

# Insight of Taiwan's Healthcare Ecosystem: Collaboration Opportunities between EU and Taiwan



**PRESENTER**

**Dr. Chien, Chung Liang**

**CEO**

**Institute for Biotechnology and  
Medicine Industry (I.B.M.I.)**

- **Established Year** 2002
- **Board of Members**
  - + Government Officials
  - + Leaders from Academia and Medical Centers
  - + Industrialist

**Founded by the former president of the Legislative Yuan of Taiwan, Mr Jin-Pyng Wang, IBMI is an independent, not-for-profit organization voicing Taiwan-based health care 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 health care providers and an incubator to health care startups in areas of novel technologies, 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**

# Our Board

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 health care.

## 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  
Taipei Medical University-Shuang Ho Hospital  
Ten-Chen Medical Group  
Tri-Service General Hospital  
Wei Gong Memorial Hospital

## Research & development

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.

FOXCONN

ADVANTECH

BENQ

REALTEK  
瑞昱半導體股份有限公司

CATCHER  
smart process

WISTRON

PEGATRON  
和碩聯合科技

TSC  
群創科技

PSC  
力晶半導體  
Powerchip Semiconductor Corp.

iKala

**380**

**Core Members**

# Integrate resources and promote the biomedical and healthcare industry



## Policy Think Tank

- Act for the Development of Biotech and New Pharmaceuticals Industry.
- Cross-Strait Cooperation Agreement on Medicine and Public Health Affairs.
- Amendment of the Fundamental Science and Technology Act.
- The Human Biological Database Management Act
- Pharmaceutical Affairs Law and Medical Care Act
- 33 biomedical policies

## Partnership & Collaboration

- Healthcare + Expo Taiwan
- Taiwan Healthcare + Portal
- MEDTEX Summit Asia
- International Hospital Leadership conference
- Bio Taiwan Highlights



## Awards & Certification

- Symbol of National Quality (SNQ) accreditation & certification
- National Innovation Awards

## Startup Incubation

- Allied with 36 Universities & Research Institutes
- Startup Angel investment



# Taiwan Biotech Take-off Action Plan (2013-2016)

## Core Concepts in Promoting Pharmaceuticals and Medical Devices



### Industrialization R&D Center Builds on Upstream R&D (MOEA)

- Establishment of Biotech Pharmaceuticals Pre-clinical Core Platform
- Establishment of Medical Devices Rapid-Prototyping Center

### Establishment of BVC to Attract Private Funding matching with National Development Fund

- Capital will be introduced into the biotech industry, with the capital make-up of the BVC being on a 40:60 basis (government 40%, private sector 60%)

### Promotion of the SI<sup>2</sup>C to Provide an Integrated Service Platform (MOST)

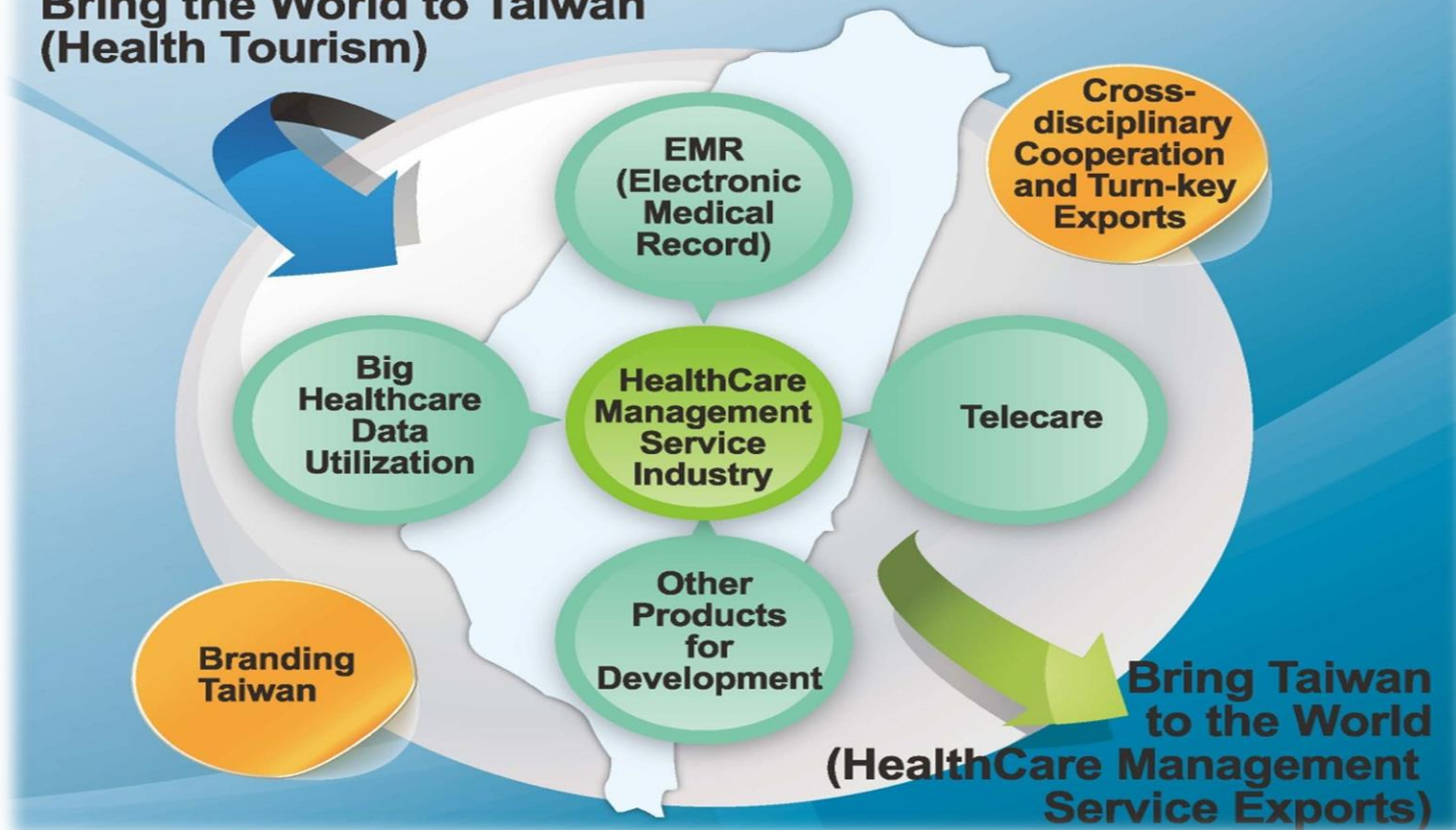
- Provides legal, IPR, technical, and operations commercialization services
- Hardware resources for factory incubation: Hsinchu Biotech Park (medical devices), South Taiwan Science Industry Park (medical devices), National Biotechnology Research Park in Nangang (pharmaceuticals), experimental animal center

### Foster International Harmonization (MOHW)

- Establishment of an integrated and transparent evaluation process of medical products
- Greater efficiency in the evaluation process of medical products
- Promotion of regional regulatory harmonization
- Assistance in the industry's development

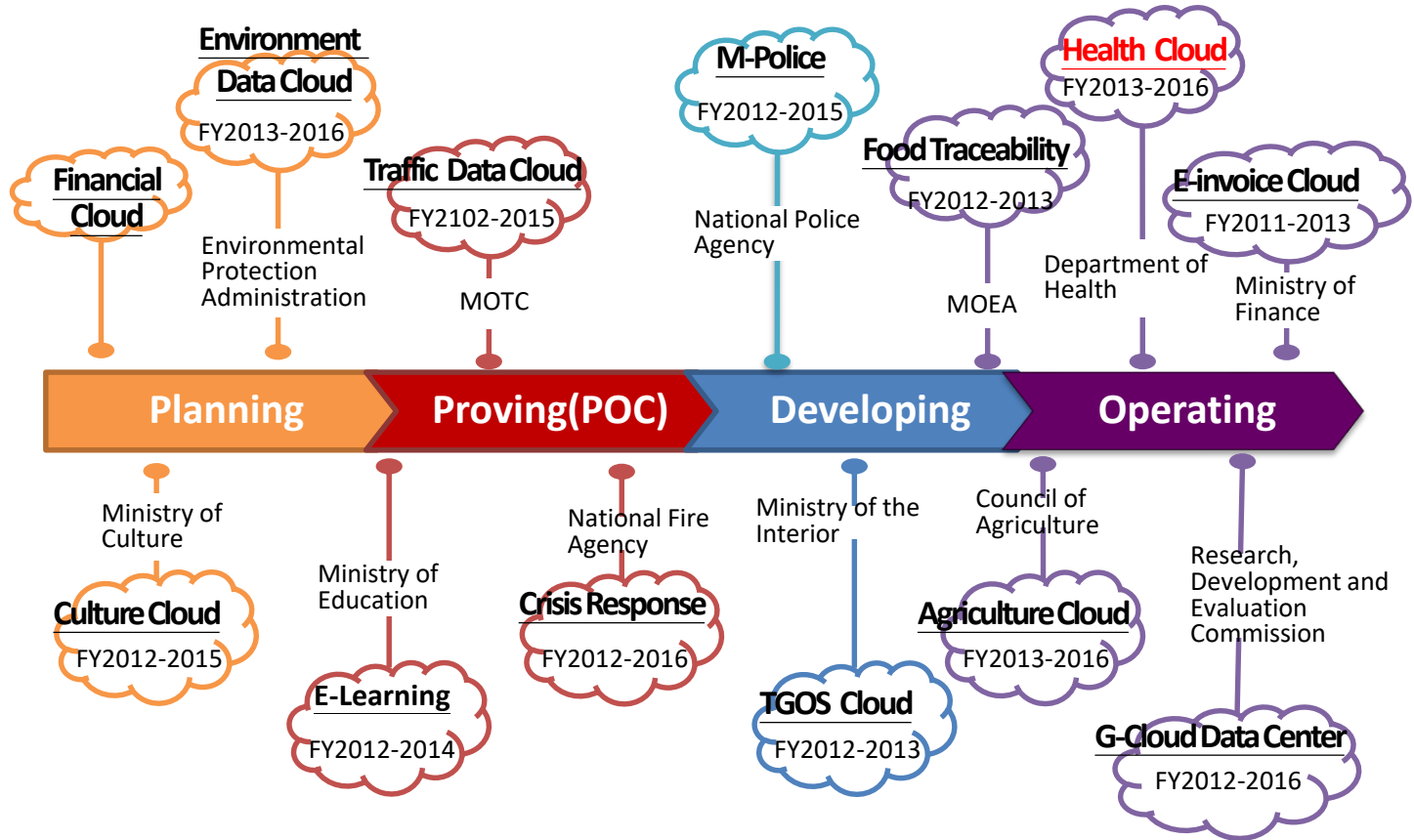
## Core Concepts in Promotion HealthCare Management Services

**Bring the World to Taiwan  
(Health Tourism)**





# G-Cloud Status toward Smart Living





# Smart Living-Taiwan health cloud

## Supporting Healthcare Management Services Industry and Promoting Smart Living



- ✓ **Quality and Healthy Life**
  - Daily: Fitness at all time
  - Sick: Personalized Medicine
  - Elderly: Long-term Care
- ✓ **ICT-enabled international model for Sustainable Health Cloud**
  - Prevention Health Cloud for Better Health
  - Long-term Care Cloud for Better Care
  - Medical Cloud for Efficient Resource Utilization (short term) and Personalized Medicine (long term)
  - Health Cloud for the Sustainability of Government Welfare and Industry Development





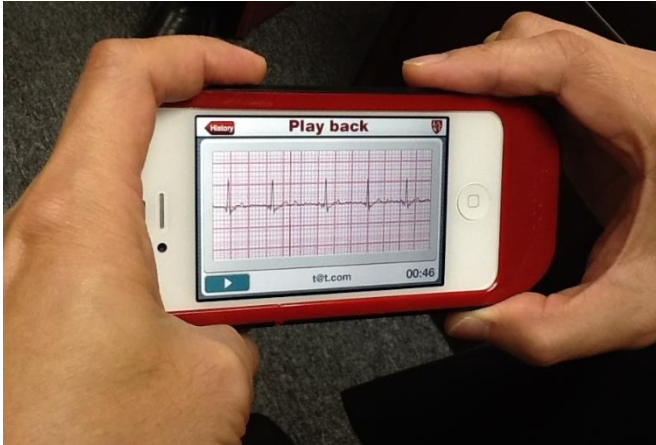
## Ambient Assisted Living – IT solutions for active & healthy aging

Using modern ICT solutions can contribute to enable elderly people to stay in their familiar surrounding for a longer time and to increase quality and efficiency of care related services.



# Example — A Great Helper

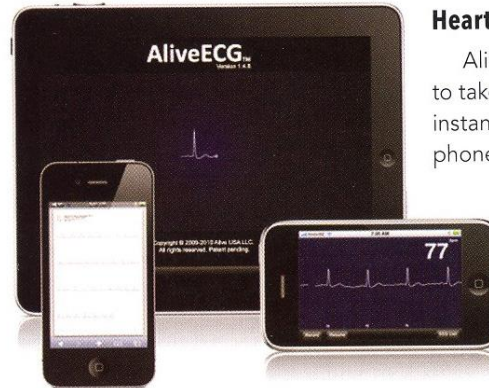
## Ambient Assisted Living



- ICT Applications
- Care for Elderly Living Alone
  - ✓ Remote Physiological Signal Monitoring
  - ✓ Reminders to Take Medicine
  - ✓ Risk Prediction

NeuroSky®  
神念科技

**Apparatus for iPhone  
APP Personalized ECG**



### Heart Monitor

AliveCor's Heart Monitor snaps onto an iPhone to take and record a person's heart rate and rhythm instantly. It can display an electrocardiogram on the phone's screen, store it in memory, or transmit it wirelessly. The device has received FDA clearance and is available starting in 2013 for \$199.

[www.alivecor.com](http://www.alivecor.com)

# Key drivers of Taiwan's healthcare industry

## Advanced Medical Care



## High Quality R&D and MFG



## Strong ICT and Elec. Tech.



# Advantages of Taiwan Medicine



## Outstanding Healthcare Insurance System

- ❖ 99.6 % of Taiwan's 23.57 million people covered under the government-run National Health Insurance (NHI)



## High Quality Healthcare Services

- ❖ Out of 200 of the largest hospitals in the world, 14 are in Taiwan.
- ❖ Taiwan ranks third, just after the USA and Germany, in terms of medical service quality.



## World-class Health Database

- ❖ National Health Insurance Research Database has been collected for more than 22 years
- ❖ Medical centers with complete medical record and imaging data

# Advantages of Taiwan ICT industry



## Most concentrated industry clusters

- ❖ World's densest and most technologically advanced semiconductor production base.
- ❖ The Major Procurement Center for Global ICT Companies & Buyers



## Strong ICT manufacturing capabilities

- ❖ Rich manufacturing experience and outstanding technologies
- ❖ The heart of the world's tech supply chain, offering high-quality products from IC design, semiconductor, to electronics.



## Rapid Commercialization

- ❖ Ranked 1st in Worldwide Major ICT product market share for more than 10 products
- ❖ High levels of hardware/software integration capability for flexible production and rapid commercialization

# Taiwan's Leading ICT Players are actively diversifying businesses into healthcare Industry.



Smart Hospital, Medical Robot, AI/ IoT Solutions, Imaging, Diagnostics, Home care & rehabilitation, Gene Sequencing, Cell Therapy, etc.



No. 24 of Fortune Global 500  
No. 1 of EMS Providers Global



No. 432 of Fortune Global 500  
No. 5 of EMS Providers Global



Top 10 Electronic ODM Global  
Top 3 manufacturers of TFT-LCD



Quanta Computer  
No. 354 of Fortune Global 500



No. 404 of Fortune Global 500  
No. 1 of NB manufacturer Global



One of leading Industrial  
Computer Providers Global



Top 3 Manufacturers of  
AMD Graphics Cards



One of Leading EMS-ODM  
Manufacturers Global



No. 5 of Best Laptop Brands 2018



No. 4 of PC manufacturer Global  
No. 4 of Best Laptop Brands  
2018



Top 3 DLP Projector  
Manufacturer  
One of Leading LCD Backlight  
Module Manufacturers Global



One of Leading Smartphone  
Brands Global



Top 3 ODD manufacturers  
Top 10 EMS Providers Global



World's leading smartphone  
camera lens supplier

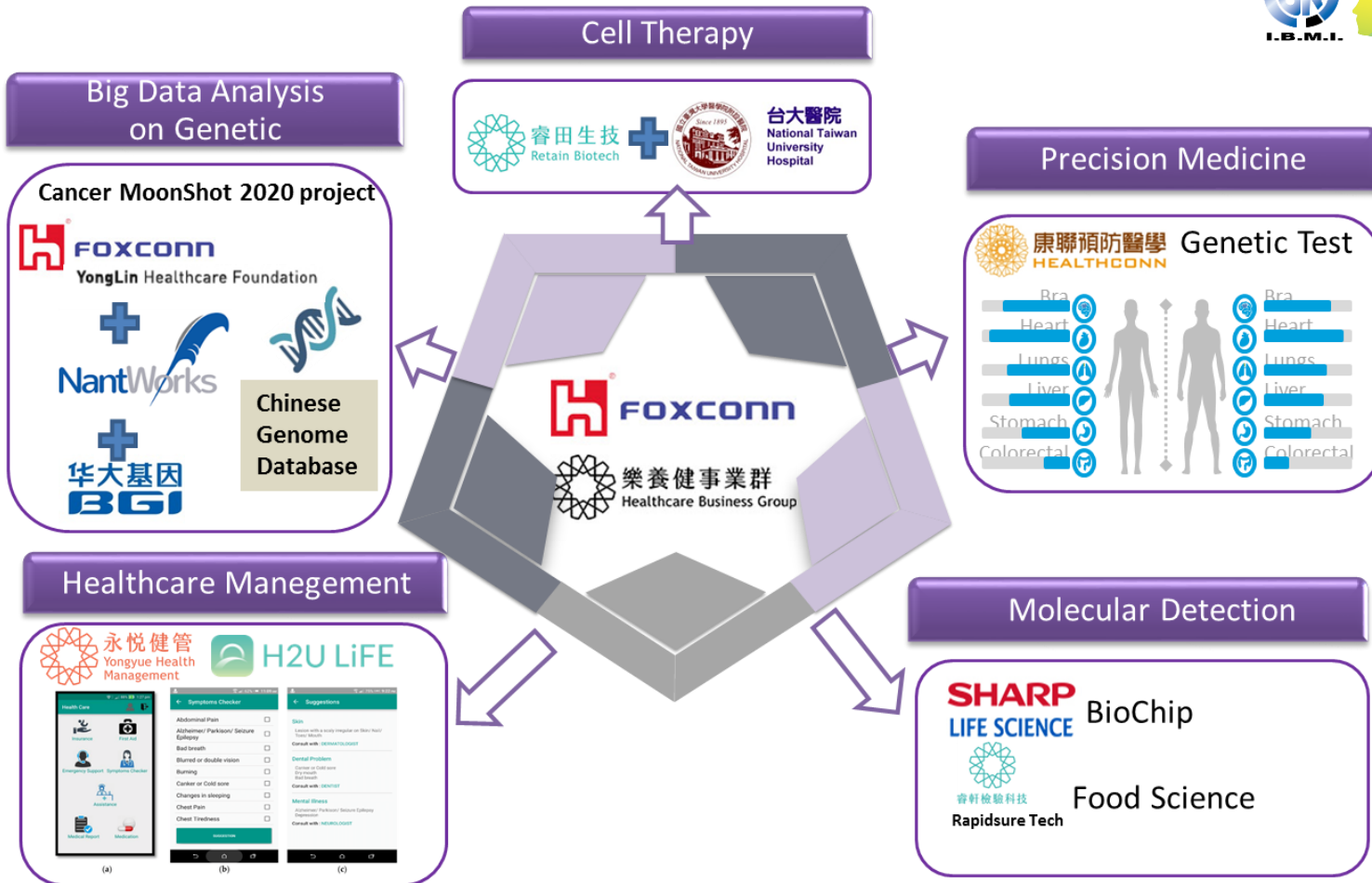


One of leader in power and  
thermal management solutions  
in the world



中華電信  
Chunghwa Telecom

One of the Largest  
Telecommunications Services  
Taiwan

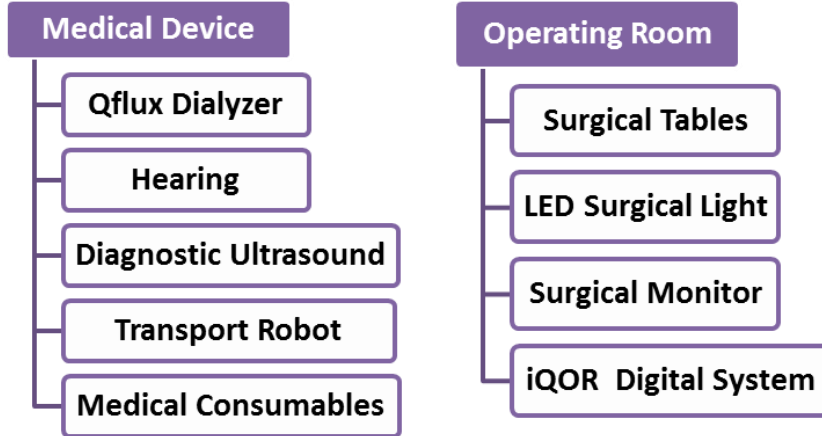




Qisda



## Featured Products



## Solutions

Smart Operation Room



ODM / OEM of  
Medical Device

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## Other Smart Healthcare Solutions

Fitness System

Smart Wearables

Smart Ward

Health Management System

Long-Term Care Monitoring Solution



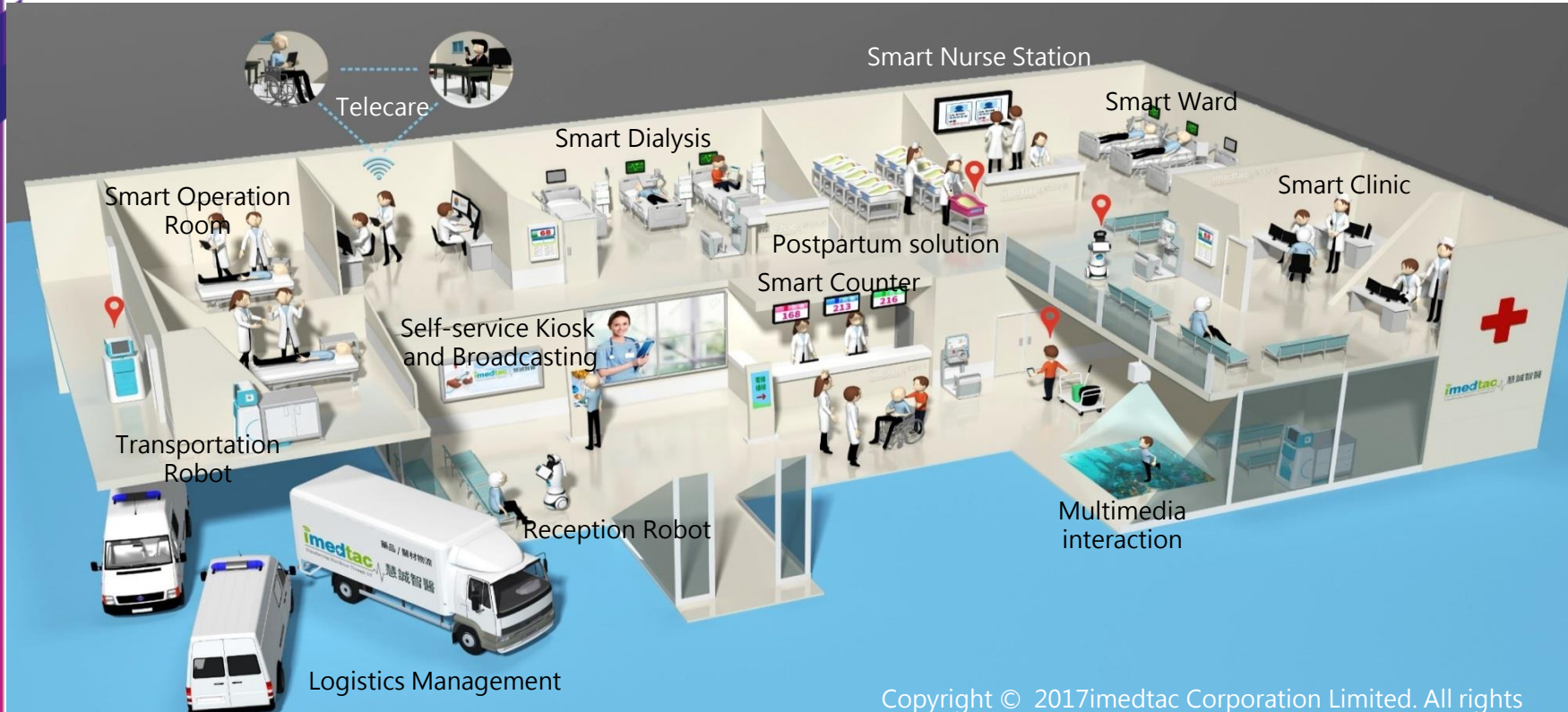
# Taiwan leading hospitals are expanding their productivity from building smart hospital...



## 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

## Modularized IoT for Hospital and Healthcare Application



- ❑ Taiwan has become the most important exporting Smart Hospital Solution country in Asia.
  
- ❑ Offer total solutions to assist Asia countries to build smart hospitals or improve hospital management effectiveness
  - China
  - Malaysia
  - Thailand
  - Vietnam
  - Indonesia
  
- ❑ Welcome European medical software industries collaboration with Taiwan to explore Asia Healthcare market.

# Europe and Taiwan both have excellent capabilities in medical care and technology



## Advantage:

- Manufacturing
- Investment opportunity
- Clinical Trail

## Advantage:

- Comprehensive investment environment
- Global Bio Industry Brands
- Innovate Medical solutions

# *Europe and Taiwan both have excellent capabilities in medical care and technology*

## *Collaboration and Partnership Opportunities*

- ✓ *Smart hospital solutions and digital healthcare technologies*
- ✓ *Pharmaceutical R&D, CDMO*
- ✓ *Health Tech Startup Investment*
- ✓ *Manufacturing Collaboration for innovative medical devices*

A ONLINE PORTAL to world-class medical teams and cutting-edge bio companies in Taiwan. <https://www.taiwan-healthcare.org/>

## Medic-All<sup>+</sup> Taiwan Healthcare<sup>+</sup>

**For patients:** We provide high-quality of medical services, such as liver transplantation, craniofacial surgery, IVF, etc.

**For medical professionals:** We provide hospital collaboration projects, including medical & clinical partnership and hospital management.

## Bio B2B<sup>+</sup> Taiwan Healthcare<sup>+</sup>

**Bio B2B** is designed for **bio-business professionals** to find value-added partnerships in Taiwan in fields ranging from APIs, pharmaceuticals, and medical devices, to bio-agricultural and health supplement companies.

*Bring together & Link together!*



2019

Healthcare<sup>+</sup>  
EXPO · TAIWAN



Institute for Biotechnology  
and Medicine Industry



Research Center for Biotechnology  
and Medicine Policy

## Global platform for real connections





# 2019

## Healthcare

EXPO · TAIWAN

### 2019 MEDTEX Summit Asia- Global Initiatives, Opportunities and Go-To-Market Strategies (Recap)

173,705+

Visitor Counts

(1F 82,851; 4F 90,854)

Expo Recap ▶

23,600+

Professionals

2,800+

International Professionals

International Delegations



28 Industry Association



52 Hospital & Medical Institutes

1200+ Attendees

MED  
TEX Med x Tech Summit Asia

12

Medical Conferences



# Healthcare<sup>®</sup>

## EXPO · TAIWAN 2020.12.03-12.06

台北南港展覽館二館



**MEDTEX  
Summit Asia**



International Hospital  
Leadership conference



B2B  
Partnering



Roadshow



Procurement  
matchmaking

Uninterrupted healthcare supply chains- from R&D,  
design to manufacturing



主辦單位



財團法人  
生技醫療科技政策研究中心  
Research Center for Biotechnology and Medicine Policy



社團法人  
國家生技醫療產業策進會  
Institute for Biotechnology and Medicine Industry



衛生福利部  
Ministry of Health and Welfare



中華民國經濟部  
Ministry of Economic Affairs, R.O.C.

MOST 科技部  
Ministry of Science and Technology

行政院農業委員會  
COUNCIL OF AGRICULTURE, EXECUTIVE YUAN

臺北市府  
TAIPEI Taipei City Government