



台灣健康產業未來發展趨勢

錢宗良

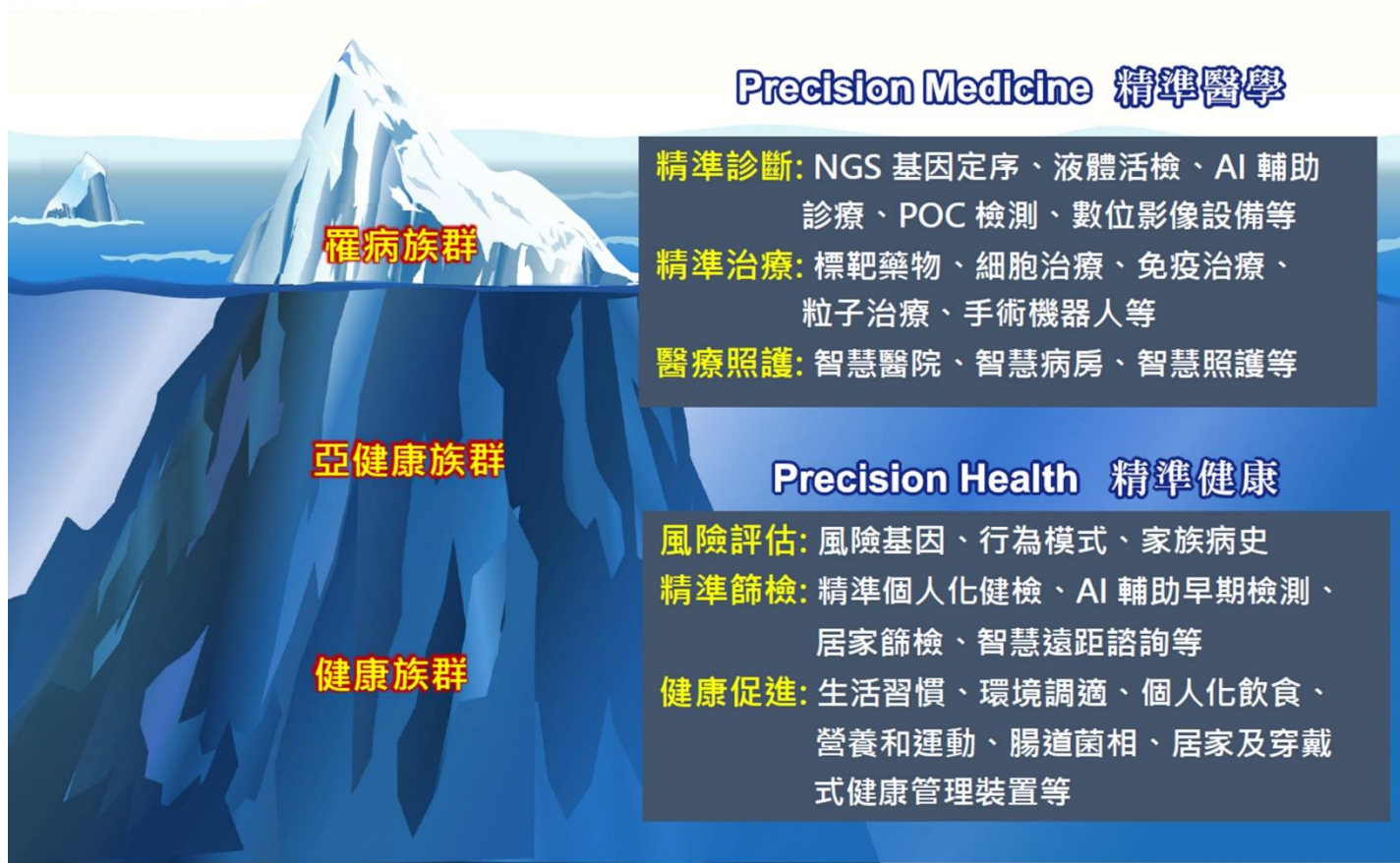
Chung-Liang Chien, Ph.D.

Professor, College of Medicine, National Taiwan University
CEO, Institute for Biotechnology and Medicine Industry

上課大綱

1. 精準健康與精準醫學
2. 臺灣精準健康產業：資通訊＋生醫產業
3. 國際行銷臺灣健康產業：生策會的任務
4. 簡介精準健康產業跨領域人才培育計畫

精準醫學與精準健康： 誰是未來大健康產業的藍海？



Precision Medicine 精準醫學

精準診斷: NGS 基因定序、液體活檢、AI 輔助
診療、POC 檢測、數位影像設備等

精準治療: 標靶藥物、細胞治療、免疫治療、
粒子治療、手術機器人等

醫療照護: 智慧醫院、智慧病房、智慧照護等

Precision Health 精準健康

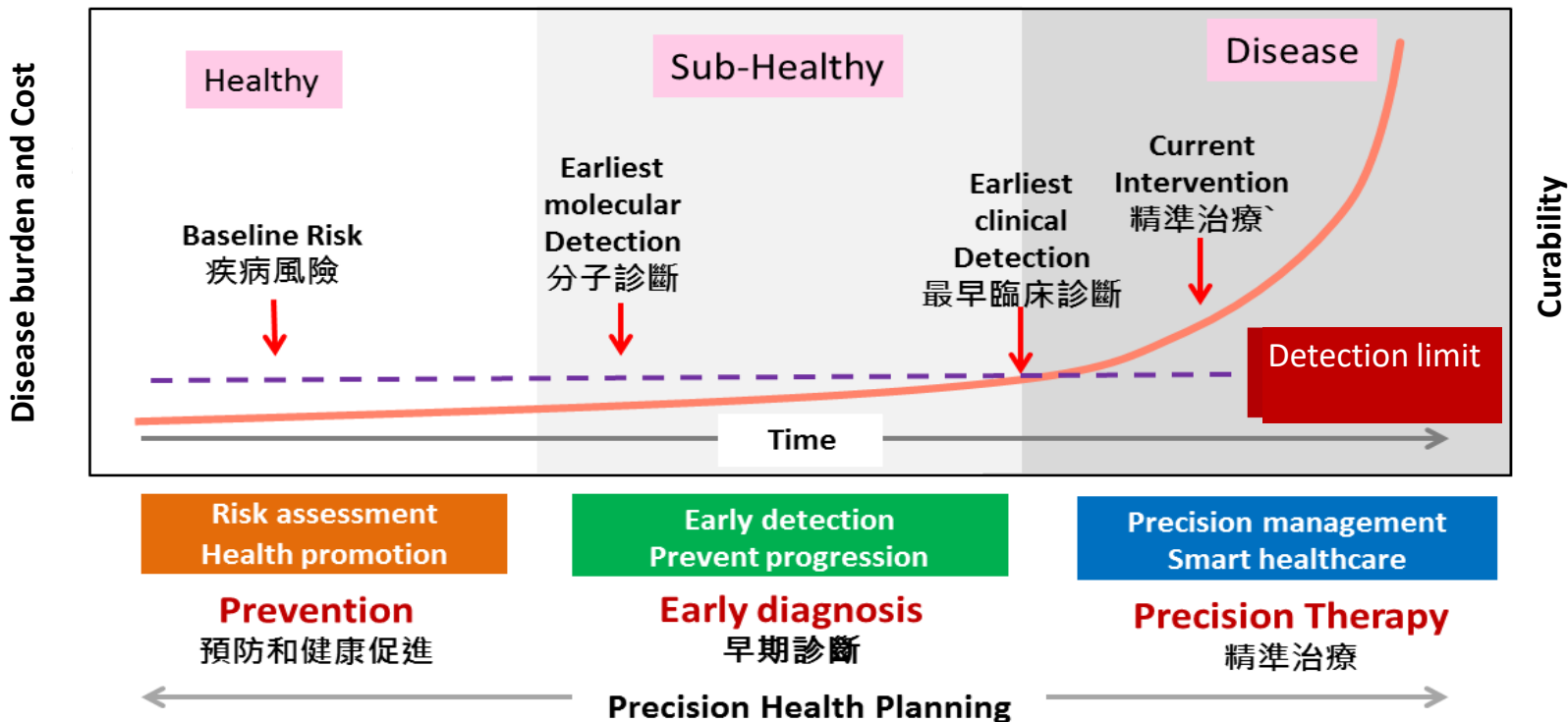
風險評估: 風險基因、行為模式、家族病史

精準篩檢: 精準個人化健檢、AI 輔助早期檢測、
居家篩檢、智慧遠距諮詢等

健康促進: 生活習慣、環境調適、個人化飲食、
營養和運動、腸道菌相、居家及穿戴
式健康管理裝置等

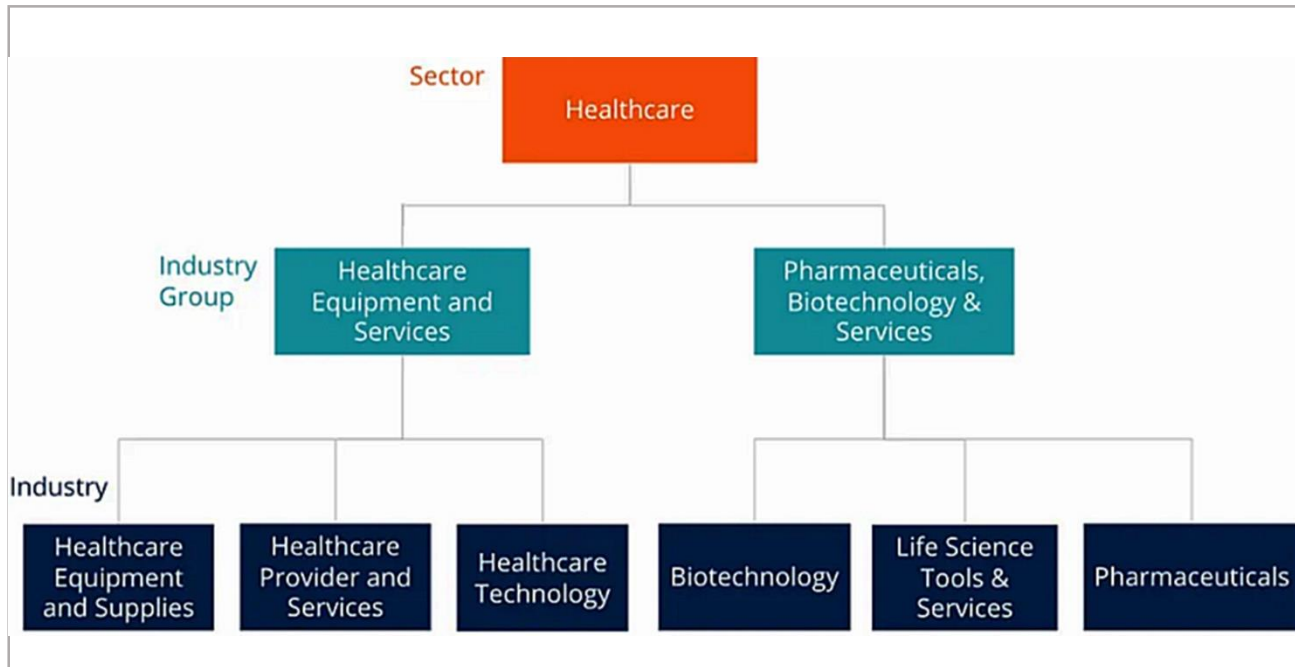
Healthcare from disease treatment to prevention

- Healthcare nowadays provides individuals with products and services ranging from prevention, health promotion, diagnosis to treatment.



Healthcare sector by GICS definition

- ❑ The healthcare sector includes the following subsections, as per Global Industry Classification Standard (GICS)

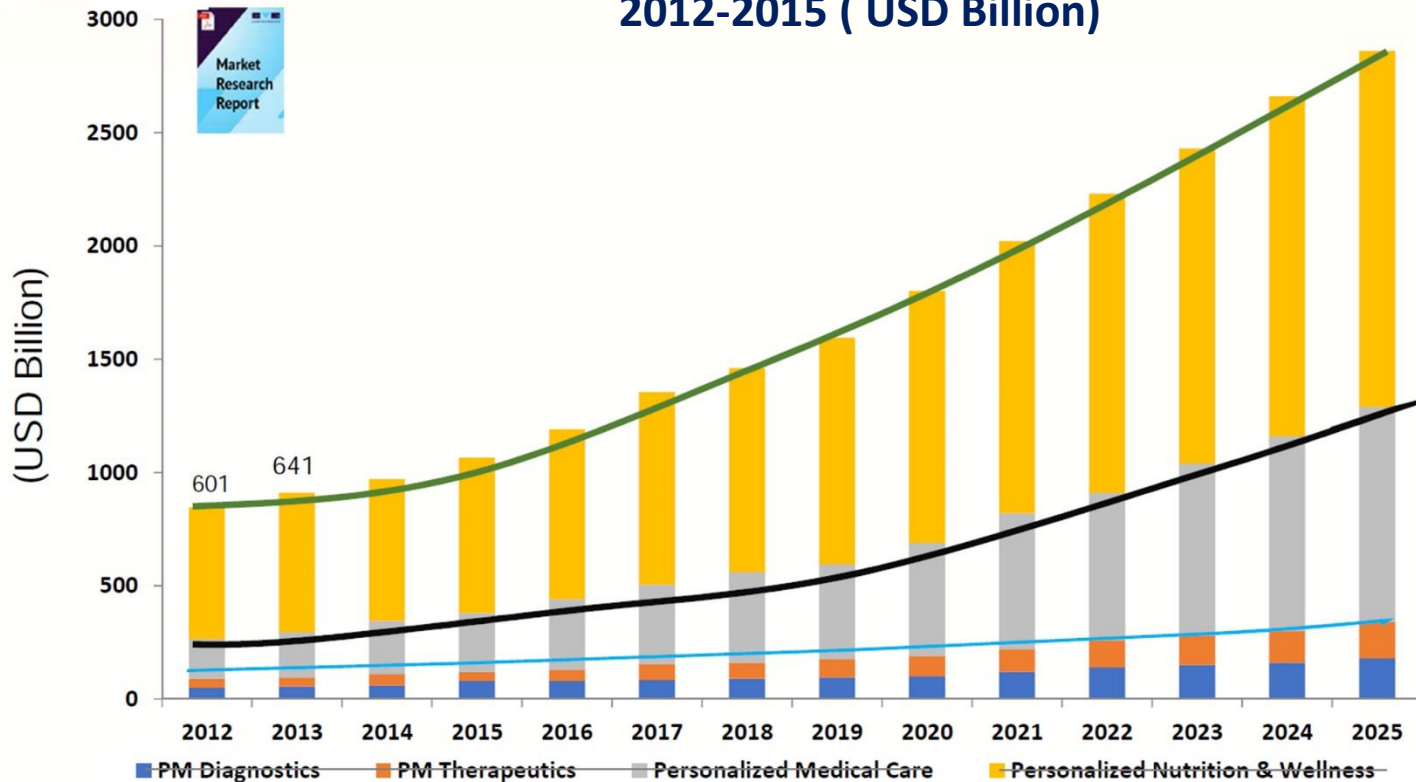


Global Markets:

- International Healthcare
- Bio-pharmaceutical
- Medical device
- Regenerative medicine
- Smart health
- Precision medicine
- Sports medicine

Global Precision Healthcare Market 精準健康產業之市場預測

2012-2015 (USD Billion)

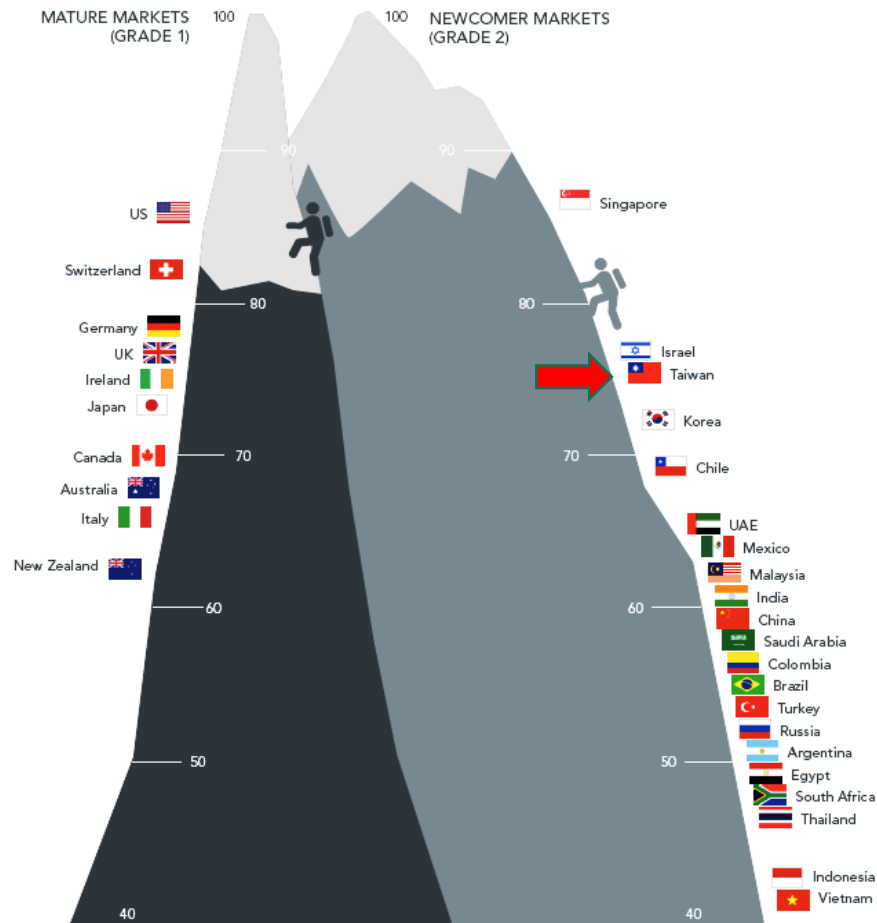


精準醫療

健康福祉

Taiwan Core Competences

- Taiwan ranks 3rd in the newcomer markets
- World-class quality of medicine and talent
- The best healthcare system and big data
- High quality clinical trials and R&D capacity
- Well-established research infrastructure
- ICT supply chain, talent and manufacturing
- AI and 5G R&D in national level



Source compiled by IBMI, RBMP (2021)

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)
- ❖ Good accessibility-The NHI has a very high approval rate among Taiwanese people



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.
- ❖ shorter wait times for beds in large hospitals and medical centers



World-class Health Database

- ❖ National Health Insurance Research Database has been collected for more than 25 years (Since 1995).
- ❖ 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



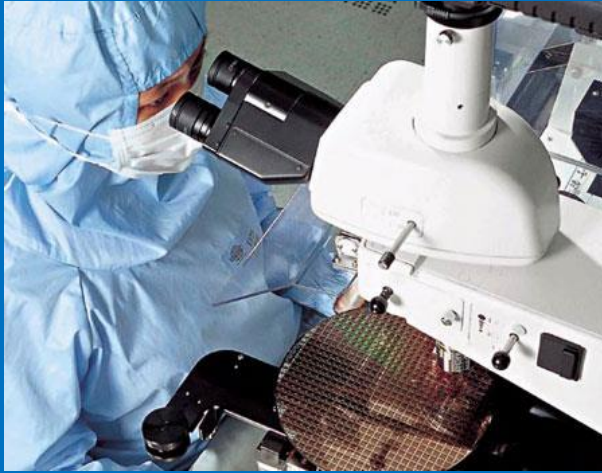
Strong ICT manufacturing capabilities

- ❖ 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



ICT



Hospital



Smart Hospital



Healthcare IoT
Platform



Health AI



Medical &
Wearable Devices



Hospital
Equipment

Taiwan's ICT Sector in Healthcare

Precision Healthcare Industry

	Mobile health	Medical equipment	Smart hospital	Gene/cell therapy	Biomedicine	
Companies						
Product pipelines	<ul style="list-style-type: none"> ■ Tele-healthcare ■ IoT solutions ■ Wearables ■ Health management 	<ul style="list-style-type: none"> ■ X ray/ultrasound ■ Micro CT ■ Surgical robots ■ Capsule endoscopy ■ Hemodialyzer ■ Pathology/AI Image ■ Vital sign monitor 	<ul style="list-style-type: none"> ■ Smart ward/operating room ■ Surgical VR ■ AI solution ■ HMS ■ EMR / EHR ■ Medical display 	<ul style="list-style-type: none"> ■ DNA sequencer ■ DNA microarray ■ Protein & genetic testing ■ CTC system ■ Cellular therapy 	<ul style="list-style-type: none"> ■ AI chip ■ Biochip for gene sequencing ■ RF & Wireless chip ■ Biosensor ■ Display component ■ Organic semiconductor 	
Areas of application						

Cross-industry cooperation at a glance



- 1) AI medical platform
- 2) Telemedicine / remote care
- 3) AI-assisted arrhythmia diagnosis
- 4) AIoT device/equipment



- 1) Genome database for Chinese
- 2) Medical wearables
- 3) Epidemic management products
- 4) Proton therapy / 8K medical imaging



- 1) Innovative devices / AI diagnostics
- 2) Health & chronic disease management
- 3) Medical imaging for animals
- 4) Cell therapy / AIoT solutions



- 1) Miniaturization of medical equipment
- 2) Exoskeleton / assistive devices
- 3) AI dialysis / medical AI imaging
- 4) Digital pathology / health management

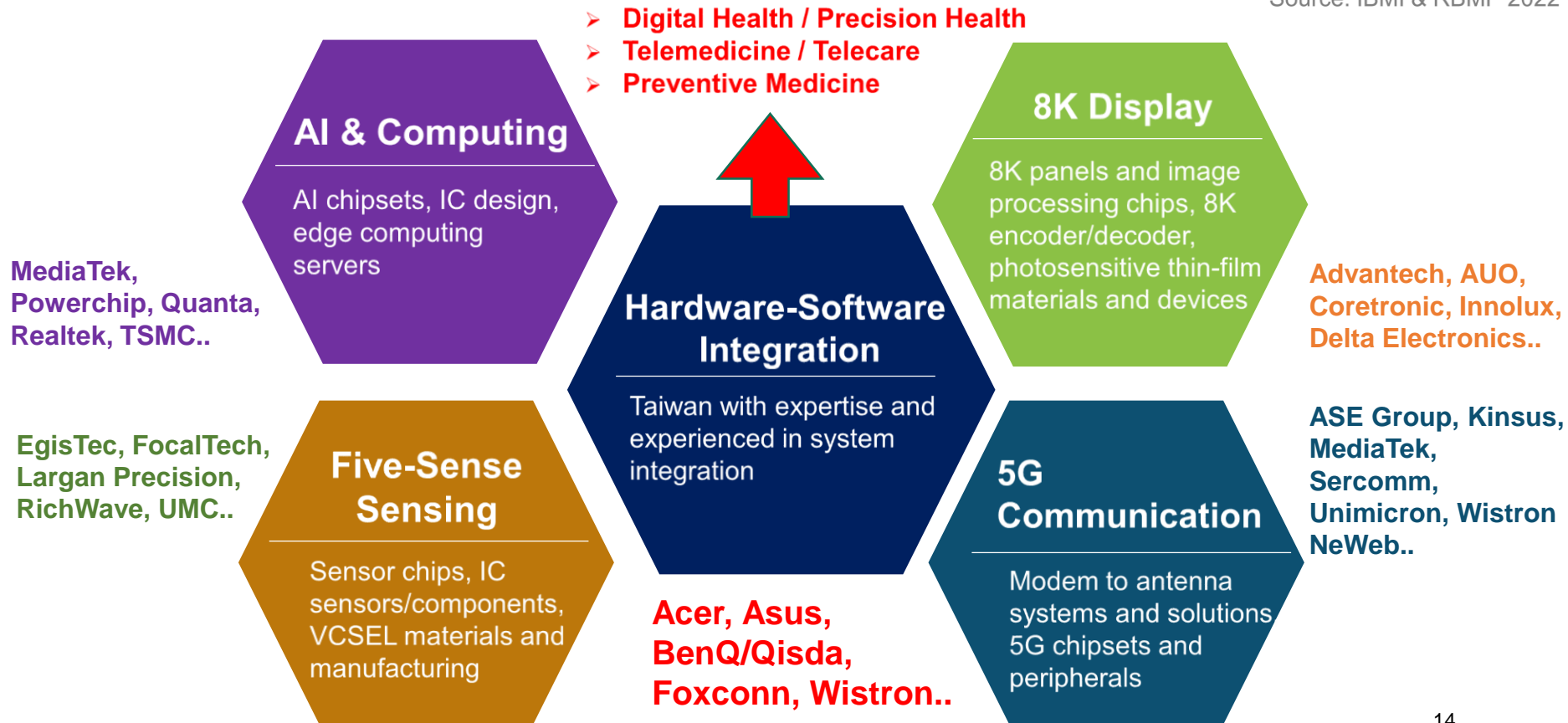


- 1) Telehealth / IoT products
- 2) Auto detection of CTC
- 3) Data integration of sports health
- 4) AI-assisted detection of disease

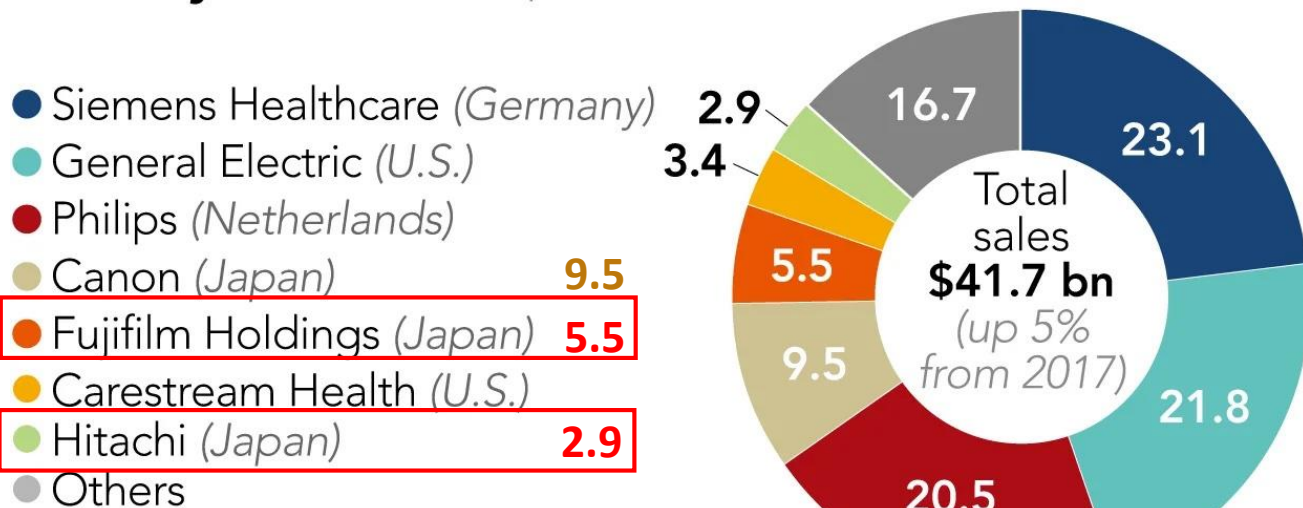
Taiwan Industry Overview

Market Players and Focus Areas

Source: IBMI & RBMP 2022



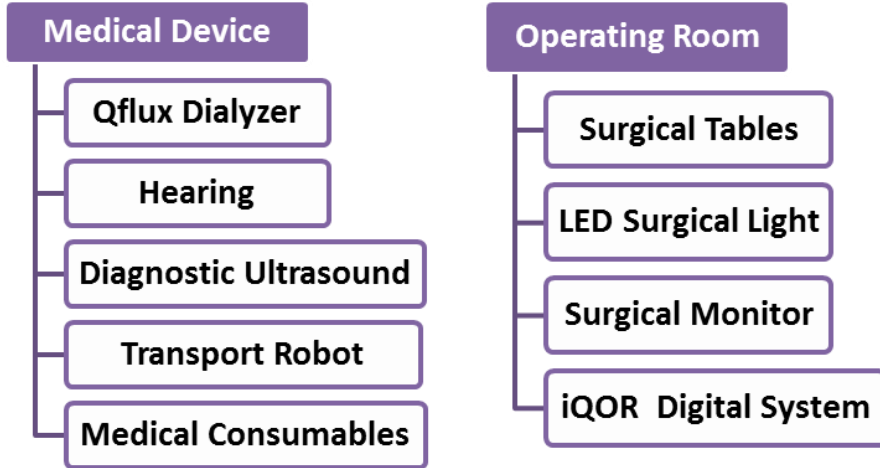
Diagnostic imaging equipment global market share by sales (2018, in percent)



Source: Evaluate **8.4+ 9.5 =17.9 (Japan)**

2月18日，富士表示：「兩家企業合併後，會將各自影像處理和人工智慧軟體和日立超音波、MRI 結合，**打包販售給醫療機構**。」 **To provide the total solution!**

Featured Products



Solutions

Smart Operation Room



ODM / OEM of Medical Device

Other Smart Healthcare Solutions

Fitness System

Smart Wearables

Smart Ward

Health Management System

Long-Term Care Monitoring Solution

Featured Products

Medical Carts



Medical Computers



Medical Tablets



Medical Monitor

Surgical Monitor

Diagnostic Monitor

Clinical Monitor

Intelligent Power System

Medical Power Storage System

Smart Battery Kit

Intelligent Power Storage System



Smart Hospital Solutions

Medical Workstation

Smart Ward

Smart Clinic

Smart Nurse Station

Medication Administration

Telehealth Applications

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



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



Smart Ward: Beside Infotainment System

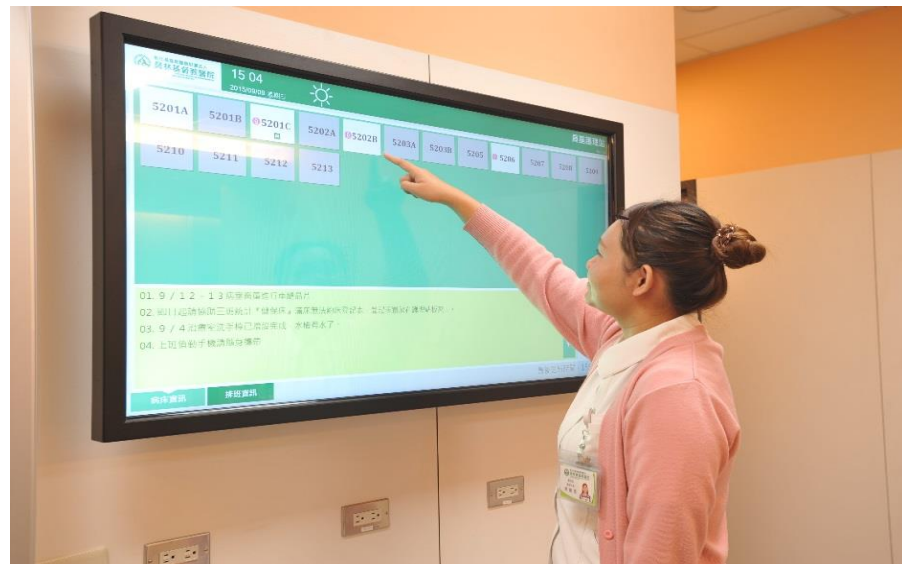
- ◆ Interactive environment
- ◆ Disclosure real-time information
- ◆ Treatment schedule



Smart Nurse Station: Nursing Dashboard

Improvement Nurse Care Quality and Work Flow

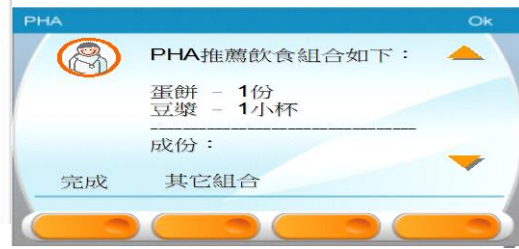
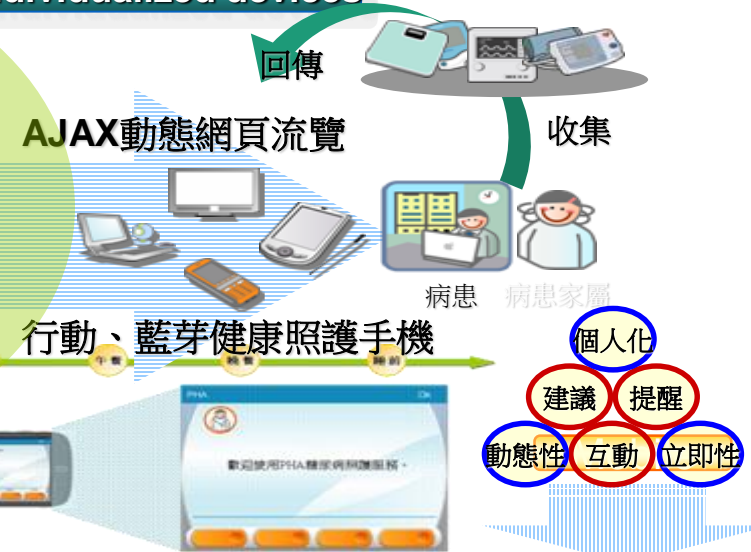
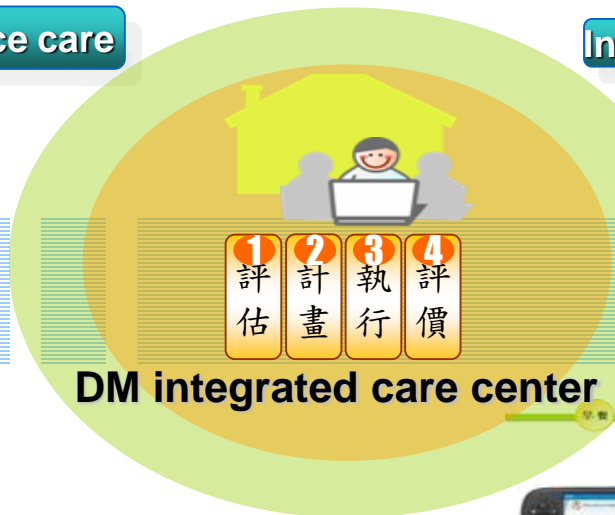
1. No paper works
2. Real time nursing shifting
3. Real time patient information (location, activity, schedule)
4. Pre-alarm system



Telecare: Diabetes Integrated Health Care Center

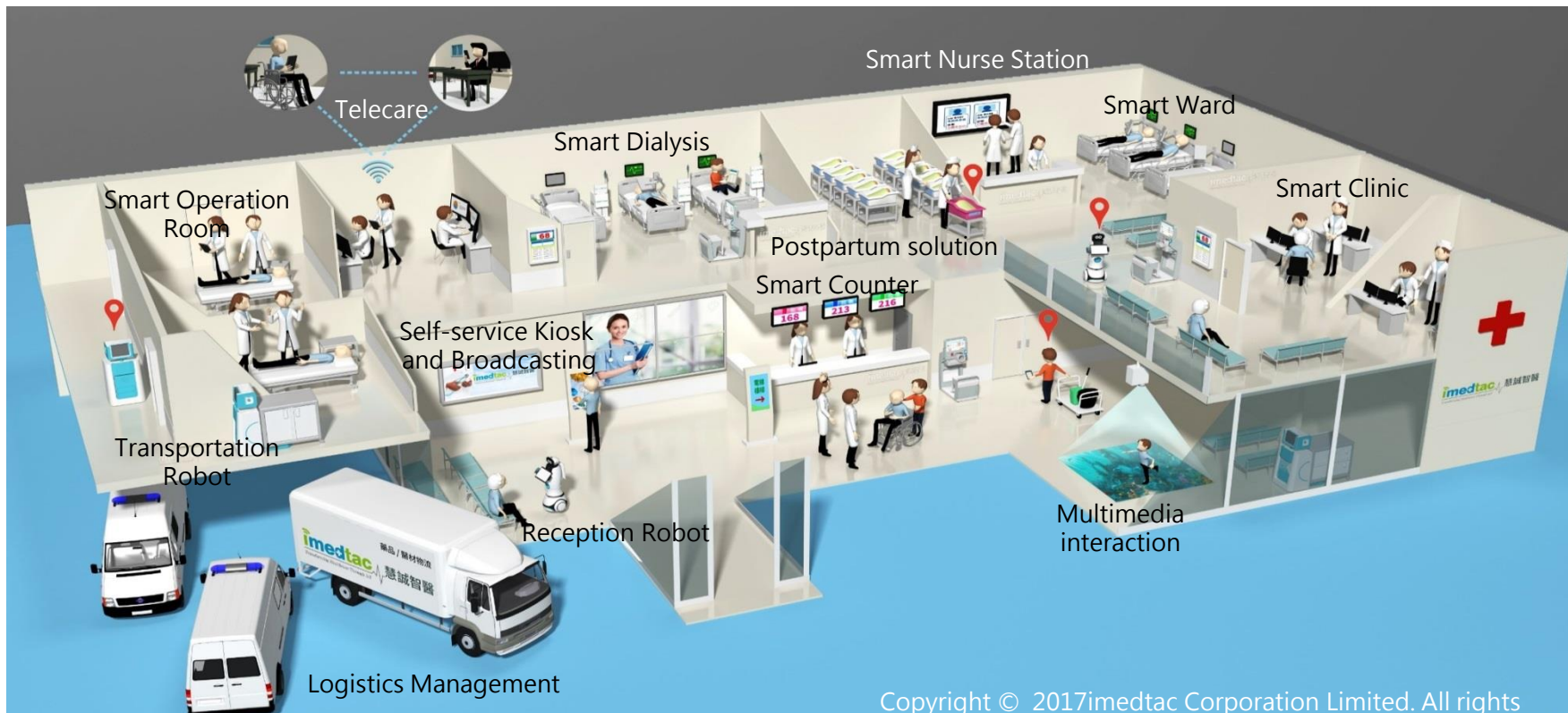
Hospital visit / Long-distance care

Individualized devices



Integrated Solutions in Smart Hospital

Modularized IoT for Hospital and Healthcare Application



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社團法人國家生技醫療產業策進會 (IBMI)

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.

380
Core Members

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

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

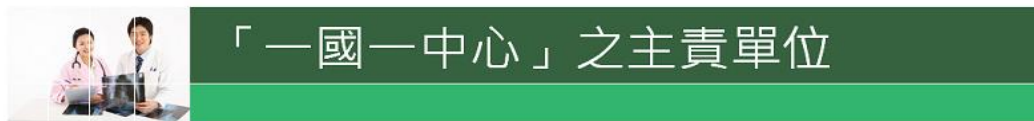
- Symbol of National Quality (SNQ) accreditation & certification
- National Innovation Awards

Startup Incubation

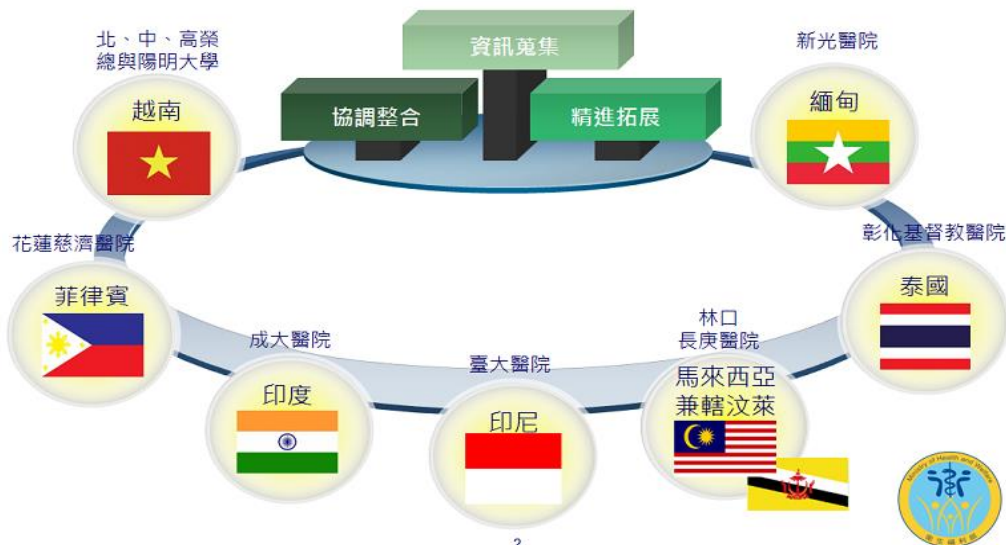
- Allied with 36 Universities & Research Institutes
- Startup Angel investment

- ❑ Taiwan 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.

- Thailand (彰基)
- Malaysia (長庚)
- India (成大)
- Vietnam (榮總)
- Indonesia (台大)
- Philippine (慈濟)



透過委託具醫學中心量能之機構，在當地執行一國一中心計畫。





《主責新南向政策醫衛產業供應鏈工作小組》 醫衛產業合作搭橋



台灣利基醫衛產業鏈

數位醫療

企業

產品

- ✓ 遠距照護系統
- ✓ IoT設備/維修
- ✓ 穿戴式裝置
- ✓ 健康數據監測分析與管理系統

醫材設備

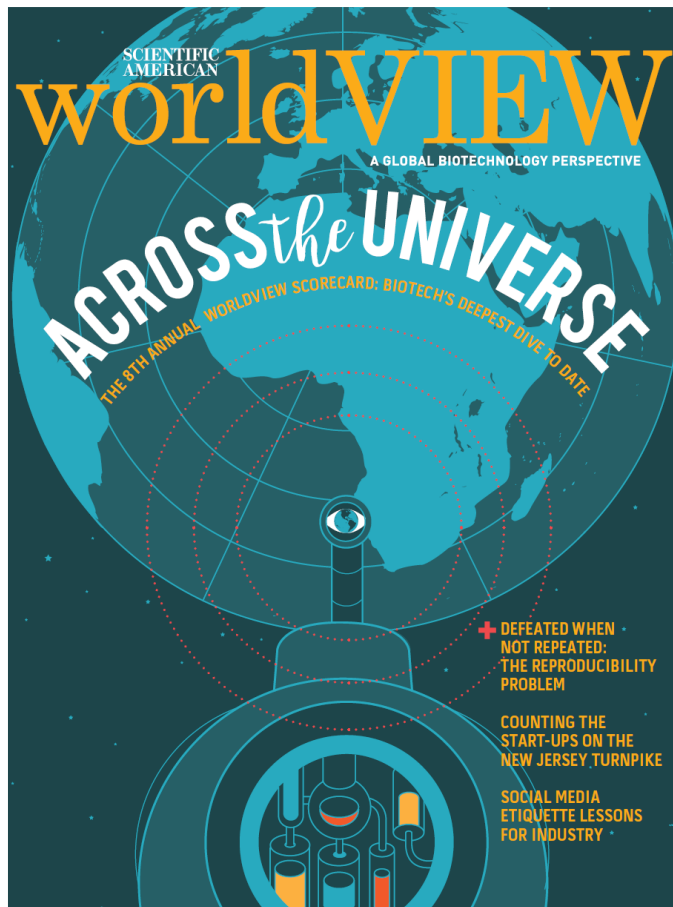
- ✓ 血液透析器
- ✓ 微型電腦斷層
- ✓ X光/超音波
- ✓ 生理監測設備
- ✓ 膠囊內視鏡

細胞治療

- ✓ CTC檢測系統
- ✓ 細胞療法
- ✓ 基因定序及晶片
- ✓ 蛋白質與基因檢測

精準檢測

- ✓ AI晶片
- ✓ 有機半導體元件
- ✓ 影像顯示元件
- ✓ 體徵訊號量測感應器



2016 & 2020 Scientific American

WORLDVIEW SCORECARD

-  PRODUCTIVITY
-  IP PROTECTION
-  INTENSITY
-  ENTERPRISE SUPPORT
-  EDUCATION/WORKFORCE
-  FOUNDATIONS
-  POLICY & STABILITY



Enhanced with a new guidebook and region-specific ratings, the 2016 Scorecard ventures deeper than ever to track down the latest in biotech innovation

Taiwan,

Country Rank
23 / 54

2020

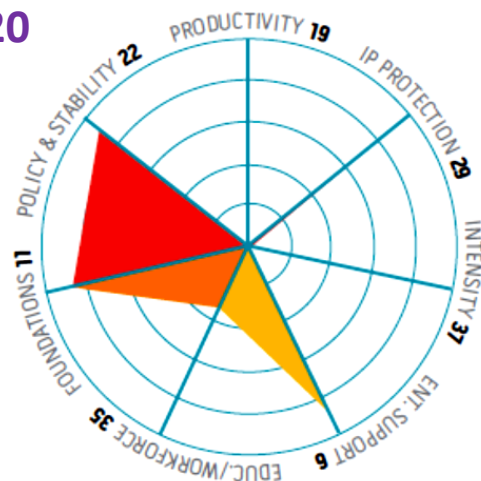
SAWV SC rank: 23

Population: 23,359,928

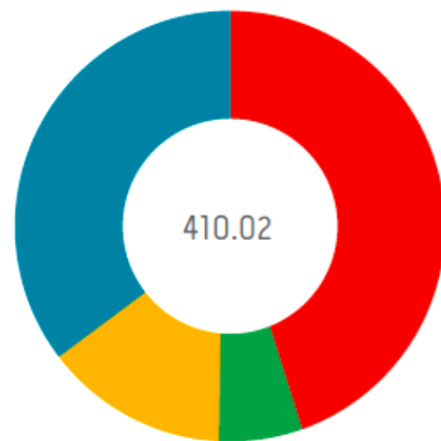
GDP: 489

R&D/GDP: 0

With an overall average of 22.4 on the SC, Taiwan's ranking of 23rd in 2016 is just about on par, and it performs even better on the *Nature Index 2015 Global*, with an 18th place overall ranking and its National Taiwan University landing in the top 100. Moreover, Taiwan advertises its biotechnology capabilities through international events, including BioTaiwan 2016. This will be the 14th annual event, and it will include presentations from companies around the world, as well as one-on-one partnering, seminars and workshops. A large exhibition is also expected, including more than 1,200 booths from 600 companies. On



August 20, 2015, *Taiwan Today* reported, "A wide-ranging development plan targeting Taiwan's biotechnology-based economy is set to kick off next year, according to Premier Mao Chi-kuo." The report continued: "Focusing on agriculture, biomedicine, food, health care and medical instruments, the 10 year initiative will potentially expand the scale of the local bioeconomy to



NT\$4 trillion (US\$123.2 billion) in 2026." With respectable scores on the SC's Foundations and Enterprise Support categories, Taiwan's commitment to innovation is clear. Like many other countries, however, Taiwan's Education/Workforce category shows room for improvement.

2016 Scientific American Worldview -A Global Biotechnology Perspective

Asian Countries' Performance

Country	Global Ranking	Productivity	IP Protection	Intensity	Enterprise Support	Education/ Workforce	Foundations	Policy & Stability
Singapore	2	---	8.3	3.8	9.2	4.5	6.6	9.6
Hong Kong	11	0.0	7.1	1.6	8.6	1.6	6.7	9.0
Japan	15	0.1	9.2	0.6	4.5	3.6	7.9	8.0
Taiwan (Score/Rank)	23	0.0/19	5.8/29	0.1/37	7.0/6	2.6/35	6.9/11	7.2/22
South Korea	24	---	5.6	0.6	4.8	3.9	8.3	6.3
Malaysia	27	---	5.5	1.1	8.0	2.1	4.9	5.9
China	41	0.1	4.7	0.6	4.5	1.3	4.0	2.9
Thailand	45	---	2.3	3.0	3.4	2.7	3.0	1.8
India	49	0.0	4.3	0.8	3.5	0.2	1.6	2.0

Source: 2016 Scientific American Worldview

CATEGORY QUICK GUIDE

#1 PRODUCTIVITY *Publicly traded biotechnology companies and output*

- 1.1 Public company revenues (US\$m)
- 1.2 Public companies

#2 IP PROTECTION *Quantitative and qualitative intellectual property protection*

- 2.1 Patent strength
- 2.2 Perceived IP protection

#3 INTENSITY *Effort in biotechnology innovation*

- 3.1 Public companies / million population
- 3.2 Public company employees / capita
- 3.3 Public company revenues / \$B GDP
- 3.4 Biotech patents / total patents filed with PCT
- 3.5 Value added of knowledge- and technology-intensive industries
- 3.6 Business expenditures on biotechnology R&D

#4 ENTERPRISE SUPPORT *Business environment and capital availability*

- 4.1 Business friendly environment (higher = better)
- 4.2 Biotech VC, 2007 (\$mm)
- 4.3 VC availability
- 4.4 Capital availability

#5 EDUCATION/WORKFORCE *People trained in biotechnology*

- 5.1 Post-secondary science graduates / capita
- 5.2 Ph.D. graduates in life sciences per million population
- 5.3 R&D personnel per thousand employment
- 5.4 Talent retention (reciprocal of brain drain)
- 5.5 Brain gain (share of global students studying outside their country)

#6 FOUNDATIONS *Infrastructure and R&D drivers*

- 6.1 Business expenditures on R&D (% of GDP)
- 6.2 Gross domestic expenditure on R&D (% of GDP)
- 6.3 Infrastructure quality (roads, ports, electricity, etc.)
- 6.4 Entrepreneurship and opportunity

#7 POLICY & STABILITY *Government control*

- 7.1 Political stability and absence of violence/terrorism
- 7.2 Government effectiveness
- 7.3 Regulatory quality
- 7.4 Rule of law



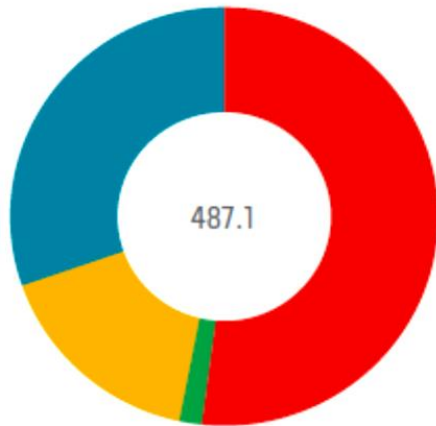
Singapore

SAWV SC rank: 2
 Population: 5,567,301
 GDP: 298
 R&D/GDP: 2

Singapore can boast a top 10 finish throughout the SC's history, and a top five finish in every year except 2011. It also scores well on other measurements: 15th for output in the *Nature Index 2015 Global*, with more than half of the publications in chemistry; and fifth on the 2015 BCI index, which stated: "Singapore has relatively strong

capabilities in R&D and manufacturing, with most of the necessary regulatory frameworks and safeguards in place and in line with international best practices." In part, ongoing investment in science and technology explains Singapore's high ranking. On January 12, 2016, for example, *ScienceInsider* reported, "The government of Singapore has announced that it plans to spend [US\$13.2 billion] on research and development between 2016 and 2020." In addition, the National University of Singapore opened a US\$25 million synthetic biology center on September 30, 2015. Other news reveals the allure of Singapore as an international leader in science. For instance, Rockefeller University plant molecular biologist Nam-Hai Chua announced plans to move his research—exploring plant RNA's impact on drought tolerance—to Singapore's Temasek Life Sciences Laboratory. Indeed, Singapore is a go-to country for biotechnology research, as well as for R&D in general.

Country Rank
 2 / 54
 2020



In part, ongoing investment in science and technology explains Singapore's high ranking.

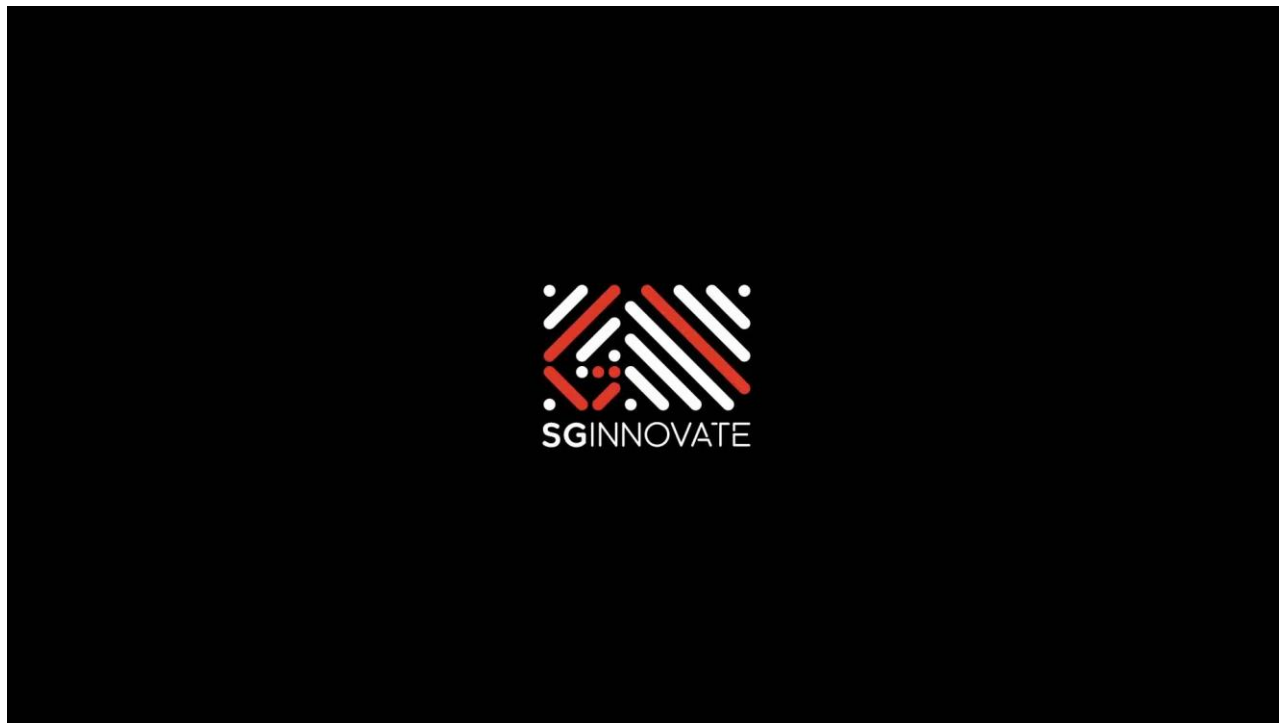
The top-ranked countries in *Government effectiveness* are [Singapore](#), [Switzerland](#), and [Finland](#).

新加坡：非常積極推動生技產業國際鏈結，已成功扮演亞太地區領頭羊的角色。針對國際華人健康市場之拓展，臺灣是可以嘗試與新加坡合作，創造雙贏的機會。

The top-ranked countries in *Regulatory quality* are [Singapore](#), [Australia](#), [Canada](#), [Finland](#), [Hong Kong](#), [New Zealand](#), and the [United Kingdom](#). Source data from *Scientific American Worldview* (<http://www.saworldview.com>)



2019年5月23日新加坡
Medtech Connect 論壇



SGInnovate interview: <https://youtu.be/3ktQSyfe7n0>

India

Country Rank

49 / 54

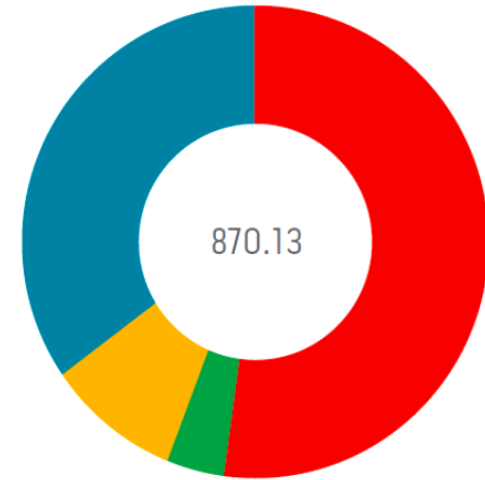
SAVV SC rank: 49

Population: 1,236,344,631 2020

GDP: 1,877

R&D/GDP: 0.82

Effort alone equated with success in biotechnology, India might top the SC and other indices. At the end of 2015, India released a new National Biotechnology Development Strategy, and some of its key goals included generating biotechnology products, increasing bio-manufacturing and producing biofuels. In fact, Shell India Markets plans to build a biofuel plant in Bangalore. Its 13th place ranking on the *Nature Index 2015 Global* suggests that some of India's efforts are paying off. Also, on January 8, 2016, an online article from *Nature Biotechnology* reported: "Most new companies emerging in the GM field are based in the United States and in Asia,



especially India, whereas public developers of the technology are appearing in India and China." Nonetheless, the 2015 BCI described India as facing a "struggling ability to compete," and noted: "India possesses the foundation and potential for becoming a hub of biopharmaceutical innovation—but currently faces several major structural barriers to moving up

from the bottom ranks in biomedical competitiveness. Local executives particularly noted the presence of major regulatory deficiencies and bottlenecks and very limited coverage of medicines, even with costs driven down. In addition, they highlighted major gaps in India's biopharmaceutical IP protection that render the system overall ineffective."

印度：在國際產業市場佈局上是不容忽視的人口大國，特別是與人密切相關的健康產業。與印度還算友善的臺灣可仿效日本模式，先投資在人才，再拓展未來廣大的市場。

India scored 0.03/10, in *Productivity* which places it 17th of the 54 countries studied. India was tied with [Finland](#) and [Ireland](#) and [Taiwan](#).

India scored 0.77/10, in *Intensity* which places it 26th of the 54 countries studied. India scored ahead of [China](#) and [Austria](#).

Source data from *Scientific American Worldview* (<http://www.saworldview.com>)



2019年5月14日 參加印度經貿訪問團在Bangalore 的招商活動。並參與竹科管理局在 Bangalore 主辦的 Taiwan-India Medical Cooperation Forum.

印度理工學院海得拉巴校區

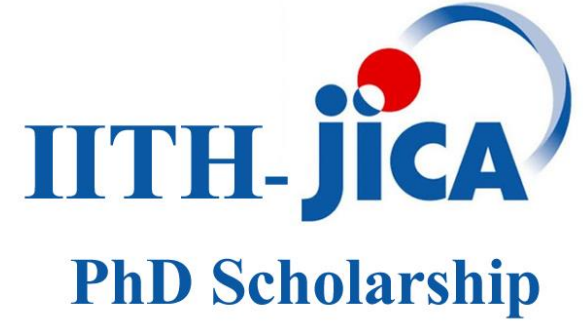
Indian Institute of Technology

Hyderabad is a public technical and research university located in Sangareddy district, Telangana, India.



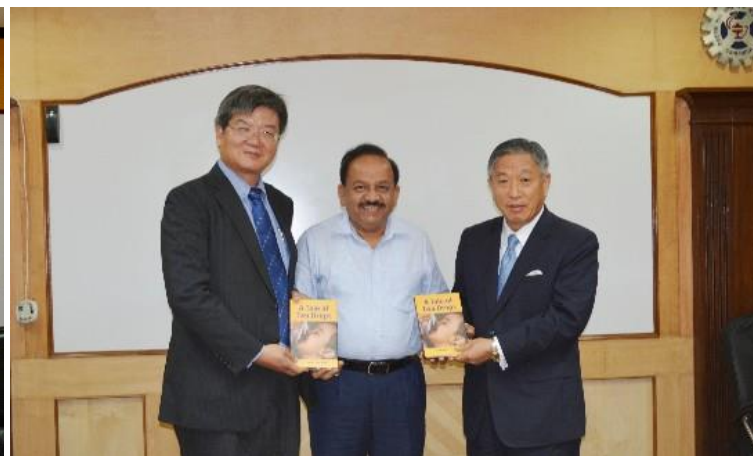
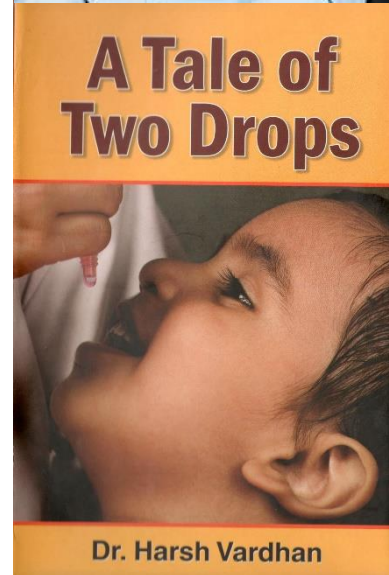
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Japan International Cooperation Agency



Dr. Harsh Vardhan is an Indian [Otorhinolaryngologist](#) and the incumbent **Minister of Health and Family Welfare, Minister of Science and Technology** and **Minister of Earth Sciences**.

Dr. Harsh Vardhan was elected to the office of [Chairperson of Executive Board of the World Health Organization](#) from May 22, 2020.



2015-07-20 科技部錢宗良次長及田中光大大使拜會印度科技部長 Hon. Harsh Vardhan。Hon. Vardhan部長並於會中致贈著作” A Tale of Two Drops”予錢次長及田大使。

Dr. Guljit Chaudhri Chief, Managing Director of Innonation, ABLE (Association of Biotechnology Led Enterprises)

Guljit started her career with international business, strategic alliances including joint ventures and domestic marketing of pharmaceuticals.

India: one of the observers of ICH*.

*The International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH)



2019-05-17 拜訪 Invest Inida, 邀請 Dr. Guljit Chaudhri 來台參加 EXPO



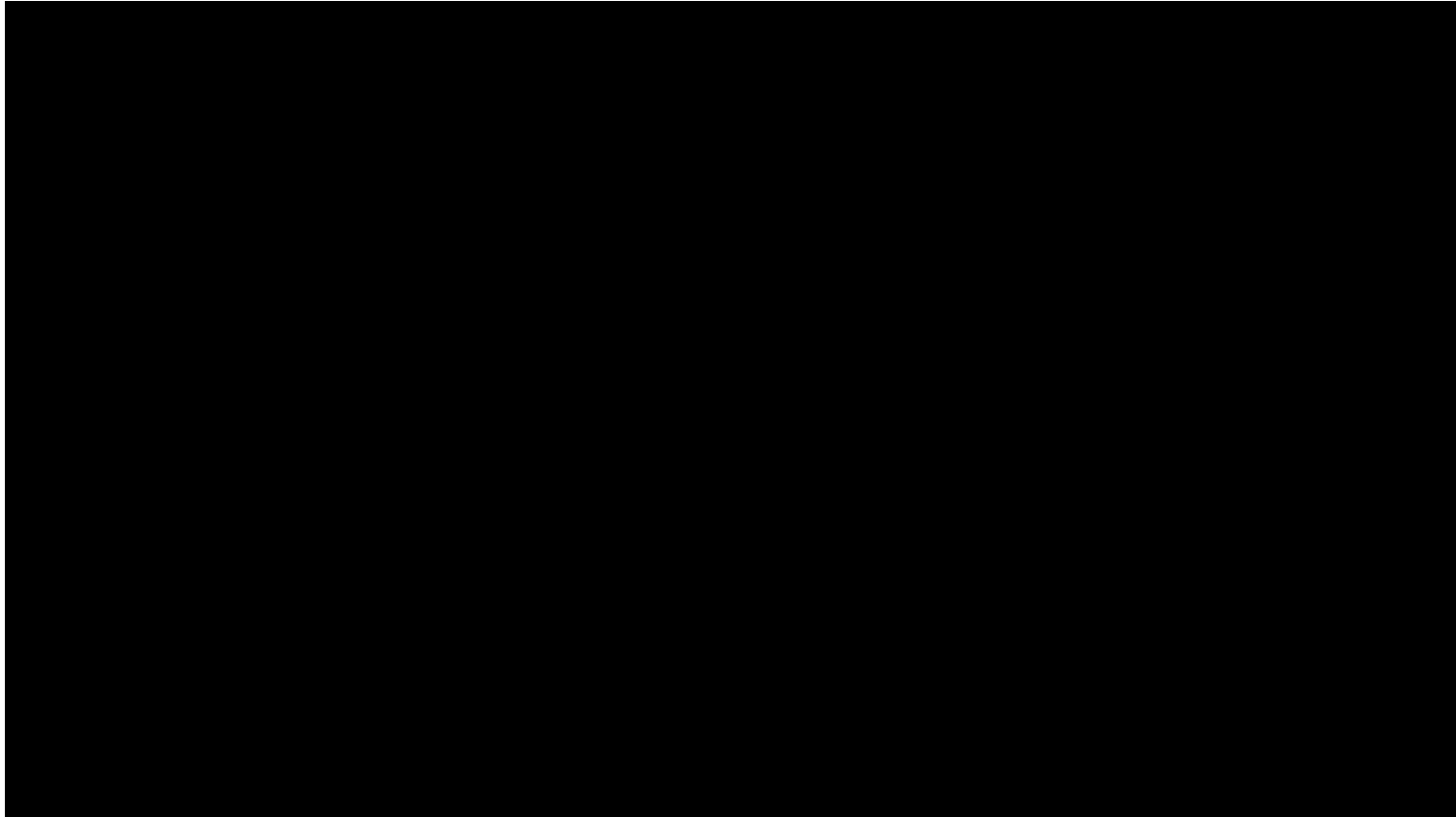
2019-12-05 Dr. Guljit Chaudhri 來台參加 Taiwan Healthcare EXPO

印度在全球仿製藥市場佔據主導地位，2017年/18年度(4-3月)藥品出口規模達到173億美元，包括對美國和歐盟的出口。其中對中國的出口僅佔1%。



2018年7月18日，中國國務院總理李克強就電影《我不是藥神》引發輿論熱議作出批示，要求有關部門加快落實抗癌藥降價保供等相關醫療改革措施。

Taiwan Healthcare Bring together & Link together!



Healthcare[®] EXPO · TAIWAN 台灣醫療科技展

2-5 December 2021, Taipei

台灣醫療AI科技特展

Inno Zone



商務/專業訪客

31,000

- 28% 醫療健康相關服務
- 16% 貿易及投資
- 15% 數位科技/資通訊
- 15% 醫用設備及儀器
- 14% 學術及研究
- 12% 生命科學及其他

2020 Healthcare[®] EXPO · TAIWAN 台灣醫療科技展

全台最大 健康派對

宅健人·動健康大賽 Health x Sport x Gaming



醫師聊健康 名醫黃金陣容健康解惑

健康振興券 健康黑科技最新產品



Read more



2021 台灣醫療科技展 推動醫療科技教育

Healthcare 
EXPO · TAIWAN
台灣醫療科技展

醫學系大學生

- 掌握醫療新科技、前沿新知與趨勢
- 總覽醫療專業與臨床實務科技應用
- 啟發醫療創新與醫學研究思維

- ✓ 課外教學
- ✓ PBL小組主題探討

參與教師：43 位
參與學生：800 位

生醫科系大學/碩博士生

結合教育部「生醫產業與新農業跨領域人才計畫」共同推動

- 了解產業發展現況、趨勢
- 探索跨領域各產業新興醫療科技
- 啟發職涯發展規劃與就業方向

- ✓ 種子教師培訓
- ✓ 學生產業見習

參與教師：154 位
參與學生：3040 位

高中生

首年與台北市教育局合作試辦

- 建立新興醫療大健康產業概念
- 累積多元學習歷程
- 啟發未來學涯方向
- ✓ 主題講座
- ✓ 醫療科技競賽

參與教師：152 位
參與學生：1710 位



教育部生醫產業與新農業跨領域人才培育計畫

Training Program for Interdisciplinary Talents of Biomedicine and New Agriculture

2020台灣醫療科技展-種子教師培訓說明會

針對精準醫學、智慧醫材、健康福祉、精準農業四大領域種子教師導覽培訓

種子教師將協助同學參觀展會，獲得產業見習之機會。

參與種子教師導覽之同學，將獲得主辦單位提供產業見習時數證明

歡迎各領域教師帶領同學參觀台灣醫療科技展！

培訓對象

本計畫各領域推動中心及夥伴學校計畫主持人及各校有興趣之教師

培訓時間

109.11.16 (一) 下午14:00-16:00

培訓地點

臺灣大學醫學院 101講堂 (台北市仁愛路一段一號)

種子教師報名方式 (截止日期11.06)

有完成報名者將獲得主辦單位提供

種子教師導覽手冊及VIP展會導覽證



說明會報名連結

需產業見習時數之同學請洽各校種子教師，由種子教師統一報名，以取得入場參觀證



2020

計畫報名：893人

自由報名：463人

Healthcare[®] 2021.12.02-12.05 EXPO · TAIWAN 台灣醫療科技展



Visit the website for more information!

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Healthcare[®] 2022.12.01-12.04 EXPO · TAIWAN 台灣醫療科技展

Please Book your Calendar for 2022!

精準健康產業跨領域人才培育計畫之延續與前瞻規劃

精準健康產業跨領域人才培育計畫

基礎 → 進階 → 轉譯 → 創新創業 → 就業 → 跨領域就業

1. 產產學跨域
2. 國際鏈結



計畫網站Website

橋接學用落差

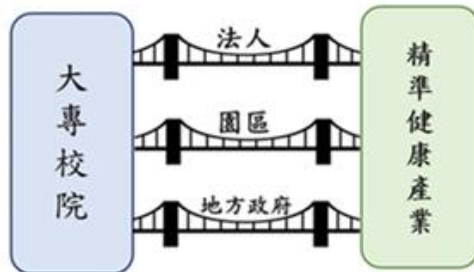
學校與產業間的合作，可透過法人、園區或地方政府之橋樑鏈結，導引學生至產業發展



精準健康產業跨領域人才培育計畫

具跨領域學用專精之人才與人力投入精準健康產業

透過符合產業需求跨領域核心課程、產業見習與實習、或創新創業團隊之養成，培訓學員國際競爭力



「精準健康產業跨領域人才培育計畫」

2022-2025



教育部

資訊及科技教育司

夥伴學校

總計(件)

智慧健康
跨領域

多元農業
跨領域

精準醫學

國際行銷管理與跨域創業
健康大數據智能運用創新領域
標靶藥、疫苗及細胞治療創新領域
精準篩檢、診斷及治療創新領域

國立臺灣
大學

智慧醫材

國際行銷管理與跨域創業
智慧醫院軟硬體系統整合創新領域
生醫感測與資通訊跨領域

國立成
功大學

健康福祉

國際行銷管理與跨域創業
健康促進與宜居環境創新領域
行動健康與照護體系領域
智慧防疫及公衛服務領域

高雄醫
學大學

食品創新

整合輸出國際行銷與跨域創業
精準營養及健康促進創新
食安與品管研發創新領域
食品產業智能化創新領域

國立臺
灣海洋
大學

精準農業

整合輸出國際行銷與跨域創業
機械性資源保育研發創新領域
健康農業與循環經濟創新領域
農林漁牧產業智能化創新領域

國立中
興大學

多元健康

整合輸出國際行銷與跨域創業
動物健康與營養保健領域
健康療癒環境創新產業領域
動植物防檢疫與疫苗研發領域

國立臺
灣大學



規劃 6 大推動中心
每領域 5 所夥伴學校

總計 35 件計畫
補助 20 所學校

	推動中心	夥伴學校	總計(件)
國立臺灣大學	2	2	4
國立臺灣海洋大學	1	2	3
國立中興大學	1	2	3
國立成功大學	1	2	3
高雄醫學大學	1	0	1
臺北醫學大學			3
國立宜蘭大學			2
國立陽明交通大學			2
長庚大學			2
國立屏東科技大學			2
東海大學			1
國立中山大學			1
國立金門大學			1
中原大學			1
國立清華大學			1
義守大學			1
國立嘉義大學			1
國立高雄科技大學			1
輔英科技大學			1
國立澎湖科技大學			1

課後補充資料

<https://expo.taiwan-healthcare.org/zh/>

2021 MEDTEX 亞洲醫療科技創新論壇

https://expo.taiwan-healthcare.org/zh/news_detail.php?REFDOCID=0r1rut36s31tzqoo

2021 亞太癌症精準醫療論壇

https://expo.taiwan-healthcare.org/zh/news_detail.php?REFDOCID=0r1rwtug78xlxmka

2022 台灣醫療科技展資訊：

<https://www.facebook.com/Healthcare.Taiwan/>

