

A human-centric
vision for the future
of healthcare

Whitepaper

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shaping tomorrow with you



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A human-centric vision for the future of healthcare

The healthcare sector is significantly transforming as technology continues to deliver better health outcomes for patients and providers. This is necessary to alleviate the pressures arising from an ageing population, chronic disease, and the increased cost of healthcare.

This paper explores the increasingly pivotal role of technology, both existing and emerging, in healthcare, considering what is possible today and what will be possible in the near future. It explores the application of new and emerging technology in various aspects of healthcare across different areas of the patient experience as well as the experience of clinicians and administrators.

The healthcare landscape

COVID-19

The entire Australian and New Zealand economies have been disrupted by the emergence of the COVID-19 pandemic. The healthcare sector has been profoundly affected. One of the biggest concerns in the health care sector was how to free up enough resources to meet the potential requirement for many thousands of infected people to be admitted to intensive care units (ICU) for lifesaving treatment.

Australia has just over 2,200 ICU beds and almost half of these are located in New South Wales. Furthermore, COVID-19 patients admitted to the ICU will stay there for an average of 10 days compared with just four days for most ICU patients, putting even more pressure on available resources.¹ In New Zealand, a Ministry of Health review found the country had a maximum of 563 ICU beds.²

In 2017-18, there were almost 62,000 hospital beds Australia-wide, with 86 per cent of those beds available for overnight-stay patients. Nationally, 68 per cent of public hospital beds

were located in major cities and 17 per cent were located in Inner Regional areas.

While Australia and New Zealand both did a remarkable job of flattening the COVID-19 infection curve, there may still be a requirement for the healthcare sector to rapidly scale up to cope with a large number of infections if subsequent waves of the virus, or new viruses, hit following the easing of lockdowns and restrictions. Successfully scaling up can be done in a number of ways, including increased funding and public/private partnerships.

For example, the Australian government partnered with the private hospital sector to ensure an additional 30,000 hospital beds and 105,000 healthcare professionals were available to deal with the pandemic.³ Furthermore, the Australian federal government allocated an additional \$2.4 billion to fund a comprehensive health package to protect all Australians from COVID-19.⁴

The federal government was already set to inject more than \$30 billion in additional public hospital funding under a five-year National Health Agreement.⁵ In 2017-18, around two-thirds of health spending in Australia was funded by governments, and government health spending accounted for 24.4 per cent of all taxes.⁶

Even before the COVID-19 pandemic hit, both Australia's and New Zealand's healthcare industries faced numerous changes, all of which were fundamentally altering the industry landscape. These changes still present potential opportunities for healthcare providers as well as challenges, once the COVID-19 threat recedes.

1 <https://www.anzics.com.au/annual-reports/>

2 https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12321390

3 <https://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/australian-government-partnership-with-private-health-sector-secures-30000-hospital-beds-and-105000-nurses-and-staff-to-help-fight-covid-19-pandemic>

4 <https://www.pm.gov.au/media/24-billion-health-plan-fight-covid-19>

5 <https://www.iqpc.com/events-austhealthweek/blog/state-of-the-australian-healthcare-industry-report-the-top-trends-driving-australias-healthcare-sector-in-2019-and-beyond>

6 <https://www.aihw.gov.au/reports/health-welfare-expenditure/health-expenditure-australia-2017-18/contents/summary>

Patient privacy

The advent of My Health Record and digitalised business models in general, combined with Australia's relatively new mandatory Notifiable Data Breach Scheme, emphasises the need for healthcare providers to take all steps to secure their systems and prevent unauthorised data breaches, and ensure the privacy of an individual and their health data.


The My Health Record initiative in particular was met with suspicion by many Australians and has a low adoption rate. The initial flurry of privacy concerns over electronic health records seems to have died down somewhat and people appear to have accepted that digitalised health records are inevitable and possibly beneficial. However, the media scrutiny of My Health Record, hyped by many global data breaches, has raised awareness in ordinary Australians of the value of their personal information and the risk of having that information compromised or stolen. Indeed, cybercriminals see health data as incredibly profitable, especially as it may contain significant personally identifiable information such as health insurance and potentially credit card information. This rich data set allows cybercriminals to monetise their theft, selling the data on the dark web as opportunities for identity theft and fraud.

One area of cybersecurity that many healthcare providers may struggle with is to secure their medical equipment. Medical devices are often connected to a network and generate protected health information for the hospital electronic health record, or back to the medical device company, or both. This raises numerous privacy and cybersecurity risks for the patient, clinician, hospital, healthcare provider, insurer, and medical device company.

As connected medical devices contain software, this software is vulnerable to threats. Where medical device vulnerabilities are not addressed, they can be exploited as access points into the healthcare network. This requires healthcare facility owners and medical device manufacturers to work together to secure medical devices against unauthorised access and exploitation.

Data from the Office of the Australian Information Commissioner reveals that health service providers reported the highest number of data breaches with a roughly equal mix of human error and malicious attacks as the cause.¹ The healthcare sector presents an attractive target for cybercriminals, so it's incumbent on the healthcare businesses themselves to ensure employees are educated and human error is minimised.

¹ <https://www.oaic.gov.au/privacy/notifiable-data-breaches/notifiable-data-breaches-statistics/notifiable-data-breaches-statistics-report-1-april-to-30-june-2019/>



Notifiable Data Breach Scheme means that **healthcare providers must take all steps to secure their systems** and prevent unauthorised data breaches



Increased demand on existing healthcare services

Both Australia and New Zealand have rapidly ageing populations. By 2036, around one in four New Zealanders will be aged 65-plus.¹ In 2017, more than one in seven Australians were aged 65 years or older² and older Australians accounted for one in five emergency department presentations³. While Australians now have one of the highest life expectancies in the world⁴, they're also enjoying a good quality of life, with one in eight older Australians employed and three quarters owning their own homes⁵.

However, 70 per cent of people over the age of 65 are overweight or obese, and the prevalence of disease indicators gets higher as they get older.⁶ This puts pressure on Australia's healthcare industry to support these ageing people and allow them, as they progress further into old age, to remain living in their own home. Similarly, in New Zealand, a boy born in 2014 is likely to live to the age of 90 while a girl born in the same year is likely to live to 93.⁷

This issue is exacerbated by the relatively low number of medical practitioners per head of population. New Zealand faces a shortage of GPs⁸ and there are significant shortages of doctors in rural areas of Australia⁹. As of June 2019, there were 118,996 registered medical practitioners in Australia¹⁰, or one for every 214 people¹¹. While, on the surface, this may seem sufficient, the problem is one of distribution. Most doctors prefer to live and work in urban and suburban areas, leaving regional and rural populations with far fewer doctors than their urban counterparts. In 2017, major cities in Australia accounted for more than 75,000 doctors compared with outer regional, remote, and very remote areas, which had a combined total of 6,735 doctors.¹²

This puts pressure on clinicians that are outside urban areas with less support, fewer resources, and more patients. In an outbreak of COVID-19 or another, highly contagious disease, these rural clinicians could quickly become overwhelmed with patients who need access to high-care facilities that simply aren't available locally. Unequal access to healthcare puts rural and regional citizens at higher risk of premature death, whether from COVID-19 or other factors. The government's attempt to counteract this issue, by allocating budgets to rural workforce incentives, puts pressure on other parts of the budget and adds up to significant costs.¹³

1 <http://www.superseniors.msd.govt.nz/about-superseniors/media/key-statistics.html>

2 <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/demographics-of-older-australians>

3 <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/health-aged-care-service-use>

4 <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/demographics-of-older-australians>

5 <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/social-economic-engagement>

6 <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/healthy-ageing/biomedical-risk-factors>

7 <http://www.superseniors.msd.govt.nz/about-superseniors/media/key-statistics.html>

8 <https://www.nzdoctor.co.nz/article/undoctored/gp-shortage-northland-symptom-growing-crisis-general-practice>

9 <https://www.mcnz.org.nz/assets/Publications/Workforce-Survey/c3f49fa2d2/Workforce-Survey-Report-2017.pdf>

10 <https://www.medicalboard.gov.au/News/Statistics.aspx>

11 <https://www.abs.gov.au/ausstats/abs@.nsf/0/1647509ef7e25faaca2568a900154b63?opendocument>

12 <https://hwd.health.gov.au/summary.html>

13 <https://insidestory.org.au/doing-the-numbers-on-doctor-shortages/>



Growing patient expectations

There is concern in some quarters that the healthcare industry is becoming somewhat industrialised in that the individual components making up healthcare services are broken down and standardised, leading to a general deskilling of the workforce. Division of labour and fragmentation of care means that healthcare providers may not have the same personal, individualised relationships with their patients. However, it also means that therapies and approaches are standardised and tested, which can lead to better outcomes for patients. This can be seen in the relative frequency and high success rates of previously complex procedures such as joint replacements or heart surgery, for example.

This has created rising expectations among the public for a high quality of healthcare at a low cost. In addition, with so much accurate information available online, patients are now better informed and more proactive than they were in previous generations. However, there is also a great deal of inaccurate or ambiguous information online, and it's practically impossible for the general population to tell the difference. This creates issues for healthcare providers in that they must deal with patient expectations around testing and treatment, and, often, they may need to advise patients of the incorrect conclusions they reach through cursory internet research.

To better align healthcare with patient expectations, patient satisfaction measures that provide a patient-centric view of healthcare, such as patient-reported outcome measures (PROMs) and patient-reported experience measures (PREMs), are being implemented across public health in both Australia and New Zealand as key performance indicators (KPIs) in the delivery of healthcare.

At the same time, clinicians and their patients are benefitting from new approaches to information sharing such as crowdsourcing. A recent study revealed that clinicians around the world were increasingly using crowdsourcing to diagnose patients more accurately, with younger clinicians more likely to seek advice and older clinicians more likely to provide it.¹ This mimics, to some extent, the traditional clinician training approach in which a younger clinician would be effectively apprenticed to a more experienced practitioner to learn their profession. With digital technologies driving the information exchange, the quality and reliability of the shared information is dramatically increased.

Increased use of IoT-based wearable technologies, artificial intelligence (AI), big data, and other emerging technologies has contributed to improved diagnoses and patient care.

Advances in technologies and techniques

Digital transformation has hit the healthcare industry, altering much more than just how patient records are managed. Increased use of IoT-based wearable technologies, artificial intelligence (AI), big data, and other emerging technologies has contributed to improved diagnoses and patient care.

According to Frost & Sullivan, the top 10 key technologies set to impact healthcare are:

1. Big data.
2. Artificial intelligence.
3. Mobile health.
4. Wearables.
5. Cloud.
6. Robotics.
7. 3D printing.
8. Blockchain.
9. Augmented reality.
10. Others.²

1 <https://pharmaphorum.com/news/doctors-using-crowdsourcing-tool-to-aid-diagnosis-study/>

2 <https://www.forbes.com/sites/reenitadas/2019/02/04/the-top-five-digital-health-technologies-in-2019/#5354ae016c0f>

The patient's experience

Patients are better-educated and informed than at any time in history; but that doesn't make their healthcare experience much less stressful. Any person undergoing a health crisis or even just trying to navigate the complex healthcare world will achieve better outcomes if the process can be simplified and streamlined at every opportunity.

Some of the key technologies, most of which are already available, that will help achieve this include:

First contact

- Telehealth, often as the first point of interaction before a patient attends a hospital or medical centre, will enable pre-screening for serious conditions and early triage. Telehealth was rapidly adopted due to COVID-19 and this game-changing legacy will benefit people enormously in the years ahead.
- A robotic concierge can assist in traffic flow in busy hospital emergency departments, similar to checking-in kiosks in airports.
- Biometric authentication provides secure, prompt access to past medical records, saving time and confusion when providing a medical history.
- Secure access to contact details lasts throughout the patient journey and will be updated with richer information as the patient progresses through different phases of care.
- All healthcare practitioners will have access to the same medical record throughout the patient's journey, eliminating the need for patients to constantly repeat their medical history and their symptoms to new practitioners.
- Emergency calls will provide integration across all emergency services to ensure the patient gets the treatment they need when they need it, eliminating double handling between services. For example, emergency services call-takers can dispatch patients to the best possible facility to eliminate the need for transfers and thus speed access to treatment.
- Artificial intelligence (AI) will assist hospital staff in triage to make informed decisions faster.
- Inpatients will be processed faster due to predictive analysis of incoming cases matched to staffing, bed allocation, and inter-hospital cooperation..

USE CASE: Tasmanian emergency services dispatch system

The Fujitsu Emergency Services Computer-Aided Dispatch (ESCAD) system integrates police, fire brigade, ambulance, and state emergency services. It simplifies the handling of calls for assistance, removing manual processes and inefficiencies caused by disparate systems. It's the first all-agency system in Australia covering all emergency services and providing multi-agency capabilities. It provides real-time sharing of incident details, resource location, hazards and warnings, and status tracking between agencies.

During treatment

- Efficient allocation of resources will occur through intelligent scheduling and forecasting.
- Practitioners will be able to deliver faster and more accurate diagnosis of condition and recommendation of treatment.
- Remote diagnosis will let specialists diagnose patients in isolated locations or with highly contagious diseases.
- Patients will be better monitored during their hospital stay.
- Keeping patients and loved ones informed will be easier through monitoring technology.
- The patient experience will be improved overall due to more efficient tracking of hospital equipment and supplies so that care can be provided at time of need.

USE CASE: AI used to assist in detection of brain aneurysms from scans

Fujitsu has partnered with GE Healthcare, Macquarie University and Macquarie Medical Imaging to leverage artificial intelligence to detect brain aneurysms faster and more efficiently. The project—which has already received a \$2.1 million grant from the Australian Government Department of Industry, Innovation, and Science—will use AI to detect brain aneurysms earlier and more accurately. This will allow a more focused approach for human radiologists, leading to earlier identification and treatment with the potential to save lives and reduce overall treatment costs.

USE CASE: Slingeland Hospital patient monitoring leads to fewer disruptions

At Slingeland Hospital in the Netherlands, Fujitsu has created a real-time monitoring solution to capture the health status of patients 24/7. It lets healthcare professionals remotely monitor patients' conditions, reducing the need for bedside visits, especially those that disrupt patient rehabilitation and rest. It also lets healthcare professionals provide tailored patient treatment plans.



USE CASE: Canberra Hospital baby monitoring in NICU

Canberra Hospital caters for people across a huge geographic area, making it difficult for people who live far away to visit their loved ones daily. Around 40 per cent of its neonatal unit patients come from outside the city, making it difficult for parents with infants in the Neonatal Intensive Care Unit (NICU) and Special Care Nursery (SCN) to spend as much time as they would like with their babies, especially when balancing other family and work commitments.

The hospital commissioned the development of a secure webcam streaming service, taking into account privacy and security considerations, that lets parents see their babies any time, as well as observe demonstrations from staff such as how to insert feeding tubes. A survey conducted by the hospital showed that this service has led to a 98 per cent reduction in stress for parents.

USE CASE: IoT monitoring of hospital equipment

The Internet of Things (IoT) has untold potential for the healthcare industry with sensors capable of delivering data on everything from a patient's temperature or heart rate to the location of their medicines and status of lifesaving equipment. They can also track when patients receive their medication to eliminate incorrect dosages that can occur due to staff rotations.

Fujitsu is pioneering solutions that leverage IoT and radio frequency identification (RFID) tags to monitor hospital equipment. Knowing at a glance where lifesaving equipment or specialised tools are located, whether they've been sterilised, and where they have been used recently can all help reduce waiting times for patients by ensuring the necessary equipment is on hand when practitioners need it. It can also help reduce and track cross-contamination.

This solution can be used to ensure the right equipment is in a theatre prior to an operation, which could reduce the number of surgery cancellations due to missing equipment.

Discharge and ongoing care

- Records are updated and accessible throughout the health system for the life of the patient.
- Practitioners can monitor recovery and feedback based on patients' vital signs post-discharge and alert the patient to return to care if vital signs dictate.
- Monitoring of elderly and dementia patients to alert carers of changes in vital signs, changes in movement and gait which increases their potential for falls, or to advise of wandering.



USE CASE: AI helps monitor safety from IoT sensors

Wearable sensors mean elderly people can be monitored for their safety while maintaining their privacy. The sensors pick up on unusual events through sound, alerting family and caregivers in real-time if there is a risk to the older person. Conversations are not recorded to protect privacy.

Fujitsu also offers solutions that let nurses monitor in-hospital patients remotely, which reduces the pressure on nurses' time and lets patients get much-needed rest. The sensors are non-invasive and give patients more freedom of movement than they may previously have had. With all information securely managed through a Fujitsu hybrid cloud environment, the solution dramatically improves patient outcomes.

A similar solution could be used to monitor patients after they are discharged from hospital. With the sensors allowing patients to continue their daily lives, the results are sent to the hospital and automated alerts, powered by AI, advise health practitioners of changes to a patient's vital signs indicating that their condition warrants attention. Healthcare staff can then arrange for the patient to return to the hospital or, if the situation warrants, send an ambulance to the patient's location.

USE CASE: Preventing pressure injuries

Pressure ulcers are painful and debilitating. Fujitsu worked with Morriston Hospital in Wales to create an app that aims to reduce pressure ulcers and prioritise treatment of the most serious cases. It gives district nurses the information they need to spot the risks early and determine which pressure ulcers require urgent treatment for patients both in hospital and at home.

It also helps nurses educate their patients so they can understand how to minimise their own risk. A wound monitoring and reminder tool were found to be powerful, helping track the effectiveness of interventions as well as reminding patients to move regularly to prevent ulcers from forming.



The clinician's experience

Care delivery

- Digitalised medical records provide confidence that a complete medical history is available at the clinician's fingertips all the way through a patient's journey.
- AI provides the ability to make vital decisions faster at all stages from triage to diagnosis, treatment, and transfer decisions.
- All data is available and potential diagnosis is made prior to the clinician meeting the patient, leading to better use of time and specialist skills, and reducing the risk of an incorrect decision.
- Biometrics linked to patient records minimise the risk of 'wrong patient' or 'wrong operation' and also enable easier and faster identification of non-responsive patients.
- 'Pop-up' hospitals and clinics with all technology enabled can bring care delivery to where it is needed in cases of pandemics or natural disasters.

USE CASE: AI assistance to speed up diagnoses

Fujitsu has created a technology that retrieves similar cases from a database of previously taken images such as scans. The AI-based technology can accurately identify cases in which abnormal shadows have spread in three dimensions, with an accuracy rate of 85 per cent according to correct answers predetermined by doctors. This makes diagnosis faster and more efficient, letting doctors get on with treating patients instead of spending so much time trying to diagnose them.

Working environment

- Smart buildings with intelligent lighting will provide increased comfort for patients and clinicians.
- Administration requirements will be reduced due to centralised records.
- Equipment will be available and present as and when required.
- Smart doors and smart locks will secure sensitive areas such as neonatal or pharmacy rooms.
- Smart lockers will let patients store their belongings, and the hospital store equipment and medications, safely and securely.
- Integration with multiple providers across the care environment will make patient care more individualised. This can include:
 - hospital parking and appointment delays or scheduling
 - food services for allergy and dietary management
 - facilities for patient mobility for in-hospital services such as scheduling porters for scans and x-rays
 - in-room or ward services such as patient identification and personalised services such as meal ordering, media subscription services etc.

USE CASE: Smart buildings for human wellness

Hospitals are often accused of being unpleasant environments, often due to their need to be bright, easily cleaned, and sterile. However, with a smart building, it is possible to achieve a far more comfortable environment using elements such as smart lighting that adjusts according to time of day, and air sensors that help control air quality, temperature, and humidity. Energy-saving features can include automatically or remotely switching off lights and air conditioning in parts of the building that aren't currently being used.

The administrator's experience

Corporate services

- Cost of care is reduced due to more streamlined and automated processes and centralised records management.
- Data analytics can power demand forecasting so supplies and services are provisioned as needed.
- Health records can be integrated with billing and administration systems.
- Decision-making can be made smarter with analytics of key indicators and metrics on demand.
- Predictive analytics for discharge and post-discharge care can reduce the risk of post-discharge complications and readmission.
- Automation of low-level tasks such as back-office services, medication delivery, diagnostics collection, transport of blood samples, etc. lets managers redirect labour to more complex tasks.
- Increased confidence in privacy of patient data means hospitals comply with all regulations and legislation.

USE CASE: Digital Annealer combinatorial optimisation to assist with complex scheduling tasks

The world's first quantum-inspired technology, Fujitsu's Digital Annealer solves business and logistics problems much faster and more efficiently than traditional systems. For example, it can analyse hospital layouts, routes, bed management, and other information to determine the optimal use of resources.

This can overcome complex scheduling challenges to ensure that facilities are always maximising use of the resources available, even down to mapping the most efficient routes for nurses to take through wards, or the best way to get a patient from the emergency department to the ICU without delays.

The Digital Annealer has also been deployed to assist the drug discovery process. Its ability to quickly solve combinatorial optimisation problems will help dramatically accelerate the search for drug candidate compounds through improved efficiency.

Research and training

- Healthcare facilities can promote innovation through design thinking and co-creation workshops.
- Virtual learning and development can contribute to skills growth in a convenient and participant-driven way.
- Simulation and modelling can assist in staff training across all disciplines.

USE CASE: Fujitsu Digital Transformation Centre

The Fujitsu Digital Transformation Centre (DTC) is a co-creation workshop space that empowers health teams to solve current and future business challenges with the help of health informaticians, health integration subject matter experts, technologists, designers, consultants, and other relevant experts. With IT professionals and physicians working together, participants can co-create human-centric solutions that help solve health or aged care challenges and improve the experience and quality of care for Australians and New Zealanders.



The CIO's experience

- Confidence that cybersecurity and privacy concerns are addressed through secure solutions.
- Confirmation of an agile environment that allows staff to work from anywhere, such as a radiologist viewing X-rays and providing emergency advice even while working remotely.
- Confidence in disaster recovery and business continuity planning.
- Confidence in solution scalability to cater for unplanned demand in the case of an epidemic or pandemic, for example.
- Ability to encourage innovation while also preserving requirements for compliance, security, and data privacy.

USE CASE: Enterprise imaging repository provides information faster

Fujitsu worked with eHealth NSW to develop a pioneering enterprise imaging repository (EIR) that gives doctors immediate access to patients' medical imaging and reports from across the state, removing the need for patients to carry previous scans in hard copy and unnecessary exposure to radiation from additional scans. This allows rural clinicians to collaborate with specialists in teaching hospitals to make better treatment and transfer decisions.

The EIR generates thousands of imaging studies each day and has more than 85 million individual images stored. The solution accounts for the need for security and privacy of patient details and uses a hybrid cloud environment. Integrating this repository with the My Health Record ensures that health practitioners have full access to patients' scans and X-rays sooner.



The need for rapid and agile responses to changing situations

The COVID-19 pandemic underlined the importance of a healthcare system that can respond effectively and quickly to shifting conditions. For example, the need for only essential workers to physically attend work meant a scramble to facilitate remote working arrangements for those who could work remotely.

Being able to adapt and deploy new solutions with agility during uncertain times is a key challenge for healthcare organisations. This requires a strong collaborative approach with technology partners that can help healthcare organisations pivot fast.

In helping organisations set up for a new remote working reality, Fujitsu follows a four-step process:

1. Rapid assessment incorporating work styles, infrastructure, customer needs, and culture.
2. Ideation to find the most innovative use of technology to serve customers effectively.
3. Rapid deployment of remote working and collaboration solutions, based in the cloud, and including upskilling for staff members.
4. Workforce enablement that helps organisations plan for new ways of working.

Working with a knowledgeable and responsive partner will help healthcare organisations deal with the unexpected more successfully.

A vision for a human-centric future in healthcare

There is a wealth of new and emerging technologies that will transform the healthcare industry. The use cases in this whitepaper highlight the world of opportunities that already exist. In the next decade or more, additional technologies will begin to become more viable for the healthcare industry in Australia and New Zealand.

For example, augmented reality can help surgeons visualise the information they need without looking away from the patient on the table. This can reduce errors, speed up surgeries, and lead to better patient outcomes. It can also help more experienced surgeons get newer colleagues up to speed on new techniques. Additionally, augmented reality has the capability to support the operation of hospital equipment via mobile devices to let users fix devices, decreasing the number of out-of-service devices and streamlining asset quantities, which saves costs.

Greater use of big data could herald unprecedented abilities for doctors to predict their patients' conditions before patients even experience symptoms, leading to a greater emphasis on prevention rather than cure. As more data is collected and verified, health practitioners will have access to stronger datasets on which to base their predictions.

Wearable technologies will mean more people can leave hospital sooner and be treated as outpatients, or age in place, reducing the load on hospitals without compromising quality of care.

These advancements all share one thing in common; they put the patient at the heart of the conversation. Whether it's about making medical records instantly and securely available, giving practitioners more support with diagnosis and treatment options, or managing hospital resources more efficiently, the healthcare industry is on the cusp of making the patient experience far more pleasant, less stressful, and, crucially, more successful in terms of health outcomes.

Meanwhile, the other people involved in the patient's care, from clinicians and administrators to hospital CIOs, have the tools they need to provide a better standard of care, as well as a better working experience.

Putting the patient at the centre of every conversation and decision throughout the continuum of care is the future of healthcare. Many organisations are already doing this to some extent but all have the opportunity to improve in this area.

Co-creation of the technologies that underpin this approach is a key success factor. By working closely together with a strong focus on the human factor in healthcare, organisations can transform the way they deliver services and address key challenges.



Next steps

Fujitsu has a long history in the healthcare industry. We see a significant opportunity to harness investments more effectively and use technology as the fourth utility in the healthcare world; as essential and fundamental as water, electricity, and gas. Technology creates the essential bridge between patients, healthcare professionals, medical services, and even the buildings that are required to deliver effective services.

As one of the world's largest ICT companies, Fujitsu is uniquely positioned to provide fully managed, end-to-end healthcare information systems and services that will improve patient outcomes and accelerate business returns. Fujitsu works with healthcare providers in jurisdictions around the world,

leveraging its global experience and technological innovation with local know-how and great customer service.

Fujitsu's ability to continuously improve the way IT can work for the healthcare industry as a whole includes co-creating healthcare solutions with patients, clinicians, and health informaticians, and bringing systems integration, technology infrastructure, strong data and analytics, comprehensive support processes and a network of skilled support professionals that collectively optimise worldwide knowledge management.

We make it our mission to understand your business challenges and work with you to solve them.

Our comprehensive portfolio of services includes:

- hybrid IT and multicloud
- cybersecurity
- emerging technologies
- Fujitsu products.
- digital workplace services
- data and applications
- data centres

Contact Fujitsu today to find out how we can help you bring your human-centric vision to life.

