



# ICT Strategic Direction to 2021



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## Context

Information and communications technology (ICT) is essential to the success of the University of Otago. Information technology is one of the key strategic enablers for the University. Strategic ICT decision making is essential in achieving key University goals such as: supporting research and teaching; enhancing the campus experience; and scrutinising and transforming the University's internal activities, processes, and structures.

The University's ICT policies and infrastructure influence both the way staff are able to share knowledge, and the information that is available to them in their research, teaching, governance, national engagement, and critic and conscience roles. Moreover, the quality of ICT service is a strong indicator of the quality of the University, as observed by current and prospective students, staff and visitors. An ICT environment that is fast, open, comprehensive, and innovative, provides a positive impression of the quality of the institution. In contrast, ICT services that are slow, restricted, or out-of-date, present a negative impression.

Otago's distance from other institutions requires increased connectedness and the ability to generate and access data and information. This in turn requires increased support from ICT infrastructure, for research and teaching collaboration and data management. As research becomes more data-driven, collaborative and interdisciplinary, there is a greater need for interoperability of data, tools and services. ICT also plays a crucial role in facilitating, supporting and encouraging communication and interaction among students, among students and teachers, and between students and the University.

It is vital that the University respond appropriately to the increasing need to support a wide range of ICT services and technologies, and that it contributes appropriately to national ICT projects and infrastructure. Acknowledging fiscal constraints, the University will recognise the total cost of such investments, including support costs, training costs, staffing, productivity effects, and maintenance.

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## Vision, Mission and Core values

This document will support the vision and mission outlined in the *University's Strategic Direction to 2020* document.

## Key Imperatives

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### Imperative: Supporting excellence in teaching

**Observation:** Teaching and learning have always been influenced by changing technologies. There will be significant challenges ahead in how we harness evolving information and communication technologies in support of excellence in teaching and learning. New technologies allow new types of learning environments.

**Response:** The University will create excellent teaching and learning environments through the implementation of appropriate and innovative information and communication technologies. The University will support both those people who use ICT for routine tasks (e.g. using a Learning Management System to share course materials), and those who innovate, exploring new uses of ICT in teaching and learning. The University will also support staff in effective use of ICT in teaching, taking into account student needs, disciplinary context, available resources and technologies.

### Imperative: Supporting excellence in research

**Observation:** Being research-led is one of Otago's defining characteristics. ICT is both a tool of research as well as a topic of research. Mature information and communication technologies provide common tools across all research disciplines, although different tools are required in different research domains. The adoption of information and communication technologies is often driven by research needs.

**Response:** The University will create excellent research environments through the implementation of appropriate and innovative information and communication technologies. The University will support both discipline-neutral ICT needs, including sharing, communication, collaboration, data curation and archiving; as well as diverse discipline-related ICT needs, such as high-performance computing, and the use of specialist software.

### Imperative: Excellence in Otago's digital presence

**Observation:** The University of Otago's digital presence is important to its national and international reputation, and as a vehicle for the promulgation of the University's successes. Digital technologies foster the visibility and accessibility of the University.

**Response:** The University, its departments, research centres and teaching programmes will maintain a world class digital presence that is engaging and highly visible to current and prospective students, staff, other research and teaching institutions, alumni, government, business, community and other stakeholders. The University will employ timely and efficient use of web sites, social networking tools and other communication technologies.

## Key Imperatives

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### Imperative: Excellence in Otago's digital environment

**Observation:** The University is distributed across many campuses with staff and students at times working overseas, from home, and from the University's residential colleges. Students, staff and visitors to the University spend a considerable amount of their time using ICT for teaching and learning, for research, for professional and clinical practice, and for a wide variety of other functions including scheduling, navigation, socialising, and recreation. The digital environment of the University should match its world-class physical environment, enhancing efficiency and helping to attract, retain and develop excellent staff and students. A quality ICT service is important in providing an outstanding student experience.

**Response:** We will create and maintain an ICT environment that is easy to use, secure, robust, efficient, sustainable, measurable and adaptable in the face of rapid technological change. We will develop the capability of all staff and students regardless of their level of skill and experience in the use of ICT, and appropriate proficiency in ICT will also be taken into account when recruiting staff. The University will ensure equity of access to information and communication technology across all its campuses, appropriate to the professional, educational and accessibility needs of its users.

### Imperative: Supporting excellence in innovation

**Observation:** Researchers recognise the 'ecology of innovation' encompassing all the activities and information associated with research. This includes inputs (funding, data), scholarly communities, collaborations and networks, scholarly outputs, and impacts (e.g. contribution to the national and international good, social and environmental well-being, economic and commercial benefit and Kaupapa Māori research). Technologically-driven innovation is important in enhancing the on-campus learning experience, and in research and commercialisation activities. Innovation occurs both at an institutional level and in response to individual or departmental needs, however the latter provide a particular challenge to University governance and infrastructure.

**Response:** The University will appropriately incentivise and facilitate both institutional and dispersed innovation with excellent technical support and development capacity. The University will provide oversight of dispersed innovation in order to identify overlaps, encourage sharing of ideas, avoid duplication. It will ensure that coordination between projects is encouraged where appropriate. The University will provide a path to scale up successful innovative use of technology into University-wide systems with institutional support.

## Key Imperatives

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**Imperative:** Excellence in information management and information architecture

**Observation:** The University stores a wide variety of research and teaching information as well as information about staff, students, patients, clients, and other stakeholders. The significant growth of research and administrative data in higher education institutions and the information and decision-making capacity that can be derived from that data, require both an institutional and a technological response to support storage, discoverability and access to resources.

**Response:** The University will develop an institutional information management framework. There will be an integrated approach to the development of services, infrastructure and policy to support the capture, description and curation of data associated with research, teaching, learning and the wider business of the University. The University's information architecture should encourage efficiency through features such as single authoritative sources and single data entry of information.

The University will store sensitive data using industry-standard security and it will maintain the privacy of the individuals about whom it stores data. The University will also facilitate collaboration by using, where possible, open or common standards for data storage, transformation and communication. The University will provide data and decision support tools to facilitate institutional decision-making at a range of levels, from strategic senior leadership decisions down to individual academic decisions concerning individual students (e.g. learning diagnostics).

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## Glossary

**Data curation:** The active and ongoing management of data enabling discovery and retrieval, maintaining data quality, and providing for re-use over time through activities including authentication, archiving, management, preservation, and representation.

**Information architecture:** The way information is organised in a website, intranet, or in online communities, in order to support usability and discoverability.

**Mature information technologies:** Information technologies that have been in use for long enough that most of their initial faults and inherent problems have been removed or reduced by further development.

**Open standards:** A technical standard establishes uniform engineering or technical criteria, methods, processes and practices for some particular system. An open standard is available for public use free of charge and has various rights to use associated with it, e.g. hypertext markup language (HTML).

**Common standards:** Technical standards (including open standards) that are in widespread use.

**Ecology of innovation:** The complex system within which innovation occurs comprising diverse entities (e.g. researchers, universities, industry, funding agencies, and government) and the relationships between them.

**Dispersed innovation:** Innovation that is not university-wide, but instead occurs in different parts of the University in response to local needs.

**Data transformation:** Converting data from one format to another.

The background of the entire page is a teal color with a complex geometric pattern of overlapping triangles and squares in various shades of blue and green, creating a modern, abstract design.

**ICT** Strategic  
Direction  
to 2021

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