

AlfredHealth

Digital Health Strategy 2022-24

**Easy access to person-centred,
smart and connected quality care.**



Contents

4

Foreword

9

**Executive
Summary**

10

**Digital Health
Spotlight at
Alfred Health**

13

Introduction

14

**Digital Health
Design Principles**

16

**Digital Health
Strategic Pillars**

30

**Strategic Planning
Horizons**

33

**Funding
Strategy**

34

**Critical Success
Factors**

Foreword



It is with great pleasure and delight that I introduce to you, our very first edition of the Digital Health Strategy for Alfred Health.

The Digital Health Strategy 2022 - 2024 serves as a critical driver for digitising, modernising and transforming our health service. It supports Alfred Health's overall Strategic Plan 2021 - 2023 and outlines how we will leverage digital technology to deliver on our overarching purpose and vision of providing high-quality and equitable patient-centred care to improve the lives of our patients and their families, our communities and humanity.

Moving beyond the introduction of the Electronic Medical Record (EMR) as well the successful completion of the eTimely Quality Care (eTQC) program, our Digital Health Strategy serves as the linchpin to transition from Digital Health supporting change to driving change across the organisation, in an attempt towards enabling and delivering smart data-driven quality care.

Our Digital Health Strategy outlines a shared vision for supporting both our patients and our workforce to come onboard with us on this journey in a meaningful way to deliver the best possible patient experience, moving beyond preventing avoidable harm to reducing unwarranted clinical variation in leading and delivering optimised patient health outcomes.

Many thanks go out to those involved in the co-design and development of this strategy which will serve as the foundational bedrock in shaping and mobilising our digital health transformation efforts over the next few years. In particular, I would like to acknowledge the efforts of the Digital Health Leadership Team, members of the Patient Experience and Consumer Engagement (PECE) working group, Strategy & Planning as well as our Strategic Advisory Boards, consumers and staff.

A handwritten signature in black ink that reads "Andrew Way". The signature is fluid and cursive.

Professor Andrew Way AM

Chief Executive Officer
Alfred Health



Foreword (continued)





The advent of the global COVID-19 pandemic has significantly transformed the healthcare landscape, resulting in an ever increasing need for cost-effective healthcare delivery, further bolstered by the increasing pervasiveness of technology.

Digital Health has remained adaptive and responsive to the requirements of Alfred Health during this time, whilst continuing to deliver on a number of key initiatives.

Our Digital Health Strategy 2022-2024 provides a stimulus for how technology will be re-designed to be person-centric whether it is for a patient, family member or staff working onsite or at home. It reinforces our continued focus on strengthening our digital foundations, optimising the EMR, uplifting our security posture and protecting the privacy of patient data as we move to cloud-first technologies. The key message from clinicians is how we use data to drive clinical and operational decisions, which will be a critical enabler as part of our drive for innovation in AI.

Transformation in digital technology has led to the personalisation of how information is provided in a readable and accessible fashion, thereby paving the way for rapid advancements in information accessibility, noting the presence of a safety net for sometimes excluded key patient groups. The establishment of patient and consumer consultation groups will be pivotal as we investigate how digital health services can support individual and broader community programs via strategic internal and external partnerships to deliver new and optimised “beyond the walls” virtual care models.

We’re excited about building Alfred Health’s digital future and we want you to be a part of it.

A handwritten signature in black ink, appearing to read 'Amy McKimm'.

Amy McKimm
Chief Digital Health Officer
Alfred Health



Executive Summary

Our Vision & Strategic Pillars

The vision of the Alfred Health Digital Health Strategy is to provide **“easy access to person-centred, smart and connected quality care”**. To achieve this vision, our aim is to advance excellence in healthcare by leveraging digital and data technologies across our six key strategic pillars:

- Personalised patient experience
- New and optimised digital and data-driven models of care
- The digital workplace for our employees
- The next generation of health service operations
- Resilience and cybersecurity
- Continued excellence in research through rich data and AI toolsets.

Digital Health Design Principles

The consistent implementation of our underlying Digital Health Design Principles in framing strategic initiatives will build the capability, culture and mindset required to respond quickly to the changing dynamic environment and rapidly create value for Alfred Health through focused investment in new and emerging clinical and corporate digital systems and technologies across the broader organisation. These principles are:

- Optimal patient outcomes
- Person-centred technology
- Security, resilience and data privacy
- Cloud-first
- Interoperable and integrated systems
- Data-driven
- Strategic enterprise-wide technology platforms and partnerships
- Innovation

Success Measures

Overall, the Alfred Health Digital Health strategy aims to achieve the following broad benefits:

- Improved safety and high quality of patient care through zero harm, adherence to standardised best practice procedures and reduced patient readmission rates.
- New models of care delivery “beyond the walls” via the successful rollout of virtual care models and further expansion in telehealth functionality and usage.
- Optimised hospital operations via automated clinician workflows, efficient bed utilisation rates, reduced length of stay etc.
- Accelerated clinical trial research and innovation outcomes through the analysis and evaluation of accurate and timely patient data to improve quality of care.
- Enhanced consumer experience journey, measured through patient experience measures and uptake of patient digital health technologies.
- Improved employee morale, workforce engagement and productivity with a modernised digital workplace toolset across Alfred Health
- A resilient and secure core technology environment.

The success of many of the strategic initiatives in this document will be as dependent on changes to business process, business organisation and workforce capability and capacity for change as much as data and technology, both for clinical information as well as non-clinical enterprise-wide corporate systems such as HRIS, payroll and billing administration platforms.

Organisational decisions around investment and improvement across corporate systems will also be made within the same strategic framework and lens in relation to the enterprise-wide application of the Digital Health design principles, strategic pillars and success measures.

The collective opportunities from digital health, whilst requiring significant effort and willingness to adapt, are great in their potential to fulfill Alfred Health’s overall purpose of improving the lives of our patients and their families, our communities and humanity.

The vision of the Alfred Health Digital Health Strategy is to provide “easy access to person-centred, smart and connected quality care”.

Digital Health Spotlight at Alfred Health

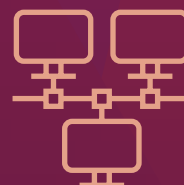
~50%

Increase in device growth
since March 2020



x5

Uplift in maximum
network bandwidth
since March 2020



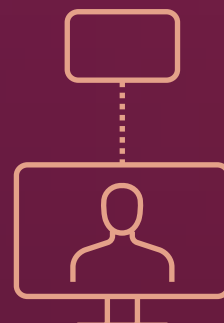
1,250

Concurrent
remote access
connections



4,141

Staff have the
ability to remotely
work from home
when required



88.8%

MS 365 active
user adoption
in Feb 2022



2,218

Staff connecting to EMR
at once as of March 2022



18%

YoY Growth in Telehealth across
2021-2022 (Health Direct)



14,452

Patient Portal registered
users since May 2020



5%

Increase in nursing tasks completed
at the patient's bedside post the
introduction of EMR¹



586 hours

Saved on phone calls via use
of the Patient Portal

16,466,955

Medications administered
through the EMR



1,193,850

Potential medication errors
prevented



8,073,892

Medications administered
through closed loop
medication management



1. A longitudinal time and motion study quantifying how implementation of an electronic medical record influences hospital nurses' care delivery - WOMBAT Study, International Journal of Medical Informatics.



Introduction

In the midst of our pandemic, when our world was changing in unforeseen ways at a pace, Alfred Health launched our 2021-2023 Strategic Plan.

At the same time, the organisation were nearing completion of eTimely Quality Care (eTQC), a 5-year program of work which has created and embedded a comprehensive Electronic Medical Record (EMR) system across our health services. The benefits of the EMR system have only been heightened with new models of care required for COVID-19 and the new ways of remote working that COVID-19 has prompted.

Never before has 'digital' been so critical in advancing excellence in health care and meeting Alfred Health's purpose to improve the lives of our patients and their families, our communities and humanity.

The pandemic has of course brought about a rapid acceleration of digital and data technologies in the health sector around the world in the form of telehealth, virtual and home care, e-prescribing, mass consumer data collection & sharing for contact tracing, online vaccination bookings & Covid-19 diagnostics. Therefore, it seems timely that we should be launching our Alfred Health Digital Health Strategy at this moment - while healthcare is being changed forever by the combined forces of unprecedented demand, increased focus on the consumer experience and technological advances.

Our Digital Health Strategy describes how we will focus our investments in digital and data technologies & capability to drive the overarching Alfred Health Strategic Plan 2021-2023. The development of this strategy during such a challenging and dynamic time has only reinforced the need for our strategy to be adaptive and holistic.

Each of our strategic pillars are interconnected to our overarching Digital Health vision of providing '**easy access to person-centred, smart and connected quality care**'. As technologies continue to advance during the course of this plan, we will remain committed to achieving this vision whilst continually assessing and adopting new innovations. Our *person-centred* approach reflects our focus on our patients and their families as well as our clinicians and staff.

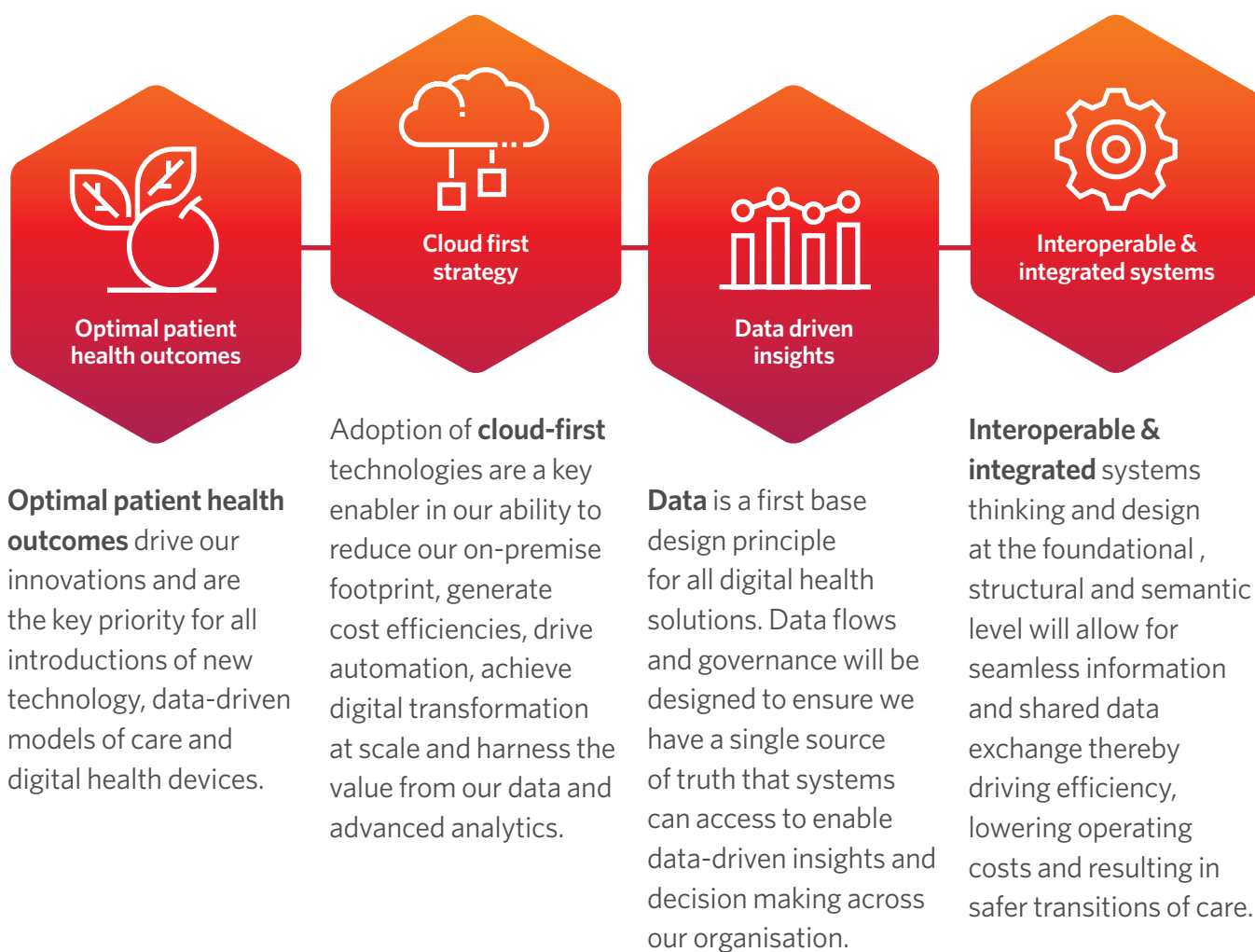
The Alfred Health EMR journey commenced in 1999 and as we concluded our electronic Timely Quality Care (eTQC) program, we have reached a point of digitisation across our health service where we are ready to progress 'beyond the EMR' to a new phase of digital maturity that will enable us to realise the value from our data and improve our community's digital experience. Artificial Intelligence (AI) and machine learning technologies will enable us to breathe new life into our data assets to enable predictions, productivity and personalisation. It also acknowledges that with advancement comes challenges, and we are conscious particularly of the evolving threats across the cyber landscape and growing consumer concerns regarding data privacy. The development and sustainability of robust, core infrastructure and governance is therefore a critical foundation in this program.

We are excited about the digital transformation that is underway at Alfred Health and across the broader health sector.

Never before has
'digital' been so critical
in advancing excellence
in health care...

Digital Health Design Principles

The Alfred Health Digital Health strategic initiatives are designed based on the underlying Digital Health design principles. This will ensure they are consistent with the intent of our Digital Health Strategy and the broader Alfred Health organisational purpose and beliefs.



The application of these principles to frame our strategic initiatives will help us build a secure and resilient digital, data & analytics foundation and increase our overall enterprise digital architecture and maturity.



Digital Health Strategic Pillars

The six strategic pillars of Alfred Health's Digital Health Strategy represent the priority areas of focus to support the Alfred Health Strategic Plan 2021-2023 and the goal to provide a modern healthcare environment through innovations in system design and technology.

These strategies and the associated initiatives planned against each of the six pillars will enable the Alfred Health Digital Health's vision of providing **'easy access to person-centred, smart and connected quality care'**.

At Alfred Health, our purpose is to improve the lives of our patients & their families, our communities and humanity. At the heart of the Digital Health Strategy is the key design principle of ensuring all Digital Health initiatives are 'person-centred'. All Digital Health initiatives will be designed and delivered according to the needs and values of our community which includes patients and their families as well as our healthcare professionals and non-clinical staff.

The six strategic pillars are described in further detail in the following sections. Each pillar has a specific goal and a set of objectives to define how we will achieve these goals. Achievement of these objectives will hinge upon on close collaboration across Alfred Health clinical programs and non-clinical organisational departments, recognising that the best outcomes are when people, process, data and technology come together.

The strategic initiatives that are known at this point in time are described in the early planning horizons. The approach to measuring the overall success of outcomes across each strategic goal is outlined in later sections. Measurable target metrics and associated benefit realisation plans will be defined for key initiatives as we move into the strategic execution phase.



1 Personalised Patient Experience

2 New & Optimised Models of Care

3 Digital Workplace

4 Next Generation Health Service Operations

5 Resilience & Cybersecurity

6 Research



1

Personalised Patient Experience

"The expansion of Digital Health across Alfred Health mirrors a larger movement within healthcare itself. This is resulting in a range of technologies becoming increasingly available for both clinicians and patients. For our staff the end result of digital transformation is ensuring the right information is seen by the right clinician at the right time. For our patients the increasing transparency and availability of their healthcare information affords the opportunity for greater partnership in the planning, delivery and evaluation of their care."

Gordon Bingham, Chief Nursing Information Officer

Context

We are living through a time when consumers are more engaged than ever in their health, are looking for personalised service and have high expectations from their experiences in other sectors. Our Alfred Health Patient Comes First Strategy (2021-24) acknowledges this and defines consumer engagement and patient experience as key strategic goals.

During the pandemic we have seen the rapid adoption of digital health technologies by patients across Australia and in June 2020 Alfred Health was the first adult health service in Australia to implement a Patient Portal.

Strategic Goal

Enable a personalised patient experience throughout the health journey so that care is easier to access, is connected to other services, supports the patient to stay engaged with their health journey and empowers the patient to make informed decisions and better manage their care.

Objectives

Our key objectives to achieve this strategic goal are as follows:

1. Making it easier for the patient by digitising paper-based key patient tasks such as appointment bookings and e-prescriptions. Our digital health patient experiences will also be designed to be person-centred, with a focus on User Experience (UX). Our key flagship initiatives to support this objective include the patient portal expansion and mobile application as a **single digital “front door”**, continued **telehealth service functionality improvements**, the introduction of digital self-service processes (such as **e-prescribing** and **e-consent**) as well as modernising a **connected inpatient experience** for education, ordering and entertainment.

2. Connected care – we will connect patient journeys across external providers and services by enabling external data exchange. Key initiatives to support this objective include the integration of **MyHealth Record**, **Remote Patient Monitoring** and external data sharing via the **Health Information Exchange (HIE)** project.

3. Accessibility design and low technology choices will be key to enabling our personalised experience and ensuring equity of access to timely data for all patients to improve their quality of care. We are also looking to what technologies can support improved accessibility, for instance access to interpreters or information in multiple languages and forms. In giving access to information we also need to support clinicians to write in a way that supports seamless knowledge transfer.

4. Personalisation of the patient experience - using data and AI technologies to personalise the patient experience will improve patient engagement along their health journey and lead to improved health outcomes. Genomics, precision medicine, personalised digital touchpoints (via patient preferred communication channels) in between clinical consultations, personalised care plans, reminders and recommendations and sharing progress updates with the care team are all examples of how personalisation will transform the way we deliver quality care and optimise overall patient health outcomes.

5. Patient and consumer consultation will ensure the focus is on maintaining the voice of the consumer in prioritising and designing the initiatives to achieve our goal. Establishment of a **Consumer Digital Health Reference Group** in conjunction with the Patient Experience & Consumer Engagement (PECE) group will ensure we are actively listening to the needs and the problems of our patients and we are gathering fast feedback on the initiatives we deploy.



Outcomes of our success

- Improved patient experience year on year by enhancing shared decision making and communication between care teams, patients and families, measured via positive patient satisfaction surveys
- Increase the digital health literacy of our patients in understanding and using healthcare information to empower in managing their own health and making appropriate health decisions
- Increased utilisation and uptake of the Patient Portal and associated mobile applications and technologies
- Partner with our consumers to obtain frequent feedback via the Patient Experience & Consumer Engagement (PECE) Advisory Board for the co-design and evaluation of digital health initiatives to improve overall patient health outcomes

2

New & Optimised Models of Care

“Alfred Health is a leader in developing innovative models of care. Now that we have established integrated clinical information systems, Digital Health is a key enabler for clinicians and patients to enhance quality care delivery and improve outcomes”.

Christopher Mason, Chief Medical Information Officer

Context

Alfred Health has a history of being at the forefront of Digital Health. Our Electronic Medical Record (EMR) journey commenced in 1999 and has significantly increased efficiency and improved safety since its implementation. We have achieved many firsts in country such as our 2019 implementation of Closed Loop Medication Administration and we will continue to invest in innovative models of care to transform our health service.

Strategic Goal

Continue to enable new models of care and optimise existing models through digital and data technologies to improve patient safety, optimise patient health outcomes and increase staff productivity.

Objectives

Our key objectives to achieve this goal are as follows:

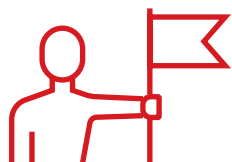
- 1. Digitising all models of care** across the health service is a critical enabler to improve productivity and safety in all areas and a pre-requisite for Digital Health innovation. Implementing **EMR for Oncology and Blood Product Administration** and are key initiatives in this space.
- 2. Building a strong clinical data foundation** to improve the quality, usability and interoperability of our clinical data to enable predictive data-driven insights and AI powered innovation. **Robust data governance**, an **AI framework** and the introduction of our **Vendor Neutral Archive** enterprise-wide image sharing platform are key initiatives to achieve our goal.

3. The integration of new and innovative medical devices will help reduce clinician workload, eliminate delays and human error in data entry and provide further data-driven insights for clinical decision making. Key early horizon initiatives include automated medication dispensing machine deployments (**Omniceil**), **Blood Glucose Integration** and **Infusion Pump Integration**.

4. Building a high quality clinical data foundation will enable us to progress to advanced clinical decision supports through AI & predictive analytics technologies. **AI-powered clinical decision supports** will reduce the time our clinicians need to spend to access the latest treatment recommendations and will be capable of personalising the recommendations to the patient's status. In line with our person-centred approach, our clinical decision support technologies will be designed to be mobile, with a focus on clinician experience and **'making it easier'**.

5. Virtual care models - Extending our care delivery beyond traditional hospital facilities will leverage the learnings and experience we have gained through the Covid-19 pandemic, continuing to embrace the acceleration of technology and digital health.

- As part of the Caring "Beyond the Walls" initiative, we will create innovative digital health models to provide care that spans the hospital, community services and the patient's home. **Virtual care models** and **Remote Patient Monitoring**, and data exchange ability with external community service providers will be key technology initiatives to support these new care models.
- Creating new **digital mental health services** is also a key initiative to support the Alfred Health goal to improve the mental health and wellbeing of our diverse community and support our communities mental health recovery from the pandemic. Digital mental health services can help improve access and provide much needed touchpoints for patients in between consultations. Digital Health technologies can empower patients with self-care tools, personalised care plans and help to facilitate peer support in conjunction with clinical care



Outcomes of our success

- Avoidable harm is prevented, measured via a reduction in medication administration errors
- Reduced unwarranted variation in clinical care to ensure consistent and contemporary best-practice models are in place
- Digital Health platforms successfully used in services such as Home Acute and Community Program and Mental & Addiction Health
- Improved connectivity between the patient, Alfred Health and other service providers
- Lead in the implementation of advancing technologies in early detection, diagnosis and monitoring to support clinical decision making and improve health outcomes
- Co-designed Digital Health Clinical Program Roadmaps

3

Digital Workplace

"A great digital workplace experience allows employees to work in a way that best meets their needs, with digital tools and information available anytime, anywhere they're needed".

Kim Health, Chief Technology Officer

Context

The Alfred Health Wellbeing Strategy aims to strengthen our positive, productive and collaborative workplace and the Digital Workplace strategic pillar is a key component in achieving this for Alfred Health. We also have a range of enterprise-wide corporate systems to support the management and education of staff such as LEX, SAP / SuccessFactors and the rostering environment. It is acknowledged that state initiatives will play a significant role in the direction and achievement of the objectives within this pillar.

Strategic Goal

Improve workforce engagement through easy-to-use digital enterprise-wide technologies to support a sophisticated user experience that increases connectivity, communication, well-being, productivity and empowerment for all staff to reach their full working potential.

Objectives

Our key objectives to achieve this goal are as follows:

1. Development of **mobile technologies** will better enable our staff to deliver high-quality care at the point of care, whether that is care beyond the walls of our hospitals or a health service onsite. We will also continue to work with key partners to develop systems that enhance functionality of key mobile devices and contribute to a better clinical user experience. Our workforce is entering a new paradigm of hybrid working and our cloud technology strategy has already played a key role in enabling our remote working capabilities during Covid-19. We will continue to invest in cloud technologies and skills to increase our agility to deliver modern enterprise digital solutions for our employees.

Some of our key initiatives include the development of a **Mobile App Development Framework**, **Microsoft 365 Optimisation** and other clinician mobility initiatives.

2. Information access and navigation - Easy access to data for insights and decision making has been identified as a key need across all areas of our health services and provision of reporting is a core deliverable of the Data & Analytics Services (DAS) team. The **Trusted Users Program** will allow analytics resources outside DAS to access local data and create their own reports and analyses. Investment in improving workforce data literacy skills, an **enterprise data governance approach to metadata** and a **data-driven clinical and organisational** decision-making culture will collectively contribute to productivity increases across the organisation.

3. Making it easier - The Alfred Health Patient Comes First Strategy (2021-2024) has defined the goal to optimise staff engagement and experience in order to improve the patient experience. Several key initiatives are planned to improve the employee digital experience, including the transformation of key corporate systems and processes (**digitisation of procurement and contract management**), the implementation of a **modern messaging platform** for care teams and a **'Digital Front Door'** to improve the access to all enterprise-wide technology and data corporate tools that staff need to do their work.

4. In line with our **'person-centred' design approach**, our digital workplace will be designed in consultation with our staff to ensure we have the systems and data that make it easy for us all to achieve our mission of improving lives, our community and humanity. A new focus on **User Experience (UX) and Human Centred Design (HCD)** will improve the usability of corporate HR, rostering, billing and learning management systems for our staff. This will also include improved **staff identity management** to support a seamless staff experience.

5. Implement innovative and modern digitised workplace facilities as part of the **Redeveloping the Alfred** program across the following sites - new St. Kilda Wing & Inpatient Tower, new Victorian Melanoma Centre, Redeveloped Sandringham Outpatients/ambulatory care facilities and the Main Ward block upgrade.



Outcomes of our success

- Strengthened collaboration and increased staff engagement across our workplace, with strong governance, leadership and workplace culture
- New modern digital workplace concepts and equipment across our new facilities
- Improved staff satisfaction with new enterprise-wide technologies and clinical information systems
- Improved ease of communication across our workforce

4

Next Generation Health Service Operations

“Today’s most successful organisations use data to their advantage when making high-impact business decisions”.

Maryanne Liddell, Chief Information Officer

Context

As Alfred Health's services expand and activity increases, the complexity of co-ordinating the organisation also grows. With the foundation of the EMR and the development in intelligence technologies over the past decade, Alfred Health is in a position to develop real time operational intelligence to anticipate, optimise and orchestrate health service operations. Robust cybersecurity controls and real time threat and performance monitoring will secure and strengthen the resilience of our health service.

Strategic Goal

Implement timely and predictive data-driven decision making across all areas of the organisation to improve care and productivity, optimise patient outcomes, thereby driving cost efficiency and increasing business agility across our health service.

Objectives

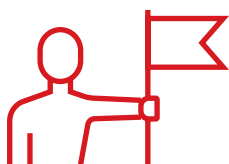
Our key objectives to achieve this goal are as follows:

1. Establishing secure and trusted operational data and systems- the introduction of advanced Clinical Coding Intelligence technologies, a new Patient Administration System (PAS) and mature enterprise cybersecurity controls will be key initiatives to support this strategic objective.

2. We will look for opportunities to standardise and streamline operational processes to improve data quality, consistency and usability, as well as embed continuous improvement cycles for data quality.

3. Implementing real time and predictive data-driven operational decision making. The Electronic Journey Board (EJB) will introduce timely visibility of data across priority clinical workflows, flagging resources and capacity constraints thereby leading into an expansion to a full organisation-wide Care Coordination Centre – managing care across all of Alfred Health services and “Beyond the Walls” settings, introducing operational co-ordinators and predictive decision making in order to anticipate need and optimise service operations. Other enabling initiatives include the development of an Analytics and Insights Roadmap and Clinical Pathway Tracking.

4. Robotic Process Automation (RPA) technologies will be considered in the future to automate the low complexity repetitive tasks that are identified across workflows and further increase productivity and staff engagement. An initial focus will be workflows within business support services.



Outcomes of our success

- Increased efficiency: reduced length of stay in hospital and improved access to quality care
- Reduction in cybersecurity related incidents and enhanced threat protection contributing to maturity in our security posture
- Increase in quality care delivery outside of the hospital walls
- Decreased workload in administrative activities such as patient flow management, rostering and data collection for patient management

5

Resilience & Cybersecurity

“Cybersecurity at Alfred Health is designed to align with the organisation’s goals and objectives and continually embed cyber risk management into the culture”.

Annie Gilbert, Director of Data Governance & Security,
Chief Privacy Officer

Context

The rapidly evolving digital technology and geo-political landscape poses complex and critical risk management issues making it imperative to protect our digital assets and build adaptable and resilient recovery responses. We need to ensure that the impacts of known and emerging cybersecurity threats to the organisation are identified, risk-evaluated and minimised appropriately.

Strategic Goal

Improve Alfred Health's resilience and security posture by establishing secure, reliable, resilient and robust platforms with appropriate monitoring and disaster recovery, to have stable support systems for Alfred Health operations and reduce cyber risk. This will improve our cybersecurity maturity position and ensure compliance with the Security Legislation Amendment (Critical Infrastructure Protection) Act and the Victorian Department of Health's Cybersecurity Baseline Control Framework (CBCF).

Objectives

Our key objectives to achieve this goal are as follows:

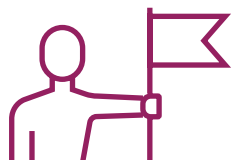
1. Implement a robust risk management operating model that defines Alfred Health's risk appetite and continuously evaluates and updates the effectiveness of our systems against the evolving threat landscape.

This would incorporate regular architectural reviews of cybersecurity solutions such as implementation of a Governance Risk and Compliance (GRC) platform that actively monitors and reports cybersecurity status and risk according to the organisation's risk appetite.

2. Enhance cybersecurity maturity levels by implementing a cybersecurity program of work that minimises Alfred Health's digital attack surface. Key initiatives include the roll-out of sophisticated cybersecurity monitoring solutions that report into the Security Operations Centre (SOC), preventative testing programs such as regular penetration testing, access and asset management and the timely application of comprehensive mitigation controls to remediate perceived vulnerabilities.

3. Promoting a culture of awareness and developing a workforce that is knowledgeable and appropriately skilled by implementing mandatory cybersecurity training for all staff, regular phishing campaigns and targeted training. This will serve to uplift organisational knowledge and understanding of the staff behaviours and work practices required to recognise, reduce and respond appropriately to top cyber-threats such as malware, web-based attacks, data breaches and ransomware.

4. Improve resilience to cybersecurity threats and other events causing outages by further developing our capability and capacity to respond and recover to incidents, through incident response and recovery guidelines, robust and tested business continuity plans (including annual desktop simulations) and enhancing our disaster recovery infrastructure with regular testing of our disaster recovery processes within Alfred Health, in partnership with the Victorian Department of Health.



Outcomes of our success

- Active asset management of our technology suite and successful annual disaster recovery testing
- 99.9% availability for P1 systems
- Reduction in vulnerabilities and improved results identified through external penetration testing and audits
- Reduced business impact of cyber attacks and other events causing outages
- Improved cybersecurity awareness measured by a reduction in successful phishing campaign entrapment
- Improved operational maturity scores as measured by the Victorian Department of Health's CBCF

6

Research

“Timely, secure, reliable and accessible systems and data enable our patients, carers, and research teams optimise the availability of and participation in clinical trials. In doing so, we will improve outcomes for our patients and enhance the quality of research across our service for the benefit of all”.

Anne Woollett, Director Clinical Trials – TrialHub

Context

A core goal of the Alfred Health Strategy (2021-2023) is to lead excellent, innovative and collaborative research so that Alfred Health's research capability continues to be recognised nationally and internationally and we continue to build on demonstrated excellence in the translation of research into best-practice. We also see our role in contributing to the knowledge base of digital initiatives in health, by innovating and conducting our own research.

Strategic Goal

Boost research efficiency by enabling increased collaboration with peers, improving the speed to implement research findings and enabling an increase in clinical trials, whilst pioneering leadership in digital health research and its translation into practice.

Objectives

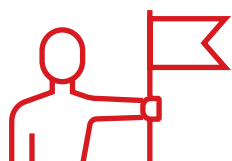
Our key objectives to achieve this goal are as follows:

1. Boost research efficiency by establishing a cloud-based Research Data Hub that enables our strategic research partners to access data sets from clinical and non-clinical systems in a secure environment enabled with modern data science tools in a timely manner to undertake their research and apply learnings directly into Alfred Health.

2. Improve the agility of implementing research findings into best practice as well as create continuous cycles of improvement where research can be applied and refined in the clinical context on an ongoing basis. Key initiatives in this space include the use of **advanced AI clinical decision supports** and evaluation of **Natural Language Processing** technology for trial selection.

3. Make it easier to manage and show information regarding clinical trials by implementing a best-in-class Clinical Trials Management Platform and setting up systems for trial patient cohort identification (within the EMR) through **Cerner Power Trials** and AI systems.

4. Creating sustainable partnerships to innovate and conduct research into digital health implementations and impacts on patient outcomes, via a group yet to be established - **The Alfred Research Centre (ARC)**.

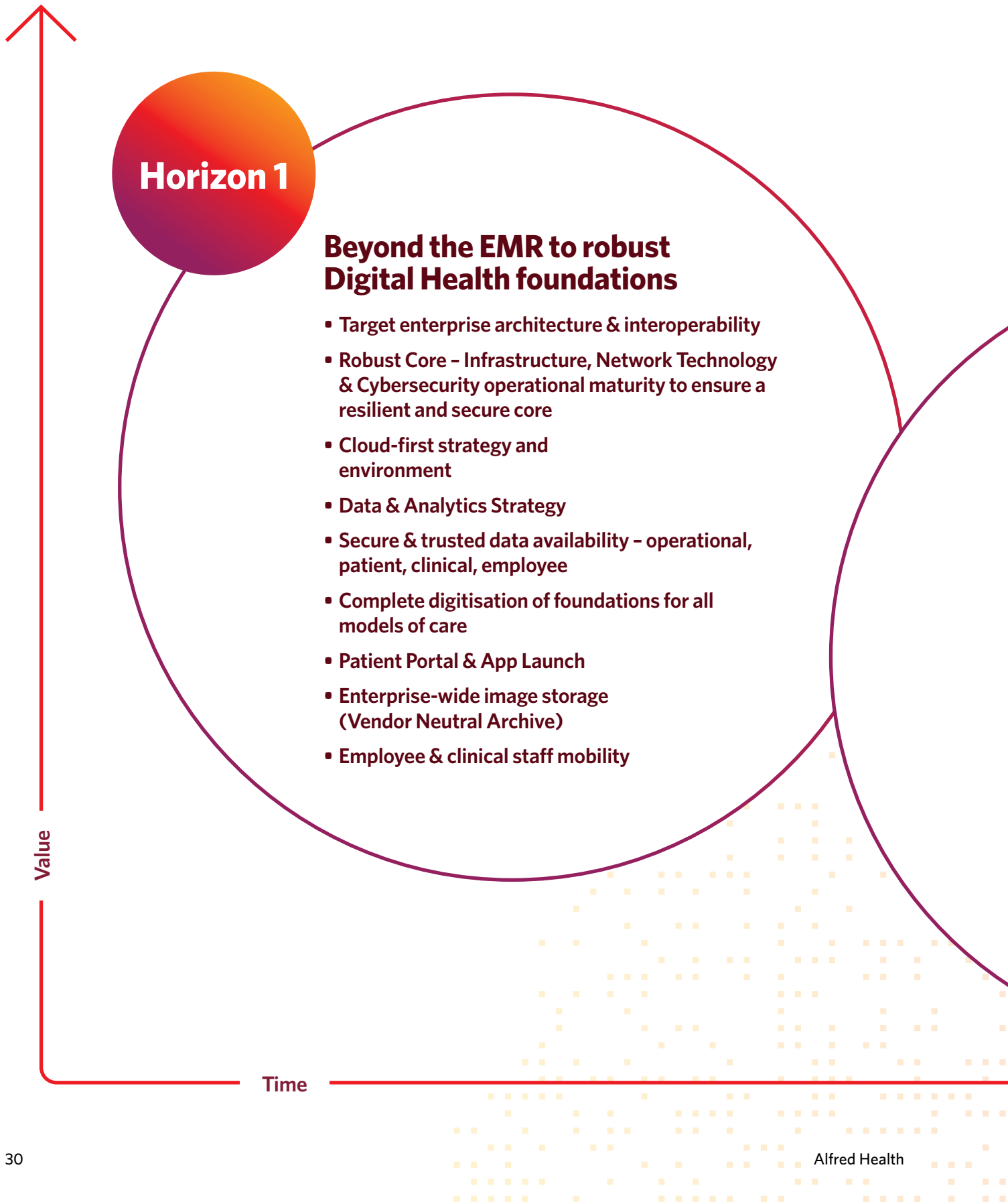


Outcomes of our success

- National and international recognition of Alfred Health's research and innovation capability via increased grant funding and clinical trials
- Increased number of participants in clinical trials across Alfred Health and TrialHub
- Publications on digital health and the adoption of innovative technologies from Alfred Health
- Improved efficiency of management of clinical trials and information on clinical trial KPI's

Strategic Planning Horizons

Note: Horizon 3 initiatives represent an aspirational target and will depend on critical pre-requisite foundational activities to be delivered as well as organisational preparedness for adoption. As a result, the sequencing of any flow-over initiatives will be continually refined, re-assessed and incorporated into the next iteration of the Digital Health Strategy.



Horizon 2

Machine intelligence fueling a connected personalised experience

- Employee Digital Front Door
- AI & Data Science – Predictive care and optimised operations
- Robotic Process Automation
- Care Coordination Centre
- Clinician Digital Experience (UX)
- Personalised and connected cross sector patient experience
- Connected inpatient services experience
- Personalised care plans
- IoT and biosensors
- Precision Medicine, Genomics, Digital & Geo-spatial health innovations

New care models and the emergence of data driven insights

- Analytics & insights – patient, employee, operational, clinical
- Modern messaging & communications
- Cloud-based Research Data Hub
- Clinical Trials Management Platform
- Electronic Journey Board (EJB)
- “Beyond the Walls” Digital Care
- Medical device & system integration
- Expanded digital patient experience, including remote patient monitoring
- Advanced clinical decision supports

Horizon 3



Funding Strategy

Context

Given Alfred Health's limitations and strategic financial constraints around competing funding priorities, it is acknowledged that the delivery of the strategic portfolio of initiatives as part of the Digital Health Strategy will need to be appropriately prioritised and planned by leveraging a combination of capital and revenue-based funding sources across Alfred Health. Some of these funding sources include:



Seeking replacement and maintenance support from Victorian Department of Health specific funding streams and general revenue base of the organisation.



Alfred Health Clinical Tech Refresh Funding, provided by the Victorian Department of Health.



Planning for specific operational expenditure savings as part of annual budgeting cycles to drive appropriate funding allocations for Digital Health Strategy initiatives across Alfred Health.



Leveraging internally generated corporate capex funds by planning expenditure through capital Asset Management Planning and the organisational prioritisation process for those funds.

Additionally, it is imperative to note that potential changes to the accounting standards and treatment of cloud-based system costs, currently being discussed with the Department of Health and the Victorian Auditor General's Office (VAGO), may mean planning between opex and capex may have to be modified once the full extent of its introduction is known.

Critical Success Factors

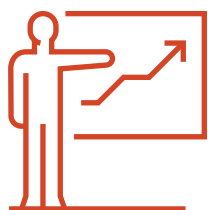
Internal to our organisation and our people, the following factors are critical to our success, which collectively serve to form the basis of our transformational efforts to deliver on our Digital Health Strategy for Alfred Health:



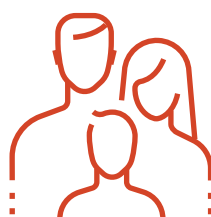
Strategic cross-functional partnerships with Patient Experience & Consumer Engagement (PECE), Data & Analytics Services (DAS) and Redesigning Care, thereby driving alignment of goals and objectives, co-design and joint value realisation of Digital Health initiatives for all organisational systems, as part of the overarching Alfred Health Strategic Plan.



The Digital Health team's cultural transformation of people, process and technology to uplift and embed core skills, competencies and capabilities to transition to new and improved ways of agile thinking and working.



Digital and data literacy across the broader workforce through continued focus in education, training and competency development, resulting in ease of navigation and an increased uptake of new and modern tools, enterprise systems and technology.



Digitally-enabled patients and families.



Workforce responsiveness and adaptability to change and innovation, driven by a mindset shift and desire for continuous improvement.



Strategic external partnerships to leverage synergies as well as transition away from legacy thinking and institutionalised working practices.



Enterprise-thinking as well as organisational process and system standardisation to drive scalability, consistency and operational efficiencies across Alfred Health.



Agile governance to allow us to respond rapidly and flexibly to a dynamically changing external environment.

AlfredHealth

The Alfred

55 Commercial Road, Melbourne VIC 3004
Telephone: (03) 9076 2000
Facsimile: (03) 9076 2222

Caulfield Hospital

260 Kooyong Road, Caulfield VIC 3162
Telephone: (03) 9076 6000
Facsimile: (03) 9076 6434

www.alfred.org.au

ABN 27 318 956 319

Sandringham Hospital

193 Bluff Road, Sandringham VIC 3191
Telephone: (03) 9076 1000
Facsimile: (03) 9598 1539

Melbourne Sexual Health Centre

580 Swanston Street, Carlton VIC 3053
Telephone: (03) 9341 6200
Facsimile: (03) 9341 6279