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Taiwan and the Global AI Report

Shaping the Future of Smart Healthcare with Medical AI: Taiwan's Model and Opportunities for Global Collaboration

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FOREWORD

Artificial intelligence (AI) has become an indispensable part of modern life, powering systems from conversational agents to autonomous vehicles and complex financial infrastructures. While these innovations offer tremendous opportunities, they also introduce complex risks that extend beyond technical vulnerabilities, affecting national security, economic stability, and public safety and trust.

The Global Alliance for Taiwan Technology Diplomacy (GATTD) seeks to facilitate cooperation, helping governments, industry, and academia confront these challenges together. Our mission is to strengthen global and regional security through research, partnerships, talent development, and commercialization, while fostering economic growth through collaboration between Taiwan and other technology-driven economies. In partnership with, and under the leadership of the Taipei Representative Office in Singapore, we aim to share insights widely and connect audiences across Taiwan, Singapore, and beyond.

This report examines the future of AI in healthcare systems and explores the possibilities and the ways in which healthcare can be transformed with AI implementation.

We welcome your feedback and comments, which will help us improve and expand future reports in this series.

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1. Global Healthcare Transformation and the Market Opportunity for Medical AI

Healthcare systems around the world are undergoing a large structural transformation. Ageing populations, rising chronic disease burdens, workforce shortages, and mounting financial pressure are forcing providers and governments to rethink how care is delivered. At the same time, care is no longer expected to remain confined within hospital buildings. There is growing demand for models that are more patient-centered, whether through smarter hospital operations, home-based remote care, or more personalized approaches to treatment and prevention. In this context, smart healthcare is emerging not as a narrow technology agenda, but as a broader response to the changing realities of healthcare delivery.

Healthcare transformation has been shaped by a gradual digital shift. As electronic medical records, connected devices, cloud computing, next-generation sequencing, and big data infrastructure became more widespread, health systems accumulated growing volumes of clinical and health data. The maturation of AI then accelerated this transformation by making those data more usable and valuable across the healthcare system. This broader shift is also reflected in market growth. MarketsandMarkets projects that the global AI healthcare market will grow from US$21.6 billion in 2025 to US$110.6 billion by 2030, a compound annual growth rate of 38.6%. By the end of 2025, the US FDA[1] had also cleared roughly 1,450 medical devices incorporating AI or machine learning, including 295 in 2025 alone. Together, these signals suggest that smart healthcare and medical AI are moving rapidly from experimentation toward strategic importance in healthcare delivery, medical products, and digital health services.

[1]US FDA: US Food and Drug Administration

2. What Makes Healthcare "Smart"?

Smart healthcare refers to the transformation of health and clinical data into actionable capabilities that improve diagnosis, workflow efficiency, continuity of care, and personalized intervention. This begins with data. Modern healthcare systems generate large volumes of information from medical records, imaging, laboratory tests, physiological monitoring devices, wearable sensors, home-care equipment, and increasingly genomic and multi-omics data. When these data can be structured, analyzed, and linked to clinical workflows, they become the foundation of smarter care (Fig. 1A).

Medical AI is becoming one of the most important enablers of this transformation. In clinical decision support, it can help identify suspicious findings on imaging, quantify lesions, detect abnormal physiological patterns, and generate risk predictions that support earlier intervention. In hospital operations, generative AI and language technologies can help summarize medical records, draft clinical documentation, convert spoken nursing input into structured records, and reduce repetitive administrative tasks. In remote and home-based care, AI can analyze continuous physiological data from connected devices, support chronic disease management, and help clinicians monitor patients after discharge. In precision and preventive care, it can combine clinical and genomic information to support more individualized diagnosis, treatment planning, and earlier identification of disease risk (Fig. 1B).

Because of these capabilities, smart healthcare is not only about improving specific tools. It also changes broader models of care. It supports the development of smart hospitals, where data and AI improve hospital operations and clinical efficiency.

It enables hospital-without-walls models, in which care extends beyond hospital buildings into homes, communities, and distributed care settings. It lowers barriers to precision medicine by making complex multi-modal data more clinically usable. It also strengthens preventive and preemptive care by allowing earlier detection, continuous monitoring, and more timely intervention. In this sense, AI is helping healthcare systems move from fragmented, reactive care toward more connected, proactive, and patient-centered models (Fig. 1C).

These outcomes, however, require more than a capable algorithm. Smart healthcare depends on high-quality and longitudinal data, digitized healthcare systems, computing and connectivity infrastructure, interoperable data platforms, clinical validation, workflow integration, and trusted governance for privacy, safety, and accountability. These foundations determine whether AI remains a promising technology or becomes a scalable part of healthcare delivery. This is where Taiwan's experience becomes especially relevant.

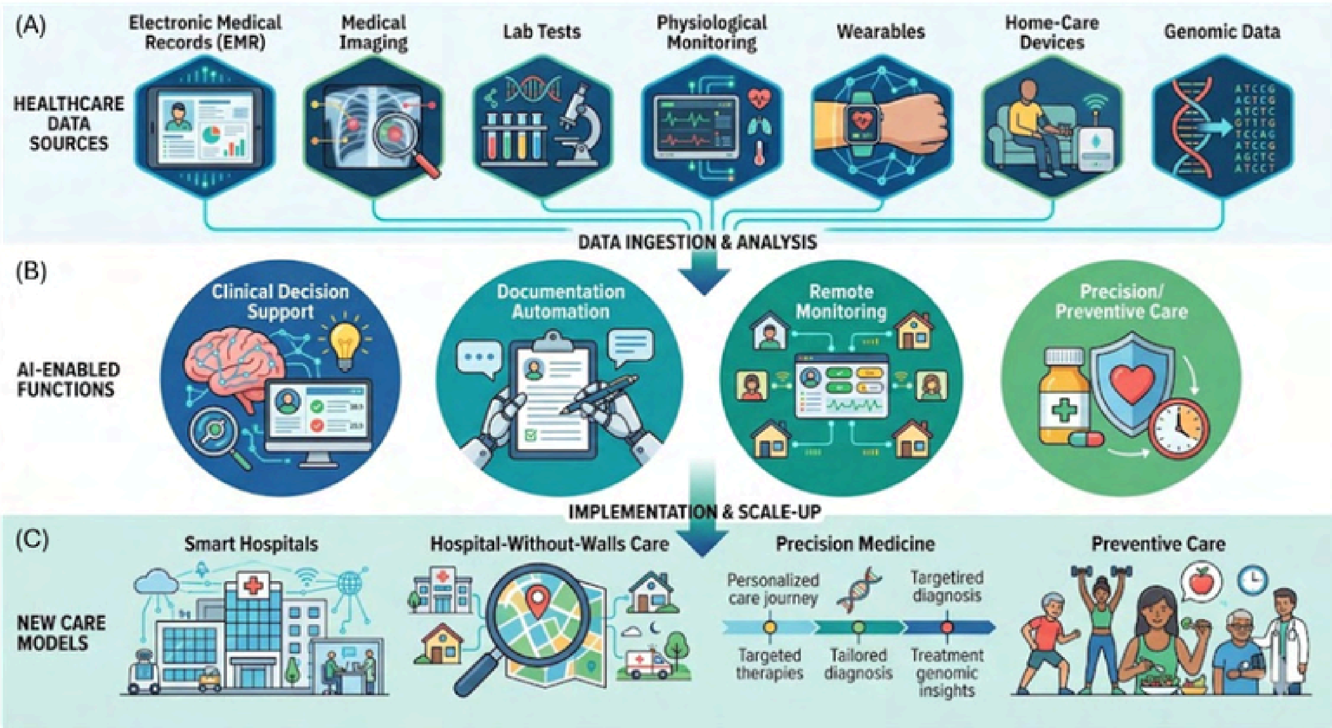

Figure 1. From healthcare data to smart care delivery: an AI-enabled transformation framework. (A) Key data sources include electronic medical records, medical imaging, laboratory tests, physiological monitoring, wearables, home-care devices, and genomic data. (B) AI-enabled functions include clinical decision support, documentation automation, remote monitoring, and precision or preventive care. (C) These capabilities support the development of smart hospitals, hospital-without-walls care models, precision medicine, and preventive care.

3. What Taiwan Brings: Data, Digital Hospitals, and Bio-ICT

One of Taiwan's most important contributions to medical AI development is the strength of its healthcare data environment. The National Health Insurance system, introduced in 1995, covers 99.7% of the population and has enabled the accumulation of long-term records on care utilization, medications, and clinical interactions. Taiwan's hospitals also digitized early. All 23 medical centers in Taiwan, 85% of regional hospitals, and 60% of district hospitals have adopted electronic medical records. These institutions continue to accumulate outpatient records, nursing documentation, laboratory data, and medical imaging, while cancer registry data and rare disease databases add disease staging and long-term follow-up information. Together, these assets provide a strong foundation for clinical AI training, validation, and implementation (Fig. 2A).

This data-rich environment is reinforced by internationally recognized hospital digital maturity. Taiwan had 13 hospitals listed in Newsweek and Statista's 2026 ranking of the 350 top World's Best Smart Hospitals, while National Taiwan University Hospital and Taipei Veterans General Hospital were also included in the World's Best Hospitals ranking. Several Taiwanese hospitals have received HIMSS[2] recognition, and Linkou Chang Gung Memorial Hospital achieved and renewed HIMSS EMRAM[3] Stage 7 status. A survey by the Market Intelligence & Consulting Institute, part of Taiwan's Institute for Information Industry, found that 70% of medical centers in Taiwan are already developing AI applications. These indicators suggest that Taiwan is not only data-rich, but institutionally prepared to validate and use AI in advanced clinical environments (Fig. 2B).

[2] HIMSS: Healthcare Information and Management Systems Society
[3] EMRAM: Electronic Medical Record Adoption Model

Another area in which Taiwan brings strong capability is Bio-ICT[4] and computing infrastructure. Taiwan accounts for more than 78% of global foundry revenue and more than 90% of advanced process technology below 7 nanometers, making it a critical production base for AI accelerators, GPUs, and high-performance computing chips. It is also responsible for more than 90% of global AI server production and around 80% of general-purpose servers through its ODM[5]/EMS[6] ecosystem (Fig. 2C).

These strengths matter in healthcare because medical AI does not scale through software alone; it also requires connected devices, sensors, cloud platforms, computing resources, and system integration. Taiwan's capabilities in IC design, ASIC[7] development, ODM/EMS manufacturing, and high-performance AI servers help lower the cost and risk of healthcare innovation while shortening the path from concept to clinical use. By integrating embedded computing, connectivity, edge-AI processors, and reliable infrastructure, Taiwan supports applications such as AI imaging, endoscopy, ultrasound, ECG[8] analysis, physiological monitoring, home-care devices, genomic computing, hospital data platforms, and AI model training. Companies such as Quanta and Advantech have worked with leading medical centers on hospital-based AI applications, illustrating how Taiwan's industrial base supports medical AI from data processing to real-world implementation. As a result, many AI-enabled medical devices have already received market approval from the Taiwan Food and Drug Administration (TFDA[9]), demonstrating Taiwan's ability to combine clinical data, validation capacity, engineering, manufacturing, and deployment capabilities to turn innovation into usable healthcare products and platforms.

[4] Bio-ICT: Biotechnology and Information and Communications Technology
[5] ODM: Original Design Manufacturer
[6] EMS: Electronics Manufacturing Services
[7] ASIC : Application-Specific Integrated Circuit
[8] ECG : Electrocardiogram
[9] TFDA: Taiwan Food and Drug Administration

Taiwan's capabilities have also attracted leading global technology companies (Fig. 2B). NVIDIA, Google and Microsoft have worked with major Taiwanese hospitals on medical imaging AI, clinical decision support, and generative AI applications for documentation and workflow. Google's collaboration is particularly notable because it extends beyond hospital-based implementation: it has worked with Taiwan's National Health Insurance Administration on AI-based chronic disease risk prediction and health management, beginning with diabetes, and has further supported deployment in primary care through the government-led Family Doctor Plan. These examples suggest that Taiwan can support both institution-level and system-level collaboration in medical AI.

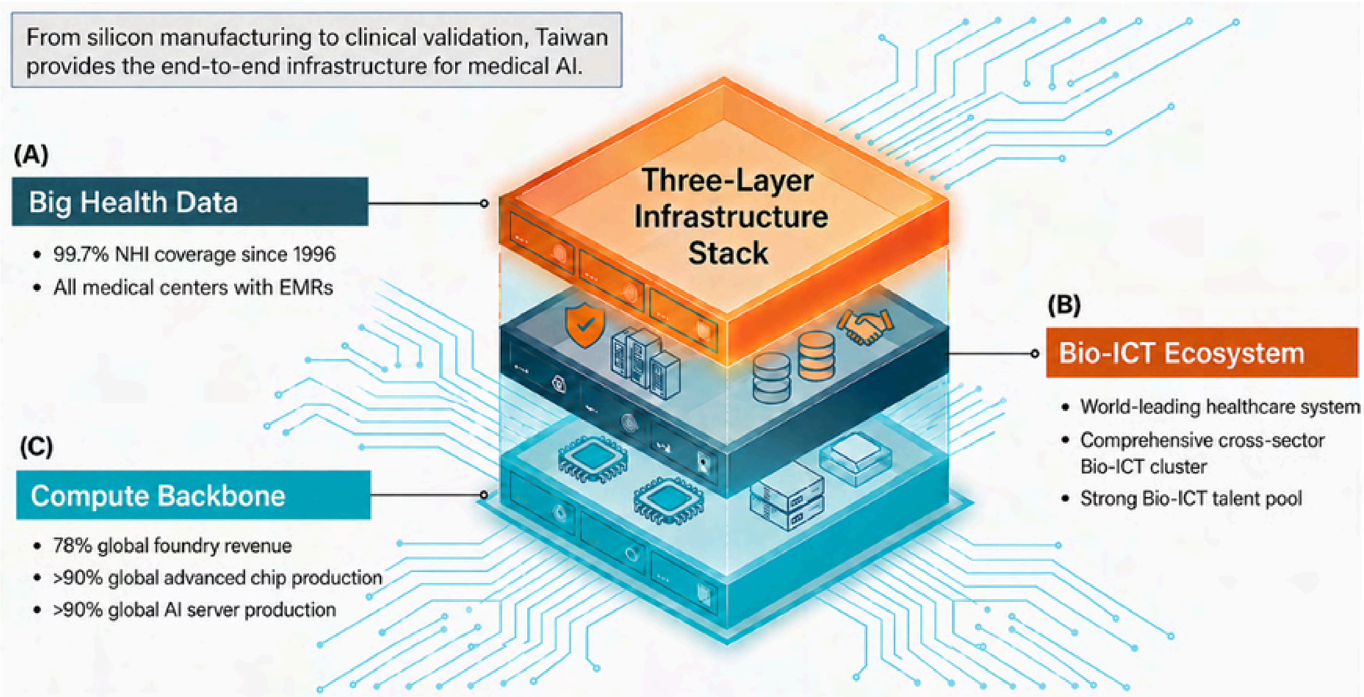

Figure 2. Taiwan's three-layer infrastructure for medical AI development and deployment. (A) Big health data provide a longitudinal clinical foundation for AI development and validation. (B) The Bio-ICT ecosystem connects digitally mature hospitals and technology partners to support clinical implementation and collaboration. (C) The compute backbone provides the engineering and manufacturing capabilities needed to scale AI-enabled medical products. Together, these pillars enable Taiwan to translate medical AI innovation into deployable healthcare solutions.

4. Taiwan's Smart Healthcare Ecosystem in Practice

Taiwan's smart healthcare ecosystem is best understood through practice. It is shaped by the interaction of global-scale ICT[10] and systems companies moving into healthcare, medical AI software and SaMD[11] firms translating clinical needs into products, smart medical device developers embedding AI into equipment and workflows, and medical centers serving as deployment and validation partners (Fig. 3A). These actors increasingly form a connected ecosystem in which clinical demand, digital infrastructure, product development, and implementation reinforce one another (Fig. 3B). This ecosystem is especially visible in three domains: smart hospitals, hospital-without-walls care models, and AI-enabled medical devices (Fig. 3C).

[10] ICT: Information and Communications Technology
[11] SaMD: Software as a Medical Device

Figure 3. Taiwan's smart healthcare ecosystem. (A) Key stakeholders include ICT and systems companies, medical AI and SaMD developers, smart medical device developers, and medical centers. (B) Their interaction forms an innovation cycle linking clinical demand, digital infrastructure, product development, and implementation. (C) This ecosystem is reflected in three application domains: smart hospitals, hospital-without-walls care models, and AI-enabled medical devices.

4.1 Smart Hospitals

In smart hospitals, AI is being used to improve workflow efficiency, reduce documentation burden, and support clinical decision-making under workforce pressure. China Medical University Hospital, one of central Taiwan's leading medical centers, offers one representative example. It has systematically developed smart healthcare applications by converting clinical and big data capabilities into deployable tools, while its affiliated company EverFortune.AI has supported the productization of these solutions. Together, they developed the Tele-ICU[12] AI command center, a centralized hub where critical care specialists use predictive analytics and IoT[13]-enabled medical devices to remotely monitor and support the treatment of ICU patients across multiple locations (Fig. 4A).

The system processes data from 60,000 medical devices and integrates ICU monitoring, electronic records, imaging, and laboratory data into a real-time AI-supported risk visualization interface. Reported outcomes show that the system reduced physician data retrieval time by 41.8%, increased nursing handover speed by 72.4%, reduced nutritionist assessment time by 66%, and lowered documentation burden by 94%. It also improved patient outcomes, including lower ARDS[14] mortality and lower mortality associated with MRSA[15] sepsis. This case shows what it means for AI to move beyond proof of concept and become embedded in hospital operations and critical care.

[12]ICU: Intensive Care Unit
[13]IoT: Internet of Things
[14]ARDS: Acute Respiratory Distress Syndrome
[15] MRSA: Methicillin-Resistant Staphylococcus Aureus

Far Eastern Memorial Hospital, the only medical center in New Taipei City, offers a different but equally important example. The hospital launched a self-developed software application called the Gen AI Smart Healthcare Platform in 2025, linked to the electronic medical record system, allowing internal staff to create AI tasks such as report and summary generation. It also worked with ITRI[16] on an AI voice system that converts spoken nursing input into nursing records and patient summaries (Fig. 4B), with recognition accuracy above 90% and documentation time reduced from 30 minutes to 3 minutes. In addition, the hospital collaborated with Far EasTone Telecommunications to introduce generative AI into patient education and dementia caregiving support. Here, the significance lies not only in the technology itself, but in the way hospitals, telecom firms, and research institutes can jointly reduce care burden and improve clinical workflow.

[16]ITRI: Industrial Technology Research Institute

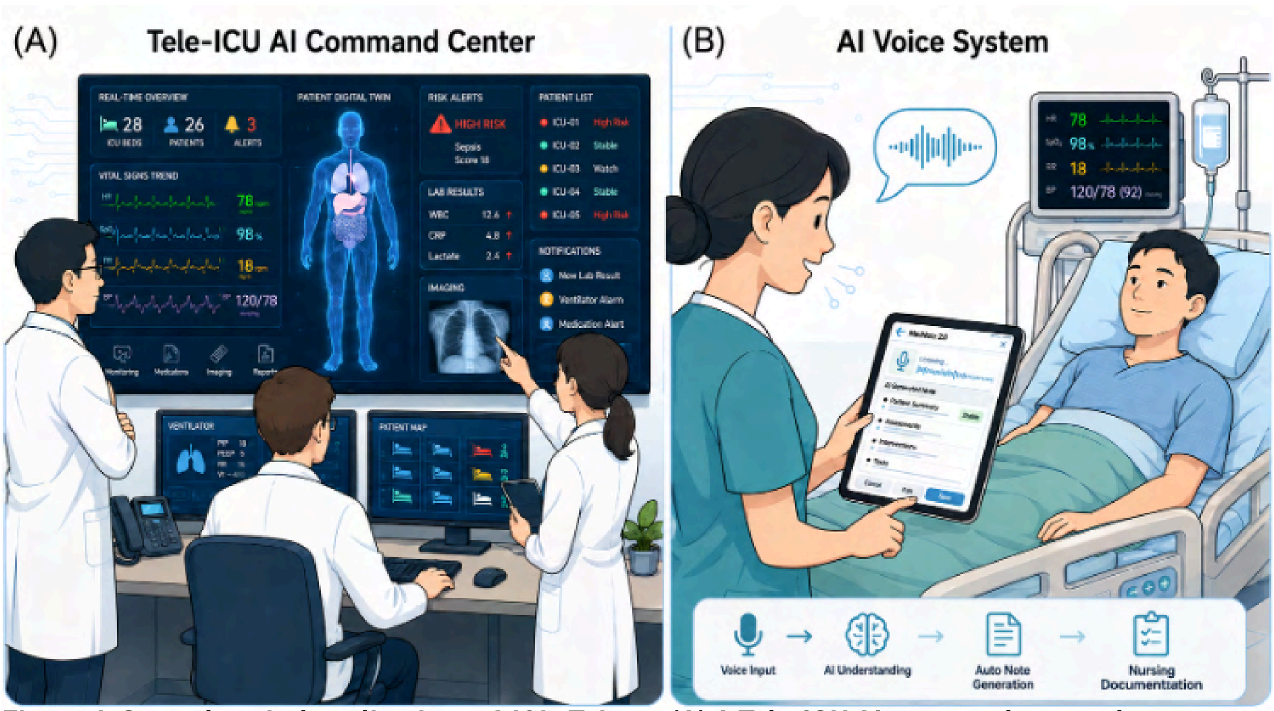

Figure 4. Smart hospital applications of AI in Taiwan. (A) A Tele-ICU AI command center that integrates multimodal clinical data for centralized monitoring and critical care decision support. (B) An AI voice system that transforms spoken nursing input into structured documentation and patient summaries to streamline clinical workflow.

4.2 Hospital Without Walls

Taiwan's hospital-without-walls model is another major area of development, and its progress relies on companies that can provide the digital backbone for distributed care. Quanta Computer, one of the world's leading providers of AI servers and data center systems, is one such enabler. Since 2019, Quanta has invested in smart healthcare and developed a cloud-based care platform called the QOCA Platform, which combines AIoT[17], cloud, and edge computing to support remote care, medical imaging applications, and cross-hospital services. Quanta's collaboration with Taichung Veterans General Hospital, the only public medical center in central Taiwan, shows how this platform is being used in practice (Fig. 5).

As a major provider of complex and critical care in central Taiwan, Taichung Veterans General Hospital also carries an important mission to overcome geographic barriers and deliver more timely care to underserved and remote areas. In 2022, the hospital used QOCA to establish one of Taiwan's largest telecare centers, integrating video consultation, remote physiological monitoring, ambulance data return, and tele-consultation. By combining AI and 5G, the center provides around-the-clock support for urgent and critical care while extending services to branch facilities, veteran homes, and geographically remote settings. This case illustrates how hospital-without-walls models can improve both care continuity and healthcare accessibility.

Quanta has also partnered with National Cheng Kung University Hospital, a leading academic medical center in southern Taiwan, through a joint AI research center established in 2021. Their collaboration focuses on patient-centered remote healthcare using AI, big data, and 5G. One solution supports home-based stroke and palliative care through real-time physiological monitoring, cloud integration, and smart alerts. These examples show how Taiwan is aligning with the global movement toward distributed care and hospital-without-walls models.

[17] AIoT: Artificial Intelligence of Things

4.2 Hospital Without Walls

Figure 5. Telehealth center support remote healthcare. Home-based physiological data are transmitted to a telehealth center for AI-assisted analysis and centralized monitoring. When abnormal findings are identified, the care team can follow up with the patient and notify family members to support timely intervention and continuity of care.

4.3 AI-Enabled Medical Devices

Taiwan's medical device sector is also moving toward higher-value, AI-enabled products. One example is Medimaging Integrated Solution Inc., or MiiS, a Taiwanese medical device company specializing in portable ophthalmic and ENT[18] imaging devices. In diabetic retinopathy, early detection is essential because timely intervention can preserve vision in many patients. A major challenge, however, is that many smaller clinics do not have ophthalmologists on site, making early retinal screening difficult even when patients are at risk. MiiS addressed this gap by making fundus imaging portable and combining it with AI-assisted analysis, allowing screening to move beyond large hospitals and into primary care and community settings. In collaboration with Taipei Veterans General Hospital and other hospitals, the company developed AI models based on more than 100,000 retinal images annotated by ophthalmologists. The resulting system enables rapid on-site preliminary assessment within five seconds and with around 90% accuracy, helping non-ophthalmology settings identify patients who need earlier referral and specialist follow-up. The software also obtained Taiwan SaMD[9] approval, indicating that it has moved beyond proof of concept into regulated clinical use (Fig. 6A).

Another example is aetherAI, a Taiwanese medical AI company known for pathology and endoscopy-related applications. In colorectal cancer prevention, the quality of colonoscopy depends heavily on whether adenomas and small polyps can be detected in real time. Missed lesions can directly affect cancer risk and long-term outcomes. Working with National Taiwan University Hospital and Cathay General Hospital, aetherAI developed a real-time colonoscopy AI system that helps physicians identify polyps during live procedures. Its clinical value lies in improving detection consistency under time pressure and helping physicians identify lesions that may be difficult to detect with the naked eye alone, thereby improving screening quality for patients.

[18]ENT: Ear, Nose, and Throat

The system achieved 95% accuracy and obtained TFDA[7] approval, showing that the application has advanced from clinical collaboration into regulated deployment (Fig. 6B).

A third example is Brain Navi Biotechnology, a Taiwanese medtech company focused on AI-enabled neurosurgical navigation and robotic surgery. In high-risk brain procedures such as tumor biopsy, ventricular drainage, stereoelectroencephalography, and deep brain stimulation, even millimeter-level error can lead to serious and irreversible harm. To address this challenge, the company developed the NaoTrac neurosurgical navigation robot, which uses patented medical image registration, machine vision, and robotic guidance to support highly precise brain interventions. Its clinical value lies in simplifying traditional positioning workflows, improving consistency, and helping surgeons reach target lesions more accurately and efficiently in high-risk procedures. The system has already been used in multiple neurosurgical settings and has obtained market clearances in Taiwan, Europe, and the United States, indicating growing clinical and international recognition (Fig. 6C).

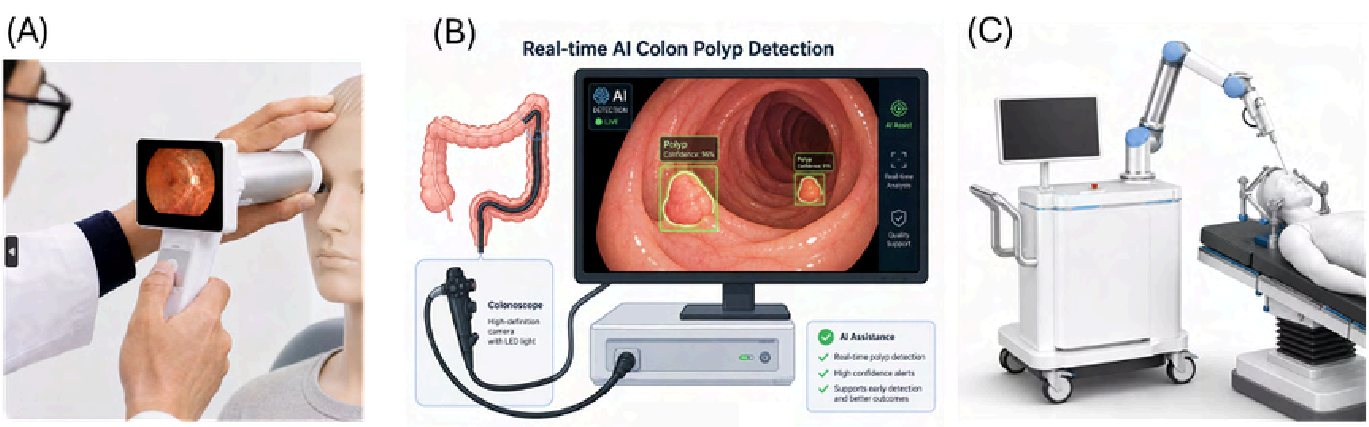

Figure 6. Representative AI-enabled medical devices in Taiwan for prevention, diagnosis, and treatment. (A) Portable fundus imaging with AI-assisted retinal assessment for diabetic retinopathy screening in primary care and community settings. (B) A real-time colonoscopy AI system for polyp detection during endoscopic procedures. (C) An AI-enabled neurosurgical navigation and robotic guidance system for precise targeting in high-risk brain interventions. Note: Panels (A), (B), and (C) are conceptual illustrations based on publicly available information and are not official product images provided or endorsed by the respective companies.

5. From Innovation to Scale: Adoption, Industrialization, and Healthcare Transformation

Still, the growth of medical AI innovation does not automatically result in broad healthcare transformation. Many AI-enabled medical products can demonstrate strong performance and even secure regulatory approval yet still struggle to move beyond pilot use. Wider implementation remains limited by multiple structural challenges, including clinician trust, responsibility allocation, workflow integration, infrastructure cost, data interoperability, and the absence of clear reimbursement pathways. These are not unique to Taiwan; they are shared globally. More importantly, adoption barriers not only slow healthcare uptake of innovation, but also weaken incentives for productization, validation, and scale-up. In turn, constrained industrialization delays the broader pace of smart healthcare transformation.

This makes industrialization a central issue. To scale smart healthcare, innovation must move beyond isolated pilots into a pathway that supports validation, integration, regulatory readiness, sustainable business models, and wider deployment. Without that pathway, promising technologies remain fragmented, hospitals adopt slowly, and the overall transformation of healthcare becomes harder to sustain.

Taiwan is beginning to address this challenge from several complementary directions. On the healthcare and policy side, the Ministry of Health and Welfare is strengthening the conditions that make adoption more feasible.

Through the government's policy, electronic medical record exchange, FHIR[19] promotion, and the three smart healthcare AI centers, it is helping build trusted AI governance, multi-hospital validation capacity, interoperability, and foundations for future clinical and economic assessment. These efforts reduce uncertainty on the healthcare side and create a more favorable environment for adopting innovative technologies. On the industrial side, institutions under the Ministry of Economic Affairs, especially ITRI[14], help address the corresponding gaps in translation and scale-up. By helping connect clinical needs, technical development, validation resources, and industry partners, ITRI supports a more credible and scalable pathway from innovation to real-world use.

[19] FHIR: Fast Healthcare Interoperability Resources

6. ITRI as a Translational and Industrialization Platform

ITRI's role is best understood through its public mission. As Taiwan's leading government-backed industrial technology research institute, ITRI was established to advance industrial innovation, create economic value, and translate technology into real societal and commercial impact. Its long-term significance can also be seen in Taiwan's semiconductor industry: TSMC was spun out from ITRI, and that legacy helped lay the foundation for the semiconductor ecosystem that underpins Taiwan's global leadership today. Within ITRI, the Biomedical Technology and Device Research Laboratories (BDL[20]) plays a leading role in smart healthcare, medical devices, and related translational innovation. This mandate explains why ITRI is able to play a role that is broader than a typical research organization: it does not only develop technology, but also helps move technology toward productization, validation, industry uptake, and collaboration. In smart healthcare, BDL contributes in three connected ways (Fig. 7).

First, BDL develops practical technologies in response to real clinical needs. One representative example is MedBobi 2.0, which is a generative AI medical software application and applies AI to clinical documentation by combining speech understanding and task planning to generate medical records, handover notes, and summaries. The system has been reported to reduce documentation time by more than 70%, and it has already been extended into cross-border, cross-language research collaboration with hospitals in Thailand.

[20] BDL: Biomedical Technology and Device Research Laboratories

Second, BDL acts as a translational partner by maintaining close collaborative links with all 23 major medical centers and regional hospitals across Taiwan, while connecting innovators with hospitals, preclinical testing, pilot manufacturing, validation support, and regulatory-related resources. In collaboration with hospital partners, it has also helped launch a “clinical trial green channel” to match projects with suitable clinical trial hospitals and accelerate implementation. Third, BDL serves as an ecosystem platform through its Interdisciplinary Collaboration Platform, integrating the ICT[8] industry, healthcare systems, capital resources, and international partners to enable cross-sector collaboration.

This matters because the main barriers that slow smart healthcare are gaps in implementation. Companies often need help bridging the gap between a proof of concept and a deployable product. Hospitals need validation support tools that fit current workflows. Policymakers need frameworks that make adoption safer and more credible. BDL bridges these gaps by supporting the industrialization side of the equation, reducing the distance between invention, validation, and implementation. For international partners, BDL can also serve as an entry point into Taiwan’s smart healthcare ecosystem by helping to connect overseas organizations with hospitals, translational resources, validation pathways, and industrial partners. Beyond supporting Taiwan’s domestic medical AI development, ITRI is building a platform to translate cross-border collaboration into real-world healthcare applications.

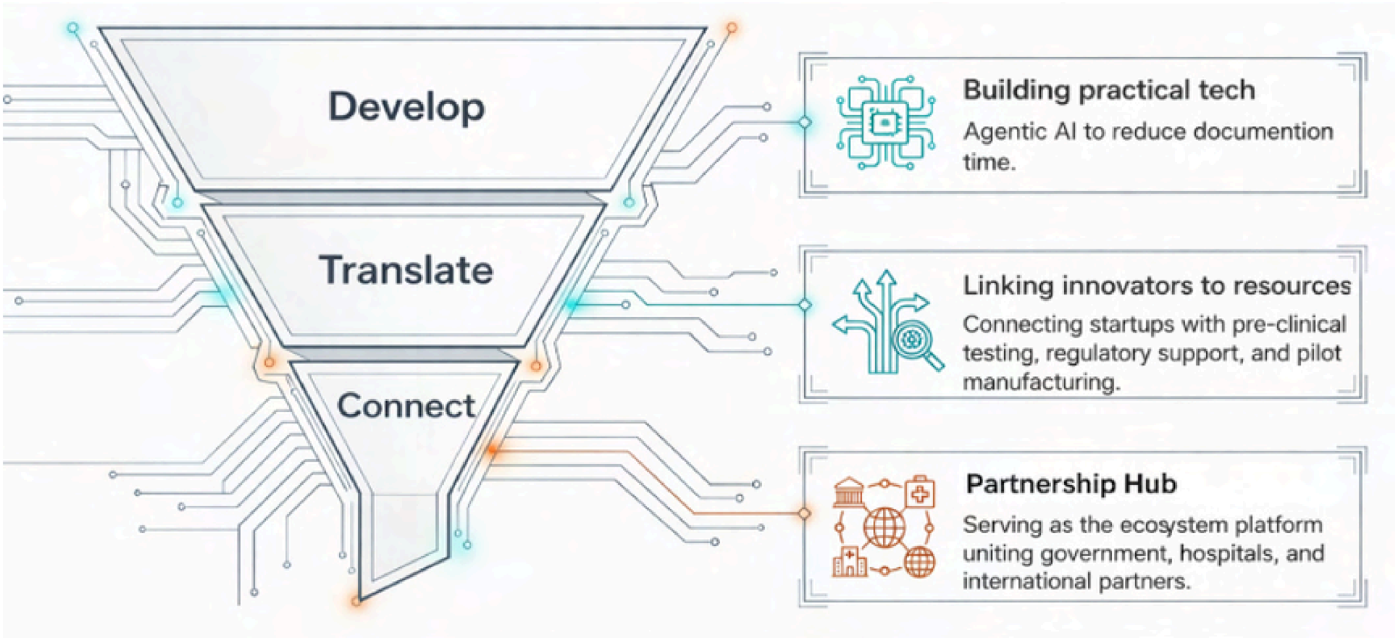

Figure 7. ITRI's translational and industrialization platform for smart healthcare. The framework outlines how the ITRI's BDL drives medical AI innovation towards practical applications through three interconnected roles: Develop, creating clinically relevant technologies; Translate, linking innovation with validation and productization resources; and Connect, enabling cross-sector and international partnerships. Together, these roles help bridge the gap between proof of concept and deployable medical solutions.

7. Outlook: Shared Challenges, Shared Resources, Shared Solutions

Taiwan's healthcare system faces similar pressures observed around the world: ageing populations, chronic disease, workforce shortages, and rising demand for more sustainable models of care. The strategic directions now shaping global healthcare—smart hospitals, hospital-without-walls care, precision medicine, and preventive or preemptive intervention—are therefore practical priorities in Taiwan, not abstract concepts. Taiwan has aligned closely with these directions: longitudinal health data, digitally mature hospitals, Bio-ICT and computing capability, an emerging group of medical AI and smart device companies, and institutional support structures that connect innovation to industrialization.

While these assets do not mean that Taiwan has solved every scale-up challenge, they enable Taiwan access to a practical environment in which healthcare problems can be addressed through real collaboration. With ITRI BDL serving as a translational and industrialization platform, Taiwan is well positioned to work with international partners to co-develop, validate, and scale solutions in smart hospital applications, distributed and home-based care, precision medicine, preventive health, and trusted medical AI.

List of Abbreviation

Abbreviation	Full Term	Note / Description
1. US FDA	US Food and Drug Administration	
2. HIMSS	Healthcare Information and Management Systems Society	A global organization that promotes and assesses digital transformation in healthcare.
3. EMRAM	Electronic Medical Record Adoption Model	A HIMSS maturity model for hospital digitalization; Stage 7 represents its highest level of digital maturity.
4. Bio-ICT	Biotechnology and Information and Communications Technology	The convergence of biotechnology, healthcare, ICT, and AI-related capabilities to enable smart healthcare applications.
5. ODM	Original Design Manufacturer	A manufacturer that designs and produces products for sale under another company's brand.
6. EMS	Electronics Manufacturing Services	Contract manufacturing services for electronic products and systems, including assembly, testing, and related production support.
7. ASIC	Application-Specific Integrated Circuit	An integrated circuit (IC) chip customized for a particular use, rather than intended for general-purpose use
8. ECG	Electrocardiography	The electrocardiogram (abbreviated as ECG or EKG) represents an electrical tracing of the heart and is recorded non-invasively from the surface of the body.
9. TFDA	Taiwan Food and Drug Administration	
10. ICT	Information and Communications Technology	

Abbreviation	Full Term	Note / Description
11. SaMD	Software as a Medical Device	Software intended to perform one or more medical purposes without being part of a hardware medical device.
12. ICU	Intensive Care Unit	-
13. IoT	Internet of Things	A network of connected physical devices and sensors that collect, exchange, and transmit data to support real-time monitoring, analysis, and automated responses.
14. ARDS	Acute Respiratory Distress Syndrome	A severe form of acute respiratory failure that may occur in critically ill patients.
15. MRSA	Methicillin-Resistant *Staphylococcus* Aureus	A drug-resistant bacterial pathogen associated with serious healthcare-associated infections.
16. ITRI	Industrial Technology Research Institute	Taiwan's government-backed industrial technology research institute that supports technology development, translation, and industrialization.
17. AIoT	Artificial Intelligence of Things	The integration of AI with connected devices and sensors to enable data-driven monitoring and automated analysis.
18. ENT	Ear, Nose, and Throat	-
19. FHIR	Fast Healthcare Interoperability Resources	An standard that enables structured electronic health data exchange and interoperability across healthcare information systems.
20. BDL	Biomedical Technology and Device Research Laboratories	The biomedical research unit within ITRI that supports the development and translation of smart healthcare technologies, medical devices, novel drugs, and regenerative medicine, together with validation and cross-sector collaboration.

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