# CAUDIT

THE COUNCIL OF AUSTRALASIAN
UNIVERSITY DIRECTORS OF INFORMATION TECHNOLOGY

# Top Ten
## 2021

**The most significant technology-related topics for higher education in Australia and New Zealand**

# ABOUT CAUDIT

**CAUDIT's purpose is to support each other in leading application of digital capabilities to transform education and research. CAUDIT realises this purpose through three strategies:**

CONNECT
ENABLE
CHALLENGE

By actively connecting CAUDIT's members, CAUDIT broadens their impact within the higher education and research sector. CAUDIT stimulates ICT's productive reach by maintaining a network linking CAUDIT members, international colleagues, service providers, and vendors.

CAUDIT's annual Top Ten report exhibits the strategic and practical value of CAUDIT's emphasis on building Members' professional capabilities, and sharing between Members.

## CAUDIT'S Members

Members of CAUDIT (Council of Australasian University Directors of Information Technology) are universities in Australia, New Zealand, and the nearby Asia Pacific region, along with major Australasian research and teaching organisations.

Each Member is represented by the most senior person with strategic and operational responsibility for ICT.

CAUDIT is an incorporated Not-For-Profit Association, governed through an Executive Committee of elected Member Representatives.

CONNECT

ENABLE    CHALLENGE

# WELCOME TO CAUDIT'S 2021 TOP TEN

**ICT is a primary facilitator of action, outcomes, and security within all higher education and research institutions.**

Reliance on effective, accessible, user friendly ICT services is an embedded feature of how we structure and excel in learning and teaching, research and engagement, student support and business administration.

COVID-19 has magnified dependence on high functioning ICT systems and services. As the pandemic dislocated our familiar ways of working, those systems and services adapted quickly and flexibly.

Lessons from the pandemic oblige us to revisit ICT options, priorities, functions, and opportunities. Those lessons substantially influence the 2021 Top Ten. It is true that much has changed. Yet while in many ways we now use ICT differently, ICT still continues to facilitate achievement of enduring goals that remain at the heart of educational and research missions.

## 2021 Top Ten themes

Every Top Ten report aims to spark and illuminate, ground and shape, discussions about an institution's current ICT needs and its digital future. Top Ten topics for 2021 are grouped into three themes:

(Foundations) (Enablers) (Outcomes)

The themes offer a framework for stimulating dialogue that helps institutional stakeholders contribute to the design of fit-for-purpose ICT capability.

## 2021 Top Ten Working Party

We are grateful to the 2021 Top Ten Working Party. Their practical insights and professional expertise are evident throughout the report:

**Stuart Hildyard**
Chief Information Officer
La Trobe University

**Jeff Murray**
Deputy Director, Technology Platforms & Infrastructure
Swinburne University of Technology

**Justin Richardson**
Deputy Chief Technology Officer
The University of Auckland

**Samantha Searle**
Head of Digital Library Services
Griffith University

**Peter Seddon**
Associate Director, Strategy & Architecture
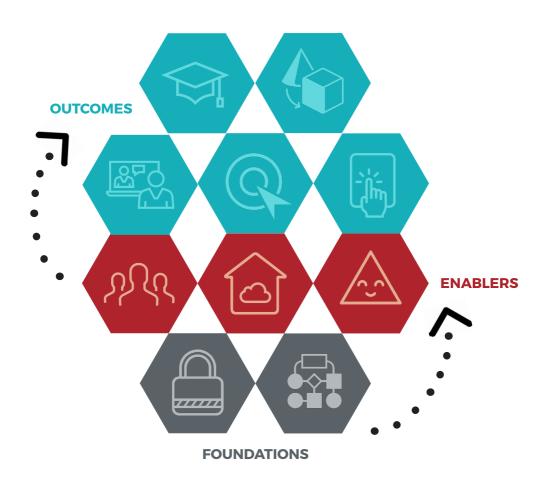The University of Western Australia

**Alex Tegg**
Associate Director, Planning & Governance
Murdoch University

**Anne Kealley**
CEO, CAUDIT

# CONTENTS

OUTCOMES

ENABLERS

FOUNDATIONS

# REVEALING TOP TEN THEMES FOR 2021

**The 2021 Top Ten topics are grouped into three themes. The topics are listed here under the themes they are allocated to.**

Topics are shown in the order they were ranked in the 2021 Top Ten survey by 42 participating Australian and New Zealand CAUDIT Member universities and research institutions.

## THEME 1: FOUNDATIONS

#1 Information Security
#8 Digital Integrations

## THEME 2: ENABLERS

#7 Leadership
#9 Modern Workplace
#10 Cultural Change

## THEME 3: OUTCOMES

#2 Student Success
#3 Business Transformation
#4 New Models of Teaching and Learning
#5 Delivering Services
#6 Seamless User Experience

## Why group the topics?

There are strong links between particular top ten topics. Grouping topics thematically helps to amplify their close relationships. Embedding strong Foundations creates a stable platform for Enablers that foster achievement of valued Outcomes.

The themes help focus conversations in our institutions about the role of digital capabilities in high performing learning and teaching, research, and professional services.
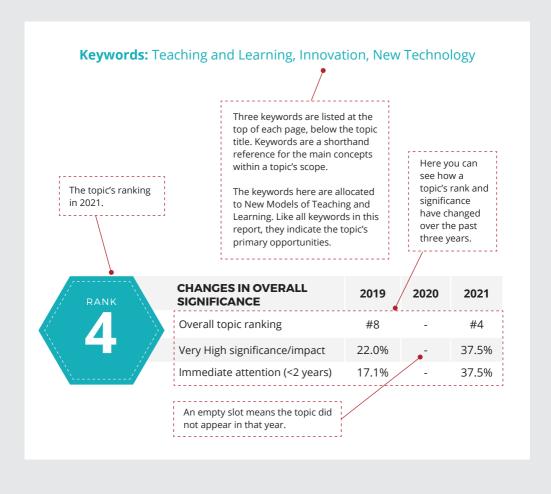
Each theme benefits from collaboration and innovation, within an institution and between institutions.

# READING THE TOPIC PAGES

A single page is devoted to each Top Ten topic where a brief description is provided about that topic's scope and influence. This description is intended to be accessible to all those who work and study in higher education and research institutions.

There are common design features on each topic page. These are explained here, and we hope they assist you to assess institutional impacts and sectoral contexts for each topic. The example below is for New Models of Teaching and Learning, which is ranked #4 in the 2021 Top Ten.

**Keywords:** Teaching and Learning, Innovation, New Technology

Three keywords are listed at the top of each page, below the topic title. Keywords are a shorthand reference for the main concepts within a topic's scope.

The keywords here are allocated to New Models of Teaching and Learning. Like all keywords in this report, they indicate the topic's primary opportunities.

Here you can see how a topic's rank and significance have changed over the past three years.

The topic's ranking in 2021.

RANK

4

| CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|
| Overall topic ranking | #8 | - | #4 |
| Very High significance/impact | 22.0% | - | 37.5% |
| Immediate attention (<2 years) | 17.1% | - | 37.5% |

An empty slot means the topic did not appear in that year.

# Foundations

**Foundations brings together two topics.**

**In 2021 Top Ten rank order, they are:**
**#1 – Information Security**
**#8 – Digital Integrations**

## An Overview

Information and communications technology evolves constantly, improving adaptability and productivity across institutional services and practices, from storing and accessing data, to collaborating on groupwork assessments and facilitating work planning.

The foundation digital infrastructure rests upon must be continuously renewed so old ICT systems and new digital capabilities mesh seamlessly and reliably. Ongoing digital integrations ensure flexible access to digital services that enable us to do our best work and so deliver valued outcomes.

Flexible access is a gift that comes with a caution: never lose sight of information security. Information security gaps and lapses have serious, sometimes catastrophic, consequences, that can shake public trust in our institutions

Our institutions rely on two high performance foundations: information security and digital integrations.

# INFORMATION SECURITY

**Keywords:** Security, Governance, Service Provision

## Embedding an Information Security approach to enable organisational outcomes

The COVID-19 pandemic ushered in far-reaching changes to familiar learning and teaching models, research practices, and business processes. There continues to be an urgent emphasis on information (like offsite access to research data or student records) and communications (like online collaboration enabling academic and professional teams to work together while working from home). Secure information. Secure communications.

Information security hinges on more than technical fixes and barriers. Alongside technical measures like software-based data controls, and of equal importance, are clear and actionable cybersecurity policies and procedures, ongoing training for students and staff about personal responsibility for cybersecurity, and inclusive conversations about threat management.

Effective information security practice is a shared obligation across campuses and laboratories, among colleagues and stakeholders. Mature cybersecurity capability also attends closely to privacy and data protection laws. It invests in specialist expertise like risk threat modelling. Strong cybersecurity maintains the framework that protects and fosters high performance digital capability.

The extensive scope of reliance on information and communications technology underscores cybersecurity's centrality to institutional viability, every day and for the long term. Its pragmatic and strategic significance is evident in its ranking since 2016 at #1, #2, or #3 among CAUDIT's Top Ten topics.

| RANK 1 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #2 | #1 | #1 |
| | Very High significance/impact | 57.1% | 77.3% | 72.5% |
| | Immediate attention (<2 years) | 35.7% | 29.5% | 35.0% |

# DIGITAL INTEGRATIONS

**Keywords:** System Integration, Digital, New Technology

**An outcome-driven enterprise architecture approach integrating ICT systems and agile developments with business objectives**

Higher education and research institutions have an array of new and old ICT platforms, software programs, and ICT hardware, acquired gradually for varied purposes. All are assets. But their full value is realised only when enterprise architects digitally integrate available ICT assets so their combined functionality aligns with and advances educational, research, engagement, and other business objectives.

Enterprise architecture (EA) leads in structuring the relationship between resources and strategy. That role is spotlighted when strategic and operational objectives are under pressure, as they presently are from pandemic disruptions and budget constraints.

Higher education and research institutions are transitioning to operating environments with similarities to, and differences from, pre-pandemic arrangements. The precise features of what comes next are uncertain. EA is especially important in these circumstances. Digital integrations need to be done and undone in short time spans to ensure ICT functionality matches needs and expectations that are changing unpredictably.

Collaboration between enterprise architects, institutional staff, and external stakeholders is indispensable for understanding progressively changing demands on ICT assets, and for devising new applications. Enterprise architects, together with members of their institutional communities, must experiment, learn, and try again as they design and trial new digital integrations in fluctuating conditions.

| RANK 8 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #6 | #7 | #8 |
| | Very High significance/impact | 28.6% | 31.0% | 22.5% |
| | Immediate attention (<2 years) | 42.9% | 47.6% | 35.0% |

# THEME 2

# Enablers

**Enablers brings together three topics.**

**In 2021 Top Ten rank order, they are:**
**#7 Leadership**
**#9 Modern Workplace**
**#10 Cultural Change**

## An Overview

People are at the centre of this theme. A diverse group of people that includes all who engage with institutional ICT. The Modern Workplace encompasses research assistants, permanent and casual academic staff, property managers, librarians, educational designers – and ICT specialists.

People in these diverse roles are on a collective institutional journey. Students are on this journey too. They are challenged to adopt novel digital modes of work and study, invited to push digital boundaries. Cultural Change is the route that journey follows.

There is a crucial role for IT leaders in sustaining cultural change in a modern digital workplace. They make digital capabilities available, navigable, and productive, partly by adopting a distributed leadership approach that reaches out to all staff.

# LEADERSHIP

**Keywords:** Strategy, Collaboration, Service Provision

## As trusted advisor and partner, leading the institution and ICT team in a challenging environment

ICT leaders play a decisive role in formulating and executing institutional strategy. They regularly review current digital capability to ensure it is fit-for-purpose across work units, for learning and teaching interactions, and for the intricacies of research. This breadth, spanning strategy and services, innovation and routine, requires adept leadership that integrates today's operational needs and tomorrow's strategic intentions.

Digital agility is a demonstrated feature of the higher education and research sector's response to the unanticipated demands of a pandemic. That digital dexterity highlighted ICT leaders' role as change agents who optimise innovation by embedding digital options in emerging and quickly adapted service designs.

ICT leaders regularly review skills and knowledge profiles within ICT teams to assess how well they harmonise with operational needs and strategic intentions. They pinpoint professional development essentials, and reshape their teams to reflect institutional priorities and objectives, and ICT budget.

Leadership rose to the Top Ten in 2020. Pandemic times accentuated its premium. Importantly, ICT leaders know exemplary digital capability is developed through distributed leadership. They support executives and managers in all work units to advocate for, implement, and review ICT's contribution to work unit objectives and accountabilities. They recognise all institutional leaders as ICT leaders.

| RANK 7 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #14 | #15 | #7 |
| | Very High significance/impact | 17.9% | 18.6% | 35.7% |
| | Immediate attention (<2 years) | 18.4% | 30.2% | 28.7% |

# MODERN WORKPLACE

**Keywords:** Workforce, Sustainability, Capability

**Meeting the changing needs of the modern ICT workforce across evolving physical and virtual environments and flexible work practices; attracting and retaining skilled staff in a very competitive ICT marketplace**

The knowledge and skills of ICT professionals in the higher education and research sector are enabling resources for transforming our workplaces into highly focused, high performing, contemporary environments. In applying their expertise to this transition, ICT professionals accrue benefits of positive changes alongside colleagues across the sector.

A prominent marker of the modern workplace is a workforce profile that mirrors community diversity at executive, management, and operational levels. Diversity is a key to designing and delivering responsive, relevant, secure ICT services. It is a key to an equitable, sustainable institutional workforce. ICT faces a particular challenge: to attract, recruit, and retain more women.

Success depends on maintaining a modern workplace environment that accounts, practically and fairly, for women and men. There is intense competition in the labour market for ICT know-how. The higher education and research sector can continue to retain and recruit the best by modelling the modern workplace in its own teams and enabling the sector to implement it.

Signature characteristics of modern workplaces include collaboration, teamwork, flexible and remote working, professional learning opportunities, mentoring. Digital capability does more than offer support in these examples. It enables them. It shapes and facilitates them. It maximises their impact.

| RANK 9 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #11 | #13 | #9 |
| | Very High significance/impact | 25.0% | 20.5% | 25.0% |
| | Immediate attention (<2 years) | 22.5% | 11.1% | 35.0% |

# CULTURAL CHANGE

**Keywords:** Strategy, Management, New Technology

## Changing organisation culture to support new ways of working: fostering a workplace that welcomes diversity, safety, and high performance

Adapting to emerging contexts, circumstances, and expectations is a strategic and operational imperative in higher education and research. Executives and managers must coherently prioritise and balance adaptation with enduring institutional values. Culture change may be in the background, but it generates momentum towards institutional priorities.

Maintaining that momentum relies on mindsets that welcome digital options which respond to continual shifts in internal and external environments. Digital tools and workflows need to change at speed – even faster during a pandemic. The shared mindset that makes a difference acknowledges advantages in quickly putting new, high performance digital tools and processes to work.

New digital applications challenge business as usual conventions. Open exchanges between ICT professionals and colleagues assist in changing prevailing attitudes, in changing culture. ITC professionals are well-placed to explain how digital alternatives make productive, personally satisfying use of every team's skills and expertise. First mover work units are encouraged to share their experiences of how digital alternatives improve workplace diversity and safety.

Openness to upgrading organisational and individual digital capability is generated through user-oriented training. Forging a proactive digital culture relies on collective willingness to learn fast – to fail or falter at first – knowing ICT support is at hand.

| RANK 10 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---------|----------------------------------|------|------|------|
| | Overall topic ranking | #5 | #8 | #10 |
| | Very High significance/impact | 35.0% | 22.7% | 25.0% |
| | Immediate attention (<2 years) | 30.0% | 31.8% | 32.5% |

# THEME 3

# Outcomes

**Outcomes brings together five topics.**

**In 2021 Top Ten rank order, they are:**
**#2 Student Success**
**#3 Business Transformation**
**#4 New Models of Teaching and Learning**
**#5 Delivering Services**
**#6 Seamless User Experience**

## An Overview

Outcomes matter. Digital tools and workflows are purposefully designed and implemented to achieve outcomes valued by higher education and research institutions. Digital capability serves daily operations, mission and strategy. Unsurprisingly, outcomes rank highest among Top Ten topics, except Information Security at #1.

Outcomes are tangible markers of the work quality generated by academic and professional staff, to student learning and graduate outcomes, to engagement with alumni and external partners.

ICT's contribution to outcomes is both hidden and apparent. When user experience is seamless, digital applications are not mentioned. When a student's Virtual Reality experience is remarkable, or a researcher's data analysis is profoundly deepened by ICT data storage and management, we hear about it. That is as it should be.

# STUDENT SUCCESS

## Improving student outcomes through the strategic alignment of technology

Strategically aligning technology with student outcomes is central to student success. In pandemic times ICT has performed as a dynamic intermediary. It has linked students with faculty, supporting them to meet challenges posed by the unanticipated predominance of remote teaching and learning.

Since 2015, Student Success has ranked #1 or #2 in the Top Ten, reflecting the priority higher education institutions attach to outcomes for undergraduates and postgraduates alike. ICT has supported institutions to affirm that focus, enabling them to think, design, and deliver beyond face-to-face lectures, tutorials, and laboratories.

Previous Top Ten booklets tame the sprawling Student Success topic by referring to unit of study influences on outcomes, but expediting remote learning and teaching has spotlighted other outcomes sensitive to strategic use of technology. ICT has facilitated meaningful engagement, interactive experiences, and student connection with peers. It has rapidly transformed remote access to library resources, student support, and other services.

Employment rates and salary levels are two outcomes that can act as student recruitment incentives. They can materially influence persistence and completion. ICT can support a multitude of data collection, analysis, and reporting activities that illuminate links between teaching and learning models, academic program design features, and job outcomes.

| RANK 2 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #1 | #2 | #2 |
| | Very High significance/impact | 50.0% | 72.7% | 55.0% |
| | Immediate attention (<2 years) | 30.0% | 27.3% | 50.0% |

# BUSINESS TRANSFORMATION

**Keywords:** Business Value, Strategy, Collaboration

**Positioning ICT as a catalyst to support transformation of education and research, along with transforming the institution's business functions, by changing operating models (including AI and Robotic Process Automation)**

Higher education and research institutions are working through high speed, high pressure digital change. The pandemic left no choice: staying open for quality learning and teaching, research and engagement, compelled fast adoption of new digital capabilities and applications. We now know successful business transformation can be undertaken within a month or so, not a year or two. It is a finding to savour, a lesson to follow.

ICT can serve many domains to improve outcomes, both while COVID-19 impacts are evident, and in the post-pandemic next normal. Business domains can enlist ICT-enabled data collection and analysis to decide and design business transformations that aid institutional recovery from the pandemic, and shape the next normal.

ICT-enabled retention strategies can help lift student persistence and completion rates, improving student outcomes and fee income. Data management in research and administration could be enhanced by Artificial Intelligence and Robotic Process Automation, which automate routine tasks across applications. ICT could fast-track new revenue sources through enabling innovative online learning alternatives.

The upside lesson from the pandemic draws on an important attribute for working fast and successfully. Teamwork. It takes collaboration across the institution for ICT to enable business transformations that achieve business outcomes that serve stakeholders well.

| RANK 3 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #3 | #3 | #3 |
| | Very High significance/impact | 54.8% | 56.8% | 42.5% |
| | Immediate attention (<2 years) | 35.7% | 34.1% | 45.0% |

# NEW MODELS OF TEACHING AND LEARNING

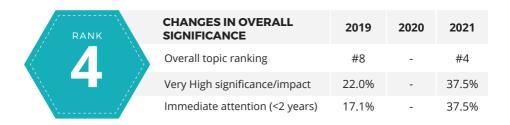**Keywords:** Teaching and Learning, Innovation, New Technology

## Identifying and supporting the use of innovative technology in teaching and learning

ICT equips curriculum developers, learning designers, lecturers, and tutors with promising options for incorporation into teaching and learning models. Digital possibilities include an array of realities: Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR). These exciting technologies can extend the power and immediacy of teaching and learning models.

ICT was instrumental in maintaining student outcomes when campuses closed due to pandemic restrictions. Remote teaching and learning became the pedagogical commonplace. Revisioned and rescaled learning management systems met new necessities. Online education enthusiasts, alongside those unconvinced about its utility, ensured student learning continued, underpinned by quality formative and summative assessment practice.

ICT endows higher education institutions with opportunities to implement new frameworks for new student cohorts. Microcredentials, for example, require purposefully designed teaching and learning models that integrate digital applications suitable for anywhere, anytime access and completion. Microcredentials depend on flexible, accurate student management systems.

ICT can accelerate achievement of high quality outcomes from diverse teaching and learning models. The path to acceleration is inclusive and deeply consultative. Codesign is the watchword – stakeholders from academic board members to first year undergraduates must engage with ICT experts to research, shape, trial, and evaluate teaching and learning models.

| RANK 4 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #8 | - | #4 |
| | Very High significance/impact | 22.0% | - | 37.5% |
| | Immediate attention (<2 years) | 17.1% | - | 37.5% |

# DELIVERING SERVICES

**Keywords:** Strategy, Enterprise Architecture, Service Provision

## Embedding agility, scalability and cost effectiveness across activities to deliver value to students and staff

Much has changed in higher education and research since early 2020. New forms of agility are designed into digital capabilities, enabling academic and professional staff to work remotely. Learning management platforms have scaled up, empowering thousands of students to benefit from online delivery. Conferences, seminars, and professional development have become virtual events, ensuring these opportunities remain vibrant, viable, and available.

While much has changed, much is familiar. ICT still delivers students effective access to teachers, tutors, libraries, and peers. ICT still maintains collaborations between researchers, and delivers smooth access to datasets. Vital student guidance and academic support services are still delivered, more often in online modes. We are using ICT differently, but for familiar ends.

The pandemic context constrains ICT budgets, yet there is heightened institutional dependence on ICT expertise and infrastructure. This puts a premium on cost-effectiveness. Delivering responsive digital services remains a dominant priority for institutional ICT leaders and their teams. However, new approaches to ICT service designs are inescapable.

Service users must contribute, through consultation and feedback, to defining essential service values. A pervasive institutional willingness to trial innovative digital service approaches is fundamental – old business as usual mindsets will not prevail in the post-pandemic next normal.

| RANK 5 | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | Overall topic ranking | #4 | #5 | #5 |
| | Very High significance/impact | 26.8% | 31.8% | 37.5% |
| | Immediate attention (<2 years) | 39.0% | 34.1% | 42.5% |

# SEAMLESS USER EXPERIENCE

**Keywords:** Access, User-centricity, Service Provision

## Ubiquitous service enabling students and staff to be and stay connected to their peers and colleagues

When users open an institution's software program on their home desktop, they know it will perform consistently: that's seamless. When using services provided by two digital applications, users think it's one application: that's seamless. When a student interrupts an assessment task on their laptop, they know they can pick up their tablet or phone later to complete it: that's seamless.

A seamless digital experience keeps users connected with peers and colleagues, facilitating valued outcomes from their research or their course coordination responsibilities, their social media marketing budget or their virtual tour of an architecture installation in Singapore. Ubiquitous, seamless experiences bundle the service suite a user needs, ensuring they can locate the right service for the task at hand.

For institutions, a seamless user experience offers other long-term outcomes. Alumni, industry partners, secondary school careers teachers – all know their digital interactions with the institution will be straightforward, productive, and positive.

ICT teams employ many strategies and technical solutions to design and deliver seamless ICT experiences. These range from data analytics that assist them to know what users need to do online, to tweaking menus and seeking feedback about what works or could work better. Seamless experiences are shared outcomes.

| | CHANGES IN OVERALL SIGNIFICANCE | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| RANK 6 | Overall topic ranking | #15 | #18 | #6 |
| | Very High significance/impact | 14.6% | 15.9% | 32.5% |
| | Immediate attention (<2 years) | 26.8% | 20.5% | 42.5% |

# THE 2021 TOP TEN SURVEY

## Participation base in 2021

42 CAUDIT members completed the 2021 Top Ten survey. The 2021 Top Ten Report is based on responses from 41 university Members and The College of Law.

## Methodology

The 2021 Top Ten program started with CAUDIT staff undertaking a literature review, and tracking higher education and ICT-related articles. This established a list of 103 potential topics.

The 2021 Top Ten Working Party reduced this long list to a working list of 27 topics. CAUDIT's Executive Committee then produced a short list of 17 topics which all CAUDIT Members were then invited tor rank.

To provide Members with each topic's focus, a descriptive statement was included in the survey.

As for 2018, 2019, and 2020, to further assess each topic's significance and likely duration of relevance, CAUDIT Members were asked to indicate:

- the level of strategic impact each topic is likely to have for their institution in 2021, and
- the time scale over which each topic is expected to have strategic importance for their institution.

## Changes to Topics in 2021

In sum, 17 topics were considered in 2021. The 2021 Top Ten Working Party introduced one new topic, reintroduced one topic, and deleted three topics from 2020.

**Introduced in 2021**

- **Data Governance**
  *Establishing data governance as the steering mechanism for a data strategy to deliver business strategy via data and analytics.*
- New topic **New models of Teaching and Learning**
  *Identifying and supporting the use of innovative technology in teaching and learning* was previously titled **Education Technology** - introduced in 2017 and ranked #7, #5 in 2018 and # 8 in 2019.
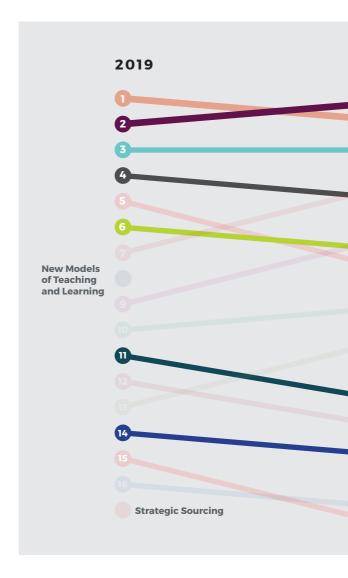
**Deleted from 2021**

- **Personalised Learning** First listed in 2015 at #13, #17 in 2016 and #12 in 2020.
- **Strategy** First listed at #8 in 2013, rising to #2 in 2015 and 2017 with last listing in 2020 at #4.
- **Sustainability** Also first listed in 2013 at #5, successively outside the Top Ten until last listing in 2020 at #10.

# HOW HAVE TOPIC RANKINGS CHANGED?

**This trends chart summarises the most significant technology related topics engaging universities in the 2019, 2020, and 2021.**

Topics appear in 2021 rank order on the righthand side of the chart. The numbers on the righthand side denote the topic's 2021 ranking.

Vibrant colours link topics ranked 1-10 in 2021 to their rankings in earlier years. Topics ranked #11 onwards in 2021 are linked to earlier year rankings in grey.

**2019**

1
2
3
4
5
6
7

**New Models of Teaching and Learning**

9
10
11
12
13
14
15
16

**Strategic Sourcing**

# 2020

1
2
3
4  Strategy
5
6
7
8
9
10  Sustainability
11
Personalised
Learning  12
13
14
15
16
17
18

# 2021

1  Information Security
2  Student Success
3  Business Transformation
4  New Models of Teaching and Learning
5  Delivering Services
6  Seamless User Experience
7  Leadership
8  Digital Integrations
9  Modern Workplace
10  Cultural Change
11  Research Support
12  Identity and Access Management
13  Data Governance
14  Digital Dexterity
15  Decision Intelligence
16  Smart Campus
17  Emerging Technology

# SIGNIFICANCE AND IMPACT IN 2021

CAUDIT Members used a six-point scale to rate each topic's significance/impact in 2021.

Ratings for 2021 Top Ten topics are summarised in the chart below.

Information Security, ranked at #1 in the Top Ten, was judged as having the most significance/impact in 2021. It attracted a rating of 90.4% when Very High (71.4%) and High (19.0%) ratings from 38 of 42 respondents are combined.
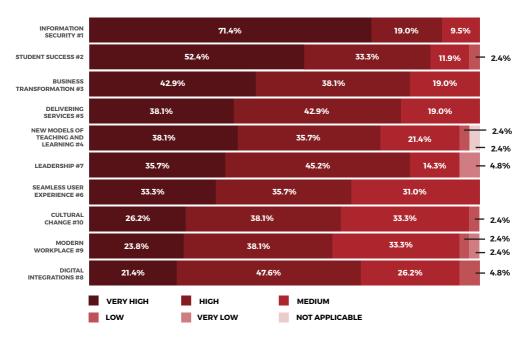
Student Success, ranked #2, was identified by 36 respondents as having Very High

(52.4%) or High (33.3%) significance/impact, for a combined total of 85.7%.

Ranked at #3, Business Transformation was also considered to hold substantial significance/impact with a rating of 81.0% (Very High, 42.9%; High, 38.1%). It is worth noting that #5 Delivering Services and #7 Leadership had combined Very High and High ratings of 81.0% and 80.9% respectively. However, their Very High ratings were lower than High ratings.

All top ten topics rated 61.9% or more when Very High and High ratings are combined.

## 2021 SIGNIFICANCE / IMPACT

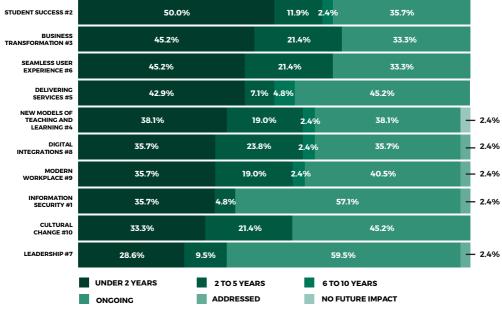| | VERY HIGH | HIGH | MEDIUM | LOW | VERY LOW | NOT APPLICABLE |
|---|---|---|---|---|---|---|
| INFORMATION SECURITY #1 | 71.4% | 19.0% | 9.5% | | | |
| STUDENT SUCCESS #2 | 52.4% | 33.3% | 11.9% | 2.4% | | |
| BUSINESS TRANSFORMATION #3 | 42.9% | 38.1% | 19.0% | | | |
| DELIVERING SERVICES #5 | 38.1% | 42.9% | 19.0% | | | |
| NEW MODELS OF TEACHING AND LEARNING #4 | 38.1% | 35.7% | 21.4% | 2.4% | 2.4% | |
| LEADERSHIP #7 | 35.7% | 45.2% | 14.3% | 4.8% | | |
| SEAMLESS USER EXPERIENCE #6 | 33.3% | 35.7% | 31.0% | | | |
| CULTURAL CHANGE #10 | 26.2% | 38.1% | 33.3% | 2.4% | | |
| MODERN WORKPLACE #9 | 23.8% | 38.1% | 33.3% | 2.4% | 2.4% | |
| DIGITAL INTEGRATIONS #8 | 21.4% | 47.6% | 26.2% | 4.8% | | |

# TOP TEN TOPIC TIMEFRAME FOR 2021

Respondents to the 2021 Top Ten survey used a six-point rating scale to indicate strategic relevance to their institution of each topic over time. This page presents respondents' time frame ratings for 2021 Top Ten topics.

As the chart shows, #2 Student Success was the topic that required immediate attention; that is, over the next two years (50.0% of respondents). A further 15 respondents (35.7%) designated Student Success as requiring ongoing attention.

Three topics fell in the 40-50% range for requiring attention within the next two years: #3 Business Transformation (45.2%), #6 Seamless User Experience (45.2%), and #5 Delivering Services (42.9%).

Two Top Ten topics were regarded as meriting high levels of ongoing attention, given their strategic importance: #7 Leadership (59.5%), and #1 Information Security (57.1%). Three other topics rated in the 40-50% range as requiring ongoing attention: #5 Delivering Services (45.2%), #10 Cultural Change (45.2%), and #9 Modern Workplace (40.5%).

## 2021 TIME FRAME - UNDER 2 YEARS ORDER

| Topic | Under 2 Years | 2 to 5 Years | 6 to 10 Years | Ongoing | No Future Impact |
|---|---|---|---|---|---|
| STUDENT SUCCESS #2 | 50.0% | 11.9% | 2.4% | 35.7% | |
| BUSINESS TRANSFORMATION #3 | 45.2% | 21.4% | | 33.3% | |
| SEAMLESS USER EXPERIENCE #6 | 45.2% | 21.4% | | 33.3% | |
| DELIVERING SERVICES #5 | 42.9% | 7.1% | 4.8% | 45.2% | |
| NEW MODELS OF TEACHING AND LEARNING #4 | 38.1% | 19.0% | 2.4% | 38.1% | 2.4% |
| DIGITAL INTEGRATIONS #8 | 35.7% | 23.8% | 2.4% | 35.7% | 2.4% |
| MODERN WORKPLACE #9 | 35.7% | 19.0% | 2.4% | 40.5% | 2.4% |
| INFORMATION SECURITY #1 | 35.7% | 4.8% | | 57.1% | 2.4% |
| CULTURAL CHANGE #10 | 33.3% | 21.4% | | 45.2% | |
| LEADERSHIP #7 | 28.6% | 9.5% | | 59.5% | 2.4% |

Legend: ■ UNDER 2 YEARS ■ 2 TO 5 YEARS ■ 6 TO 10 YEARS ■ ONGOING ■ ADDRESSED ■ NO FUTURE IMPACT

# TOPIC STATUS

## 2021 TOP TEN TOPIC SIGNIFICANCE BY TIMEFRAME MATRIX

As would be expected #1 ranked Foundation topic, Information Security rated as most significant. It is accorded suppressed urgency, being second least urgent after the Enabler topic, #7 Leadership. For CIOs, Information Security and Leadership are necessarily uppermost for both strategic and operational reasons.
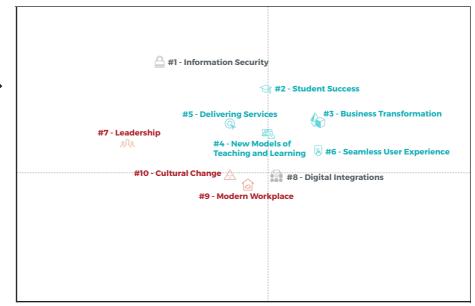
Three Outcome-themed topics attracted CIOs' urgent attention – #2 Student Success, #3 Business Transformation, #6 Seamless User Experience. These rated ahead of:
  • Foundation topic – #8 Digital Integrations
  • Outcome topic – #4 New Models of Teaching and Learning.

Of less urgency among 2021 Top Ten topics were:
  • Foundation topic – #8 Digital Integrations
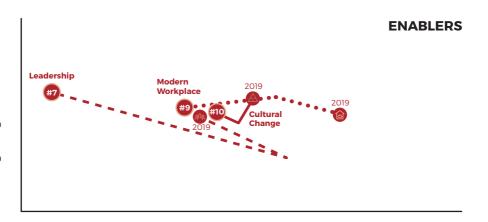  • two Enablers topics – #9 Modern Workplace, and #10 Cultural Change.

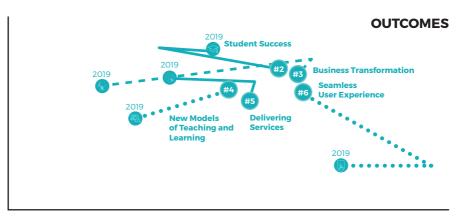### 2021 Top Ten Topics Significance X Timeframe Matrix By Theme

**FOUNDATIONS**

**#1**
Information Security

2019

**#8**
Digital Integrations

2019

**ENABLERS**

Higher Significance

Leadership
**#7**

Modern Workplace
**#9** **#10**
2019

2019
Cultural Change

2019

**OUTCOMES**

2019 Student Success

2019

2019

2019
New Models of Teaching and Learning

**#4**

**#5**
Delivering Services

**#2** **#3** Business Transformation

**#6** Seamless User Experience

2019

Shorter Timeframe →

27

# CAUDIT

**THE COUNCIL OF AUSTRALASIAN
UNIVERSITY DIRECTORS OF INFORMATION TECHNOLOGY**

## www.caudit.edu.au

caudit@caudit.edu.au

PO Box 9432
Deakin ACT 2600
Australia

Stay in touch with CAUDIT on:

**@CAUDITinc**

**linkedin.com/company/caudit**

**@cauditinc**

ABN: 39 514 469 351