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empowering ideas

Innovation in action:

The state of play in Asia's health ecosystems

Executive summary

The Asia-Pacific (APAC) healthcare sector is primed for reinvention. Factors like an ageing population, a shrinking workforce, increasing strains on outdated systems, and the rise of digitalisation are forcing leaders to reassess their approach to healthcare delivery.

Technological advancements are accelerating disruption in the healthcare space. For instance, APAC's tech-savvy users are enthusiastically adopting wearable fitness trackers and healthcare apps, generating an abundance of health data that can feed innovation.

Mainstreaming such innovations paves the way for novel solutions within an ecosystem that encourages knowledge-sharing and collaboration.

Given the present state of play, transforming healthcare in APAC calls for increased collaboration between various market players. It also requires a space where different contributors can co-innovate – the beginnings of ecosystem-enabled innovation in healthcare.

Organisations can prepare for ecosystem-led innovation by building valid business cases that align with internal goals. They need to establish processes that move beyond traditional vendor-customer relationships, supporting collaboration and prioritising trust and partnerships.. They should also adopt an incremental approach, starting with low-risk projects and building on those successes.

By prioritising patient needs, fostering collaboration, and building a strong data infrastructure, healthcare organisations (like medtech or pharma companies, hospitals, or health insurance companies) can drive meaningful innovation and improve patient outcomes.

Government bodies can do their part through incentives like research subsidies and regulations that ensure data privacy and cybersecurity.

As the industry evolves and the data infrastructure strengthens over time, healthcare has the opportunity to shift towards preventive and personalised care. This will be enabled by connected solutions and improved data flows, empowering individuals to take charge of their health.

Embracing ecosystem innovation empowers stakeholders to create a patient-centric healthcare system that addresses the APAC population's evolving needs.

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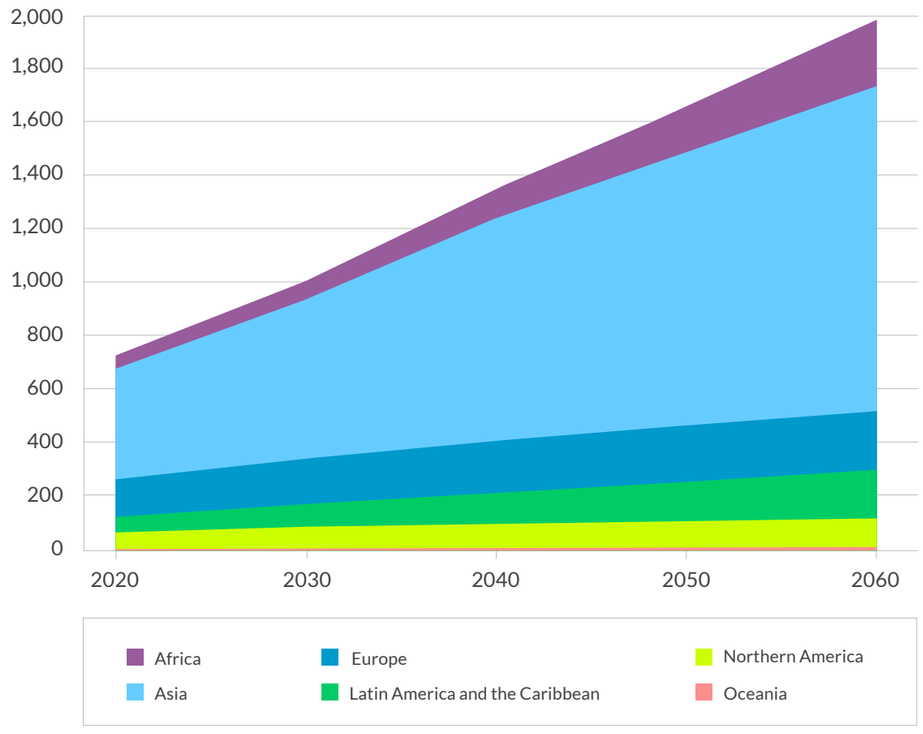
State of play: Healthcare in APAC

The Asia-Pacific (APAC) region's healthcare system faces several structural realities that demand fundamental, systemic changes.

Ageing population



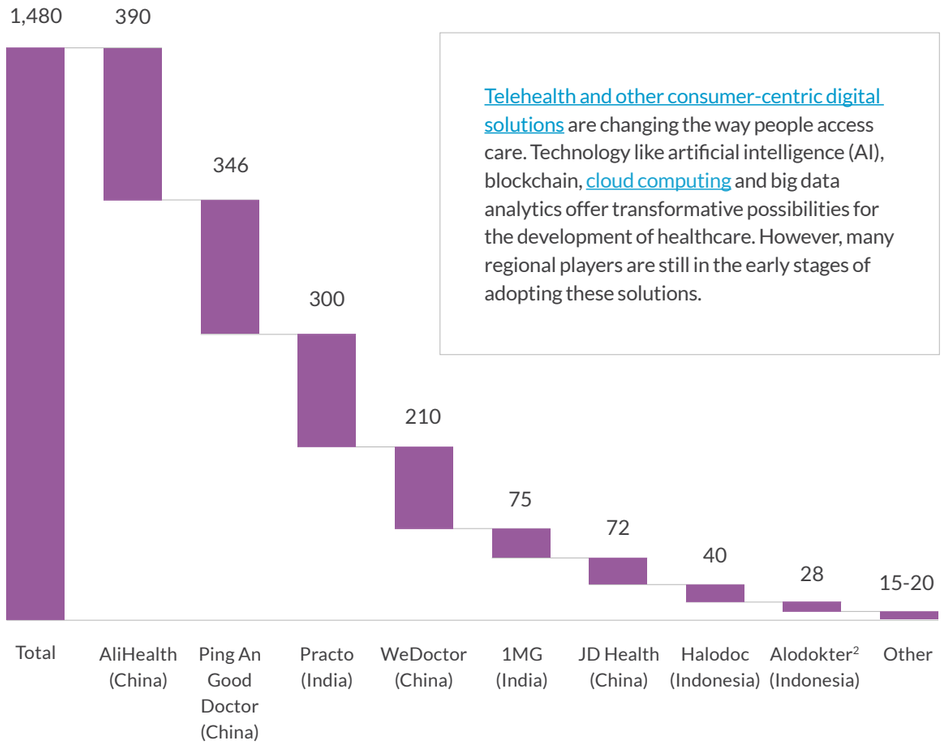
Population aged 65+ by region, from 2020 to 2060

Source: "Asia Aging: Demographic, Economic, and Health Transitions", United States Census Bureau, 2022

The US Census Bureau projects a population of over 1.2 billion Asians over 65 years old by 2060. This demographic shift will place an increasing burden on healthcare systems already under strain across the continent.

Digitalisation

Millions of registered users in 2020 across emerging health platforms



[Telehealth and other consumer-centric digital solutions](#) are changing the way people access care. Technology like artificial intelligence (AI), blockchain, [cloud computing](#) and big data analytics offer transformative possibilities for the development of healthcare. However, many regional players are still in the early stages of adopting these solutions.

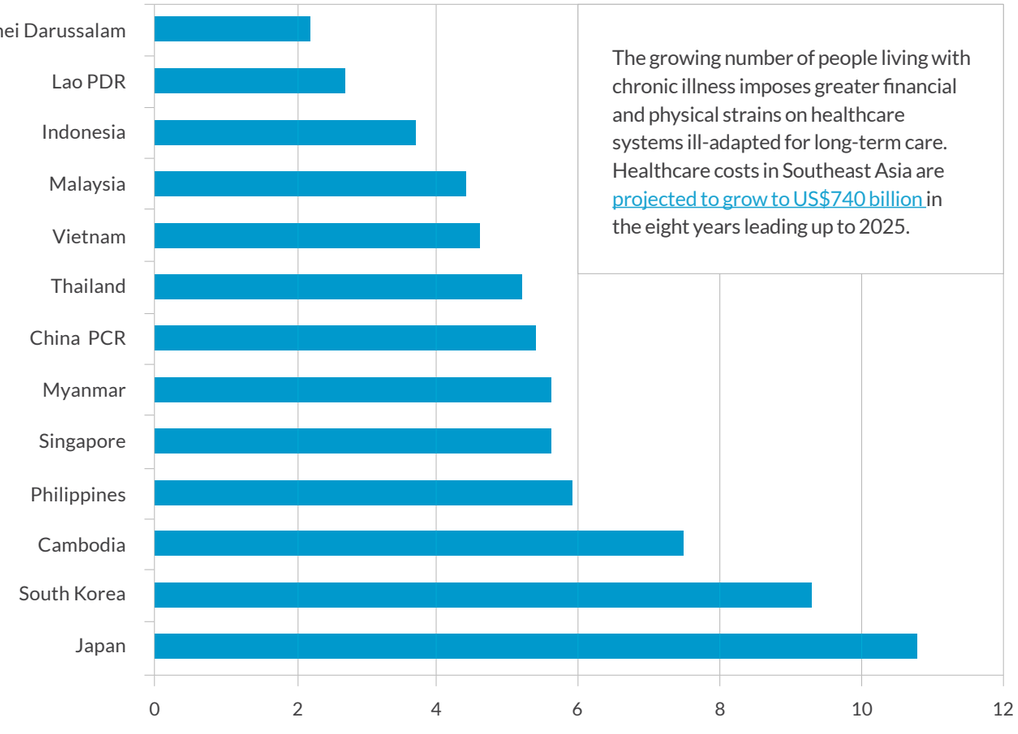
[1]Does not account for user overlap.

[2]Number of monthly active users (MAU).

Source: "The future of healthcare in Asia: Digital health ecosystems", McKinsey, 2021

Increasing burden and growing costs

Total health expenditure as % of GDP in ASEAN+3 in 2021

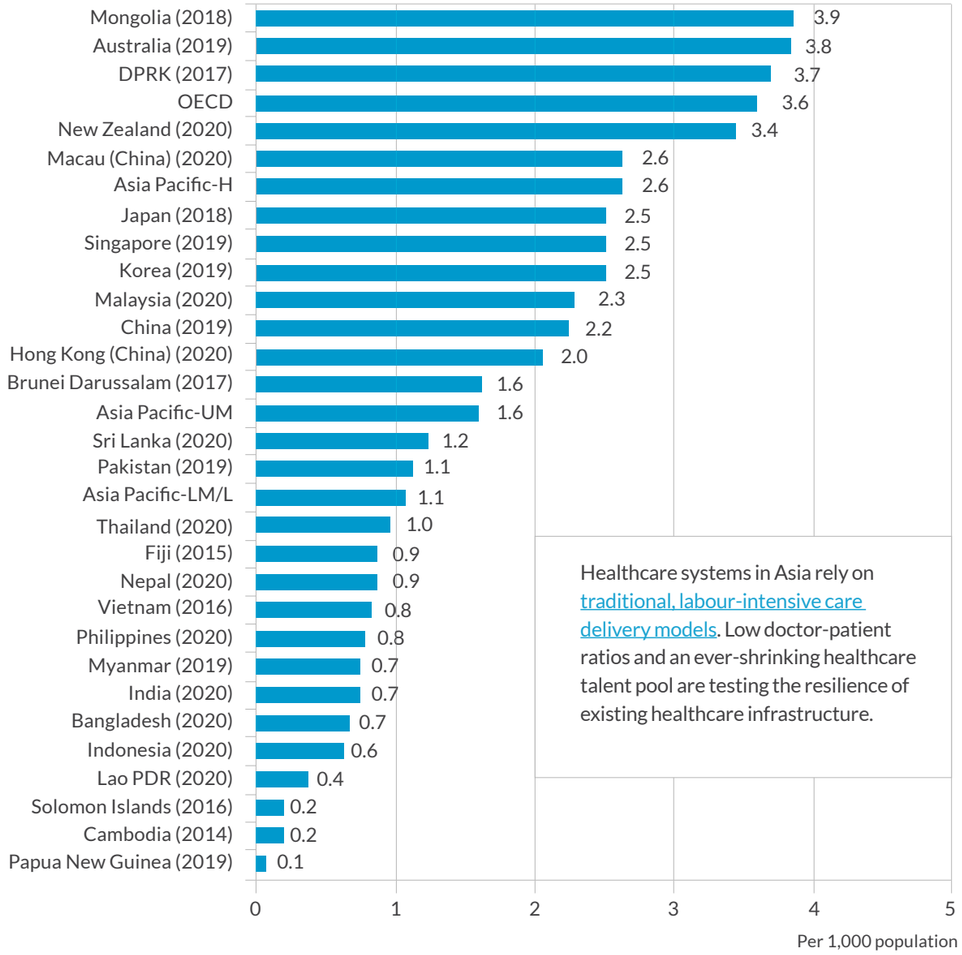


The growing number of people living with chronic illness imposes greater financial and physical strains on healthcare systems ill-adapted for long-term care. Healthcare costs in Southeast Asia are [projected to grow to US$740 billion](#) in the eight years leading up to 2025.

Source: "Databank", World Bank Group, 2024

Shrinking workforce

APAC doctors per 1,000 population



Healthcare systems in Asia rely on traditional, labour-intensive care delivery models. Low doctor-patient ratios and an ever-shrinking healthcare talent pool are testing the resilience of existing healthcare infrastructure.

Source: "Health at a Glance: Asia/Pacific 2022", OECD, 2022

Why Asia's healthcare systems matter in the global landscape

As home to over 60% of the world's population, Asia's healthcare developments have far-reaching implications for global disease management, public health policies and healthcare innovations.

Countries like Singapore, Japan and South Korea lead the world in digital health, pioneering telemedicine, AI-powered diagnostics, and value-based care models. Meanwhile, China and India are driving the expansion of pharmaceutical manufacturing, biotech research, and cost-effective medical solutions that benefit both emerging and developed markets worldwide.

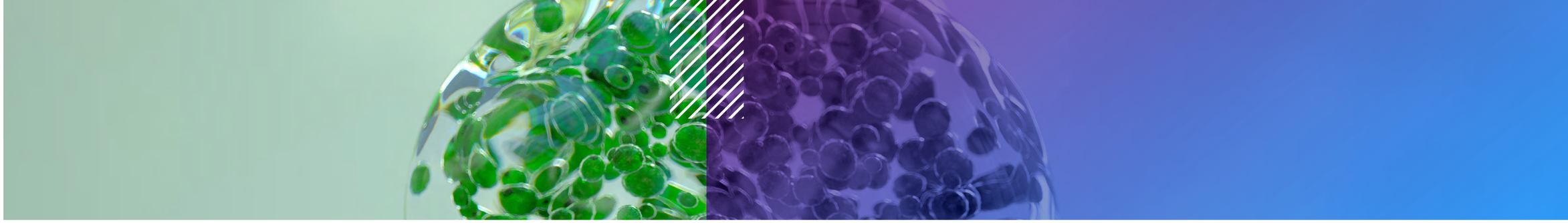
With its increasing investments in digital infrastructure and pressures for regulatory harmonisation, Asia is building a blueprint for integrated healthcare ecosystems that balance innovation with accessibility. But not all healthcare systems are made equal.

Despite Asia's growing influence in global healthcare, its health systems remain fragmented and uncoordinated. The region's contrasting life expectancies reflect major differences in healthcare availability and delivery – Singaporeans' 84.3 years far exceed the Burmese life expectancy of 76.5 years.

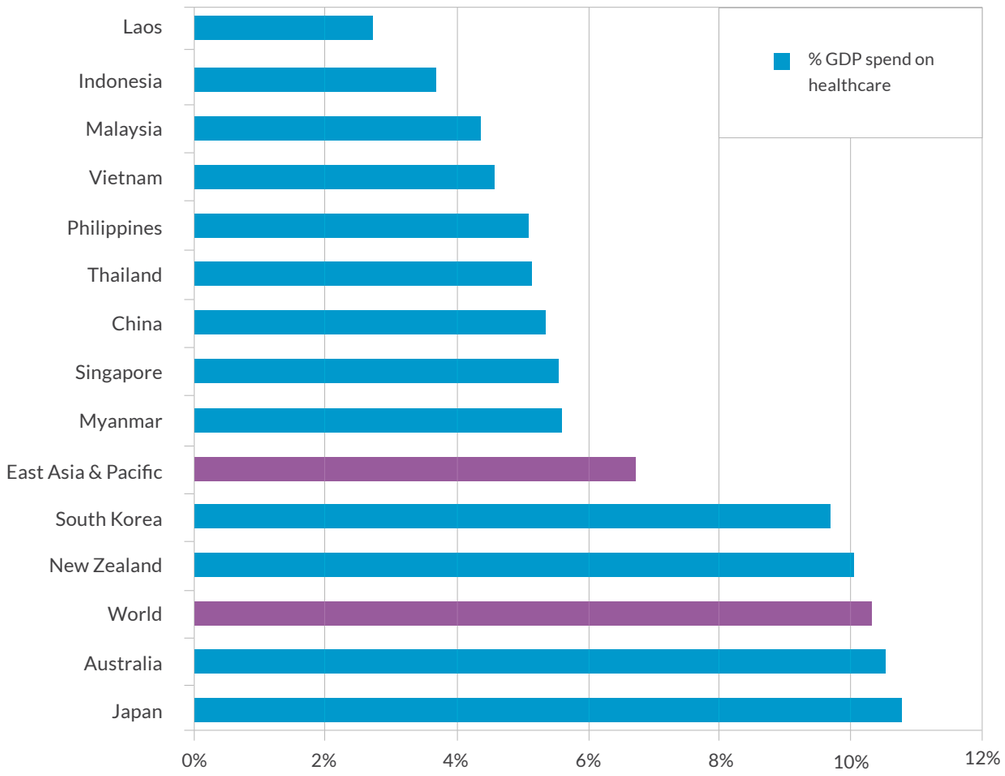
Disparities aside, life expectancy across Asia has generally increased, leading to growing costs and strains on infrastructure. Let's review this complicated picture.

Firstly, **Asia's countries reflect vastly different economic statuses**. The contrast between high-income countries like Japan and Asia's lower-income countries manifests in disparities across infrastructure, access to medical services, and healthcare quality.

Japan enjoys a universal healthcare system with advanced medical technologies and high-quality services, while less developed countries struggle with inadequate healthcare infrastructure and limited access to essential medical care.



APAC countries' healthcare spend by % of GDP



Source: "Databank", World Bank Group, 2024

Secondly, Asian countries adopt **different models for healthcare financing**, ranging from government-funded universal healthcare to out-of-pocket payment systems.

Thailand's Universal Coverage Scheme (UCS) provides broad access to healthcare services, whereas Indian patients pay a significant portion of healthcare out-of-pocket, leading to financial strain on many families.

Much of APAC lacks universal healthcare, and the quality of service varies widely. Developed economies like South Korea and Singapore have more than two physicians for every 1,000 people. That number drops to less than one doctor per 1,000 people in developing nations like Myanmar, Vietnam, and the Philippines.

APAC life expectancy at birth in 2010, 2019, 2020, and 2021, grouped by income level

Note: Asia Pacific-H, Asia-Pacific high-income countries; Asia Pacific-UM, Asia-Pacific upper-middle-income countries; Asia Pacific LM/L, Asia-Pacific lower-middle- and low-income countries.

Source: United Nations World Population Prospects (accessed on 29 September 2022).

Most Asian economies invest 4–7% of total GDP into the health sector, compared to around 12% in high-income countries. The World Bank places healthcare coverage across Southeast Asia at 61%. Many developing economies rely on private, for-profit institutions to provide healthcare for large parts of their populations.

This sobering reality aside, great potential for change persists.

In 2019, only 22% of APAC patients used telehealth services involving a human doctor. By 2023, over 50% of respondents welcomed AI-facilitated healthcare delivery for non-critical conditions. This surge in adoption – driven by APAC's tech-savvy population – was accelerated by the COVID-19 pandemic, which created an urgent need for alternative healthcare delivery methods.

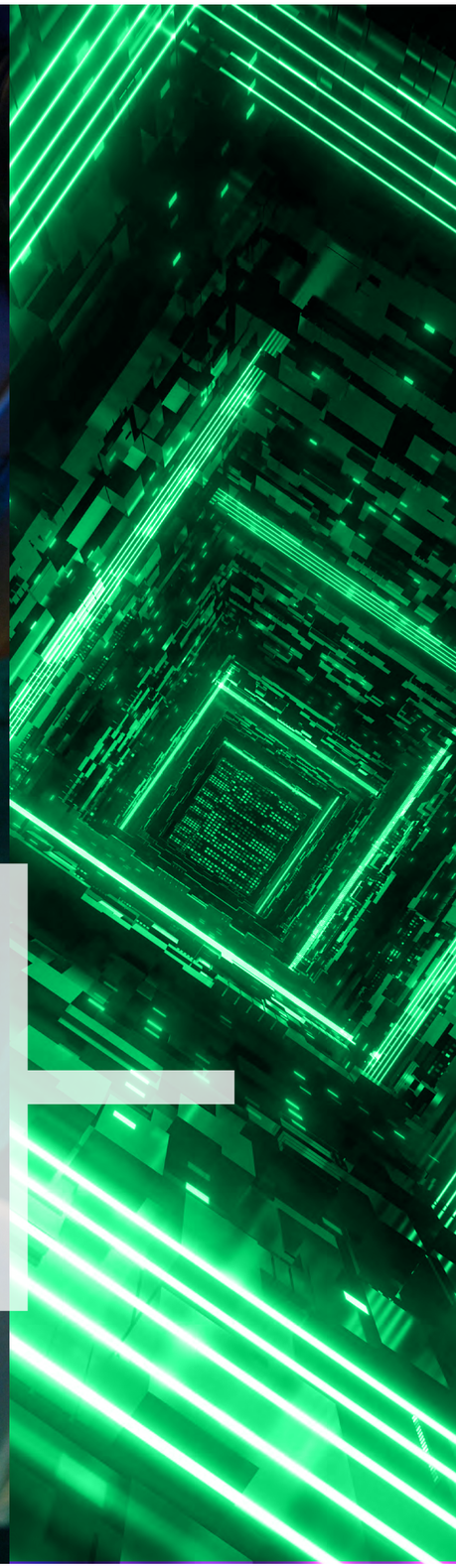
Health gadgets and apps are also gaining traction. Smart wearables don't just measure heart rates – they collect personal health data that healthtech companies use to develop new solutions. Insurance-backed digital apps will experience a 70% rise in adoption by 2026, spurred by their ability to facilitate self-diagnosis and digital claim management.

Healthcare is transforming: Asia can lead the way

Restoring and maintaining patients' health requires multiple stakeholders' participation – from the individual to medical professionals to institutional healthcare providers. For this whole ecosystem to evolve, these stakeholders must actively collaborate: breaking down silos and shifting from transactional interactions to building genuine partnerships.

Data-sharing practices also need to move from strict data protection to securely sharing anonymised or aggregated data.

The future of healthcare depends on different players – payers, patients, healthcare providers, pharmaceutical firms, medtech companies, and governments – effectively coming together in an innovation ecosystem to solve tomorrow's healthcare needs.



Driving innovation without compromising patient privacy

Zühlke worked with the AO Foundation, a medical research company, to explore how AI modelling can improve spinal CT scans. The challenge lies in combining various datasets from different sources without compromising patient data privacy.

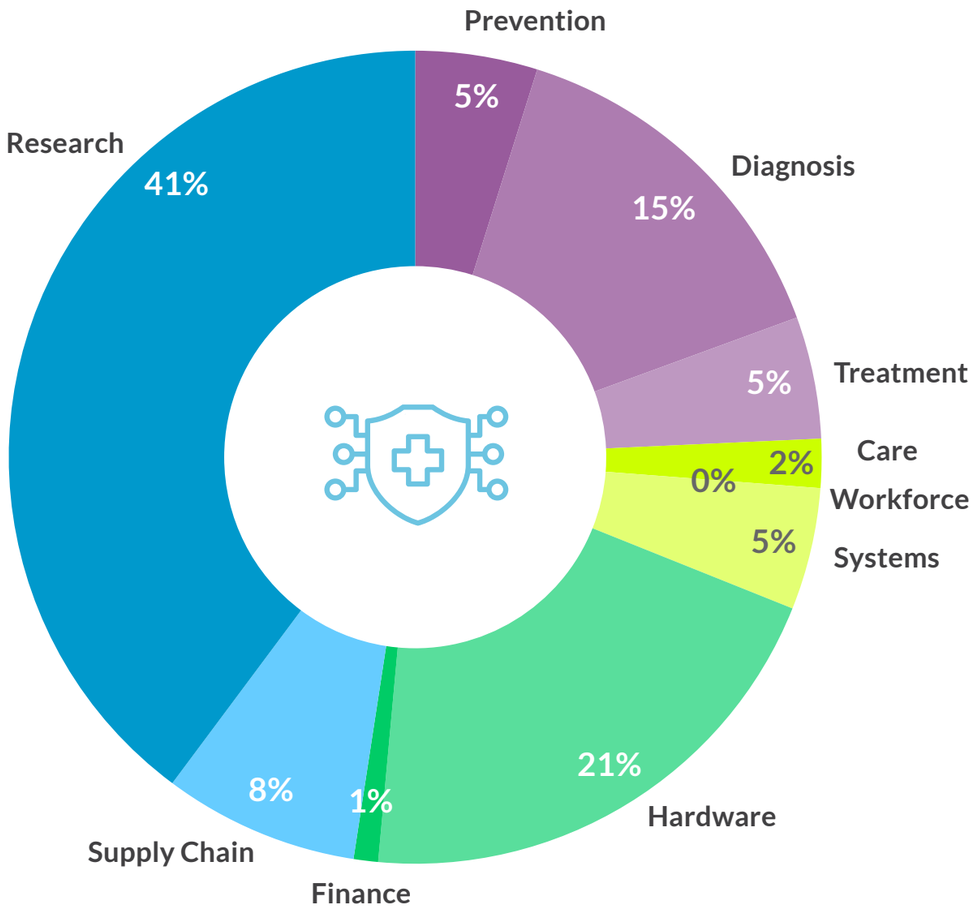
High-quality patient data is crucial for training AI in medical applications, but access often raises legal and privacy concerns. To address this challenge, Zühlke leaned on "federated learning": training AI models on separate datasets without sharing the actual data.

Federated learning feeds insights from contained datasets to an AI model, improving the latter's ability to distinguish bones from tissues, muscles, and organs in CT scans. This reduces the need for time-consuming and error-prone manual assessment of scans. In all cases, the original patient data remained within each hospital, upholding data privacy.

The project demonstrates how healthcare providers and researchers can now use this AI model to train on sensitive patient data without compromising confidentiality.

APAC has almost 600 healthtech start-ups, concentrated in developed economies like Australia, Singapore, and China. With so many innovators within this space, healthcare in APAC is in a prime position to leverage the latest technologies.

2023 East Asia healthtech 200 by sub-sector



Research and Hardware accounts for over 60% of start-ups in East Asia in 2023.

Source: "2023 East Asia Health Tech 200", Holoniq, 2023

Unlocking these technologies' full potential requires **ecosystem innovation**, where different stakeholders play off each others' strengths to co-create novel solutions.

Building an ecosystem that fosters such innovation requires careful coordination. The challenge lies in establishing the right structures and protocols for seamless integration and eventually, collaborative solution-finding. Healthcare data fragmentation makes this especially tricky.

> In Singapore, we have been pushing many platforms to settle things like data security and cybersecurity policy. We are still in the infancy stage of setting these up. Once that's done, we can go and co-innovate.
>
> **Dr. Eric Wong,** Group Chief Data and Strategy Officer, Singapore National Healthcare Group (NHG)

Despite existing communication between healthcare players, deeper collaboration has yet to be fully realised. In the traditional delivery model, healthcare players are often siloed from each other. While learnings and insights from healthcare professionals may benefit pharma or medtech companies, limiting access to information can be an obstacle to meaningful patient-centric innovation.

Additionally, the use of advanced technologies on patient data raises concerns for some stakeholders, who view it as a privacy and security risk.

Pharma & life science:

Unrivalled medical and biotechnological knowledge and expertise.

MedTech companies:

Deep expertise in key technologies for diagnostics and therapies.

Payers:

High levels of trust and from consumers, financial support for innovative solutions.

Healthcare providers:

High levels of trust from patients and consumers and deep knowledge of the patient journey.

Government/regulators/ policy makers:

Provide comprehensive regulations to enable and empower innovative solutions.

Digital health players/ start-ups:

Platforms to enable digital health solutions and secure data usage across the value chain.

Universities/Research Institutes:

New clinical research and impulses for innovative products or service offerings.

Technology enablers/hyperscalers:

Technological solutions from AI to automation, cloud, data, devices, monitoring, security, software to network and infrastructure.

Physicians/clinicians/healthcare professionals:

Highest level of trust, direct contact to consumers and patients and best knowledge of their pain points.

Working within an ecosystem can address these issues, creating a virtuous cycle of innovation that benefits all players. Diversity and cross-pollination of ideas give birth to new solutions and new ways of thinking.

Ecosystem innovation happens when people, processes, and technology within an industry interact in a complementary and collaborative manner, using mutually beneficial interactions to feed the ideation and creative activity of solution-finding.

Ecosystem-enabled innovation in action

ObvioHealth, a global leader in digital health solutions, sought to introduce a cutting-edge platform for decentralised clinical trials. Zühlke collaborated with ObvioHealth to create ObvioGo®, a next-generation virtual clinical trial platform.

The platform integrates five key modules covering the entire clinical trial lifecycle, offering code-free study configurations that reduced trial build time by 66%. It ensures compliance with regulatory, quality, and privacy standards, leveraging AI and machine learning for better outcomes.

The solution enables cross-border collaboration, creating a digital health ecosystem catering to both biotechnology and pharmaceutical clinical science teams. And with trial build times reduced, promising therapies can be brought to the market in less time, benefiting patients.

No single player can deliver the impactful, holistic, and human-centric solutions that the world needs. To move healthcare further into the future, we need to tap into a range of skills, insights and technology that naturally reside with different industry players.

This is the rationale behind encouraging ecosystem innovation in healthcare.

What prevents healthcare from embracing ecosystem innovation?

Healthcare is subject to strict regulations

Healthcare providers must meet high standards pertaining to regulation and privacy. To protect patient safety, new products must be thoroughly tested before being released for real-world use. Consequently, health data is costly to collect and manage.

“Healthcare is heavily regulated for good reasons,” explains Dr Eric Wong, Group Chief Data and Strategy Officer of Singapore’s National Healthcare Group (NHG). “We are not just dealing with money or delays. We are ultimately dealing with human lives – it’s impossible for us to put a price on human life.”

Even well-intentioned developments yield unintended effects. South Korea passed a Digital Medical Products Act in 2024 to guarantee the safety, effectiveness, and quality of digital medical products. While not intended to stifle innovation, the law will likely increase the time and cost associated with bringing new digital medical products to market.

Healthcare puts up barriers to change

Healthcare’s cautious approach is rooted in its direct impact on human lives. Any new solution must maximise patient well-being in two directions: it should show clear benefits and minimal risk. It should also yield outcomes that can be measured and verified.

This slows down ecosystem innovation – even promising innovations may be overlooked without clear evidence of benefit outweighing risk. “Proving a solution or technology as good is not good enough,” Dr. Wong explains. “You need to show me exactly how it makes our life easier. How does it, in practical terms, help us care for our patients better?”

Healthcare players must protect IP

In an industry supported by years of research and development, intellectual property (IP) rights tend to be vigorously protected and contested. When multiple parties contribute to an innovation, questions around IP ownership become complex: Who owns the rights and how are the benefits distributed?

A balance must therefore be found between protecting IP and fostering an environment where shared knowledge leads to groundbreaking healthcare innovations. Without clear agreements and trust, ecosystem innovation will always be blocked by competition between parties.

Healthcare data is fragmented

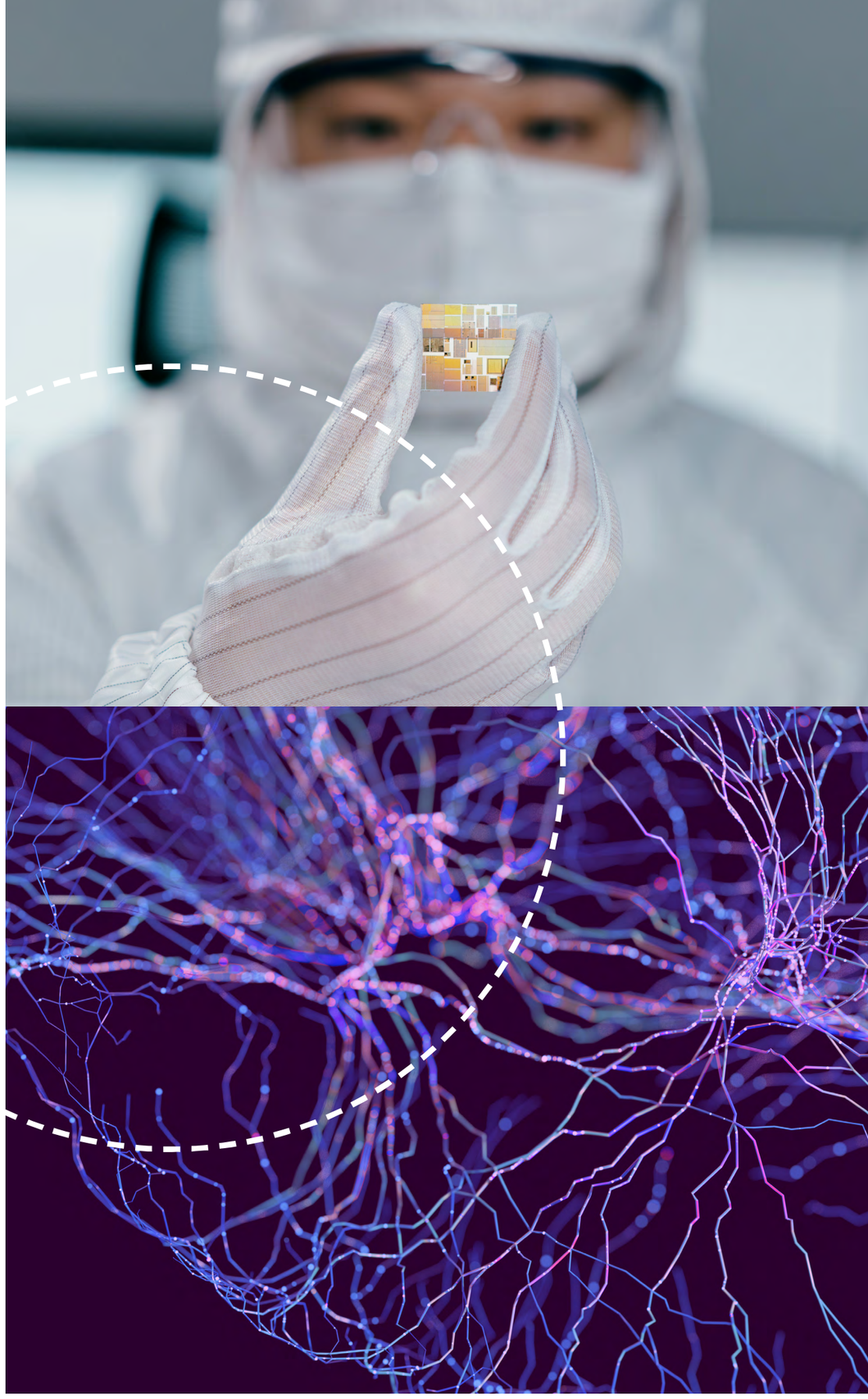
In many Asian countries, healthcare exists as a multi-institution cluster environment, where fragmented healthcare data inevitably arises from conflicting definitions and interpretations of key indicators. Even basic metrics, such as admission and discharge times, can vary widely between institutions, slowing data integration and analysis.

Synapxe, Singapore's national healthtech agency, rolled out the National Electronic Health Record (NEHR) system to address the fragmentation problem. NEHR captures data from various healthcare organisations to create a unified platform where healthcare data can be safely stored and accessed.

"Standardisation of data is crucial," says Andy Ta, Synapxe's Chief Data Officer. "This combination of high-resolution data from public healthcare and broad data from the National Health Service will aid in resolving data variability."

Despite these efforts, the industry as a whole remains slow to change. Without a unified data framework, different stakeholders struggle to collaborate effectively.

Adopting an ecosystem innovation mindset is crucial for individual parties in the healthcare industry to overcome these obstacles and keep pace with technological developments. The healthcare industry can operate at even higher levels if it embraces ecosystem innovation.



How we can nurture ecosystem innovation for healthcare

> For this ecosystem to thrive, trust has to be built. Fear has to be eliminated. And silos have to be broken.
>
> **Kenneth Tan,** SVP & President, Asia Pacific & Japan, Varian

Because the healthcare system is broad and complex, enabling ecosystem innovation requires an intentional effort to bring contributors together. This calls for a conscious and strategic approach: participants should understand what they contribute and what they gain from participating in this ecosystem.

The ecosystem's sustainability depends on the mutual benefits it provides to all partners involved. Non-monetary incentives, such as access to valuable services or information, can help boost participation and engagement.

"Every single player [must] have an aligned interest and shared purpose," explains Kenneth Tan, Senior Vice-President of Varian. "The ecosystem [must also] equitably distribute the burden according to capacity, encouraged by aligned incentives."

Change must happen on an industry and organisational level

1. Create valid business cases for innovation

To play to their strengths in an innovation ecosystem, organisations must define their desired place in the ecosystem, set internal goals that correspond to that position, and develop robust business cases that are aligned with internal goals.

These tasks must be grounded in a sustainable economic framework. Without it, even the most innovative solutions will struggle to achieve long-term success.

Key actions:

- **Define your place in the ecosystem:** Outline the strengths and capabilities your organisation can contribute – whether you're a player in digital health, biotech, medtech or elsewhere. Determine what makes your company unique within the ecosystem.
- **Determine your preferred innovation outcomes:** Are you entering new markets or launching new products to drive top-line growth? Or do you want to cut costs by streamlining operations or adopting efficient new technologies? Clear objectives will guide your innovation projects and help you keep track of progress.
- **Build clear value propositions:** Articulate the value of your contributions, stressing both patient outcomes and economic advantages. Align these solutions with market needs to maximise impact.
- **Select the right business model:** Identify the revenue model that best suits your projects, such as direct-to-consumer (D2C), business-to-business (B2B), or reimbursement pathways involving insurers or government programmes.
- **Invest in the right technologies:** Digital business models must find the right mix of technologies to support their goals – whether it's cloud computing for scalability; AI for automation and personalisation; or blockchain for transparency and security. Rather than adopting every innovation, businesses should assess which technologies to build in-house and which to source externally, based on what best aligns with their strategic priorities and capabilities.

Proactively developing a strong business case enables organisations to focus their innovation efforts and resources on achieving strategic objectives, minimising the risk of projects falling short of desired outcomes.

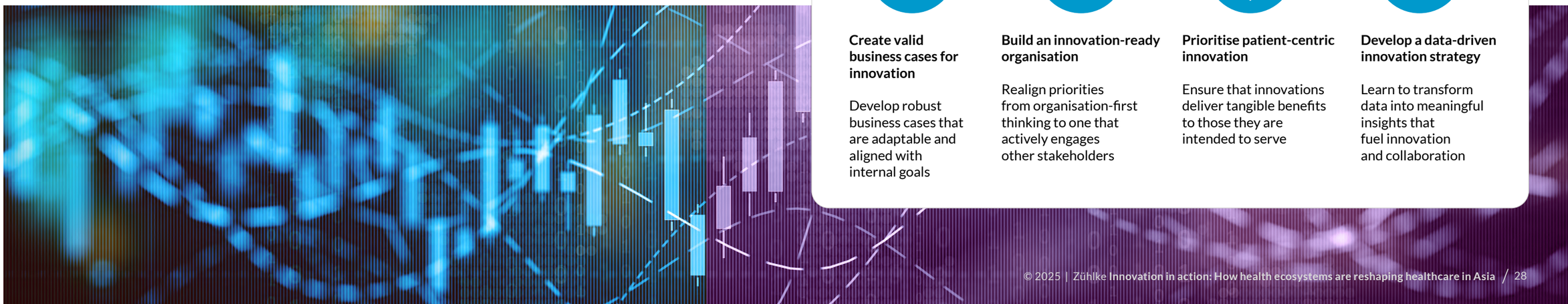
2. Build an innovation-ready organisation

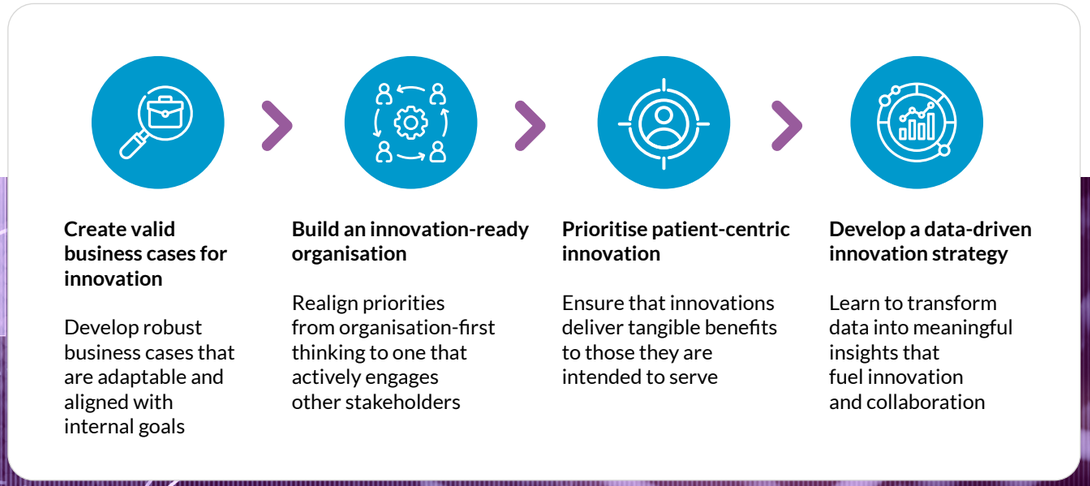
With a strong business case in hand, healthcare organisations must realign their priorities with the unique demands of ecosystem innovation. This requires a shift from organisation-first thinking to one that actively engages other stakeholders.

Key actions:

- **Look for collaborative partners that align with your organisation's value proposition and preferred outcomes.** Ask these questions about potential partners:
  - Who do you need in the ecosystem to achieve your desired outcomes?
  - What can you offer them to make a partnership attractive?
  - What resources and actions are required to secure and maintain these valuable partnerships?
- **Set clear goals:** Once partnerships are established, get everyone on the same page. Set specific goals that ensure all partners contribute value. Define the shared value exchange, ensuring all parties understand the required investment and anticipated benefits or outcomes. Implementing structured governance and regular communication will help all parties navigate complexities in the relationship.
- **Prioritise more flexible approaches to partnership:** Rather than relying on typical vendor-customer relationships, consider creative strategies or processes that support innovation. Unconventional payment schedules; streamlined approval processes; and flexible contracting arrangements can encourage collaboration without added risk to one's bottom line.
- **Implement adaptive processes incrementally:** Create governance structures, such as committees, to evaluate innovation projects. Prioritise low-risk, well-defined projects to build trust and validate new processes; this phased approach allows organisations to learn, adapt and scale innovation efforts while fostering a culture that supports continuous improvement and agility.

By restructuring to prioritise cross-company collaboration, healthcare organisations can foster an environment where innovation thrives and innovative solutions can be developed and scaled more effectively.





3. Prioritise patient-centric innovation

Sustained innovation in the healthcare ecosystem requires a strong focus on positive patient outcomes. To ensure that innovations deliver tangible benefits to those they are intended to serve, organisations must make an intentional shift towards human-centred design and an understanding of the entire patient journey.

Key actions:

- **Identify real patient needs:** Analyse the entire patient journey and map it against current gaps in the market and your strengths. Innovative solutions are more likely to flourish wherever your competencies or your partners' can deliver the greatest value.

- **Transform innovation into practical solutions:** Validate the clinical effectiveness of your innovations and assess their potential for market growth and cost savings.

By integrating a patient-centric strategy into ecosystem innovation, healthcare organisations can create solutions that are more effective, widely accepted, and better aligned with patient needs, ultimately leading to improved health outcomes and greater market success.

4. Develop a data-driven innovation strategy

Data is the lifeblood of digital healthcare organisations. Big data and predictive analytics deliver on-the-minute insights into customer behavior, market trends, and competitors' activities – helping improve operations, personalise the customer experience, and enable proactive innovation strategies.

Key actions:

- **Build a secure and scalable data infrastructure:** As electronic health records (EHRs), wearable devices, and genomic data become more prevalent, robust data infrastructure becomes ever more critical to integrating diverse data sources and providing a comprehensive view of patient health. A well-designed data warehouse is also essential for applying AI effectively in healthcare, enabling accurate insights and improving clinical decision-making.

- **Utilise advanced data tools and methods:** ETL (Extract, Transform, Load) solutions can integrate data from multiple sources and normalise it on a common data platform. A unified data environment enhances accessibility and reliability, enabling smoother collaboration and better decision-making across the healthcare ecosystem.

- **Establish robust data governance and interoperability:** Install frameworks to ensure data quality, security and compliance with regulatory standards. Interoperability standards such as the Fast Healthcare Interoperability Resources (FHIR) framework can facilitate seamless data exchange across different platforms, promoting a more connected and efficient collaboration ecosystem.

- **Encourage a culture of data sharing:** Promote data sharing between partners using secure, interoperable platforms that balance privacy with accessibility. Initiatives such as Singapore's Ministry of Health TRUST platform enable secure data sharing for research and drive ecosystem innovation.

By focusing on effective data use and governance, healthcare organisations can transform their data assets into powerful innovation drivers, improving patient outcomes and fostering greater collaboration across the ecosystem.

> By harnessing AI and real-world evidence, we can bridge gaps in patient access, accelerate drug development, and ensure that life-saving treatments reach those who need them most. The key is to foster an ecosystem where stakeholders – from pharma to healthcare providers to digital innovators – can securely and effectively collaborate to translate data into better patient outcomes.
>
> **Dr. Ahmed Elhusseiny,** Head of APAC, Roche

Government incentives and regulation: enabling innovation

While incentives might encourage organisations to co-innovate, regulations can also ensure a level and equitable playing field. Governments have a role in fostering both.

Subsidies or grants for research and innovation projects can spur collaboration. Funding can be made conditional on collaboration, involving three or more healthcare players. Governments can also design programmes that attract the right players into the ecosystem, creating a virtuous cycle.

Singapore offers an instructive example. Their healthcare spending is projected to reach US$45.9 billion in 2030, all to support government commitments to ensuring affordable healthcare.

Investment decisions are made by the National Research Foundation (NRF), a department within the Prime Minister's Office. NRF sets national direction for research and development, supported down the line by government agencies like the National Health Innovation Centre (NHIC).

NHIC helps Singapore's public healthcare sector to commercialise their medical innovations; 25 start-ups over the past 10 years have enjoyed NHIC's support, amounting to a cumulative valuation of S$273 million.

Collaboration goes both ways; non-governmental organisations (NGOs) or other players can help government agencies keep pace with emerging technologies and update regulations.

In Singapore, for instance, the Asia Pacific Medical Technology Association (APACMed) advises regulatory bodies like the Health Sciences Authority on medical devices and digital health solutions, including AI in healthcare. APACMed also provides feedback on best practices for the safe and effective use of medical technologies.

> How do you ensure that incentives keep everyone in alignment? We need a system whereby people from each of their corners will look and say, "I'm going to benefit from this."
>
> **Dr. Cheong Wei Yang,** Vice Provost of Singapore Management University & Senior Advisor to the Singapore Ministry of Health

Regulators and government bodies can follow these guidelines to encourage innovation:

- **Regulations should set data privacy and cybersecurity standards.** Companies requesting access to health data must first meet regulatory requirements to safeguard against cyber threats and data breaches.
- **Clear governance should be established around IP and other legal considerations.** These do not necessarily have to be set by governments; prevailing laws can be used to guide internal agreements on shared IP.
- **Governments or regulators can organise groups or venues to encourage collaborative exchanges of ideas.** Government bodies can be the objective third parties within the broader healthcare industry, pushing for their citizens' interests.

Collaborative spaces encourage healthcare innovation

> I'd like a more systematic way to create, maintain and review innovations. It might be a forum where we can share ideas and problems. This end-of-innovation-implementation review is what we need to continue innovating... a forum whereby intervention can be created and be maintained and prospered.
>
> **Prof. Ser Wee**, CEO, Space (MedTech) Pte Ltd

Ecosystem innovation involves vigorous interactions between sectors, organisations, even competitors. It requires previously independent systems and data to connect, creating enormous opportunities for all players to enter new markets, scale operations and provide an improved customer experience.

Players in healthcare already know they form part of an ecosystem. But increasingly, modern ecosystems are backed by digital technologies that open up new possibilities in collaboration and solution development.

The future of healthcare involves working alongside partners offering complementary data and capabilities. In this future, players unite under the common goals of product invention and improved patient outcomes.

How to prepare for ecosystem innovation in healthcare

- **Prioritise a growth and collaboration mindset:**

  Prepare to collaborate with diverse players, including health insurance companies and regulatory bodies. Form strategic alliances with healthtech start-ups and digital health innovators to speed up development.

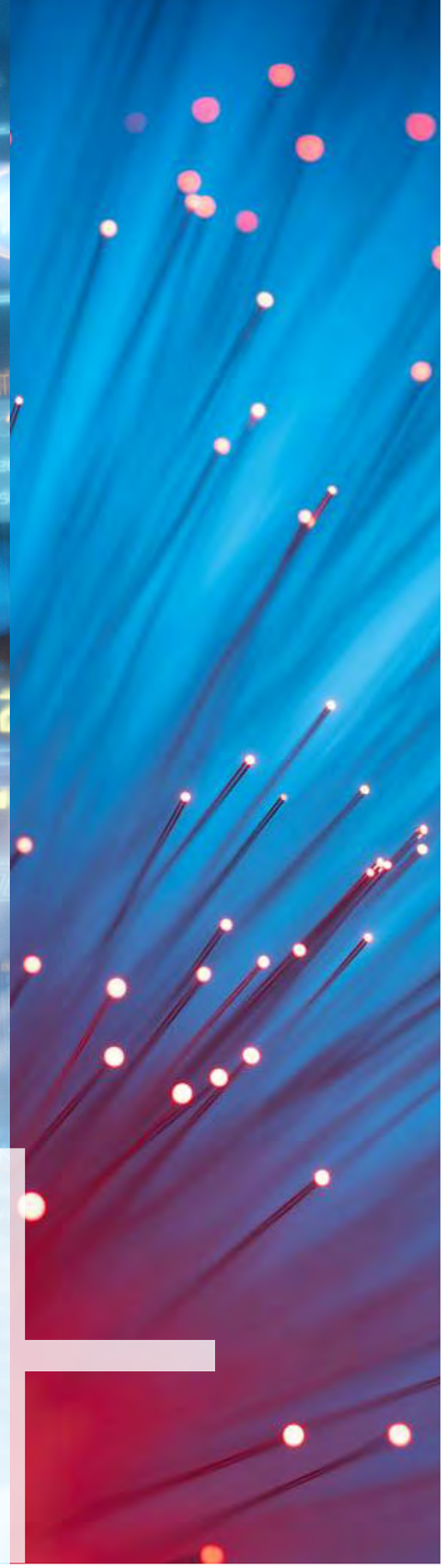
- **Integrate new solutions into old systems:**

  Many healthcare systems need an upgrade, and embracing technology can create opportunities for innovation. Get the fundamentals right – data privacy, cybersecurity, and governance are non-negotiables. Technology can act as a catalyst if implemented correctly, nudging healthcare players towards closer collaboration and data sharing for improved patient outcomes.

- **Establish a robust data-sharing infrastructure:**

  Building a shared, scalable foundation for data enables seamless exchange and interoperability across stakeholders, while ensuring compliance with privacy and security regulations. A well-integrated infrastructure also supports advanced analytics and AI-driven insights, unlocking innovation across the healthcare ecosystem.

Creating a successful ecosystem that fosters innovation relies on aligning interests and incentives between various players within health systems. Having a platform or venue for knowledge sharing is a good start to encourage parties to talk to each other regularly.



Future healthcare will go beyond treating illnesses

Asia's healthcare ecosystems are rapidly shifting toward digital-first, decentralised models, where AI-driven diagnostics, predictive analytics, and cloud-based health records enable more proactive and personalised healthcare delivery. Governments and industry leaders are expected to push for progressive regulatory frameworks that foster secure data exchange, enhancing interoperability across healthcare providers, payers and digital innovators.

At the same time, non-traditional players such as tech firms and insurers will push the industry beyond traditional healthcare silos, unlocking new pathways for patient engagement and disease prevention. As wearables, remote monitoring, and AI-powered early intervention take centre stage, healthcare will increasingly move from hospitals into everyday life.

Once this data-driven, preventive approach gains momentum, patients will become more active participants in their health. Access to high-quality, real-time information will help them make informed decisions, manage chronic conditions more effectively, and seek timely medical support. Treatments and recommendations will become personalised, accounting for individual medical histories and personal health data collected through wearable trackers and smartwatches.

Each player within the healthcare ecosystem has a role in providing patients with the data and resources to achieve truly improved health outcomes, providing a holistic view of health – from daily fitness to acute care.

Healthier SG: Shifting focus from treatment to prevention

The Healthier SG initiative was launched in 2022 to support the Singapore Ministry of Health's plan to shift healthcare's focus from treatment to preventive care, improving long-term population health outcomes.

Healthier SG emphasises a proactive approach: promoting lifestyle changes, regular checkups and early interventions. Its key components include:

- **Personalised care plans:** Citizens are encouraged to enrol with a primary care provider, who will develop a personalised health plan that includes lifestyle recommendations, health screenings and vaccinations.
- **Focus on chronic disease management:** Healthier SG promotes regular monitoring and management of chronic diseases like diabetes and high cholesterol. The programme regularly sends reminders for screenings and follow-up care, reducing complications and improving patients' quality of life in the long run.
- **Collaborative ecosystem:** Healthier SG nurtures partnerships across public health institutions, general practitioners and community organisations, creating an ecosystem that supports holistic health management.
- **Data integration and sharing:** Healthier SG encourages the integration and sharing of health data across various healthcare providers and institutions. Its interoperable data networks allow stakeholders to access anonymised patient information for research, treatment, and innovation purposes.

Healthier SG represents a more community-based, preventive model of healthcare that reduces strain on the healthcare system while enabling citizens to age gracefully.

Non-invasive diagnostics, enabled by AI

Zühlke partnered with Fibronostics to develop a next-generation Software-as-a-Medical Device (SaMD) for liver diagnostics. The non-invasive blood-based test, built on AI and algorithm technology, uses biomarkers to assess liver damage more reliably with less pain for the patient.

Previously, patients needed to undergo a biopsy for clinicians to assess liver health. The process is unpleasant and open to complications.

The new blood test, LiverFACt, enables doctors and clinicians in primary care facilities to forgo invasive procedures to assess their patient's liver health, driving better clinical outcomes for both clinicians and patients.

With ecosystem innovation, we can create a world where navigating the healthcare journey – from diagnosis to treatment – is seamless, where industry players are aligned, and where technology serves as an enabler, not just a tool.

About the author

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Jim is the Head of Health Singapore at Zühlke, where he is dedicated to expanding the company's healthcare expertise and offerings to healthcare and pharmaceutical companies. With over 25 years of experience in the ICT industry, Jim brings a wealth of knowledge in providing business and strategic advice to clients throughout the region. He has held various leadership positions across enterprises, and was the founding CEO of Good Doctor Technology.

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