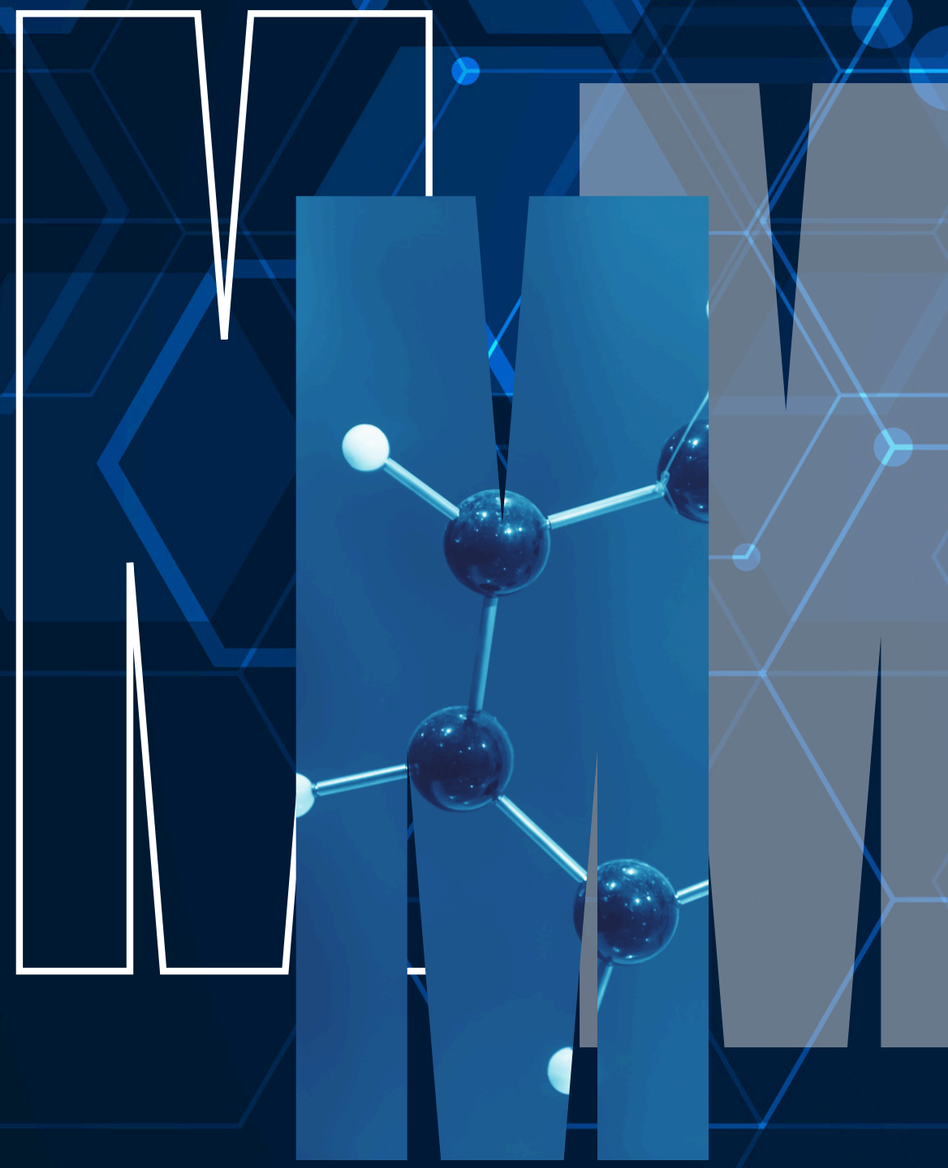
MONASH University

2025-2028 DIGITAL HEALTH STRATEGY



MONASH
INFORMATION
TECHNOLOGY

FOREWORD

Digital Health has been a cornerstone strategic priority for the Faculty of Information Technology since 2017. The last several years have been unlike any other, we've witnessed a revolution that has transformed the healthcare landscape across delivery and research. A revolution underpinned by technology.

This 2025 – 2028 Digital Health Strategic Outlook seeks to formalise our direction in harnessing the pace of technological innovation and the depth of expertise that resides within the Faculty. Importantly, it reflects our deliberate effort to unify the diverse perspectives of technologists and health professionals.

By aligning leading capabilities in areas such as data science, AI, human-computer interaction, cybersecurity and health informatics with the real and evolving priorities across every domain in healthcare we can better foster a collaborative ecosystem that benefits patients, clinicians and the broader communities it affects.

The Faculty is committed to improving health outcomes through digital solutions that are both technologically robust and ethically sound. We're proud to be at the forefront of this transformation, and we look forward to working with our diverse partners to shape a better future for all.

ENDORSEMENT FROM THE DEAN

The Digital Health Strategic Outlook is a powerful expression of our commitment to Monash's Impact 2030 – especially in supporting 'Thriving Communities' – and a clear manifestation of our Faculty's mission IT for social good.

Digital health is central to equitable, resilient and socially responsible futures. Uniting technological innovation with real-world healthcare needs exemplifies how our Faculty leads through collaboration, impact and purpose. It's a natural area to apply the leading expertise we possess across our departments and research groups.

I thank all those who contributed to this strategic direction and look forward to advancing this vision together.

Professor Ann Nicholson

WELCOME FROM DIGITAL HEALTH LEAD
PROFESSOR CHRIS BAIN

We are living in a time where technology is reshaping how we understand, deliver and experience care. From the rise of precision medicine to AI-driven diagnostics, telehealth and wearables, the potential for digital health continues to emerge.

No matter who you are or where you come from, healthcare is a global priority with importance that cannot be understated. This universal significance makes digital health a natural focus area and reflection of the Faculty's core mission: IT for Social Good.

Technology is entrenched so deeply in every aspect of our lives, with a reach that spreads to almost every corner of the world. As a faculty dedicated to IT, we're in an advantageous position to leverage new and emerging technologies to address some of society's most pressing challenges in health, wellbeing and equitable access to care.

This strategic outlook, developed closely with researchers, clinicians, patients, medical institutions and community members, is a springboard to evolve the solid foundation we've established so far. It builds upon where the Faculty already has strong existing relationships, opportunities of enormous potential and influential partnerships.

Importantly, digital health is intrinsically multidimensional – demanding collaboration across disciplines, systems and experiences. Therefore the capabilities, themes and impact areas presented will resonate beyond academia with broader society.

I would like to thank the researchers, professional staff and Faculty leadership for both their contributions to, and support of, this strategic direction, as well as our collaborators across Monash University and the healthcare sector worldwide. I am grateful to have the opportunity to lead this vital agenda.

Warm regards,
Professor Chris Bain

MULTIDISCIPLINARY APPROACH

The following is a breakdown of key specialist research groups within the Faculty of IT that collaborate and contribute to our Digital Health initiatives.

Augmented Intelligence and Multimodal analytics (AIM) for Health Lab

Using the power of AI to answer critical medical research questions underpinned by cross-cutting expertise coupled with connections to first-tier healthcare providers and industry partners.

Exertion Games Lab

Harnessing emerging and creative technologies with people-focused design to build health solutions that are inclusive and expressive – like sensory-rich interfaces and immersive therapies.

Emerging Technologies Research Lab

Combining speculative design and human-centred research to explore how emerging digital health technologies influence society and our care experiences, everyday practices, agency and communications.

Action Lab

Supporting the design of ethical, participatory digital health solutions that empower communities, amplify the underrepresented and promote collective wellbeing.

Cybersecurity

Establishing robust tools, infrastructure and safeguards to protect patient data, facilitate reliable information sharing between providers and address vulnerabilities in integral healthcare systems.

Education and Analytics

Enhancing human learning and empowering healthcare practitioners to thrive in a digital world through modern educational offerings and intelligent systems that enable timely, adaptive support in clinical settings.

Vision and Language

Leveraging our rare dual expertise in vision and language to support computational intelligence that can interpret clinical images, automate question answering and accelerate medical research discoveries.

Databases and Distributed Systems

Developing cutting-edge solutions to manage, store and process raw information from wearables and other health data streams to inform decision-making, track outbreaks, model health risks and other important tasks.

Embodied Visualisation

Enhancing how people understand, interact and learn from complex medical data by transforming it into intuitive, explorable experiences that support decision-making for clinicians, patients and policymakers.

Inclusive Technologies

Adopting a multi-faceted approach to exploring how emerging inclusive technologies can enhance the lives of underserved populations – especially people with disabilities, older adults and children.

Digital Transformation

Enhancing access to digital technologies, maximising their societal benefits, promoting digital literacy and supporting local agency – while ensuring medical recordkeeping is ethical, inclusive and accountable.

Optimisation

Adopting a human-in-the-loop approach to optimising ambulance routing, treatment dosages, genomic data research, hospital scheduling and other critical functions.

Machine Learning

Using AI and machine learning to enable faster, more accurate disease diagnostics, personalised treatments, patient self-management, predictive modelling and condition monitoring.

Software Engineering

Combining AI-augmented software engineering with human-centred design to develop robust, accessible and scalable solutions that enhance care delivery.

Monash Assistive Technologies and Society Centre (MATS)

Harnessing digital technologies to provide real-world solutions for people with disabilities that support access, build inclusive pathways and drive creativity.

- Lab
- Group
- Centre

BRIDGING RESEARCH AND IMPACT

Discover our key capabilities in Digital Health and areas they’re making the most impact.

HOW WE CREATE IMPACT

FACULTY OF IT CAPABILITIES

AREAS OF IMPACT	AI in Health	Community Informatics	Digitally Enabled Care Models	Optimisation of Software in Healthcare	Value Based Digital Health
Cancer and Cancer care From its extensive range of Cancer Registries to the clinical services it delivered via partnering hospitals, Monash has a strong foundation for our faculty to evolve this area with emerging technologies globally.	Leveraging the potential of **AI and machine learning** in: • **Medical imaging:** Improving image analysis, abnormality detection and accuracy of all identification processes. • **Bioinformatics:** Enhancing genomics activities, personalised medicine, disease research and drug discovery. • **Decision-making support:** Assisting clinicians in diagnosing and determining treatments while reducing human error. • **Administrative efficiency:** Streamlining tasks such as scheduling, billing, patient information sharing and more. • **Assistive technology and accessibility:** Supporting individuals with disabilities through adaptive technologies. • **Data privacy and security:** Producing novel approaches for managing data and preserving privacy. **Key Faculty research entities** Optimisation, Machine Learning, Databases and Distributed Systems, Vision and Language, Embodied Visualisation and AIM for Health Lab.	Championing health equity and quality of care for underserved communities through **community informatics** that drives: • **Inclusive solutions:** Developing digital solutions to break down economic and geographic barriers to healthcare. • **Health education:** Using digital tools and data to identify knowledge gaps and tailor education to learners – refined with ongoing feedback. • **Co-design and collaboration:** Engaging patients, healthcare providers and community organisations in co-creating meaningful digital solutions. • **Informed decision-making:** Gathering insights integral to personalised care, timely interventions and better resource allocation. **Key Faculty research entities** Empowered Communities Lab, Action Lab, MATS, and Software Engineering.	Developing healthcare delivery approaches based on **digital technologies** that enable: • **Remote care:** Via telehealth platforms, mobile apps, connected devices and wearables. • **Empowered self-management:** Through real-time access to health information and reliable guidance for day-to-day management of conditions. • **Better decision-making:** Based on large amounts of diverse health data gathered through wearables and other devices. • **Robust integration:** Due to interoperability and APIs that allow digital tools to synchronise with EMRs and communicate with clinical workflows. • **Tailored interventions:** Driven by data and predictive analytics that allow for personalisation. **Key Faculty research entities** Databases and Distributed Systems, Cybersecurity, AIM for Health Lab, Software Engineering, Digital Transformation and Embodied Visualisation.	Helping healthcare organisations **optimise** and scale their systems for high-demand environments through: • **Enhanced usability:** Developing intuitive interfaces, streamlined processes and better accessibility. • **Stronger data infrastructure:** Improving how data is captured, analysed and visualised to drive action. • **Fortified security:** Establishing federated learning, anonymised data, compliance measures and more robust cybersecurity architecture. • **Human-centred design:** Co-designing with end users, facilitating continuous feedback and ensuring adoption and meaningful use. • **Automation and integration:** Fast-tracking administrative tasks and enabling predictive analytics for early intervention and resource planning. **Key Faculty research entities** Optimisation, Cybersecurity, Machine Learning, AIM for Health Lab, Digital Transformation and Software Engineering.	**Bridging the gap** between real patient value and digital health solutions underpinned by: • **Effective R&D:** Ensuring research and development outputs are effective and sustainable for use in healthcare. • **Equity and inclusion:** Boosting accessibility for diverse populations by addressing disparities in literacy, affordability and more. • **Continuous improvement:** Embracing agile and continuous development driven by real user feedback. • **Data-informed decisions:** Using reliable data and analytics to guide care decisions. • **Integrated and coordinated care:** Enabling seamless communication and reducing fragmentation across the healthcare system. • **Patient-centred outcomes:** Prioritising meaningful health outcomes FROM clinical processes, **Key Faculty research entities** Digital Transformation and Software Engineering.
Forensic Medicine and Forensic Pathology Monash has a longstanding relationship with the Victorian Institute of Forensic Medicine (VIFM) – a leader in forensics. Our access to data, real-world needs and research opportunities can empower institutes like VIFM to serve a premium role in the study of mortality and disease.					
Mental Health and Wellbeing Working with partners such as Turner Institute and Turning Point, we're undertaking mental health research and supporting mental wellbeing and addictions. With advancements across apps, wearables and remote healthcare, we're poised to evolve this area with IT.					
Neurosciences The University has existing strengths in this domain through its Department of Neurosciences and the Neuroscience group at its affiliate Hudson Institute. With neurological care prevalent around the world, this area is primed to be advanced through our Digital Health projects.					
Women's Health Monash is a global leader in women's health through groups such as the Monash Centre for Health Research and Implementation – a collaborator of the Faculty. This primes us for impact with partners in IVF more broadly and major health providers with extensive care programs and sites.					

LINKS TO BROADER MONASH STRATEGY AND ECOSYSTEM

LINK TO IMPACT 2030	**Thriving Communities**	✓	✓	✓	✓	✓
	Climate Change	✓	✓	✓	✓	
SYNERGY WITH MONASH INSTITUTES	**Monash AI Institute (Faculty of IT led)**	✓	✓	✓	✓	
	Monash Institute of Medical Engineering	✓	✓	✓	✓	✓
	Monash Victorian Heart Institute	✓	✓		✓	
	Monash Biomedical Imaging	✓				
	Monash Centre for Health Research and Implementation	✓	✓	✓	✓	✓
EDUCATION	**Digital Health courses and units***	✓		✓	✓	✓

*Indicates capabilities that are also taught by the Faculty either in its IT degrees or through courses managed by other faculties.

A GLOBAL NETWORK OF PARTNERS

With Digital Health a worldwide priority, we've forged strong partnerships with influential organisations, institutions and groups in Australia and abroad.

INTERNATIONAL

Monash University Malaysia

Monash's third largest campus and the first foreign university campus in Malaysia.

Malaysia University Indonesia

Indonesia's first foreign university campus focused on postgraduate studies and research.

University Medical Center, Ho Chi Minh City

The first combined hospital-university model in Vietnam combining patient care, medical education and research.

- Serves over 2M outpatients and 55K inpatients annually
- Trained nearly 6K physicians, nurses and international fellows in 2023
- A key pillar of the overarching University of Medicine and Pharmacy

University of Medicine and Pharmacy, Ho Chi Minh City

One of Vietnam's most prestigious institutions for medical and pharmaceutical education, and also operates the University Medical Center.

- Has 33K+ publications in medicine accumulating more than 44K citations.
- Comprised of seven faculties specialised across healthcare, nursing and medicine.

VinUniversity, Hanoi

A private, non-profit university established in 2018 comprising four colleges including the College of Health Sciences.

- Achieved QS 5-Star rating in nine categories, including teaching, employability and global engagement
- Hosts the VinUni-Illinois Smart Health Centre (VISHC) as a key partner with the Minas DH Program

Apollo Hospitals

India's largest integrated private healthcare network with services across hospitals, pharmacies and digital health.

- Operates 70 hospitals, 5,541 pharmacies and 1,750 diagnostic centres nationally
- Employs 83K staff and has served more than 150M patients from 140+ countries

Apollo University

Established by the Apollo Group and the #1 private university in India (QS, 2025).

- Has a School of Health Sciences and a School of Technology – both partners with Monash University
- Delivers a master's degree in Health Informatics

Indian Institute of Technology Bombay (IITB)

One of India's premier public technical and research universities renowned for excellence and innovation.

- Hosted 13,282 students (including 3,687 PhD candidates) in 2023 and employs 733 faculty members
- Ranked #1 in India in the QS World University Rankings 2025

Chulalongkorn University, Thailand

Thailand's first university and ranked #1 nationally.

- Known as a centre for academic learning and professional excellence.
- Closely integrated with King Chulalongkorn Memorial Hospital run by the Thai Red Cross

AUSTRALIA

Australian Council of Senior Academic Leaders in Digital Health (ACSALDH)

A group that advances digital health research, education and innovation.

- Consists of 37 members each representing an Australian university
- Formed in 2024 by the Digital health Cooperative Research Centre

Australian Alliance for Artificial Intelligence in Healthcare (AAAiH)

An initiative that aims to improve health and economic outcomes through scalable and sustainable AI-enabled healthcare.

- 100+ global partners and stakeholders from all domains.
- Operates across Safety, Quality and Ethics or Workforce programs

Australia's National Digital Health Initiative (AND Health)

The leading provider of commercialisation, incubator and accelerator programs for digital health tech companies.

- Worked with 935+ companies nationally
- Supported more than 1.2M patients
- Proven in supporting the commercialisation of proof-of-concept health technologies

Australasian Institute of Digital Health (AIDH)

Australia's peak body for digital health with a 30-year history.

- Represents a united and influential voice for health informatics and digital health leaders and practitioners.
- 2,300+ members and fellows, and 190+ industry partners

VICTORIA

Monash Health

The state's largest public health service with a 170+ year history offering healthcare across the entire lifespan.

- Over 2K beds across its 40+ care facilities
- More than 16K staff

Regional Health Training Hubs

Government-funded initiatives designed to improve the recruitment and retention of medical professionals in rural areas.

- 25+ training hubs across all Australian states and territories
- Bendigo, Gippsland and Mildura are operated by Monash – the most of all participating universities

Alfred Health

A top metropolitan health service that owns The Alfred, Caulfield Hospital and Sandringham Hospital, numerous clinics, a leading intensive care unit and the largest, most active trauma service in the country.

- Serves over 680K people in southern and Bayside Melbourne
- Over 8.5K employees and 13 statewide services

Victorian Institute of Forensic Medicine (VIFM)

An institute providing independent forensic medical and scientific services to support families of the deceased, victims of violence, law enforcement and other jurisdictions.

- 200+ employees
- Operates as the Department of Forensic Medicine partnering with Monash University
- Houses the Donor Tissue Bank of Victoria

MONASH AUSTRALIA

Institutes

Monash AI Institute (Faculty of IT led)

An institute advancing AI through novel research, industry collaboration, training and entrepreneurship leveraging an interdisciplinary research community and vast affiliate network.

Monash Institute of Medical Engineering (MIME)

A multidisciplinary institute driving the evolution of healthcare through innovative medical technologies and engineering solutions.

Monash Victorian Heart Institute

A leading centre dedicated to cardiovascular research, education and patient care innovation.

Monash Biomedical Imaging

A research facility providing advanced imaging technologies for biomedical and neuroscience research.

Monash Centre for Health Research and Implementation (MCHRI)

A collaborative centre translating health research into practice to improve community health outcomes.

Faculties

- Faculty of Medicine, Nursing and Health Sciences
- Faculty of Engineering
- Faculty of Pharmacy and Pharmaceutical Sciences
- Other faculties

BROADER MONASH AUSTRALIA ECOSYSTEM

KEY ACTIONS AND MEASURES OF SUCCESS

Our Digital Health work contributes to the broader University's Impact 2030 goals of Excellent, Enterprising, International and Inclusive – while addressing its identified Challenges of the Age: Climate Change, Thriving Communities and Geopolitical Security.

KEY PERFORMANCE INDICATORS	PLANNED ACTIVITIES
DH1: Increase gross research income from Digital Health work by 5% annually	• Formalise collaborations with new Memorandums of Understanding and service established ones. • Source new partnerships. • Actively share and disseminate inbound funding and HDR supervision opportunities.
DH2: Increase total completed Higher Degree by Research (HDR) supervisions on Digital Health topics by 5% annually	
DH3: Increase total Digital Health research outputs by 5% annually	
DH4: Grow membership of the Alliance for Digital health At Monash (ADAM) by 5% annually	• Host ADAM webinars and other events aligned to University strategic priorities, global trends and technological innovations in Digital Health. • Formalise collaborations with new Memorandums of Understanding and service established ones. • Promote and elevate Digital Health work from the Faculty, University, partners and in the healthcare sector more broadly. • Generate interest in ADAM membership through active marketing and affiliations. • Extend invitations directly to prospective ADAM members emerging from collaborations, events, networking and other channels.
DH5: Expand the presence and impact of digital health in Monash University's education ecosystem	• Aim to establish and deliver the first graduate digital health course offerings with other faculties and Monash University Malaysia by 2027. • Aim to establish single unit digital health offerings that can be integrated into existing and new course offerings across faculties at Monash.
DH6: Boost the contributions and participation of digital health partners in the Faculty's industry programs.	• Increase the formal participation of health and digital health companies in the Faculty's work-integrated learning programs to offer students real-world experience.

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DISCOVER MORE

If you would like to delve deeper into our Digital Health work, partnerships or other opportunities, please get in touch.

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