



# MARKET OPPORTUNITY

## ASEAN




HEALTHCARE  
& MEDICAL  
TECHNOLOGIES



 **7<sup>th</sup> Largest Economy**  
€2.5 trillion GDP

 **4<sup>th</sup> Largest Exporting Region**  
7% of global exports

 **3<sup>rd</sup> Largest Population**  
622 million people



### OVERVIEW

- ASEAN is highly diverse in terms of the quality and maturity of healthcare sectors across the region. Healthcare sectors across Singapore, Malaysia, and Thailand are more advanced and aligned with international standards.
- The establishment of the ASEAN Economic Community drives the integration of the region and market, focusing on the free flow of goods and services, investment, skilled labour and capital. Healthcare is a priority service sector.
- Growth in average annual healthcare spending between 2014-2018 is expected to be around 11% of GDP in ASEAN, though rates can vary widely among individual ASEAN countries.<sup>1</sup>

### Key Business Opportunities

1. Companies involved in **ICT for healthcare** will be able to leverage on the increasing penetration of internet and mobile phone networks in ASEAN with the expanding middle class.
2. Companies developing **telemedicine and remote health monitoring solutions** will find opportunities in ASEAN given its substantial rural class and uneven distribution of healthcare as well as high rates of adoption of **mobile health (mHealth) initiatives**, which include **consultations between healthcare providers and transmission of patients' health-related data using mobile devices**.
3. Companies producing **medical devices** such as **prosthetics and diagnostic tools** will benefit from increasing demand for medical devices in the ASEAN market, which is expected to double by 2019 to €8.64 billion. The lack of domestic competition in the region presents an opportunity.
4. Companies producing solutions that **reduce the overall cost of surgical procedures or medical treatment** will find opportunities in ASEAN given the pressure on pricing arising from healthcare budget constraints by policymakers.
5. Companies with products in the field of **ophthalmology** can tap into the high burden of eye diseases in the region, including **cataract, glaucoma, and myopia**, with **Singapore and Thailand** being renowned for ophthalmology.

### Sector Characteristics

- Demand for accessible healthcare is increasing rapidly due to high population growth rates and epidemiological trends, indicating higher prevalence of chronic diseases and cardiovascular diseases.
- Public-private partnerships are not highly prevalent in healthcare across ASEAN, though a number of ASEAN countries are interested in expanding their engagement of the private sector.
- For medical equipment and devices, European brands have highly positive brand recognition and will be the preference for local governments and clinicians. However, the lack of affordability of European equipment is resulting in the use of assets beyond their appropriate lifecycle. Therefore there are opportunities for medical equipment to be provided either through (1) more innovative financing mechanisms or (2) redesigned manufacturing for low resource settings.
- Innovative healthcare insurance products (e.g. micro health insurance – potentially offered through mobile phone plans at low monthly cost) are in demand in ASEAN.

Sources:  
1. IMS Institute for Healthcare Informatics. (2016). *Medicines Outlook through 2017*.  
2. PwC Singapore. (2016). *Southeast Asia Healthcare Market Overview*.

# MARKET OPPORTUNITY

## ASEAN

### Multinational Key Players: Medical Devices

Source: BMI Research, Bloomberg, Annual Reports 2015

^Revenue retrieved from APAC region

Rank	Company	Revenue (€)^
1	<b>GE Healthcare</b> Dialysis and transfusion therapy equipment	2.9 Bil
2	<b>Abbott Laboratories</b> Medical devices for diabetic conditions	2.5 Bil
3	<b>Siemens Healthineers</b> Diagnostic imaging, laboratory diagnostics	2.3 Bil
4	<b>Roche</b> Immunodiagnostics, blood glucose meters	2.0 Bil
5	<b>Medtronic</b> Cardiac rhythm disease management devices	1.9 Bil

### ASEAN Key Players: Medical Devices

Source: BMI Research, Bloomberg, Annual Reports 2015

6	<b>Euro-Med Laboratories (Philippines)</b> Medical and surgical sterilisers	4,500.0 Mil
7	<b>Top Glove Corp Bhd (Malaysia)</b> Consumables including surgical gloves	529.4 Mil
8	<b>Kossan Rubber Industries (Malaysia)</b> Consumables including surgical gloves	345.0 Mil
9	<b>Biosensors (Singapore)</b> Critical care catheter systems, blood pressure transducers	289.8 Mil
10	<b>Q&amp;M Dental Group (Singapore)</b> CAD CAM Digital Dentistry	81.6 Mil

### ASEAN Country Specifics

#### Healthcare Market Size and Growth

\* Ranked in descending order of healthcare spending

Source: BMI Research, PwC Analysis<sup>2</sup>

Rank	Country	Healthcare Spending / billion € (2014)	Growth (CAGR) / % (2014-2019)
1	Indonesia	25.08	9.6
2	Thailand	17.13	6.5
3	Singapore	13.78	7.2
4	Malaysia	12.44	4.5
5	Philippines	12.16	8.7
6	Vietnam	10.63	8.8
7	Cambodia	1.24	10.8
8	Myanmar	1.05	6.2

#### Medical Device Market Size\*\*

(Unit: million € 2015)

\*Ranked in descending order of value

Source: BMI Research

Rank	Country	Market Size Value
1	Singapore	476.49
2	Vietnam	732.16
3	Thailand	1,132.32
4	Indonesia	581.72
5	Malaysia	1,254.62
6	Philippines	332.85

#### Imports

(Unit: million € 2014)

Rank	Country	Import Value
1	Singapore	3,217.72
2	Vietnam	662.17
3	Thailand	854.27
4	Indonesia	544.43
5	Malaysia	1,207.74
6	Philippines	233.83

#### Exports

(Unit: million € 2014)

Rank	Country	Export Value
1	Singapore	5,392.12
2	Vietnam	702.25
3	Thailand	805.69
4	Indonesia	282.76
5	Malaysia	1,937.63
6	Philippines	282.76

\*\*Medical device market size includes product areas from **Consumables, Diagnostic imaging, Dental products, Orthopaedics and prosthetics, Patient aids, and Other medical devices.**

# MARKET OPPORTUNITY

## Singapore



### OVERVIEW

- Healthcare expenditure in Singapore is expected to grow to €23.5 billion by 2020 at a CAGR of 9.9% from 2015 to 2020, fueled by factors such as rising incomes and a progressively ageing population.<sup>1</sup>
- Singapore has a strong set of medical device regulations, which are often cited by neighbouring countries. Medical devices are categorised by level of risk and have to be registered with the Health Sciences Authority.
- There is strong government financial backing and dedicated infrastructure to foster the industry in Singapore, including Medtech Hub, Biopolis, and Tuas Medical Hub, which provide the bio-cluster community with a plug-and-play environment. This is supplemented by the fast-growing start-up environment in Singapore and Singapore's Smart Nation initiative.
- With a rapidly ageing population, Singapore will need assistive medical technologies and therapeutics that can help tackle this rising trend.


### Key Business Opportunities

- Companies involved in **medical diagnostics** can leverage on the A\*STAR-led S\$60 million Diagnostics Development Hub that brings together various skills experts to accelerate innovation, particularly in the sub-segments of **immunochemistry, point-of-care devices, and molecular diagnostics** in addressing strategic global indications dealing with the Asian phenotype.
- Companies developing products in **population health management (PHM)**, which includes **tele-health, tele-monitoring and other healthcare informatics** solutions will benefit from an investment programme between Philips and EDBI to alleviate the pressures of Singapore's ageing population while upholding quality of care and Singapore's position as one of Asia's digital health hubs.
- Companies with medical solutions catered towards **functional ageing** will be able to tap on the Centre for Healthcare Innovation and Medical Engineering (CHIME) and the Silver Community Test-bed Programme launched by Singapore's government to launch and test-bed **age-friendly assistive devices** in a real-life home setting.
- Companies with solutions that seek to manage **obesity-related and chronic diseases** will be able to tap into demographic and lifestyle trends of increasing incidences of **hypertension and diabetes**.
- Companies in **digital dentistry** will be able to find opportunities amidst rising interest in this field, including **computer-aided design and manufacturing of dental solutions**.

### Sector Characteristics

- Foreign manufacturers dominate the competitive landscape; there is a lack of domestic competitors in the field.
- In a bid to improve the quality and attractiveness of the local medical devices market, Singapore launched its Technical Reference (TR) for medical device manufacturing.
- The Singapore government has dedicated a budget of €2.64 billion to develop the health and biomedical sciences sector over the next 5 years.<sup>2</sup>

Product Type	CAGR <sup>3</sup> (2015-2020)
Orthopaedics & Prosthetics	11.9%
Other Medical Devices	11.7%
Patient Aids	11.7%
Consumables	10.8%
Diagnostic Imaging	9.1%
Dental Products	8.8%



- Country:** Singapore
- Capital City:** Singapore
- Population:** 5.5 million (2015 est.)
- GDP per capita:** €49,871 (2013 est.)
- Currency:** Singapore Dollar (SGD)
- Official Languages:** English, Malay, Tamil, Standard Mandarin

#### Sources:

- Ministry of Healthcare (MoH), WHO, PwC Analysis. (2016)..
- , 3. BMI Research. (2016). *Singapore Medical Devices Report Q1 2017*.

# Market Opportunity Singapore

## Healthcare & Medical Technologies

### Multinational Key Players: Medical Devices

Source: BMI Research, Bloomberg, Annual Reports 2015

\* Information retrieved from APAC region

	Company	Revenue (€)*
1	<b>Medtronic PLC</b> Endotracheal tubes, catheters, bandages	1.9 Bil
2	<b>Baxter International Inc</b> Disposable syringes, blood tubing, collection sets	1.8 Bil
3	<b>Becton Dickinson</b> Skin antiseptics, syringes, needles, and ventilators	1.0 Bil
4	<b>Zimmer Biomet Holdings Inc</b> Orthopedic surgical and joint replacement	0.8 Bil
5	<b>Edwards Lifesciences Corp</b> Surgical gloves, patient ergonomics products	0.2 Bil

### Domestic Key Players: Medical Devices

Source: BMI Research, Bloomberg, Annual Reports 2015

	Company	Revenue (€)
1	<b>Biosensors International Group</b> Cardiovascular, Endovascular, Cardiac Imaging	289.8 Mil
2	<b>Q &amp; M Dental Group Singapore</b> CAD CAM Digital Dentistry	81.6 Mil
3	<b>Medtecs International Corp</b> Endotracheal Tube, Catheter Insertion Tray	57.9 Mil
4	<b>UG Healthcare Corp Ltd</b> Surgical, vinyl gloves, face masks	36.7 Mil
5	<b>QT Vascular Ltd</b> Haemodialysis machines, peritoneal dialysis	11.7 Mil

### Product Categories

Source: BMI Research

\* Ranked in descending order (Unit: € in million)

#### Market Size (2015)

Rank	Product Area	Value (€mil)	% of Total
1	Other medical devices	194.4	40.5%
2	Consumables	82.0	17.1%
3	Diagnostic imaging	77.9	16.2%
4	Patient aids	58.3	12.1%
5	Orthopaedics	43.4	9.0%
6	Dental products	24.0	5.0%

#### Export (2014)

Rank	Product Category	Value (€mil)	% of Total
1	Patient aids	1679.6	30.1%
2	Other medical devices	1597.6	28.6%
3	Consumables	964.7	17.3%
4	Diagnostic Imaging	867.4	15.5%
5	Orthopaedics	443.7	7.9%
6	Dental products	30.7	0.5%

#### Import (2014)

Rank	Product Area	Value (€mil)	% of Total
1	Other Medical Devices	1,400.2	45.7%
2	Patient aids	546.8	17.8%
3	Consumables	494.7	16.1%
4	Diagnostic Imaging	488.5	15.9%
5	Orthopaedics	84.2	2.7%
6	Dental products	52.7	1.7%



# Market Opportunity Thailand

## Healthcare & Medical Technologies

### OVERVIEW

- Thailand's healthcare expenditure grew 6.3% from €22.2 billion in 2015 to €23.6 billion in 2016.
- Thai healthcare expenditure increased gradually over the years from 5.1% in 2010 to 6.2% in 2015.
- Thailand is one of the leading destinations for medical tourism with 1.2 million arrivals in 2014.
- Thailand is the 3<sup>rd</sup> fastest growing market in the APAC region with a 2015-2020 CAGR of 11.4%.
- Thailand is the 8<sup>th</sup> largest medical device market in the APAC region valued at €1.1 billion in 2015.
- Domestic production of medical devices is estimated to be around €940 million.


### Key Opportunities

1. The Thai government intends to make Thailand an **international health key driver** of medical devices growth. Hospitals are going to be modernised with new equipment in order to raise their competitiveness in the health sector. This will help boost sales in medical devices.
2. **Medical tourism** is one of the priorities for the Thai government. Almost 1,500 hospitals in Thailand see more than 2.1 million foreign patients annually from Asia, Western countries and the Middle East. This will translate to positive demand for various medical technologies and devices.
3. Thailand is facing a **fast-growing and rapidly ageing population**. Currently, the percentage of the Thai population aged 65 years old and above is 10.5%. The proportion of the population above 60 is forecasted to grow from 15% in 2015 to 22% in 2025. Companies in the healthcare segment can leverage on Thailand's ageing demographics.
4. Thailand's **strategic geographic location** allows companies to enter into emerging markets such as Myanmar, Vietnam, Laos and Cambodia. Moreover, its strong logistics infrastructure facilities the import and export of medical devices.
5. Thailand has an established healthcare scheme (Universal Coverage Scheme) that provides free basic healthcare to 50 million Thais. Such healthcare schemes by the government ensures that treatment is within the reach of most patients, thereby supporting the **demand for medical products**.

### Sector Characteristics

- Local production in Thailand is limited to consumables and basic medical devices.
- Thailand is a major producer of latex products such as surgical gloves and catheters.
- Over 80% of domestic production of medical devices is exported.
- Thai hospitals offer advanced medical equipment such as Picture Archiving and Communication Systems (PACS).
- 85.2% of the medical device market in Thailand is supplied by imports.
- Medical devices need to be classified, registered and approved by the Thai Food and Drug Administration prior to import to Thailand.

Product Type	CAGR (2015-2020)
Diagnostic Imaging	17.3%
Other Medical Devices	13.3%
Consumables	8.8%
Orthopaedics & Prosthetics	8.3%
Dental Products	6.6%
Patient Aids	5.4%



- **Country:** Thailand
- **Capital City:** Bangkok
- **Population:** 68 million (2015 est)
- **GDP Per Capita:** €5,580
- **Currency:** Baht (THB)
- **Official Language:** Thai



Source: BMI Research: Thailand Pharmaceuticals & Healthcare Report Q1 2017, Thailand Medical Devices Report Q4 2016

# Market Opportunity Thailand

## Healthcare & Medical Technologies

### Multinational Key Players: Medical Devices

Source: BMI Thailand Medical Devices Report, Bloomberg

\* Revenue retrieved from APAC region

	Company	Revenue (€)*
1	<b>Cardinal Health</b> Gloves, anaesthesia, cardiovascular products	4.6 Bil
2	<b>Siemens</b> Diagnostic Imaging, Laboratory Diagnostics	3.3 Bil
3	<b>Medtronic</b> Endotracheal tubes, catheters, bandages	2.6 Bil
4	<b>Nipro</b> Disposable syringes, blood tubing	1.9 Bil
5	<b>Ansell</b> Surgical gloves, patient ergonomics products	1.5 Bil

### Domestic Key Players: Medical Devices

Source: BMI Thailand Medical Devices Report, Bloomberg

	Company	Revenue (€)
1	<b>B. Braun (Thailand)</b> IV solutions, syringe pumps, surgical instruments	26.7 Mil
2	<b>Business Alignment PCL</b> Linear Accelerator (LINAC), Oncology systems	26.5 Mil
3	<b>Techno Medical PCL</b> General and cardiac surgery equipment	20.1 Mil
4	<b>Shun Thai Rubber Gloves Industry</b> Medical and surgical gloves, examination gloves	13.5 Mil
5	<b>Fresenius Medical Care</b> Haemodialysis machines, peritoneal dialysis	11.2 Mil

### Product Categories

Source: BMI Thailand Medical Devices Report

\* Ranked in descending order (Unit: € in million)

#### Market Size (2015)

Rank	Product Area	Value (€mil)	% of Total
1	Other medical devices	356.5	32.1%
2	Consumables	286.9	25.8%
3	Diagnostic imaging	242.3	21.8%
4	Orthopaedics	89.9	8.1%
5	Patient aids	69.8	6.3%
6	Dental products	65.1	5.9%

#### Export (2014)

Rank	Product Category	Value (€mil)	% of Total
1	Consumables	436.6	55.3%
2	Other medical devices	290.7	36.8%
3	Diagnostic imaging	22.6	2.9%
4	Patient aids	20.3	2.6%
5	Dental products	17.6	2.2%
6	Orthopaedics	2.4	0.3%

#### Import (2014)

Rank	Product Category	Value (€mil)	% of Total
1	Other medical devices	243.0	29.0%
2	Diagnostic imaging	203.0	24.2%
3	Consumables	185.7	22.2%
4	Orthopaedics	83.6	10.0%
5	Patient aids	63.3	7.6%
6	Dental products	59.3	7.1%