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# H✚SPITAL
# AND HEALTHCARE

# HEALTHCARE
# TECHNOLOGY
## SUPPLIERS
## GUIDE 2024

**NAVIGATING THE
AI ROADMAP**

**THE ROLE OF POWER
CONTINUITY**

# Welcome to the *Hospital + Healthcare* Technology Suppliers Guide 2024!

What an exciting time it is for healthcare technologies, a harbinger of better outcomes.

Australia's digital health market was valued at $2.5bn in 2022 and is estimated to reach $10.96bn in 2030, with the country's AI in medical imaging market size set to grow from $18m in 2022 to $222m in 2030, according to healthcare-focused market research firm Insights10.

While artificial intelligence presents a range of opportunities including improved diagnostics, more personalised medicine, better care delivery, enhanced productivity and more, health leaders will need to carefully balance these with challenges such as data sharing and privacy.

The lead article in this issue reflects on the role of AI in health care, where Australia stands and where are we headed — it highlights the recommendations from the Australian Alliance for AI in Healthcare (AAAiH) aimed at driving a national policy agenda for safe and ethical use of AI in health care.

The issue also features articles on AI to improve X-ray diagnosis, value-based health care, hospital-to-home interventions and more; the latest products and solutions; and listings from technology suppliers across the country. We hope it helps you when making important purchasing decisions.

**Mansi Gandhi**

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# Navigating the era of AI

Artificial intelligence (AI) is increasingly being integrated across the entire healthcare spectrum, but where does Australia stand and is the health sector ready for the next leap forward?

From transforming diagnostics to delivering precision medicine, improving hospital administration to virtual patient care, AI is redefining the health landscape.

While the benefits of AI may seem endless, taking advantage of these will require a mature and coordinated national approach, according to Professor Enrico Coiera, the Director at the Australian Institute of Health Innovation, Macquarie University, and founder of the Australian Alliance for AI in Healthcare (AAAiH), who recently launched the National Policy Roadmap for Artificial Intelligence in Healthcare. The roadmap hopes to drive a national policy agenda for safe and ethical use of AI in health care.
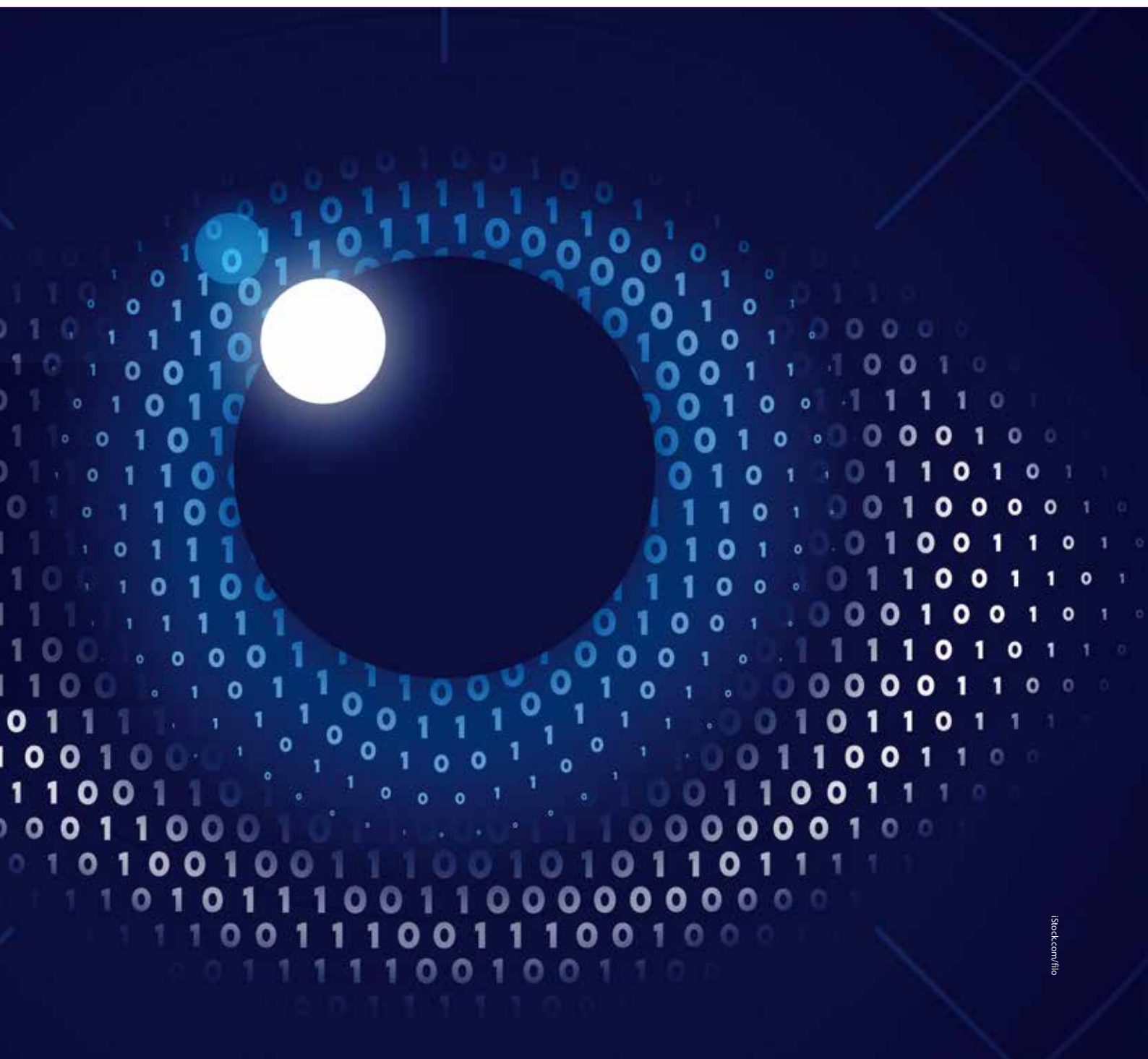
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## Where does Australia stand?

AI in health care has seen significant investments globally, with a total worldwide market size of US$11bn in 2021, according to the global data and business intelligence platform Statista. The firm estimated the healthcare AI market to grow to around US$188 billion in 2030, a growth of 37% from 2022.

"While Australia is well positioned to be a global leader in the real-world application of AI, we have yet to develop a coordinated approach for how that might happen, let alone invest at anywhere near the scale of other nations. All the

necessary elements for a world-class translational capacity are in place. We have a high-performing health system and substantial digital infrastructure at state and federal level," according to the AAAiH Roadmap.

"Australia has particular strengths in computer and data science, bioscience and implementation science. Our researchers have long applied AI to healthcare, stretching back over four decades. While several frameworks and roadmaps have been developed for the AI sector, Australia is currently unprepared to manage the opportunities and risks of an AI-enabled health system," the roadmap said.

## Research investment

A vibrant and innovative research and development sector is critical to develop products, technologies and solutions involving AI but Australia is "a clear global laggard in research investment for healthcare AI".

"Of the 84 randomised clinical trial studies of AI published internationally between 2018 and 2023, none were conducted in Australia.[1] The countries that were most active in clinical AI trials were the US (31%) and China (29%). About 37% were undertaken in the EU or its neighbours and were often multinational in scope.

"AI research in Australia attracted only 0.9% of grant funding available from the National

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## Priority areas

The recommendations highlight five priority areas:

- AI safety, quality, ethics and security — ensuring the safe use of AI in health care.
- Workforce — enabling essential training and development of the healthcare and AI workforce.
- Consumers — ensuring health AI literacy.
- Industry — supporting industry to thrive and be competitive.
- Research — guiding the research that will protect Australia's national interest.

## Data, privacy and population relevance

Uploading sensitive patient data into AI systems such as ChatGPT that sit outside of local security controls is just one of the issues that will prove problematic from a privacy and consent perspective, according to the Executive Dean of the RMIT University School of Computing Technologies and co-founder of AAAiH Professor Karin Verspoor.

Further, AI must be trained on data relevant to the population in which it will be used. It is therefore essential that Australia develops its own representative and robust dataset on which to train AI, she said.

Coiera said investment by Australia in the adoption of AI has been fragmented, especially in health care. This national plan will not only help to safeguard Australia, it will also bring the country into line with comparable nations such as the US and UK that have made substantial progress in investment and adoption of AI, he said.

AAAiH is an international community of practice with over 100 member organisations drawn from industry, health service providers, academia and consumer organisations. The community has been supported in development of the National Policy Roadmap for Artificial Intelligence in Healthcare by Macquarie University, the CSIRO Australian eHealth Research Centre, RMIT University, the Digital Health Cooperative Research Centre and the AIDH.

Health and Medical Research Council (NHMRC) and Medical Research Futures Funds (MRFF) for the period 2018–2022. Analysis of that $12 million annual average showed most went to clinical teams with limited AI track record, indicating uncertain targeting of that funding," according to the roadmap.

As against this, England has allocated over £144 million to healthcare AI research and development through multiple funding rounds since 2018.[2]

"The EU has announced €220 million worth of investment in four sectoral Testing and Experimentation Facilities for AI, with one focused on health[3], and in previous years has made substantial research investments in AI and digital health.[4] China has also stepped up its investment in healthcare and life sciences with AI, aiming for 7 percent annual growth for R&D expenditure.[5]

"We (Australia) have not come close to matching the R&D support available in other nations, and despite pockets of excellence, our national healthcare AI research capability overall, lacks global competitiveness," the roadmap said.

### Need for bold thinking

The AAAiH Roadmap suggested that there is a strong case for Australia to repeat the genomics strategy for AI in health. "The scale of the AI opportunity, as well as the significant head start other nations have made in research, indicate there is a need for bold rather than incremental thinking."

The new roadmap identifies current gaps in Australia's capability to translate AI into effective and safe clinical services and provides guidance on key issues such as workforce, industry capability, implementation, regulation and AI safety.

Designed to assist all levels of government, industry and civil society, the plan acknowledges and builds on the extensive work already undertaken nationally and internationally.

"Australia needs to move fast to safeguard patients and support our healthcare and AI sectors, while taking advantage of the benefits and mitigating the risks of AI," according to Coiera.

"The governance of AI in health care needs to be one of the highest priorities for the nation," he said.

AAAiH has developed a report, based on the recommendations, after extensive consultation with representatives from federal, state and territory government departments; research, regulatory and professional bodies; and consumer and industry representatives. While AI is already being seen in some aspects of health care in Australia, taking full advantage of the potential benefits of AI will require a mature, coordinated and system-wide approach, Coiera said.

"AI offers significant new possibilities for improving clinical diagnosis, treatment and workflows. It holds the potential to turn Australian health care into a learning system that is more agile, adaptive, personalised, safe, effective and equitable, across research and development, into clinical settings and at home for patients and their families," he said.

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# How to foster a truly inclusive culture

Lauren Anderson*

In an era where diversity and inclusion have rightfully taken centre stage in workplaces around the world, it's alarming to see that many Australian workers still feel the need to hide their true selves at work.

According to recent data from Indeed, a staggering 65% of Australian employees report concealing aspects of their identity in the workplace, a figure that has risen by 17% since 2020. This issue is particularly pronounced among marginalised groups, with 71% of LGBTIQA+ individuals, 76% of First Nations peoples and 69% of migrants admitting to being unable to express their true selves at work.

The data serves as a stark reminder that fostering a truly inclusive workplace culture is an ongoing challenge for many leaders. Inclusive workplace cultures are essential for the success and wellbeing of hospitals and healthcare organisations.

The consequences of failing to create an inclusive environment can be profound, impacting performance efficiency, patient outcomes, staff engagement and, ultimately, the overall healthcare experience. It can also negatively influence teamwork, staff morale and staff retention.

The journey towards an inclusive workplace culture begins at the most senior level, where leaders must take a proactive and visible role in promoting diversity and inclusion, and in clearly communicating their commitment to ensuring these values run throughout the organisation. When leaders demonstrate a genuine commitment to diversity and inclusion, and show they are willing to listen to concerns and feedback, it sends a powerful message throughout the organisation.

This commitment also should be embedded in recruitment and hiring policies and processes. Healthcare organisations should strive for a workforce that reflects the diversity of the communities they serve.

When individuals from diverse backgrounds hold leadership positions, it sends a message that diversity is valued and that different perspectives are essential for success. When recruitment processes are designed to reduce bias and to be accessible to people of all backgrounds, identities and abilities, diversity within the workforce will likely follow.

The use of inclusive language in the workplace is also a clear indication of a commitment to diversity and inclusion.

This includes avoiding gendered language or terminology that may be exclusionary. For example, encouraging employees to personalise their emails or name badges by adding pronouns or symbols of cultural significance is one way to support employees in being their true selves and to position your organisation as an ally to all.

Implementing recognition and rewards systems that celebrate and acknowledge contributions from diverse individuals and teams is another way to establish a culture of inclusion.

This not only fosters a sense of belonging but also encourages individuals from underrepresented groups to excel and take on leadership roles within the organisation. It sends a clear message that diversity is not just valued but actively promoted and recognised as a source of strength and innovation.

Creating an inclusive workplace culture involves recognising and celebrating the differences that make each individual unique. This goes beyond mere tolerance — it's about embracing the lived experience of

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each individual and the value they bring to the organisation. The celebration of cultural events and traditions, ensuring each colleague has equal access to the resources required to do their job, recognising that individuals have commitments outside of the workplace, and offering flexible leave policies will all help foster greater respect for all colleagues across the organisation.

It's important to remember that not all organisations will be starting in the same place and that some will be further along in their diversity and inclusion journey than others. Leaders who are starting from scratch should consider first assessing their existing cultural norms before attempting to shift the dial. Conducting cultural audits can help identify areas where inclusivity is lacking or where certain groups may feel marginalised.

Cultural audits often consist of a combination of surveys, interviews, focus groups and document analysis. These methods should be chosen based on the organisation's size, culture and specific objectives, with the end goal being to provide an objective assessment of an organisation's culture,

identify areas for improvement, and outline meaningful steps leaders and staff can take towards creating a more inclusive workplace.

Once the data is collected and analysed, a comprehensive action plan that outlines specific strategies, policies and initiatives to be addressed or improved should be drawn up. It's important to remember that cultural audits are not one-time events but are part of an ongoing commitment to diversity and inclusion. Regular follow-up audits should be conducted to track progress, further refine strategies and adapt policies in response to shifts in wider society.

Inclusive workplace cultures are built on the foundation of respect and safety for all. Healthcare leaders must demonstrate zero tolerance for harassment, discrimination and bullying, and offer clear and confidential reporting mechanisms, with reports taken seriously and promptly investigated. Alarmingly, Indeed's data reveals 45% of all working-age Australians have either witnessed or personally experienced an act of discrimination at work.

Holding individuals who engage in discriminatory or harassing behaviour accountable for their actions is paramount, as is providing support and resources such as counselling or legal support for individuals who have experienced harassment or discrimination.

Changing the culture of an organisation is a complex and ongoing process. It involves a thorough examination of existing norms, values and behaviour, and an unwavering commitment to changing these over time. It requires leadership, cultural change and the active participation of every employee.

The consequences of failing to foster inclusivity are far-reaching, affecting not only staff but also patient outcomes and the overall effectiveness of healthcare organisations. By setting the tone for inclusivity, acknowledging differences and taking immediate action against discrimination, healthcare leaders can pave the way for a more diverse, equitable and inclusive future in health care.

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# Elevating Surgical Recovery:
## The Crucial Role of Residential Respite Care in Supporting Seniors

If you have senior patients recovering from surgery, sending them home to recover can be concerning. While they're ready to leave hospital, they may still need some extra care, or their family might not be equipped to offer the level of care required, for the period of time they need it.

That's where respite care can serve as a lifeline. Respite care within an aged care setting can offer that essential support to convalescing patients, and it can also provide much-needed rest and relief for caregivers.

Also operating as a 'test-run' for more permanent aged-care options, respite care can be a useful option for your patients to consider if they have surgery coming up, and it can help to plan ahead. If your patient is eligible for a Home Care Package, they can also usually access 63 days of respite care through My Aged Care.

"We often have recovering patients coming to us after they've had surgery," explains Nithin Shetty, Facility Manager at TriCare Williams Landing. "Many will be people who need more intense care and supervision than they can receive at home.

"It's wonderful to see the visible transformation in our residents — the way they regain their strength, interact with others, and even appreciate this new phase of life as they're supported through their recovery," says Nithin.

The key to effective respite care is a dedicated and professional support network: one that operates around the clock to ensure patients receive continuous care in that post-surgery phase. The care can be tailored from basic assistance with daily activities to more complex nursing and medical attention.

For senior patients and their families who may be considering a more permanent move into an aged care residence, respite care offers a supportive 'try before you buy' approach.

The popularity of respite care as a way to smooth the transition to permanent care is growing, with The Australian Institute of Health and Welfare reporting that 64% of those entering permanent care have tried a respite service first (from their most recent data from 2019–20). This is a significant increase from just 26% ten years earlier. And of those who tried respite care, over half (52%) went on to enter permanent care on the same day they exited respite care.

This gentle introduction can give people insight into the day-to-day realities of aged care, enabling them to make confident decisions about their future living arrangements.

"We are often thanked by our residents' families and caregivers for allowing patients to see how their life could be in aged care — that it doesn't have to be an unknown or mysterious proposition," says Nithin. "And it gives caregivers the time and space to care for their loved ones, while also having the freedom to live their own lives."

Having a Home Care Package in place also means patients can have the required support post-surgery without the unnecessary financial burden.

While respite care can provide a much-needed interim solution or contingency plan when it's most needed, it can also be considered as a stepping stone towards a more comprehensive, accommodating, and seamless transition into aged care if the need arises. It's an opportunity to help patients adjust with the least resistance possible while providing them the highest level of care.

Healthcare professionals play a pivotal role in guiding patients towards the best decisions for their health. Incorporating respite care into patient recovery plans can make a world of difference in patient outcomes, providing them with options beyond managing on their own or relying solely on family and caregivers. Respite care not only assures patients of professional care but also grants them the time and space to adjust, fostering a smoother recovery process.

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# Securing the future of health care

Alex Nehmy*

The healthcare industry is undergoing the greatest revolution since the invention of the hospital — the digital revolution.

In the 1960s and 70s, we witnessed the introduction of digital medical devices such as digital infusion pumps, electrocardiogram machines and CT scanners. Fast forward more than five decades and the medical devices critical in providing patients with positive health outcomes have evolved into sophisticated computer systems.

However, the technology also has inherent weaknesses as it often contains vulnerabilities that cybercriminals can exploit or maliciously modify. A vulnerable medical device could be rendered unusable, preventing it from functioning at all, or modified to cause a malfunction. In the case of a digital ventilator or an infusion pump delivering life-saving medication, it is likely to be fatal.

This is not theoretical — there are a number of cybercriminal groups already targeting healthcare organisations. Ransomware group Medusa, which in May attacked NSW Crown Princess Mary Cancer Centre, recently targeted Philippine state health insurer PhilHealth. This not only

compromised the data of over 36 million members — around a third of the country's population — but it raised concerns about the cybersecurity vulnerabilities within the healthcare sector.

We are entering a new era where digital medical devices deliver transformative healthcare potential. However, threat actors can also turn these very devices against us. The healthcare sector must, therefore, look at how it can safeguard the cybersecurity of digital medical devices.

The pandemic accelerated the pace of digital transformation in health care, with the rise of telemedicine and remote health care. In Australia, digital health is poised to grow into a $10.96 billion-dollar industry by 2030, driven by paradigm shifts in the industry, public sector initiatives and an aging population.

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## The approaches to a secure future

The closer a device is to a patient, the more likely it is to kill them. As digital healthcare devices become more prevalent in our everyday lives, they also expose us to greater risks from threat actors. Gartner predicts that by 2025, an industrial device will be misused to harm or kill someone. Would you want your loved one in hospital, receiving life-saving treatment from a digital infusion pump that could malfunction at any moment?

Not only can threat actors breach our medical devices to disable them or create malfunctions, but the rise of digital health care also exposes Australians to another threat — ransomware attacks. According to Palo Alto Networks' Unit 42 2023 Ransomware and Extortion Report, Australia is the most targeted country in the region for ransomware attacks. We're seeing threat actors stoop increasingly low and target health care, with 69% of healthcare organisations surveyed by The Australian Digital Health Agencies Cyber Security Report 2022 being attacked in 2021.

To ensure the digital future of Australian health care is secure, the healthcare industry must, therefore, focus on the following three approaches:

## Secure build

Device manufacturers must acknowledge the criticality of ensuring device integrity and build cybersecurity into every aspect of the device. From software to physically secure hardware, security must be considered and prioritised right from the design of the device to the final code. Smart medical devices must be built securely from the ground up.

## Secure operation

Upon deploying devices in the field, they must be configured securely to minimise the risk of compromise. Ensuring default passwords have been changed and hardening the configuration of the device is essential in ensuring its integrity. Additionally, healthcare institutions need to deploy these devices in secure network segments, with the least privilege access and protection from the latest threats.

## Secure future

Ongoing operation of these smart medical devices relies on vulnerabilities being identified and device software being kept up to date with regular patching schedules.

To fully embrace its digital future, the healthcare sector must integrate cybersecurity seamlessly into all of its operations while safeguarding the integrity of digital medical devices. Cybersecurity stands as the foundational cornerstone, enabling health care's digital evolution and paving the way for a secure digital ecosystem.

*Alex Nehmy, Field Chief Security Officer – Critical Industries, Asia Pacific & Japan, Palo Alto Network.

Artificial intelligence (AI) is one area which will transform digital health care. Smart medical devices will monitor your body around the clock, collecting valuable data and leveraging AI to detect health issues early and provide timely intervention from your home. Healthcare professionals will have access to your health data and AI recommendations from a virtual hospital, anywhere in the world, where you will receive care 24/7 on a schedule that suits you, rather than waiting for the doctor to do their rounds.

Whilst this data is invaluable for doctors and health professionals in the treatment of patients, it is also subject to theft by cybercriminals looking to use it for nefarious purposes. The recent 23andMe data-scraping attack, which saw hackers target users with Ashkenazi Jewish heritage, demonstrates the risk this data can pose. In this attack, hackers obtained confidential customer information including names, email addresses, passwords and medical history, and leaked it on the dark web, impacting 1.3 million Ashkenazi Jew and Chinese users.

Australia is witnessing a multitude of AI-led healthcare startups that promise seismic changes in how people live. These companies are harnessing the power of AI to enhance patient care, streamline medical processes and provide real-time health monitoring. By enabling early detection and remote management of health conditions, these AI startups are not only improving patient outcomes but also reducing the burden on hospitals. This allows medical facilities to focus on treating the most critical cases while enhancing overall healthcare efficiency in Australia.

# Featured Products

**Keep up with the latest industry innovations**



## Machine learning tool

The Beamtree Ainsoff Deterioration Index (ADI) is an application that uses a simple numeric score as a representation of patient acuity.

Built with historical data from over 300,000 Australian patients, the ADI dashboard displays a visual summary of acuity for all patients at ward and hospital level. Accompanying analytical views further guide organisational insight to workload and risk.

Real-time alerts are generated for patients at the highest risk of deterioration. The sensitivity and accuracy of the tool means that alerts are only generated for patients genuinely at risk of deterioration, far enough in advance to enable clinical teams to act and prevent serious outcomes and long-term issues.

In a clinical trial published in the journal *Resuscitation* (Bassin et al, 2023), the ADI was found to improve patient outcomes as well as significantly reduce the length of stay by 5% across the entire organisation. This bed stay reduction translates into a cost-benefit into the millions of dollars and frees up access to hospital beds, improving access to care.

***Beamtree***
beamtree.com.au

## Patient management solution

The Heidi Assistant solution enables clinics to streamline patient interactions, including gathering histories, implementing patient request workflows, outpatient monitoring and more.

The AI feature takes patient history ahead of time with an aim to help clinicians close their consults quickly and efficiently.

Benefits include: saves valuable consult time collecting and pre-drafting patient intake notes, so time can be spent assessing the patient instead of gathering their history; allows clinics to provide care through innovative modes like asynchronous chat, safely; with pre-intake summaries, clinicians can assess whether issues can be resolved via chat, phone or video, and seamlessly upgrade to in-person appointments as needed; patients can schedule appointments and share visit details.

***Heidi Health***
www.heidihealth.com.au

## Air filters

Camfil Absolute V-shaped air filters provide extra-high-efficiency final filtration in air-conditioning systems, housings and diffusers for systems that require a very high airflow and low pressure drop.

Absolute V filters are usually used in make-up-air or recirculation units as a final HEPA stage to protect terminal HEPA filters in cleanrooms. They can also be used in exhaust air to help remove harmful ultrafine particles, whether chemical, biological or radioactive.

The range is available in filter classes E10 to H14, with an MPPS of 85% to 99.995%, and is suitable for very high airflows greater than 3400 m³/h. The media is pleated using Camfil's patented controlled media spacing (CMS) technology for optimal airflow and media performance. Together with intermediate hot-melt separators, the product is designed to ensure uniform pleat spacing and the ability to form a rigid self-supported media pack.

The product's gasket seal is a seamless polyurethane foam gasket applied to its flange that is designed to eliminate the risk of air bypass. The Absolute V family includes Absolute VG and Absolute VE. Absolute VE features an enclosing frame of galvanised sheet metal that forms a rugged and durable enclosure.

Absolute VG is made from lightweight plastic and is completely fire combustible upon disposal. Each Absolute V filter is individually tested and certified to EN 1822 with a separate scan test protocol and serialised on the product label.

***Camfil Australia Pty Ltd***
www.camfil.com.au

iStock.com/Jacob Wackerhausen

# Revolutionising Surgical Workflow and Logistics:

## Integration, Automation, and Collaboration

**In the complex world of healthcare, every minute counts, especially in the operating room.** Surgical procedures require meticulous planning, seamless coordination, and the involvement of multiple stakeholders, from surgeons and nurses to administrative staff and suppliers. The effective management of the surgical logistics is critical to the overall success of a healthcare institution. Fortunately, modern technology has revolutionised the way we streamline surgical order management, reducing administrative burdens and improving coordination among all parties involved.

**Hospitals worldwide are grappling with the challenge of rising medical supply costs** and to counter this financial strain, healthcare facilities are increasingly seeking innovative solutions. The healthcare supply chain presents a range of obstacles that contribute to these escalating costs.

**A significant issue within the healthcare supply chain is the lack of transparency and visibility**, leading to situations of overstocking or understocking of vital medical supplies. These challenges result in avoidable waste and costly delays in patient care. Additionally, the fragmented nature of the supply chain, characterised by numerous suppliers, exacerbates inefficiencies and cost inflation. Lastly, the absence of standardised procedures and modern technologies for inventory management results in **poor resource allocation and excessive spending.**

To address these pressing challenges, a comprehensive overhaul of the healthcare supply chain management is urgently needed. An ideal system should streamline inventory management processes, optimise order placement, forecast demand, manage inventory levels efficiently, and enable timely procurement of supplies. The ultimate goal is to minimise waste and reduce costs, all while ensuring the availability of essential supplies when needed most.

This transformation isn't just an option; it's a critical step towards enhancing healthcare efficiency and cutting costs. **By optimising order management, healthcare professionals can redirect their focus towards delivering exceptional patient care.**

A key element of this revamped system is a **communication platform** like Surgical Order (SOx) that replaces laborious manual tasks and outdated methods. This platform **facilitates seamless synchronisation** among stakeholders, including surgeons, hospitals, and suppliers, thereby eliminating the need for manual inventory tracking. By integrating seamlessly with existing software and workflows, SOx is able to ease the transition and reduce the learning curve. Cutting-edge scanning technology capable of effortless barcode, QR code, and data matrix scanning can revolutionise the process, eliminating time-consuming manual entry and barcode creation tasks.

Furthermore, SOx empowers suppliers to offer personalised services to hospitals by providing real-time inventory data. This facilitates **timely restocking when inventory levels dip** below the minimum threshold and allows for the transfer of excess inventory between hospitals in case of supply chain delays and further reduce waste.

To add even more value, SOx encompasses **automatic billing, an implant registry, and an intuitive analytics dashboard.** Automatic billing streamlines the billing process, minimises errors, trims overhead costs, and prevents revenue leakage. The implant registry ensures full traceability of implants used in surgeries, enhancing inventory management and patient safety. The analytics dashboard offers insight into the surgical order process, enabling data-driven decisions.

These advancements lead to enhanced efficiency, reduced overheads, and improved patient care.

**For more information on how SOx can save your hospital time and money, visit** surgicalorder.com **or contact us at** info@surgicalorder.com.

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» For more information
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surgicalorder.com**

# Featured Products

## Filter housing system

The Camfil CamSafe filter housing system is designed for use wherever containment and operator safety are essential.

CamSafe is a modular and flexible product family, designed for exhaust of contaminated air in containment applications like biosafety L1 to L3+, safety laboratories, hospitals, pharmaceutical and chemical industries, animal facilities. Housings are available as single modules or multimodule systems depending on required filtration stages and air volume.

The housing can be fitted with a wide range of particulate or molecular filters. Clamping with a single action lever is patented and includes a double safety feature to provide secure filter positioning and gasket compression. A service bag collar for contamination-free BIBO filter change helps enable safe change of every individual filter.

CamSafe has been tested at ±6000 Pa to the following qualification levels: mechanical resistance — Class D1 - EN 1886:2003; local and global leakage — Class C - EUROVENT 2/2, Class L1 - EN 1886, Class 3 - ISO 10648, Class D - EN 12237.

The system is designed for reliable and efficient filter testing with qualified leak detection capability, using lower aerosol quantities. Other configurations of the CamSafe range can be adapted to specific needs, from additional features and functions to specific finishes, custom formats and bespoke integration.

*Camfil Australia Pty Ltd*
www.camfil.com.au

## Automated dispensing cabinet

The Flowsell HS8 Remote Locked Cabinet is designed to assist hospitals and medical facilities achieve best-practice HS8 controlled drug compliance.

Created in partnership with market leaders in automated controlled drug management platforms Modeus, the HS8 Remote Locked Cabinet combines Flowsell's innovative medication storage solutions with the latest in technology.

The cabinet is linked to a secure computer system that records staff, patient and medication details, before authorising access to the cabinet via remote lock. It virtually eliminates the risk of human error while keeping controlled drugs — and the facility's reputation — safer.

Every medical facility is legally required to comply with controlled drug regulations regarding storage and record-keeping. Manual recording systems have potential for human error, and are vulnerable to manipulation for theft of controlled drugs.

Whether intentional or accidental, mistakes involving controlled drug inventory management can be costly and lengthy to investigate — as well as highly damaging to a facility's reputation. The cabinet is designed to help users reduce the risks and have secure, accurate and efficient controlled drug management.

*Flowsell*
www.flowsell.com.au

## ATP monitoring tool

The novaLUM II-X system brings together Charm's ATP (adenosine triphosphate) detection technology and new novaLINK 5 software for a system designed to make sanitation verification, corrective action and documentation easier.

Available from Cell Biosciences, the system can optimise real-time sanitation monitoring and can use data to evaluate and improve sanitation programs. Detection of ATP on surfaces has been shown in several published papers to be an effective tool to monitor cleanliness and to document the effectiveness of cleaning programs.

One study published in the *American Journal of Infection Control* (October 2012. 40(08) e233-9) established validation criteria for ATP detection systems that monitor hospital surfaces. Hospital surfaces were treated with three representative bacteria and blood as biological sources of ATP. This study provides guidance on what to consider when trialling and selecting an ATP system.

The study found that the Charm Sciences novaLUM with PocketSwab Plus swab met the verification standards. It further validated that measurement of ATP is applicable for monitoring cleanliness. ATP is sufficiently stable over a 10-day period, unperturbed by sanitiser, and is subsequently removed with effective cleaning (similar to bacterial removal) as measured using ATP testing. The study serves as a model for cleaning validation and verification and for the evaluation of ATP testing systems.

For a free trail of the system, contact Cell Biosciences.

*Cell Biosciences Pty Ltd*
www.cellbiosciences.com.au

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# The importance of
# **uninterrupted power**

As with all hospitals, power continuity is of critical importance for patient safety, so when Queensland's Hervey Bay Hospital was designing the new Emergency Department (ED) building in 2017, there was an opportunity to implement a new power distribution solution that would meet the expectations of a modern hospital.

When the new ED was built, the hospital required a system that would deliver power to sensitive, critical equipment at all times without exception.

"It's about redundancy, but it's also about our ability to service the equipment without creating impacts on our clinical services, which is what we always look for in all of our design," said David Manzini, Manager of Wide Bay Hospital and Health Service's Building, Engineering and Maintenance Service division, whose jurisdiction includes Hervey Bay Hospital.

Another consideration was the legislative requirement to switch off mains power to test the hospital generators on a monthly basis.

"We did have back-up generators, but our biggest issue was when you do your monthly generator testing there's a changeover time, and for an emergency department that was not acceptable by today's standards," according to Darren Atkins, Manager of ICT Network Infrastructure for Queensland Health.

The main impacts of losing power would have been on operating theatres, ICUs, renals and the emergency department.

"It's all about risk mitigation," Manzini said. "They're all critical services and they really struggle if they're in the middle of a procedure while that power's clunking in and out while they're ventilating patients, dialysing patients. They can't afford that clinical risk. This means that we have to delay testing and maintenance if there's someone on an operating table or if they advise us that there are clinical risks of losing power at the time."

Manzini and Atkins engaged electrical engineer Charles Webster to audit the available design options provided by an

electrical contractor. The recommended solution was the NHP ATyS with Bypass from Socomec, which is based on proven ATyS load break switch technology. It provides automatic transfer of two supply sources to ensure the continuity of supply to critical loads such as HVAC, sprinklers, elevators, fire panels and pumps, control and signalling, ventilation and hospitals, offering complete isolation to ensure safety and continuity of power supply during maintenance and test operations.

"It improves safety for electrical workers by allowing full safe electrical isolation without loss of UPS supply," Webster said.

"It allows the hospital to maintain equivalent UPS supply reliability without having a separate UPS system installed in every building. It also greatly reduces the whole-of-life cost of the UPS power supply to new installations by utilising the unused capacity of existing UPS systems that are modular and expandable to meet any increase in UPS demand. So there's significantly

lower capital cost, almost no monthly and annual maintenance required, zero battery replacement costs and significantly less space required in the new building."

"The function of the ATyS Bypass is to help improve reliability of the UPS supply," Atkins said.

"It makes good commercial sense to use ATyS Bypass rather than separate UPS systems in every new building. You still need a UPS somewhere, but this allows improved utilisation of the existing UPS. A UPS is rather expensive with its ongoing regular maintenance requirements, testing and also battery replacements every 10 years or so."

Manzini said, "I take Charlie's advice as gospel, so to speak. There'll be some projects where you won't have someone as passionate as Charlie, and he's passionate because he works for us as the 'client's engineer', so he's always got our interests at heart. We know he won't recommend a product that will be cheaper but not be suitable for the needs of

the hospital and we happily took his advice to use the NHP product."

The benefits for hospital personnel and efficiency of maintenance operations were paramount. When the double doors open, there's a barrier to protect staff from touching components, preventing electrocutions. According to Atkins, "There was big talk of safety, because the way the switch was compartmentalised, you could put it into 'bypass' and still work on certain sections of it without losing power, which wasn't a feature of other products that we'd looked at."

Queensland Health has been using NHP's Concept Panelboards extensively whenever upgrades have been required for many years now and this relationship continues. "The design we committed to for Hervey Bay using the Socomec UPS with ATyS Bypass is something that we've continued to use and build on. We are also replacing the main switchboard in the hospital's old ward with the NHP product, as well as in our new mental health facility," Atkins said.

# Featured Products



## Care management software

The Lumary NDIS care management software is an all-in-one comprehensive platform designed to help providers deliver streamlined and efficient care to participants, and optimise the entire care services journey.

The end-to-end care management software aims to remove administrative and paperwork complications to patient care using a single interface that provides the ability to onboard new clients, access participant information, update care plans, manage billings, schedule appointments and generate invoices. Routine tasks are managed by the software to allow users to focus on offering quality patient care.

Real-time data tracking and reporting enables users to receive insights into NDIS participant progress and outcomes to support informed decisions and provide personalised care. With claiming and data-syncing integration to the NDIA PRODA platform, the software automation simplifies workflow and focuses on efficiency.

Cloud-based storage allows users to access participant information from anywhere at any time, making the product flexible for remote care delivery by eliminating the need for physical paperwork. The software also assists with tracking and calculating travel and transport.

*Lumary*
www.lumary.com



## Digital heart monitor

The QT Medical PCA 500 is a digital, cloud-based, 12-lead resting heart stress test, available from Numedico Technologies in Australia and New Zealand.

The device's intuitive interface and precise diagnostic capabilities are said to make what used to be a complicated procedure of cardiac assessment simple and user-friendly.

Approved by the FDA, TGA and Medsafe in Australia and New Zealand, the test allows individuals with no experience or training, including patients themselves, to complete a medical standard 12-lead equivalent heart stress test. In a first responder, hospital or clinical environment, the device is said to reduce the time required to evaluate the patient's heart state.

*Numedico Technologies Pty Ltd*
www.numedico.com.au



## App builder platform

The Mobiddiction Mobiconnect is a customisable enterprise software featuring a ready-made suite of modules, allowing organisations to launch their web, mobile or apps for any screen.

In consultation with and assistance from industry experts, community organisations, doctors and health experts, the company has created a virtual reality application currently in trial at the Palliative Ward at the Nepean Hospital.

Mobiddiction partnered with Our Community Cares (OCC), a local Penrith, community-funded charity that assists the local community providing comfort goods to those who need it, who sponsored Oculus Meta Quest 2 headsets for use at the palliative care ward.

Through a series of workshops, ideation sessions and planning the VirtReal MetaQuest VR application that the company developed has features with the end user/patient in mind. The experience is designed to provide patients a sense of being in a virtual environment, hoping it provides a sense of positive distraction for the patients who struggle with a variety of challenges such as pain, mental health, isolation, depression and more.

*Mobiddiction*
www.mobiddiction.com.au

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# Featured Products



## Surgical logistics platform

Surgical Order (SOx) is a single online, digitally interoperable platform where healthcare providers, regardless of size, can connect with global suppliers for streamlined seamless ordering, scheduling, completion and billing of surgery.

Features include: hospital dashboard — a hub of communication that synchronises information and provides transparency for all parties during the supply-chain process; encrypted communication to ensure data privacy for all users; native barcode scanning; a connected ecosystem providing access to up-to-date stock levels and tracking updates for stock in transit from suppliers.

The system allows users to digitise hospital processes and reconcile paper-based systems into a web-based workflow. The platform's web-based theatre lists allow nurses to easily monitor upcoming surgeries and make changes where required.

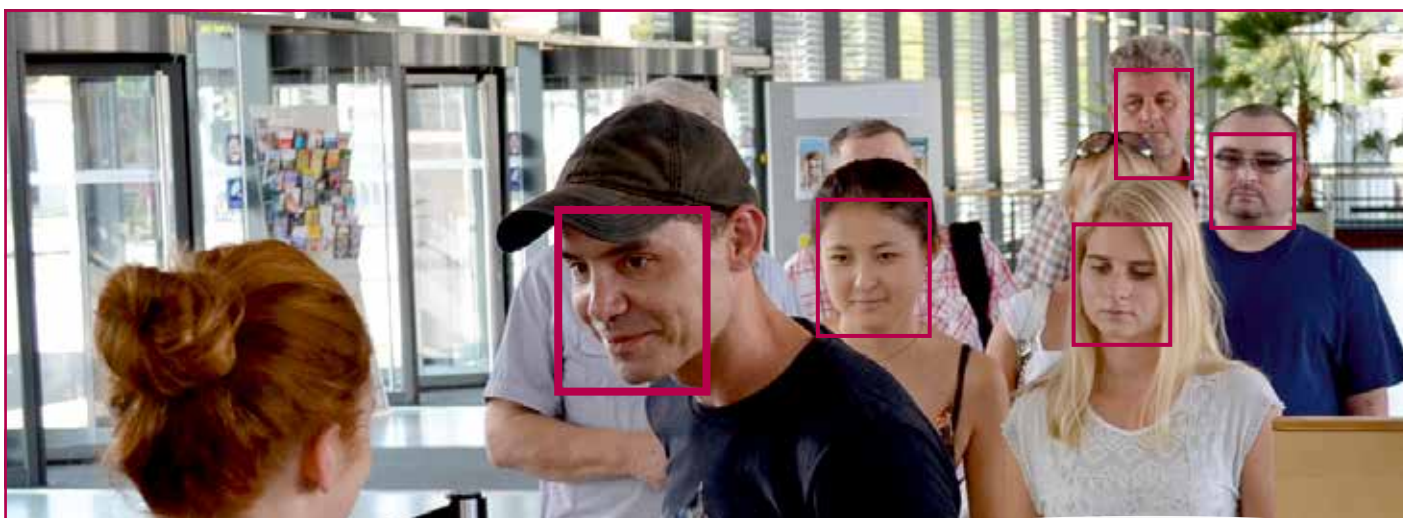***Surgical Order***
surgicalorder.com

## Pressure injury monitoring system

Lenexa Medical's LenexaCARE is a fabric-based sensor technology paired with AI software that monitors patient position and pressures in real time to enable personalised pressure injury prevention.

The solution is designed to continuously monitor the patient's position and presence, as well as their high-pressure areas, ultimately providing real-time, patient-specific, non-subjective data to guide clinicians and carers to deliver quality care.

LenexaCARE is designed to minimise patient suffering and also assist clinicians and reduce the burden on the wider healthcare system.

***Lenexa Medical***
www.lenexamedical.com

# Featured Products

## Digital headsets

The Smileyscope virtual reality technology solutions are aimed at reducing a patient's pain, stress and anxiety when having common medical procedures, such as blood tests, vaccinations and medical imaging.

The company's digital headsets change potentially stressful environments, such as hospitals and clinics, to relaxing virtual locations, like underwater worlds full of colourful fish.

By using virtual reality technology to make needle procedures less scary for children, procedures could be completed faster and without the need for sedation or rescheduling appointments. This could help children get access to the treatment they need without delay.

Smileyscope's headsets are medical grade and fully wipeable, which means they can be used in acute care settings from an infection control point of view. They are lightweight and can be used by children as young as four years old.

***Smileyscope***
www.smileyscope.com.au
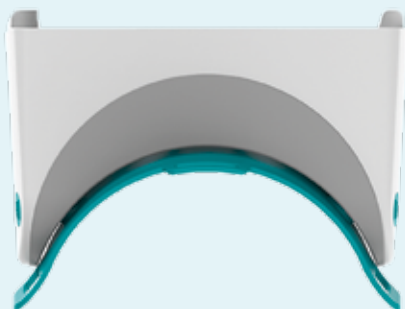
## Indoor wayfinding solution

Wise Studios WiseNav is an indoor wayfinding solution aimed at reshaping patient experience and optimising staff efficiency.

The Wayfinding as a Service offering is being used in 60+ hospitals as EyeDog across the USA and Europe. WiseNav, in collaboration with Eyedog, facilitates a patient-centric journey from home to healthcare appointments, simplifying navigation, reducing patient stress and saving staff time.

The tool leverages smartphone technology and is designed to streamline patient flow, reducing late or missed appointments and delivering monetary benefits with an enhanced return on investment (ROI).

WiseNav includes immediate pathway updates, accommodating building changes and allowing seamless expansion.

***Wise Studios***
www.wisestudios.co.nz

# Improving patient care with AI

Martin Dube*

While AI has been a prominent discussion for over a decade, in the last six months it has taken over every conversation in technology. It seems every industry is scrambling to see how AI, and more specifically generative AI, can reshape how it operates.

For health care, the technology still needs to overcome a few key challenges. One of the biggest is breaking down data silos so that their data can flow securely in and out of AI technologies.

## A laggard or leader?

The healthcare industry has traditionally lagged behind in terms of technology adoption. According to the McKinsey Digitization Index, health care is one of the least-advanced industries in digitisation. Changing technology in health care takes time due to the high stakes that any potential failing could have in terms of human lives.

An alternative perspective is that health care has just been deliberate in its adoption of advanced technology, making smart choices in areas that matter. While the healthcare sector has been slow to embrace new technologies, there have been notable areas of significant progress and innovation, providing reasons for optimism regarding future advancements. Many organisations have embarked on digital transformations, enhancing their ability to fulfil their missions and goals.

## The future

Irrespective of the current state of health care, nearly all forecasts point to a forthcoming surge in the utilisation of AI in the healthcare industry. There are numerous advantages to be gained in terms of the technology's capacity to analyse vast amounts of data, including unstructured data stored in various formats like images, medical claims and clinical research trials. Within these vast resources, AI can aid in recognising patterns and insights that elude human detection, among other valuable contributions.

We foresee new opportunities for health care to leverage AI around personalised medicine, disease prevention, treatment optimisation, hospital outpatient services, and leveraging ESG and Gen AI to augment talent by assisting in driving precision medicine.

Gen AI can analyse large amounts of genomic data and offer tailored insights to support healthcare advancements. When healthcare organisations embrace AI, it yields substantial benefits for everyone involved, including the organisation itself, healthcare practitioners and patients.

## Potential benefits

AI has the potential to significantly benefit healthcare professionals, including doctors, nurses and clinicians. When hospitals integrate AI and machine learning platforms into their systems, they bolster their technology infrastructure. The benefits of embracing AI include:

**Streamlining time-consuming tasks**: AI can automate and simplify time-consuming routine tasks that clinicians typically handle, reducing their administrative burden and freeing up their valuable time.

**Enabling more time for direct patient care**: By automating repetitive processes and paperwork, AI allows healthcare practitioners to allocate more of their time and attention directly to patient care, improving the quality and depth of their interactions with patients.

**Enhancing diagnostics**: AI-powered diagnostic tools can augment a clinician's ability to detect and prevent diseases at an early stage. AI systems can rapidly analyse large datasets, helping practitioners make more accurate and timely diagnoses, which can be critical in ensuring the best possible outcomes for patients.

## Automated processes

AI has the potential to revolutionise the patient experience in health care, bringing about several promising advancements. Envision a healthcare landscape where a patient's visits to a doctor's office begin with seamless automation. Front desk processes, such as form filling and sharing medical history, can be digitised through the application of intelligent document processing and generative AI tools. AI and generative AI-driven automation have the capability to extract data from various formats, including images and PDFs, ensuring that information can be reused and is interoperable. This automation also extends to the submission of insurance claims, simplifying the insurance process.

**Streamlined administrative processes**: Patients can enjoy a more efficient and convenient experience with AI-driven automation handling administrative tasks, such as paperwork and data sharing. This leads to reduced wait times and smoother interactions with healthcare providers.

**Improved quality control:** AI-powered devices can be used by healthcare practitioners to capture real-time documentation for educational and quality control purposes. These devices can record surgeries, assist in automating procedure documentation and ensure that the highest standards of care are maintained.

**Enhanced medical record accessibility:** AI-driven solutions can make medical records more accessible and transferable, enabling patients to have their health data readily available and easily shared between healthcare providers. This can lead to more coordinated and personalised care.

**Efficient insurance processes:** AI can simplify the submission of insurance claims, making the process quicker and more efficient for patients. This reduces the administrative burden associated with healthcare expenses and ensures that patients can access the benefits they are entitled to more easily.

## Patient experience

AI has the potential to greatly improve the patient experience by automating administrative tasks, enhancing access to health care through virtual consultations, ensuring quality control and simplifying various processes within the healthcare system. These advancements ultimately lead to better patient care and increased convenience.

*Martin Dube, Rackspace Vice President, Public Cloud, APJ

iStock.com/bestbrk

## AIM Software Pty Ltd
www.aimsoftware.com.au

A fully integrated financial management solution at the heart of your operation. 2GEN is affordable and compliant with residential aged care legislation. The solution is scalable for use in small single-site homes to larger multi-location operations. AIM can also assist users with more specialised modules.

## Alayacare
www.alayacare.com

AlayaCare is a technology provider for the aged and disability sectors. Through aligning with technology and tapping into the power of AI-based software, AlayaCare aims to transform the way care is delivered.

## Alcidion
www.alcidion.com

Alcidion aims to transform healthcare delivery globally with smart, intuitive technology. The company's solutions align with clinical workflows to deliver clinical decision support at the point of care. Alcidion's flagship product, Miya Precision, an event-based technology platform, supports a flexible modular approach.

## Alpha Global
alpha.global

Alpha Global is a leading provider of AI-powered solutions that helps businesses find suitable technology solutions based on their requirements. The company is on a mission to deploy innovative technology solutions that deliver immediate and long-term results to the health sector in Australia.

## Altera Digital Health
au.alterahealth.com

A global healthcare IT innovator, Altera Digital Health develops and elevates technology to connect and inspire healthier communities. The company's platform approach to its solutions is said to be changing the way health care is delivered.

## Ambu Australia Pty. Ltd
www.ambuaustralia.com.au

Ambu specialises in single-use endoscopy, anaesthesia and patient monitoring & diagnostics solutions. The Ambu Bag resuscitator is claimed to be the world's first single-use flexible endoscope. The company offers a convenient endoscopy solution across bronchoscopy, ENT, cystoscopy and GI.

## Anaeron Pty Ltd
www.anaeron.com.au

Anaeron distributes leading medical accessories and consumable products aimed at combating the spread of infection.

The company supplies hygiene, cleaning validation, infection control and prevention solutions, including S-7XTRA, probe storage, leakage testers and a range of ultrasound and medical consumables.

## Ascom
www.ascom.com.au

Ascom is a global solutions provider focused on healthcare ICT and mobile workflow solutions. Ascom aims to close digital information gaps allowing for the best possible decisions — anytime and anywhere.

## Aspect Insurance
aspectinsurance.com.au

Aspect Insurance provides busy SME businesses — digital and physical — with easy access to tailored insurance. The group sees itself as risk managers that understand SMEs, digital risk and the unique risks faced by businesses in the health sector.

## Ausmed
www.ausmed.com.au

Ausmed's Workforce Capability Solutions are designed to empower modern healthcare providers to define, track and enhance their staff's knowledge, skills and competence all within a single platform. Allowing them to take a person-centred approach to their workforce, as well as those receiving care.

## Axient Pty Ltd
www.axient.com.au

Axient optimises healthcare workflows with RightFax, ensuring secure, compliant information transmission. The solution integrates with EPIC and other EHR systems, automates fax workflows and enhances document management for efficient healthcare operations.

## Beamtree
beamtree.com.au

A global AI health technology company, Beamtree is designed to support organisations delivering patient care. They strive to create a better future for health by turning data into insights and action through automation. Their innovative solutions aim to improve the delivery of care and solve real-world problems.

## BeyondTrust
www.beyondtrust.com

BeyondTrust is a provider of intelligent identity and access security solutions, enabling organisations to protect identities, stop threats and deliver dynamic access. The company is trusted by 20,000 customers plus a global ecosystem of partners.

## Bizcaps Software
www.bizcaps.com

Bizcaps Software assists healthcare organisations, government agencies, hospitals and health services to resolve their data management challenges through cloud-based software solutions and specialist support services. Bizcaps Software

provides services in compliance with global data standards and is 100% Australian made and owned.

## Blue Mirror
www.bluemirror.ai

Blue Mirror provides virtual donning and doffing training to help teams stay safe through effective PPE use. Blue Mirror is an extendable resource used to train staff on donning and doffing. Powerful dashboards and admin logins allow you to manage your own PPE protocols with the click of a button.

## BOGE Compressors Australia PTY Ltd
www.boge.com/en-au

For more than 50 years, BOGE has worked with well-known hospital equipment outfitters and manufacturers of medical devices to develop customised and standards-compliant system solutions for a highly sensitive area, with the supply of medical-grade compressed air and the safety of patients as top priority.

## Brother International Aust Pty Ltd
corpsolutions.brother.com.au/

Brother understands that providing patient value is at the heart of care delivery. To support this goal, technology must meet standards of reliability and efficiency while ensuring patient privacy. Brother's at-your-side philosophy guides the company to create products and solutions the healthcare industry can rely on.

## Caire Australia
www.caireaustralia.com.au

CAIRE Inc. is a global oxygen supply manufacturer, providing customers with the innovative and effective oxygen generators, therapy and concentrator products and services for home care, hospitals and

long-term care. For more than 50 years, CAIRE has developed oxygen delivery equipment.

## CFT International



www.cft.edu.au

CFT International, RTO 21120, is a provider of fully accredited food safety training throughout Australia. The company specialises in the training needs of the aged care and health services sectors and has been supporting these industries for over 25 years.

## Cincom Systems of Australia



www.cincom.com/au

Cincom is a global organisation focused on building software solutions aimed at helping businesses succeed. The company's configure-price-quote (CPQ), customer communications management (CCM) and business application solutions are designed to enhance organisations' capabilities, optimise processes and deliver a better experience to customers.

## Cognitec Systems



www.cognitec.com/

Cognitec has worked exclusively on face recognition technology since its inception in 2002, offering products for facial image database search, real-time video screening and people analytics,

border control, ISO-compliant photo capturing and facial image quality assessment.

## CombiTel
www.combitel.com.au/

CombiTel is a provider of patient entertainment and signage solutions. The company's flagship product, Omniscreen Pilot, is made in Australia and deployed by leading healthcare and aged care providers. CombiTel offers flexibility, local support, integration and many content options.

## CommScope



commscope.com

From copper and fibre structured cabling to Wi-Fi networks to 5G-ready in-building cellular platforms, CommScope's end-to-end portfolio delivers the network that both public and private healthcare organisations need, so healthcare organisations can deliver the care your patients need.

## Connected Health Powered by Wavelink
www.connected-health.com.au

The Wavelink Connected Health solutions use technology to enable healthcare workers to deliver improved patient outcomes. By combining purpose-built multifunction smart devices with healthcare-specific applications, the company lets healthcare workers carry out their duties safely, securely and effectively.

## Daraco IT Services
www.daraco.com.au/ health-solutions

Daraco supports the IT needs of private health providers, helping clients gain new patients, streamline processes and improve platforms.

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# Five steps to accelerate network transformation

**Bruce Bennie, Vice President & General Manager, Australia & New Zealand at Juniper Networks.**

In an age of rapid healthcare digitisation, healthcare practitioners are grappling with unprecedented pressures to satisfy ever-growing and increasingly complex patient demands using digital solutions. These digital tools have become indispensable, automating essential healthcare administration tasks like managing electronic health records, appointments, and billing. Moreover, they are now seamlessly integrated into the daily operations of the healthcare industry, driving mission-critical functions.

Networks play a pivotal role in empowering medical professionals. They enable access to remote at-risk patients with telehealth consultations, who would otherwise find it difficult to receive specialised healthcare. Patient monitoring, preparation of medication and the optimisation of physical hospital conditions are precisely monitored and controlled by digital tools.

The integration of artificial intelligence further enhances medical data analysis, improving patient outcomes and automating routine tasks, granting medical professionals more time to address patient concerns. However, these digital tools are only as effective as the network that supports them. It is crucial that healthcare providers prioritise network robustness, considering these five critical aspects:

## Protect patient data
Patient data and healthcare applications, often hosted on public clouds and transmitted across public internet connections, are highly susceptible to cyber-attacks. A breach could have catastrophic consequences.

Cyber-attacks often target electronic patient records or disrupt electronic healthcare operations to ransom highly confidential data or operations. To protect this information and to ensure regulatory compliance, healthcare organisations should adopt cloud-centric security solutions with extra security elements such as zero-trust routing, URL filtering, payload encryption, denial-of-service protection,

Network Address Translation (NAT) and VPN functionality to mitigate the risk of attack while complying with data privacy mandates.

## Enhance patient experience
The success of healthcare organisations is closely tied to patient outreach and experience. To maximise patient numbers and achieve patient satisfaction, implementing digital solutions is critical. Digital tools such as online telemedicine applications, interactive kiosks, mobile health, and clinician apps all assist in facilitating care for remote patients and achieving patient satisfaction.

These services directly rely on the network as a medium to efficiently transfer information from medical providers to patients. By intelligently managing traffic and employing appropriate service-level agreements, healthcare systems can enhance user experiences and foster the adoption of new technologies. AI-driven network monitoring can detect and address network issues proactively, preventing potential disruptions.

## Reduce care disruption
In healthcare, where digital tools are lifelines, network speed and availability are not luxuries but necessities. Network connectivity failures can disrupt critical care, hinder clinician productivity, and erode patient trust.

Healthcare systems can mitigate care disruption and patient dissatisfaction by ensuring continuous access to critical applications, especially in the event of wide area network (WAN) link failures or Internet Service Provider (ISP) outages. Streamlined traffic management, session-aware routing, and quality-of-service (QoS) functions are essential to ensure reliable service with minimal disruption, all without the need for expensive backup tunnels.

## Smoother network management
To match vast and growing medical demand, hospitals and healthcare systems must

continuously expand into new locations and upgrade legacy systems. Integrating different network systems and installing new networks use precious time and resources possibly resulting in error.

To ease the process of network installation, healthcare providers must first update network protocols to remove outdated and inefficient elements. Ideally, healthcare providers can action moving data and networks to the cloud to minimise disruption to services and complications of network structures when installing new networks. From a centralised cloud, IT operators could use systems such as zero-touch provisioning, claim codes, and advanced templating tools to efficiently install and manage networks.

## Leverage AI for competitive advantage
The increased transparency mandates of modern life mean any financing or resources the healthcare industry receives from the government and philanthropy are more tightly controlled than ever. To adhere to the ethical demands, hospitals and healthcare providers are constantly seeking cost efficiencies.

Shifting network services to the cloud and implementing AI-driven network management can reduce errors and complications, leading to significant cost savings. Centralised network management will also ensure uniform policies across locations and clouds, simplifying ongoing administration.

Operating in such a crowded, competitive landscape, having a robust and reliable network is non-negotiable. Embracing the digital transformation of healthcare networks is not just an option; it's a strategic imperative. To delve deeper into how Juniper Networks is revolutionising the campus network experience, explore more using this link: https://www.juniper.net/us/en/solutions/healthcare.html.

**JUNIPER** NETWORKS

»
For more information visit:
**www.juniper.net/au/en**

The company aims to help make the most of their customers' existing IT investments while minimising risk through policies and controls that keep the organisations secure amidst today's evolving cyber threat landscape.

## DB Results
dbresults.com.au

DB Results is a digital business consulting and technology company. As digital business specialists, the company empowers customers along every step of their journey from strategy to reality. The company services a range of industry sectors including financial services, health, energy and utilities, government, etc.

## Design + Industry
www.design-industry.com.au/

Design + Industry is an ISO 13485:2016 certified product design and development consultancy, with 70+ specialist designers and engineers in our studios. For 35 years, the company has been delivering design and innovation in Australia, providing leading solutions, products and user experiences.

## Ergotron, Inc.



www.ergotron.com/en-au/

Ergotron moves caregivers and patients forward with ergonomic products that enhance workflows and drive positive patient experiences and engagement. Driven by the goal to remove constraints inhibiting patient-focused energy, the company's products are designed for caregivers to help them thrive.

## Eucalip Group Pty Ltd
www.eucalipgroup.com

Established in 1986, Eucalip is a manufacturer and supplier of TGA-approved economical infection prevention and control products to institutions, pathology, military and aged care. The company's Det-Sol sachets are used by major hospitals and institutions nationally for infection control.

## Flowsell
www.flowsell.com.au

Every hospital has multiple departments that require safe storage of medications and this can be as varied as the ED/OR/ICU/CCU/Maternity/HITH and each ward. Flowsell is a hospital medication storage space provider that offers customised solutions to fit into each department's unique footprint.

## FM Essentials
www.fmessentials.com.au

FM Essentials are facility management providers and offer clients a unique combination of: specialist FM consulting and workplace operations; building management, facility management and maintenance management services; asset and maintenance management software. Our award-winning business was formed 20 years ago.

## Galvin Engineering
www.galvinengineering.com.au

Galvin Engineering, a 4th generation Australian manufacturer, offers safe, electronic, hands-free water solutions for hospitals, health and aged care. The company's brands like CliniMix address challenges such as water wastage, vandalism, bacterial spread and scalding, offering safety in high-risk environments.

## GS1 Australia
www.gs1au.org

A non-profit, global data standards organisation that enables visibility and traceability across health care. The company supports the adoption and implementation of interoperable global data standards within the Australian healthcare sector with an aim to enhance patient safety, and operational and supply chain efficiencies.

## Head Bumpa Pty Ltd
www.headbumpa.com.au

Head Bumpa is a provider of sociable, comfortable soft head protection for all ages throughout their lives for growing milestones, special needs, health conditions, elderly, babies and children. Customers can complement the product with a scarf or beanie.

## Hills Health
www.hillshealthsolutions.com.au

Hills is an Australian-owned company that develops, distributes, implements and manages integrated health technology solutions for homes, hospitals, aged care facilities and other health settings across Australia and New Zealand.

## Hipac



www.hipac.com.au

Hipac, an Australian company with nearly 40 years' experience, is a provider of innovative healthcare solutions. Specialising in sourcing, designing and manufacturing for operating theatres, mental health facilities and bio-medical waste solutions. The company aims to create an environment where healthcare professionals can work productively, safely and efficiently to achieve the best possible patient outcomes.

## Hippo
myhippo.com.au

Hippo's global team of healthcare professionals, technologists, experienced designers and

innovators' mission is to serve patients and those who care for them by leading the transformation to virtual care and expanding access to clinical expertise and technologies to improve the quality of health care and health education.

## Hospital Surgical
www.hospitalsurgical.com.au

Hospital Surgical is a solutions-based distributor to the APAC region. We have partnered with Radiation Pro Glasses offering a variety of radiation protection, protective eyewear, apron racks, etc. We help you with decisions. We are dedicated to providing premium medical supplies by leading manufacturers.

## HPA

hpaust.com/

HPA provides solutions that work smoothly, seamlessly and efficiently to support medical staff to save and enhance lives. We work as part of your team to advise, supply and manage all the equipment you need to care for patients — ICT and carts, patient monitoring, surgical solutions and infrastructure.

## Human Centred Innovations
mymatilda.com.au

Human Centres Innovations designs and deploys evidence-based intelligent social robots like Matilda (Australian Innovation) with holistic support services for older people and people with disability in a variety of settings including hospital to home care, dementia support, lifestyle programs, daily living, palliative care, social connect, telehealth.

## Humanetix
www.humanetix.com.au

Humanetix is focused on improving the quality of aged and health care through smart technology, enabling better care for recipients, families and care staff. Users can simplify care and improve efficiency with the Humanetix ACE PLATFORM. The company tailors solutions and revolutionises workflows for impact.

## Humanforce

www.humanforce.com

Humanforce provides employee-centred, intelligent and compliant human capital management (HCM) solutions for frontline and flexible workforces. Founded in 2002, Humanforce has 2300+ customers and over 600,000 users worldwide.

## INDIGO CARE
www.indigocare.com.au

INDIGO CARE conducts research, designs and manufactures nurse call peripherals and fall prevention devices that can be stand alone or integrate into most nurse call systems for aged care facilities and hospitals. Aged care is the group's business and it aims to provide easy-to-use, quality products to every customer.

## IntraSpace
www.intraspace.com.au

IntraSpace provides effective and efficient storage and office furniture as part of its custom healthcare storage solutions. The company designs high-quality, compliant retrofits, upgrades or new fit-outs that function seamlessly within the everyday demands of space. The company helps users get storage right the first time.

## IOS Technologies
www.info-organiser.com.au

Since 1999, Information Organiser Solutions is said to have been at the forefront of Australian electronic office software development. Its latest version includes email filing workflows, enhanced security and VERS certified records management automations. Organise a free online demo at www.info-organiser.com.au.

## Jands
www.jands.com.au/

Jands provides professional audio, lighting and video solutions throughout Australia and New Zealand. The company believes in delivering top-tier products and providing innovative solutions to customers. Jands' professional team can assist with every step, from technical specification and design, through to implementation.

## Juniper Networks

www.juniper.net

Juniper Networks is a provider of AI networking, cloud and connected security solutions. The company simplifies the process of transitioning to a secure automated multi-cloud environment. Juniper was the Leader in two Gartner Magic Quadrant reports — Enterprise Wired and Wireless LAN Infrastructure and Indoor Location Services.

## Kofax Australia
www.kofax.com

Kofax's Intelligent Automation Platform helps organisations transform information-intensive business processes, reduce manual work and errors, minimise costs and improve customer engagement. The company combines RPA, cognitive

capture, process orchestration, mobility, engagement and analytics to deliver results.

## Leica Microsystems
www.leica-microsystems.com

Leica globally stands for setting new standards in the precision of optics, in resolution as well as in image reproduction and analysis. Microscopes and scientific instruments by Leica Microsystems provide researchers, engineers and surgeons clear images of the microscopic world.

## LogRhythm
www.logrhythm.com

The LogRhythm SIEM platform helps security teams protect critical information from emerging threats. The company's comprehensive platform offers log management; security analytics; network detection and response (NDR); user and entity behaviour analytics (UEBA); and security orchestration, automation, and response (SOAR).

## Lumary



www.lumary.com

Lumary is an Australian healthtech company delivering software solutions to the global health market. The Lumary CM care management platform is purpose built for disability and in-home aged care providers in Australia, and supports smaller and enterprise-level organisations to manage their entire care delivery business.

## Med-X Healthcare Solutions
www.med-xsolutions.com.au

Med-X is an experienced service provider in clinical and related waste disposal and management.

The Med-X Sharps Solution incorporates a complete range of Australian Standard compliant sharps containers, as well as safe, secure collection and disposal of sharps waste. Med-X also offer washroom, hygiene and sanitary services.

## MEDELEQ PTY LTD
www.medeleq.com.au

MEDELEQ has been supplying medical equipment to the Australian healthcare industry for 42 years. The company is ISO-accredited, has distributors in all states and has products listed with the TGA. Many are on various government contracts and the company's financial stability has enabled good stockholdings.

## MePACS Personal Alarms
mepacs.com.au

MePACS offer a 24/7 personal and duress alarm service that is responded to by trained professionals. The company has more than 50,000 clients and 30+ years' experience in emergency response. MePACS offer a simple, sleek device that has one-button activation, GPS, fall detection and fast charging.

## Miracle Electronics
miracle-electronics.com/

Miracle Electronics is a nurse call and resident assistance solution provider for hospitals, retirement villages and rest homes.

## Mobiddiction Pty Ltd
www.mobiddiction.com.au/virtreal

Technology company Mobiddiction works with government and enterprises on digital web and mobile programs, innovation and field mobility services across various industries. The company's

Digital Patient VR for digital patient experience including palliative care is currently being trialled by the Nepean Hospital Palliative Care unit.

## Modeus
www.modeus.com.au

Modeus is a leading supplier of electronic controlled drug register software, servicing over 5500 customers across multiple industries including pharmacy, veterinary, aged care, hospital, paramedic services, and medication warehousing and distribution.

## Moveability Australia
www.moveabilityaus.com.au

Moveability Australia is a family-owned business committed to delivering customer service excellence with 15 years' experience in the specialised health, mobility and lifestyle equipment industry. The company's goal is to be the leader in services and equipment that will improve the quality of life for individuals.

## MTA Australasia Pty Ltd
www.mta-au.com

MTA is a European-based manufacturer and global supplier of commercial and industrial water chillers for both HVAC and industrial process applications, including medical applications such as MRIs, Linac, PET, etc. Offering cooling only and reversible heat pump configurations with a cooling range of 1.7 to 1934 kWr.

## MyHealth1st
myhealth1st.com.au/practices

MyHealth1st allows users to connect, manage and engage with new or existing patients at every step of their healthcare journey with the digital convenience they want and expect. The tool helps practices gain a clearer understanding of their patients and help them to put their health first.

## NHP Electrical Engineering Products
www.nhp.com.au

NHP is an independent, Australian owned company that has been providing electrical and engineering industry excellence for more than 55 years. The company sources electrical products from across the globe and has a local presence throughout Australia and New Zealand.

## NWI Group
www.nwigroup.com.au

A family-run Australian business, NWI Group is committed to providing a service of quality in the sale, calibration and service of weighing and measuring equipment used in hospital and other healthcare facilities. The product range covers fine precision measuring equipment to wheelchair and handrail scales and more.

## Olinqua
olinqua.com

Olinqua's powerful interoperability platform, with Connected Workforce and Connected Environment technology, optimises communication and data exchange right across hospitals. It allows users to replace six applications — messaging, tasks, media exchange, incidents, asset tracking and environment monitoring — with one, integrated solution.

## Peacock Bros.
www.peacocks.com.au

Peacock Bros. provides healthcare solutions to medical facilities and associations in the ANZ region. Specialists in digital healthcare solutions, they provide medical-grade barcode scanners, mobile computing, all-in-one PCs, ergonomic carts, printers and consumables, and patient ID solutions.

## Personify Care
personifycare.com

Personify Care believe people deserve the best possible care, even when they are not in the hospital or clinic. The company provides software that helps healthcare teams reach patients when they need it most, by digitising care pathways. It helps remove repetitive paper forms and phone calls throughout the entire patient journey.

## Philips
philips.com.au/healthcare

Philips is a leading health technology company focused on improving people's health and enabling better outcomes across the health continuum — from healthy living and prevention, to diagnosis, treatment and home care.

## Pitney Bowes
pitneybowes.com/au

Pitney Bowes delivers technology that helps clients automate manual business processes to streamline operations, improve productivity, save time and reduce cost. The company offers a range of mailing and shipping products, and digital visitor and contractor access management solutions to Australian healthcare organisations.

## Powertec Wireless Technology
www.powertec.com.au

Powertec is a national wireless technology company with a team of over 90 permanent staff, supported by a network of over 100 telecommunications field contractors, and 1000 local distributors and dealers spanning Australia and internationally. Powertec delivers turnkey wireless and communication systems.

## Procell

PROCELL®
BY THE DURACELL COMPANY

www.procell.com

Procell is a premium primary battery brand owned by Duracell, exclusively serving the professional market and designed to reduce overall costs and drive the profitability for corporate. Estimate your battery related savings when using Procell, please visit our website to learn more.

## Price Holyoake
www.holyoake.com

Antec controls by Price Holyoake design and manufacture a diverse range of products to create safe and cost-effective solutions that ensure occupant safety and limit energy usage in critical spaces.

## Propell Pty Ltd
www.propellhealth.com.au

Propell is the Australian distributor of iHealth — patient-focused mobile health devices. This includes: Bluetooth-connected blood pressure monitors, pulse oximeters, thermometers, scales and blood glucose monitors.

## Prospection
www.prospection.com/

Prospection provides real-world SaaS insights, with a mission to advance precision medicine through real-world evidence. Using real-world data, the company unearths health journey and treatment insights by analysing longitudinal data for hundreds of millions of patients to see how drug treatments are used after the clinical trial.

## RA Health
www.ragroup.com.au

RA Health is a supplier of automated hospital distribution systems using core technologies of MAXAGV Automatic Guided Vehicles and Motoman Yaskawa Robotics. Operating in Australasia since 1988, RA Health continues to support over 3500 installations across hospitals, laboratories, warehouses and manufacturing.

## RiskClear
www.riskclear.com.au

RiskClear captures incidents, risk register, feedback, audits, credentialling, quality improvements, contractor and maintenance registers, documents and training all in the one place. It is currently used in over 120 private hospitals throughout Australia.

## Rubbermaid Commercial Products
rubbermaidcommercial.com.au

Rubbermaid is committed to creating durable and innovative solutions. The company's products are designed to protect staff from injury and reduce the unnecessary waste created by cheaper, less durable alternatives.

## SATEC (Australia) Pty Ltd
www.satec-global.com.au

SATEC is a developer and manufacturer of specialty solutions for power metering and power quality monitoring. For over 30 years, the company has been providing advanced power telemetry solutions for utility substations and energy efficiency optimisation for the industrial and commercial market.

## SEKO
www.seko.com

SEKO's cleaning and hygiene solutions include chemical dilution and dispensing units, wall-mounted spray stations and the award-nominated Wash Series on-premise laundry systems which bring IoT-enabled remote management to set a new standard of operational efficiency.

## Service Central (Aust) Pty Ltd
www.eaco.systems

Within the health and allied health services sector, The Eaco System (Eaco) is a suite of software that enables you to easily collaborate in real time with the key stakeholders in your network. It serves as a powerful works management platform to drive efficiency, transparency and productivity.

## Sleeptite
www.sleeptite.com.au

Sleeptite is designed to improve the wellbeing and health outcomes for older Australians — achieved through innovative sensor technology and real-time feedback on a user's state of health and sleep. The company aims to improve the healthcare sector through innovative, non-invasive medical-grade resident monitoring systems.

## Smartrak
www.smartrak.com

Smartrak understands the need for organisations to increase productivity from their vehicles and assets. Without access to data, organisations cannot make informed decisions. Councils, government organisations and utility companies use these tools to manage their fleets.

## Soter Analytics
soteranalytics.com/

Soter Analytics is a global safety solutions company that develops a tailored approach to workplace safety for their partners. Soter incorporates advanced AI-driven wearables, sensor-free video processing and a suite of health professionals specialising in leading data metrics.

## Spotto
www.spotto.io

Spotto's simple-to-install, cost-effective real-time asset visibility and tracking enables hospitals and aged care facilities to dramatically reduce the time wasted by nurses searching for equipment and improves response times when you need things urgently.

## Surgical Order



www.surgicalorder.com

SOx connects practices, hospitals and suppliers to create and coordinate theatre lists, manage inventory, billing and implant registries. It is designed to reduce manual transcription and double handling of information, allowing users to replace repetitive admin tasks with a secure and integrated communication platform.

## Tennant Company
www.tennantco.com.au

Tennant Company is a recognised leader in designing, manufacturing and marketing solutions that help create a cleaner, safer, healthier world. Tennant machines advance cleanliness standards in the healthcare sector, contributing to a safer and healthier world for patients and healthcare professionals alike.

Click on the Hospital image for a Virtual Hospital Tour

# Solutions for ever-changing workflows

**E**rgotron focus on creating healthy and productive interactions between humans and technology and pride themselves on being the world leader in improving how people work, learn, play, and care for others.

With over 40 Years experience in creating ergonomic solutions for computer usage worldwide, and over 25 Years in Healthcare alone, Ergotron is uniquely qualified to help you configure medical workstations that fit the workflow throughout your facility.

• Reliable – Over 25 Years of Healthcare Experience

• Broadest Portfolio

• Safe and Ergonomic – Fully Certified and Tested

• Workflow, facility inventory planning and design

• Custom Builds

Designed for your ever-changing workflows, our comprehensive portfolio of computer wall mounts, medical carts, desk mounts, monitor arms and services is ready to support your entire facility.

## Powering you up with two options:

### Ergotron LiFeKinnex Power System Bring Power Everywhere

Ergotron's LiFeKinnex power system eliminates power anxiety.

Keep your medical carts charged for when they're needed the most.

Designed for on-cart charging or hot swapping, LiFeKinnex lets caregivers focus less on battery life and more on patient care with a reliable solution that promotes safety. Lithium iron phosphate (LiFePO4) battery chemistry lasts for more cycles than many other battery technologies, can be discharged fully without complications and offers a lower total cost of ownership for healthcare organizations. LiFeKinnex can easily be added to new or existing fleets.

Key benefits: minimizes downtime — a magnetic alignment connection supports quick battery swaps, while the power module's built-in battery keeps the system running continuously; longer battery life — claimed to recharge three to four times faster than a comparable SLA battery. Lithium iron phosphate (LiFe) battery technology is said to be safe and reliable, support about twice as many cycles as lithium-ion batteries and fit any workflow. Users can plug in the unit to charge the cart, even during use, or use the optional four-bay wall or desk battery charger to keep the cart moving with a hot swap.

### SV42 range for Life Powered Carts with built in rechargeable batteries

Ultrafast recharge ensures caregiver and cart uptime:



Click on the cart image to explore our Full Healthcare range

A full recharge from full discharge can be completed in about two hours.

Long battery "LiFe" minimizes time and cost for maintenance and replacement.

Stay productive and on the go with our LiFe power system.

This innovative, truly ergonomic, and easy-to-maneuver healthcare cart features sit-to-stand height adjustment, independent screen positioning and an adjustable back-tilt keyboard tray.

Reach out to your local Ergotron representative for a consultation on Ergonomic Healthcare Solutions.

Email: robin,burgess@ergotron.com
Mobile +61 421080303

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For more information visit
**www.ergotron.com**

# Lyell McEwin Hospital Emergency Department achieves well-planned change management, minimising disruption to hospital operations

## Challenges

SA Health has expanded the Lyell McEwin Hospital Emergency Department (LMH ED) — doubling the hospital's capacity to meet the growing needs of Adelaide's northern area. The CommScope SYSTIMAX® VisiPatch® 360 solution was already in use at the site; however, it was critical for CommScope's local partner, Electro Data & Generation (ED&G), to relocate LMH ED's major IT infrastructure to the new site with minimal disruption to services.

## CommScope solution

The CommScope SYSTIMAX VisiPatch 360 solutions were deployed to ensure that systems managers can maintain a real-time view of the network's physical layer, facilitate faster troubleshooting, and improve security. These measures reduce network downtime and make maintenance more cost effective,

while also future-proofing the system for additional growth.

## The project

The LMH ED redevelopment project has been staggered to ensure the uninterrupted functioning of the existing ED. To achieve this, a critical works plan was required to manage the digital health systems outage. This was developed by ED&G in consultation with LMH ED's project team and CommScope to ensure a successful migration of services.

## Critical health services and uninterrupted networks

Physicians, administrators, and other staff members involved in providing emergency care must have access to the most up-to-date and reliable information so they can deliver the best possible outcomes for the patient. Medical devices must always work

LMH's leadership team decided to invest in infrastructure growth and upgrades to its emergency department (ED). Given that the real estate available was limited, LMH ED developed a plan to build a multi-story facility on the existing ED site. This plan included relocating the existing communication room to the second level of the new building.

## A robust, state-of-the-art solution

While the existing CommScope infrastructure was functioning well, the relocation was an excellent opportunity to upgrade and expand the system. This empowered LMH ED to future-proof its network infrastructure — ensuring the best possible access to (and incorporation of) advanced medical technologies, which are critical to delivering state-of-the-art healthcare solutions now and into the future.

The CommScope SYSTIMAX solution is viewed as the most prestigious structured cabling solution globally. It is a robust, reliable, and proven solution that comes with a 25-year extended warranty on the product as well as application assurance that guarantees performance for 25 years — ensuring the system can reliably support the heavy workload and urgency of critical moments that happen in EDs.

The SYSTIMAX VisiPatch 360 solution, with consolidation points and OS2 singlemode fiber, was implemented across the project to meet all current requirements as well as future growth needs, while assuring minimal disruptions to current services. This included preserving the full functionality of numerous health provisions — most importantly, the ED.

Executing the relocation of the existing communication room, implementing the new system, and seamlessly ensuring critical infrastructure pathway redeployment was a joint project involving the hospital's IT department, ED&G, and CommScope.

CommScope and ED&G needed to retain and transition all medical critical services, medical day services, and building management services (BMS), including heating, ventilation and air conditioning (HVAC); electrical metering and water metering; access control; closed-circuit television (CCTV); master antenna television (MATV); and duress.

To achieve this, the team invested a large amount of time in investigating, recording, negotiating, designing, pre-works critical planning, and managing the timing for implementation of cutovers. The smooth delivery of the work required professionalism and dedication to the highest order.

## On-the-ground expertise supports best-in-class installations

The differentiator for CommScope is that it not only supplies the most robust and reliable structured cabling solution in the market,

but it also has the on-the-ground skills and expertise to design and deliver a flawless project for critical infrastructure organisations that cannot afford disruptions during the project or daily operations.

This is a long-term, future-focused project. As the certified CommScope PartnerPRO® Network solution provider that deployed this solution — and is the current CommScope solution provider to multiple South Australia (SA) health sites — ED&G is highly regarded by SA Health for its professionalism, reliability, and total investment in the delivery of health services to the people of South Australia.

The SYSTIMAX VisiPatch 360 solutions are built to exceed industry standards. However, local certified teams are required to design, install, and provide support throughout the full warranty period. There was a significant amount of expertise leveraged across the teams around the critical works planning involved in the relocation of the critical fiber-optic infrastructure.

Throughout the project, to ensure a harmonious, best-in-class installation, CommScope's engineering and technical team conducted regular audits. This ensured there was no degradation of the cabling during the installation before everything was sealed and run through key consolidation points. These points were placed strategically around the building to ensure maximum speed and connectivity.

## Seamless transitions and integrations

Many outlying divisions were reconnected through the installation of consolidation points to the new communications room. Overall, 1,540 data outlets were relocated or removed, 1,401 new data outlets were installed, 33 fibre cables were relocated, and 72 fibre connections were repatched.

Throughout the project, ED&G provided uninterrupted services across numerous health provisions, including the ED.

Ultimately, ED&G ensured there was no downtime in the delivery of critical services. This was made possible by a team of trained, experienced, professional integrators committed to excellence, backed by a supportive channel that aligns with and contributes to CommScope's global and regional business goals.

Over the next decade, ED&G will continue to provide professional, reliable installations of CommScope SYSTIMAX VisiPatch 360 data infrastructure. This infrastructure plays an important part in LMH ED's ability to deliver the health solutions needed by the community.

1. Northern Adelaide Local Health Network (NALHN) of Government of South Australia. Web: https://www.sahealth. sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/services/hospitals/lyell+mcewin+hospital/lyell+mcewin+hospital

accurately and reliably. Having any system fail in that setting could affect not just one but potentially dozens of patients. Strengthening and future-proofing LMH ED's IT infrastructure was critical, and doing so without causing any unplanned downtime was non-negotiable.

## Addressing population growth and future-proofing services

LMH is part of the Northern Adelaide Local Health Network (NALHN), which delivers services to a population of more than 400,000 people living in Adelaide's north and northeastern suburbs.[1] It is a major tertiary hospital offering medical, surgical, diagnostic, emergency, and support services.

Faced with the dual challenges of a growing community population and the need to provide new services around recent medical advancements with existing infrastructure,

**COMMSCOPE®**

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For more information visit
**commscope.com**

## Telstra Health
www.telstrahealth.com/

Telstra Health works to improve lives through digitally enabled care for our community. The group's purpose drives its work, as it strives to realise a connected and improved digital health experience for all.

## The Clinician
http://theclinician.com/

The Clinician is a global digital health company helping providers and payers transition to more digitally enabled and patient-centred care. Their digital health platform, ZEDOC, enables care teams to digitally monitor, inform and empower patients on their own devices, wherever they are.

## Training Online Food Safety
wwww.trainingonlinefs.edu.au

Training Online Food Safety are specialists in nationally accredited online food safety training for food safety supervisors and all staff handling food.

## Tristel Pty Ltd
tristel.com/au-en/

Tristel manufactures infection control products utilising patented chlorine dioxide chemistry; for device, surface and water disinfection. Within technology, Tristel 3T delivers digital traceability for devices, and Tristel's Rinse Assure provides a simple solution for bacteria-free, compliant rinse water in endoscopy.

## Trotec Laser
www.troteclaser.com/en-au/

Trotec is a global leader in laser technology and software. Austrian designed and engineered, Trotec manufactures a diverse range of laser solutions, designed for marking medical instruments to provide traceability and meet all medical marking standards. Trotec is an Associate Alliance Partner of GS1 Australia.

## ULA Group
www.ulagroup.com/

ULA group is part of a global network, working alongside leading medical experts to develop innovative technology, providing solutions for health management and disease prevention, with a main focus to reduce the spread of infectious disease and bacteria.

## uPaged
www.uPaged.com

uPaged solves healthcare workforce shortages by matching hospitals, aged care facilities, nurses and doctors so that on-demand shifts and term contracts are filled by the right person, at the right time, and at the right price. uPaged saves time, cost, quality and compliance issues.

## Vidversity
www.vidversity.com

VidVersity is an Australian platform enabling the creation of online, interactive video learning. Suitable for software training, induction, training in medical procedures and technology. A complete solution from video capture, fast editing to online module creation. The solution is secure and works with or without an LMS.

## Virtualcare
www.virtual-care.com.au

Virtual care at scale can improve efficiency of care delivery, reduce costs and improve patient experience. With an end-to-end virtual care platform, the company automates manual workflows to streamline care delivery. The Virtualcare platform enables remote care across Australia — providing care everywhere.

## Visionflex
www.visionflex.com

Visionflex is a provider of clinical virtual care solutions. Through its telehealth platform where videoconferencing connects with integrated medical devices, metro-based GPs and specialists can perform detailed clinical consultations with patients in regional areas, reducing unnecessary travel and costs.

## Vitalcare



www.vitalcare.com.au

For 30+ years, Vitalcare, a nurse call technology provider, has installed 1000+ systems in hospitals and aged care facilities nationwide, serving 50,000+ beds.

## WHITECAT
www.whitecat.com.au

WHITECAT offers scalable surgical instrument tracking solutions that deliver visibility to the instrument level for cost- and quality-conscious healthcare facilities in ANZ that want to improve their workflows when the growth in aging population requires safer and greater surgical interventions.

## Wise Studios
www.wisestudios.co.nz

Wise Studios specialises in planning, designing and project managing signage and wayfinding strategies with an aim to empower people to communicate, engage with and navigate branded spaces. The WiseNav by Eyedog digital solution offers an intuitive guide without a separate app. With landmark photo navigation, a human-centric approach and multilingual support, WiseNav provides accessible routes for all.

## Access Control
– Cognitec Systems
– Peacock Bros.
– Pitney Bowes
– Smartrak
– Vitalcare

## Advanced Molecular Imaging
– Philips

## Aged Care Software
– AIM Software Pty Ltd
– Alpha Global
– Ausmed
– CarePage
– Cincom Systems of Australia
– CombiTel
– Connected Health
  Powered by Wavelink
– FM Essentials
– Humanforce
– Modeus
– Peacock Bros.
– Philips
– Rubbermaid Commercial Products
– Spotto
– Telstra Health
– Vidversity
– Visionflex
– Vitalcare

## Alarm Management
– Olinqua
– Philips
– Price Holyoake

## Alarm Systems
– ActivTec Solutions
– Design + Industry
– MePACS Personal Alarms
– Miracle Electronics
– Olinqua
– Philips
– Vitalcare

## Allied Health Software
– Alcidion
– Hippo
– MyHealth1st
– Peacock Bros.
– Spotto
– Telstra Health
– Vidversity
– Visionflex
– Vitalcare

## Artificial Intelligence
– Alcidion
– Beamtree
– Blue Mirror
– Cognitec Systems
– Daraco IT Services
– Human Centred Innovations
– Kofax Australia
– Olinqua
– Philips
– RA Health
– Soter Analytics
– Vitalcare

## Audio Visual
– CombiTel
– Daraco IT Services
– Design + Industry
– Hipac
– Jands
– Price Holyoake
– ULA Group

## Bed/Chair Tech
– Design + Industry
– Miracle Electronics
– Sleeptite
– Vitalcare

## Billing Software
– Beamtree
– Telstra Health

## Call Systems
– ActivTec Solutions
– Alpha Global
– Ascom
– INDIGO CARE
– Miracle Electronics
– Olinqua
– Price Holyoake
– Vitalcare

## Care Planning Software
– Alcidion
– Ausmed
– Cincom Systems of Australia
– CombiTel
– Human Centred Innovations
– Humanforce
– Philips
– Telstra Health
– The Clinician
– Virtualcare
– Vitalcare

## Cloud computing
– Alcidion
– Axient Pty Ltd
– Daraco IT Services
– Galvin Engineering
– Humanforce
– Olinqua
– Personify Care
– Pitney Bowes

## Continuous Improvement
– CarePage
– CFT International
– GS1 Australia
– Human Centred Innovations
– Philips
– Pitney Bowes
– Rubbermaid Commercial Products

## Contract Management
– Bizcaps Software
– FM Essentials
– IOS Technologies

## Cybersecurity
– BeyondTrust
– Connected Health Powered by Wavelink
– Daraco IT Services
– DB Results
– Olinqua
– Philips

## Data Analysis
– Alcidion
– Beamtree
– Bizcaps Software
– Daraco IT Services
– Galvin Engineering
– Olinqua
– Philips
– Prospection
– Soter Analytics
– Telstra Health
– Vitalcare

## Data Centres
– CommScope
– Daraco IT Services
– MTA Australasia Pty Ltd
– Philips
– Vitalcare

## Data Management/Storage
– Ausmed
– Bizcaps Software
– Daraco IT Services
– Galvin Engineering
– Hipac
– Hippo
– IOS Technologies
– Miracle Electronics
– Olinqua
– Peacock Bros.
– Philips
– Vitalcare

## Diagnostic Informatics
– Leica Microsystems
– Philips

## Digital Health
– Altera Digital Health
– Connected Health Powered by Wavelink
– DB Results
– Design + Industry
– GS1 Australia
– Hippo
– HPA
– Human Centred Innovations
– Leica Microsystems
– MyHealth1st
– Peacock Bros.
– Personify Care
– Philips
– Sleeptite
– Telstra Health
– The Clinician
– Visionflex

## Digital Transformation
– Alcidion
– Axient Pty Ltd
– Brother International Aust Pty Ltd

– CarePage
– Cincom Systems of Australia
– CombiTel
– Connected Health Powered by Wavelink
– Daraco IT Services
– DB Results
– Design + Industry
– Galvin Engineering
– GS1 Australia
– Hipac
– Hippo
– Kofax Australia
– MyHealth1st
– Olinqua
– Peacock Bros.
– Personify Care
– Philips
– Pitney Bowes
– Propell Pty Ltd
– RA Health
– Spotto
– Surgical Order
– Telstra Health
– The Clinician
– Tristel Pty Ltd
– Vidversity
– Virtualcare
– Visionflex
– Vitalcare

## Disability Software
– CarePage
– DB Results

## Discharge Summaries
– Alcidion
– Telstra Health

## Education Software
– Alpha Global
– Ausmed
– Blue Mirror
– Daraco IT Services
– Hippo
– Training Online Food Safety
– Vidversity
– Vitalcare

## Electronic Claiming
– Altera Digital Health

## Electronic Medical Record
– Ergotron, Inc.
– Philips
– Telstra Health

## Entertainment Systems
– CombiTel
– Daraco IT Services
– Design + Industry
– Jands
– Vitalcare
– ULA Group

## Fintech Solutions
– Cincom Systems of Australia
– Daraco IT Services

## GP Software
– MyHealth1st
– Telstra Health
– Visionflex
– Vitalcare

## Hardware
– BOGE Compressors Australia PTY Ltd
– Brother International Aust Pty Ltd
– CombiTel
– Connected Health Powered by Wavelink
– Daraco IT Services
– Design + Industry
– Hippo
– HPA
– Peacock Bros.
– Powertec Wireless Technology
– Price Holyoake
– Propell Pty Ltd
– RA Health
– Tristel Pty Ltd
– Visionflex

## Hospital Software
– Alcidion
– Alpha Global
– Altera Digital Health
– Ausmed
– Beamtree
– Code Focus
– CombiTel
– Daraco IT Services
– FM Essentials
– Galvin Engineering
– Hippo
– IOS Technologies
– Leica Microsystems
– Modeus
– MyHealth1st
– Olinqua
– Peacock Bros.
– Personify Care
– Philips
– Spotto
– Surgical Order
– Telstra Health
– Vidversity
– Virtualcare
– Visionflex

## Hospital Virtual Care
– DB Results
– Ergotron, Inc.
– Hippo
– Jands
– Peacock Bros.
– Personify Care
– Telstra Health
– Visionflex

## Identity Management
– Bizcaps Software
– Brother International Aust Pty Ltd
– Cognitec Systems
– Daraco IT Services
– DB Results
– GS1 Australia
– Peacock Bros.
– Vitalcare

## Image-Guided Therapy
– MTA Australasia Pty Ltd
– Philips

## IoT Devices
– CarePage
– Connected Health Powered by Wavelink
– Design + Industry
– Galvin Engineering
– Human Centred Innovations
– Olinqua
– Peacock Bros.
– Propell Pty Ltd
– SATEC (Australia) Pty Ltd
– SEKO
– Service Central (Aust) Pty Ltd
– Sleeptite
– Smartrak
– Soter Analytics
– Spotto

## Infection Control
– Eucalip Group Pty Ltd
– Galvin Engineering
– Hipac
– HPA
– Tennant Company

## Integrated Care
– RA Health
– Vitalcare

## IoT Devices
– Daraco IT Services
– Galvin Engineering
– RA Health
– Vitalcare

## Labelling and Asset Management
– GS1 Australia
– HPA
– Peacock Bros.
– Trotec Laser

## Location Services
– Bizcaps Software
– Peacock Bros.
– Service Central (Aust) Pty Ltd
– Smartrak

## Medical Apps
– Alcidion
– DB Results
– Leica Microsystems
– Mobiddiction Pty Ltd
– Olinqua
– Philips
– Propell Pty Ltd
– Telstra Health
– Tristel Pty Ltd
– Visionflex
– Vitalcare

## Medical Devices
– ActivTec Solutions
– Ambu Australia Pty. Ltd

– Anaeron Pty Ltd
– BOGE Compressors Australia PTY Ltd
– Caire Australia
– Design + Industry
– Eucalip Group Pty Ltd
– GS1 Australia
– Head Bumpa Pty Ltd
– Hipac
– Hippo
– Hospital Surgical
– HPA
– INDIGO CARE
– Leica Microsystems
– MEDELEQ PTY LTD
– NWI Group
– Peacock Bros.
– Philips
– Propell Pty Ltd
– Sleeptite
– Tristel Pty Ltd
– Visionflex
– Vitalcare

## Medical Imaging
– Leica Microsystems
– MTA Australasia Pty Ltd
– Philips

## Medication Management
– Alcidion
– Altera Digital Health
– GS1 Australia
– HPA
– IntraSpace
– Modeus
– Peacock Bros.
– Telstra Health

## Message Integration
– Ascom
– Bizcaps Software
– Olinqua
– Peacock Bros.

## Mobile Device Management
– Connected Health Powered by Wavelink
– Ergotron, Inc.
– Olinqua
– Peacock Bros.

## Network infrastructure
– BOGE Compressors Australia PTY Ltd
– CombiTel
– CommScope
– Connected Health Powered by Wavelink
– Daraco IT Services
– Galvin Engineering
– Peacock Bros.
– Powertec Wireless Technology
– Vitalcare

## Neurology
– Ambu Australia Pty. Ltd
– Leica Microsystems
– Philips

## Online Appointments
– MyHealth1st
– Olinqua

## Operational Planning Management
– Galvin Engineering
– Med-X Healthcare Solutions
– Philips
– Rubbermaid Commercial Products

## Paging
– Ascom
– Jands
– Miracle Electronics
– Olinqua
– Peacock Bros.

## Palliative Care Software
– Human Centred Innovations

## Pathology Software
– Beamtree
– Leica Microsystems
– Philips

## Patient Identification
– Cognitec Systems
– GS1 Australia
– HPA
– Peacock Bros.

## Patient Monitoring
– Alpha Global
– Ambu Australia Pty. Ltd
– DB Results
– Design + Industry
– Hippo
– HPA
– MEDELEQ PTY LTD
– Peacock Bros.
– Personify Care
– Philips
– Sleeptite
– Telstra Health
– The Clinician
– Visionflex

## Pharmacy Software
– Leica Microsystems
– Modeus
– Philips
– Telstra Health

## Power Protection and UPS
– Design + Industry

## Product Information Management
– Bizcaps Software
– GS1 Australia

## Radiology Software
– Beamtree
– Leica Microsystems
– Philips

## Real-Time Equipment Tracking
– Design + Industry
– HPA
– Miracle Electronics
– Olinqua
– Peacock Bros.
– Service Central (Aust) Pty Ltd
– WHITECAT

## Records Management
– IOS Technologies
– Peacock Bros.
– Telstra Health

## Remote Help Desk Services
– FM Essentials
– Hippo

## Remote Monitoring
– Alcidion
– Alpha Global
– BOGE Compressors Australia PTY Ltd
– Caire Australia
– Daraco IT Services
– DB Results
– Design + Industry
– Ergotron, Inc.
– Galvin Engineering
– Hippo
– HPA
– Human Centred Innovations
– Olinqua
– Peacock Bros.
– Personify Care
– Philips
– Propell Pty Ltd
– Sleeptite
– Telstra Health
– The Clinician
– Virtualcare
– Visionflex
– Vitalcare

## Safety tech
– Alcidion
– Beamtree
– Design + Industry
– Galvin Engineering
– Hippo
– MePACS Personal Alarms
– Olinqua
– Price Holyoake
– Soter Analytics
– Vitalcare

## Scanning and Access
– Design + Industry
– HPA
– IOS Technologies
– Peacock Bros.
– Philips

## Secure Message Delivery
– Ascom
– Daraco IT Services
– Olinqua
– Peacock Bros.
– Personify Care
– Telstra Health

## Shared Health Records
– Alcidion
– Altera Digital Health
– Daraco IT Services
– Olinqua
– Philips
– Telstra Health

## Specialist Software
– Beamtree
– Cognitec Systems
– Humanforce
– IOS Technologies
– MyHealth1st
– Peacock Bros.
– RA Health
– Smartrak
– Surgical Order
– Telstra Health
– Vidversity
– Visionflex
– Vitalcare

## Supply Chain Solutions
– Bizcaps Software

– Peacock Bros.
– Service Central (Aust) Pty Ltd

## Telecommunications
– Ascom
– Axient Pty Ltd
– CommScope
– Connected Health
  Powered by Wavelink
– Daraco IT Services
– Design + Industry
– Hippo
– Jands
– Olinqua
– Peacock Bros.
– Personify Care
– Powertec Wireless Technology
– Virtualcare
– Visionflex
– Vitalcare

## Telehealth
– Caire Australia
– CombiTel
– Daraco IT Services
– DB Results
– Ergotron, Inc.
– Hippo
– HPA
– Human Centred Innovations
– Jands
– Peacock Bros.

– Personify Care
– Philips
– Propell Pty Ltd
– Telstra Health
– Virtualcare
– Visionflex

## Virtual reality
– Hippo
– Mobiddiction Pty Ltd
– Price Holyoake
– Vitalcare

## Visitor Management System
– Cognitec Systems
– Peacock Bros.
– Pitney Bowes

## Wi-Fi
– CombiTel
– CommScope
– Connected Health
  Powered by Wavelink
– Daraco IT Services
– Design + Industry
– Olinqua
– Peacock Bros.
– Vitalcare

## Workflow Terminals
– Peacock Bros.
– Service Central (Aust) Pty Ltd

**CSIRO Research Scientist Dr Aaron Nicolson explores the use of machine learning and artificial intelligence tools in medical imaging. Image courtesy of CSIRO.**

# Improved X-ray diagnosis

New research from CSIRO's Australian e-Health Research Centre* has identified methods for improving artificial intelligence (AI) diagnosis of heart and lung conditions using X-ray.

A better understanding of optimal models will lead to greater accuracy in using AI to diagnose X-ray images, CSIRO Research Scientist and lead author of a recently published paper Dr Aaron Nicolson said.

"AI has the potential to improve health services, and in particular better support health professionals by easing their burden and workload of current non-automated practices," Nicolson said.

"Automated report generation for X-rays could reduce clinician burnout and create space for them to provide more robust patient care. The research demonstrates the future potential to better support clinicians."

Current methods of AI X-ray report generation use an "encoder" to read the chest X-ray images, and a "decoder" to produce a report, according to the agency's Australian e-Health Research Centre (AEHRC) researchers. Until now there has been no research into which encoder and decoder is best for automated chest X-ray report generation.

The researchers tested different encoders and decoders, as well as the effectiveness of different tasks for warm starting the chest X-ray report generation task.

Findings show that the optimal combination of encoder and decoder, together with the use of the warm starting method, produce a 26.9% relative improvement on the accuracy of automated image reporting. Evaluation was done by comparing with human radiologist reports.

Radiologist Dr Doug Anderson from Monash Medicine, Victoria said, "Clinician burnout is a risk factor for mental illness and particularly prevalent in radiologists due to large workloads and demanding clinical documentation.

"The increasing clinical reliance on imaging for diagnosis combined with a relative shortage of radiologists is creating unsustainable workloads and a search for workload management solutions.

"An exciting potential solution to onerous radiologist workloads is using artificial intelligence to assist with interpreting chest X-rays and documentation."

While the model identifies some pathologies consistently (eg, pleural effusion) it does not yet accurately identify others (eg, lung lesion). The next step for researchers is improving the AI model so it can accurately identify most pathologies. These improvements are required before the technology can be used in a clinical setting, according to the researchers.

*Dr David Hansen, CEO and Research Director, Australian e-Health Research Centre at CSIRO is facilitating a panel discussion on AI in healthcare at the AI.Care 2023 conference this week in Melbourne.

# Winning the war for talent with technology

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**A**ttraction, engagement, retention. Three seemingly simple words. Yet when presented in the context of the healthcare industry, they take on deeper significance.

Fundamental challenges face healthcare employers in 2024, not least of which is an acute shortage of skilled workers.

The 2023 Skills Priority List, produced by Jobs and Skills Australia, revealed the most severe shortages nationwide were seen among health professionals, where 82% of occupations lacked workers. This included specialist physicians, radiographers, general practitioners, and countless others. Also classified as 'in shortage' were registered nurses in all specialty areas.

It's little wonder that healthcare employers are re-doubling their efforts to retain existing talent and position themselves in the best way possible to attract fresh candidates. While these deep-rooted challenges are not easily resolved, a human capital management (HCM) suite can help ease some of these talent pressures.

## What is a HCM suite and how can it help?

A HCM suite is used by HR professionals and business leaders to automate, manage, and analyse HR functions and people-related processes. Although the functionality and scope of the various HCM suites on the market vary, their primary function is to help organisations attract, develop, engage, retain and manage their workers — all while improving compliance and overall business performance.

The benefits of a HCM suite for healthcare employers are extensive:

## Improvements to the employee experience

Employee engagement is a by-product of a rewarding employee experience (EX). HCM suites play a key role in bolstering communication and connection with frontline employees. Whether it's improving autonomy with self-service tools, understanding what matters most to your employees with customisable survey forms, or offering benefits that genuinely make a difference to the lives of workers — such as access to earned wages — a HCM suite like Humanforce can help administer, track and support all elements of the EX.

## Compliance confidence

As an industry that relies on 24/7 shift work, a range of conditions apply within healthcare awards and EAs, including shift penalties, shifts after midnight, and enforcing minimum rest periods. Humanforce's award interpretation engine automates complex calculations to ensure payment of employees is accurate and entitlement obligations are met.

Employers must keep records relating to whether employees hold a range of certifications and qualifications to ensure they are eligible to work. Holding qualifications in Humanforce enables not just tracking and reporting but also the ability to send alerts when qualifications expire.

## Workforce optimisation

When caring for others is the top priority, it's critical to ensure shifts are properly staffed and that employees themselves are not over-burdened. HCM suites can help with intelligent rostering based on predictive demand modelling, previous work patterns, staff qualifications and staff availability. Even better, employees are empowered to choose and bid on available shifts. In addition, tracking time and attendance via mobile phones or kiosks can help managers accurately monitor operations on-the-go to ensure the right people are in the right place at the right time.

## Data-driven decision making

A HCM suite houses data that is essential for the smooth running of large entities like hospitals. Using workforce analytics and sophisticated reporting tools means trends, threats and opportunities can be identified and solutions formed. Whether it's tracking labour costs in real time, building out cost-effective rosters based on historical data, or checking agency usage and staff attendance summaries — to name just a few of the reports available from Humanforce — smarter decisions and greater efficiency are the end result.

The talent crunch is not going away anytime soon. For that reason alone, it's never been more important to provide the right tools and technology to HR and operations teams.
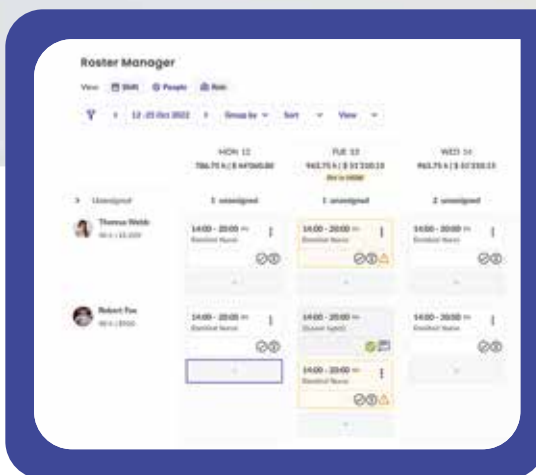
# humanforce

» 
For more information visit:
**www.humanforce.com**

# Featured Products

## Biomedical waste treatment solution

The Hipac Sterilwave onsite solution is designed to handle the challenges that healthcare facilities face when it comes to the disposal of biomedical waste.

The system combines shredding and microwave heating to process contaminated waste efficiently, while maintaining compliance with regulatory standards and promoting eco-friendliness.

Available in four different unit sizes, this versatile solution can cater to the diverse waste demands and facility sizes of healthcare institutions. From small clinics to large hospitals, Sterilwave has a custom solution to meet specific client requirements.

**Hipac Healthcare**
www.hipac.com.au

## Virtual clinical hub

The iAgeHealth remote workforce solution provides real-time clinical services to resource-challenged aged care facilities in regional, rural and remote aged care.

Developed by McLean Care with input from specialists at Deakin University, the technology is designed to remove geographical barriers and offers facilities increased access to qualified clinicians, 24 hours, seven days a week.

The solution uses a 'virtual' hub of specialist clinicians based anywhere in Australia and includes 24/7 access to registered nurses and 7-day access to a multidisciplinary allied health team led by a nurse practitioner, including physiotherapists, dieticians and other allied health professionals working collaboratively with registered nurses. The service enables virtual in-room clinical, allied health specialties and diagnostic capabilities, and also offers clinical specialisations such as wound care, diabetes management, chronic health management and more.

iAgeHealth provides a full end-to-end diagnostic, treatment and care management process that is informed by a range of integrated clinical IoT devices. The time for consultation will be allocated based on urgency of care required but often residents will be seen in less than an hour from the initial request. Clinicians can assess the resident in real time and develop clinical treatment plans tailored to the individual resident's needs.

The solution has been designed by experienced industry leaders for the industry, working in support of existing teams with TGA approved plugins to deliver seamless continuity of care and optimal health outcomes for clients.

**iAgeHealth**
www.iagehealth.com

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# Self-managed
# **hospital-to-home**
## interventions key to reducing frailty

**T**he Flinders University-led pilot program — INDividualized therapy for Elderly Patients using Exercise and Nutrition to reduce depenDENCE post discharge (INDEPENDENCE) — involved dieticians (Professor Michelle Miller, Dr Alison Yaxley and Dr Chad Han, as part of his PhD with College of Nursing and Health Sciences at Flinders University), physiotherapist Dr Claire Baldwin and physician Associate Professor Yogesh Sharma.

The program adopted a chronic condition self-management model developed by Professor Malcolm Battersby, initially for self-management of conditions such as diabetes, for pre-frailty and frailty.

"Pre-frailty and frailty in older adults are associated with poor health outcomes and increased healthcare costs — and these worsen during hospitalisation," said Han, who is now a research fellow within the Cancer Survivorship Program focusing on models of care and geriatric oncology, at Flinders University's Caring Futures Institute.

"We found that a well-accepted, self-managed exercise and nutrition intervention program with good preliminary effectiveness can help to reduce frailty, as measured by the Edmonton Frail Scale."

The randomised control trial examined pre-frail or frail older adults admitted to South Australian hospitals between September 2020 and June 2021, and measured

> A program examining the effect of an individualised hospital-to-home, self-managed exercise and nutrition intervention, for pre-frail and frail older adults who are hospitalised, has found encouraging results in helping to reduce frailty.

the variables of their adherence to the intervention program.

This included monitoring the frailty status by the Edmonton Frail Scale (EFS) score, lower extremity physical function, handgrip strength, nutritional status, cognition, mood, health-related quality of life, risk of functional decline, unplanned readmissions.

The researchers found that adherence to the inpatient and home visits plus telehealth intervention were high. Intention-to-treat analysis showed that participants in the intervention group had significantly greater reduction in EFS at three and six months compared to the control group; particularly the functional performance component.

There were also improvements among the intervention group compared to the control group in three key areas — the overall Short Physical Performance Battery score at three and six months; the mini-mental state examination at three months; and handgrip strength and Geriatric Depression Scale at six months.

"This study provides proof of acceptability and adherence to a patient self-managed exercise-nutrition program that may reverse or slow down the progression of pre-frailty and frailty in hospitalised older adults," Han said.

"The results may provide guidance to clinicians and researchers looking to develop or implement self-managed exercise-nutrition program for pre-frail and frail hospitalised older adults.

"In a selected group of older adults, such a program might support patient autonomy, enabling them to maintain independence, through implementation of exercise and nutritional self-care.

"It is also important to note that results could change with longer follow-up beyond six months, and further research is required to assess the sustainability of such an intervention."

The research has been published in *Clinical Interventions in Ageing*.

# Featured Products

## Cleaning tool

The Tennant T681 Small Ride-On Scrubber is a cleaning tool designed to enable efficient coverage of facilities, addressing the specific needs of healthcare environments.

The solution aims to elevate operator comfort and streamline cleaning processes with the water pickup and drying capabilities aimed at reducing the risk of slip-and-fall accidents, prioritising the safety of patients, staff and visitors.

Integrated technology like Chem-Dose (chemical dosing system) aims to provide precise and reliable cleaning results while minimising environmental impact. Tailored for the specific needs of healthcare facilities, this ride-on scrubber offers manoeuvrability and simple operation aimed at maintaining sterile spaces.

***Tennant Australia Pty Ltd***
www.tennantco.com.au

## Rotary screw compressors

Kaeser Australia's latest class 0 oil-free compressors are designed for health care, pharmaceuticals, foodstuff, chemicals and other specialised engineering applications that have especially high demands when it comes to compressed air quality.

The CSG.1 rotary screw compressors have air flow rates ranging from 4 to 15 m³/min and pressures up to 11 bar, and customers are offered the choice of air- or water-cooling, and can select an optional integrated refrigeration dryer or an i.HOC (heat of compression) dryer.

The compressors can be specified as a fixed-speed, fixed-flow-rated machine or, for applications with fluctuating compressed air demand, variable-speed-controlled 'SFC' versions are available with IE5 Ultra-Premium Efficiency synchronous reluctance motors.

The risk of potential product contamination by oil from the rotary screw compressor is evaluated and minimised by means of an HACCP (Hazard Analysis Critical Control Point) analysis. Process validation is made easier with the residual oil class 0 certificate in accordance with ISO 8573-1.

CSG.1 has also been certified according to ISO 22000:2018, which covers the manufacture of food and beverage equipment. To further formalise the supply chain's integrity, customers can also option the CSG.1 with Pharmaceutical, Food or Engineering Industry Certification Packages. Additionally, customers can request certification that the machine is free of silicone contamination, as per VW PV 3.10.7.

The updated CSG.1 series is able to deliver 16% higher flow rates from the same power-rated motor as previous. A further aim of the range's refinement was to improve the compressor heat recovery systems.

***Kaeser Compressors Australia***
au.kaeser.com

## Safety solutions

Available from ParagonCare Group, Duress safety solutions are designed for staff who need support from a real-time secure location system.

The Duress portfolio features the Falcon, Phoenix, Eagle and Duress App. All include 24/7 customer support, A1-graded emergency monitoring, live audio/video, check-ins, team alerts as well as a dedicated dashboard to manage everything end to end.

The solutions accommodate the intricacies of the healthcare sector, including onboarding, registration, security and accessibility. Many institutions have critical issues that need to work with any software solution, including SSO and staff churn — Duress is designed to be set-and-forget, allowing the health sector to keep their staff and patients safe, without tying up their IT departments.

Duress creates a safety bubble around their location, giving real-time data on alerts and emergencies, as well as real-time automated check-ins. These allow staff to get real-time help, either through the organisation's existing security centre or Duress Operations Centre. Employers can choose to expand the bubble for certain staff to keep them safe while commuting, working remotely or visiting patients.

The Duress Operations Centre is running 24/7, with redundant power and communications, and is backed by a second centre located elsewhere in Australia. For institutions with internal security, Duress plugs into the existing security service.

***Paragoncare Ltd***
www.paragoncare.com.au

## VR upper-limb therapy system

The Neuromersiv Ulysses VR upper-limb therapy system is designed to enable users enjoy performing reward-based activities of daily living (ADLs) in immersive, realistic environments.

The system has been clinically designed to promote greater upper-limb motor function in people with a variety of neurological conditions including stroke, acquired and traumatic brain injury and spinal cord injury. It is designed to work with the fully wireless Meta Quest 2 VR headset with hand tracking capabilities, eliminating the need for holding bulky controllers.

Features and benefits include: designed for minimal hand dexterity; practise virtual activities of daily living that are challenging and fun; friendly virtual assistant will guide users through every step; web dashboard therapy session tracking (clinicians only); track all clients' progress over their sessions to determine which therapy to focus on VR live streaming (clinicians only); view what the client is seeing in VR in real time on a phone or tablet so they can be assisted if needed.

*Neuromersiv*
www.neuromersiv.com

## Home fertility test

Sapyen, an Australian male fertility health technology company, has launched a laboratory-grade, at-home semen analysis tool.

The company's Test Kit uses a patent-pending sperm stabilisation medium, *SPX72.* Sapyen has formulated a regulation-approved stabilisation solution that is claimed to extend sperm viability from 1 hour to up to three days, making it possible for men to ship samples to partner labs using existing postal infrastructure. This technology aims to ensure the sample remains at suitable quality as it travels from home via post to an accredited pathology clinic Australia wide.

A personalised report is shared within three days providing results and clear explanations on your next steps, including information for medical practitioner if further interventions are required.

The test is approved in multiple markets with successful FDA, TGA, and CE registrations., and the laboratories Sapyen partner with are certified or accredited as per regional standards: NATA in Australia, CLIA in the US and HFEA in the UK.

Sapyen works with IVF clinics, fertility and vasectomy specialists, and healthcare practitioners across the US, UK and Europe, and Australia.

*Sapyen*
www.sapyen.co

# delivering innovation



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# Driving value-based health care

Daniel Erasmus*

**O**ur healthcare system is regarded as world-leading, but it still grapples with siloed data and insights, patient dissatisfaction, clinician shortages, exhaustion and rising costs. As we look towards practical solutions and innovation, we must acknowledge the value of patient-reported data and perspectives as fundamental elements to sustainable, systemwide improvement.

Each year, Australians present for almost 12 million hospital interactions. Private hospitals account for 41% of that load and are responsible for the vast majority – over 60% - of elective surgery procedures. Meanwhile, there are more than 14 million Australians with private health coverage – around 50% of the population – making their experiences and outcomes crucial to the performance of our entire, mixed system.

But Australia's private sector has historically lacked patient-reported data to help drive innovation and improvement. Instead, it has relied on cost and clinical data, which might help to assess service output but fail to capture the true experiences and outcomes of patients, or the value of treatments.

The Australian Health Service Alliance (AHSA) and Insight Actuaries' Voice of the Patient, a new integrated patient survey tool, hopes to give privately insured patients a say in their healthcare journey.

The tool gathers responses from thousands of private patients across the country, and from hundreds of hospital settings, to provide valuable insight into the operation and performance of the Australian healthcare system.

Launching Voice of the Patient after three years of data collection and independent analysis, Andrew Sando, CEO of the AHSA, said the platform will ensure patient perspectives sit at the centre of care, strengthening hospital transparency and contributing to better outcomes.

## PREMs and PROMs

Over the last 12 months, 45,000 patients have already taken part in Voice of the Patient — which makes it one of the largest private patient-reported databases in Australia, according to Insight Actuaries and the AHSA. Voice of the Patient has achieved a 45% response rate and covers hundreds of individual hospitals across Australia.

Voice of the Patient collects data from patients via validated measurement tools. Patient-reported experience measures (PREMs) examine perceptions of experience with health services, while outcome measures (PROMs) assess perspectives on illness or care, and the impact on wellbeing.

Patient-reported data is now recognised as a crucial element of successful, value-driven health systems, and is being rapidly adopted from the US and Europe, to Africa and Asia. It is said to consistently lead to health service improvement, fewer adverse events and shorter hospital stays, contributing to markedly lower costs, better outcomes and experiences for patients.

## An independent framework

"The Voice of the Patient creates an independent framework that enables a healthcare system — hospitals, practitioners, patients and health funds — that is constantly learning, developing and improving to benefit practitioners and patients alike," Sando said.

"It ensures the patient's views, experience and outcome objectives remain a fundamental element of every healthcare journey, through all settings and stages."

"An increasing number of similar initiatives are coming out every single year across the globe, and it is expected that patient perspectives will form the foundation of future value-driven and successful health systems," Sando said.

Private hospital operators across Australia have backed Voice of the Patient as a valuable tool to help monitor and maintain the highest quality standards of care, according to Sando.

"We provide aggregate data to private hospitals and day surgeries, helping them to assess themselves against the performance of the system. Over the past three years, they have shown overwhelming support for the tool as a key development resource — helping Australia's private sector maintain that world-class status."

## Indentifying bottlenecks, improving outcomes

Daniel Erasmus, CEO of Insight Actuaries, said accurate patient-reported experiences and outcomes help address systemic issues for healthcare quality and safety.

"Tools such as the Voice of the Patient help to identify logjams, bottlenecks or oversights in the system, improving coordination of care and communication across settings," Erasmus said.

"As the caretakers of the patient experience, and those at the forefront of rising demand for health services, it's encouraging to see Australia's hospital operators get behind groundbreaking PREMs and PROMs initiatives to improve person-centred care."

*Daniel Erasmus, CEO and Consulting Actuary, Insight Actuaries, Australia

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