healthcare experts and Malaysian consumers. This resulted in more than 75 ideas, which have been streamlined and

organised into 23 initiatives involving 8 enablers. These initiatives are national in scope, and government agencies will lead and direct them, with private sector involvement being essential for continued success.

To effectively allocate resources towards the T&CM industry's development in Malaysia, a prioritisation approach has been adopted (**Figure 42**). This involves assessing the potential impact and feasibility of different initiatives. The impact is evaluated based on economic, healthcare and sociocultural effects, while feasibility is assessed based on coordination needs and capability maturity. By prioritising initiatives with high impact and feasibility, the limited resources can be maximised towards achieving the goals set out in the T&CM Blueprint. However, it should be noted that the implementation of the Blueprint will require significant investments in both financial and human resources to ensure its success.

Figure 42: Initiatives' prioritisation



6.1 INITIATIVES BASED ON ENABLERS

These tables provide a detailed breakdown of the objectives, activities, timelines and participants for each of the initiatives under the 8 enablers. It is important to note that the list of stakeholders is not exhaustive.

The symbols used in the tables are indicated as below:



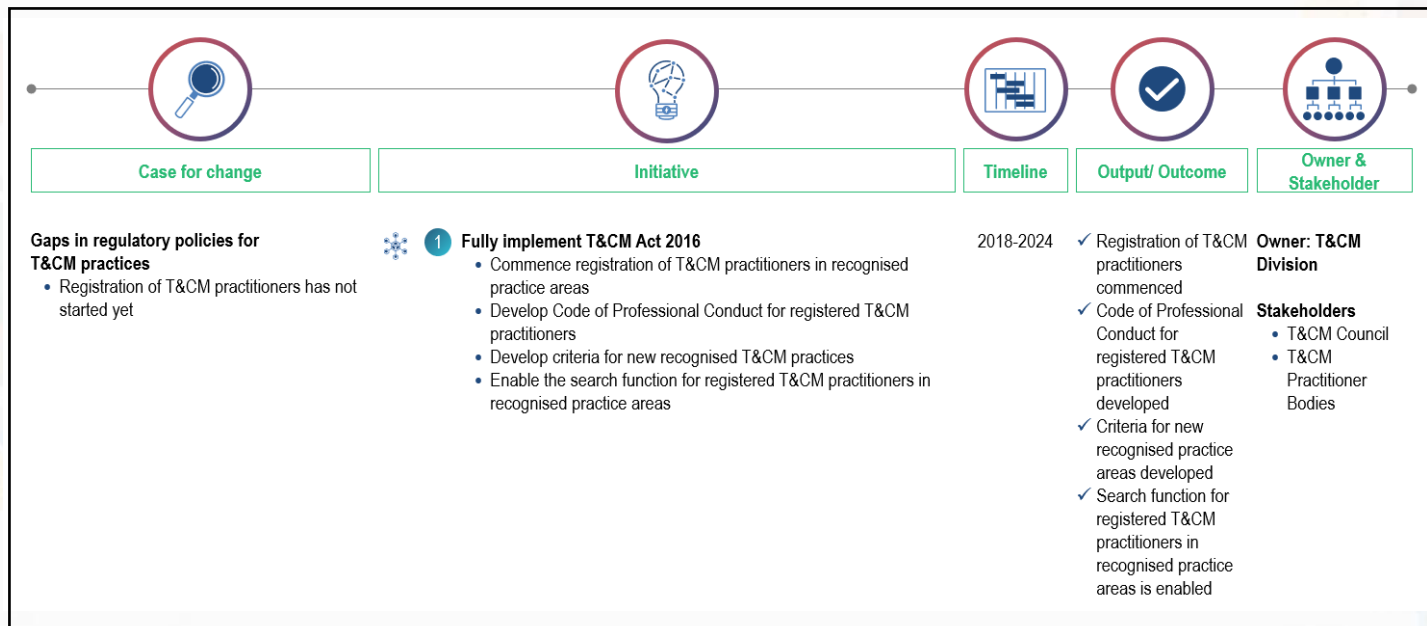
6.1.1 GOVERNANCE

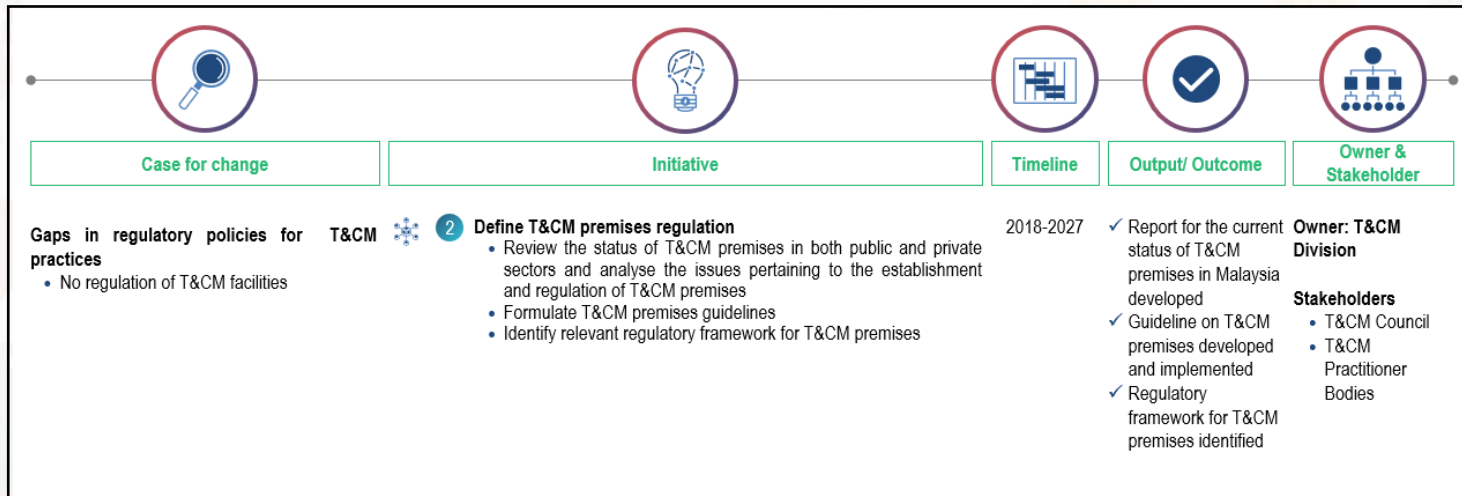
Objective: Establish a coordination body to ensure effective implementation of the initiatives

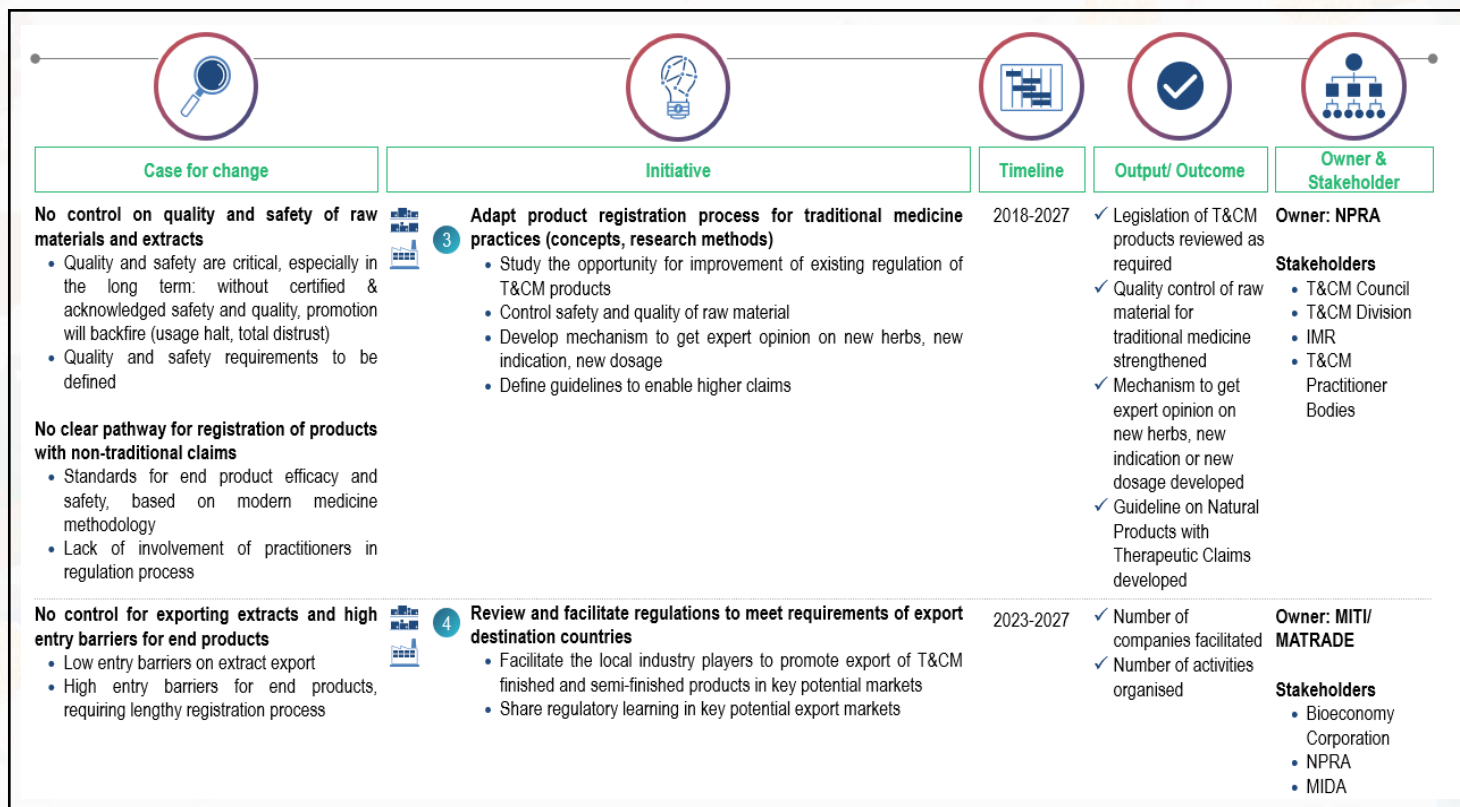
				
Case for change	Initiative	Timeline	Output/ Outcome	Owner & Stakeholder
Lack of concerted efforts across ministries and vision on long-term strategic plan • Priorities of ministries/ agencies such as MAFS, MOSTI, NRECC are based on respective objectives and directions • Limited understanding of overall outcome or key achievements (only individual milestones are visible) • Development effort by ministries fragmented across end product value chain	 0 Ensure effective collaboration across ministries/ agencies and monitor T&CM initiatives implementation • Define and implement PMO setup • Coordinate prioritisation among ministries/ agencies • Monitor T&CM initiatives implementation • Define KPIs for ministries/ agencies to ensure stakeholders involvement and alignment	2019-2027	✓ Coordination effectiveness tracked and continuously improved ✓ On track delivery of initiatives	Owner: PMO Stakeholders • MOSTI • MOH • MAFS • MHTC • MOTAC • Ministry of Economy • MOHE • MITI • MOHR • KPDN • MOHA

6.1.2 REGULATION

Objective: Build comprehensive legal requirements to ensure T&CM compliance to safety standards in products, services provision and facilities

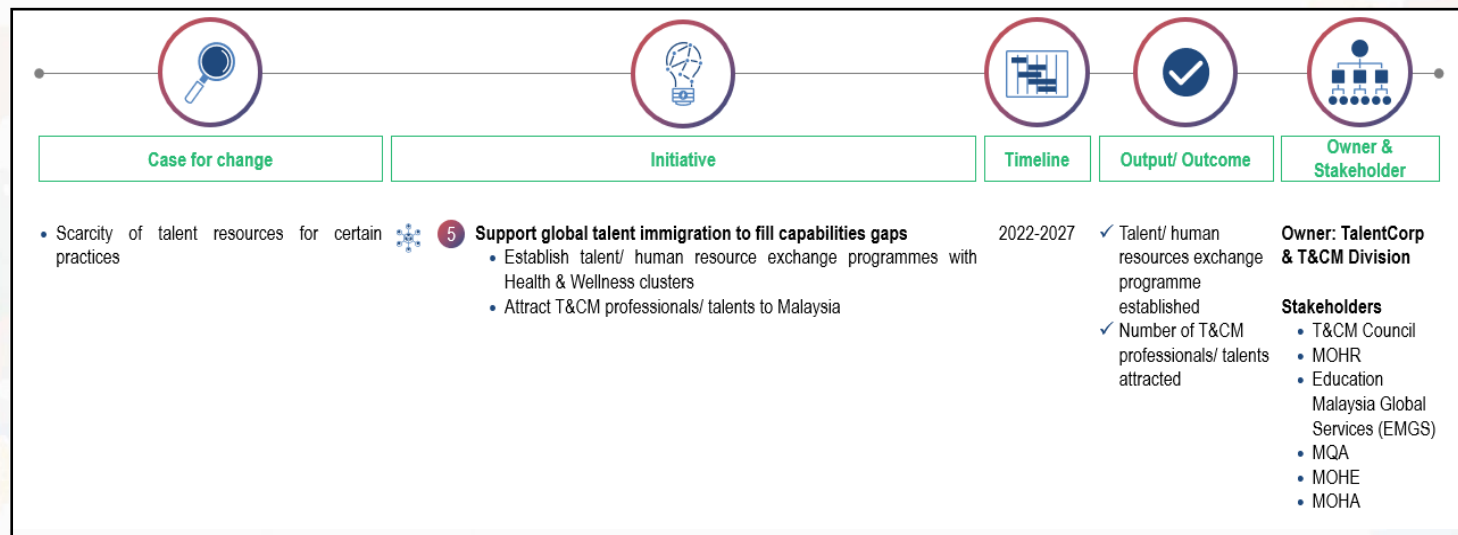


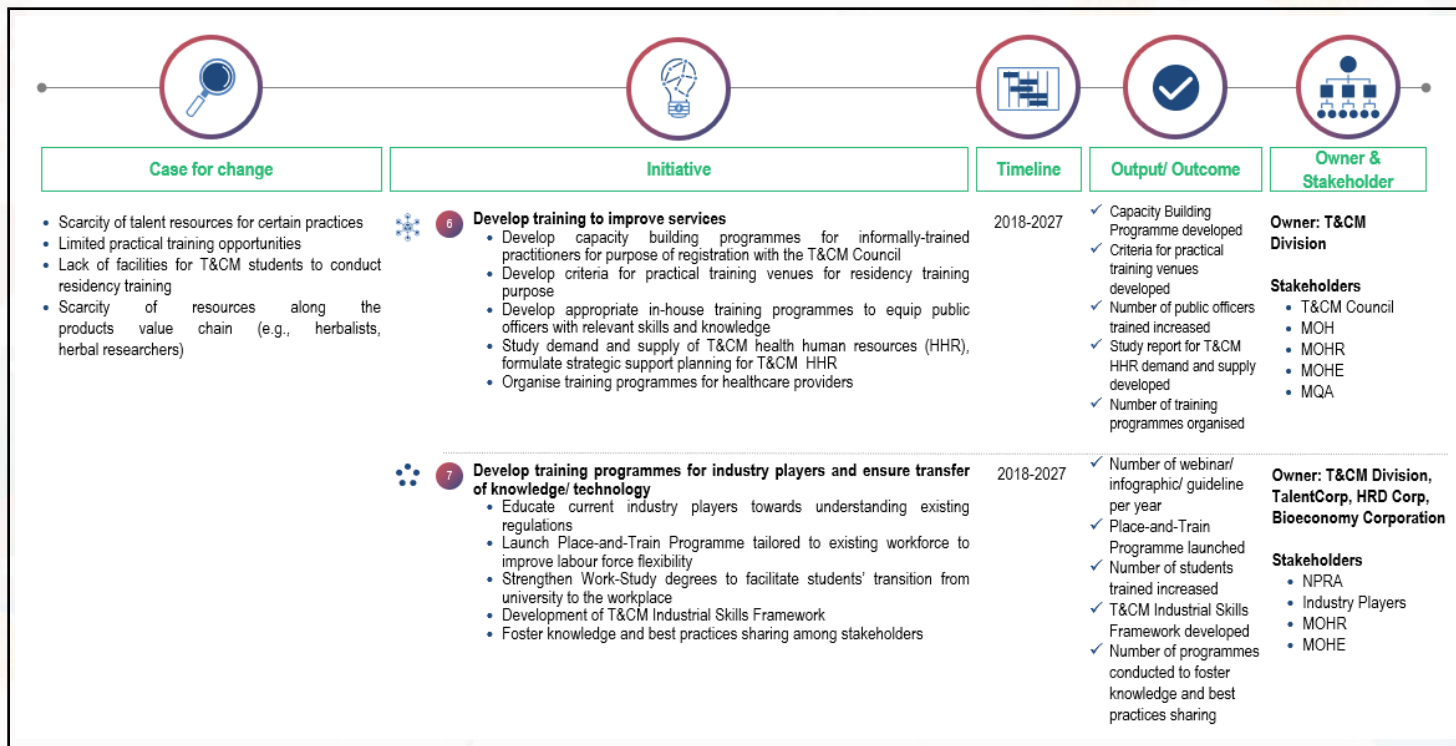


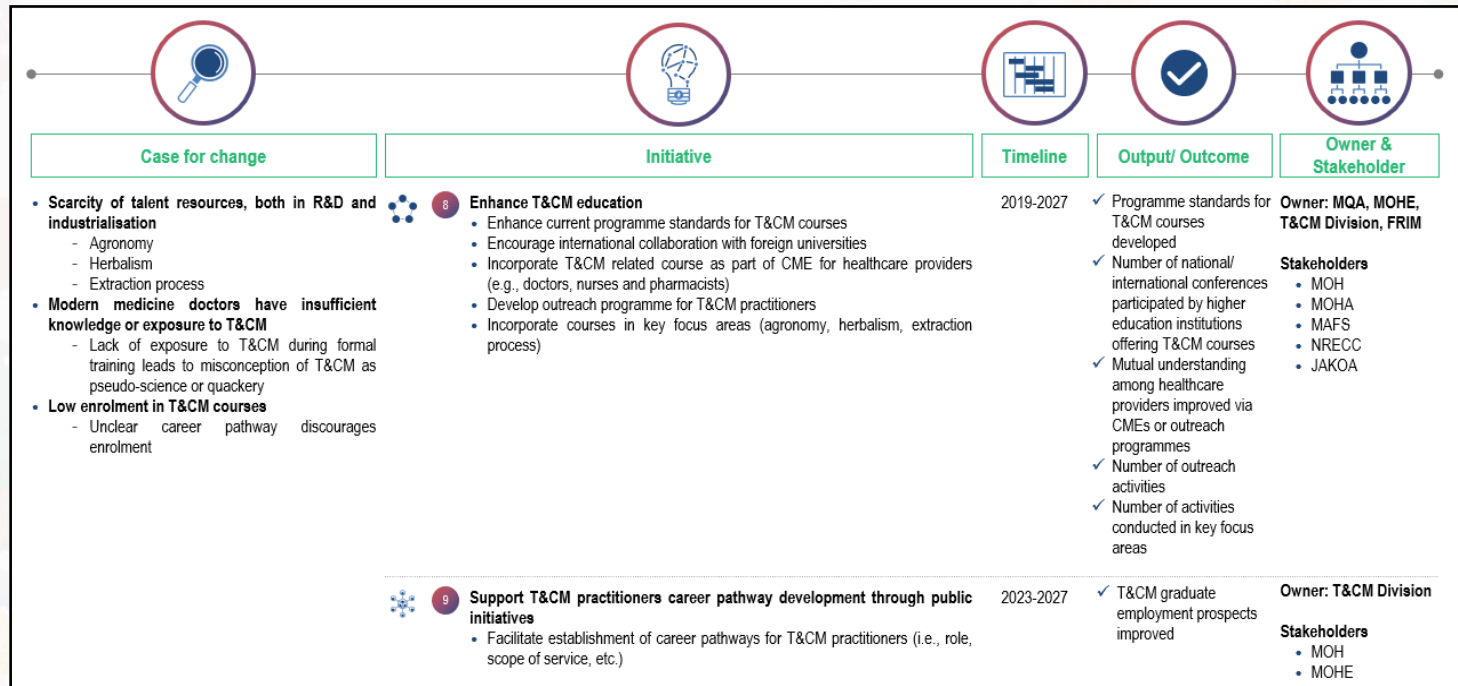


6.1.3 EDUCATION AND TRAINING

Objective: Become a world-class education system that develops and attracts T&CM professionals, with sufficient locally trained and internationally trained professionals to sustain industry growth

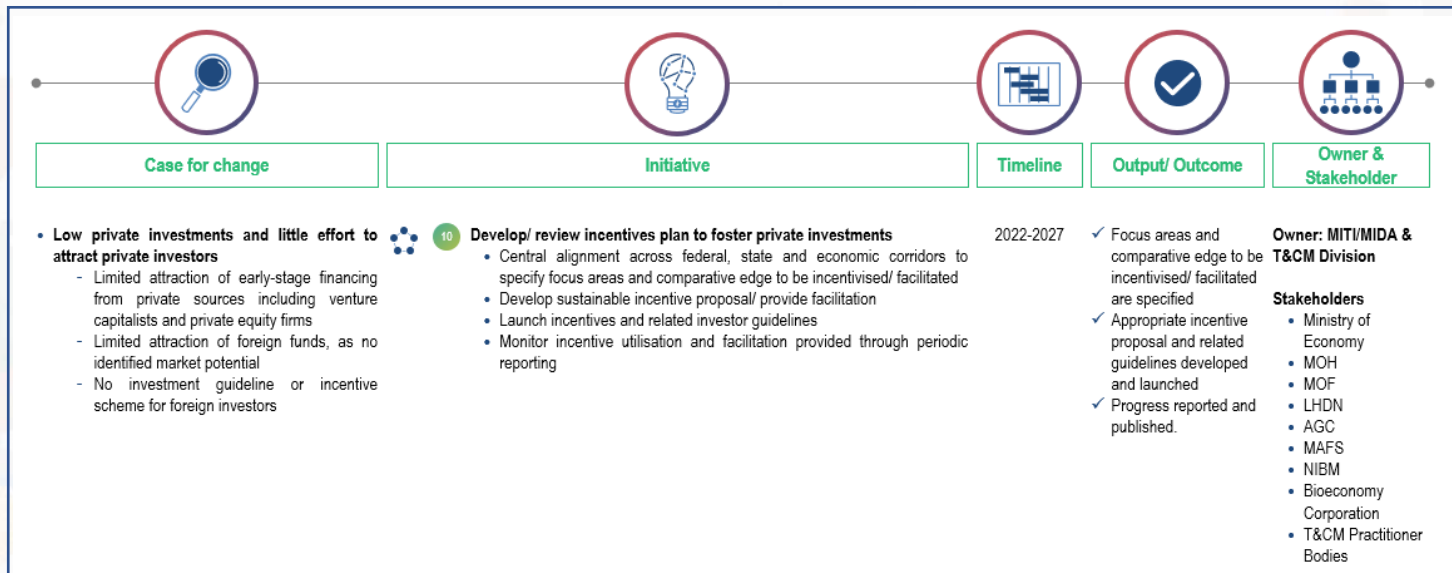


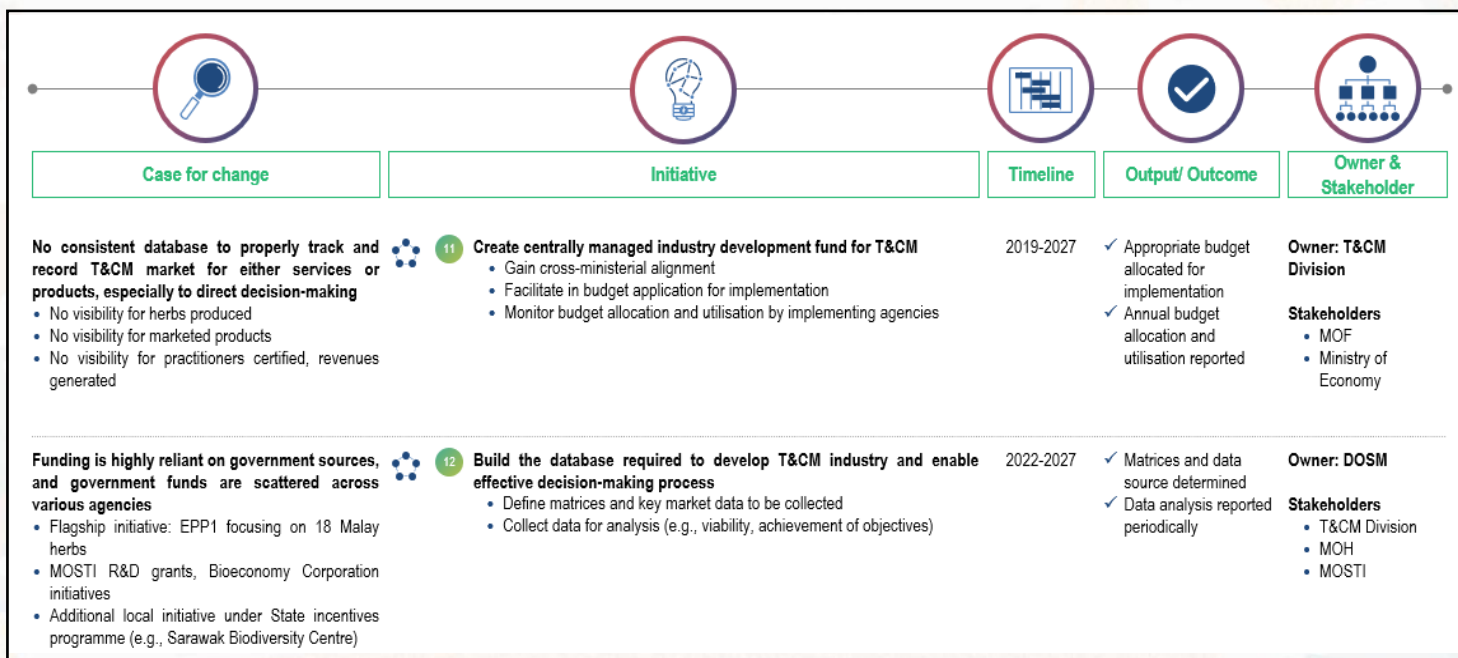




6.1.4 FUNDING

Objective: Dedicated budget allocation to support T&CM development

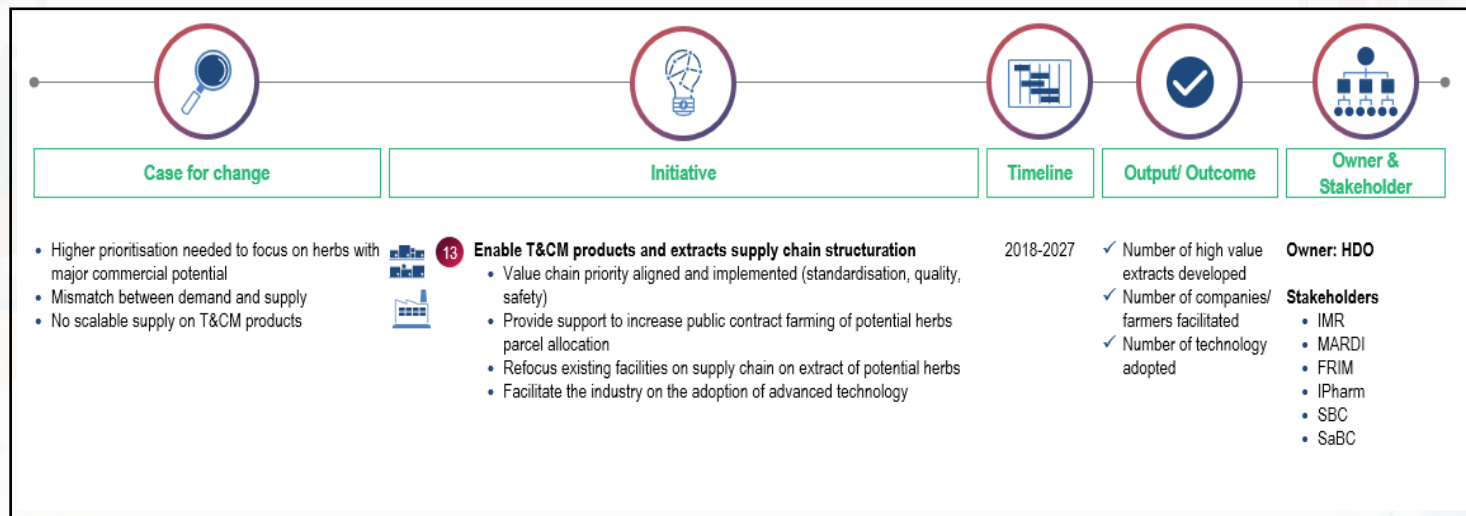


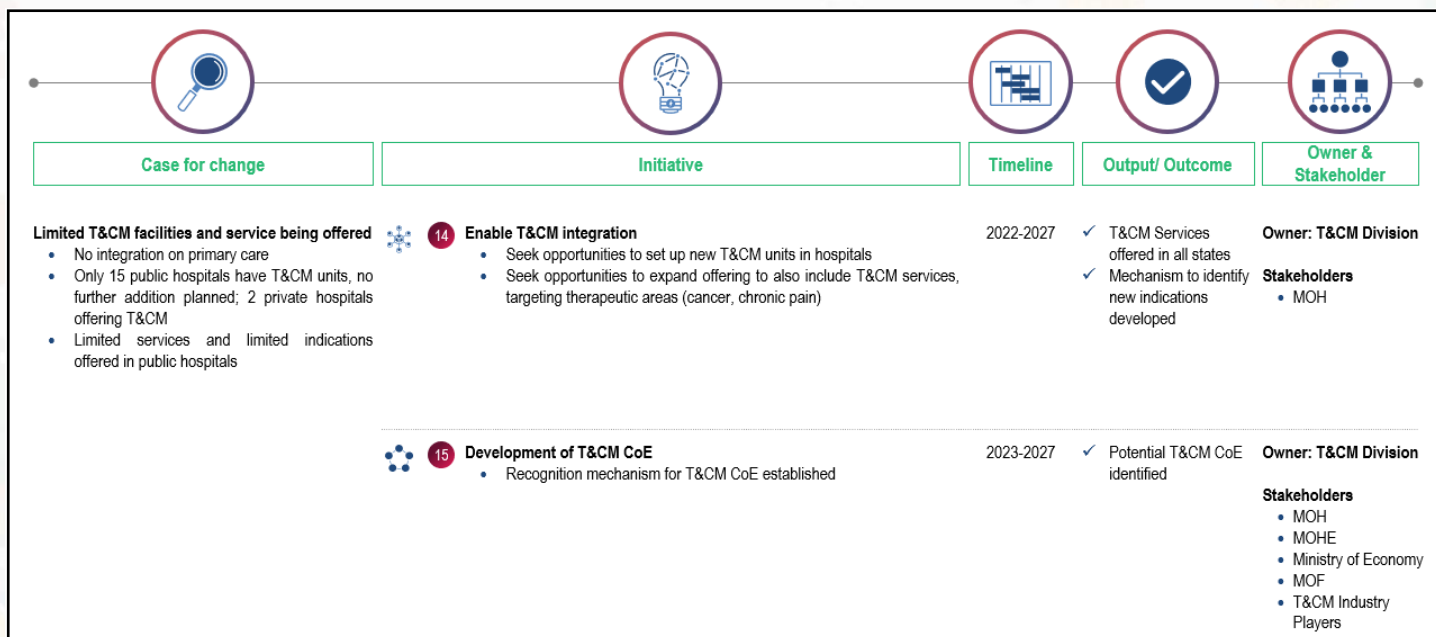


6.1.5 INFRASTRUCTURE

Objectives:

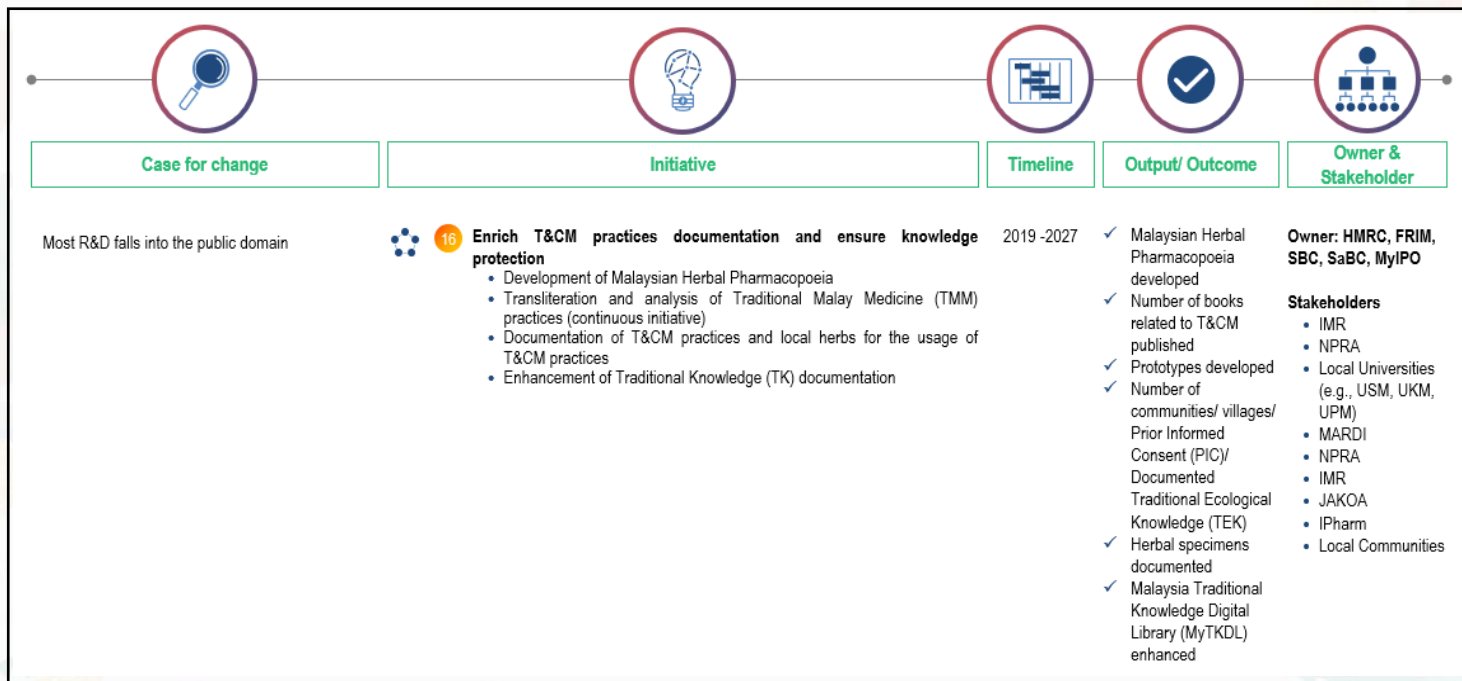
- I. For service: develop an efficient physical network of hospital and clinic that deliver safe and high-quality T&CM solutions on a standalone or integrated basis
- II. For products: Structure a scalable value chain across agriculture and manufacturing to produce high-quality and safe T&CM products for both local and international markets





6.1.6 RESEARCH AND DEVELOPMENT (R&D)

Objective: To increase the publication of scientific and outcome-based evidence that validates the safety and effectiveness of T&CM products and services



				
Case for change	Initiative	Timeline	Output/ Outcome	Owner & Stakeholder
Insufficient R&D effort to build scientific evidence for extracts, end products and services - Conducted on a company/ product basis - Limited engineering and technology - R&D focused only on Malay medicines & 18 different herbs	 17 Enhance R&D of indigenous herbs along all steps of the value chain - Development of potential herbs/ products/ extracts along the value chain activity (agronomy-therapeutic-discovery-method development-processing technology) - IP protection: protect extract with patents, trademarks and copyright	2022-2027	✓ Herbal products/ extracts developed and ready for commercialisation ✓ Statistics on number of patent applications related to TK and genetic resources (GR) reported	Owner: HDO, MyIPO Stakeholders - T&CM Division - IMR - MARDI - FRIM - IPharm - Universities - Research Institutes - Industry Players
Most R&D falls into the public domain Lack of standards for T&CM R&D requirements - Insufficient R&D effort in developing scientific evidence	 18 Enhance evidence-based research for T&CM practices - Facilitate in defining and standardising concept and methodology for T&CM research - Disseminate T&CM research within healthcare community - R&D roadmap [for products and services] for the coming 10 years defined	2020-2027	✓ Framework for T&CM Research in Malaysia developed ✓ T&CM research articles/ publications shared increased ✓ T&CM Research Priorities for Malaysia developed	Owner: T&CM Division Stakeholders - NIH - T&CM Practitioners

6.1.7 PROMOTION

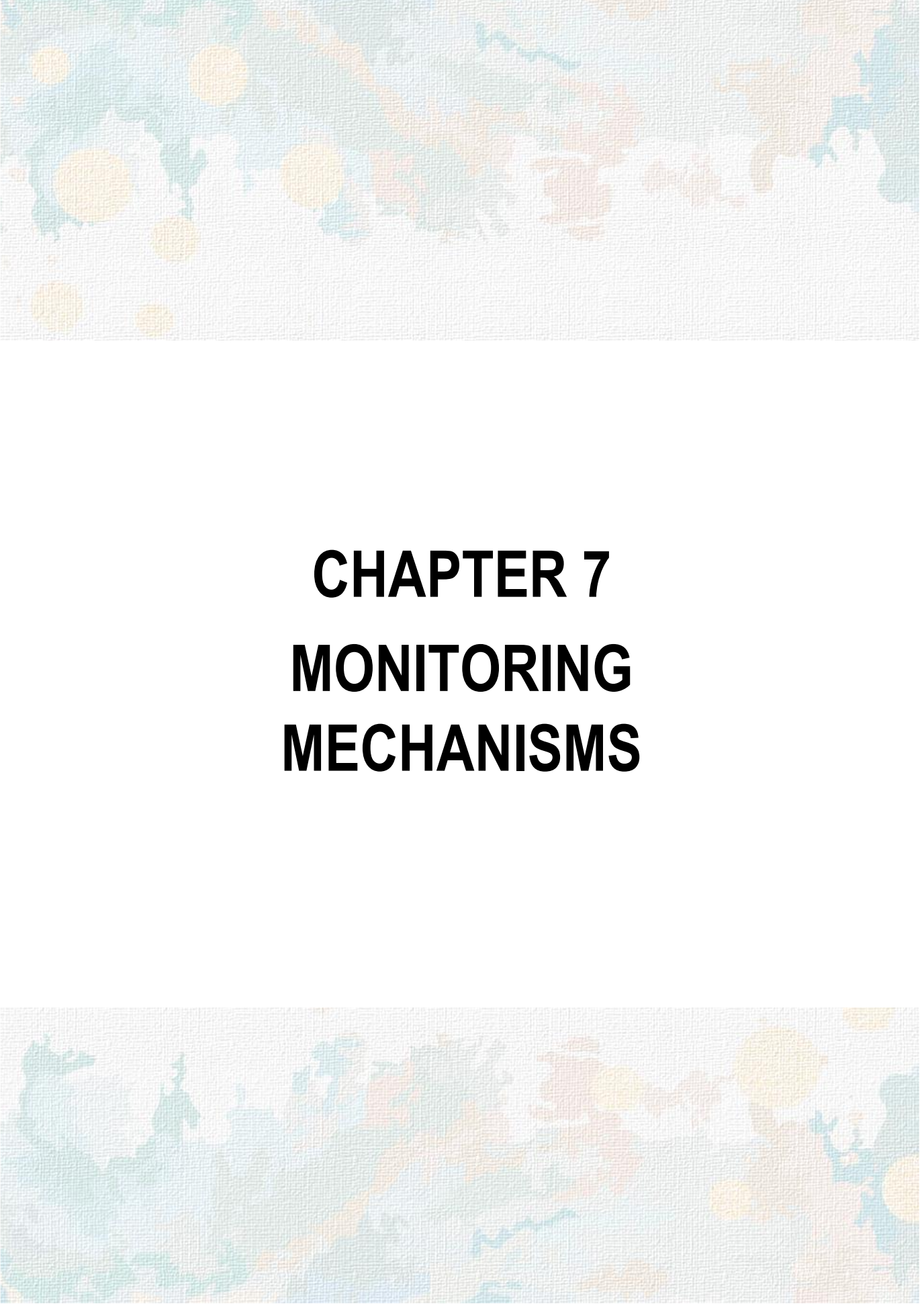
Objective: Holistic communication and promotion of T&CM industry

 Case for change	 Initiative	 Timeline	 Output/ Outcome	 Owner & Stakeholder
No structured nationwide communication strategy or plan in place, either domestically or internationally - Promotion efforts are scattered across different conferences by different institutions (e.g. FRIM, MAFS) - T&CM products & services are promoted mostly through word of mouth (friends, family) - Limited promotion of Malaysian biodiversity, traditional knowledge of T&CM practices or herbal properties - No structured T&CM offering for medical tourists	 19 Launch awareness campaign of T&CM to educate and build public trust (Healthcare & Sociocultural) - Structure key messages around Malaysian biodiversity extracts properties, products potential, practices, services providers - Communicate domestically and internationally on T&CM healthcare benefits and usage, and educate people/ stakeholders to recognise safety and quality standards - Create awareness on Malaysia's T&CM initiatives, products/ practices among local and international players via local and international events/ exhibitions/ conferences	2023-2027	✓ Communication plan formulated & implemented	Owner: Bioeconomy Corporation and T&CM Division Stakeholders - MOTAC - MIDA / MATRADE - MHTC
	 20 Develop programmes and initiatives to showcase local heritage Establish T&CM as an integral element of Malaysian heritage	2022-2027	✓ Number of traditional medicine practices gazetted as national heritage under the National Heritage Act 2005 [Act 645]	Owner: Department of National Heritage Stakeholders - MOTAC - Tourism Malaysia - IMR - FRIM - T&CM Division
	 21 Promote T&CM services to tourists - Develop strategy to promote T&CM services to medical tourists - Kickstart promotion campaign and marketing to medical tourists	2022-2027	✓ Promotional strategy developed ✓ Awareness campaign and launched	Owner: MHTC Stakeholders - T&CM Division - MATRADE

6.1.8 INSURANCE COVERAGE

Objective: Enable a patient to receive reimbursement for a T&CM product or service especially from private healthcare facilities

Given that this initiative can only be feasibly initiated by the private sector, therefore the economic benefit must be demonstrated to health insurers, as the Malaysian T&CM industry is nascent and requires long-term solutions. Moving forward, the government should capture information on T&CM treatments and usage to enable insurers to assess cost-benefit of coverage and develop a list of products and services.



CHAPTER 7

MONITORING MECHANISMS

CHAPTER 7

MONITORING MECHANISMS

The T&CM Blueprint recognises the challenges in delivering impact through an extensive cross-ministerial and cross-agency effort. At the same time, the Blueprint is cognisant of the needs for a coordinated effort to develop and grow the T&CM industry.

Thus, the governance structure to monitor the implementation plan must be designed on the three guiding principles identified in the Implementation Plan - Act Fast, Start Small and Think Big.

The proposed governance structure comprises three layers (**Figure 43**).

1. A **Steering Committee** would provide strong leadership and be accountable for the overall success of the T&CM industry. This committee, chaired by the Minister of Health, would strongly support Malaysia's aspirations, create mechanisms to resolve issues in an efficient manner, and provide checks and balances to impel outcomes as and when necessary.
2. The **Programme Management Office (PMO)** team would be dedicated to implement the Blueprint. It would coordinate efforts, collect information and feedback from the various ministries and agencies, and communicate regularly with the leadership team and with major industry participants.
3. **Work streams for each enabler** will be led by senior working-level representatives from relevant stakeholders and will serve to accomplish tasks as needed.

Figure 43: Proposed governance structure

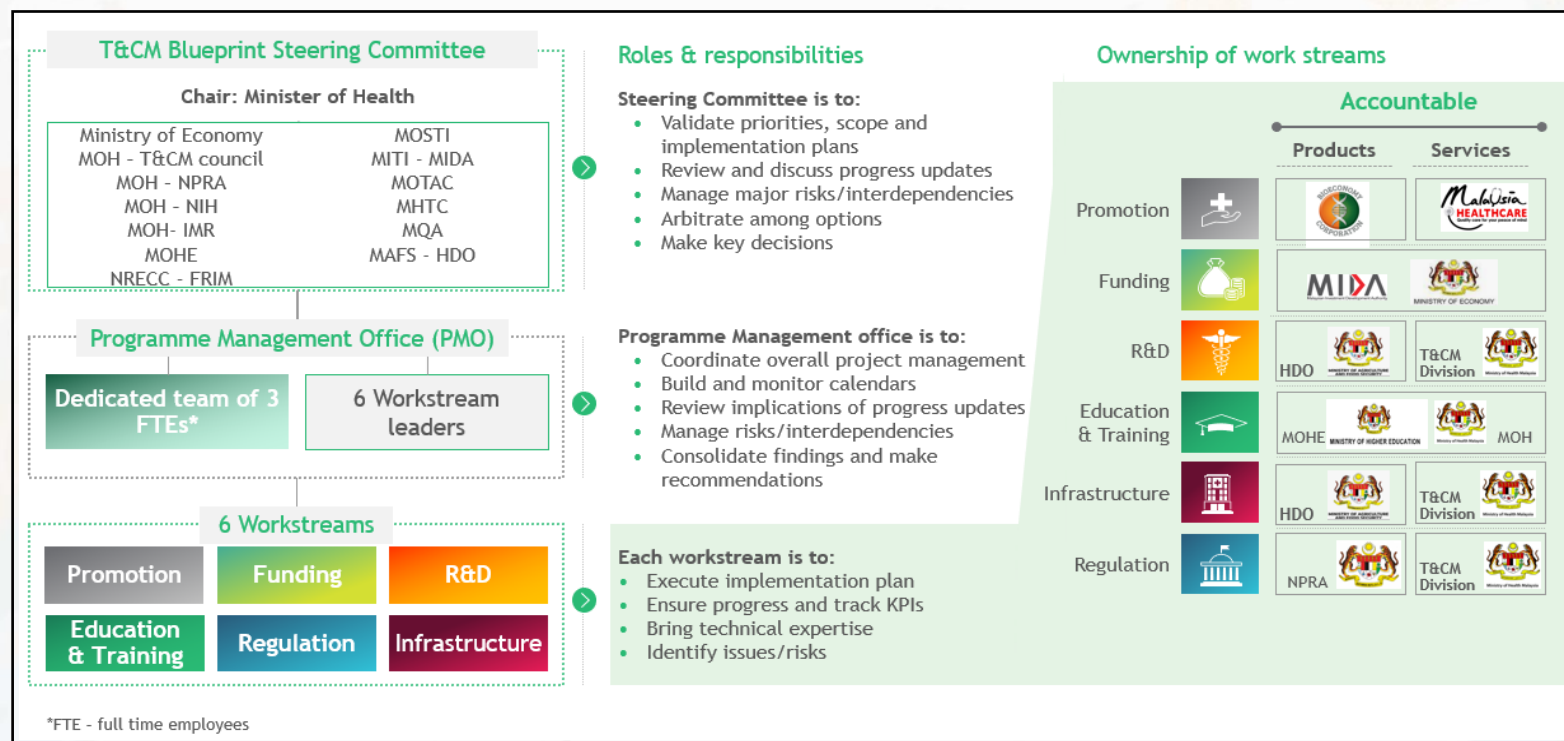
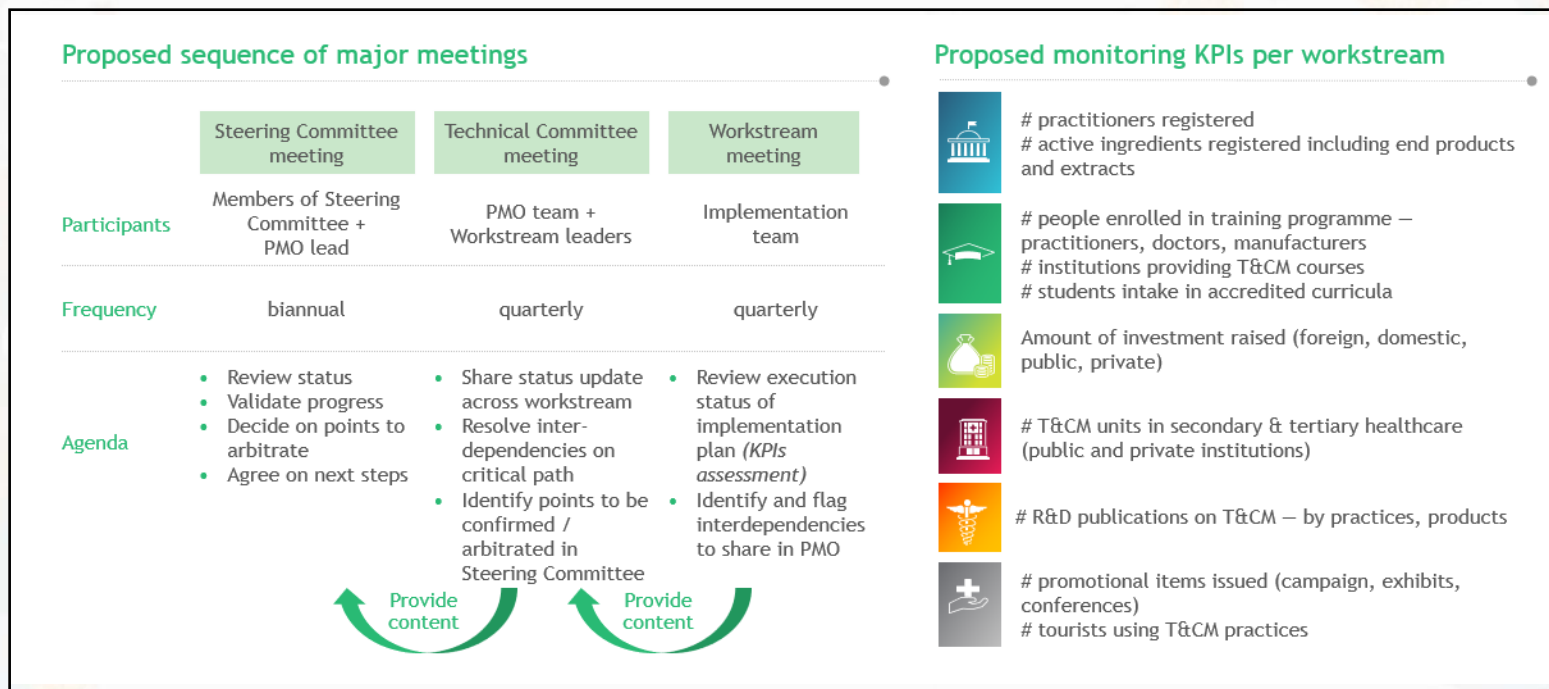


Figure 44: Proposed meeting sequence and KPI monitoring



Effective progress reviews during implementation would follow this sequence (**Figure 44**):

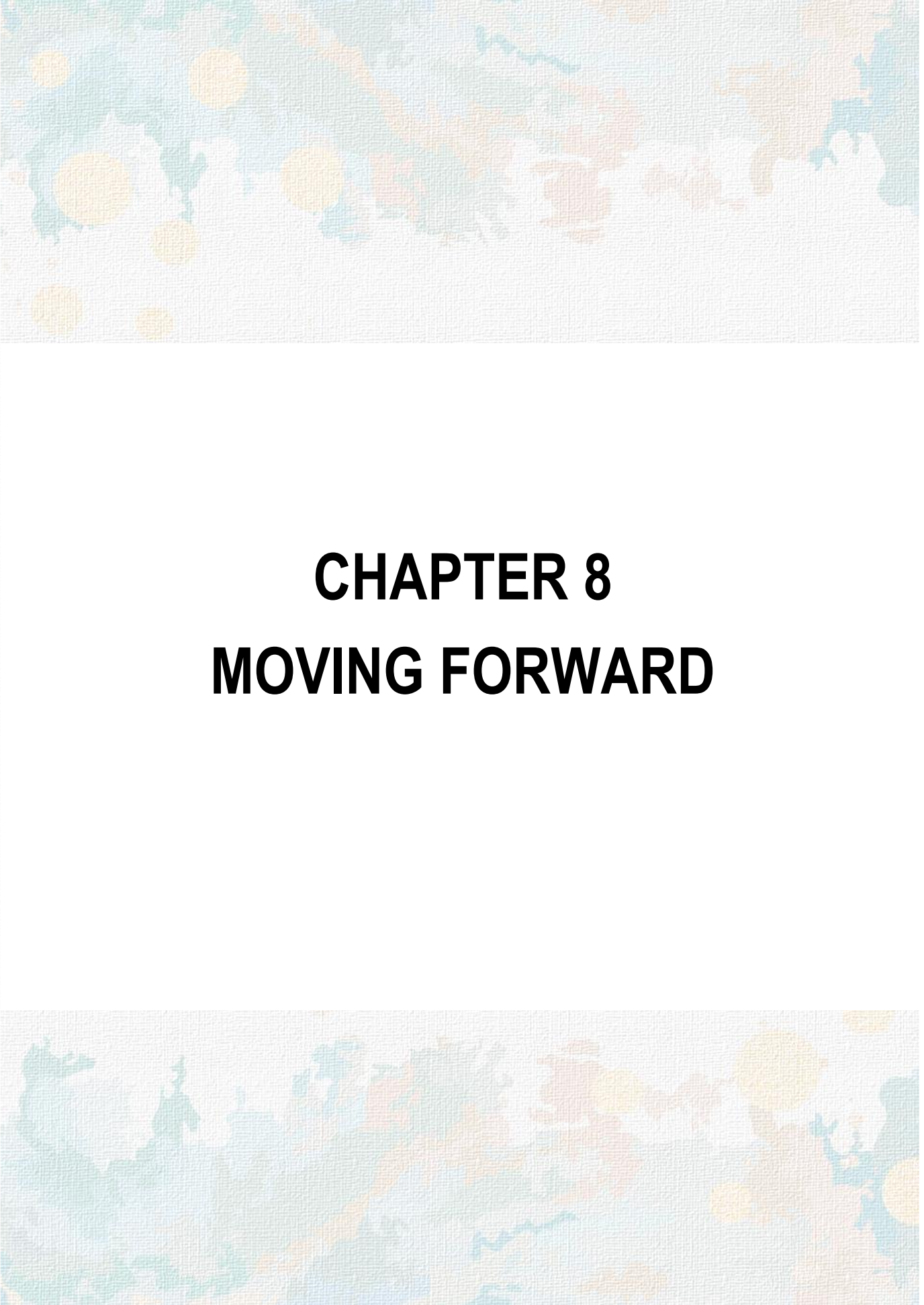
The **Steering Committee** will meet biannually or when necessary, be facilitated by the PMO team, mainly to make decisions and review the actions of the PMO and Work streams.

The **Technical Committee** will review progress on initiatives, identify issues for action and coordinate work streams. Effective implementation will require the PMO team to include at least four full-time dedicated project members (one project manager coordinating three team members) to work with work streams and ensure strong coordination and collaboration among ministries and government agencies, professional boards, associations, academia and the private sector.

The PMO team will use four tools to monitor standards, ideally available through a project portal to make it easier to share information among project participants:

1. **Master integration plan** that includes a reference list of activities, duration, identified interdependencies and resulting timeline
2. **Initiative templates** that describe top-priority initiatives including owner, central initiative description, distribution to sector-specific, action plan, outcome, approval process and budget (if relevant)
3. **Implementation tracker**, especially useful for listing issues and proposing contingency plans as needed
4. **Decision log** to keep a list of important decisions for validation or arbitration in the Steering Committee.

Enabler Work Streams will convene quarterly or when necessary. These meetings will gather progress reports on individual initiatives, resolve any obstacles and guide project owners and their teams as they move forward.



CHAPTER 8

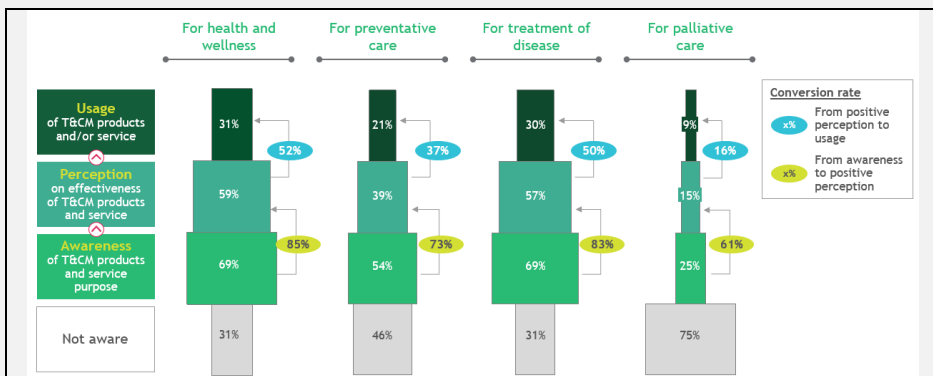
MOVING FORWARD

CHAPTER 8 MOVING FORWARD

The practice of T&CM in Malaysia faces challenges that need to be addressed today, and fixed fundamental deficits before the industry can grow and mature. To build on a strong foundation of T&CM practices, Malaysia needs to:

- Ensure that T&CM is clearly defined, appropriately regulated and enforced
- Certify that T&CM quality, safety and efficacy meet minimum standards
- Raise awareness of T&CM healthcare benefits among healthcare practitioners and the general public (**Sidebar 16**).

Sidebar 16: Building the domestic T&CM consumer market



The T&CM Consumer Survey 2018 establishes the relationship of Malaysian consumers to T&CM products and services today. This analysis provides a view of consumers' awareness, perception of effectiveness and their usage of T&CM products and services, thereby informing on gaps that needs to be addressed along the patient journey. The analysis produced four central insights:

- **Relatively low consumer awareness of the role of T&CM in preventive and palliative care:** Only 54% and 25% of Malaysians are awareness of preventive care and palliative care respectively, compared to 69% for both health and wellness and treatment of disease.

Sidebar 16: Building the domestic T&CM consumer market (continue)

- **Consumers aware of the purpose of T&CM are more likely to have good perception of the effectiveness of T&CM:** Conversion rate from awareness to perception measures the proportion of individuals who have a good perception of the effectiveness of T&CM if they are aware of T&CM. This conversion rate is relatively high, ranging from 61% to 85%, signalling that the majority of consumers aware of T&CM believe in the effectiveness of T&CM products and services.
- **However, good perception of the effectiveness of T&CM does not translate to usage:** Conversion rate from perception to usage measures the proportion of individuals who use T&CM services and/or products if they have a good perception on its effectiveness. This conversion rate is relatively low, ranging from 16% to only 52%, signalling that a minority of consumers who believe in the effectiveness of T&CM product and services tend to use them.

The T&CM implementation plan will address these gaps through greater focus on awareness campaigns, establishing and enforcing regulations, as well as improving availability of T&CM products and services.

a. Source: Malaysia T&CM Consumer Survey 2018 (unpublished)

b. Question: *Which reasons are you aware of that T&CM products and services may be used for?/ for what reasons do you believe T&CM products and services can be effective if used?/ What was the reason for your visit?/ What was your reason for purchasing a T&CM product?*

The establishment of safety and quality standards will help ensure the integration of T&CM into Malaysia's national health system and provide Malaysians with greater access to high-quality T&CM products and services. With efforts to address the talent shortage and improve professionalism within the T&CM industry, practitioners can have a clear career opportunity with access to formal education and training. Encouraging local manufacturers of T&CM products to produce at higher volumes will enable them to benefit from economies of scale and expanding opportunities for growth both domestically and internationally.

A significant transformation will be necessary if the T&CM sector is to become the robust, thriving industry envisioned by the Blueprint. The actions set forth by the Blueprint are the steps needed to make the vision a reality by 2027: a model T&CM

industry, recognised regionally for high quality and safety standards, attracting foreign visitors who come to Malaysia for T&CM treatments, as well as exporting products around the globe.

The Next Ten Years

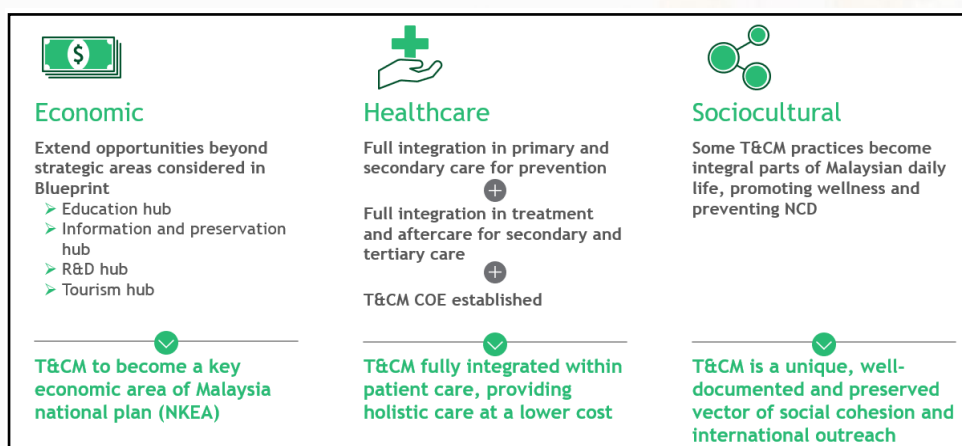
To achieve this transformation, the major initiatives described in this Blueprint will require a comprehensive approach that includes regulation, education and training, R&D, infrastructure and governance. The Blueprint's eight enablers organise T&CM initiatives along these perspectives: regulation, talent, integration, ownership, and promotion.

Implementing the T&CM Blueprint and reaching the sector's full potential must be a concerted effort, orchestrated across ministries and agencies. An effective and decisive governance structure is needed to balance the interests of many stakeholders, with support from a strong and effective coordinating body. A PMO will monitor, track and report progress within the Blueprint's eight enablers and 23 initiatives, and will facilitate meetings of the Steering Committee, Technical Committee and individual enablers work streams. Clear mechanisms must be in place to resolve disputes or obstacles at all levels, with a well-defined and efficient hierarchy of decision-making backed by robust governance, to coordinate efforts and make the best use of available resources.

The Blueprint is a long-term project with the goal of establishing a culture within the T&CM industry that prioritises quality, safety and professionalism, with sustainable infrastructure, as well as R&D. A review will be conducted to assess the changes made to the T&CM market, including products and services, major achievements, outcome and potential, and project management and governance lessons. The success of major initiatives and further prioritisation and integration will be evaluated after the completion of the 10-year Blueprint. This review will also consider the sophistication of T&CM practices and their integration into the national healthcare system. Different strategies, including those involving the private sector, may be considered at this point. Strong collaborations among public and private organisations and individuals will be essential for the success of the blueprint.

In the mid-range, the Blueprint should focus on the progressive integration of T&CM into the overall healthcare system. Once the preliminary goals of regulation, professionalisation, promotion and mutual acceptance have been achieved, T&CM can move towards higher levels of co-location and cross-referrals with modern medicine. This approach will enable T&CM's role in the healthcare system to continue growing beyond 2027 (**Figure 45**), potentially becoming an economic force. It's important to recognise that T&CM's potential extends far beyond the 10-year Blueprint.

Figure 4: The way forward, beyond 2027



Achieving this potential will require continuous improvement of the sector's enablers: R&D, healthcare infrastructure and education and training will sustain the development of a T&CM industry the effectiveness of which is recognised around the world. Persistent efforts to update and enforce regulations, promote Malaysian T&CM beyond national borders and maintain robust governance will ensure the safe development of practices that should deliver benefits for generations to come.

APPENDIX I

LIST OF DEVELOPMENT COMMITTEE MEMBERS

TECHNICAL COMMITTEE

Economic Planning Unit

- Industry Development Section

Ministry of Agriculture and Food Industry

- Crop, Livestock and Fisheries Industry Division

Ministry of Domestic Trade and Consumer Affairs

- Intellectual Property Corporation of Malaysia

Ministry of Education

- Higher Education Department
- Malaysia Qualification Agency

Ministry of Energy, Science, Technology, Environment and Climate Change

- Policy and Strategic Coordination Division

Ministry of Health

- Disease Control Division
- Family Health Development Division
- Institute Medical Research
- Malaysia Healthcare Travel Council
- Medical Development Division
- Medical Practice Division
- National Pharmaceutical Regulatory Agency
- Pharmacy Policy and Strategic Planning Division

- Planning Division
- Policy and International Relations Division
- Public Health Development Division
- Traditional and Complementary Medicine Division

Ministry of International Trade and Industry

- Sectoral Policy Division (Pharmaceutical and Medical Device Unit)
- Service Sector Development Division
- Malaysia Investment Development Agency

Ministry of Human Resources

- Department of Skill Development

Ministry of Local Government Development

- Local Government Department

Ministry of Tourism, Arts & Culture

- Industry Development Division

Ministry of Water, Land and Natural Resources

- Forest Research Institute Malaysia

Sabah State Government

- Sabah Biodiversity Centre

Sarawak State Government

- Sarawak Biodiversity Centre

Note:

These organisations were involved in the development of the T&CM Blueprint in 2018. The current name of the organizations may differ.

STEERING COMMITTEE

Economic Planning Unit

- Deputy Director, Services Industry Section

Malaysia Investment Development Agency

- Director, Healthcare, Education and Hospitality Division

Ministry of Agriculture and Food Industry

- Secretary of Crop, Livestock and Fisheries Industry Division

Ministry of Domestic Trade and Consumer Affairs

- Assistant Director General (Technical, Science and Technology), Intellectual Property Corporation of Malaysia

Ministry of Education

- Director General, Higher Education Department

Ministry of Energy, Science, Technology, Environment and Climate Change

- Senior Secretary, Strategic Planning Division

Ministry of Health

- Secretary General
- Director General of Health
- Deputy Director General (Medical)
- Deputy Director General (Public Health)
- Deputy Director General (Research and Development Support)
- Senior Director of Pharmaceutical Service

Ministry of International Trade and Industry

- Deputy Secretary General (Industry)

Ministry of Tourism, Arts & Culture

- Secretary-General

Ministry of Water, Land and Natural Resources

- Deputy Director General (Research), Forest Research Institute Malaysia

Sabah State Government

- Permanent Secretary, Ministry of Health and People's Welfare

Sarawak State Government

- Permanent Secretary, Ministry of Education, Science and Technology Research

Note:

These organisations were involved in the development of the T&CM Blueprint in 2018. The current name of the organizations may differ.

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