

MODERNISING HEALTHCARE: ALIGNMENT TO THE QUADRUPLE AIMS OF HEALTH

The delivery of health services in New Zealand is supported by a complex, adaptive, technical ecosystem. Multiple interconnected systems across primary, community and acute health care providers are designed to digitally enable a productive and informed workforce to deliver superlative patient care.

That technology needs to be maintained and upgraded so that the quadruple aims of care can be achieved: patient experience, workforce satisfaction, population health and value for money.

Strategic, long-term thinking, planning and execution based on accurate data are critical to modernise these systems, requiring a careful assessment of the current networks, infrastructure and applications aligned to the strategic direction.

Insights reported from baseline assessments will inform where newer, more secure technologies, such as hybrid cloud infrastructure, can be introduced to deliver those quadruple aims.

Effective efficient systems

At Fujitsu, the concept of 'smart hospitals' refers to health systems that are not just digitised but are also interconnected in a way that provides valuable insights to both the workforce and patients. This interconnectivity is a way to enhance

productivity, effectiveness, safety, and quality while maintaining, or even reducing costs.

Wayne Pohe, health account lead Fujitsu NZ, says the key is to use technology not for its own sake, but to achieve meaningful outcomes.

This approach aligns with the principles of system transformation, as advocated by W. Edwards Deming, whose quote, "a bad system will beat a good person every time," is particularly relevant to health systems under pressure worldwide.

Ian Manovel, head of health Fujitsu Australia and New Zealand, says there needs to be a management system in place that guides the transition from the current state to a more efficient, coordinated future.

Understanding your current state

The first step in this transition is to conduct a thorough assessment of the current digital infrastructure.

A lack of visibility makes it difficult to plan for necessary upgrades and to ensure that the infrastructure can support the demands of a modern health system.

This assessment should provide a baseline understanding of the existing technology and its condition, which can then be translated into economic and operational assessments.

"You need to know where all the

servers and racks and cables and networks and everything are, what level of agedness, whether they are in support or out of support, and whether they need replacing" Manovel says.

Health New Zealand – Te Whatu Ora amalgamated 20 District Health Boards and other agencies into a single entity in July 2022.

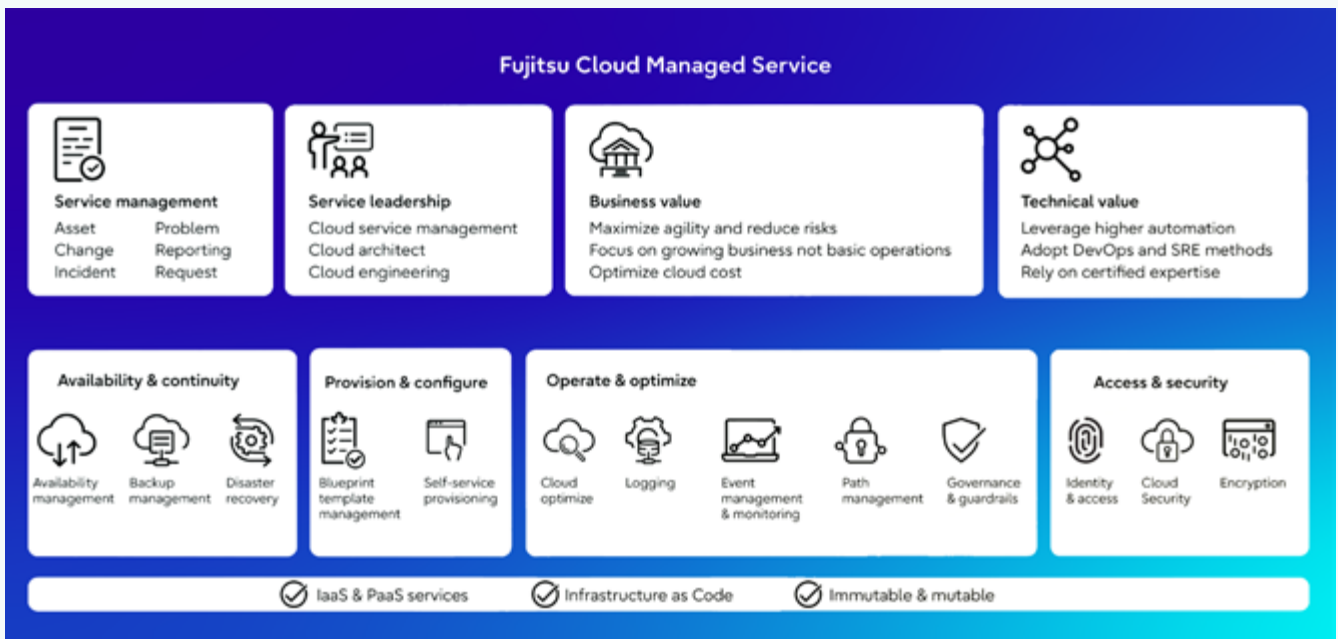
By understanding the full scope of this national organisation's infrastructure, Health New Zealand can better plan for upgrades and make informed decisions about where to invest in new technology.

Invest to save

The next step is to look at moving data, application and platform workloads to stable, secure, managed hybrid cloud services. Only by doing that initial comprehensive assessment will an organisation know which applications and data should be moved to the cloud.

This approach involves weighing the costs and benefits of cloud migration versus maintaining on-premises infrastructure.

For some applications, keeping them on-premises may be more cost-effective and provide faster access for clinicians, particularly when considering data egress charges and other potential downsides of cloud migration.



“It may be that some applications and data do not need to move to cloud, it might make more sense to keep certain infrastructure on-prem or in an Infrastructure as a Service environment and invest in replacing it,” Pohe explains.

For other parts of the infrastructure, moving to the cloud will be the best option. Manovel highlights the potential benefits of cloud environments for certain workloads, particularly in terms of accessibility for the health workforce and enabling self-service options for the population.

“By strategically planning which parts of the infrastructure to move to the cloud and which to maintain on-premises, health providers can create a more efficient, interconnected system that better meets the needs of both patients and healthcare providers,” he says.

Delivering long-term value

Fujitsu delivered significant improvements to an Australian government health agency through its Cloud Managed Service (FCMS).

The agency, responsible for supporting over six million people, faced challenges with high capital expenditures (CapEx) to renew and manage hardware and an increasing cost for cybersecurity services.

Fujitsu implemented FCMS to optimise the management of Microsoft Azure and AWS environments, enabling the agency to transition legacy workloads to the cloud, reduce costs, and enhance operational efficiency.

FCMS improved the agency’s ability to focus on innovative projects, modernised applications, and reduced technical debt.

The solution enhanced cybersecurity, significantly raising the Microsoft Secure Score in both production and non-production environments. Additionally, the implementation of FCMS improved the agency’s remote access security by transitioning to Azure VPN.

Fujitsu’s expertise in cloud financial management (FinOps) helped the agency develop cost-saving strategies, potentially saving up to \$2 million annually.

Overall, the health agency was highly satisfied with the service, noting improvements in identity, access management, workforce productivity, and overall system resilience.

Read more in the FCMS in Australian Government Health case study