



Be Part of the Global Healthcare Digital Transformation Ecosystem

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IoT

OUTLINES

- I. Institute for Biotechnology and Medicine Industry (IBMI)**
- II. Taiwan Government Initiatives for Digital Healthcare**
- III. Taiwan Healthcare Industry Overview**
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About IBMI

Institute for Biotechnology and Medicine Industry (IBMI) is an independent, not-for-profit organization voicing Taiwan-based healthcare industry, promoting interdisciplinary collaborations through its global platform, and creating policy dialogues between public and private sectors. On top of that, IBMI is also a trusted awarding and certification body to healthcare providers and an incubator to health care startups in areas of novel biotechnologies, services and innovations.



Founder
Jin-Pyng Wang

Former president of
the Legislative Yuan,
Taiwan



President
Chi-Huey Wong

Scripps Family
Chair Professor of
the Scripps
Research Institute



Vice President
Barry Lam

Chairman & CEO
Quanta Group



Vice President
Pan-Chyr Yang

Academician of
Academia Sinica



Vice President
Chang-Hai Tsai

Chairman of the
Board of China
Medical University
& Health Care
System



Supervisor
Wei-Jao Chen

Professor Emeritus,
Department of
Surgery. National
Taiwan University
College of
Medicine

About IBMI

The board members consist of leaders from hospitals and R&D institutes, and C-level representatives from electronics, ICT, biotech and pharmaceutical sectors. Currently, IBMI has more than 400 members from across industries relating to healthcare.

Healthcare

Chang Gung Memorial Hospital
Changhua Christian Hospital
China Medical University Hospital
College of Medicine, National Taiwan University
Hualien Tzu Chi Hospital
Kaohsiung Medical University Hospital
MacKay Memorial Hospital
National Cheng Kung University Hospital
National Defense Medical Center
Shin Kong Wu Ho-Su Memorial Hospital
Show Chwan Memorial Hospital
Taichung Veterans General Hospital
Taipei Medical University
And more.

R&D

Development Center of Biotechnology
Industrial Technology Research
Institute
KPMG in Taiwan
National Health Research Institutes



Electronic & ICT

Advantech Co., Ltd.
Catcher Technology Co., Ltd.
Foxconn health technology business group
iKala Interactive Media Inc.
Pegatron Corp.
Powerchip Semiconductor Manufacturing Corp.
Qisda Corp.(BenQ)
Realtek Semiconductor Corp.
Topco Group
Wistron Corp.

Bio-Pharmaceutical

Bora Pharmaceuticals Ltd.
Maywufa Biopharma Group
Missioncare Medicine Co. Ltd.
St.Shine Optical Co., Ltd.
CHC Healthcare Group
Orient Pharma Co., Ltd.

Taiwan Government Initiatives For Digital Healthcare

The background features a dark blue gradient with a complex network of thin, light blue lines and dots. These lines form a series of overlapping, wavy patterns that resemble a digital signal or a data visualization. The dots are scattered throughout, some appearing as small, bright blue points, while others are fainter. The overall effect is a sense of dynamic, interconnected digital space.

Create A Global Ecosystem For Healthcare Digital Transformation in Taiwan



President Tsai Ing-Wen

Hospitals play a key role in bringing together the supply chains from the upstream to the downstream. These hospitals can strengthen technology in healthcare and press ahead the overall industry development. Taiwan government will continue its efforts through policy making and the integration of cross-sectoral resources, work hand in hand with the industry to develop precision health for the global market.



Mr. You Si-Kun, President of Legislative Yuan / President of the Expo General Assembly 2021

We at the Expo aim to reinforce the linkage between Taiwan's healthcare and semiconductor sectors, channel them into global strategic alliances to create an ecosystem in which digital technologies could be simply applied in healthcare industry.

Taiwan Government Initiatives for Digital Healthcare

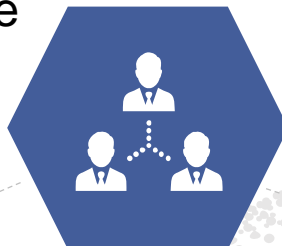
Incentives

The Act for the Development of Biotech and Pharmaceutical Industry



Counselling on Products

Counselling Programme for Mobile Health Products, and for AI-Enabled Medical Device



New cabinet-level governmental body

Ministry of Digital Affairs (MODA)



Regulatory Framework

- Guidance on Software as Medical Device Released
- Telemedicine Regulations Revised after COVID.



National Programmes

- Health Big Data Platform by NSTC
- Digital Health Initiative by MOEA

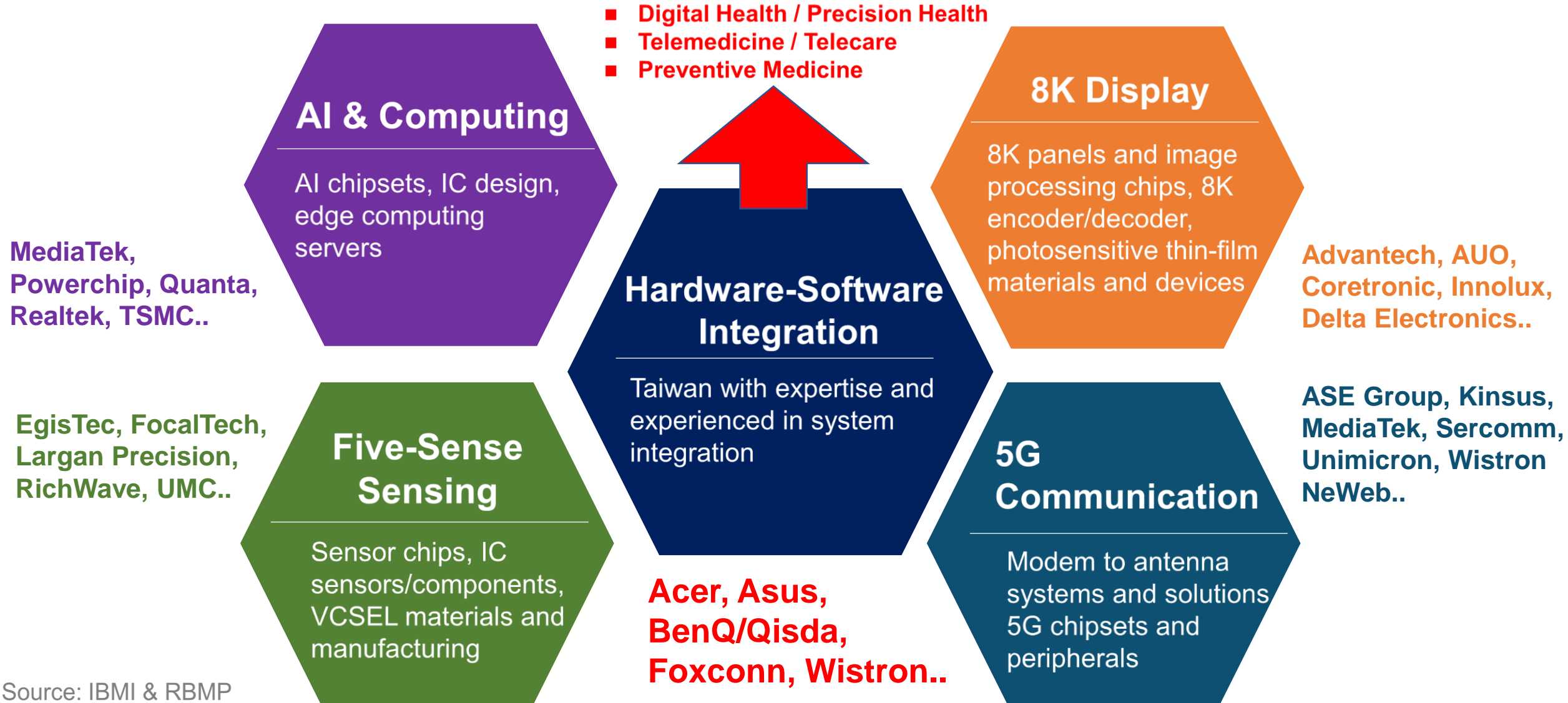


Taiwan Industry Overview

The background is a deep blue gradient. It features a series of thin, light blue wavy lines that flow across the bottom half of the image, creating a sense of motion and depth. Scattered throughout the background are numerous small, light blue dots, some of which are connected to the wavy lines by thin vertical lines, resembling a data visualization or a network diagram.

Taiwan Industry Overview

Market Players and Focus Areas



Source: IBMI & RBMP

Taiwan Industry Overview

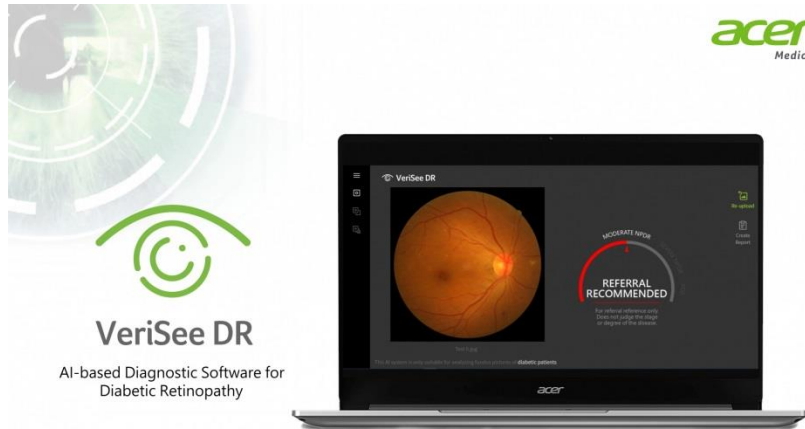
Digital Health R&D

	Prevention & Detection	Monitoring	Diagnostics	Health Tech & Services
Company				
Focus Areas	<ul style="list-style-type: none"> MRI-based tumour image classification Breast cancer recurrence risk assessment Tumour metastasis and recurrence assessment Early prediction of dementia AI-assisted risk assessment of dementia Analytical services for health risk Auto-analysis of cardiovascular imaging system 	<ul style="list-style-type: none"> Chronic disease care platform AI-assisted vital sign monitoring AI-assisted dermatological disease monitoring EKG software AI in medication and wound care Cloud-based health platform Stress EEG assessment Health promotion Real-time heart rate monitoring Mobile health application 	<ul style="list-style-type: none"> AI-based diagnostics for diabetic retinopathy AI endoscopy lesion detection system Metastatic brain cancer/acoustic neuroma diagnosis Portable 12-lead ECG/EKG analysis Non-invasive, AI-based thyroid neoplasm detection AI-powered stethoscope Detection software for breast ultrasound AI-based detection of pneumothorax and Intracerebral hemorrhage AI-based bone marrow smear differential counting AI-based diagnostics of osteoporosis AI-based flow cytometry analysis for leukemia AI-assisted EEG analysis for mental health 	<ul style="list-style-type: none"> Decision support platform for antibiotic therapy Decision support for hemodialysis AI platform for remote critical care Mental health platform Sleep telecare Therapeutic neuromodulation on-chip AI-driven radiotherapy Immersive 3D software for sleep disorders Digital therapeutics for dementia AI-based hearing aids IoT in elderly care

Taiwan Industry Overview

Successful Solutions

Acer



VeriSee DR

- The AI-powered software is designed to detect diabetic retinopathy (DR) by analysing retinal images.
- Approved in Taiwan, Thailand and Indonesia, VeriSee DR requires no internet connection, can be customised and seamlessly integrated into clinical workflow.

TeleMed for Home Care & Point of Care

- The solution provides a non-contact outpatient service which simulates the workflow in clinical practice for patients and clinicians.
- It is intended to improve efficiency and quality of telecare/remote care/long-term care and enhance the pandemic prevention measures.



Taiwan Industry Overview

Successful Solutions

Asus

全球首創 MRI腫瘤分類及乳癌復發預測系統



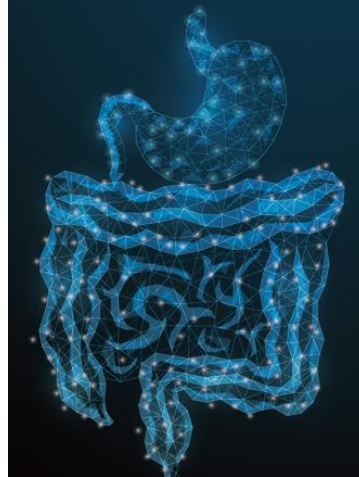
- 非侵入式
免除切片 0痛苦
- 節省93%檢驗時程
即早治療
- 精準腫瘤分類
輔助醫生治療規劃
- 乳癌復發風險預測
低風險患者免化療之苦

MRI Tumour Classification and **Breast Cancer** Reoccurrence Prediction System

The software analyses 3D images during a screening breast MRI, assisting radiologists recognise the location of tumours, classify them as well as evaluating recurrence risk with PAM50 (Prediction analysis of microarray 50).

EndoAim AI Endoscopy Lesion Detection System

The software is intended to assist clinicians to analyse polyps during a colonoscopy and classify them into non-adenoma or adenoma.



- 即時警示
病灶不遺漏
- 超過90%精準度
降低誤判
- 即時息肉分類
提供診斷參考

Taiwan Industry Overview

Successful Solutions

EBM Technologies (商之器)

EBM develops medical information technology solutions such as Enterprise and Mobile PACS and systems for Patient Health Records (PHR), Electronic Medical Records (EMR) and eHealth.

- Supports standard DICOM images from any modality for unlimited modality connections.
- Enterprise mobile image reading.
- Low cost of ownership, since no separate hardware and software required
- Hanging protocols allow easy comparison of patient images for improved diagnostic accuracy
- Easy and fast integration of existing HIS, links images to corresponding patient data
- Independent image storage
- Scalable User Licensing (allows growth from a small 3-user clinic to a large hospital with 100+ users)
- Studies can be assigned to user groups.



Taiwan Industry Overview

Inventec 英業達

Successful Solutions

“Chiline” HomeCare System

A cloud-based healthcare management system, is combined with 3 medical devices and a management platform. It a total solution which can meet the need of telecare institute and individual who cares personal and family health.



Source: Corporate website; compiled by IBMI & RBMP

Measurement devices includes:

- Blood Pressure Monitor
- Glucose/ Cholesterol/ Uric Acid Monitoring System
- ECG Monitor

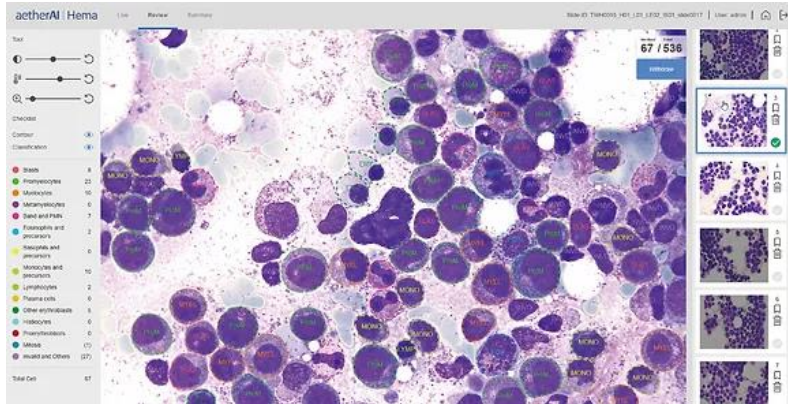
Taiwan Industry Overview

aetherAI 雲象科技

Successful Solutions

aetherAI Hema: Automatic Differential Count of **Bone Marrow Smear**

With datasets marked and generated from 700,000 cells, the aetherAI Hema solution is specifically developed to automate the procedure of bone marrow smear differential counting.



aetherAI LDCT: **Lung Nodule** Detection

The solution is specifically developed to detect **lung nodule in low-dose CT images**. Trained on high quality of annotated images, aetherAI LDCT is able to detect and prioritize lung nodules to assist physicians in **early lung cancer** detection.



After seeing all these successful solutions...

Taiwan hospitals are expanding their productivity to be the solution providers.



彰化基督教醫院
CHANGHUA CHRISTIAN HOSPITAL



員林基督教醫院
Yuanlin Christian Hospital



**U.S. Green Building Council
LEED Gold Level Certification on
Dec, 2015**



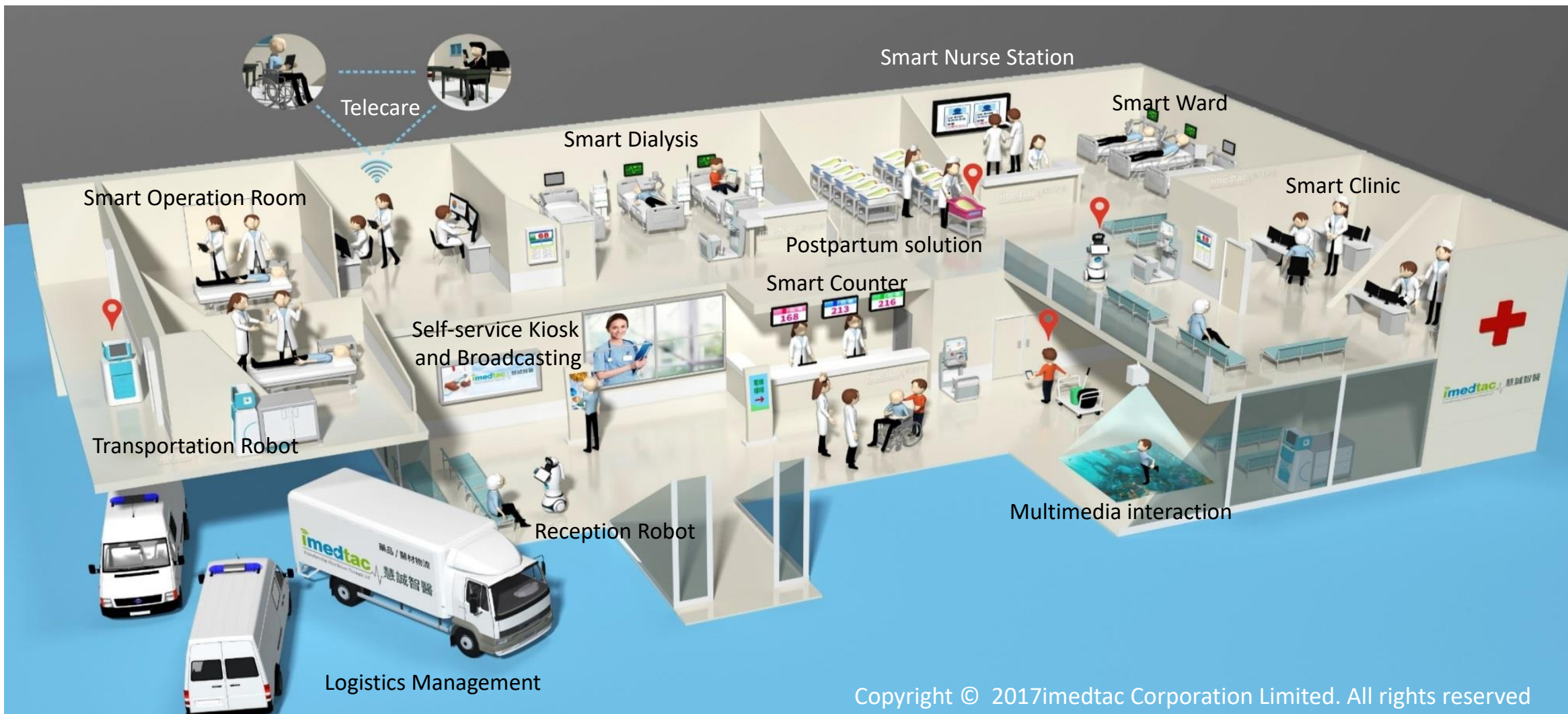
ICT Players launch products and solutions:

- ◆ Smart Nurse Station
- ◆ Smart Ward
- ◆ Smart Clinic
- ◆ Smart Counter
- ◆ Smart Dialysis
- ◆ Smart Operation Room
- ◆ Multimedia interaction
- ◆ Accompany robot
- ◆ Logistics Management

⋮

Integrated Solutions in Smart Hospital

Modularize IoT for Hospital and Healthcare Application by **imedtac** 慧誠智醫



The potential collaboration between Thailand and Taiwan

The background is a deep blue gradient. It features a complex pattern of thin, light blue lines that form a series of overlapping, wavy bands across the bottom half of the image. Scattered throughout this pattern are numerous small, light blue dots of varying sizes, some appearing to be connected by thin vertical lines, creating a sense of digital connectivity or data flow.

1 Country 1 Center Highlights

Thailand

Changhua Christian Hospital

Smart Hospital

Cooperate with Chunghwa Telecom/ Thonburi Hospital Group



India

National Cheng Kung University Hospital

built an image storage system to improve the efficiency of medical service in India.

Indonesia

National Taiwan University Hospital

Overseas Consultation Physicians" and "Overseas Health Managers" in 2019

Far Eastern Memorial Hospital

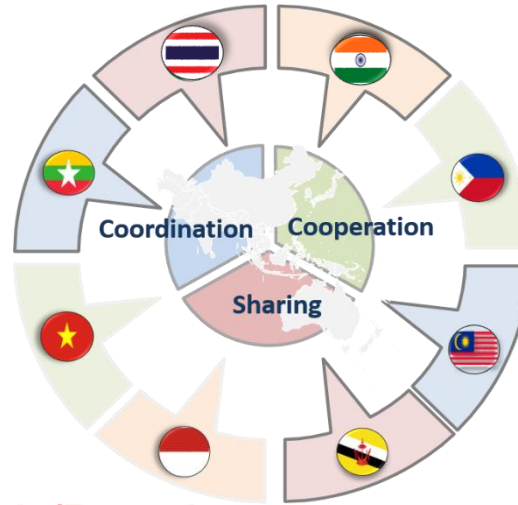
Using its own telemedicine app to have consultations with a Kota Medan patient.



Myanmar

Shin Kong Wo Ho-Su Memorial Hospital

Operation for a Burmese teenager with hand deformities.



Philippines

Hualien Tzu Chi Hospital

Established Tzu Chi Great Love Eye Center in 2008;

Malaysia/Brunei

Chang Gung Memorial Hospital

To provide update health education and personalized information to international patients interactively.

China Medical University Hospital

Conducted Cell Therapy research with Malaysia Association for Cell Therapy (MACT)



Vietnam

Veterans General Hospitals & National

Yang Ming Chiao Tung University

Taipei VGH Performed a critical liver transplant surgery for a boy from Vietnam 2020.

Kaohsiung Medical University Chung-Ho Memorial Hospital (KMUH)

University Medical Shing Mark Hospital, the largest Taiwan-funded hospital in Vietnam consulted KMUH about epidemic prevention



Going Forward..

Digital Health is Essential to Developing Precision Health in Thailand & Taiwan.

- ❑ To establish a flexible, adaptive and friendly regulatory framework and business environment for novel medical devices
- ❑ To accelerate digital health transformation and adoption of innovative health technology with the Real World Data/Real World Evidence.
- ❑ To Fuel digital health infrastructure that aims to accelerate the relevant global standardization to be followed and incorporated into hospital IT systems and digital health products.

Thailand & Taiwan Bilateral Cooperation

MDA2019

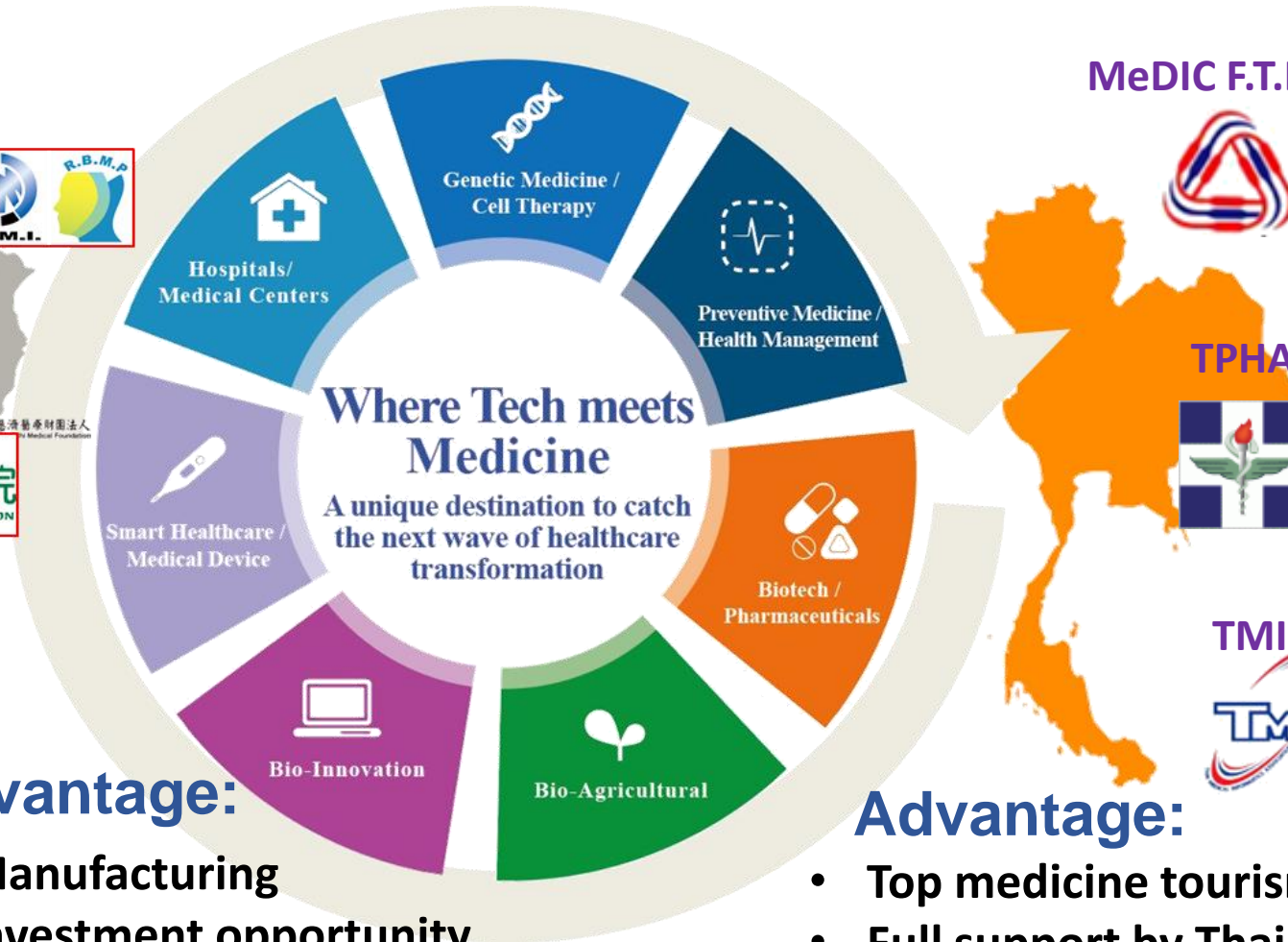


Visit CCH 2018



Advantage:

- Manufacturing
- Investment opportunity
- Clinical Trials



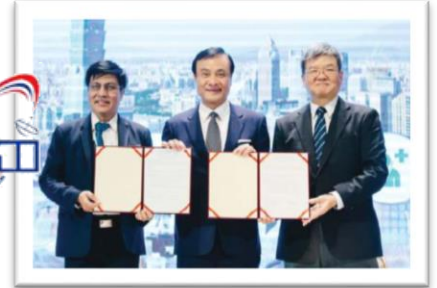
MeDIC F.T.I.



TPHA



TMI



Advantage:

- Top medicine tourism
- Full support by Thailand 4.0 initiative
- Core position in ASEAN

Healthcare[®] EXPO · TAIWAN 台灣醫療科技展

2-5 December 2021, Taipei

Medical AI Application



Inno Zone



Trade Visitor & Professional
31,000

- 28% Healthcare Related
- 16% Trade & Investment
- 15% Digital Tech & ICT
- 15% Medical Devices
- 14% Academia, R&D
- 12% Life Sciences & Others

Onsite + Online

*Expand Healthcare Markets &
Businesses in APAC*

Healthcare⁺ Expo 1 – 4 December 2022, Taipei
Healthcare⁺ B2B 1 August 2022 – 31 July 2023

Branding Taiwan



Thank you for your attention