

Industrial Landscape

PHARMACEUTICALS

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REVISION CONTROL

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EXECUTIVE SUMMARY

The pharmaceutical industry in Malaysia has experienced significant growth and development in recent years, driven by various factors such as an aging population, increasing healthcare expenditure, and government initiatives to promote the healthcare sector. This executive summary provides an overview of this pharmaceutical industry landscape document, highlighting key trends, challenges, and opportunities in Malaysia. This report also aims to assist stakeholders in understanding the evolving market dynamics and making informed decisions to drive success in the pharmaceutical sector.

Government Support and Initiatives:

The Malaysian government has implemented various policies and initiatives to support the pharmaceutical industry's growth and development such as the Industry Collaboration Program (ICP). This program involves partnerships between pharmaceutical companies, research institutions, universities, and government agencies to promote research and development, innovation, and the growth of the industry. Therefore, through ICP, the government's focus on enhancing healthcare infrastructure and increasing access to affordable medicines provides opportunities for pharmaceutical companies can be leveraged.

Market Dynamics:

From the study, Malaysia is known to have a high standard in regulating the production, storage and distribution of drugs. The main regulatory agency is the Drug Control Authority, with its secretariat at the National Pharmaceutical Regulatory Agency (NPRA) which is responsible for product registration, and issues manufacturing, import and wholesale licenses to wholesale companies. In this document, there will be a wider overview of the market dynamic and supply chain which comprises of manufacturers and importer, companies with NPRA wholesale licenses, as well as the providers.

Research and Development (R&D):

Malaysia aims to become a regional hub for pharmaceutical R&D, fostering collaborations between industry players, research institutions, and academia. R&D, clinical trials, and biotechnology investments are encouraged to promote innovation, attract foreign investments, and develop high-value products.

Issues and Challenges:

As the pharmaceutical industry is highly complex and regulated, there are several challenges identified in this study along with opportunities that could be tapped into especially in relation to ICP. Among the challenges identified include, resource allocation and long development timelines. In allocating resources for funding, research personnel and laboratory facilities can be a source of challenge. In addition, collaborators may also have different expectations regarding the allocation of resources. In addition, drug development in pharmaceutical industry also often takes many years which can affect expectations from collaborators.

In conclusion, the pharmaceutical industry in Malaysia presents a promising landscape with steady growth, government support, and emerging opportunities in areas such as biopharmaceuticals and digital health. However, companies operating in the market must navigate regulatory challenges, adapt to changing market dynamics, and invest in research and development to remain competitive and capitalize on the country's healthcare advancements.

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INTRODUCTION

OBJECTIVE	The objective of this document is to provide strategic direction for implementing the Industrial Collaboration Programme (ICP) for the Medical and Healthcare Industry, focusing in Pharmaceutical Sector in Malaysia
PURPOSE	<ul style="list-style-type: none"> ▪ Provide strategic direction to TDA in developing ICP Requirement Documents (IRD). ▪ Streamline with government aspirations ▪ Identify related stakeholders ▪ Identify current local capability
SCOPE	The scope covers the landscape of the Pharmaceutical sector in Malaysia, which includes medicine, reagent and vaccine, excluding medical devices, facilities/engineering management, and ambulance services.

The **pharmaceutical industry** discovers, develops, produces and markets drugs or pharmaceutical drugs for use as medications to be administered to patients, aiming to cure, vaccinate or alleviate the symptoms. Medical devices such as bandages, catheters and artificial joint will be excluded as it will be discussed in a different document (Medical Devices).

There are 2 types of manufacturers involved in the pharmaceutical industry which are:

Original Manufacturers

Original manufacturers are research-based manufacturer which can be categorized as either in a pharmaceutical research or the development of new drugs. These manufacturers work with subsidiaries that produce generics or cooperate with external generics manufacturers in order to improve the value-added cycle of their active ingredients.

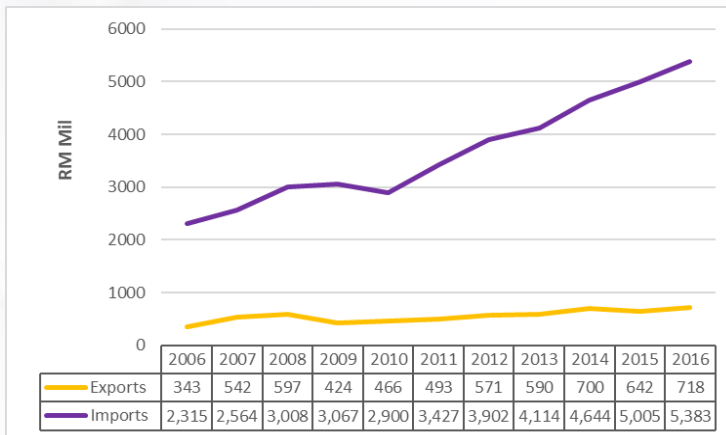
Generic Manufacturers

Generic manufacturers are ones that usually use active ingredients for which patent protection has already expired. These manufacturers can offer drugs at a significantly lower prices and most of them appear on the market as full-range suppliers.

Malaysia's pharmaceutical current capabilities,

Pharmaceuticals companies in Malaysia are engaged in the production of generic drugs, traditional medicines and herbal supplements as well as contract manufacturing for multinational corporations (MNCs). The Malaysian pharmaceutical industry has the capability to produce almost all dosage forms, including sterile preparations such as eye preparations, injections, soft gelatin capsules and time release medications.

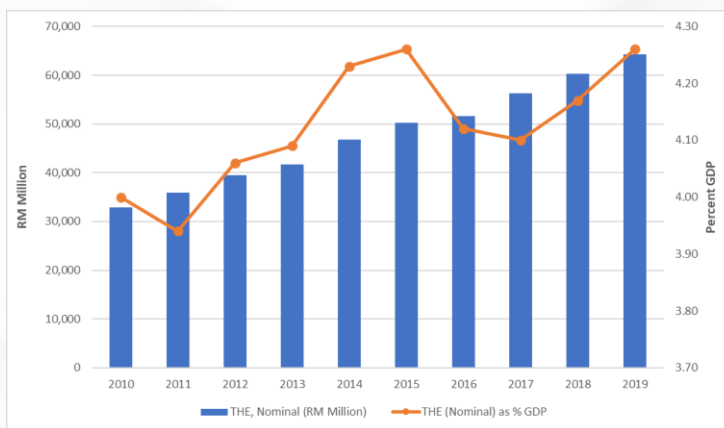
Figure 1: Import and Export of Pharmaceuticals in Malaysia, 2006-2016



Source: BMI Reports (2009-2017); Third World Network's calculation for 2006-2008
 Note: RM-USD conversion is based on Bank Negara's annual average exchange rate

Figure 1 has shown import has seen a stable increase from 2010 to 2016. Export has also been quite stabilized since 2006 – with not many changes. It may be assumed that Malaysia has not been focusing on marketing drugs outside of Malaysia and only focuses on local use.

Figure 2: Trend for Total Expenditure on Health, 1997-2019 (RM Million & Percent GDP)



Source: Market Review on Pharmaceutical Sector, 2017

Table of Total Expenditure on Health 2010-2019 (RM Million & Percent GDP)

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
RM Million	32,889	35,953	39,448	41,647	46,780	50,194	51,534	56,264	60,339	64,306
Percent GDP	4.00	3.94	4.06	4.09	4.23	4.26	4.12	4.10	4.17	4.26

Figure 2 has shown a concern on how to maximize the local content with the increasing GDP. In the year 2019, MoH spent RM28,860 million (45%) of TEH was spent by MOH. In relation to GDP, in 2019, MOH expenditure was 1.91% of the national GDP.

Source: Market Review on Pharmaceutical Sector, 2019

LEAD MINISTRIES AND AGENCIES

Ministry of Health Malaysia (MoH)

- Responsible for the health system: health behavior, public health, health management, medical research, health system research, etc.

Academy of Sciences Malaysia (ASM)

- ASM has formed a Task Force on the Precision Medicine Initiative for Malaysia aiming to:
 - Generate evidence of precision medicine’s effectiveness
 - Integrate precision medicine approach into clinical practice
 - Identify new regulations, pricing, and reimbursement approaches for diagnostics and treatment.

RESEARCH INSTITUTES

National Institute of Health (NIH)

- NIH comprises of 6 institutes and is responsible in conducting health research that covers initial planning and prioritizing research areas according to the needs, conducting research on the field, and utilizing research findings for health services and programs.

Institute of Medical Research (IMR)

- Develop enabling technologies or products and identifying new biomarkers for use in early detection and diagnose of disease.
- Specialized Diagnostic Services
- Provide advisory and consultative services to MoH

Clinical Research Malaysia

- Training in early phase drug development by providing refresher course on Good Clinical Practice (GCP) for doctors and support staff
- Development and placement of study coordinators via recruitment of suitably qualified candidates and train them to become capable Study Coordinators (SCs) who will be placed at trial sites in order to assist investigators

National Institute of Biotechnology Malaysia (NIBM)

- NIBM is responsible for setting priorities and direction for R&D activities, planning for commercialization of R&D output and enhancing the R&D ecosystem to drive Malaysia into a global biotechnology hub.

Institute of Clinical Research (ICR)

- Funding through a Special Registry Grant generously set aside under the office of the Deputy Director General (Research & Technical Support) Ministry of Health Malaysia.
- Provide technical resources for the registers
- Oversee the registries produced to ensure promised results and operationally comply with applicable ethical guidelines and best practice

REGULATORS

National Pharmaceutical Regulatory Agency (NPRA)

- Implement the regulatory scheme on quality of pharmaceutical products in the market.
- Implement the licensing scheme for pharmaceutical manufacturers, importers and wholesalers
- To carry out research on methodology and basic research for the purpose of evaluating quality, efficacy and safety of drugs/cosmetics.
- To carry out training for pharmaceutical regulatory officers and semi-professional officers.

GOVERNMENT-LINKED COMPANIES (GLCs)

Halal Development Corporation (HDC)

- Provide advisory services and opportunities throughout the halal market and value chain
- Facilitate participation and growth of halal industry participants
- Facilitate the management of halal-industry related initiatives and issues.

Malaysia Bioeconomy Development Corporation Sdn. Bhd.

- Act as the central point in providing support, facilitation, and advisory
- Nurture and accelerate the growth of Malaysian bio-based companies
- Actively promote foreign direct investments in the bio-based industry

ACADEMIA

UKM

Centre of Tissue Engineering & Regenerative Medicine

USM

Institute for Research in Molecular Medicine

UPM

Center of Excellence for Halal Science

UM

- Cancer Research Institute
- Centre of Excellence for Research in AIDS

MAJOR INDUSTRY PLAYERS

Novartis

- Nilotinib, Imatinib (Cancer)

MSD

- Gardasil (HPV)

Pharmaniaga

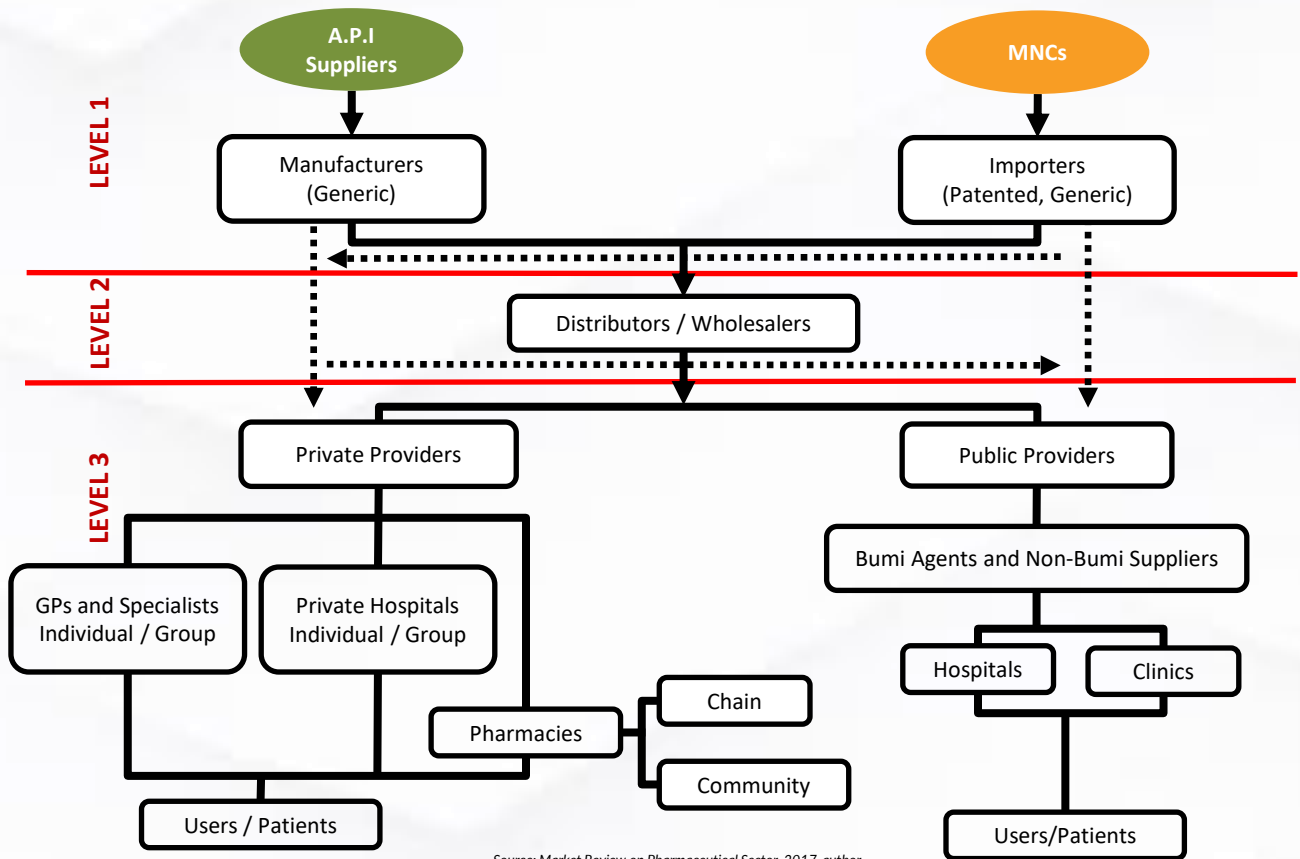
Various Products

Duopharma

Various Products

Hovid

Various Products



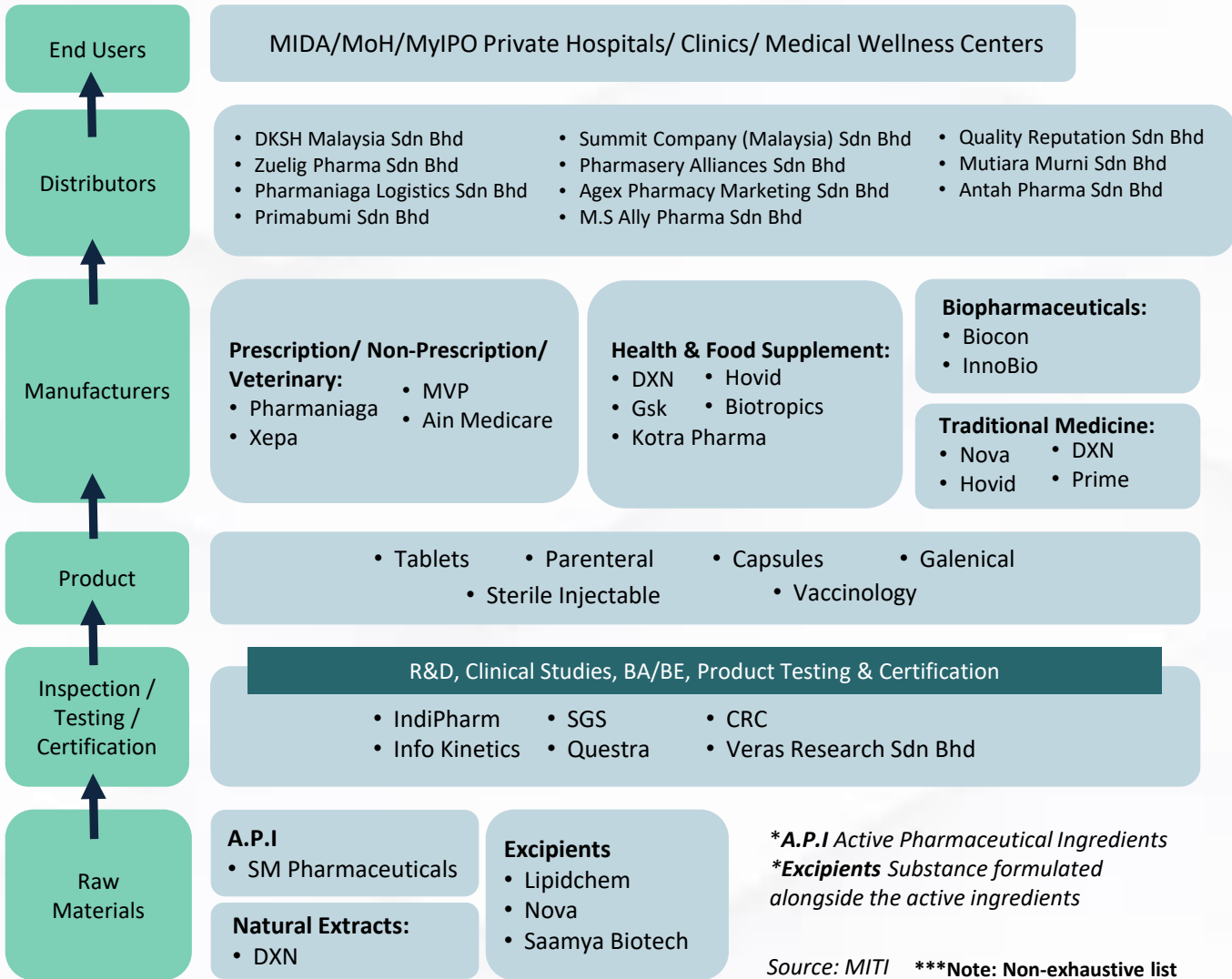
From the illustration shown, there are three levels involved in the pharmaceutical supply chain in Malaysia. The first level consists of manufacturers and importers of medicines. The manufacturers of controlled medicine are mostly locally owned companies that produce generic drugs mainly for the domestic market although the bigger companies are orientating towards export markets. However, the importers of controlled medicines are dominated by MNCs from high-income countries that import patented medicines from their parent companies.

The second level of the supply chain comprises of companies with an NPRA wholesale license such as independent distributors, Bumiputera agents, subsidiaries of manufacturers that own wholesale and distribution companies, and retail pharmacies engaging in wholesaling. In most cases, these distributors do not take ownership of the products but simply distribute on behalf of the principals. In addition, there are also Bumiputera agents that act as tender agents for non-Bumiputera local and foreign pharmaceutical companies bidding for government contracts.

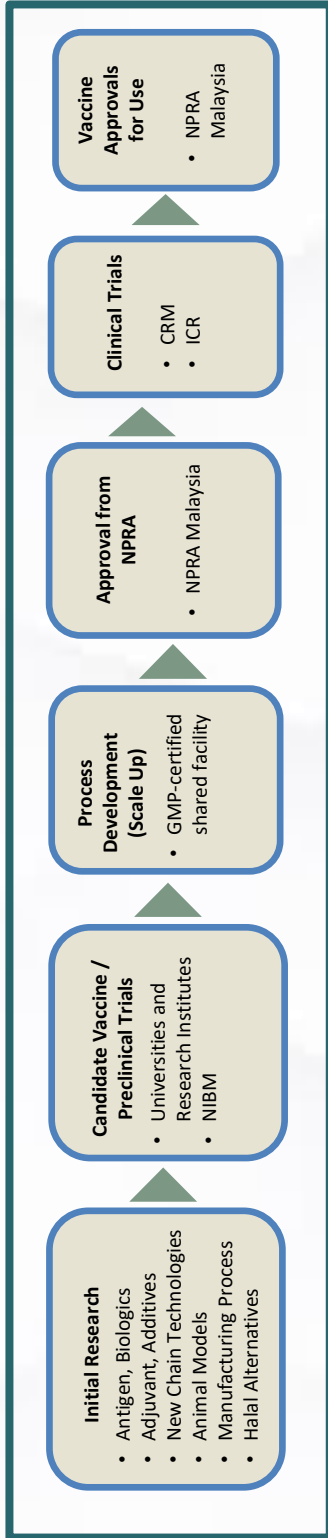
In the third level, the providers would provide medicines directly to patients and end users. In the private sector, procurement of medicines is done directly with the manufacturer of importers or through wholesalers/distributors. However, in most cases, foreign MNCs and non-Bumiputera local companies would bid for government tenders through Bumiputera agents who act as intermediaries between Ministry of Health and the suppliers.

MALAYSIA PHARMACEUTICAL ECOSYSTEM – INDUSTRY PERSPECTIVE

The following is the current Malaysian pharmaceutical ecosystem from the industry perspective. However, the lists of stakeholders are non-exhaustive and may evolve as more data is obtained.



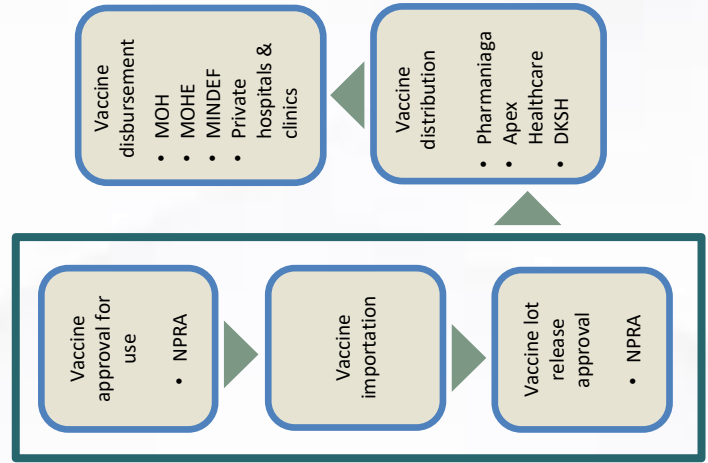
4 INDIGENOUS DEVELOPMENT OF VACCINES



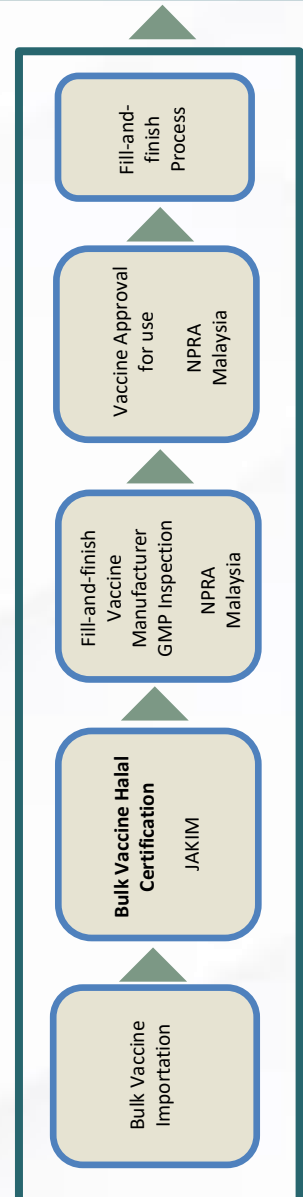
2 VACCINE MANUFACTURING



1 IMPORTATION OF VACCINES



3 FILL AND FINISH



MAJOR INDUSTRY PLAYERS

The following are the lists of major industry players in Malaysia consisting of A.P.I Manufacturers, wholesalers and distributors, and MNCs. However, the lists of stakeholders are non-exhaustive and may evolve as more data is obtained.

Industry Players	Identified Capabilities / Collaborations	Related Procurements
Pharmaniaga Logistics Sdn. Bhd	<ul style="list-style-type: none"> • Development of training programs for logistics professionals with MISCM. • Blockchain technology in logistics research project with UM. • Fill & Finish products & tablet production and packaging. 	<ul style="list-style-type: none"> • Pembekalan Insulin Recombinant Human 100IU/ml Penfill/Refill Secara Pakej • Pembekalan Nilotinib Kapsul Secara Pakej Bagi Rawatan Penyakit Chronic Myeloid Leukemia (Cml) Dan Gastrointestinal Stromal Tumour (Gist) Melalui Malaysia Patient Assistance Programme (Mypap)
Duopharma Biotech Berhad	<ul style="list-style-type: none"> • GMP-certified factory pioneering advance pharmaceutical technologies, manufacturing Halal pharmaceutical products 	<ul style="list-style-type: none"> • Pembekalan Insulin Recombinant Human 100IU/ml Penfill/Refill Secara Pakej
Pfizer Malaysia Sdn. Bhd.	<ul style="list-style-type: none"> • Vaccine Manufacturing – Covid19 Vaccine 	<ul style="list-style-type: none"> • Pembekalan Vaksin Covid-19 Pfizer-Biontech antara Kerajaan Malaysia dan Pfizer (M) Sdn. Bhd.
Merck, Sharp & Dohme (M) Sdn. Bhd.	<ul style="list-style-type: none"> • Bio-informatics & Genomics • Proteomics & Drug Discovery 	<ul style="list-style-type: none"> • Perolehan Vaksin Human Papilloma Virus (HPV)
GlaxoSmithKline (GSK)	<ul style="list-style-type: none"> • Pharmaceuticals and vaccines • Consumer healthcare, over-the-counter medicines 	
Novartis Corp. (M) Sdn. Bhd.	<ul style="list-style-type: none"> • AXON – a real-time and fully digitalized platform fueled with analytical insights enabling the optimization of individualized disease management 	<ul style="list-style-type: none"> • Pembekalan Nilotinib Kapsul Secara Pakej Bagi Rawatan Penyakit Chronic Myeloid
Freesinius Medical Care	<ul style="list-style-type: none"> • R&D in dialysis technology • Clinical support and education programs • Continuous innovation and product enhancement in High Flux, High Efficiency Dialysers 	<ul style="list-style-type: none"> • Pembekalan Produk High Flux, High Efficiency Disposable Hollow Fibre Sterile Dialyser untuk Kegunaan Hospital-Hospital KKM

***Note: Non-exhaustive list

MAJOR INDUSTRY PLAYERS

Industry Players	Identified Capabilities / Collaborations	Related Procurements
TreeMed Sdn. Bhd.	<ul style="list-style-type: none"> ▪ Bio-informatics cutting-edge technological solutions ▪ Supply of scientific equipment and consumables ▪ Export-related activities for gloves & plastic consumables for laboratories 	<ul style="list-style-type: none"> • Pembekalan Fully Automated Nucleic Acid Testing (NAT) Analyzer Dan Aksesori NAT Untuk Saringan HIV-1/2, HCV, Dan HBV Bagi Penderita Darah Secara Format Individual Donor Testing (IDT) • Perolehan Pembekalan Reagen Ujian Patologi Kimia Bagi Hospital di Negeri Perak Secara Reagent Rental Berserta Chemistry Analyser Selama (4) Tahun
Grifols Malaysia Sdn. Bhd.	<ul style="list-style-type: none"> ▪ Plasma-derived medicines ▪ Biosimilars ▪ Diagnostic services, such as blood screening and testing ▪ Plasma collection services in Malaysia 	
Science Valley Sdn. Bhd.	<ul style="list-style-type: none"> ▪ Collaboration with UTM on development of new biotechnologies ▪ Collaboration with UM on development of new diagnostic kits ▪ Collaboration with Akademi Sains Malaysia on vaccine development 	
Roche Diagnostics Malaysia Sdn. Bhd.	<ul style="list-style-type: none"> ▪ Bio-informatics cutting-edge technological solutions ▪ Supply of scientific equipment and consumables ▪ Export-related activities for gloves & plastic consumables for laboratories 	
Science Care Sdn. Bhd.	<ul style="list-style-type: none"> ▪ Provide medical facilities in hospitals, clinics and laboratories ▪ Member of the Malaysia Medical Device Industry Association (MMDI) 	
Siemens Healthineers Malaysia	<ul style="list-style-type: none"> ▪ Diagnostic, therapeutic imaging ▪ Laboratory diagnostics ▪ Digital health – Hospital information systems, electronic health records, telehealth solutions 	
Beckman Coulter Malaysia Sdn. Bhd.	<ul style="list-style-type: none"> ▪ Development of a national blood bank system and the implementation of electronic medical records 	

***Note: Non-exhaustive list



Strategic Framework of the Medical Programme (MoH) 2021-2025

HIGH-SKILL WORKFORCE IN HEALTHCARE

A well-distributed workforce with high competency, knowledge, and motivation will ensure great development of capacity and human resources in the healthcare sector. In order to further enhance the existing workforce, the framework suggests strengthening clinical post-graduate training programs for medical practitioners and equipping and strengthening the capacity and competency among regulators, administrators, and related professionals.

RAPID DEVELOPMENT OF TECHNOLOGY

- Benchmarking against best practices in other countries regarding system integration to capture and manage data for registry development, disease surveillance and health economics.
- Old medical equipment especially those beyond economic repair, including ambulances shall be replaced to keep with the latest development of technology.
- Obsolete information technology infrastructure should be addressed to enhance efficiency in clinical management and administration.

COLLABORATION IN R&D AND TECHNOLOGY DEVELOPMENT

- Strengthen safety and quality in delivery of healthcare system with the emergence and re-emergence of infectious diseases.
- Promote more local and international research collaborations and strengthen its application and healthcare.

INVESTMENT

- Appropriate investment in medical equipment to promote patient's safety and better clinical outcome, it will also promote cost effectiveness in medical treatment or interventions.
- Considering the government's call for encouraging foreign investment, medical tourism and public-private partnership.



National Vaccine Development Roadmap 2021

Holistic Vaccine Manufacturing

Holistic vaccine manufacturing refers to a comprehensive approach to vaccine production. This approach involves the integration of multiple disciplines (e.g., science, engineering, quality management, and regulatory affairs) to ensure the safe, efficient, and sustainable production of vaccines. Among the activities proposed to be involved in this approach would be the initial R&D, Fill-and-Finish and Bulk Manufacturing.

Talent Pool in Vaccine

A diverse and skilled talent pool in vaccine development can lead to increased innovation and the development of a new and improved vaccine. Therefore, increasing the talent pool in Malaysia may bring great benefits as it also helps in strengthening the healthcare system, as well as bringing high economic benefits such as attracting foreign investments and creating more job opportunities for the local workforce.

In increasing more talent pool in Malaysia, there should be more collaborations made between the relevant stakeholders with Centers of Excellence (CoE) under the international organizations and global manufacturers. These collaborations may be in the form of training (e.g., on-board training) and upskilling programs for fresh graduates and local workforce.

Advancement in R&D, technology, and human capital

To encourage the establishment of multi-discipline R&D programs between universities, research institutes, private corporations.



National Strategic Plan for Cancer Control Programme 2021-2025

FOCUS AREA 3: DIAGNOSIS (PATHOLOGY) : 1

To upgrade the scope and efficiency of existing laboratory diagnostic services in all national, regional and state hospitals to provide total support for cancer patients

FOCUS AREA 3: DIAGNOSIS (RADIOLOGY) : 5

To strengthen our human capital Development.

FOCUS AREA 4: TREATMENT (PAEDIATRIC ONCOLOGY) : 2

Upgrading of existing facilities.

FOCUS AREA 4: TREATMENT (RADIOTHERAPY & ONCOLOGY) : 3

To strengthen manpower and improve career development within MOH.

FOCUS AREA 4: TREATMENT (GYNAECOLOGY ONCOLOGY) : 4

Development of a One Stop Cancer Centre (OSCC).

FOCUS AREA 4: TREATMENT (PAEDIATRIC ONCOLOGY) : 6

Research development in paediatric oncology.

FOCUS AREA 8 : RESEARCH AND DEVELOPMENT : 1

Develop the MOH Biobank to support cancer research programs in Malaysia

<p>LOCALISATION</p>	<ul style="list-style-type: none"> • Unmet human resource needs with increasing workload and complexity ¹ • Insufficient and unequal distribution of human resources particularly specialists (in the pharmaceutical sector) between the public and private sectors. ¹ • Lack of collaboration between the public and private sectors and non-governmental organisations.
<p>HUMAN CAPITAL DEVELOPMENT</p>	<ul style="list-style-type: none"> • Health Resource Efficiency – Lack of resources in terms of expertise and facilities. ¹ • Issues to upgrade local talents to be more industry-trained. ²
<p>INVESTEMENT</p>	<ul style="list-style-type: none"> • Increasing economic burden and scarce financial resources - Under-utilised or unutilised facilities due to lack of staff and equipment. • Lack of investment in medical equipment.
<p>R & D & C</p>	<ul style="list-style-type: none"> • Lack of holistic incentives to support the R&D. ³ • Clinical trials is often a slow and expensive process, delaying time to market and hindering profitability.
<p>TRANSFER OF TECHNOLOGY / KNOWLEDGE</p>	<ul style="list-style-type: none"> • Old health facilities and equipment - old medical equipment especially those beyond economic repair, including ambulances shall be replaced to keep with the latest development of technology. • Rapid development of technology - Vertical and horizontal integration is yet to be achieved fully, including public-private data-sharing platforms. • Lack of digitalisation in healthcare system.
<p>MARKET ACCESS</p>	<ul style="list-style-type: none"> • The local industry players are not able to capture the market share for sustainability and profitability.

FOCUS AREA

HALAL PHARMACEUTICALS



- ✓ **Talent development** programs and competency training schemes, including qualification and certification courses (e.g., halal pharmaceutical).
- ✓ Maximise the use of **local content** by local sourcing the *Halal Substitute*.

VACCINE DEVELOPMENT



- ✓ **Increase human capital** in regulatory body of clinical trials and vaccine approvals.
- ✓ Enhancement of strategic clarity, transparent and clear regulations of local vaccine development.
- ✓ Increase experience in later phases of clinical trials.

ADVANCED BIOPHARMACEUTICALS (e.g., mRNA)



- ✓ Increase in **product localization** by IP transfer/ licensing
- ✓ Development or enhancement of **local testing** facility for industry according to international standards.

PRE-CLINICAL & CLINICAL STUDIES



- ✓ Establish more clinical trials to study and test the latest medicine manufactured.
- ✓ **Commercialization of the potential 'market ready' R&D products** from local universities and research institutions to the local and global market.

BIOLOGICAL BIG DATA



- ✓ **Staff attachment** or/and **upskilling for the local workforce**
- ✓ Integration of digitalization via Technology Enhancement Programme and/or **module development** Equipment and facilities update with the latest technology

PRECISION MEDICINE



- ✓ Adopt new manufacturing technologies and processes and **invest in R&D** in various niche areas such as advanced pharmaceutical (e.g., mRNA process and techniques), precision medicine (next-generation sequencing), etc

HUMAN CAPITAL DEVELOPMENT

NO.	INITIATIVES/POTENTIAL PROGRAMMES	FOCUS AREA
1.	Talent development program and competency schemes, qualification and certification courses.	<ul style="list-style-type: none"> Halal Pharmaceuticals Vaccine Development
2.	Post-Graduate Diploma and MSc. Scholarships for local doctors in specialty areas.	<ul style="list-style-type: none"> Oncology, rheumatology, fertility, generic diseases
3.	Capacity Advancement Program (Training, Seminars, Conference).	<ul style="list-style-type: none"> Effective Vaccine Management Vaccine Development Infectious Disease Surveillance Rick Assessment for Infectious Diseases
4.	Staff attachment/On-the-job training	<ul style="list-style-type: none"> Vaccine Development
5.	Professional certification in clinical research	<ul style="list-style-type: none"> Certified Clinical Research Associate (CCRA)
6.	Module Developments	<ul style="list-style-type: none"> Effective vaccine management

TRANSFER OF TECHNOLOGY

NO.	INITIATIVES/POTENTIAL PROGRAMMES	FOCUS AREA
1.	Benchmarking in OEM/manufacturers facilities or foreign accredited research institutes for vaccine R&D and manufacturing.	<ul style="list-style-type: none"> Adoption of Good Laboratory Practices (GLP) Adoption of Good Manufacturing Practices (GMP)
2.	Industrial placement for students and professional in accredited research institutes or manufacturing facilities/OEM.	<ul style="list-style-type: none"> Vaccine Development
3.	Transfer of technology and knowledge in vaccine technology.	<ul style="list-style-type: none"> Related to Messenger RNA (mRNA)
4.	Development or enhancement of local testing facilities for industry according to international standards in Advanced Biopharmaceuticals.	<ul style="list-style-type: none"> Advanced Biopharmaceuticals Vaccine Development
5.	Adopt new manufacturing technologies and processes.	<ul style="list-style-type: none"> Vaccine Development Advanced Biopharmaceuticals



Strategic Framework of the Medical Programme (MoH) (2021 – 2025)



National Strategic Plan For Cancer Control Programme (2021-2025)




National Vaccine Development Roadmap 2021





Other reference documents, websites, and database other reference documents


RESEARCH, DEVELOPMENT AND COMMERCIALIZATION		
NO.	INITIATIVES/POTENTIAL PROGRAMMES	FOCUS AREA
1.	Collaborative research grants with local institutions to stimulate innovative research in challenging areas.	<ul style="list-style-type: none"> Artificial Intelligence/Machine Learning improvements in sustainability aspects in the pharmaceutical value chain
2.	Collaboration with MoH, agencies, academia, or industry to carry out pre-clinical studies, clinical studies, and bio-surveillance studies on vaccine-preventable diseases.	<ul style="list-style-type: none"> Disease such as HPV, Pneumococcal, measles, diphtheria and pertussis
3.	Impact studies on the effectiveness of vaccine on HPV 16 and 18 under the National Immunization Program in Malaysia for those receiving an incomplete dose (1 dose) and completed dose (2 doses)	<ul style="list-style-type: none"> Vaccine Development
4.	Development of National Immunization Registry for HPV and/or any other vaccines under National Immunization Program.	<ul style="list-style-type: none"> Vaccine Development
5.	Development of capacity building for HPV vaccine potency test in ensuring whether vaccines that have undergone cold chain breakdown for a certain amount of time can still be administered or must be disposed.	<ul style="list-style-type: none"> Vaccine Development
6.	Bridging studies which is any clinical trial conducted in a country to provide clinical data on safety, efficacy, dosage, and dose regimen to permit the extrapolation of foreign clinical data to the population in such country or in relation to Regulatory Approvals or secondary manufacturing approvals in such country.	<ul style="list-style-type: none"> Clinical Research

MARKET ACCESS		
NO.	INITIATIVES/POTENTIAL PROGRAMMES	FOCUS AREA
1.	ICP Recipient to export their products and services to the global market	<ul style="list-style-type: none"> Locally manufactured pharmaceutical medicines Consultation of technical expertise and knowledge

 Strategic Framework of the Medical Programme (MoH) (2021 – 2025)


 National Strategic Plan For Cancer Control Programme (2021-2025)


 National Vaccine Development Roadmap 2021


 Other reference documents, websites, and database other reference documents


INVESTMENT		
NO.	INITIATIVES/POTENTIAL PROGRAMMES	FOCUS AREA
1.	Provide support regarding regulation, accreditation, and investment for facility building equipment and facilities to government agencies, research institutions and industry.	<ul style="list-style-type: none"> • Effective Vaccine Management • Halal Pharmaceuticals
2.	Assisting/financing/establishing the R&D&C center for medical research in the latest development of technologies.	<ul style="list-style-type: none"> • Vaccine Development • Precision Medicine
3.	Replace the old medical devices/equipment/facilities with the latest development of technologies (e.g., big data).	<ul style="list-style-type: none"> • Technology development in healthcare
4.	Awareness programme related to vaccination and infectious diseases.	<ul style="list-style-type: none"> • Effective Vaccine Management
5.	Assist in developing Malaysia as a regional hub in clinical research.	<ul style="list-style-type: none"> • Pre-clinical and Clinical Research

MALAYSIA LOCAL CONTENT		
NO.	INITIATIVES/POTENTIAL PROGRAMMES	FOCUS AREA
1.	Collaboration with external companies/OEM to produce vaccines or medicines in the country.	<ul style="list-style-type: none"> • Technology development in healthcare
2.	Strengthening the supply chain ecosystem through collaboration with local industry players in the joint development of new products and services.	<ul style="list-style-type: none"> • Vaccine Development
3.	Maximize the use of local content by locally sourcing the Halal Substitute	<ul style="list-style-type: none"> • Halal Pharmaceuticals

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Strategic Framework of the Medical Programme (MoH) (2021 – 2025)
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National Strategic Plan For Cancer Control Programme (2021-2025)
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National Vaccine Development Roadmap 2021
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Other reference documents, websites, and database other reference documents

LIST OF ICP PROGRAMS - MOH

(BASED ON PREVIOUS ICP DATABASE AS OF OCT 2023)

No.	Procuring Agency	Program Title	Program Sector	Supplier	Project Title	ICP Provider	ICP Recipient
1.	Ministry of Health (MoH)	TENDER PEMBEKALAN REAGEN BGI (2-TARGET) SLAN-96P PCR SYSTEM DI INSTITUSI PENYELIDIKAN PERUBATAN IMR DAN MAKMAL KESIHATAN AWAM KOTA KINABALU UNTUK TEMPOH SELAMA 12 BULAN	HEALTH	PANTAS NIAGA SDN BHD	LOGISTICS AND SUPPLIES	PANTASNI AGA SDN BHD	<ul style="list-style-type: none"> • TIONG NAM LOGISTICS SDN BHD • MASKARGO • AXA AFFIN GENERAL INSURANCE BHD • ICREATE SDN BHD
2.	Ministry of Health (MoH)	TENDER PEMBEKALAN REAGEN BGI (2-TARGET) SLAN-96P PCR SYSTEM DI INSTITUSI PENYELIDIKAN PERUBATAN IMR DAN MAKMAL KESIHATAN AWAM KOTA KINABALU UNTUK TEMPOH SELAMA 12 BULAN	HEALTH	PANTAS NIAGA SDN BHD	PROTÉGÉ PROGRAM	PANTASNI AGA SDN BHD	GRADUAN SISWAZAH
3.	Ministry of Health (MoH)	TENDER PEMBEKALAN REAGEN BGI (2-TARGET) SLAN-96P PCR SYSTEM DI INSTITUSI PENYELIDIKAN PERUBATAN IMR DAN MAKMAL KESIHATAN AWAM KOTA KINABALU UNTUK TEMPOH SELAMA 12 BULAN	HEALTH	PANTAS NIAGA SDN BHD	NEXT GENERATION SEQUENCING LABORATORY (NGS LABORATORY JV)	PANTASNI AGA SDN BHD	<ul style="list-style-type: none"> • STRAITS GENOMICS SDN BHD (SGSB) • INSTITUT PENYELIDIKAN PERUBATAN (IMR) • MAKMAL KESIHATAN AWAM KOTA KINABALU (MKAKK) • MAKMAL KESIHATAN AWAM KEBANGSAAN (MKAK) • UMBI-UKM
4.	Ministry of Health (MoH)	PEMBEKALAN NILOTINIB KAPSUL SECARA PAKEJ BAGI RAWATAN PENYAKIT CHRONIC MYELOID LEUKEMIA (CML) DAN GASTROINTESTINAL STROMAL TUMOUR (GIST) MELALUI MALAYSIA PATIENT ASSISTANCE PROGRAMME (MYPAP)	HEALTH	PHARMANI AGA LOGISTICS SDN BHD (PLSB)	ASCIMINIB - ACCESS TO PATIENTS	NOVARTIS	CLINICAL RESEARCH MALAYSIA (CRM)
5.	Ministry of Health (MoH)	PEMBEKALAN NILOTINIB KAPSUL SECARA PAKEJ BAGI RAWATAN PENYAKIT CHRONIC MYELOID LEUKEMIA (CML) DAN GASTROINTESTINAL STROMAL TUMOUR (GIST) MELALUI MALAYSIA PATIENT ASSISTANCE PROGRAMME (MYPAP)	HEALTH	PHARMANI AGA LOGISTICS SDN BHD (PLSB)	PROTÉGÉ	PHARMANI AGA LOGISTICS SDN BHD	LOCAL GRADUATES
6.	Ministry of Health (MoH)	PEMBEKALAN VAKSIN COVID-19 PFIZER-BIONTECH BNT1262B ANTARA KERAJAAN MALAYSIA DENGAN PFIZER (MALAYSIA) SDN. BHD.	HEALTH	PFIZER (MALAYSIA) SDN BHD	CAPACITY & KNOWLEDGE BUILDING IN VACCINE	PFIZER (MALAYSIA) SDN BHD	<ul style="list-style-type: none"> • MOH AND ITS AGENCIES (E.G NPRA, NIH, IMR, CRC, ETC) • LOCAL HLIS (UIAM, UITM, UPM, ETC)

Increasing adoption & adaptation of new technology and innovation in healthcare, e.g., development of medicine and vaccine



Increase in technical know-how for government, industry players and technical institutions in handling latest technology in medicine/vaccine production

Increasing number of high skilled workers through professional certifications and competency trainings.



Develop local capability and capacity in vaccine and medicine manufacturing through collaborations with OEMs / SMEs

Reducing the dependencies on foreign capabilities to manufacture medicine and vaccines

