

Healing an Ailing MedTech Talent Ecosystem

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The Asia-Pacific (APAC) region represents a critical landscape for the future of medical technology. However, a thriving medical technology sector needs people skilled in engineering, product development and manufacturing. With advances in artificial intelligence (AI) and robotic surgeries driving a big transformation and creating new opportunities, it is also deepening the skills gap many workers face. Let's take a closer look at these gaps and the solutions that are emerging to address those gaps.



The demand for personalised and efficient healthcare is on the rise and the medical technology (medtech) industry is booming within the APAC region. But at the same time, the region is faced with an ageing population and a growing burden of disease, exacerbated by limited healthcare infrastructure and manpower.

Further, the region is witnessing accelerated adoption of artificial intelligence (AI), robotics, 3D printing, and smart diagnostics, reshaping healthcare delivery and patient outcomes. Both the public and private sectors across APAC countries are investing in the growing adoption of new technologies to strengthen the medtech sector.

If we look closely, individual countries within the APAC region have distinct technological strengths and capabilities. For instance, China and India stand out for their vast technical talent pools, while Japan and South Korea are notable for having a large pool of users for AI-enabled solutions; and Singapore and Australia are recognised for their well-established healthcare data infrastructure and strong capabilities in AI development.

However, workers within the medtech often lack access to the necessary training or educational resources required to adopt the new skills. This digital divide has led to a growing demand for scalable and accessible upskilling initiatives. Thus, the medtech sector within the APAC region must prepare their workforces for a technology-driven future in order to realise economic growth, social equity and innovation, to avoid wage gaps, trade imbalances and security threats.

“AI is set to revolutionise product differentiation and productivity across the medtech value chain. For instance, autonomous robotic surgeries, which are being developed and deployed in Japan, leverage AI and advanced robotics to perform precise and minimally invasive procedures. Another example is the use of AI-enhanced bio-devices in China, where bioelectronic medicine devices use electrical stimulation to treat chronic diseases. Challenges related to integrating AI in medical technologies can be addressed by establishing supportive policies such as building a robust AI talent ecosystem across APAC. For instance, Singapore’s AI Apprenticeship Program (AIAP) focuses on enhancing engineering skills through deep-skilling training and industry projects. Additionally, similar programmes are being explored in countries like Australia and

South Korea to address the talent gap”, said **Harjit Gill, Chief Executive Officer, Asia Pacific Medical Technology Association (APACMed)**.

Addressing Digital Divide

APACMed and Bain & Company, with support from the Singapore Economic Development Board, recently undertook a study to identify the AI talent needs within the medtech industry across APAC. The report revealed that collaboration and early action on capability building can enable APAC countries to ride the waves of transformation in healthcare. In addition, the industry and the government need to strengthen ‘bilingual talent’ that has the necessary capacity and skills to traverse the medical and deep tech ecosystems.

Without regional alignment on skills requirements and a consistent approach, talent and capability are likely to be inconsistent across regions. Ensuring that stakeholders possess the necessary skills and capabilities is crucial for the successful integration of technology. Policymakers thus, must develop and promote initiatives aimed at supporting both current and future efforts to upskill and enhance technological capabilities.

Realising this as a need of the hour, Singapore’s Prime Minister and Finance Minister Lawrence Wong introduced key initiatives in Budget 2025, presented on February 18, which include expanded training allowances, an enhanced SkillsFuture Workforce Development Grant, and a revamped SkillsFuture Enterprise Credit scheme.

Likewise, China Education Development Foundation (CEDF), Dell Technologies, and the National Center for Educational Technology (NCET) have recently launched the 2025 ‘Upskilling Future Workforce for the Digital Economy’ project. Further, the Indian government has introduced major educational reforms in its Budget 2025-26 announcement, which include the establishment of National Centres of Excellence (CoEs) for Skilling and investment of Rs 500 crore into a CoE in AI for education, to enhance skill development and promote digital inclusivity.

Citing another example, the Human Resources Ministry in Malaysia is allocating RM3 billion starting in 2025 to strengthen the local workforce and its adaptability in response to rapid technological advancements and changing industry demands. Further, the Department of Skill Development in Thailand aims to upskill and reskill over five million workers in 2025, emphasising digital technology to support industrial advancement.

On the other hand, South Korea’s Ministry of Trade, Industry and Energy have announced the opening of a Global Talent Centre, which aims to attract more foreign talent to Korea’s tech sector.

“A recent report forecasts that technological shifts will generate 2.7 to 3.5 million new jobs by 2027, even as they replace about 23 per cent of existing positions. So, the integration of advanced technologies requires professionals with robust digital literacy and problem-solving abilities. Many professionals lack hands-on experience with advanced medical technologies, and communication gaps hinder seamless interactions in global settings. Bridging this gap means focused efforts from all sides where collaboration is a key factor”, said **Munira Loliwala, VP- Strategy and Growth, TeamLease Digital**

Value of Collaboration

Collaborative environments which include the participation of government bodies, big industry players, startups and academicians play a huge role in the process of learning, innovation and upskilling. Also, exploring strategies and channels that encourage early dialogue and engagement among stakeholders is equally necessary for talent development.

According to reports, specialised workforce education programmes offer a potential opportunity for incentivising technological innovation. As a result, we need more education and training programmes to develop professionals with knowledge in both medical domains and technology.

In this regard, a new trend is being set by the global tech players that are developing new partnerships and collaborations with governments, academic institutes, and hospitals across the APAC region, to resolve the digital divide.

For example, the Ministry of Communication and Digital Affairs in Indonesia and Microsoft have launched elevAlte Indonesia, a new AI skilling initiative to equip 1 million Indonesian talents with AI skills across sectors.

Focusing particularly on the partnerships taking place within the medtech sector, Medtronic has recently partnered with UMC, Vietnam’s largest university medical centre to enhance minimally invasive surgery education. Comprehensive continuing

medical education programmes are being made available to accelerate the learning curve for surgeons. Another project has been signed recently with the Malaysian Society of Colorectal Surgeons, aimed at enhancing the skills of colorectal surgeons in Malaysia.

Sher-I-Kashmir Institute of Medical Sciences and India Medtronic Private Limited, a wholly owned subsidiary of the Irish firm Medtronic, have announced a partnership to establish new Surgical Skill Lab in India, to improve the skills of budding surgeons and provide an overall appreciation and understanding of minimally invasive surgery.

Similarly, All India Institute of Medical Sciences (AIIMS), and US-based medtech company Intuitive, are establishing an innovative new training centre for robotic-assisted surgery, to focus on equipping surgeons and care teams with the skills and technology training necessary to perform robotic-assisted surgery across specialities including urology, gynaecology, general surgery and more.

Dr M Srinivas, Director, All India Institute of Medical Sciences Delhi said, "With the rising disease burden in India-cancers, urologic, and gynecological conditions requiring soft tissue surgery, the demand for advanced technologies like robotic-assisted surgery is growing. The need for associated training is clear in India."

Further, Healthium Medtech, based in India, has collaborated with the Healthcare Sector Skill Council to enhance skill development in the Indian healthcare workforce by offering specialised training and certification programmes for skilling healthcare professionals across India.

Another recent notable collaboration between Medtronic and Philips is about training over 300 cardiologists and radiologists in advanced imaging techniques for structural heart diseases, with a focus on End-Stage Renal Disease (ESRD) patients in India.

Royal Philips has also partnered with Singapore General Hospital (SGH) to advance medical imaging capabilities in Asia Pacific with a first-of-its-kind MRI training collaboration, to advance medical imaging education and capabilities. A magnetic resonance imaging (MRI) training centre is being set up in SGH as an educational hub for radiographers from across the APAC region, to facilitate the upskilling of radiographers with the latest MRI clinical applications and host educational workshops, seminars and trainings across the public or private sectors.

A big medtech player in Japan, Olympus is also investing its time and resources to upskill the workforce aligning with the new age technologies. The company has recently opened a new centre in India, in partnership with HCL in this regard.

Sharing his perspective, **Marc Radatt, Chief Executive Officer, Olympus Corporation Asia Pacific** said, "The demand for skilled medtech professionals in the APAC region is growing rapidly, with some markets experiencing a more significant increase than others. To meet this demand, we must continue to invest in the development of medtech professionals to ensure a steady supply of qualified talent. We have observed that many medtech companies in the APAC region often fulfill the requirement for skilled workforces by hiring from other companies in the same industry. In this context, we have positioned our organisation as a destination for both existing employees seeking to enhance their skills and those transitioning from other industries, equipping them with the knowledge and tools to excel in the medtech sector."

Terumo, another Japanese medtech company, has also recently revealed similar plans towards upskilling the healthcare workforce in India and Singapore with new initiatives. The company has launched its Terumo Asia Skill Lab in Singapore, to invite healthcare professionals, as well as biomedical students from across the region to participate in masterclasses and workshops and engage in collaborative research initiatives. Further, to enhance the clinical skills of healthcare professionals in India, Terumo has expanded its existing skill-based lab with new capabilities.

"We must not only ensure access to training but also ensure the training is relevant for years to come. Creating a skills-based society is key to building a more resilient and adaptive workforce, and partnerships are one of the most powerful tools at our disposal to drive this transformation", said **Guy Diedrich, Senior Vice President and Global Innovation Officer at Cisco**

The shift from a job-based to a skills-based medtech ecosystem is very much in demand, and all stakeholders must continue to invest in skilling programmes, prioritising inclusivity.

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