

RISKRADAR MONTHLY INSIGHTS

JULY 2024

*Taking risk intelligence to the next level.
Enabling the University stay ahead.*



Feature: Human-Centered Approach and Research Security Case Study

Summary

- Survey insights from EY have shown the importance of a human-centered approach and how universities can benefit from it

Human-Centered Approach

How universities can keep people at the center of digital transformation [Mar 2024]

A study by EY and Oxford's Saïd Business School identified six factors for successful digital transformation: adaptive leadership, compelling vision, supportive culture, empowerment, technology investment, and collaboration. Focusing on these strategies and investing in people while supporting their emotional and psychological needs can significantly improve transformation success.

Why human-centered transformation design is critical for universities [Nov 2023]

Digital transformation must prioritise students, faculty, and staff needs. Research shows that students seek high-quality teaching, digital technology, and academic and career preparation support. Faculties need time-saving tools and training for effective digital teaching. Researchers require better equipment and computing tools, automated processes, and collaboration tools, and administrators are looking for integrated systems and access to data. By focusing on a user-centred approach and accessible data systems, evolving around the needs and expectations of students and staff, universities can strengthen offerings and improve the overall student experience.

How can learning be transformed for a more human-centered workforce? [Apr 2024]

In the face of rapid technological advances, Institutes of Higher Learning (IHLs) must become flexible learning hubs. The digital economy, driven by technologies like Generative AI, demands transformed education through empowered educators and strong industry collaborations. Key strategies include addressing skill gaps, enhancing career prospects, and promoting lifelong learning to help individuals thrive in a dynamic digital landscape.

Summary

- Research security case of a Professor leaking sensitive information

Research Security

Professor jailed for leaking sensitive technology to China [Jun 2024]

A professor, named only as 'Lee' in court proceedings, from the Korea Advanced Institute of Science and Technology (KAIST) was sentenced to two years in prison for illegally transferring sensitive LiDAR technology used in autonomous vehicles to China.

The Supreme Court of Korea upheld the sentence for violating confidentiality laws and found the professor guilty of fraud, embezzlement, and obstruction of business by misusing funds and submitting false documents.

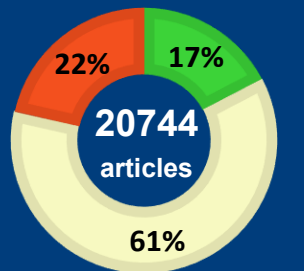
Lee did not report substantial financial benefits received from China, leading to KAIST dismissing him in 2020; the university faced criticism for leniency and is considering further disciplinary actions post-Supreme Court judgement.

RiskRadar Overview of Key Risks

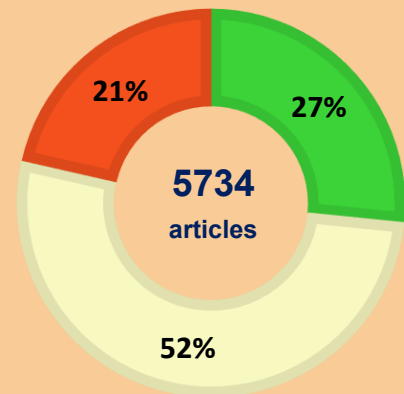
Emerging Risk

WHO declared mpox a global public health emergency in August after a Congo outbreak spread regionally. So far this year, 13 cases have been detected in Singapore. Starting 23 August, Singapore will conduct temperature and visual screenings for certain inbound travelers and crew at airports to prevent mpox. This targets flights from high-risk regions, despite no direct flights from outbreak countries. Travelers should follow health advisories and report symptoms. The risk to the public is low, with transmission mainly through close contact. [\(CNA\)](#)

Overall Sentiment



Economic Risk



Key Topics

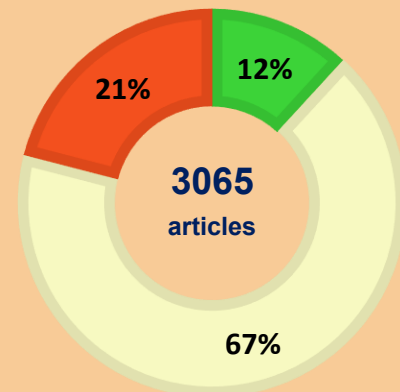
1. Economic Outlook
2. Currency
3. Industry Growth

Relevant Articles

- [ASEAN markets open to green industries, services](#)
- [The odds are growing for the Singapore dollar \(SGD\) to be Asia's best-performing currency for a third straight year](#)
- [Singapore aims to attract future industry leaders, not just high-net-worth individuals](#)



Environmental Risk



Key Topics

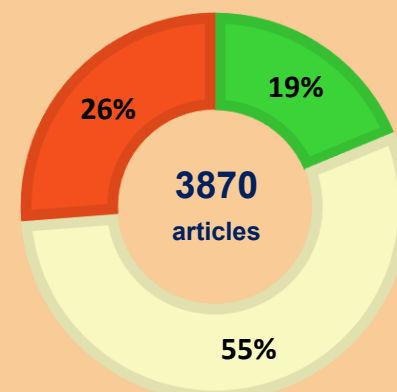
1. Climate Change
2. Marine Protection
3. Clean Energy

Relevant Articles

- [Glacier melt is accelerating in Alaska, study says](#)
- [China's marine protection offers valuable experience, wisdom for global ocean governance](#)
- [Singapore to stop registration of new diesel cars and taxis from Jan 1, 2025](#)



Geopolitical Risk



Key Topics

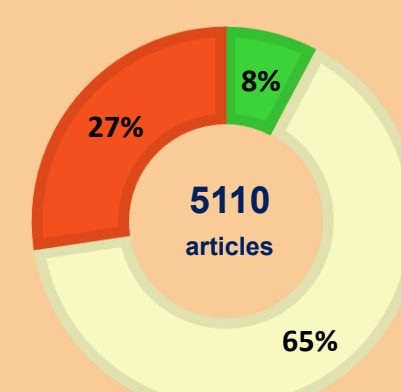
1. Self-radicalisation
2. Provisional Agreement
3. Economic Reform

Relevant Articles

- [Boy, 14, who was radicalised due to Israel-Hamas conflict is youngest to be dealt with under ISA](#)
- [Beijing and Manila strike deal to reduce tensions in South China Sea](#)
- [Leaders: Plenary session injects new impetus into HK economy](#)



Societal Risk



Key Topics

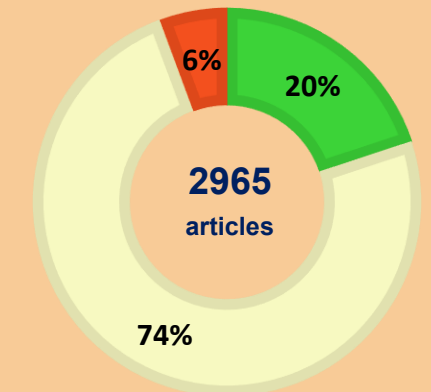
1. Misconduct
2. Healthcare Costs
3. Well-Being

Relevant Articles

- [A top Chinese university fires a professor after a student accused him of sexual harassment](#)
- [Discipline in not over-treating and over-prescribing drugs will help manage healthcare costs: SM Lee](#)
- [LEAP Approach to Address the Well-being Needs of School Students and Teachers: HongKong](#)



Technological Risk



Key Topics

1. Data Privacy
2. Regulation
3. Collaboration

Relevant Articles

- [Ant International and NTU Singapore Collaborate on Privacy-Enhancing Technologies](#)
- [China publishes the first set of regulations on what a Humanoid Robot should be like, pilot starts with Shanghai](#)
- [Singapore, Europe to deepen tech cooperation for chips, AI](#)

Recent Global Developments in IHLs



Financial Sustainability

- Massey University, faced a \$45 million loss last year and a \$30 million deficit this year, has a recovery plan involving staff restructuring, property sales, and boosting student enrolment. To break even by 2026, the university is raising international and domestic student numbers. Later this year Massey will start running courses in Singapore at the facilities of another education provider. ([Stuff](#))
- Rising college costs have emphasised the importance of financial aid as costs are more than most families can afford. 76% of students cite financial aid and the overall process as a top factor. The 2024 Free Application for Federal Student Aid (FAFSA) delayed financial aid and impacted students' college choices. This underscores the critical role of timely and sufficient aid in higher education as it affects a university's student enrolment. ([CNBC](#))



Admissions

- Over 30 Chinese master's degree students forged qualifications to gain admission to University of Hong Kong's (HKU) Business School, with potential involvement of up to 100 students. HKU conducted a probe in May for current master's students to resubmit credentials and is enhancing its admission procedures, including third-party certifications verification, applicant interviews, and collaborating with the HK SAR government. ([ANN](#))

Campus Regulations

- Harvard University plans to implement new campus space rules by prohibiting overnight camping, chalking, and unapproved signage, following months of student protests. While some policies address issues like alcohol distribution, others target protest activities, potentially impacting free speech. The final policy has yet to be finalised. ([The Harvard Crimson](#))



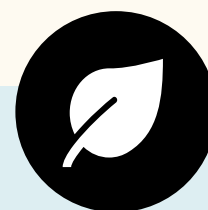
Research Development

- A Princeton University paper highlights shortcomings in AI agent benchmarking. It suggests improvements like cost control and accuracy optimisation while emphasising standardisation and reproducibility in evaluations to enhance real-world applicability. Despite these challenges, companies see its potential for reduced costs and reliance on large language models, making it a promising future direction. ([Foundry](#))
- Scientists at The University of Texas Health Science Center have developed a new "humanised" mouse model, THX. These mice possess a fully functional human immune system and human-like gut microbiome. It can produce antibodies and immune responses to pathogens like Salmonella and SARS-CoV-2 after vaccination. This breakthrough promises advancements in immunotherapy and vaccines, and disease development. ([LabX](#))



Cybersecurity

- Moody found significant rise in cybersecurity budgets by universities, with a 70% increase over the past five years. Conversely, reported ransomware attacks on educational institutions surged by 70% in 2023. Experts emphasised the need for cultural and procedural shifts in cybersecurity practices. Adoption of AI and machine learning in cybersecurity strategies is growing but poses dual-use risks. ([Inside Higher Ed.](#))
- The US Office of Science and Technology Policy (OSTP) memo mandates that higher education institutions with over \$50 million in federal research funding implement cybersecurity programs. This initiative aims to counter security threats from competitors like China, ensuring transparency and securing critical infrastructure. Academic collaborations with China now face increased scrutiny due to changing geopolitical landscape ([IBM](#)).



Sustainability

- At the HESI (Higher Education Sustainability Initiative) Global Forum 2024, institutions discussed how AI can help achieve Sustainable Development Goals (SDGs). Concerns were raised on the extinction of minor languages. The HESI Action Group on AI was launched to drive ethical digital transformation in higher education. The UN plans for regulated AI while emphasising sustainability and addressing global challenges such as poverty and climate change. ([University World News](#))
- Singapore launched a \$90 million Create Thematic Programme to enhance hydrogen utilisation, green chemistry, synthetic biology, and chemical transformation. It involves the collaboration of NUS, NTU, and international partners such as the University of Cambridge and Max Planck Institute. This supports Singapore's net-zero emissions aim by 2050. ([Straits Times](#))



Graduate Employability

- Singapore universities are introducing IT and digital courses to meet industry demands and boost graduate employability. This includes industry courses and AI focused programmes. IT and digital tech grads' full-time permanent job rate has dropped 5% since 2021. Experts highlighted tech market challenges as employers seek skills in AI, cybersecurity and data science. ([CNA](#))

DEI (Diversity, Equity & Inclusion)

- The three University of Alabama campuses have closed their DEI offices as a new state law bans DEI funding at public universities, effective 1st October. The closures raised concerns towards underrepresented groups and retention rates of students of colour. Similar legislative efforts against DEI programmes are occurring in other Republican-controlled states. Opposition views the closures as setbacks for student inclusion. ([NBC](#))



RiskRadar Overview of Key Risks



Cybersecurity

RECENT DEVELOPMENTS

[‘Serious hacker attack’ forces Frankfurt university to shut down IT systems](#)

The Frankfurt University of Applied Sciences experienced a severe hacker attack leading to its IT systems shut down, impacting external access to its IT systems and its communications infrastructure. This incident is part of a series of cyberattacks on German universities specialising in applied sciences.

[Disney’s internal communications leaked online after hack](#)

Disney's internal Slack communications, including ad campaigns, studio technology interview candidates and unreleased projects were leaked by hacking group NullBulge following a hack. Over 1TB of data was released, with data spanning back to 2019.



Inflation

RECENT DEVELOPMENTS

[S’pore core inflation drops to 2-year low in June, full-year overall inflation forecast under review](#)

Consumer prices in Singapore saw lower inflation rates for June 2024, with overall inflation hitting a three-year low and core consumer inflation reaching a more than two-year low. Core inflation, excluding private transport and accommodation costs, dropped to 2.9% year-on-year, down from 3.1% for the previous three months. Overall inflation dropped to 2.4% from 3.1% in May.

[Bank of Canada expected to cut rates this week as inflation slows](#)

The Bank of Canada (BoC) is expected to cut its key overnight rate following a similar cut last month amidst easing consumer price inflation, restrained spending, and a poor economic outlook. Canada's economic growth has been positive but weak, driven largely by recession fears attributed to immigration-led population growth rather than economic strength.



Digital Disruption

RECENT DEVELOPMENTS

[The Digital Dermatologist Will See You Now: How Technology is Revolutionizing Skincare](#)

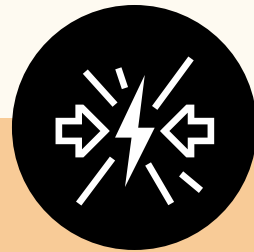
Online dermatology (“teledermatology”) has progressed significantly with the use of innovative and sophisticated digital tools, including video calls, augmented reality and AI tools to diagnose and prescribe treatments remotely.

[OpenAI enters Google-dominated search market with SearchGPT](#)

OpenAI has launched SearchGPT, an AI-powered search tool, to provide users with real-time internet information and summarised search results with source links and the ability for follow-up questions and contextual responses. OpenAI is working with publishers like News Corp and Axel Springer to offer tools to manage content appearance in search results.



RiskRadar Overview of Key Risks



Geopolitical Relations

RECENT DEVELOPMENTS

[U.S., Allies Issue Rare Warning on Chinese Hacking Group](#)

Australia, the U.S., and six other allies issued a coordinated warning about a Chinese state-sponsored hacking group, APT40, which threatens their networks. The advisory accused APT40 of cyber espionage and data theft, operating under China's Ministry of State Security. In 2021, four Chinese nationals tied to APT40 were charged with hacking to steal technology and research from companies, universities, and government entities.

[Danish institute boycotts foreign universities, citing concerns about military collaboration](#)

Technical University of Denmark (DTU) will boycott 11 foreign universities, including Beijing Institute of Technology and Malek Ashtar University in Iran, to prevent sharing of information that could lead to espionage or military misuse. Danish ministry published new guidelines enhanced background checks to protect research and military know-how



Climate Change

RECENT DEVELOPMENTS

[Fight or Flee: Tuvalu's residents prepare for mass displacement as nation forecast to be among first to disappear due to climate change](#)

Tuvalu, a low-lying Pacific island nation, faces existential threats from rising sea levels. Its capital is projected to be mostly flooded by 2100, potentially rendering it uninhabitable by 2050. Efforts to tackle this include international aid and climate migration pathways. Technology is used to create a digital twin of Tuvalu in the metaverse to preserve its culture and heritage.

[China warns of hotter, longer heatwaves as climate change intensifies](#)

China is experiencing hotter, longer heatwaves and more frequent, unpredictable heavy rain. Maximum temperatures may rise by 1.7-2.8°C within 30 years. China is highly vulnerable to climate change and faces increasing pressure to adapt to weather changes and rising sea levels. If emissions remain high, extreme heat events could occur biennially and rainfall could double and become more erratic.



Disinformation & Misinformation

RECENT DEVELOPMENTS

[Russian websites posing as local American newspapers aimed at Americans](#)

A network of Russia-based websites masquerading as local American newspapers is pumping out fake stories targeting the US elections. The AI-generated content creates an illusion of credible news - thousands each week - through mixing real news with fake stories targeting American and Ukrainian politics. Despite efforts to debunk, the fake stories appear credible and become widespread.

[Singapore to block nearly 100 social media accounts linked to Chinese tycoon Guo Wengui](#)

Singapore has blocked about 100 social media accounts linked to Chinese tycoon Guo Wengui, with the first use of the Foreign Interference (Countermeasures) Act (FICA) since its passage in 2021. The blocked accounts on platforms like X, Facebook, YouTube, and TikTok allegedly disseminated disinformation, including false claims about Singapore's political leadership transition.

About RiskRadar

RiskRadar is the Office of Risk Management and Compliance (ORMC)'s cutting-edge risk intelligence and sense-making capability. Launched in March 2023, RiskRadar serves as a cornerstone for horizon scanning that enables us to identify mega and macro trends by integrating media monitoring and social listening tools. It transforms conventional risk management at the National University of Singapore, providing expert insights and intelligence to allow for holistic decision-making amidst a fast-evolving landscape.