Australian Government
Australian Trade and Investment Commission

THE 2021 AUSTRALIAN ARTIFICIAL INTELLIGENCE EXPORT SURVEY

Contents

Executive summary

Artificial intelligence (AI) has a growing role in Australia's export economy. It is helping existing exporters to improve their products and become more competitive in global markets. And Australian expertise is devising new AI-based products and services and exporting those directly.

Austrade undertook an industry survey of 85 AI technology organisations in mid-2021. Our goal: to help policy makers and the technology industry gain a better understanding of the role of AI in Australia today.

The *'2021 Australian Artificial Intelligence Export Survey'* identifies areas of commercial success for Australian AI technology in overseas markets. It also identifies barriers to growth that could be addressed by industry and government.

Results summary

The survey provides deep insights into Australia's internationally focussed AI-enabled companies. This includes the technologies they use, the industries they sell to, and the customer segments they service. Key highlights include:

- Most respondents are startups or small business with less than AUD5 million in revenue.

- The majority service other businesses including enterprise customers and government customers. Few are servicing consumers directly.

- The top sectors serviced by Australian AI companies are Defence, Mining and Energy, Agriculture, and Healthcare.

- Approximately 65 per cent of companies surveyed are currently exporting, with an additional 14 per cent having previously exported.

- 50 per cent of exporters noted a country in the Americas as their top export destination, with the US featuring most prominently.

- 24 per cent identified a country in Europe as their top export market, led by the UK.

- 16 per cent identified a country in APAC (excluding Americas) as their top export market.

Australian AI is already going global

The survey shows that for those companies that do trade overseas, exporting is a significant contributor to total revenue. Overall, 34 per cent of those that export claim that export revenue contributes over 50 per cent of their total revenue. Considering that most respondents were startups or small business, this indicates that AI companies are 'going global' fast.

In terms of challenges, respondents said that COVID-19 has been the greatest barrier for existing exporters. The pandemic has made it difficult for them to access international customers, undertake business development and build global teams. For non-exporters, their readiness to export and limited international network have been barriers for them to commence exporting.

The survey highlights the specific needs of firms with global ambitions. It will be a useful reference for Australia's AI innovation community. The survey will also provide context for accelerator programs and start-up hubs that aim to drive capability growth.

If you want to know more about the survey results, please reach out to Austrade Advanced Technology and Manufacturing Centre of Excellence at **AdvTechManuCoE@austrade.gov.au**.

The survey

Austrade helps Australian AI businesses build export capability, connect to foreign markets, and solve industry problems globally. To ensure our support is evidence-based, Austrade conducted a survey of AI organisations in mid-2021.

Respondent demographics

The survey received responses from **85** organisations, with **83 per cent** of the participants from an executive level role.

Capabilitites and customers

87 per cent of respondents identified as having Machine Learning (ML) capabilities, followed by Deep Learning with 66 per cent and Computer Vision. 54 per cent of respondents said their business employed multiple AI technologies in their solutions.

Participants most commonly service other businesses and government. A few have developed solutions to service consumer customers.

Business to business (B2B) is the most prominent segment serviced with 76 per cent of respondents servicing other businesses. This is followed by enterprise customers (B2E) and government (B2G) customer segments. While AI solutions are embedded in many consumer products from financial services to retail, the businesses which responded to the survey are typically applying their capabilities to service other organisations.

Machine learning (ML)
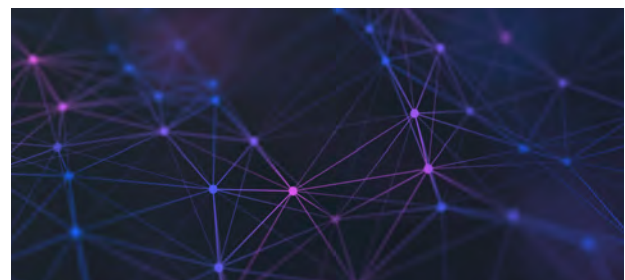
Machine learning (ML) is a sub field of AI. It refers to a computer system with the ability to learn from experience and feedback without being explicitly programmed to do so. ML is used to make predictions and conclusions on the basis of data. Machines learn by updating their internal model based on observed data, with the aim of performing ever more accurate predictions on future data. Machines can also be engineered to adapt to complex changing environments and adapt their responses based on the data they receive.

The global machine learning market is projected to grow from $7.3B in 2020 to $30.6B in 2024, attaining a CAGR of 43%

Source: Market Research Future, Machine Learning Market Forecast Report – Global Forecast to 2024.

Top selling industry verticals

The most common industry verticals currently serviced by AI businesses are Aerospace, Defence & Security followed by Mining, Resources & Energy, Agriculture, and Healthcare.

Aerospace, defence & security
50.6%

Other
21.7%

Mining, energy & resources
43.4%

Construction & infrastructure
20.5%

Agriculture
33.7%

Education
18.1%

Healthcare
33.7%

Automotive
14.5%

Transport
32.5%

Consumer
13.3%

Information technology services
30.1%

Real Estate
12.0%

Financial services
26.5%

Media
9.6%

Logistics
26.5%

Entertainment
8.4%

Retail
25.3%

The industry verticals serviced results demonstrate the versatility of Australian AI solutions and its applicability to a range of industries. Of the 85 respondents:

- 74 per cent noted they service **two** or more industry verticals.
- 58 per cent service **three** or more industry verticals.
- 48 per cent service **four** or more industry verticals.
- 38 per cent service **five** or more industry verticals.

74%
2 or more industries

58%
3 or more industries

48%
4 or more industries

38%
5 or more industries
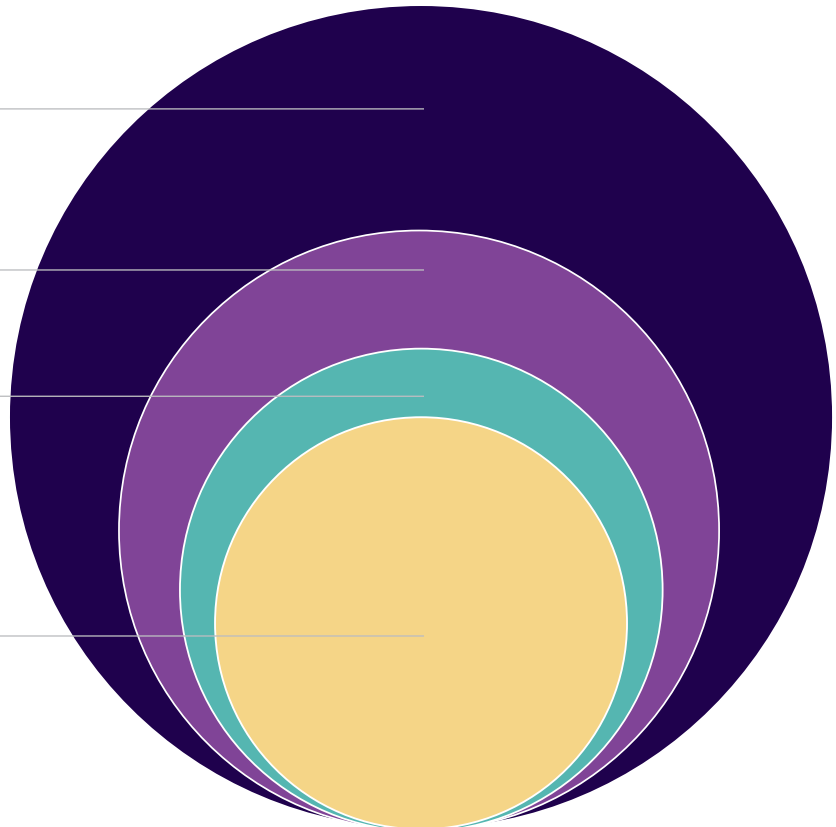
To further emphasise the diverse applications of Australian AI solutions, the diagram below shows that out of 36 AI businesses servicing Mining, Energy and Resources, 22 service Aerospace and Defence, 21 service Defence and Security and Transport respectively, and so on.

Mining, Energy & Resources

36
respondents

22	Defence & Security	**14**	Logistics
21	Aerospace & Defence	**11**	Retail
21	Transport	**10**	Automotive
19	Agriculture	**10**	Education
15	Construction & Infrastructure	**6**	Real Estate
15	Financial Services	**5**	Consumer
14	Healthcare	**4**	Media
14	Information Technology Services	**3**	Entertainment

Turnover

The majority of participants in the survey are small businesses or startups, based on income. 70 per cent had total revenue of less than AUD5 million, while 42 per cent had total revenue of less than AUD1 million.

Total turnover in 2019/2020 (AUD)

3.61%
Above 20 million

42.17%
Less than 1 million

15.66%
Between 5 million and 19.99 million

27.71%
Between 1 million and 4.99 million
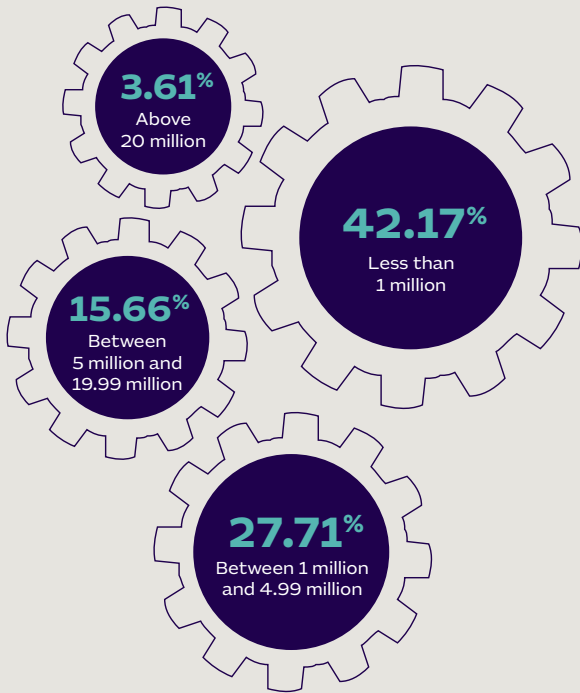
What percentage of exports made up your organisation's total turnover last financial year? (2019/2020)

- 40% — 0–24%
- 18% — 25–49%
- 14% — 50–74%
- 20% — 75–100%

Exporter highlights

The majority of respondents – 65 per cent – are currently servicing customers in international markets. Of the 34 per cent that are not currently exporting, over half had previously tried. This indicates the global nature of these businesses.
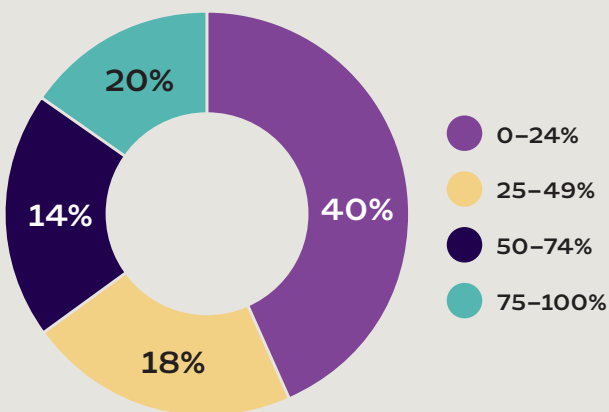
Export revenue

Approximately 34 per cent of exporters reported that 50 per cent or more of their total revenue is derived from exports. 20 per cent noted that 75–100 per cent of their revenue is derived from exports, demonstrating AI businesses reliance on overseas sources of income.

Overseas markets serviced

Unsurprisingly, when asked to share the current top 3 country export destinations by revenue, the US and UK featured most prominently. 76 per cent of respondents list the US in their top 3, 38 per cent the UK followed by 14 per cent for Germany.

Top export markets – current

Germany **14%**

UK **38%**

Canada **10%**

US **76%**

Japan **6%**

UAE **4%**

Singapore **12%**

Chile **6%**

South Africa **4%**

New Zealand **10%**
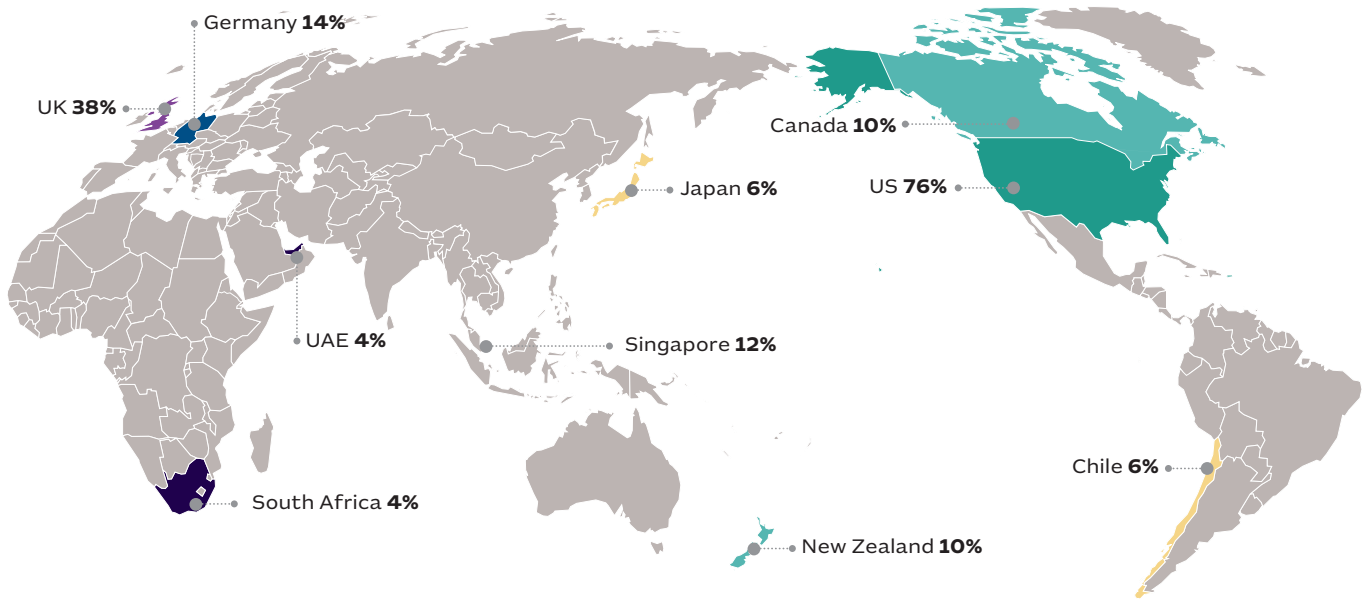
When narrowing down to the number one export market, 38 per cent of exporters cited the US as its number 1 market and 20 per cent the UK.

Exporters were also asked to share the top 3 export markets they would like to target next. While the US and UK also lead in markets that AI businesses want to export to, highlighting the immense customer opportunity in each location, there's a divergence between responses to current and future export destinations.

AI exporters want to lift their sales in Canada and Japan. Countries like France, Brazil and India that don't feature in the current top markets are being targeted.

Top export markets – future

Germany **13%**

UK **33%**

Canada **31%**

US **63%**

Japan **10%**

India **6%**

France **8%**

Chile **6%**

Brazil **8%**
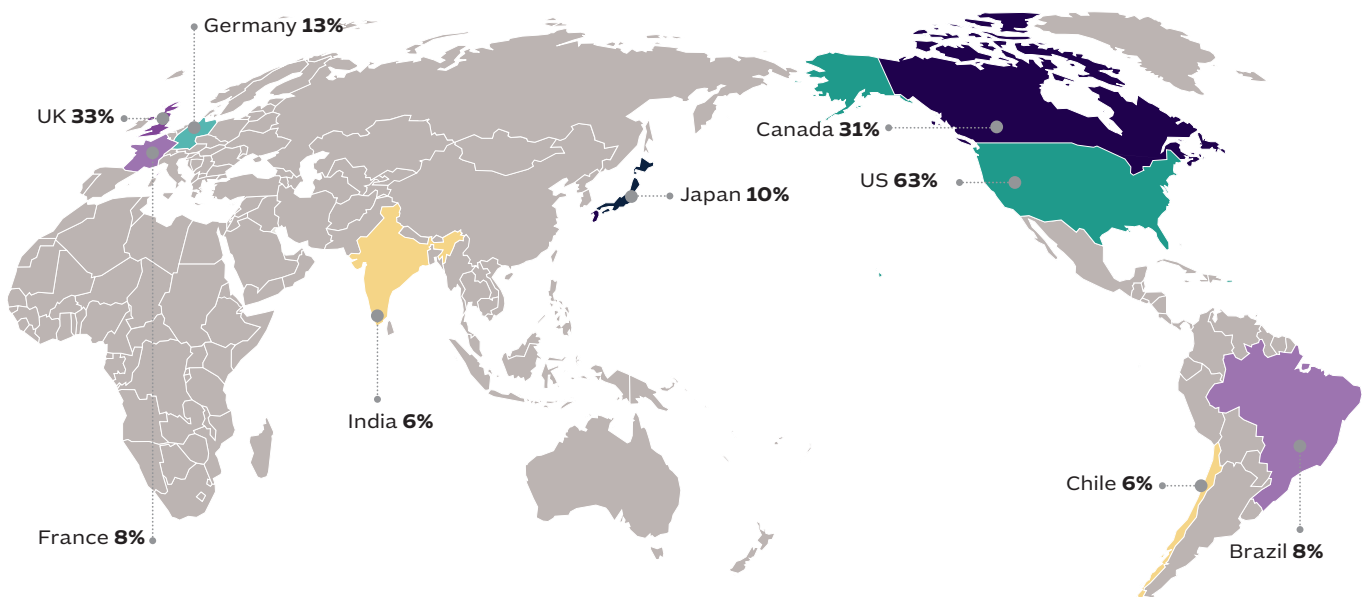
Overseas industries serviced

Exporters target a wide range of industry verticals in overseas markets. The top target market is Defence, Aerospace & Security. This vertical was selected by 14 per cent of the 50 current exporters.
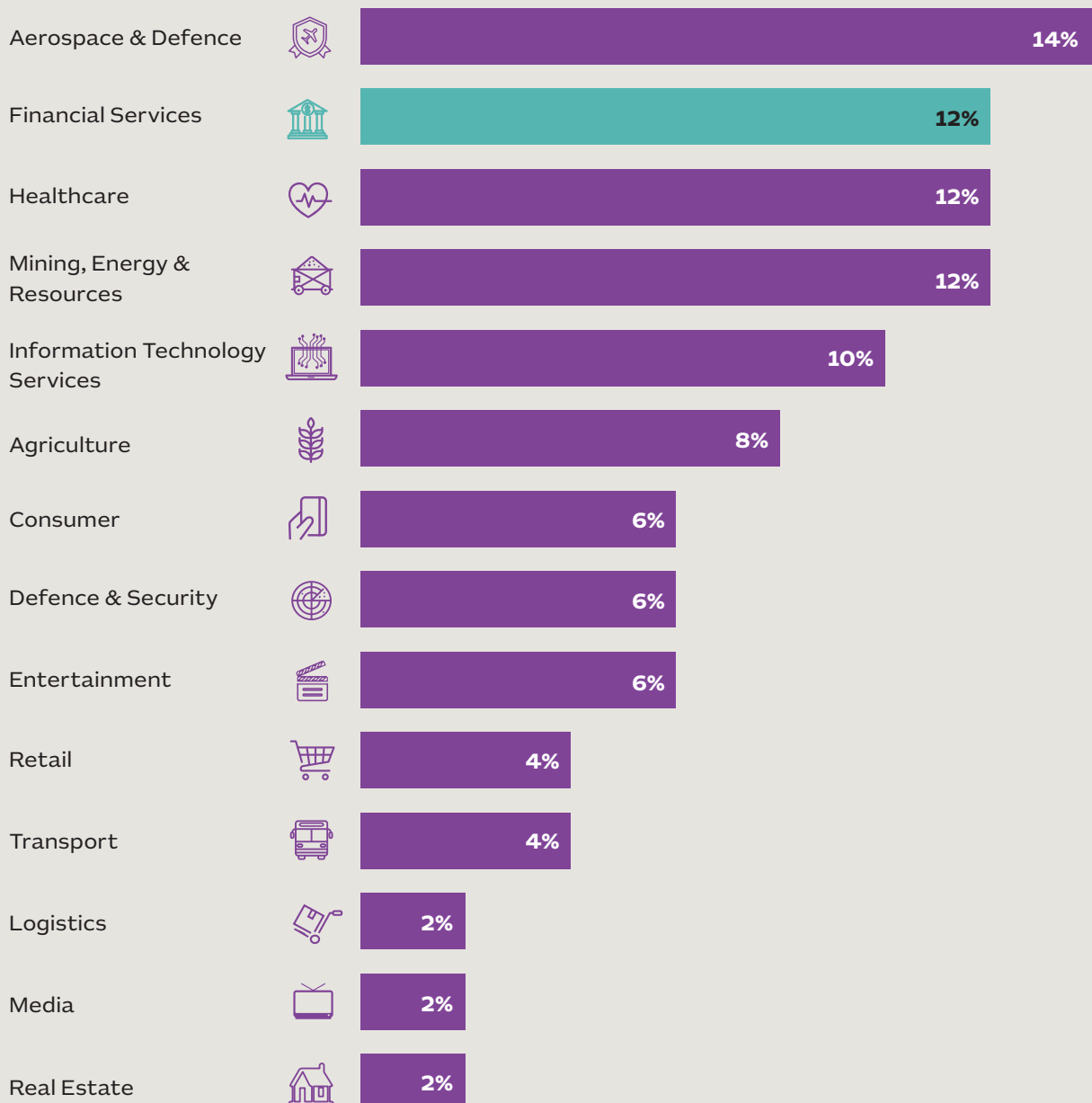
12 per cent selected Financial Services, Healthcare and Mining, Energy & Resources each, followed by Information Technology Services at 10 per cent.

Interestingly, when asked earlier to share their top industry verticals overall, Financial Services was 8th. However, here as an export priority it sits 2nd. Similarly, Healthcare and Information Technology Services ranked higher as an export vertical.

Top export industry verticals

Industry	%
Aerospace & Defence	14%
Financial Services	12%
Healthcare	12%
Mining, Energy & Resources	12%
Information Technology Services	10%
Agriculture	8%
Consumer	6%
Defence & Security	6%
Entertainment	6%
Retail	4%
Transport	4%
Logistics	2%
Media	2%
Real Estate	2%

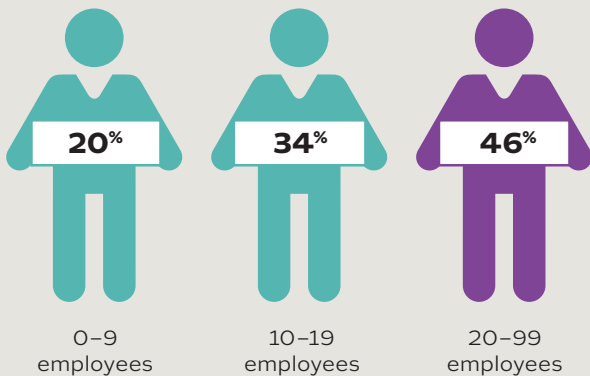## Exporter demographics

The survey asked AI exporters about their current and future employment plans. 46 per cent indicated they currently employ between 20 to 99 full-time staff.

How many full-time staff do you currently employ?

| **20%** | **34%** | **46%** |
| 0–9 employees | 10–19 employees | 20–99 employees |

All exporters said they plan to hire more employees in the next 12 months.

How many employees are you intending to employ in the next 12 months?

| **24%** | **22%** | **18%** |
| 1–5 employees | 6–10 employees | 11–20 employees |

32%

> 21 employees

Percentage of respondents that preferred not to disclose has not been included.

When asked about capital raising, 92 per cent of exporters indicated they intend to raise funding in the future. Of this group, 83 per cent are planning to execute a capital raise in the next 12 months. Viewed alongside employment intent, it is clear that AI exporting businesses are highly optimistic in terms of growth outlook.

Challenges and barriers faced by exporters

The survey sought insights on the challenges and barriers experienced by exporters in taking solutions global. Unsurprisingly, COVID's impact was cited most frequently. The impact spanned the ability to network with potential customers, the ability to generate leads, and the ability to hire the right staff to take their businesses forward in overseas markets.

Representative comments include:

"Travel limitations, due to COVID-19, have impacted the ability to access clients, conduct research and clinical trials in hospitals and aged care facilities."

"The restrictions on travel due to COVID are currently our largest challenge. The ability to access the market and to be physically present for face-to-face meetings and events limits relationship building and business transaction opportunities."

Respondents also said that the lack of relevant connections restricted export opportunities. Without brand recognition and awareness – and the marketing budget needed to change this – some companies said they struggled to compete in overseas markets.

"Lead generation is easy enough but getting the opportunity to engage with the 'right' people at those companies is the trick."

AI exporters noted the following as challenges to going global:

- "… [A] ….lack of networks into overseas industries."

- "… [A] ….lack of brand recognition in the new markets; time to learn to navigate the overseas markets."

- "The company struggles to obtain connections to relevant government entities and city decision-makers."

Austrade is well placed to help Australian AI businesses understand local culture, and to connect into overseas networking channels. This would help Australian AI-enabled companies to overcome some of their current exporting challenges.

Creating the right mix of policies, governance, learning development and support will strengthen Australia's AI instruments and enable a growing economy offering jobs and prosperity. This will help Australian AI businesses address current challenges.

Challenges and barriers faced by non-exporters

When asked to identify factors that impact their ability to export or attempts to export, a majority of non-exporting respondents emphasised that they were at too early a stage in their growth path. Other barriers in common with exporters included networks in overseas markets, travel restrictions due to COVID-19 and limited funding to scale internationally.

Limited networks and connections into the right people in the right customers appears to be the significant obstacle to gaining traction in overseas markets.

A number of non-exporting AI businesses noted that "they don't have the contacts to potential international customers."

"I can't source effective partners in international markets. My organisation requires help to identify new market opportunities."

Austrade, with its global footprint of 80+ offices in over 40 countries, can help AI businesses land and expand in global markets. Austrade can help open doors, unlock opportunities and help Australian businesses go further, faster.

A bright outlook

As the Australian and global economies start to bounce-back after the massive disruption caused by COVID-19, Australian AI technology businesses are poised to seize opportunities in overseas markets. Australia's innovative AI solutions, solving a variety of problems, are in demand globally.

If you're an Australian AI business, ensure that you've undertaken your due diligence before committing to international expansion. Carefully select your target markets, partners and potential customers to mitigate risks.

Austrade is well placed to support Australian AI businesses that are ready for global expansion, put a plan in place to succeed and execute on it.

A bright outlook