



Australian University Science on the Global Stage: Trends, Scenarios, and Shifting Student Preferences

Australian Council of Deans of Science
Annual Meeting 2021

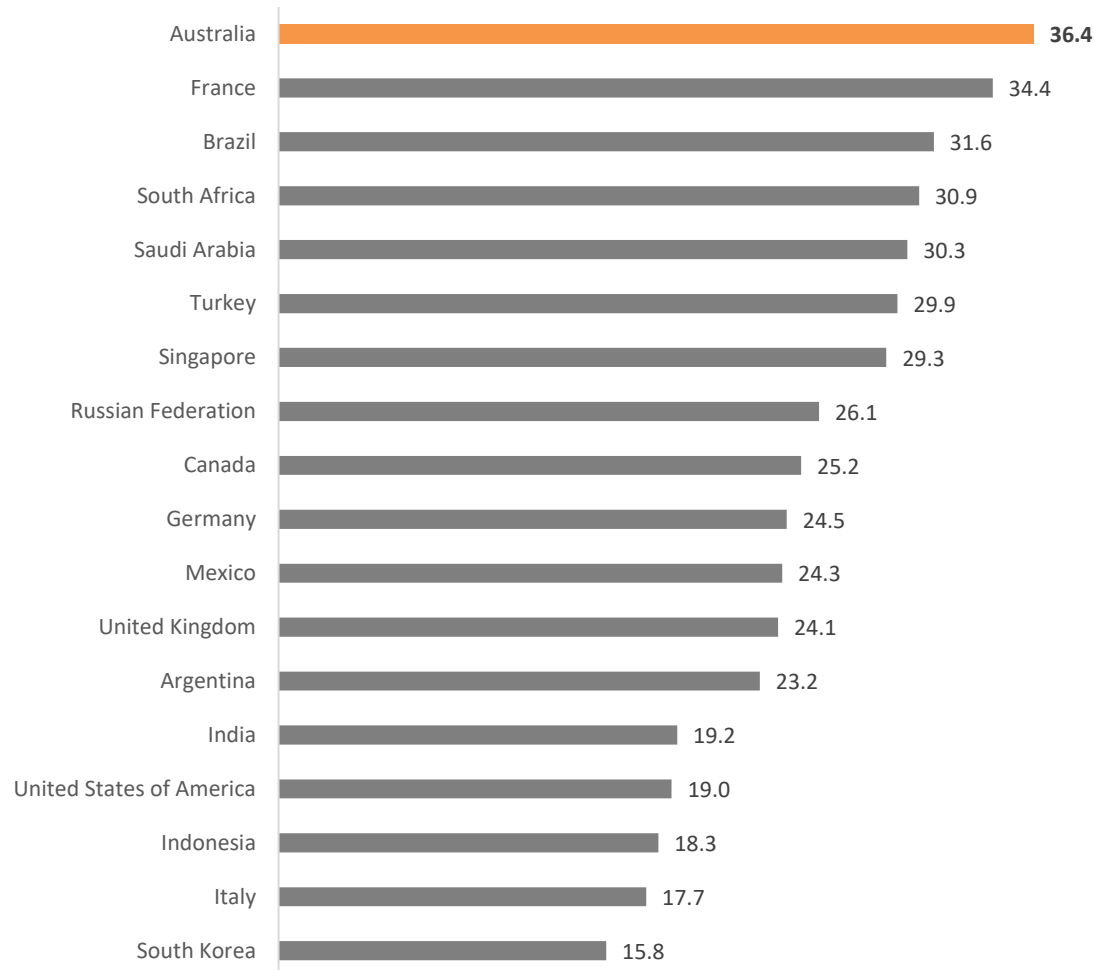
Jon Chew
Head, Strategic Insights and Analytics



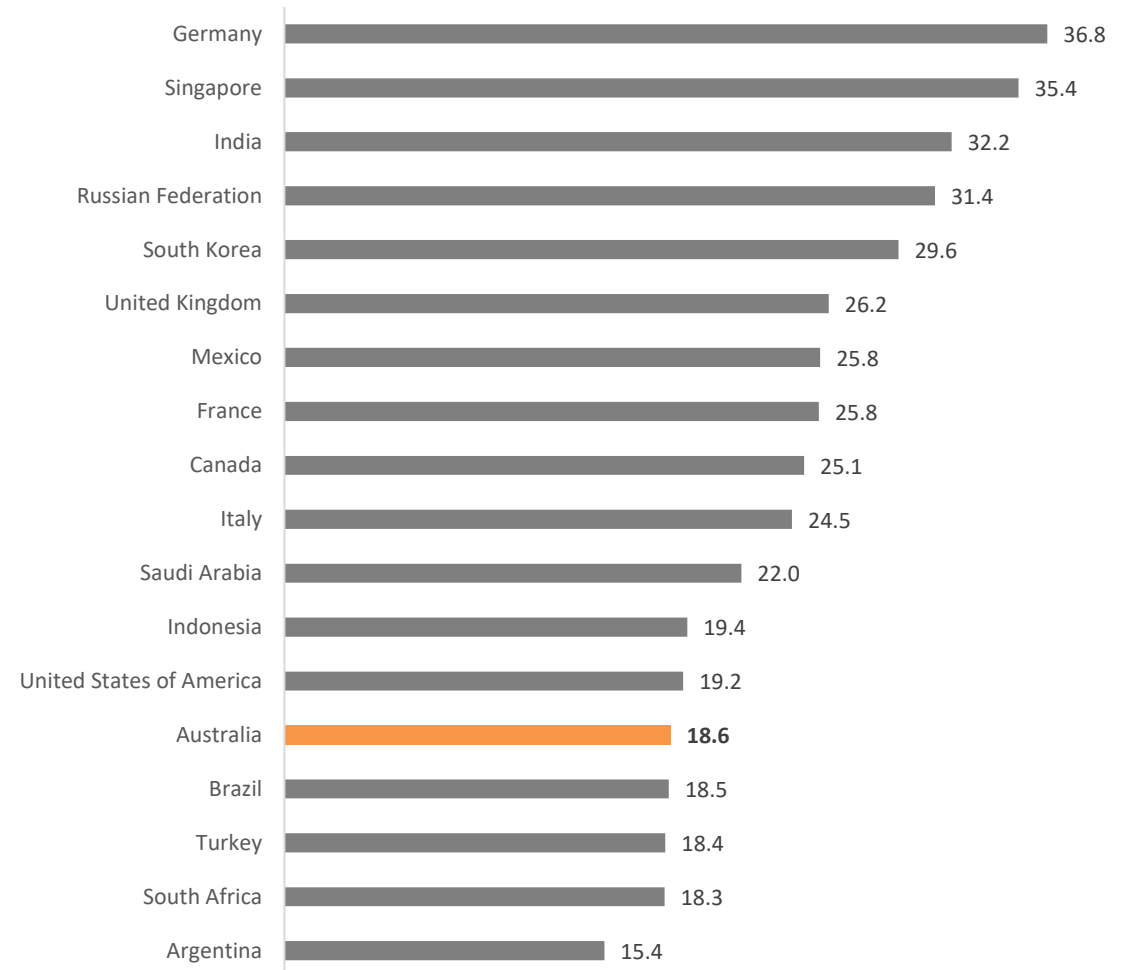
Characteristics of Australian University Science

Australian higher education is skewed towards business and away from STEM, which will likely be exacerbated by the JRG funding model

Percentage of graduates from tertiary education graduating from Business, Administration and Law programmes, both sexes (%)



Percentage of graduates from Science, Technology, Engineering and Mathematics programmes in tertiary education, both sexes (%)

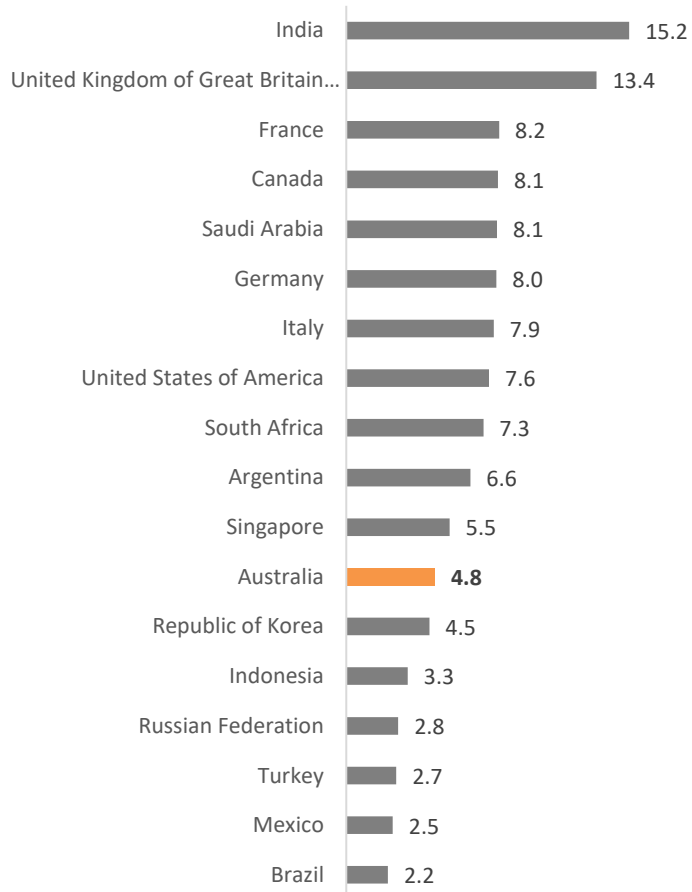


Source: UIS.Stat

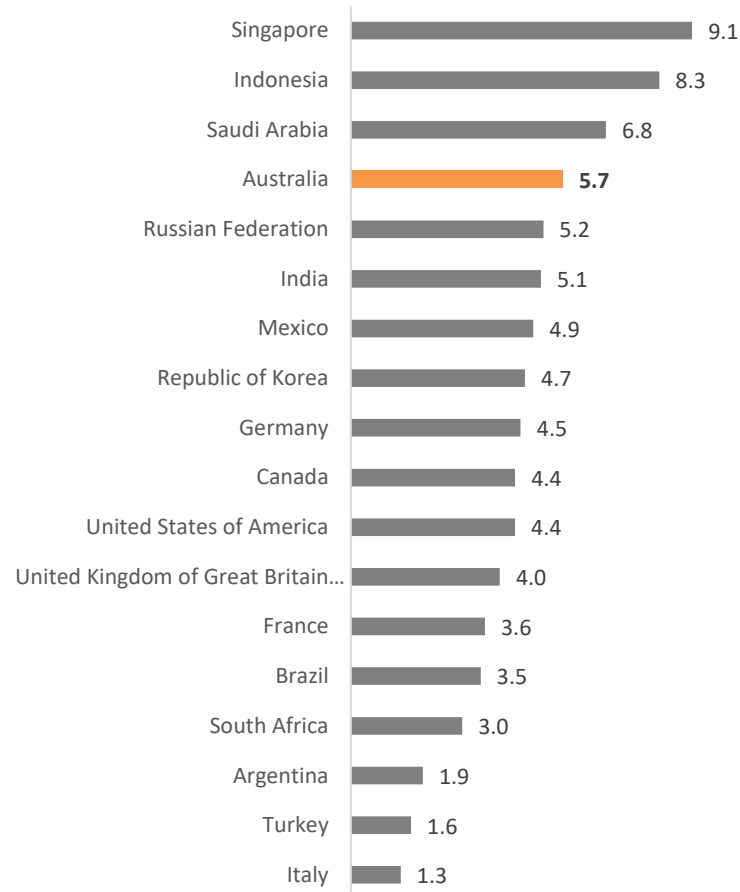
Within STEM, Australian HE is particular weak in natural sciences and engineering

Percentage of graduates from tertiary education graduating, both sexes (%)

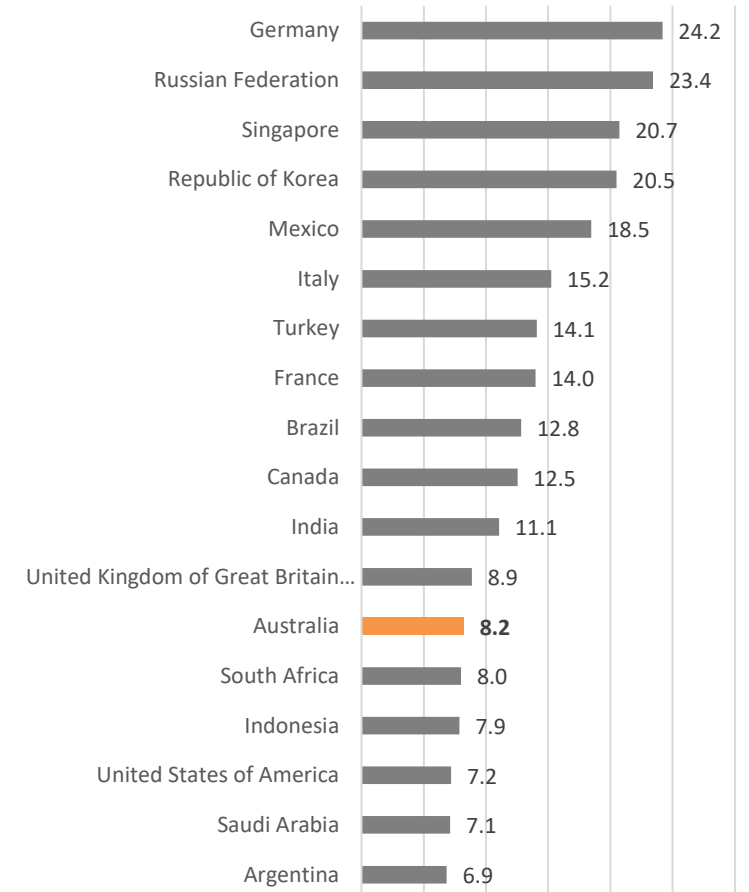
Natural Sciences, Mathematics and Statistics programmes



Information and Communication Technologies programmes



Engineering, Manufacturing and Construction programmes

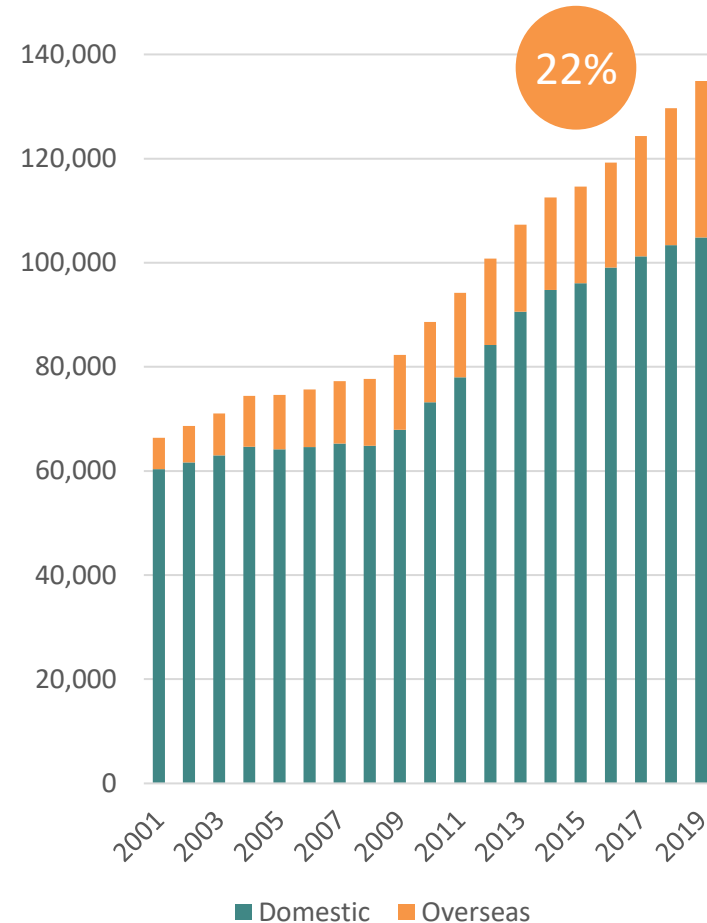


Source: UIS.Stat

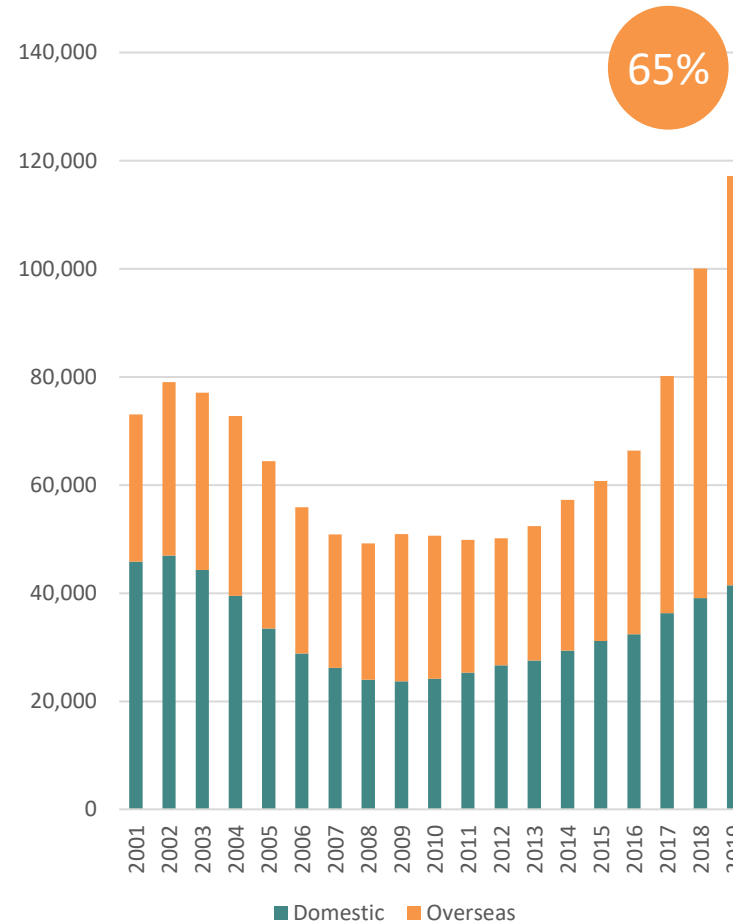
Australia has amongst the highest proportions of international students (26.5%), but even so, IT and Engineering have a very large and growing proportion of international students

Enrolment Count by Year by Citizenship Category by Field Of Education

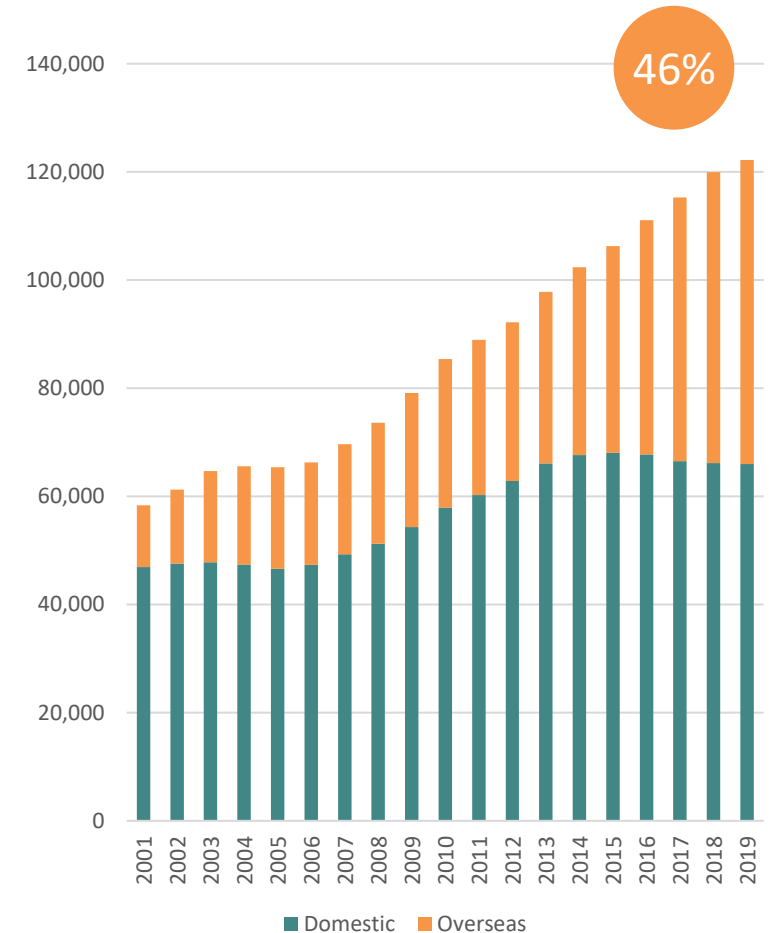
Natural and Physical Sciences



Information Technology



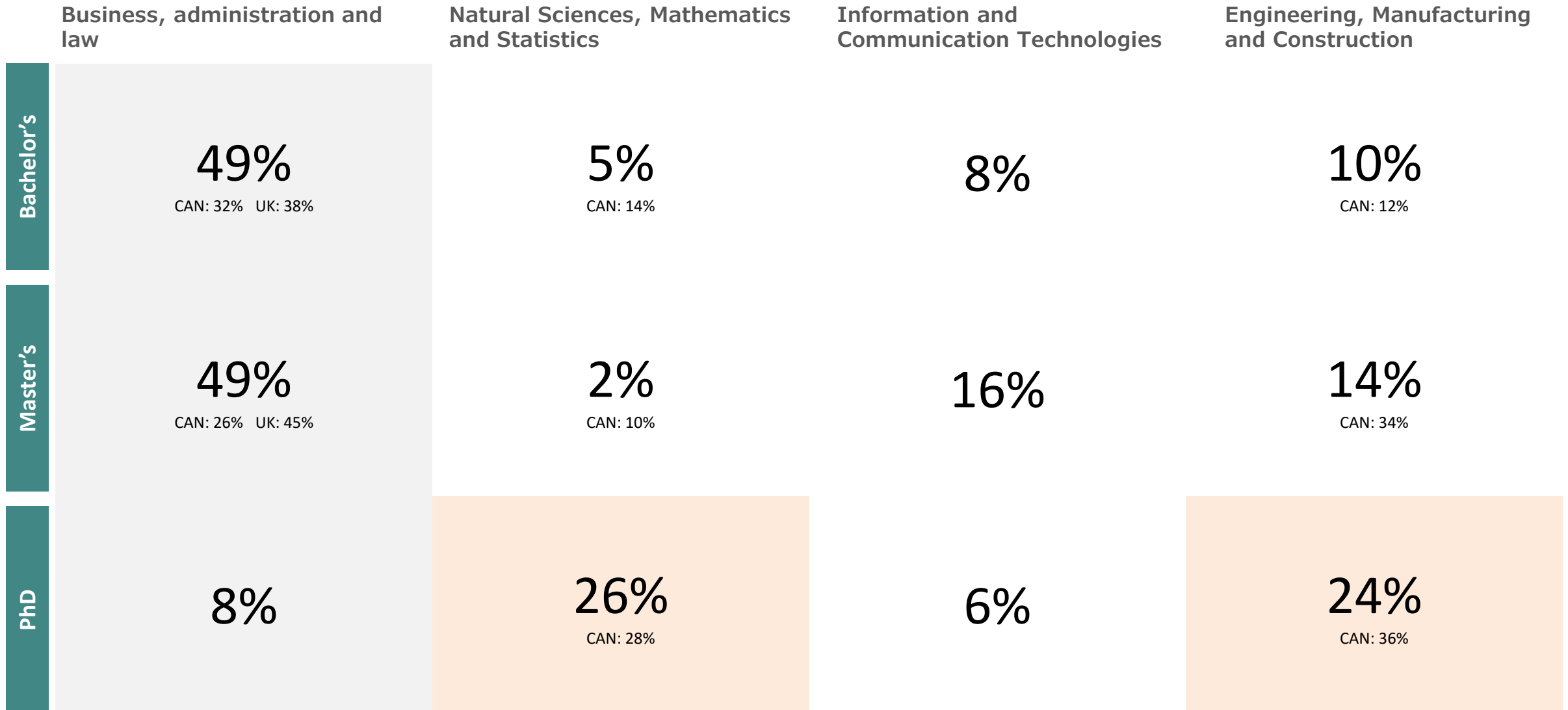
Engineering and Related Technologies



Source: UCUBE

Within STEM, Australian HE is reliant on international students (1 in 4) to populate the PhD workforce in natural sciences and engineering

Share of mobile graduates by field (Australia/Canada/UK)



Source: OECD.Stat

Within STEM, Australian HE is reliant on international students to populate the PhD workforce in natural sciences and engineering

Share of mobile graduates by field (Australia)

Business, administration and law

Natural Sciences, Mathematics and Statistics

Computer science and information technology

Engineering, Manufacturing and Construction

QS

7/100

Social Sciences and Management

6/100

Natural Sciences

7/100

Computer Science and Information Systems

6/100

Engineering and Technology

THE

5/100

Business and Economics

5/100

Physical Sciences

7/100

Computer Science

8/100

Engineering

LEIDEN

9/100

Social Sciences and Humanities

8/100

Life and Earth Sciences

1/100

Mathematics and Computer Science

1/100

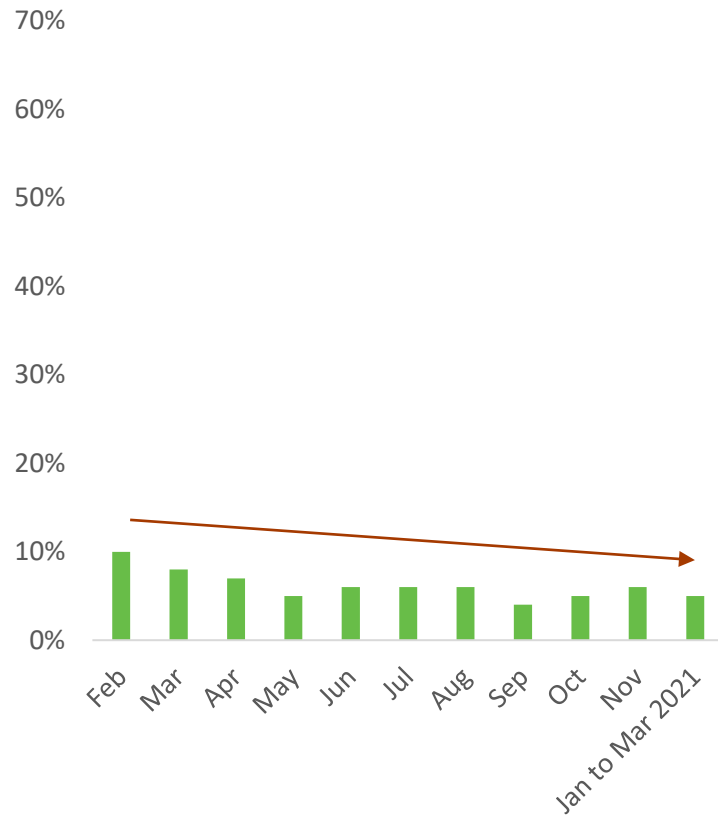
Physical Sciences and Engineering

Source: OECD.Stat

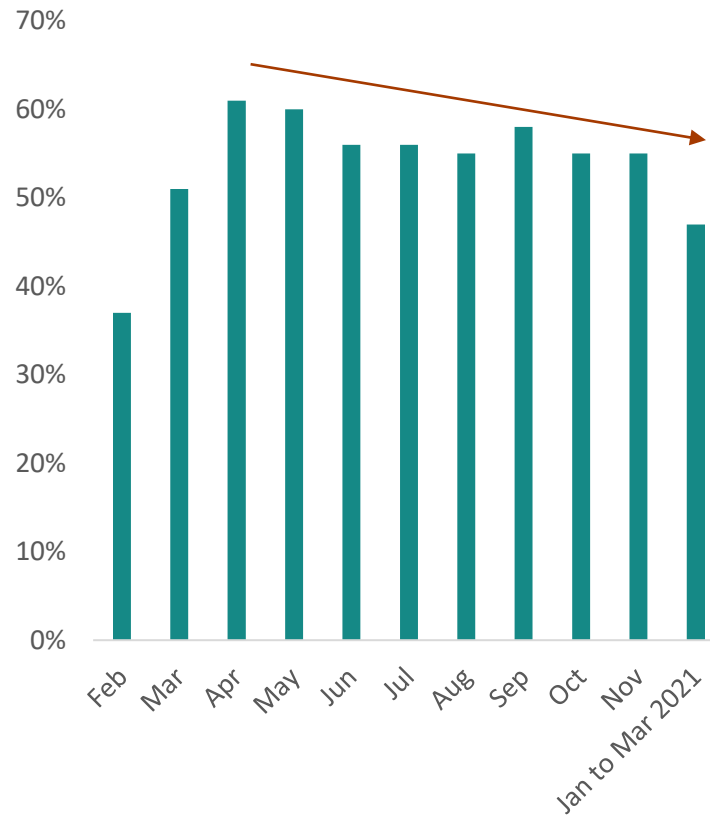
Global challenges for Australian Higher Education

Students will continue to be sticky and committed, but in 2021-22 they will increasingly seek to change destinations rather than keep waiting

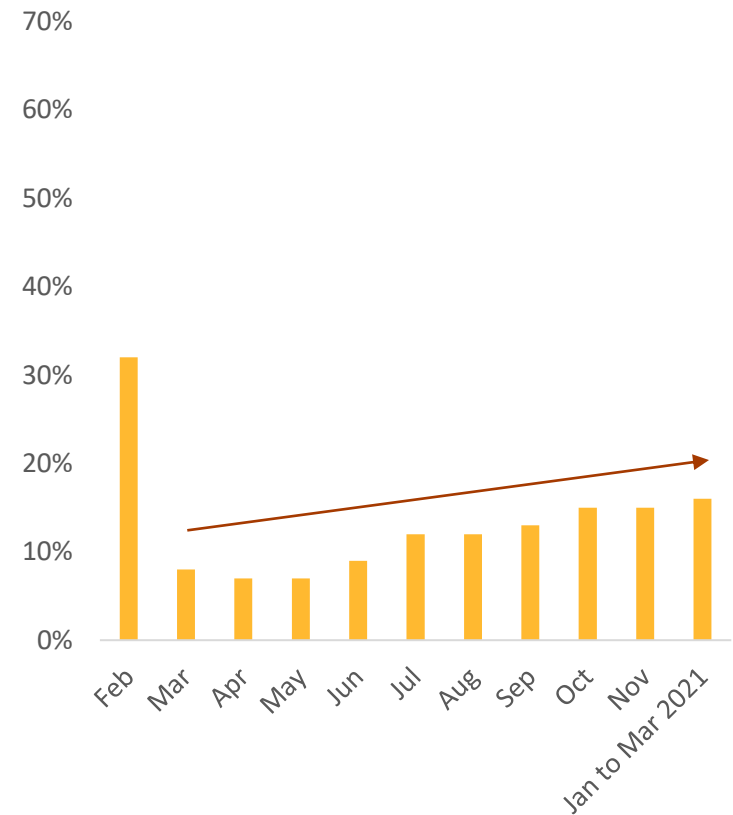
Students impacted by COVID-19 that say “I no longer want to study overseas” is still low and trending down.



The largest group has always been those that plan to “defer or delay to next year” – we are now in next year!



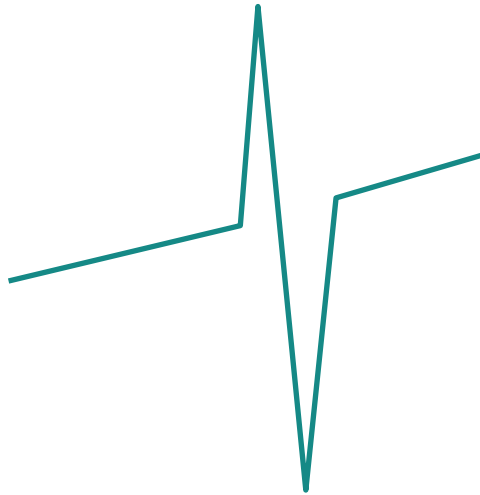
Students that say “I now intend to study in a different country” is now approaching 20%.



Source: QS Impact of coronavirus on global higher education (n = 66,000, Feb to Aug), QS September 2020 and beyond (n=3,000, Sept), QS Higher Education In 2020: How Covid-19 Shaped This Year (Feb to Nov), Evolving education amidst crisis: The perspectives of international students (Jan to Mar)

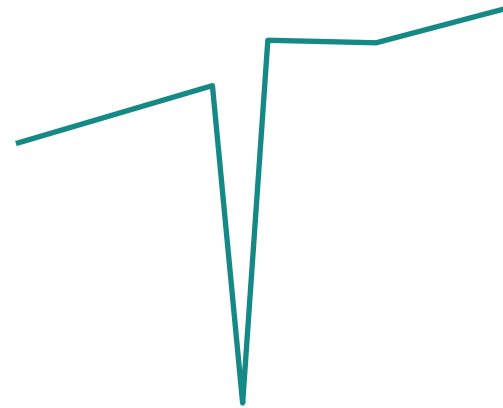
Sudden Surge or Slow Recovery? The impact of COVID-19 will generate four types of trajectories for different industries

The TP Spike



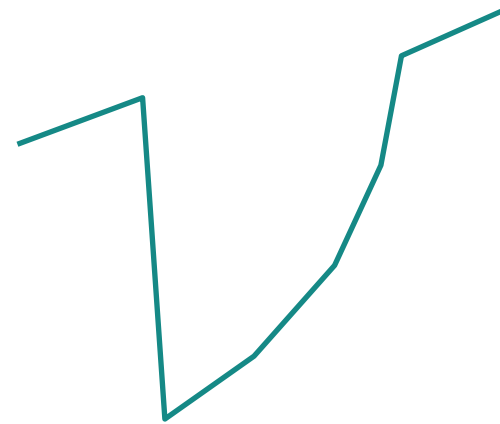
Toilet paper, bicycles,
computer monitors

The One-Off Blip



Holidays, haircuts,
perishable exports

The Slow Trek Back



Large indoor events,
major CAPEX
(also the shape of the
GFC recovery)

The Sharp-Dip and Catch-up Rebound



Almost everything
else

Government policy, vaccine efficacy and economic performance are the key factors that are determining the timing of the catch-up rebound

Australia is softening its stance on international borders but uncertainty remains and a fragmented reopening is likely in 2022

Return to 'normal' requirements	H2 2021	H1 2022	H2 2022
The vaccine roll out will be complete	●		
Borders will be open	●	●	
Flights will be available	●	●	
Quarantine will no longer be required	●	●	●
Visas will be available	●		
F2F teaching will resume	●	●	
Economy is in recovery	●	●	
Underlying pre-COVID momentum/demand		●	

Return to 'normal' expected in H2 2022

With the announcement of quarantine requirements being lifted for vaccinated travellers and guaranteed visa turnaround times, Canada's fall recovery is on track

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Borders will be open	●	
Flights will be available	●	
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F2F teaching will resume	●	
Economy is in recovery	●	
Underlying pre-COVID momentum/demand	●	

Return to 'normal' expected in H2 2021

Notwithstanding its mishandling of COVID, the UK's rapid vaccine roll-out and recent track record for visa processing and open borders makes a 2021 recovery very likely

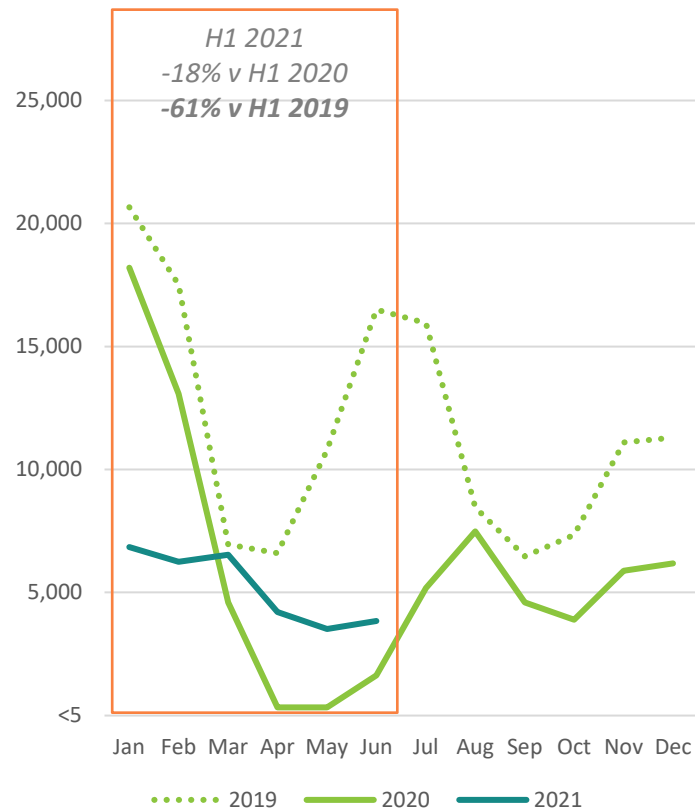
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Return to 'normal' expected in H2 2021

In this post-pandemic recovery, the UK already has a clear head start over Canada, with Australia lagging far behind

Australia continues with visa processing but offshore grants are at -61% compared to pre-COVID

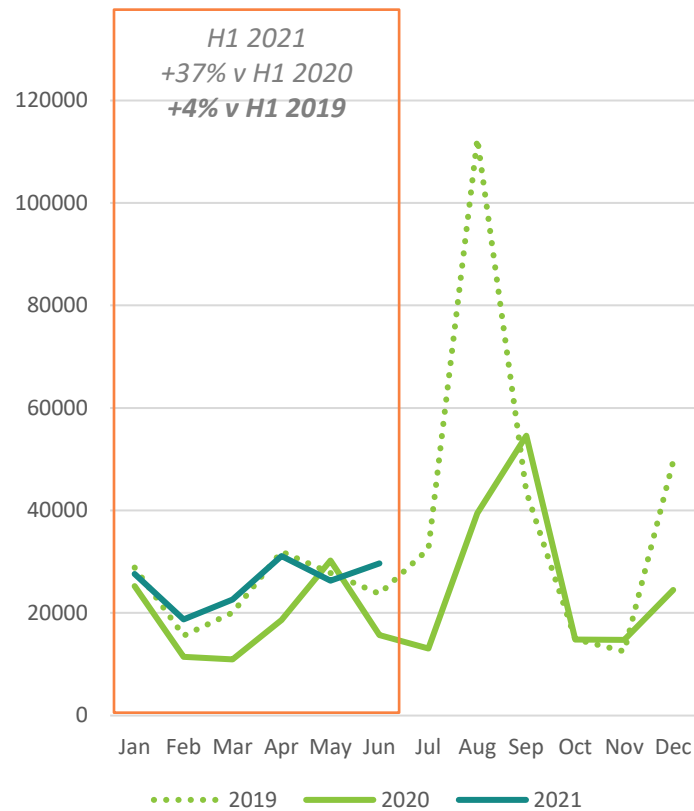
Australian HE Sector visa offshore grants – Difference month-by-month 2019, 2020, 2021



Source: DHA pivot table, offshore grants only

Canada has recovered to pre-COVID levels, and could yet build momentum for the fall

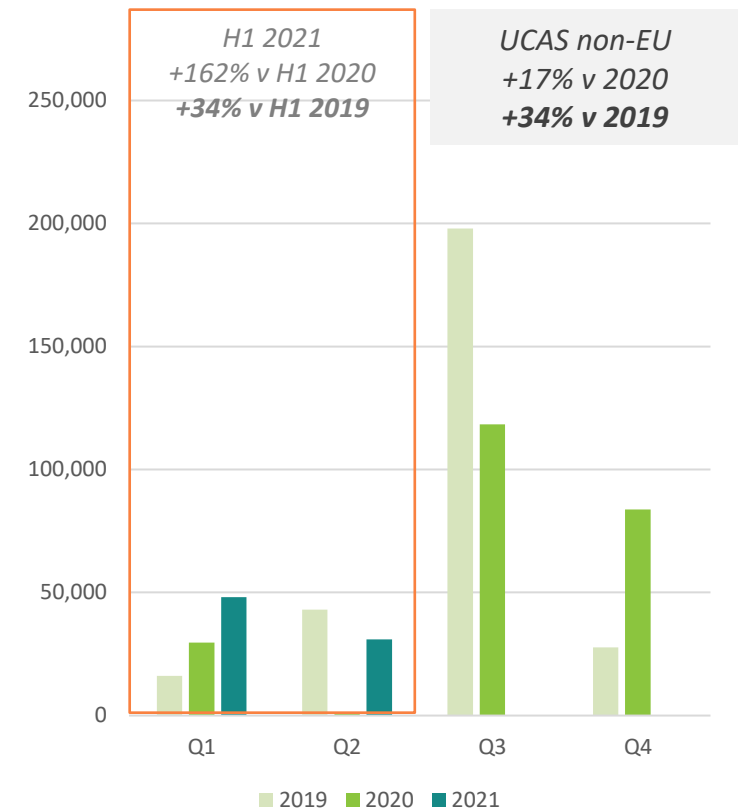
Canadian New Study Permit Holders – Difference month-by-month 2019, 2020, 2021



Source: IRCC, includes college sector, includes extensions

The UK's recovery commenced in Q4 2020 and remains well ahead in H1 2021 compared to pre-COVID

UK Visas issued for applicants of sponsored study visas – 2019, 2020, 2021

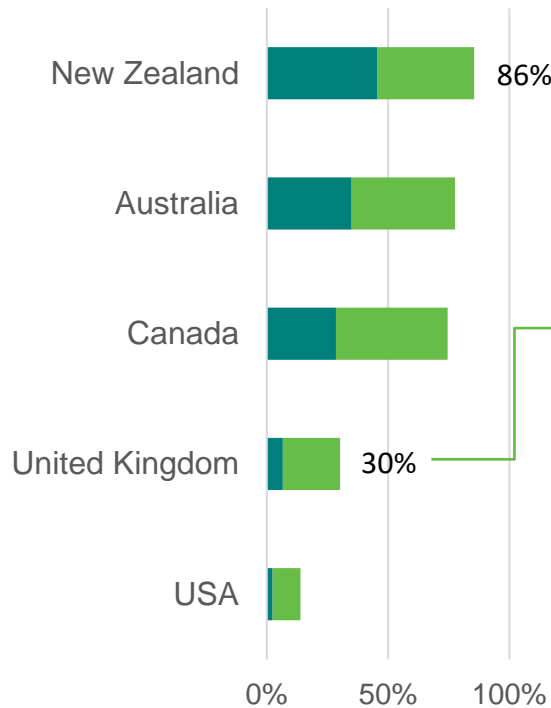


Source: Home Office, includes all sectors, includes extensions

The emergence of the Winning North and the Losing South

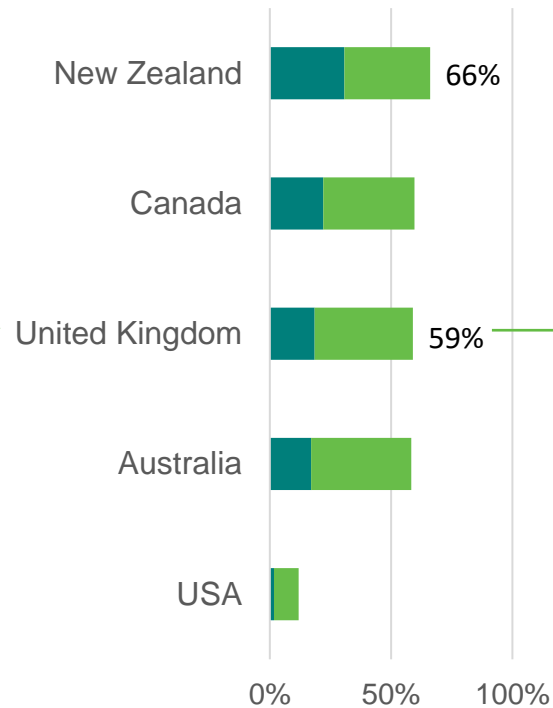
"Over the past two months, the way this country's government has handled coronavirus has made it a more attractive study destination."

Phase 1: Cases, Crisis, and yet Commitment



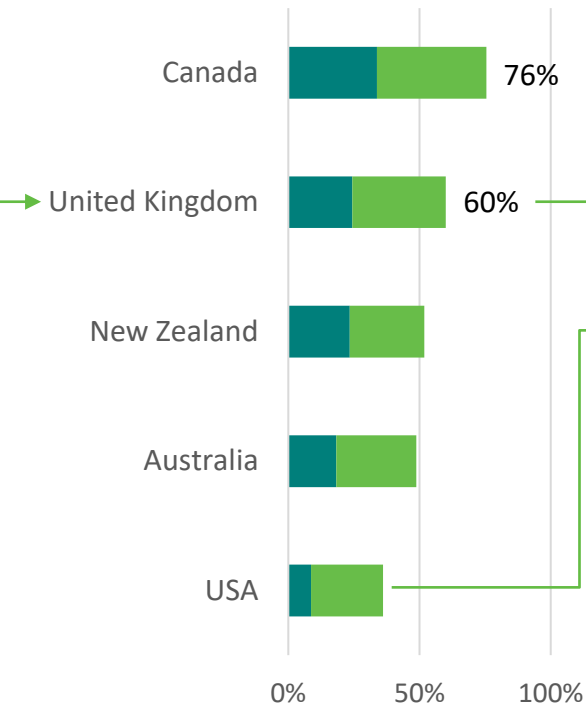
Source: Navitas Agent Survey, Round 1 (May 2020 n=340)

Phase 2: The Calm and the Momentary Opportunity



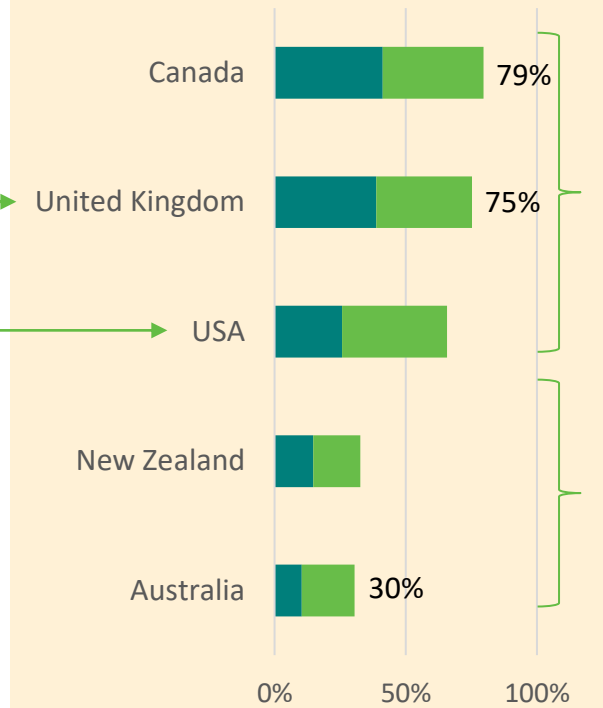
Source: Navitas Agent Survey, Round 2 (Sept 2020 n=292 agents)

Phase 3: The Sudden Surge or the Slow Recovery?



Source: Navitas Agent Survey, Round 3 (March 2021 n=888)

Phase 4: The Winning North versus Losing South



Source: Navitas Agent Survey, Round 4 (Oct 2021 n=1,031)

Five factors will strengthen the northern hemisphere upturn in the next 2-3 years, while Australia and New Zealand suffer from long-COVID

1. REDUCTION IN CAPACITY



The impact of COVID-19 will see:

- The visible closure of colleges that are no longer able to sustain zero revenues.
- The less visible loss of capacity as institutions and universities scale back or consolidate their program offering.

2. TRANSFER OF CAPABILITY



The loss of capability will come from:

- Academic staff with cultural competence and pedagogical expertise for working with foreign students and non-native English speakers.
- Professional staff, especially in international offices, with relationships and offshore know-how for student recruitment.

3. TEMPORARY LOST ADVANTAGES



The dilution of systemic advantages that Australia has held in the past include:

- The loss of key staff that gain employment in institutions from other countries.
- The weakening (or indeed loss) of relationships with agents in market
- The closure of Australia-focused desks at large agencies.

4. PATH DEPENDENCY



Path dependency of student choices will shift in favour of other countries when:

- There are siblings in the same city or country
- The family owns property or holds an existing lease
- There are relatives with whom students are able to reside.

Future cohorts of students will be biased away from Australia/NZ as a result.

5. REPUTATIONAL LAG EFFECTS



Australia and New Zealand's present reputation for being less than hospitable to international students will have an adverse impact on the current pipeline of students e.g. those currently in high school may turn to other destinations when they graduate in a few years.

The shortfall in international student fee revenue may also have a longer term impact on research rankings.

International students are an important part of science faculties, which face disproportionate challenges post-COVID

Australia has a challenge in keeping up with other countries when it comes to science HE

International students make up growing proportion especially at PG level

Australia is especially reliant on international students for its PhD workforce

Long-COVID effects on international education will have repercussions for science faculties