

2025

The RDTI Review FY2021-22

kashcade

Contents

The RDTI Program: A word from Kashcade	<u>3</u>
Key Takeaways	<u>4</u>
An Introduction to the RDTI Program and the ATO's Transparency Report	<u>5</u>
RDTI Company Survival Rates	<u>10</u>
Age of RDTI Companies	<u>13</u>
Size of RDTI Companies	<u>16</u>
RDTI Across Industries	<u>21</u>
RDTI Across Geographies	<u>28</u>
R&D Employment/Jobs	<u>42</u>
Australia's R&D System	<u>52</u>
Closing Note: Food For Thought	<u>57</u>
Appendix	<u>59</u>

The RDTI Program: A Word From Kashcade

Kashcade funds innovative Australian companies that are eligible under the R&D Tax Incentive (RDTI) by lending against their expected end of year tax refund.

The RDTI is a cornerstone of Australia's innovation ecosystem, providing essential support to businesses across industries. With expenditure claimed under the program growing 3.5% per annum in recent years, it remains paramount.

Our analysis of the ATO's Transparency Report for FY2021-22 reveals the program's vital role in enabling Australian companies, whether early-stage startups or established enterprises, to pursue bold ideas and drive long-term economic growth.

As a nation, Australia faces a challenge: to move beyond reliance on traditional industries and embrace innovation as the engine of our future economy. While other countries ramp up their R&D investment strategies, we must understand and adjust our own to remain competitive.

The RDTI is Australia's flagship innovation program, and it helps businesses access the financial resources to take risks, test ideas, and deliver transformative breakthroughs. It supports a range of businesses investing in innovation – from biotechs, to software, to advanced manufacturing – helping Australia take big bets on cutting-edge innovations and truly compete in the global arena.

At Kashcade, we are proud to support the businesses that are taking risks and bolstering Australia's future. Our analysis of the ATO Transparency Report data highlights the extraordinary impact this program is already having, and our hope is that our analysis provides more insight enabling both program administrators and participants to discuss what more our nation can achieve with the RDTI.

Thank you for being part of this conversation. We hope you find the insights in this report inspiring and actionable in helping propel Australia forward.



One of the most pertinent insights from the data was that the vast majority of RDTI recipients are small, early-stage companies.

For many of them, the RDTI isn't just helpful - it's existential. Without it, these companies wouldn't have the resources to keep building break-through innovations.



— Patrick Nappa,
Kashcade Co-Founder & CTO

Key Takeaways

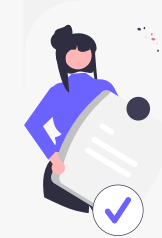
Small, private companies made up an overwhelming **majority of claimants** (age, # employees, private status).



The median RDTI spend was **\$329k**, and average was **\$972k**.



Strong correlation with RDTI and survival rates - **RDTI claimants had a 13x lower failure rate** than that of the average AU company.

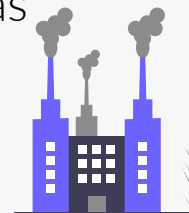


R&D expenditure is overwhelmingly concentrated in **central business districts**, highlighting the importance of inner-city innovation hubs.

0.58% (1 in 172) of all **Australian companies participated** in the RDTI program in FY2021-22.



Manufacturing / Industrial is most common industry claiming R&D, whilst **Biotech / MedTech** has the highest median & total R&D expenditure.

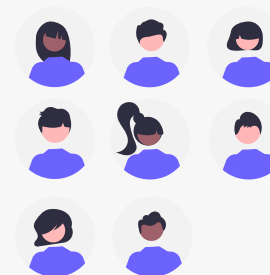


Companies with 11-50 employees are most common, by RDTI expenditure and participation.



Agriculture / AgTech dominates regional expenditure, **BioTech / MedTech** is primary source of expenditure in metropolitan areas.

An **estimated 95k R&D FTEs** are **employed** by RDTI companies



RDTI participating companies together **provide over half a million jobs in Australia**.

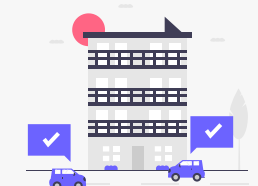
The median R&D expenditure for **metropolitan** companies is **47% higher** than regional.



Inner city companies participate in the RDTI program **3x the national average**.



Manufacturing appears across all **major cities**.



The RDTI Program and The ATO's Transparency Report

An introduction to the RDTI program	6
The ATO's RDTI Transparency Report 2021-22	7
Kashcade's RDTI review: an in-depth analysis	9

kashcade

An introduction to the RDTI program

The RDTI is Australia’s largest government program supporting business innovation, delivered jointly by the Australian Tax Office (ATO) and AusIndustry, to provide a tax offset to companies conducting eligible R&D activities.

The RDTI reduces the cost of experimentation, product development, and technological advancement. In doing so, the program is designed to encourage investment in R&D across all sectors and stages of business, from early-stage startups to established enterprises.

Eligibility Criteria:

- Must be an eligible R&D entity (e.g., incorporated under Australian law).
- Conduct eligible core R&D activities as defined by legislation.
- Incur a min of \$20k in eligible R&D expenditure, unless engaging a registered Research Service Provider (RSP).

Application Process:

1. Self-assess eligibility of company and R&D activities.
2. Register R&D activities annually with the Department of Industry, Science and Resources within 10 months of the income year's end.
3. Claim the tax offset in the company's annual tax return with the ATO.

Benefits:

Under the RDTI, eligible companies can access one of two types of tax offsets, depending on their size, structure and R&D intensity. For companies with aggregated turnover < \$20M a refundable tax offset is available. For companies with aggregated turnover ≥ \$20M, a non-refundable tax offset is available, calculated using an R&D intensity measure.

The following table breaks down these benefits:

Annual Turnover (\$)	Offset Type	Tax Offset of R&D Expenditure		Typical Company Tax Rate ¹
		R&D Expenditure as a % of Total		
		≤2%	>2%	
<20M	Refundable tax offset (i.e. cash refund)	43.5% (tax rate + 18.5% premium)		25%
20M to <50M	Non-refundable tax offset (i.e. tax credit)	33.5% (tax rate + 8.5% premium)	41.5% (tax rate + 16.5% premium)	25%
\$50M+		38.5% (tax rate + 8.5% premium)	46.5% (tax rate + 16.5% premium)	30%
Any	For R&D expenditure above \$150M, the tax offset equals the company tax rate			

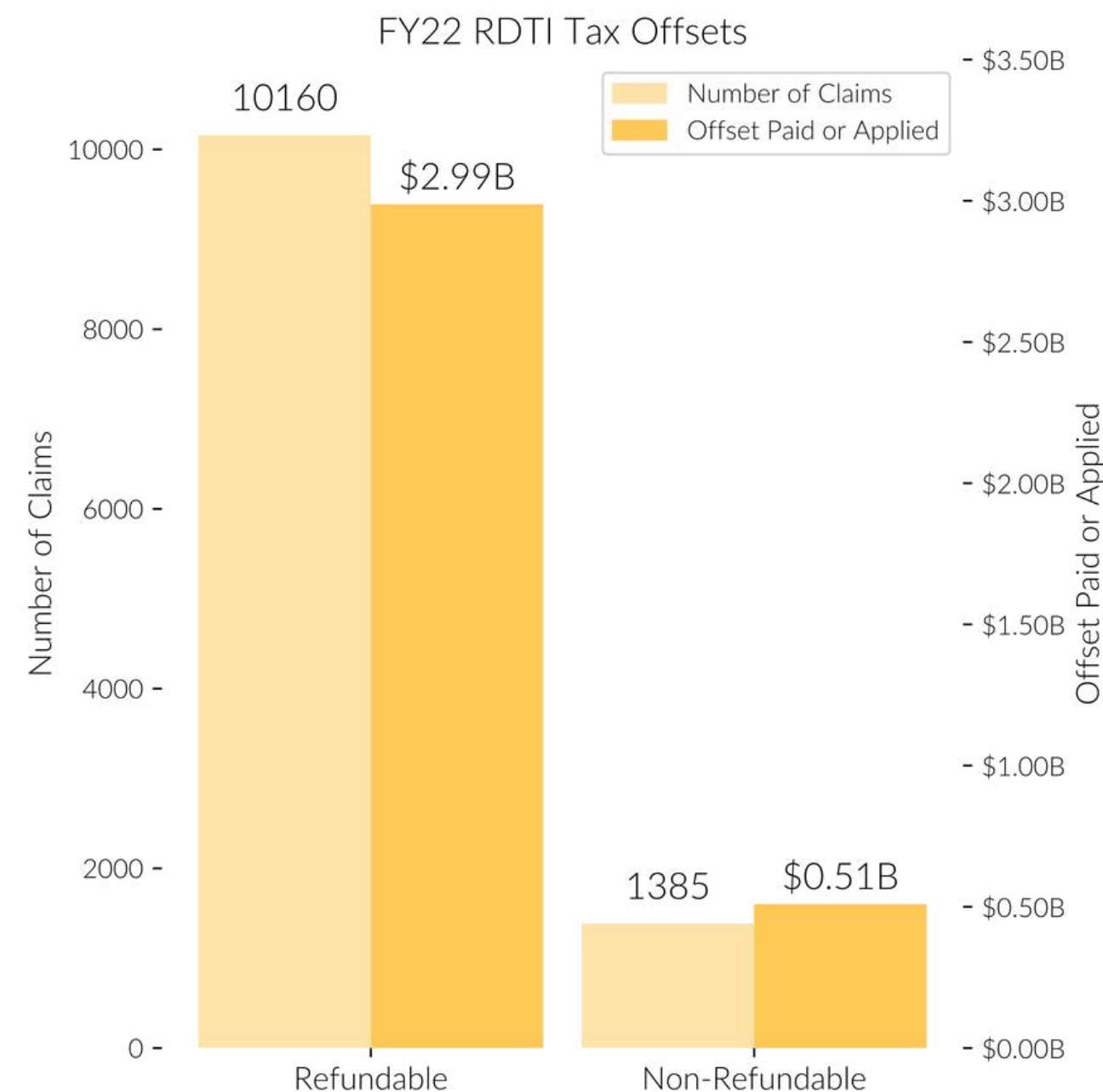
¹These figures represent most common company tax rates, however variations can apply.

The ATO's RDTI Transparency Report FY2021-22

In October 2024, the ATO released the first annual RDTI Transparency Report, which provided an overview of the companies that participated in the RDTI program in the 2021-22 income year.

By highlighting how businesses across all industries and sizes engage with the program, it showcases the critical role the RDTI plays in encouraging innovation that might otherwise be constrained by cost and risk. Published in two parts, the report includes raw data on claimants and a summary of key insights, offering a broad perspective on R&D activity in Australia:

- **11,545** business entities were included in the report.²
- **\$11.2B** in R&D expenditure was claimed across 11,545 entities during FY2021-22, equating to **\$3.5B** of government tax credits and rebates.
- **88%** of all claims (by volume) were refundable,³ indicating most companies receiving R&D benefits are smaller businesses or those without taxable income.
- **12%** of claims were non-refundable, representing large amounts of expenditure contributed by big businesses.



²An additional 850 entities were omitted as their financial year started prior to July 1st, 2021. Therefore, there were approx. 12.4k users of the RDTI program in FY2021-22 and total expenditures are likely under-reported by approx. 7%. Additionally, some claims of those companies were adjusted by the Commissioner (likely downwards), however, [the data provided in the Transparency Report](#) excludes those adjustments.

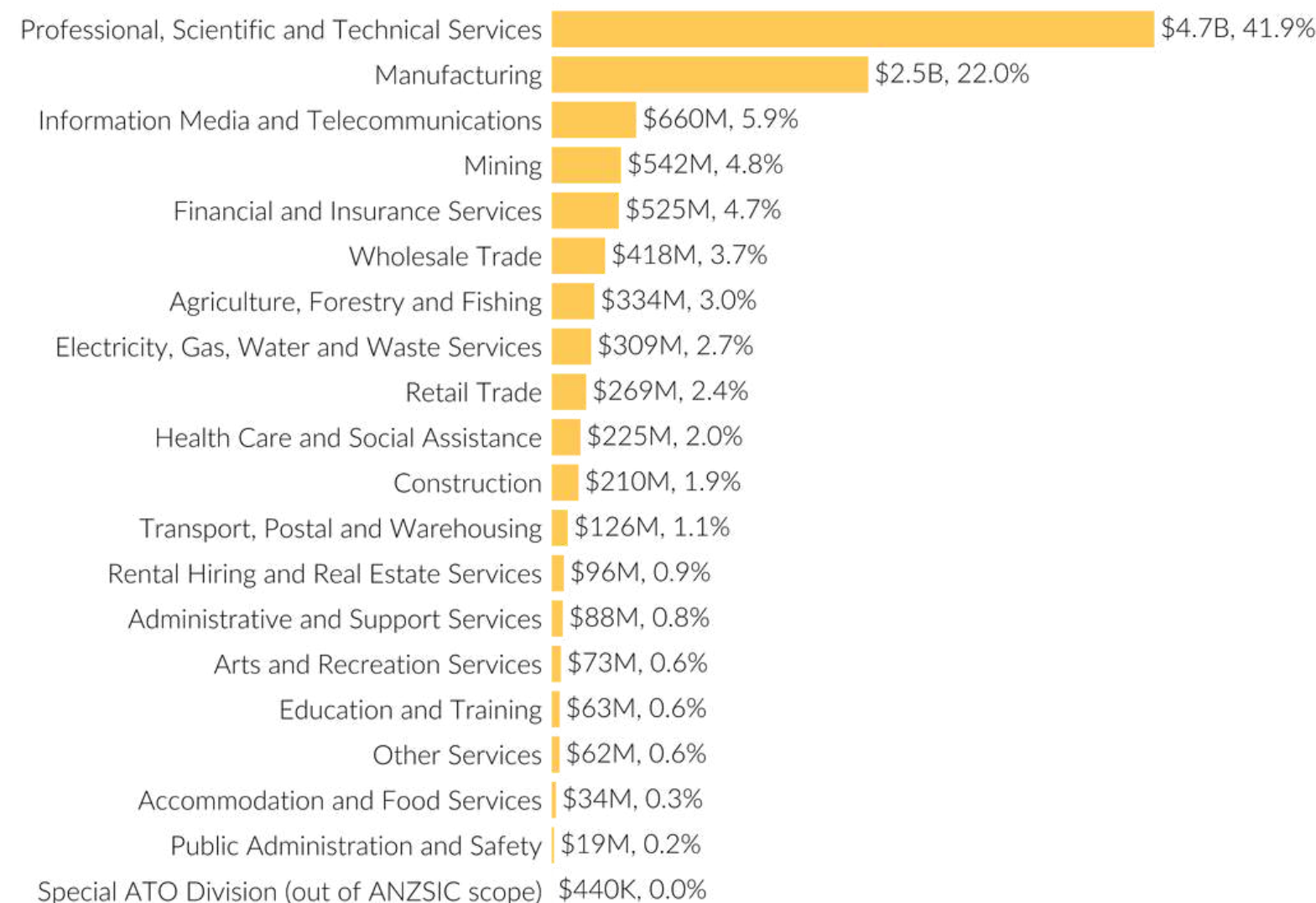
³Per the October 31st 2023 [R&D Tax Incentive Roundtable](#). This figure was used in the above chart, combined with the government budget figures for these programs.

The ATO's RDTI Transparency Report FY2021-22

The Transparency Report honed in on the industries, business size and geography of companies supported by the RDTI program.

Characteristics of the RDTI participants, such as ownership status, company size, and top-level ANZIC codes, were summarised to provide greater insight into the constituents of the RDTI program:

- The Professional, Scientific, and Technical Services sector represented **43%** of total claims, making it the leading industry for R&D, followed by Manufacturing at **21%**.
- Australian-owned companies accounted for **97.8%** of this year's population, with **11,286 claims**.
- Small businesses were the biggest cohort of claimants (**48%**). Public and multinational businesses contributed most to expenditure (**44%**).



(Sourced from the ATO Transparency Report)

“The diversity reflected in the RDTI Transparency Report is testament that the current open access to R&D tax based support to the corporate sector has been very successful. It also draws out the intensity of investment across businesses, which identifies not only where the corporate sector has chosen to focus that R&D investment, but importantly, exposes fields that may be important for directing future Government policy.”

— Rod Campbell, President of the R&D Tax Advisers Association

Kashcade's RDTI review: an in-depth analysis

Kashcade conducted a detailed analysis on the ATO's Transparency Report, supplemented by secondary research, to reveal additional insights and clarity on the RDTI program.

While the ATO's Transparency Report provides a valuable high-level snapshot of R&D activity under the RDTI, there is greater depth required to fully understand where and how innovation is occurring across the economy.

To address this, Kashcade conducted a deeper analysis of the FY2021-22 data, and incorporated additional data from sources such as ASIC, company websites, and LinkedIn.

Overlaying statistical modelling and artificial intelligence, we were able to uncover detailed insights into sub-industries, employment trends and opportunities, and how RDTI claimants compare to the broader Australian business population.

Through this analysis, we aim to provide a clearer picture of how the RDTI program is shaping innovation and the economy, helping to inform policymakers, investors, and business operators alike.

This report is the result of that research, and will be repeated on annual basis here on in.

Patrick Nappa, Co-Founder & CTO

Alex Simmons, Co-Founder & CEO



Data sourced from:

kashcade

LinkedIn

**Australian Business
Register**

**Australian Bureau
of Statistics**

ASIC

**Australian
Taxation Office**

RDTI Company Survival Rates

Australian companies fail 13x more than RDTI claimants 11

The RDTI is important for company survival 12

kashcade

Australian companies fail 13x more than RDTI claimants

The importance of RDTI for company survival.

Research and development is an experimental process, and by definition, qualifying activities are at risk of failure. Companies, their management teams and investors inject funds to test their hypotheses as for how unsolved problems might be solved.

With such high stakes, it might come as a surprise that RDTI program claimants had a 13x lower de-registration rate than the population of Australian companies between December 2022 and October 2024.

In fact, the survival rate of the total population of Australian companies was 85.98%, i.e. just over 14% of Australian companies registered in December 2022 were deregistered by October 2024. By contrast, only 1.07% of RDTI claimants were deregistered in the same period (i.e. they had a survival rate of 98.93%).

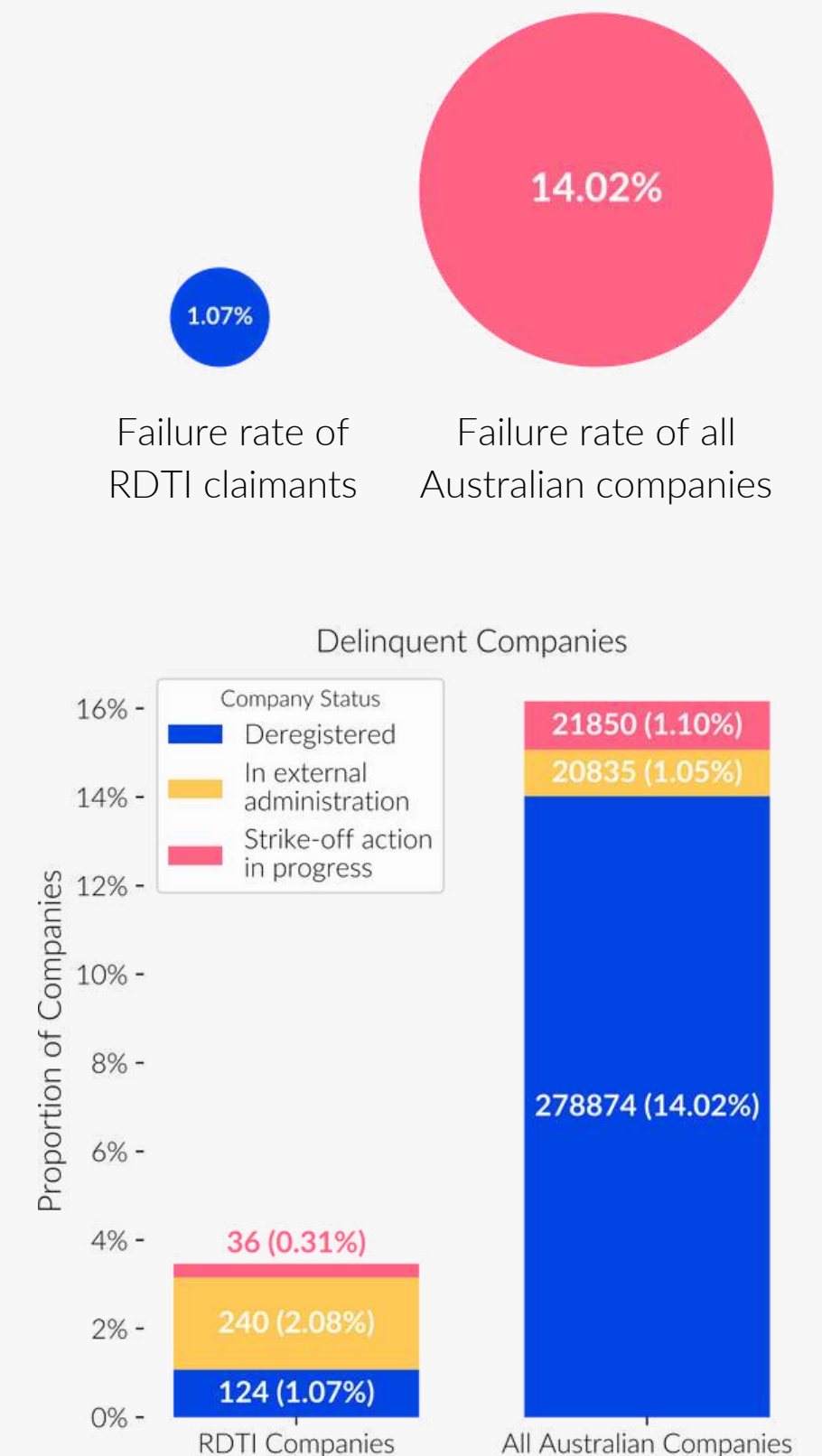
As a group, RDTI companies constitute 0.58% of all Australian companies - that is, 1 in 172 companies engage in the RDTI program. **The companies that were deregistered had significantly smaller R&D expenditure than the rest of the population**

The median claim was \$167k, just over half the \$329k median R&D expenditure of the total population. These companies were also younger than the average company – a median age of 5 years at the point of de-registration, compared to the 9 year median age of the population.

Whilst R&D companies recorded a much lower de-registration rate, at the time of analysis, companies who had claimed R&D had twice the rate of administration. This does not signal the end of a company, as many companies exit administration and continue to operate.

It's important to note that Australian companies in FY24 had 2.25x the insolvency rate as FY22, and is likely a result of post-COVID corrections and a more difficult operating environment with higher interest rates.

On the other hand, the RDTI cohort of companies had a 3x lower rate of “Strike-off action in progress” status. This state represents a period of 2 months after which, the company will be deregistered if no action is taken.



The RDTI is important for company survival

Why do RDTI companies have a higher survival rate than the general population, and would companies investing in innovation find it harder to survive without the RDTI?

These innovative companies, particularly those in their earliest stages of life, are spending a significant portion of their resources on solving those problems. Inevitably, when companies' budgets or resources become exhausted, they must then raise more capital (whether internally or externally) or fail.

This begs the question: **Why do RDTI companies have a higher survival rate than the general population, and would companies investing in innovation find it harder to survive without the RDTI?**

The higher survival rate might be caused by the fact that the cash refunds companies receive from the RDTI program provide these companies with a much-needed cash injection.

What's more, there is appeal to investors - with a portion of R&D expenditure being refundable **for early-stage companies, every dollar invested will go further, making it more appealing to invest.**

Alternatively, this outcome could simply be a matter of correlation, not causation. Examples of failed RDTI claimants receiving significant tax incentives, yet still failing, can be referred to.⁴

Further, consideration needs to be given to the idea that mostly strong companies are the ones investing in R&D, therefore pushing up the rate of survival of RDTI claimants. However, the data suggests that these instances are the exception, not the rule, as only ~1% of RDTI companies failed, and a majority of RDTI claimants are early-stage companies in their first 10 years of existence.

In sum, more time will be required to tell whether this initial trend holds true, or whether there are many "zombie" companies that remain inactive yet are still registered, thereby over representing the survival rate. In the meantime, however, we can remain optimistic about what the data so far is showing.

⁴Source: [*The Age* \(2024\)](#).



The RDTI is of such importance to Australian startups and scaleups that it is now essentially a part of their business model.

The Government's policy intent for this program is to encourage technological innovation by partially underwriting the risks taken by businesses to solve real-world problems in novel, unproven and innovative ways, and from looking at the businesses being built by the inspirational founders that I work with, that objective is being achieved.

Without this program, some of these fast-growing companies simply would not be here.



- Jack Qi, William Buck

Age of RDTI Companies

Early-stage companies made up most of the RDTI

14

kashcade

Early-stage companies made up most of the RDTI

The RDTI program mirrors the innovation lifecycle, with most claims and spending coming from early-stage companies, and tapering as companies mature.

The typical innovation lifecycle begins with companies allocating smaller budgets towards experimental R&D in the early years, ramping up investment as they identify promising opportunities, before ramping down expenditure as the business moves through to production and commercialisation. This pattern can be found in the RDTI program when looking at claims by age of company.

A significant portion of RDTI claims comes from these early-stage innovators. **In FY2021-22, companies aged under 9 years made up 60.79% (8,100) of total claimants, while those under 6 years represented 45.08% (7,018).** These groups were also responsible for a significant proportion of expenditure claimed under the program: 48.17% (\$5.4B) of total claims came from companies <9 years old, and 32.74% (\$3.7B) from those <6 years old.

For early-stage ventures, the RDTI is particularly impactful. An estimated \$2B in cash refunds⁵ were returned to these companies <9 years old, allowing them to reinvest into further R&D and continued operations.

While the majority of claims come from young businesses, there was also a notable, though smaller, contribution from older ones. **39.21% of claimants, representing 51.83% of total expenditure, were aged 9 years or older, and 13.88% of claimants, contributing 25.79% of expenditure, were aged 21 years or more.**

Claims from older companies tended to be larger – the largest age bracket (aged over 39 years) had an average claim of \$2.8M, five times larger than companies younger than 3 years, which claimed \$550k on average. This reflects that whilst there are fewer established companies engaging in R&D, those who do, perform large scale R&D.

Importantly, established businesses continue to push the envelope, investing in experimental R&D. This is vital for avoiding the ‘innovator’s dilemma’ - the risk of complacency in the face of market success. By incentivising R&D through the RDTI, even well-established companies are encouraged to pursue new, high-risk innovations, leveraging their strong position to continue making new discoveries.



The RDTI plays a crucial role in supporting innovation, both for small and big businesses alike.

By supporting important ideas from small teams and early-stage companies, it ensures innovation doesn't just come from the top-end of town - it keeps smaller businesses nipping at the heels of the larger ones, thereby incentivising Australia to remain its most competitive.

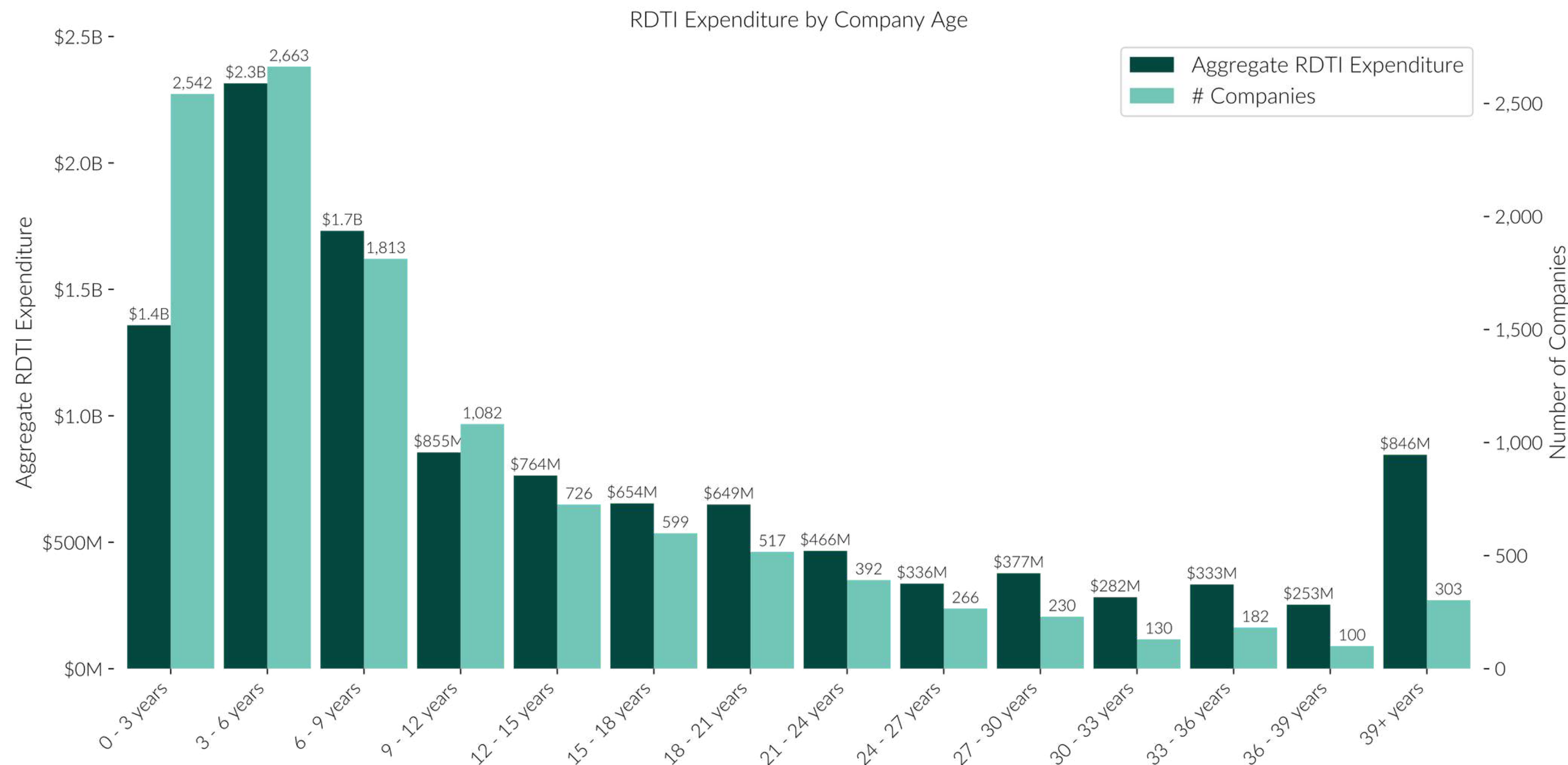
— Sameer Kassam,
InCorp Advisory



⁵Assumes: 88% of companies <9 years old received a refundable offset of 43.5% of their claimed expenditure.

However, claims came from businesses at all stages

3-6 year old companies were most common, but expenditure per company was higher for older companies.



Size of RDTI Companies

By employee count	<u>17</u>
By LinkedIn member count	<u>18</u>
By public / private status	<u>19</u>
The highest R&D expenditure companies in FY2021-22	<u>20</u>

kashcade

11-50 employees is a recipe for participation & expenditure

Size of RDTI companies: by employee count.

Kashcade analysed each company's LinkedIn profile (where available) to view self-reported employee count and the number of associated LinkedIn members (who claim to work at each company).

As the ATO-released dataset of 11,545 companies only included their entity name and their ABN/ACN, finding the online presence of all companies was difficult.

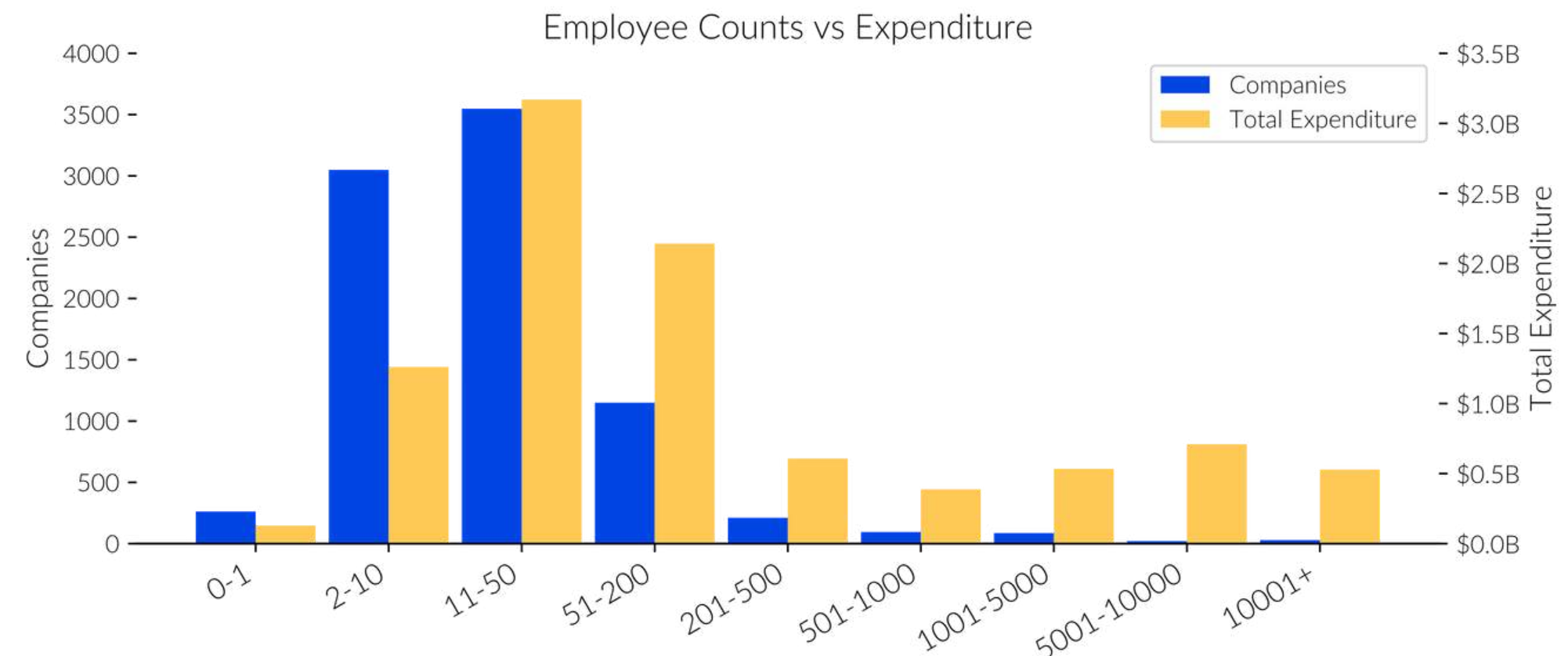
Using web-scraping and AI automation techniques, we were able to find the LinkedIn profiles for 8,451 companies (73.20%) with a high level of confidence.

We measured the number of employees⁶ for each company two ways:

1. The company's self-reported employee range, for example 0-1, 2-10, 11-50 employees;
2. The number of LinkedIn members having that company listed as their employer.

Both measures are important to look at, as they include and exclude different employee types.

The self-reported company range includes all employee types, but is not as fine-grained, and is required to be kept up-to-date manually; whilst the LinkedIn members skew towards primarily including white-collar employees (who we postulate are more likely participating in R&D activities).



Small companies are most prevalent in this dataset, with companies in the 50 employees or less buckets comprising 81% of the population, and together contributing 48% of R&D expenditure. Companies registered as having 11-50 employees is the most common company, both by expenditure and by participation in the RDTI.

⁶As at October 2024.

RDTI fuels innovation broadly, but especially for small companies

Size of RDTI companies: by LinkedIn member count.

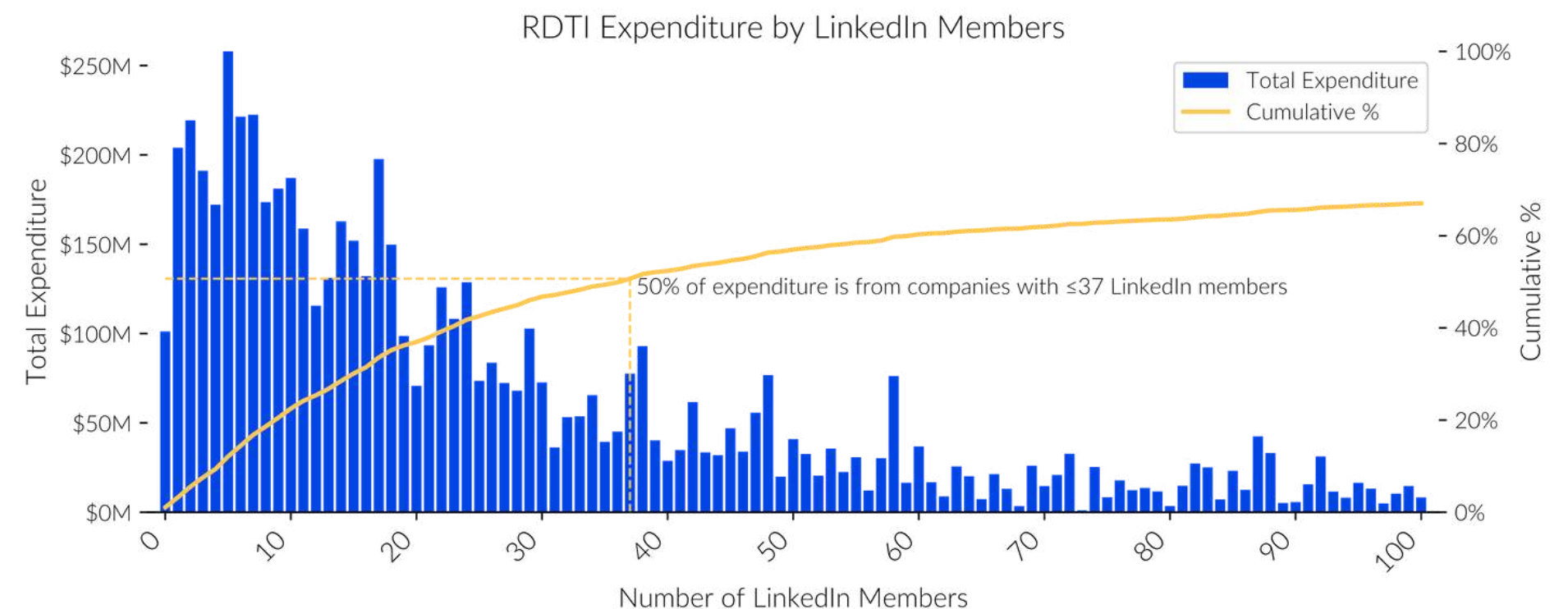
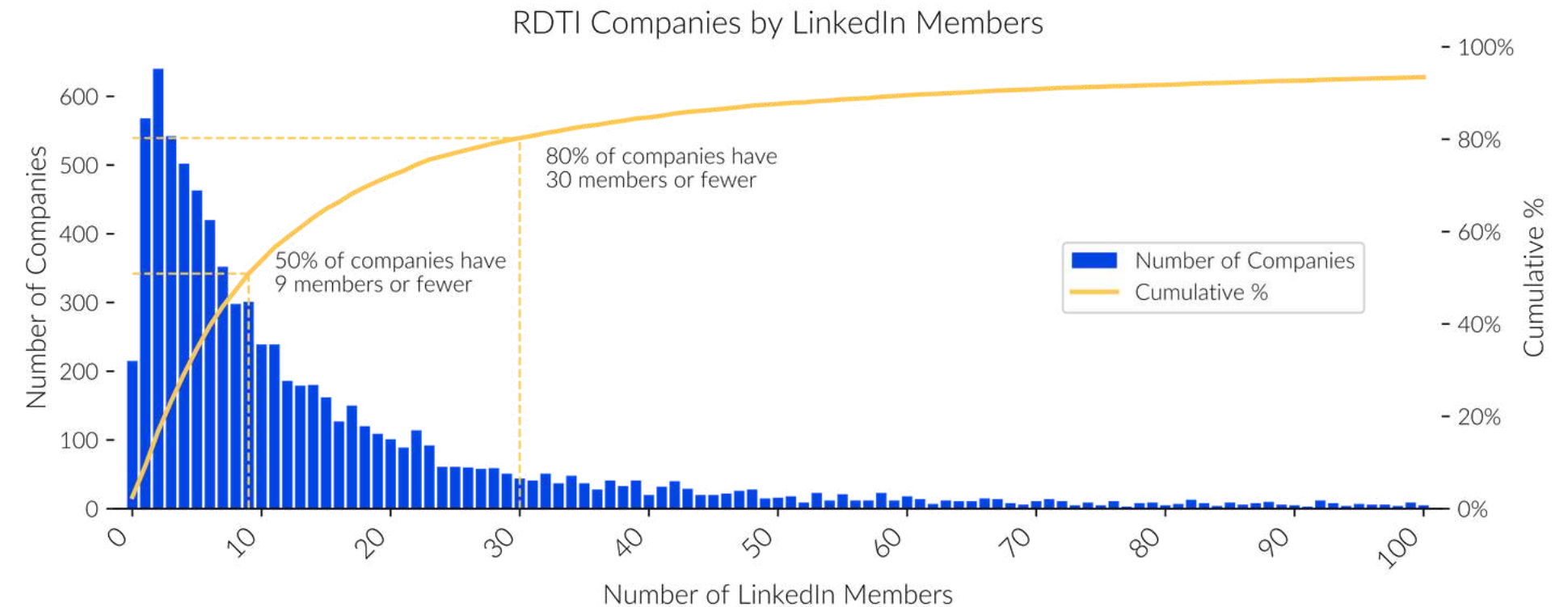
The data highlights the sheer quantity of small companies participating in the RDTI program. Of the sample we identified:

- Businesses with <50 LinkedIn members accounted for 87.64% of companies, and 57.00% of R&D expenditure.
- Businesses with <10 LinkedIn members made up 53.72% of companies, and 22.50% of R&D expenditure.

On the other hand, well-resourced companies, though fewer in number, contribute a significant portion of the overall RDTI expenditure.⁷ The data showed larger organisations (50+ LinkedIn members) contributed just 12.35% of claimants but were responsible for 43.00% of total R&D spending.

The relationship between employee count and the specific industry of companies is explored in a later section of this report.

⁷It's important to note that R&D activities are often dominated by wages across a variety of industries. Therefore, it's expected that these higher employee-count companies have a larger R&D expenditure.



Public companies top RDTI spend, privates lead participation

Size of RDTI companies: by public / private status.

Private companies

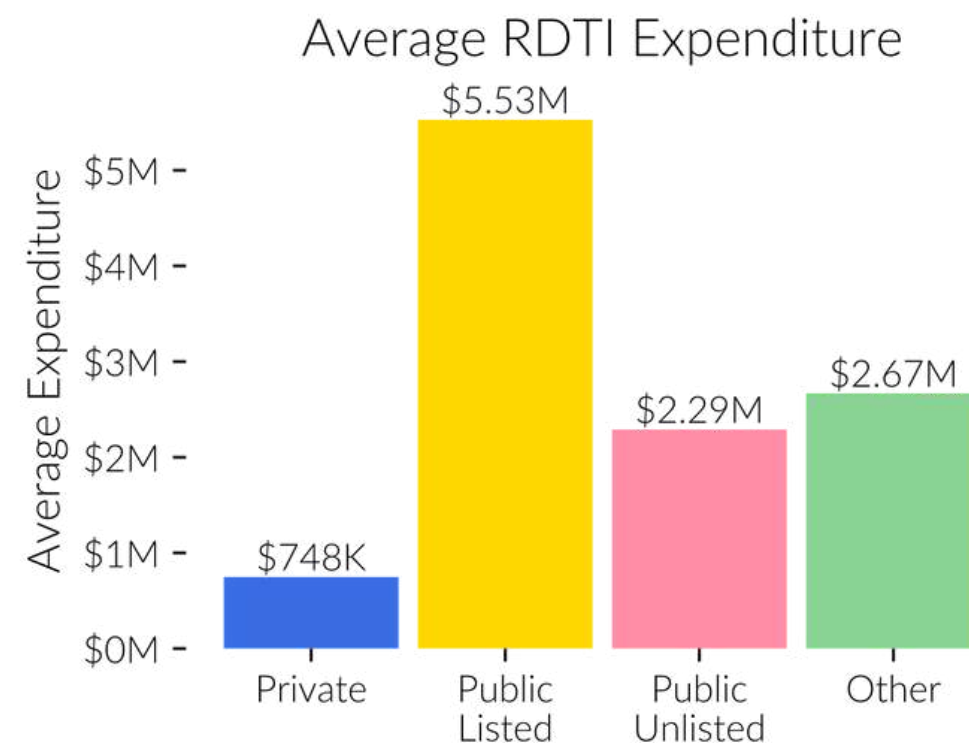
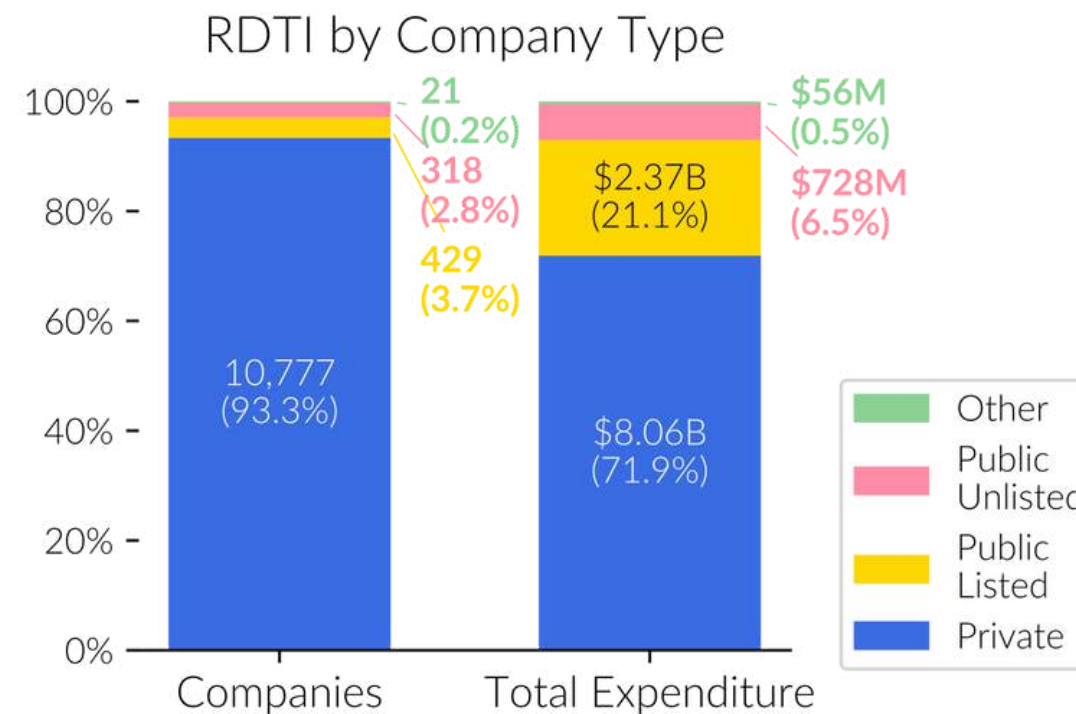
The majority (93.35%) of RDTI claimants are private companies, which represent 10,777 entities and account for a combined \$8.06B (71.88%) in R&D expenditure. This translated to an average spend of \$748K per private company.

Public listed companies

Public listed companies, despite being fewer in number, at 429 (or 3.72%), spent \$5.53M on average – 7 times higher than that of private companies. This category alone contributed \$2.37B (21.13%) to the total expenditure, demonstrating how larger, well-capitalised businesses utilise their resources to invest heavily in R&D.

Public unlisted companies

Public unlisted companies, numbering 318 (2.75%), reported a total of \$728M (6.49%) in R&D expenditure, with an average spend of \$2.29M per company – approximately half that of their listed counterparts but still over three times that of private companies.



The data shows something we see all the time – public companies spend big, but it's the sheer volume of private companies that keeps the RDTI engine running.

It's not just about the dollars. When over 10,000 private firms are putting R&D on the agenda – even if modestly – it shows that innovation isn't limited to big budgets.

The real story here is that Australia's R&D landscape relies on both scale and spread. Take away either, and the system doesn't work.

– Ben Cusack, Bulletpoint



Large organisations are still a core pillar to Australian R&D

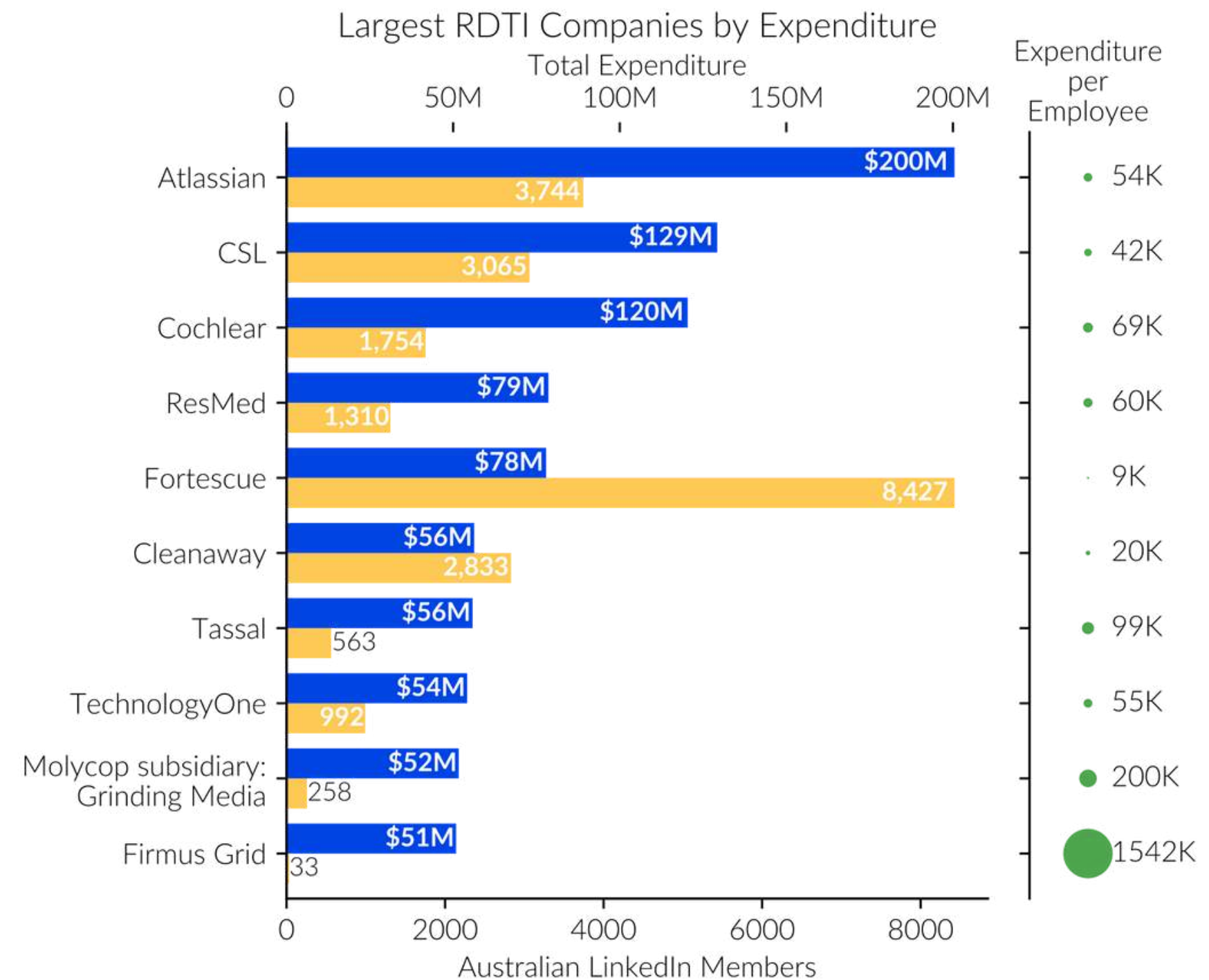
The highest R&D expenditure companies in FY2021-22.

While the RDTI supports over 11,500 businesses each year, a small group of companies account for a significant share of the total expenditure contributed. In FY2021-22, the top 10 claimants represented 8% of all RDTI expenditure (totalling \$871M) while the top 15 accounted for 10% (\$1.1B).

Although there has been debate around the \$150M expenditure cap for large claimants, only one known company, Atlassian, appears to have exceeded this threshold in FY22. However, due to limitations in the published dataset, other large contributors may not be visible.

These figures highlight the importance of continuing to incentivise high-expenditure R&D among larger, well-resourced businesses.

They act as a core pillar to Australia's innovation ecosystem, both directly in the form of new technological advancements, as well as in their downstream effects, such as up-skilling of workers, attracting investment to Australian companies, and more.



Large companies tackle some of the largest innovation challenges. The RDTI encourages these businesses to invest in R&D locally, employing thousands, and keeping their inventions and IP in Australia. The \$150M cap places an arbitrary ceiling on the support that our global exporters and tech unicorns receive when they invest in Australia, which risks flight of talent and capital overseas. — Matt Tiltman, Pathfinder Consulting Group

RDTI Across Industries

~50% of RDTI engagement came from five main industries	<u>22</u>
The top contributors per industry are market-leading companies	<u>23</u>
How does RDTI program help claimants most?	<u>24</u>
A tale of two industries: AI vs. Gambling & Tobacco	<u>25</u>
Why is Biotech/MedTech the biggest RDTI industry?	<u>26</u>

kashcade

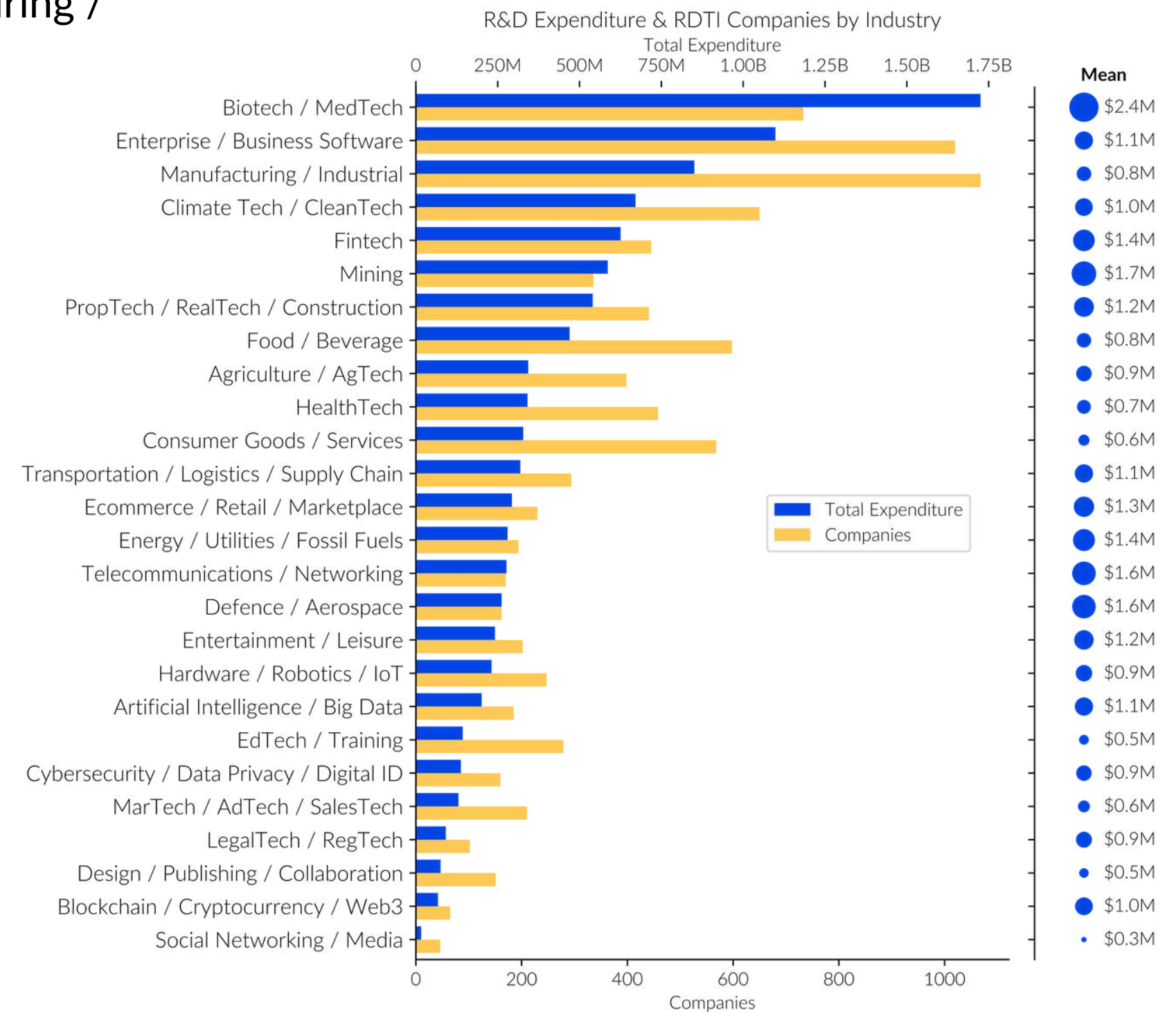
~50% of RDTI engagement came from five main industries

Most expenditure came from Biotech / MedTech, Manufacturing / Industrial, and Enterprise / Business Software industries.

The ATO's Transparency Report's industry breakdown was based on top-level ANZSIC codes, limiting meaningful insight. To address this, we developed a refined classification of 26 industries that better reflect the fields of innovation across Australia.⁸

Just five of these 26 industries contributed over 48.05% of the program's expenditure and made up over 41.61% of total claims:

- **Biotech/MedTech:** \$1.73B total expenditure, \$663k median claim, 733 claimants.
- **Enterprise/Business Software:** \$1.10B in total expenditure, \$359k median claim, 1,020 claimants.
- **Manufacturing/Industrial:** \$851M in total expenditure, \$356k median claim, 1,068 claimants.
- **Climate Tech/Clean Tech:** \$671M in total expenditure, \$362k median claim, 650 claimants.
- **Fintech:** \$626M total expenditure, \$532k median claim, 445 claimants.



⁸Categorisation for this analysis was conducted using AI-driven methods to analyse company websites, LinkedIn profiles, and public databases. Out of the 11,545 companies, we were able to categorise 9,412 (81.5%), with a high confidence level. While this approach provides valuable insights, it is subject to limitations. For example, self-reported industry categories and branding preferences may lead to overrepresentation of certain sectors, such as Climate Tech / Clean Tech, and underrepresentation of others, such as Energy / Utilities / Fossil Fuels for sentiment-driven reasons. Furthermore, the recent surge in AI-related branding may inflate the apparent prevalence of software-focused companies.

The top contributors per industry are market-leading companies

The top RDTI contributors per industry.

#	Industry	Company	Known For	Contribution
1	Enterprise / Business Software	Atlassian Australia	Jira, Confluence	\$200,460,127
2	Biotech / MedTech	CSL	Blood plasma	\$129,243,465
3	Mining	Fortescue	Iron ore extraction	\$77,885,564
4	Climate Tech / CleanTech	Cleanaway Waste Management	Waste collection	\$56,309,397
5	Food / Beverage	Tassal Group	Salmon	\$55,821,520
6	AI / Big Data	Firmus Grid	AI data centers	\$50,889,715
7	E-Comm, Retail, Marketplace	Coles Group	Coles, Liquorland	\$48,707,596
8	Telecomms / Networking	Telstra Corp	Mobile networking	\$46,257,071
9	PropTech / RealTech / Construction	Adcon Engineering	Construction	\$44,345,085
10	Fintech	Creativemass	WealthConnect	\$44,012,669
11	Entertainment / Leisure	TABCorp	Betting, Racing	\$39,500,304
12	Transportation / Logistics / Supply Chain	Bajara	Self-driving car LiDAR	\$37,946,784
13	Defence / Aerospace	Gilmour Space Technologies	Attempting first Australian orbital rocket	\$37,526,831
14	Manufacturing / Industrial	Liberty Holdings Australia	Whyalla steelworks	\$35,696,382

#	Industry	Company	Known For	Contribution
15	Consumer Goods / Services	Westfarmers	Bunnings, Kmart, Officeworks	\$34,989,543
16	Hardware / Robotics / IoT	Morse Micro	Semiconductor design	\$26,694,912
17	Energy / Utilities / Fossil Fuels	AGL Energy	Energy generation	\$23,452,118
18	Agriculture / AgTech	Manildra	Wheat Products	\$22,315,107
19	LegalTech / RegTech	ATI Global	InfoTrack, legal software	\$18,132,397
20	HealthTech	Health Care Logic	SystemView, hospital analytics	\$14,838,262
21	Cybersecurity / Data Privacy / Digital ID	Penten	AltoCrypt, secure communication	\$14,312,678
22	Blockchain / Cryptocurrency / Web3	Holon Global	Filecoin, decentralised data	\$9,549,678
23	MarTech / AdTech / SalesTech	Vuelio Australia	Media monitoring, PR management	\$8,086,200
24	EdTech / Training	Learnosity	Online assessment & teaching	\$7,072,228
25	Design / Publishing / Collaboration	Mining Software Holdings	Mining News	\$4,795,300
26	Social Networking / Media	Digital Athlete	Social media advising for athletes	\$3,860,526

How does RDTI program help claimants most?

The RDTI relieves the burden of both high CapEx requirements and expensive specialist workers.

Outside of software-based industries, capital expenditure (CapEx) requirements to initiate R&D activities create significant barriers to entry across many industries.

Biotech / MedTech, for example, faces large up-front costs such as specialised equipment and laboratory set-up. Similarly, Mining and Manufacturing / Industrial often require access to land and machinery for experimentation. **We therefore see mostly CapEx-heavy industries with the greatest median R&D expenditure.**

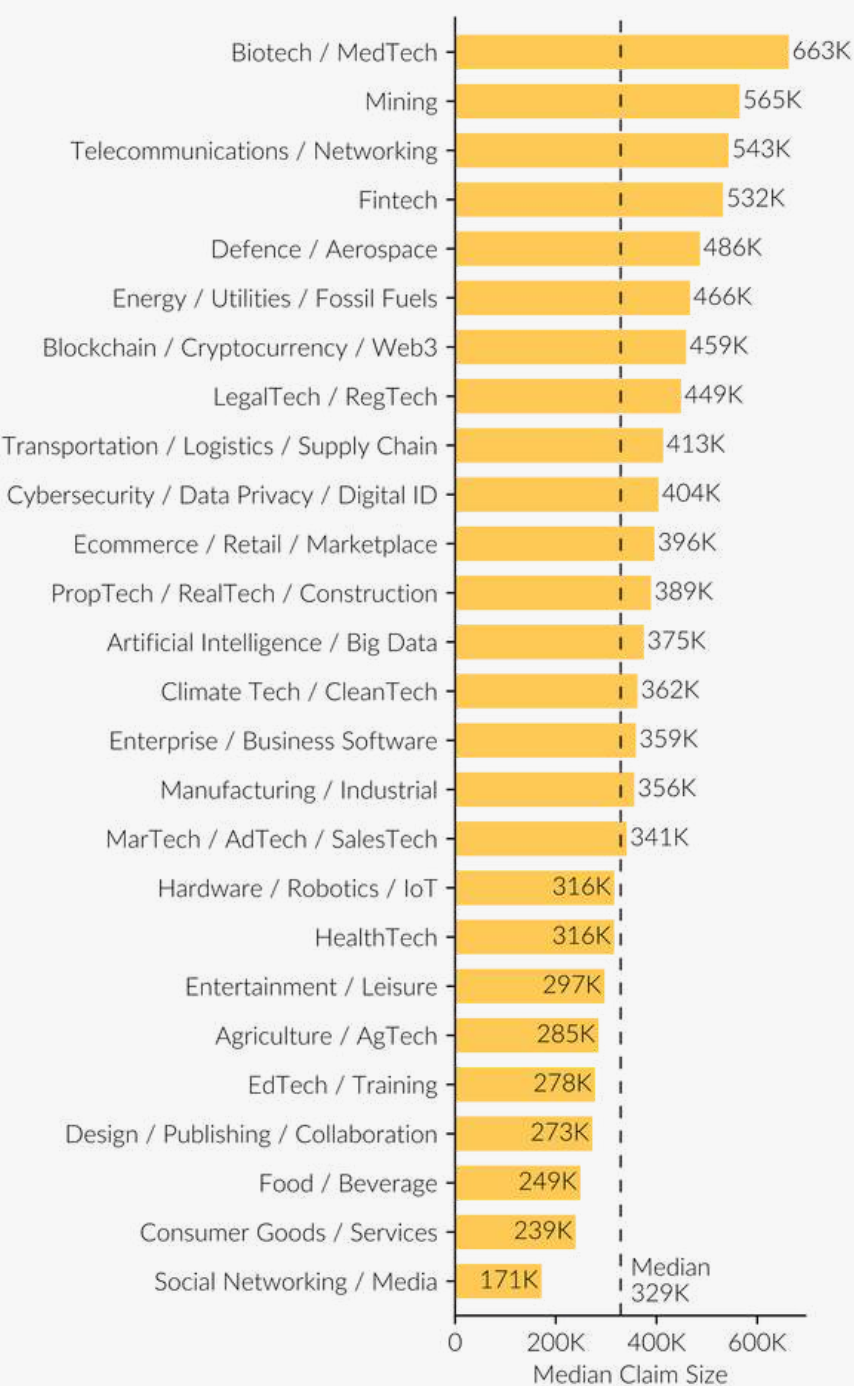
As an example, Gilmour Space (Defence / Aerospace) has used the scheme to build their Eris rocket. Claiming \$37.5M expenditure in FY22, they're attempting to build Australia's first orbital rocket - an endeavour that necessitates heavy capital expenditure, long before any meaningful revenue can be captured. However, if successful (planned for a first launch in 2025), it could enable a whole new category of Australian R&D for space-related activities.

Software-based industries, on the other hand, have enjoyed lower CapEx requirements, allowing for broader RDTI participation.

The key challenge for the software industry is that salaries for employees working on the cutting edge (mostly specialised software engineers) are amongst the highest in the country.

Industries such as Fintech and Blockchain / Cryptocurrency / Web3 are key examples of this, with average R&D expenditure significantly above the median. Meanwhile, Social Networking / Media as an industry measures the lowest across all our metrics – with the lowest median claim (\$171k), the smallest total spend (\$15.97M, or 0.15% of categorised expenditure), and the fewest number of companies representing just 0.49% of categorised companies. This industry has a low participation likely due to the industry being relatively well-established, whereas RDTI eligibility requires attempts to solve novel problems.

Median Claim Size by Industry



A tale of two industries: AI vs. Gambling & Tobacco

Artificial Intelligence (AI)

Only 10% of RDTI claimants reference the use of AI on their websites, however this is expected to grow.

A 2025 search of the FY2021–22 RDTI cohort’s websites found that only 10% of companies referenced the use of AI.⁹ Even of the software-adjacent industries subset, the figure was just 20%.

From FY2022-23, however, AI-related RDTI claims are expected to grow significantly across most industries - both in claimant volume and total expenditure - following the rapid adoption of AI since 2022, particularly after the release of OpenAI’s ChatGPT in November 2022. In particular, the Government has aimed to support AI activities with the National Reconstruction Fund, the Industry Growth Program, and the RDTI (which supported \$478M worth of AI related projects in FY2022-23).¹⁰

In particular, software-based innovators focused on AI and quantum computing are likely to drive large capital expenditure claims, with the need to support high-cost infrastructure such as GPU compute and other specialised electronics, with AI engineers and talent in high demand.



⁹8,584 company websites were found where there was a high enough confidence level to analyse for references to AI.

¹⁰Source: Department of Industry, Science and Resources, [Portfolio Budget Statements 2025-26. Budget Related Paper No. 1.11](#)

Gambling & Tobacco

Gambling and tobacco companies are earmarked for exclusion from the RDTI in FY26.

The inclusion of all industries in the RDTI program has sparked recent public debate. Critiques have centred on whether every sector aligns with Australia’s broader goals for innovation.

Following the release of the Transparency Report, Treasurer Jim Chalmers, among others, questioned whether taxpayer-funded R&D incentives should prioritise industries that bring long-term benefits to society, and exclude others,¹¹ and led to an proposed exclusion of the gambling and tobacco industries from the RDTI. This ongoing debate raises critical questions about the ethical and strategic direction of Australia’s innovation ecosystem and could lead to other changes in future.

Gaming companies were primarily categorised as ‘Entertainment / Leisure’, with 3 out of the top 4 companies in that industry by expenditure being gambling-related: Tabcorp (with \$39.5M expenditure), Aristocrat Leisure (\$22.2M), and Ainsworth Game Technology (\$15.0M).

Tobacco companies were not well represented in the dataset - only Cignall (\$529k) was identified as a participant.

¹¹Source: [ABC News \(2024\)](#).

Why is Biotech/MedTech the biggest RDTI industry?

High-cost R&D and clinical intensity make Biotech/MedTech the most supported industry.

The Biotech/MedTech sector continues to advance in key areas such as genetic engineering, diagnostics, biopharmaceutical development, and next-generation therapies and surgical technologies. Activity spans both globally established enterprises and early-stage companies.

The sector remains the most significant contributor to Australia's RDTI program, broadly leading the FY22 cohort in participation. It contributed a remarkable \$1.73B in R&D spend, with a median expenditure of \$633k and a mean of \$2.4M. It was also estimated to have supported approximately 13,488 R&D full-time employees (FTEs), making it the largest employer of R&D talent under the program, and the third-largest by number of claimants (733 companies).

But why does Biotech/MedTech consistently top the RDTI rankings? One major factor is the cost-intensive nature of clinical trials, which are essential to ensuring new innovations meet safety and efficacy standards before commercialisation.

Australia's robust clinical trial ecosystem, bolstered by world-class researchers, a favourable regulatory framework, and international credibility, has made it a preferred location for both domestic and foreign businesses. In 2022, clinical trial expenditure in Australia reached \$1.6B.¹²

However, despite these advantages, trials remain expensive. Costs include patient recruitment, regulatory compliance, investigational product manufacturing, site management, and extensive data processing. The complexity varies by therapeutic area and study design, often requiring years of sustained investment.

Without support mechanisms like the RDTI, many of these projects would be financially unfeasible, especially for early-stage companies.



The RDTI is one of the most critical levers supporting Australia's Biotech and MedTech ecosystem.

It empowers companies, particularly those in the early stages, with the financial capacity needed to get through the continuous hurdles this sector demands. It helps bridge the gap between world-class research and commercialisation, allowing Australian innovation to compete on the global stage.

– Nicholas Parry, BDO



¹²Source: MTPConnect, [titled Australia's Clinical Trials Sector – Advancing Innovative Healthcare and Powering Economic Growth.](#)

Why is Biotech/MedTech the biggest RDTI industry?

FY22 saw breakthroughs that underscored Australia's technical leadership.



EMVision Medical Devices

\$5.8M Expenditure

Developed a portable brain scanner designed to support rapid stroke diagnosis at the point of care - a potentially transformative improvement for emergency medicine.



BiVACOR

\$1.0M Expenditure

Received global recognition for its artificial titanium heart, marking a world-first transplant into an Australian patient in 2024.



Cochlear

\$120M RDTI Expenditure

One of the sector's largest RDTI contributors and a globally recognised leader in implantable hearing solutions, Cochlear's ongoing investment in R&D has earned it recognition as one of Australia's most innovative companies, exemplifying how Australian R&D can result in commercial success and profound social impact on a global scale.

RDTI Across Geographies

RDTI across states	<u>29</u>
Western Australia punches above its weight class in R&D	<u>30</u>
Metropolitan vs. regional RDTI	<u>31</u>
RDTI expenditure across Statistical Area Level 3s (SA3s)	<u>34</u>
Most common R&D industries across Australia	<u>36</u>
Key questions for policy makers	<u>41</u>

kashcade

R&D spend across states was proportional to company numbers

RDTI across Australian states.

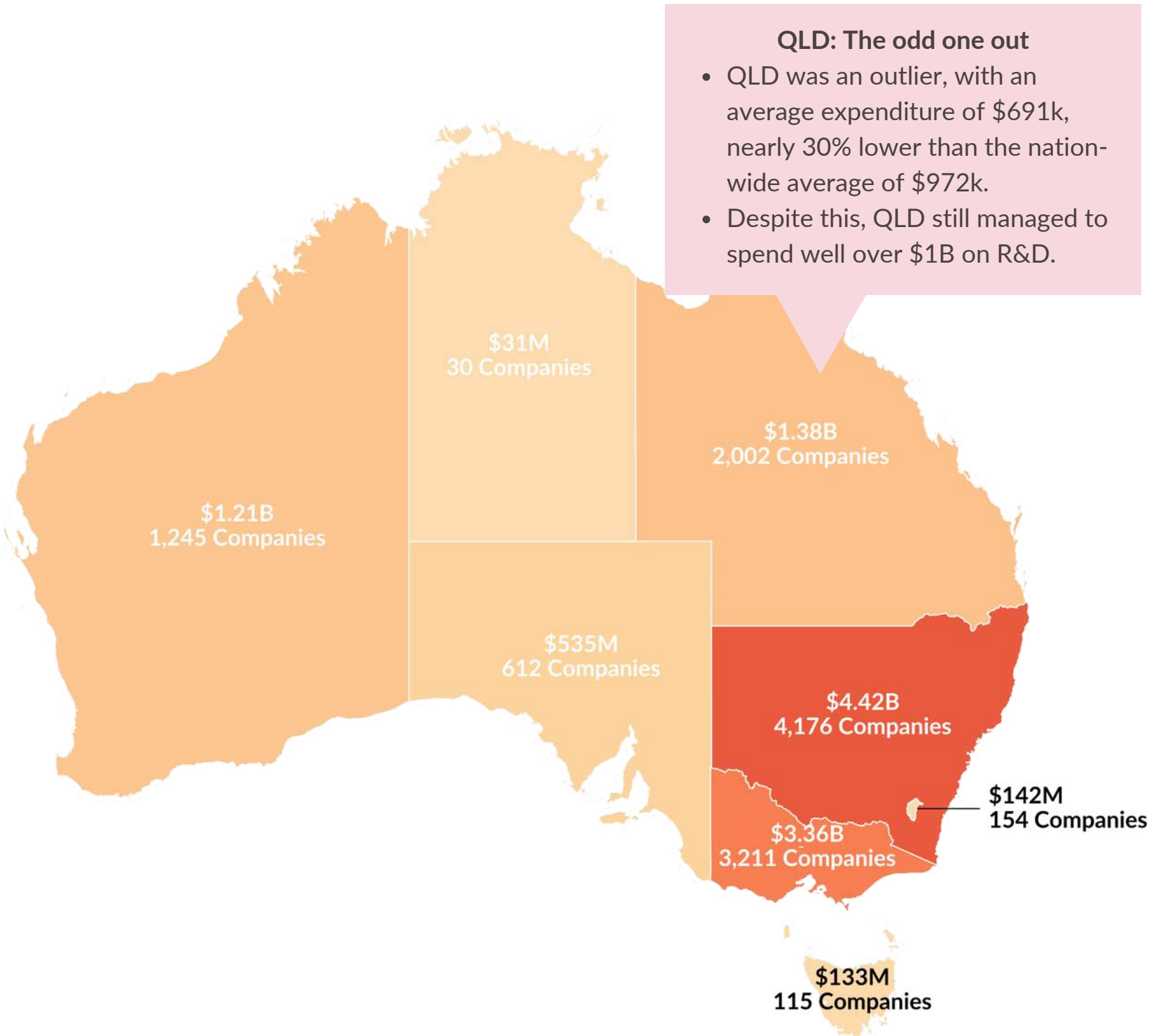
Using data sourced from the Australian Business Register (ABR), we categorised R&D expenditure based off the registered postcode for each company.

As expected, a significant majority (63.98%) of RDTI claimants were based in either New South Wales (36.17%) or Victoria (27.81%).

These companies accounted for more than \$7.79B in combined R&D expenditure, or 69.39% of the total program expenditure. Still, **911 companies and \$841M in expenditure came out of South Australia, Tasmania, ACT, and the Northern Territory combined.**

Four of the eight states or territories with R&D expenditure registered – NSW, VIC, WA, and QLD – each saw over \$1B invested in R&D.

Median RDTI Expenditure Claimed per State/Territory	
Tier 1	Tier 2
VIC - \$367k	TAS - \$289k
WA - \$340k	ACT - \$285k
NSW - \$334k	SA - \$284k
	QLD - \$273k



Western Australia punched above its weight class in R&D

On average nationally, 0.58% of companies participated in the RDTI program.
WA, however, saw 0.74% participation.

To adjust for company populations, we can instead look at participation in the RDTI program as a proportion of total companies registered.

Nationwide, the participation rate was 0.58% - that is, for every 10,000 companies registered, 58 participated in the RDTI program in FY2021-22.

1 in 172 companies participate in the RDTI scheme nationwide.

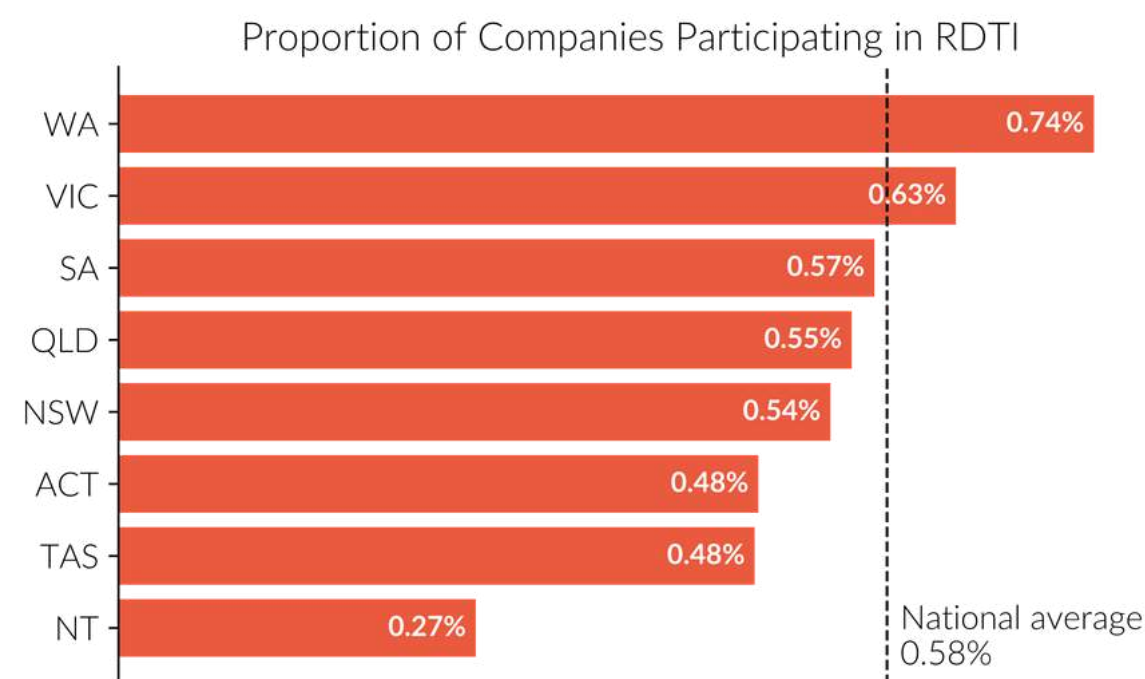
On a state-by-state basis, a significant gap between the leader and laggard emerged. **WA led the country with a participation rate of 0.74%**, underscoring their significant investment in R&D. Meanwhile, the NT only had 0.27% of registered companies participate in the RDTI scheme.

1 in 135 companies participate in the RDTI scheme in WA.

As we explore later, this is a consequence of metropolitan cities outperforming regional cities Australia-wide.

WA is the state with the highest proportion of population living in the capital city (approximately 80% live in Perth). **VIC was the only other state to be above the national average participation rate, with 0.63% of companies claiming R&D.**

SA, QLD, and NSW are all slightly below the national average, but fairly close. ACT and TAS lag behind (although not as far as the NT), with each state recording 0.48% of companies participation in the RDTI.



In W.A., we see a strong culture of innovation, particularly in mining, energy, and renewables. These industries face complex challenges that demand continuous R&D, and the RDTI plays a critical role in supporting companies through those challenges.

What's unique about WA is that businesses are thinking big, using the incentive to support the development of new technologies that will improve outputs and efficiency in a sustainable manner.



– Simon Harcombe, RSM

Metropolitan RDTI engagement is much greater than regional

Metropolitan vs. regional RDTI engagement.

The environment for R&D opportunities is drastically different between metropolitan and regional areas.¹³ Metropolitan areas are characterised by dense populations and high availabilities of specialised employees, however, space is expensive.

On the other hand, regional areas are characterised by an abundance of space, at the expense of density. As a result, different industries operate in these contrasting regions, and, at different scales.

It's unsurprising to see that metropolitan areas dominate the RDTI program, accounting for 90% of total expenditure.

With 10,384 companies contributing \$10.57B, the average company's R&D expenditure in metropolitan regions amounts to \$1.02M, almost double the \$556k average in regional areas.

Similarly, the median claim size in metropolitan areas (\$344k) is significantly higher than that of regional areas (\$239k), underscoring the scale of R&D activities concentrated in cities.

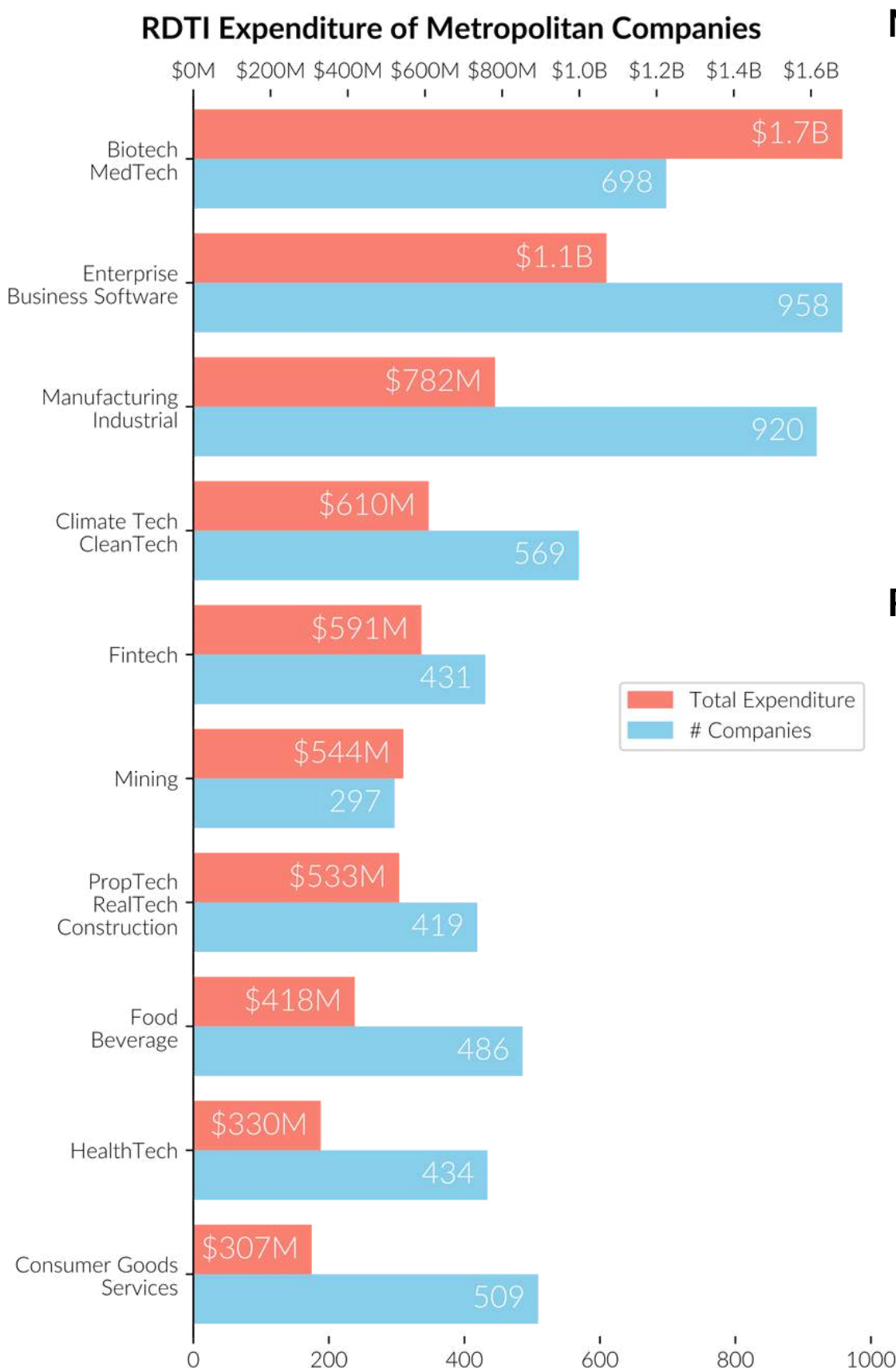
Regional areas, however, remain an important contributor to the program, with 1,161 companies collectively investing \$645M in R&D.

Industries like Agriculture / AgTech and Manufacturing / Industrial drive 34.25% of all categorised expenditure in these areas, reflecting the unique strengths and innovation needs of regional economies.

	Metropolitan	Regional
# Companies	10,384 (90%)	1,161 (10%)
Total RDTI Expenditure	\$10.57B	\$645M
Mean	\$1.0M	\$556k
Median	\$344k	\$239k

¹³Whether a company is considered metropolitan or regional is determined by their registered address. Approximately one third of postcodes were classified as metropolitan.

Different industries define metropolitan vs. regional RDTI



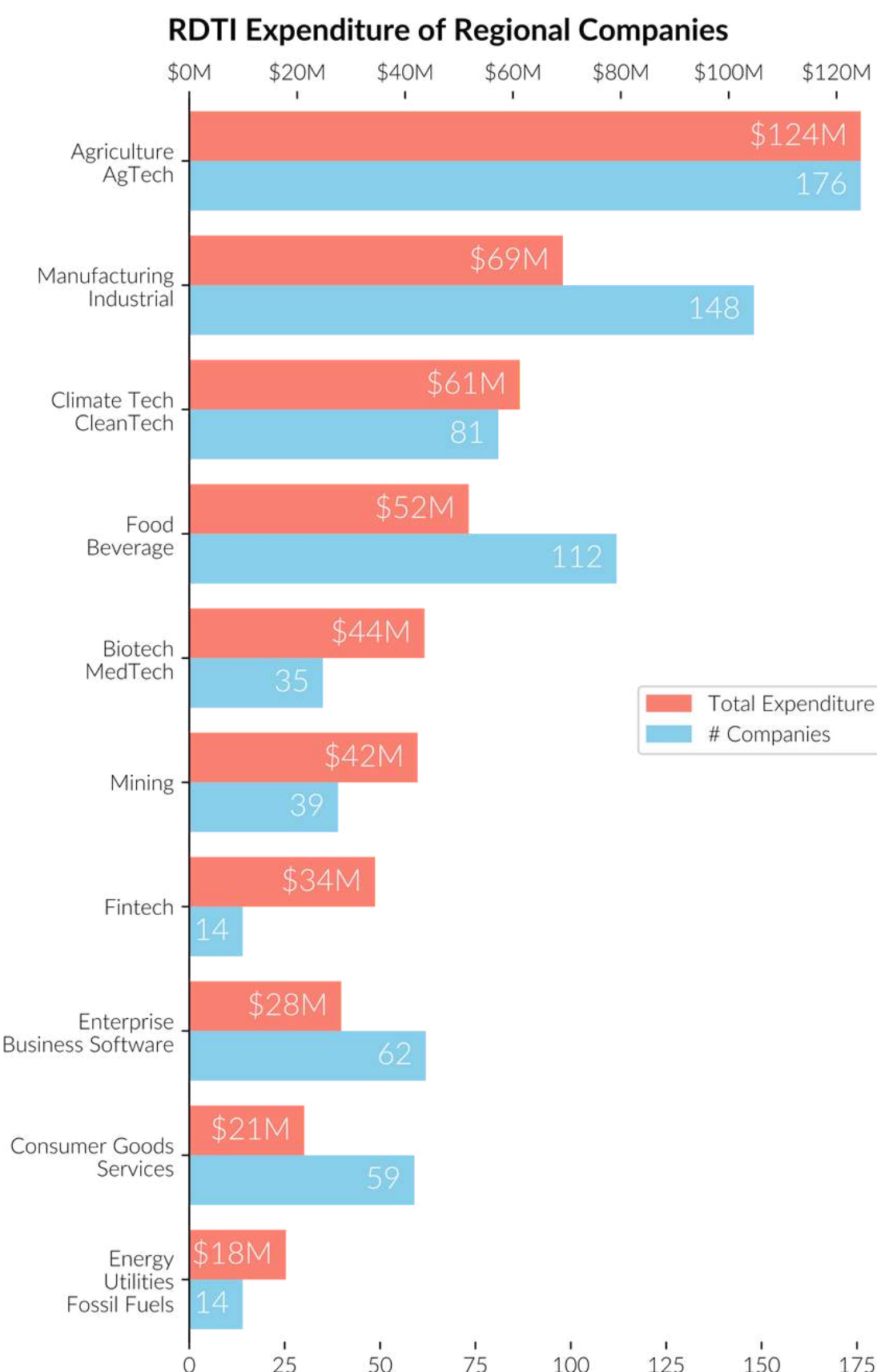
Metropolitan Areas

- Biotech/MedTech leads R&D expenditure with \$1.68B across 698 companies, highlighting the reliance on metropolitan hubs for specialised expertise and infrastructure.
- Enterprise/Business Software tops participation with 958 companies contributing a total of \$1.07B, reflecting the prevalence of a digital-centric workforce in cities.
- Manufacturing / Industrial is a shared priority, ranking third in metropolitan areas with \$782M across 920 companies.

Regional Areas:

- Agriculture/AgTech dominates regional innovation, with \$124M in expenditure across 176 companies, closely tied to the agricultural output of these regions.
- Manufacturing/Industrial ranks second in regional areas, with \$69M in expenditure across 148 companies, reflecting the ongoing need for industrial innovation in non-urban settings.
- Climate Tech/CleanTech ranks third, with \$61M spent across 81 companies, highlighting the cross-regional importance of sustainability-focused R&D.

Regional's biggest industry (Agriculture / AgTech) is >13x smaller than Metropolitan's biggest (Biotech / MedTech).



Spend is dominated by metropolitan entities in most industries

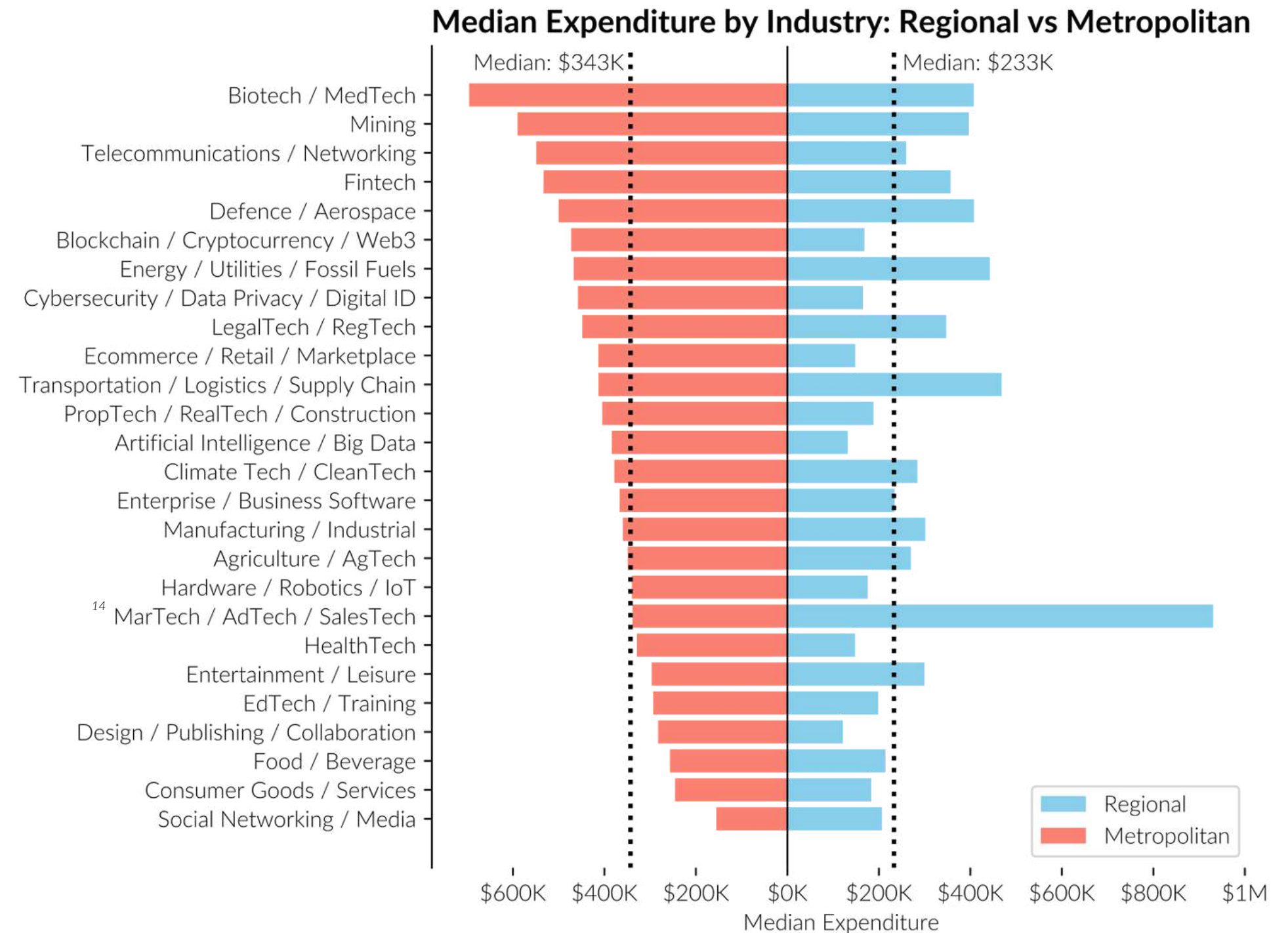
Metropolitan vs. regional RDTI spend.

There is no obvious correlation between the median claims of metropolitan and regional companies, however, **the top 5 metropolitan industries by median also register above average in regional geographies.**

The divide in total expenditure between regional and metropolitan can be described partly by the comparatively lower wages regionally, in addition to high expenditure industries such as Biotech / MedTech being few in number.

However, the number of companies participating in RDTI regionally is below expectations.

Is there more to be done to incentivise innovation in these areas?



¹⁴Note: The 'MarTech / AdTech / SalesTech' industry outlier for Regional is skewed by a single company's large claim.

City CBDs lead the way in RDTI spend

RDTI expenditure across Statistical Area Level 3s (SA3s).

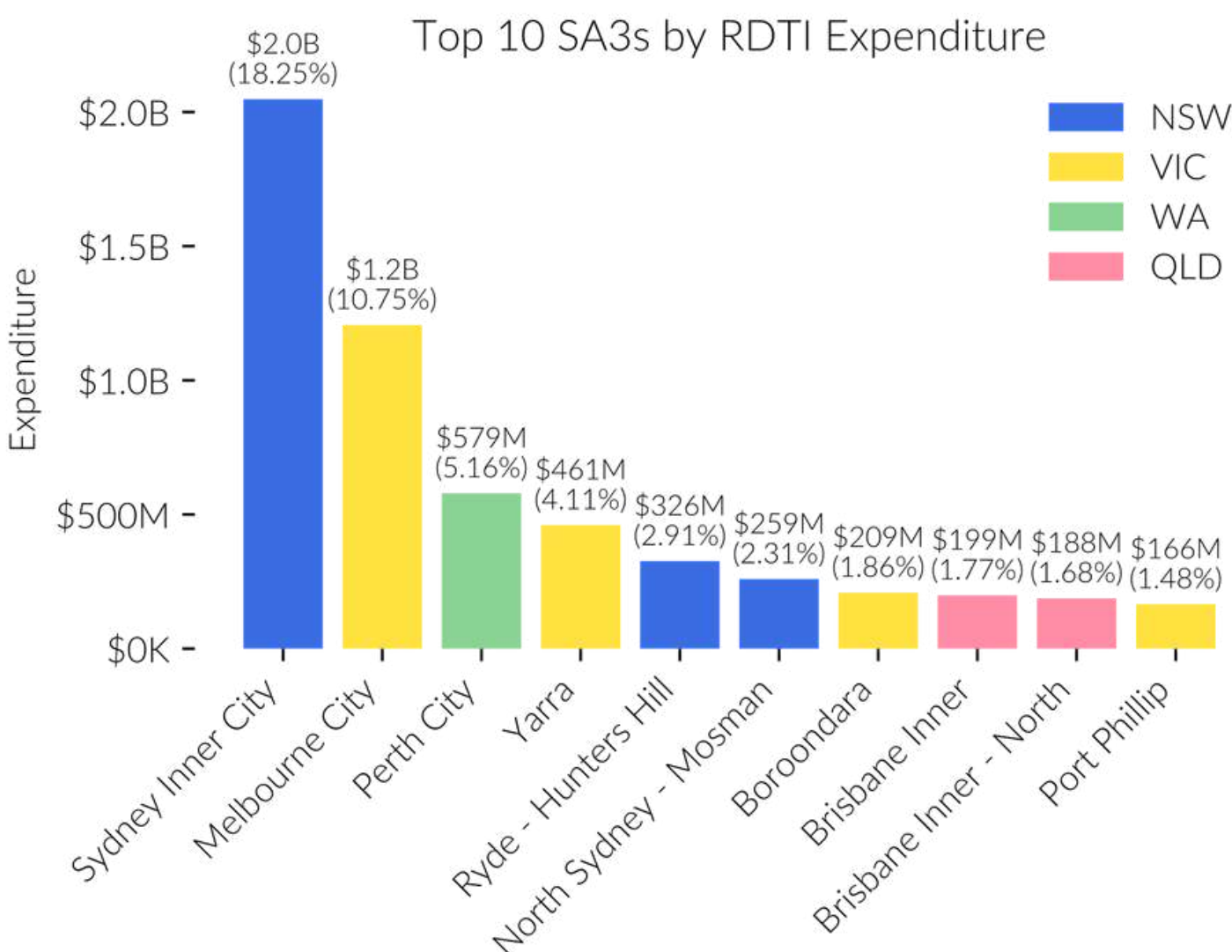
The geographic distribution of RDTI participants reveals a high concentration of expenditure and claimants in central business districts (CBDs) and metropolitan areas.

This analysis used regions called Statistical Areas Level 3 (SA3s). SA3s are granular areas defined by the Australian Bureau of Statistics (ABS), and mitigate some of the flaws found when using postcodes.¹⁵ Results showed that, while participation is widespread across geographies, there is significant clustering in Australia's largest urban centres, but a notable long-tail distribution across regional and suburban areas.

A majority (50.28%) of the R&D expenditure was concentrated in just ten SA3s - corresponding to just over 3% of the SA3s with RDTI expenditure. The CBDs of Sydney, Melbourne, and Perth occupied the top three spots, with SA3s from four states making an appearance in the top 10.

At the same time, we saw the distribution had a very thin tail - the final 5% of R&D expenditure was across 145 SA3s (45% of the 322 SA3s with R&D expenditure). These results further highlighted the dominance of inner-city hubs in research and development.

The top 10 SA3s alone contribute over 50% of all R&D expenditure, in an area 1/24,000th (or 0.0041%) the size of Australia.



¹⁵Using SA3s was seen to be a more apt classification than the finer-grained postcodes, which created significant noise in the data. A large proportion of postcodes had zero companies registered, let alone those with R&D expenditure. In addition, postcodes had overlapping geographies, so as a result, it was difficult to visualise trends. Of the 340 geographical SA3s, 322, or 94.70%, recorded R&D expenditure – by comparison, on a postcode basis, only 40.69% of postcodes recorded expenditure. In general, SA3s are designed to have populations between 30,000 and 130,000 people, however, some regions have populations above or below this number.

Claimants are concentrated in city centres

Number of RDTI companies across Statistical Area Level 3s (SA3s).

The distribution of entities claiming RDTI is still very concentrated, with the top 10 SA3s representing 32.72% of all RDTI claimants.

This reinforces what we observed in the metropolitan vs regional breakdown - claims are most concentrated and are larger in metropolitan centres, but there are still volumes of claims in regional areas (albeit smaller).

The top three SA3s are the CBDs of Sydney, Melbourne, and Perth, accounting for 20% of all RDTI claimants - further supporting these areas act as the primary innovation hubs in Australia.

In fact, here the gap between Sydney Inner City and Melbourne City widened - the number of RDTI entities registered in Sydney Inner City is 78% more than Melbourne city, while expenditure measures 70% higher.

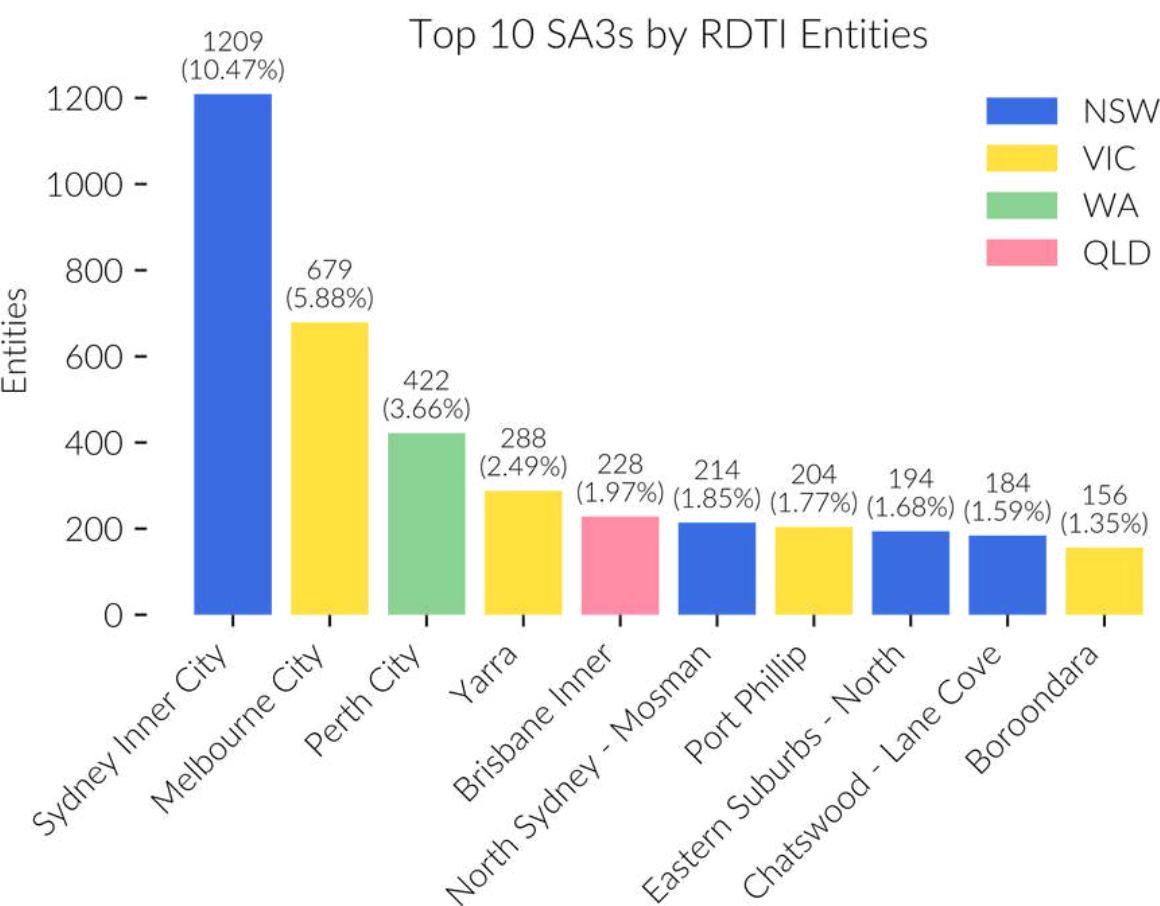
We also observed the distribution of R&D entities across SA3s had a thin tail, but not as thin as expenditure.

The final 5% of R&D entities were across 115 SA3s (as opposed to 145 SA3s for expenditure).

Perth City, despite being smaller in population, ranks third for both total expenditure and claimant count, emphasising its relatively strong role in national R&D.

Innovation centres within cities cater to fledging startups across industries. The Sydney Startup Hub alone has played host to over 1,800 start-ups in its time. By providing space to these new companies, it incentivises the creation of future companies, attracts investment, and spawns more R&D efforts.

Across these SA3s, each have different average and median claim sizes, along with varying concentrations of industries. In Perth, for example, mining-driven R&D is significant, both by expenditure and number of claimants, as seen in the following section. Its lower industry diversification may present both opportunities and risks in how R&D activity evolves in future years.



A deeper dive into SA3s: Over the next few pages we take a deeper look at industries across Australia. Each region has its own innovation signature - shaped by local industries, talent, and economic strengths. The following maps compare the most common industries, those with the greatest expenditure, and the number of entities across SA3s - providing a graphical map of innovation in Australia.

Manufacturing / Industrial is the most distributed industry

Most common R&D industries across Australia.

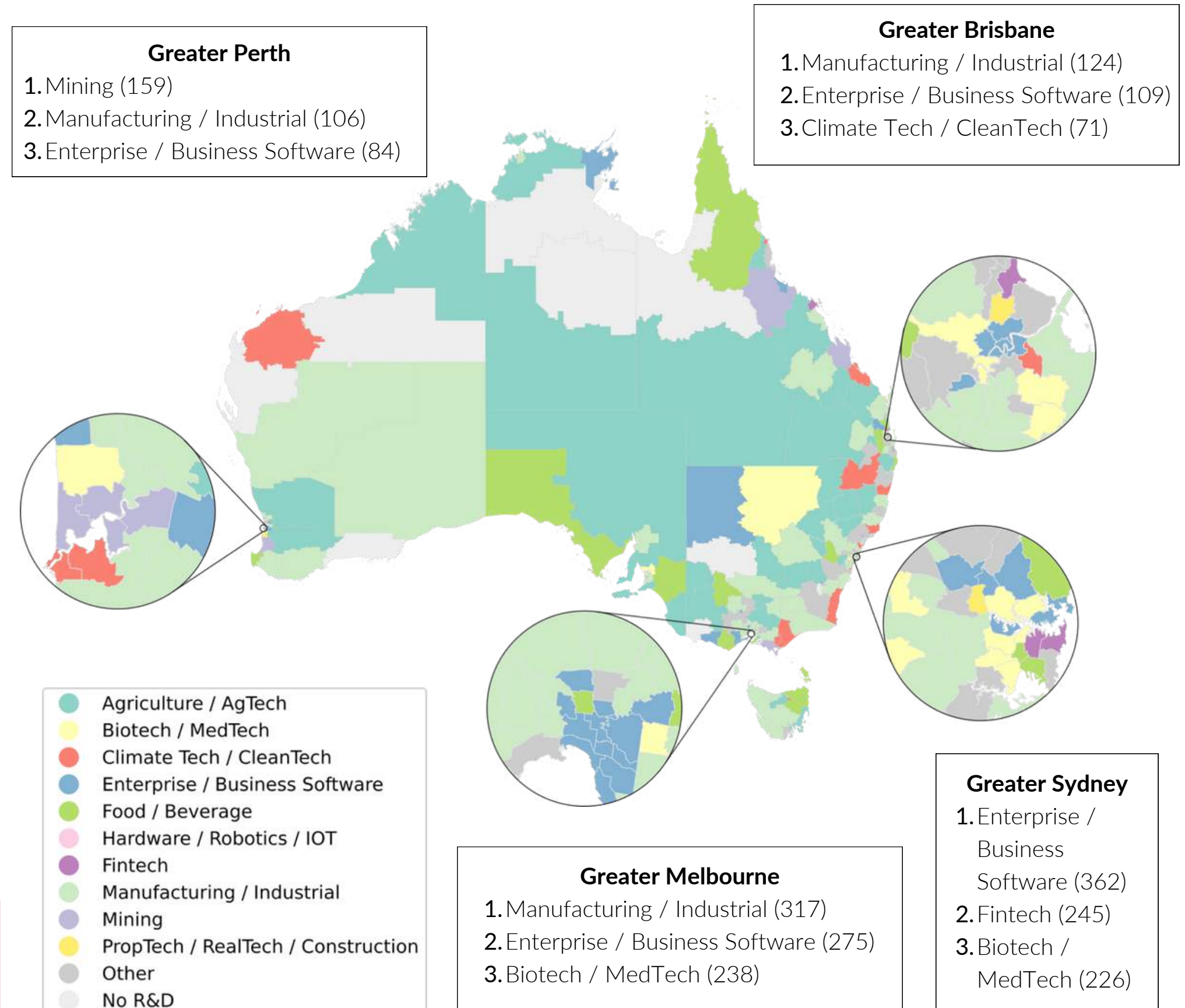
By measuring the most common industry for each SA3 across Australia, we were able to detect specialities across regions. We can see visualised the stranglehold that Agriculture / AgTech has over regional Australia - most commonly in regions known for it. For example, the North and South Wheatbelt outside of Perth is a stronghold of Agriculture / AgTech nestled between mining and manufacturing regions.

Within each major city, we see Business / Enterprise Software making an appearance in the top 3 industries across the greater catchments. Only Greater Sydney is missing Manufacturing / Industrial in its top three whose omission is supplanted by Fintech, an industry uniquely represented in Sydney's city centre.

Perth is similarly unique with the existence of Mining in the top three, although the presence of Climate Tech / CleanTech in Fremantle and Melville aligns with its resource-driven economy and growing clean technology sector.

Across Australia, Manufacturing / Industrial led in 92 SA3s as the most frequent industry, doubling the second place Enterprise / Business Software (42 SA3s).

92 of the 322 SA3s had Manufacturing / Industrial as the most frequent industry.



Major city SA3s have heavy, overlapping industry concentrations

Industries by R&D expenditure across Australia.

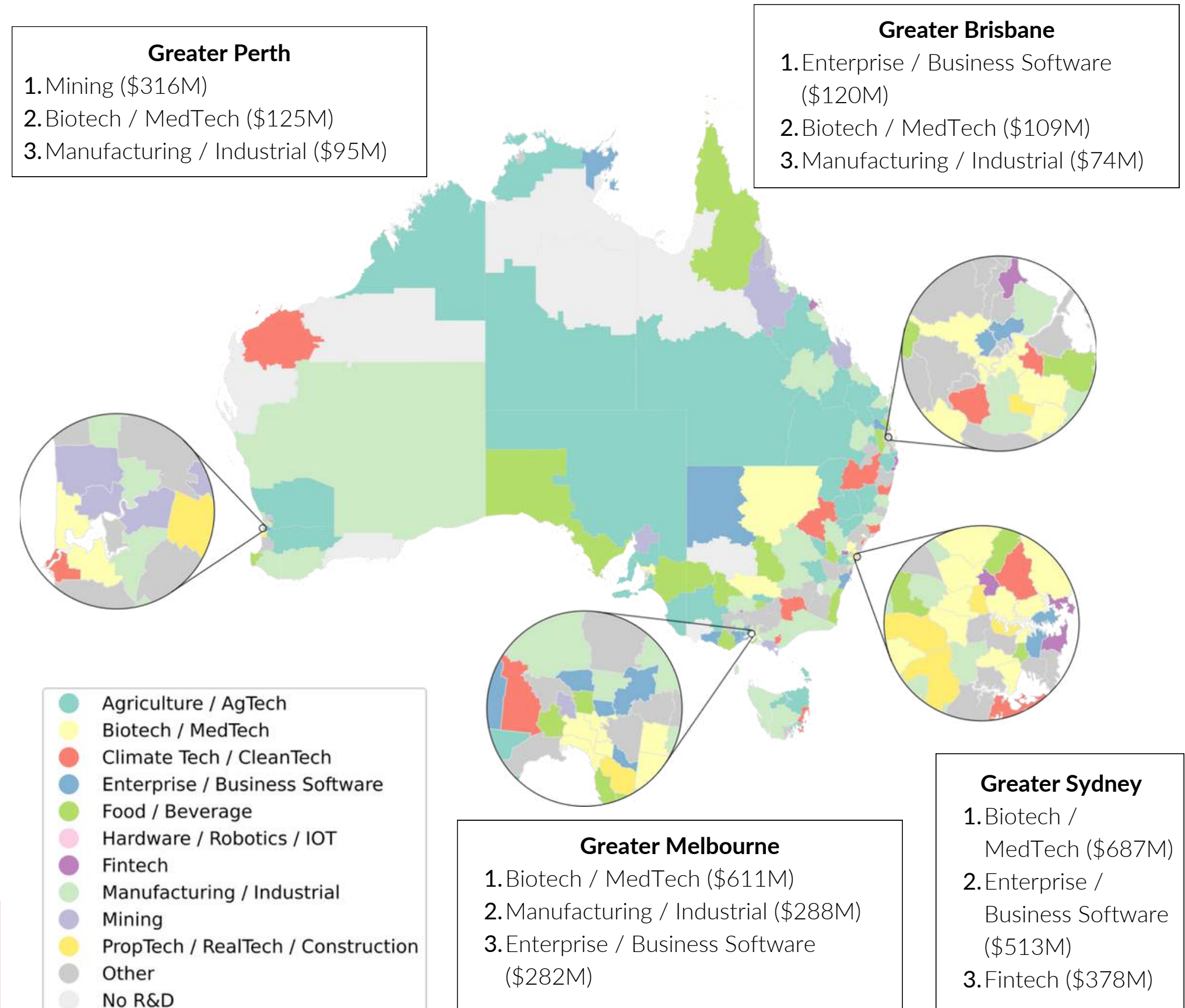
By contrast, the distribution of industries measured by expenditure was more varied. Manufacturing / Industrial only topped total expenditure in 62 SA3s (as opposed to 92 when measured by frequency). However, we observed that Biotech / MedTech surged within cities, with 42 SA3s registering it as their industry with the greatest expenditure.

Biotech / MedTech's dominance was most apparent in urban areas, appearing in the top three in the four largest cities. Greater Melbourne had Biotech / MedTech with over two times the expenditure as the next industry, Manufacturing / Industrial.

Perth again stands out with Mining as its top R&D industry, accounting for \$316M in expenditure, significantly higher than its second-ranked sector, Biotech / MedTech (\$125M), reflecting the city's economic reliance on resource-driven innovation.

A diversified economy is one that is resilient to shocks and changes, and whilst we see Australia is particularly diverse with its swathes of industries distributed throughout the country, the same cannot be said within narrower regions - particular SA3s have heavy concentrations of similar industries.

75% of all Biotech / MedTech expenditure is within Greater Sydney and Melbourne.



Significant R&D activity remains centralised

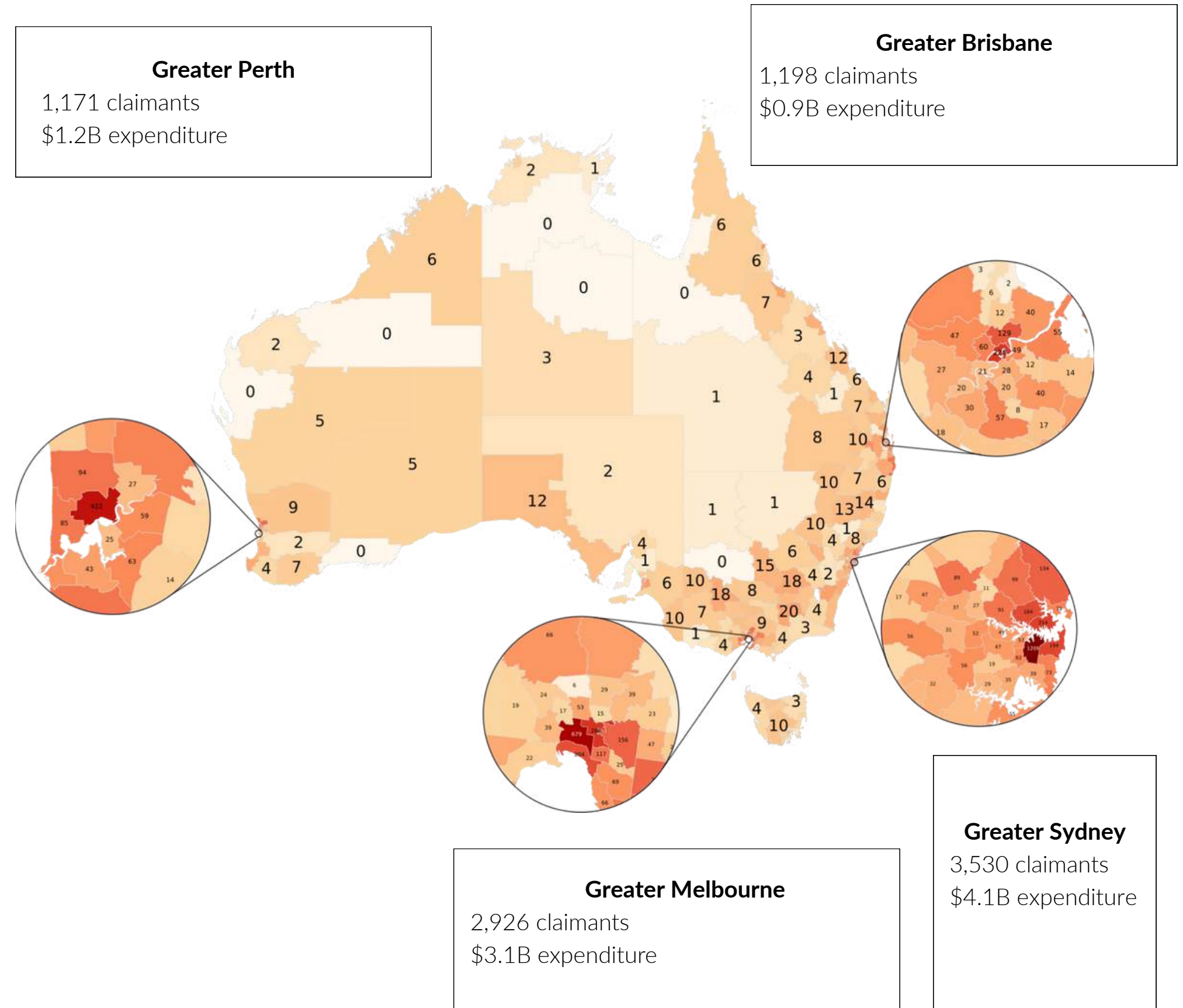
Number of RDTI claims across SA3s.

R&D claims are overwhelmingly concentrated in Australia's largest cities; with Greater Sydney (3,530 claimants) and Greater Melbourne (2,926) far ahead of Brisbane (1,198) and Perth (1,171). Sydney has 20% more RDTI claimants than Melbourne, whilst also having a significantly larger average claim size than other cities, reinforcing its position as the country's primary innovation hub.

Within each city, a significant portion of RDTI claimants are clustered within a single SA3, rather than being evenly spread across metropolitan regions. This suggests that CBDs dominate innovation activity.

Whilst diverse in industry, regional Australia has insignificant levels of RDTI entities and expenditure - **the Sydney Inner City SA3 alone has more claimants (1,209) than all of regional Australia combined (1,161)**. In fact, its claimed RDTI expenditure of \$2B is over triple what is recorded regionally (\$645M).

Of the 18 SA3s with no registered R&D expenditure, we observed these were mostly situated in island communities (e.g. Norfolk Island), remote and desert communities, or areas that are mostly covered by national parks. We believe having nearly 95% coverage of Australia by SA3 to be particularly impressive, and a testimony to the innovation existing all throughout Australia.



RDTI participation is concentrated within CBDs

SA3 RDTI claimant concentration within cities.

This stark concentration of R&D claims within the four largest greater-cities (as categorised by the ABS) is visualised below. Greater Perth has the highest percentage of claimants within the top SA3, with 36.0% of Perth's R&D claims are situated within Perth City.

Sydney Inner City is only marginally less concentrated, with 34.2% of claimants within Greater Sydney head-quartered within the SA3. However, this is comparatively higher than Perth's, as Sydney contains over 2.2x the number of SA3s as Perth.

Sydney's centralisation stubbornly remains, despite years of government efforts to decentralise economic activity. The two other planned CBDs of Sydney - Parramatta and Liverpool - each only have ~1% as much as Sydney Inner City's RDTI expenditure.

In contrast, Brisbane and Melbourne both share significantly less concentration. The top SA3s of Brisbane Inner and Melbourne City represent 19.0% and 23.2% respectively. Their top 5 SA3s combined represent 44.2% and 50.3% indicating that, while concentration is better than other cities, there is still a large amount of concentration within such few areas.

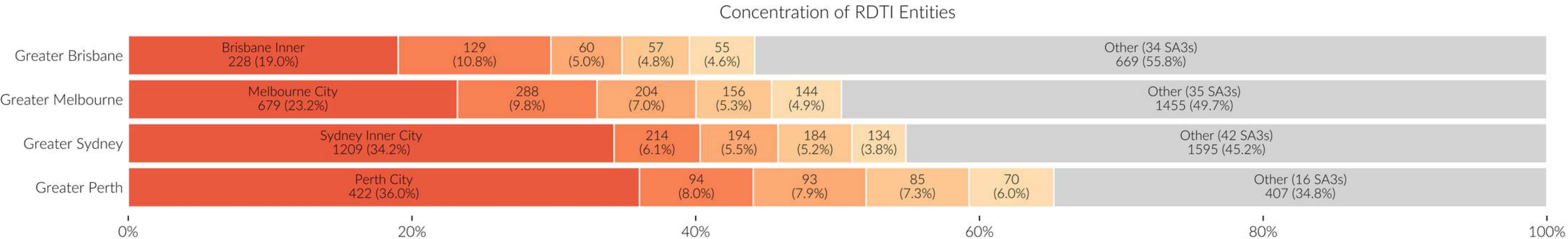
These insights highlight the continued dominance of capital cities in R&D activity, and raise questions about the effectiveness of decentralisation policies aimed at expanding innovation beyond inner-city business hubs.



We continue to see R&D activity concentrated in Australia's capital city CBDs. The infrastructure, talent density, and investor access in inner cities remain powerful drawcards for innovation-focused businesses.

In its current state, the program is likely to see this trend continue.

– John Nixon, Standard Ledger



Is it sub-optimal for innovation to be dominated by cities?

Top SA3s by RDTI participation rate.

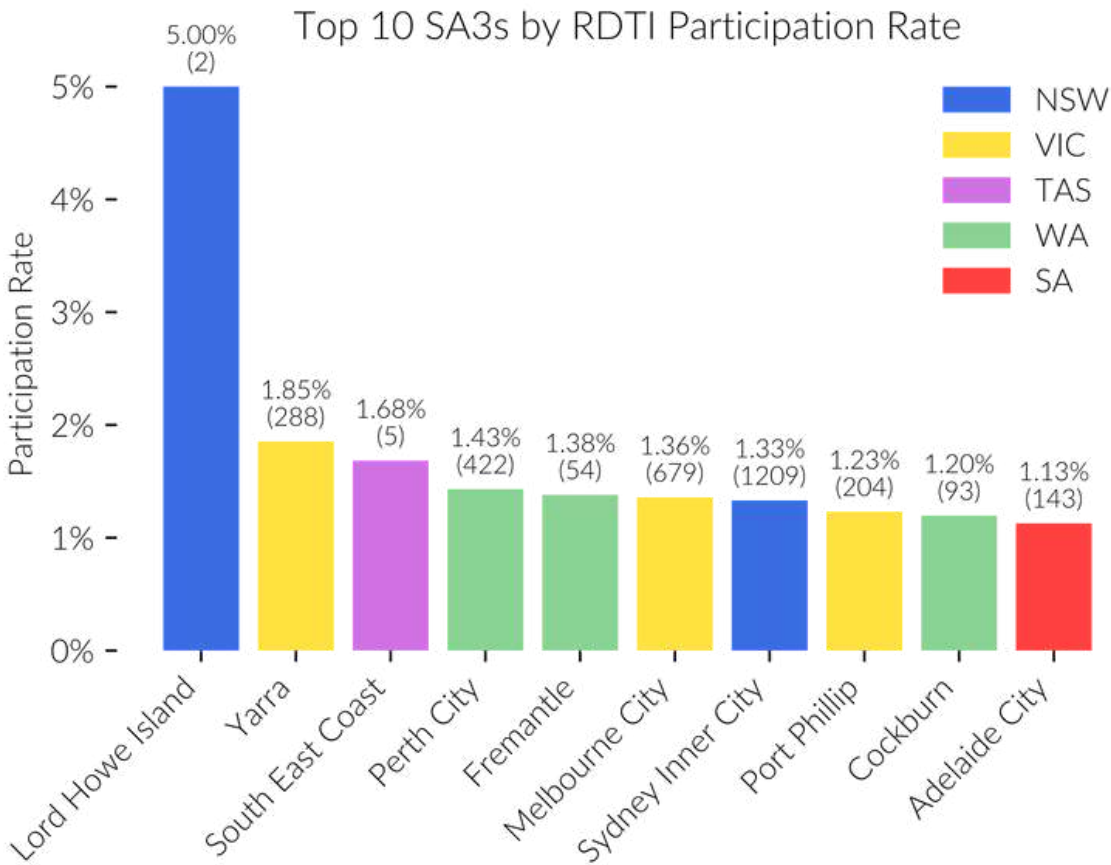
Analysis of RDTI participation by SA3 - being the proportion of RDTI entities to total companies in the region - reveals a high concentration of innovation activity within inner-city areas. The participation rates in these regions are 2-3x the national average (0.58%), highlighting that highly-skilled innovation is clustered in metropolitan hubs.

- Inner-city regions dominate R&D participation: Eight of the top ten SA3s are in major cities, with Sydney Inner City, Melbourne City, and Perth City leading in both the number of claimants and total expenditure.
- Yarra (Inner Melbourne) has the highest non-outlier participation rate, at 1.85% - over three times the national average.
- Perth City has the second-highest metropolitan participation rate, at 1.43% - in line with earlier insights highlighting WA's disproportionately high RDTI participation.

Parramatta and Liverpool both record significantly lower participation rates than Sydney Inner City's, with rates of 0.31% and 0.29% respectively, over four times lower than that of Sydney Inner City (1.33%) - challenging the vision of a diverse and multi-CBD area.

Similarly, regional areas struggle to compete, despite potential advantages such as lower operational costs and cost-of-living for employees. Of the two regional areas that made it into the top 10, both are unusual:

- Lord Howe Island's two entities both belonged to the same brewing company (Lord Howe Brewing Company), and recorded low R&D expenditures, averaging \$128k; and
- Tasmania's South East Coast region had just five entities that participated in the FY22 RDTI, however, nearly 95% of that region's expenditure was a single entity - Sea Forest, which invests in seaweed as an additive for livestock feed to reduce methane emissions.



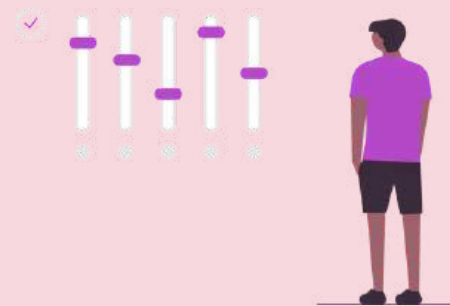
Inner Melbourne's Yarra region has 1 in 54 companies participating in RDTI - over three times the rate of the national average.

These findings highlight both the strengths and weaknesses of Australia's R&D distribution, prompting an important discussion about the future of innovation policy and regional economic development.

Key questions for policy makers

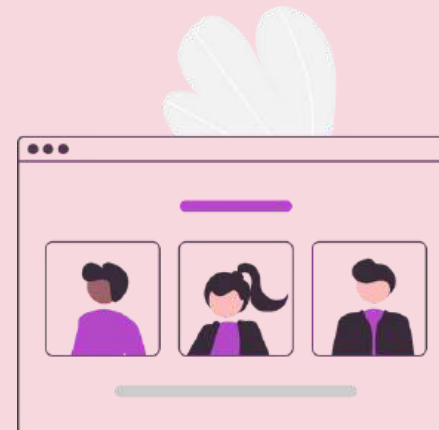
1

Should more be done to incentivise R&D outside of major CBDs?



2

How can regional centres attract more R&D-focused companies?



3

Do innovation hubs create spillover benefits for surrounding businesses or does decentralisation dilute efficiency?



R&D

Employment/Jobs

RDTI investment is highly correlated with skilled job creation	<u>43</u>
Software industries lead employment, but talent spans all	<u>44</u>
The largest RDTI employers highlight the breadth of industries	<u>45</u>
The 10 largest Australian employers claiming RDTI	<u>46</u>
Complex, high-tech industries lead expenditure on employees	<u>47</u>
Companies with 11-50 employees are the biggest RDTI cohort	<u>48</u>
RDTI companies employ over half a million white-collar workers	<u>50</u>

kashcade

RDTI investment is highly correlated with skilled job creation

The link between R&D investment and jobs.

Estimating the number of full-time R&D employees (FTEs) across industries provides valuable insight into how RDTI investment translates into job creation.

Our analysis combined LinkedIn Associated Members (LAMs) – individuals who have listed a company on their LinkedIn profile as their current employer – and R&D expenditure per company. Further information on the methods and assumptions we used for this analysis can be found in the appendix.¹⁶

Our findings suggests that approximately 95,000 full-time RDTI jobs exist in Australia, aligning with the ABS estimate of 91,414 person years of effort was devoted to R&D in FY2021-22.¹⁷

The data shows a clear correlation between RDTI participation, expenditure, and job creation: **Industries with higher RDTI engagement tend to employ more R&D professionals**, reinforcing the program's critical role in supporting skilled employment. **This also suggests that a significant proportion of RDTI funding is ultimately directed towards job creation, rather than capital expenditures.**

As Australia continues to compete in the global innovation race, supporting high-growth, R&D-driven industries could be a key strategy for both economic development and workforce expansion. The following page visualises the number of estimated employees per industry.

¹⁶To estimate the number of RDTI employees per company, we took the minimum of either: A) their Australian LAMs; or B) their R&D expenditure divided by \$75k. Calculation B assumes \$75k is equal to 1 FTE's RDTI allocation, being 75% of the average Australian professional salary of \$100k. This 'Minimum of A and B' method accounts for companies with substantial CAPEX, as their LAMs would be lower than the expenditure indicates, while also not overstating the number of employees for non-R&D-intensive businesses by considering the R&D expenditure. However, we do still overestimate in these scenarios in larger organisations, as not all R&D expenditure is allocated to wages and salaries. Nevertheless, as we are only counting under 72% (8,295 companies) of the Transparency Report population (as companies are required to have both LinkedIn member data, and valid industry categorisation to be counted), we believe these over- and under-statements approximately even out.

¹⁷Source: [ABS \(2023\)](#).



Great R&D starts with great people. The R&D Tax Incentive is designed to support the time, effort, and expertise businesses put into solving complex problems and developing new ideas.

Investing in people is one of the most effective ways to strengthen that innovation.

– David Housler, InnerCode



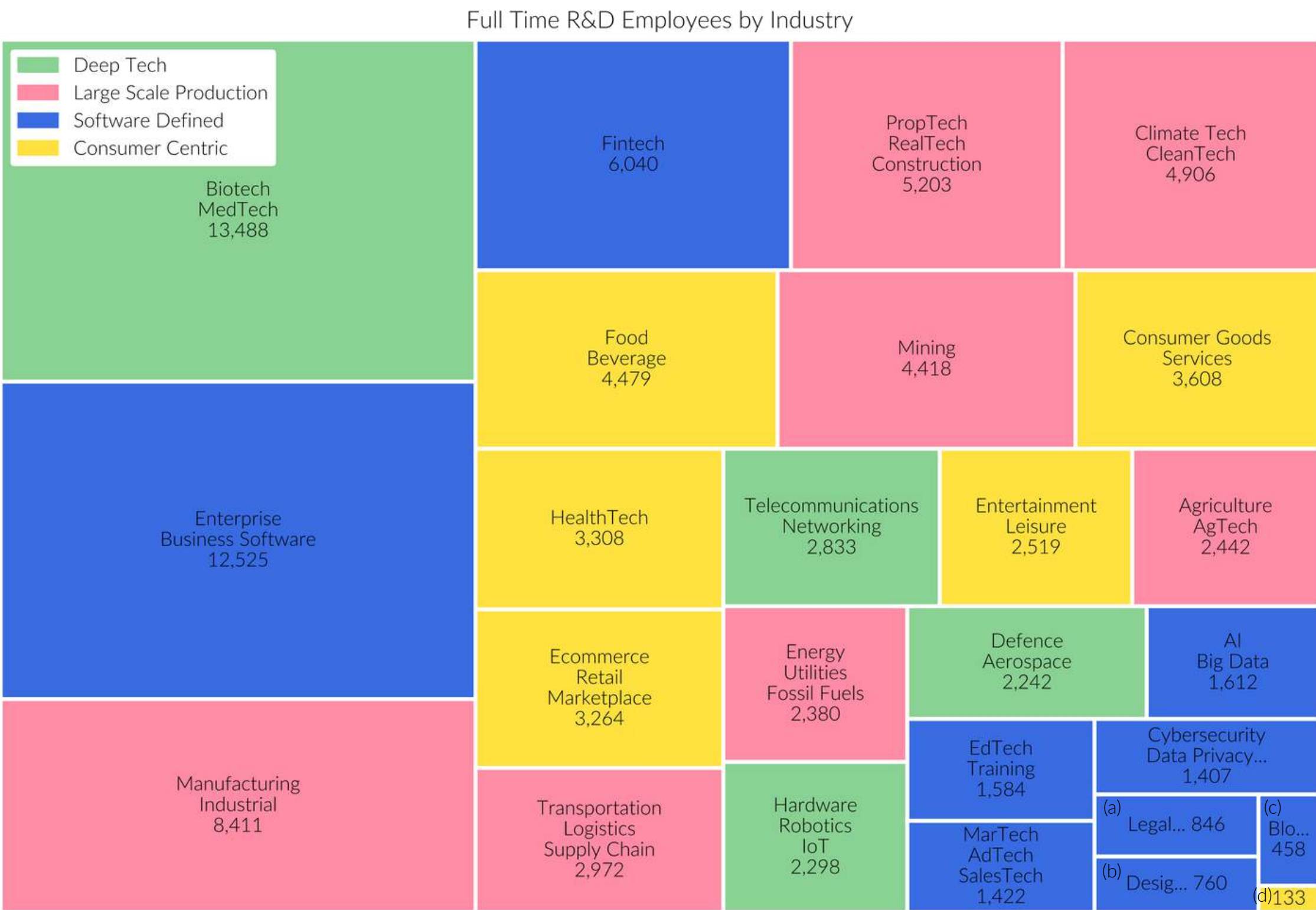
Software industries lead employment, but talent spans all

R&D employees per industry.

The following tree-map shows the estimated distribution of full-time R&D employees across industries, highlighting where Australia’s innovation workforce is concentrated.

Key insights:

- **Deep Tech and software-driven sectors occupy the top rungs**, but large-scale production and consumer-centric industries are consistently mid-of-field.
- **Industries that employ the most R&D workers align with their high R&D expenditure and claimant participation**, see: Biotech/MedTech (13,488 FTEs); Enterprise / Business Software (12,525 FTEs); Manufacturing / Industrial (8,411 FTEs).
- **ClimateTech (4,906 FTEs) and HealthTech (3,308 FTEs) show strong employment figures**, reinforcing their importance in Australia’s innovation ecosystem.



(a) LegalTech / RegTech. (b) Design / Publishing / Collaboration. (c) Blockchain / Cryptocurrency / Web3. (d) Social Networking / Media

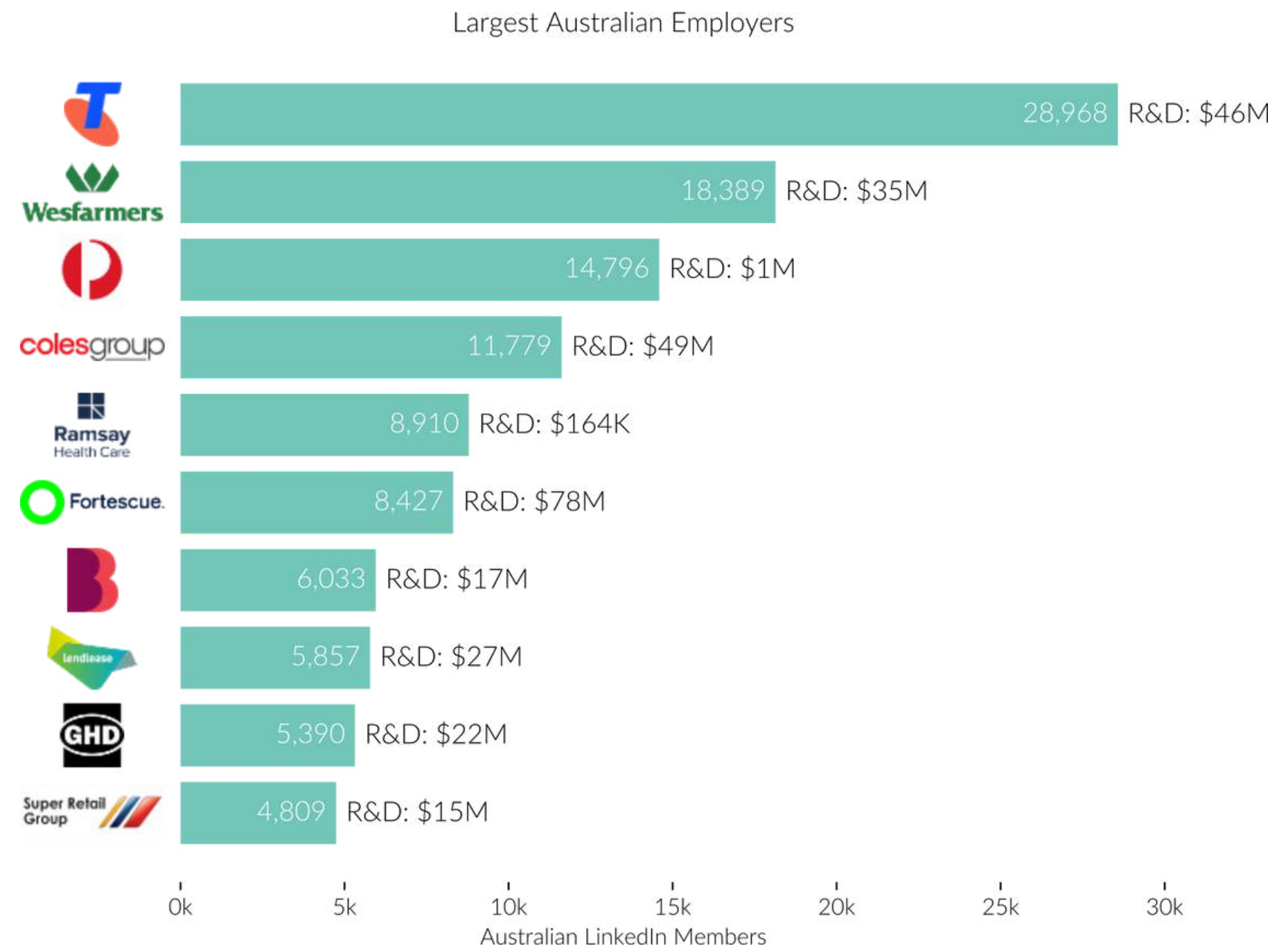
The largest RDTI employers highlight the breadth of industries

Largest Australian employers claiming the RDTI.

While sectors like Biotech, Software, and Fintech are natural R&D leaders, the presence of Mining, Retail, Logistics, and Construction businesses in the top R&D employers highlights the diversity across the program.

Although early-stage 'new-aged' tech companies often dominate R&D discussions, the data shows that large, well-established enterprises across multiple industries engage with the RDTI to support their research efforts too, and remain competitive in the innovation landscape, even as they mature.

This data shows that large, mature companies are still actively engaging in R&D, entering new markets, and improving efficiency. Their continued participation in the RDTI program highlights that innovation isn't just about new ideas, but also about sustaining competitiveness as businesses grow in size and complexity.



It's encouraging to see that some of Australia's largest employers, across a diverse and broad range of sectors, are also among the biggest RDTI contributors. This reinforces that established enterprises continue to invest in R&D locally to stay globally competitive and drive long-term value for Australia.

— Bruce Murray, FundFindrs



The 10 largest Australian employers claiming RDTI

	Telstra Corporation Ltd (VIC) 28,968 AusLAMs 35,203 LAMs (82% Australian) \$46.3M RDTI Expenditure	Telecommunications/Networking: Australia's largest teleco, providing mobile, broadband, and digital solutions for individuals and businesses nationwide.
	Wesfarmers Ltd (WA) 18,389 AusLAMs 21,585 LAMs (85% Australian) \$35.0M RDTI Expenditure	Consumer Goods/Services: A diversified conglomerate operating in retail, industrials, chemicals, and energy, owning brands such as Bunnings and Kmart.
	Australian Postal Corporation (VIC) 14,796 AusLAMs 15,177 LAMs (97% Australian) \$1.3M RDTI Expenditure	Transportation/Logistics/Supply Chain: Australia's national postal service, offering mail, parcel, and logistics solutions for consumers and businesses.
	Coles Group Ltd (VIC) 11,779 AusLAMs 12,042 LAMs (98% Australian) \$48.7M RDTI Expenditure	Ecommerce/Retail/Marketplace: A leading Australian supermarket and retail group, providing groceries, liquor, and financial services across the country.
	Ramsay Health Care Ltd (NSW) 8,910 AusLAMs 10,864 LAMs (82% Australian) \$0.2M RDTI Expenditure	HealthTech: A global healthcare provider operating hospitals and clinics, delivering high-quality patient care across multiple countries.
	Fortescue Ltd (VIC) 8,427 AusLAMs 9,890 LAMs (85% Australian) \$77.9M RDTI Expenditure	Mining: A global leader in iron ore production and renewable energy initiatives, focusing on sustainable mining and green hydrogen projects.
	Bendigo and Adelaide Bank Ltd (VIC) 6,033 AusLAMs 7,567 LAMs (80% Australian) \$16.8M RDTI Expenditure	Fintech: A community-focused financial institution offering banking and lending solutions across Australia.
	Lendlease Corporation Ltd (NSW) 5,857 AusLAMs 11,268 LAMs (52% Australian) \$21.6M RDTI Expenditure	PropTech/RealTech/Construction: A multinational real estate and infrastructure group, specialising in property development, construction, and investment.
	GHD Group Ltd (NSW) 5,390 AusLAMs 15,679 LAMs (34% Australian) \$21.6M RDTI Expenditure	Climate Tech/CleanTech: A global professional services company with engineering, architecture, and environmental solutions; sustainability-focused.
	Super Retail Group Ltd (QLD) 4,809 AusLAMs 5,840 LAMs (82% Australian) \$15.0M RDTI Expenditure	Ecommerce/Retail/Marketplace: A retailer owning brands such as Rebel and Supercheap Auto, catering to automotive, sport, and outdoor enthusiasts.

Each of the top ten R&D employers in Australia is either a publicly listed company or a major private enterprise with national or global operations.

It is unlikely that any of these companies are considered high-intensity for R&D (i.e. >2% of total expenditure spent on R&D).

Ramsay stands out with particularly low expenditure: \$163k spread across 8,910 Australian employees.

Of the top ten employers, Fortescue contributed the highest average spend of \$9k per Australian employee on R&D.

Complex, high-tech industries lead expenditure on employees

RDTI expenditure per employee, by sector.

The distribution of mean R&D expenditure per employee across industries reveals stark contrasts in how different sectors allocate investment towards innovation.

Industries that are capital-intensive, deep-tech, or reliant on scientific research lead in per-employee R&D spending, while consumer-facing and service-based industries spend significantly less.

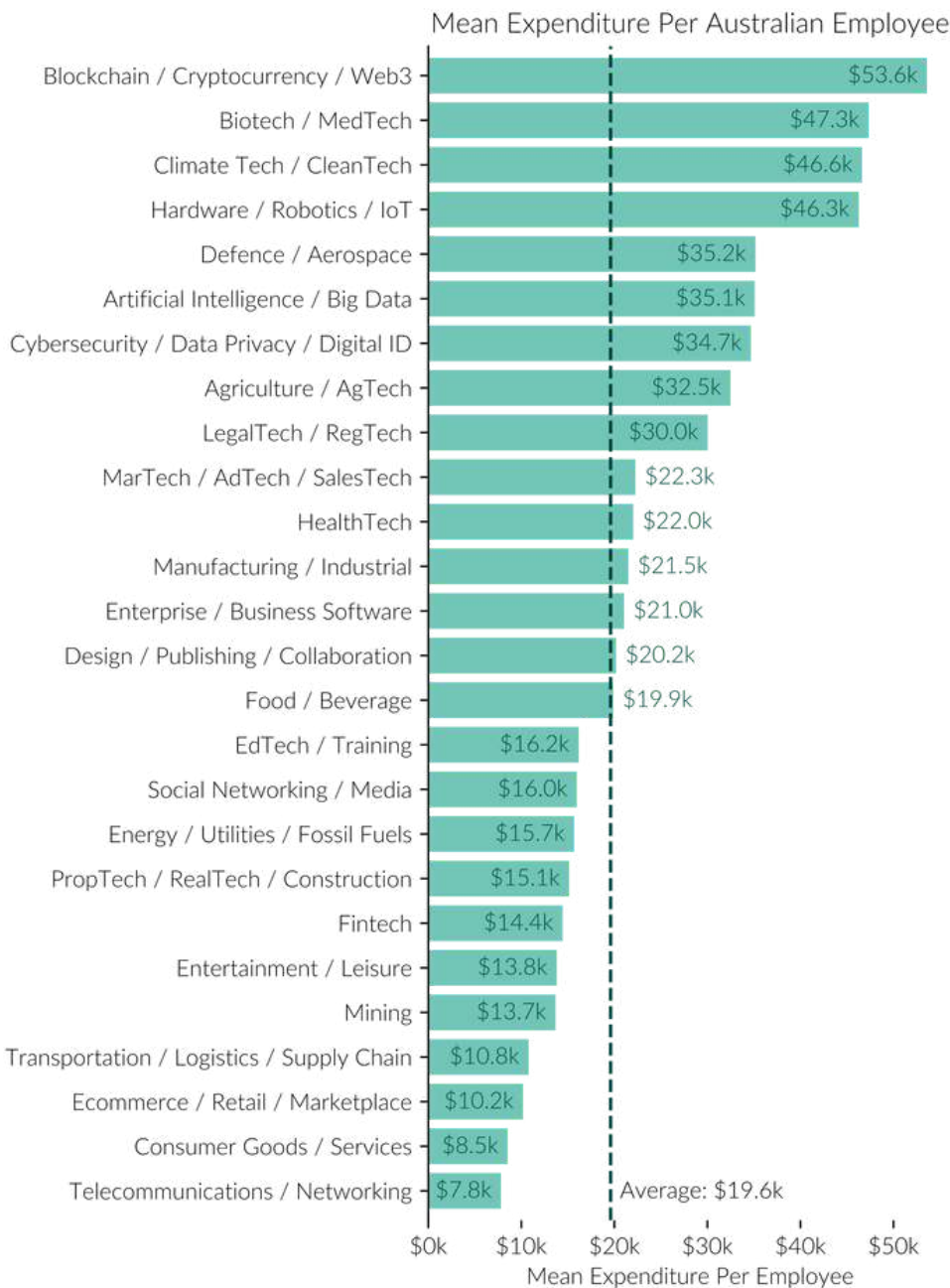
Across the RDTI program, the mean expenditure per employee is ~\$20k, though this varies widely by industry, ranging from Telecommunications / Networking's \$8k average spend,¹⁸ to Blockchain's \$54k.

Fields requiring specialised equipment, complex experimentation, and high regulatory compliance - such as Biotech, Defence, and Hardware/Robotics - exhibit substantially higher investment per employee.

Emerging industries such as AI and Blockchain also saw high expenditure per employee. Those who work in these fields are highly specialised and can command a high salary and, as these fields have a high potential revenue per employee (due to efficiencies in automation within these industries), companies are willing to pay.

In Fintech, a large contingent of these employees are working at banks, who operate employee-intensive operations such as brick-and-mortar service staff and support staff. These decrease the mean expenditure per employee, but the expenditure per R&D employee is still high, as jobs in Fintech (in particular, software engineering roles) attract high salaries.

On the lower end, service-heavy industries like Retail and Social Networking / Media allocate minimal R&D per employee, indicating less of a focus on capital-intensive innovation.



¹⁸Telecommunications is highly skewed by Telstra, which captures ~85% of the employees in this industry. When excluding Telstra from the analysis, the average expenditure for this industry jumps to \$44,019 per employee (fifth highest).

“ **Early stage businesses have a much higher R&D intensity than established businesses as they seek to develop pre-commercial solutions. The majority of those claiming R&DTI expenditure, at this time, are also emerging high tech industries.** ”
— Jeremy Worthington, Worthington Associates

Companies with 11-50 employees are the biggest RDTI cohort

Employment by RDTI companies across industries.

Mid-sized companies were found to drive R&D participation across industries, while larger firms account for the bulk of total expenditure.

Companies with 11–50 employees were the most active participants in the RDTI program, accounting for 42.29% of claimants and 33.46% of classified expenditure.¹⁹

Across industries, companies with less employees dominated participation, while larger firms (201+ employees) represented just 5.30% of the sample.

The percentage of companies with each employee range is surprisingly consistent across all industries, except for Agriculture / AgTech, Design / Publishing / Collaboration, and Social Networking / Media - which all bias towards the lower bracket of 2-10 employees. Mining was the only industry where over 10% (10.23%) of claimants had more than 200 employees.

The link between employee count and expenditure reflects R&D's reliance on skilled labour.

Larger companies naturally incur higher costs and can afford to pursue more ambitious projects. However, industry-specific trends vary. For example:

- PropTech / RealTech / Construction and Entertainment had roughly 50% of their R&D spend come from companies with 201+ employees; alternatively
- Sectors like Cybersecurity / Data Privacy / Digital ID and MarTech / AdTech / SalesTech recorded under 5% from this group.



The under 50 employee bracket consistently stands out across industries, not just for participation, but for the sheer concentration of innovation activity. These businesses are incentivised to innovate, as they typically fall under the aggregated \$20 million turnover threshold, attracting significantly higher offsets compared to firms exceeding this mark.

They are early enough to stay focused on new solutions yet resourced enough to invest meaningfully. It is where we see some of the most impactful R&D take shape.



— Lachlan Catanese,
Grant Help

¹⁹To be included in this analysis required both LinkedIn employee information and industry classification. Only 71.85% of companies (8,295) could be classified, covering 83.89% of all RDTI expenditure (\$9.4B). This may skew the analysis to including larger, and thus publicly visible, companies.

Companies with 11-50 employees are the biggest RDTI cohort

A breakdown of employee count across industries reveals companies with 50 or less employees contribute the most to the program, by participation and R&D expenditure.



RDTI companies employ over half a million white-collar workers

Employment by RDTI companies across states.

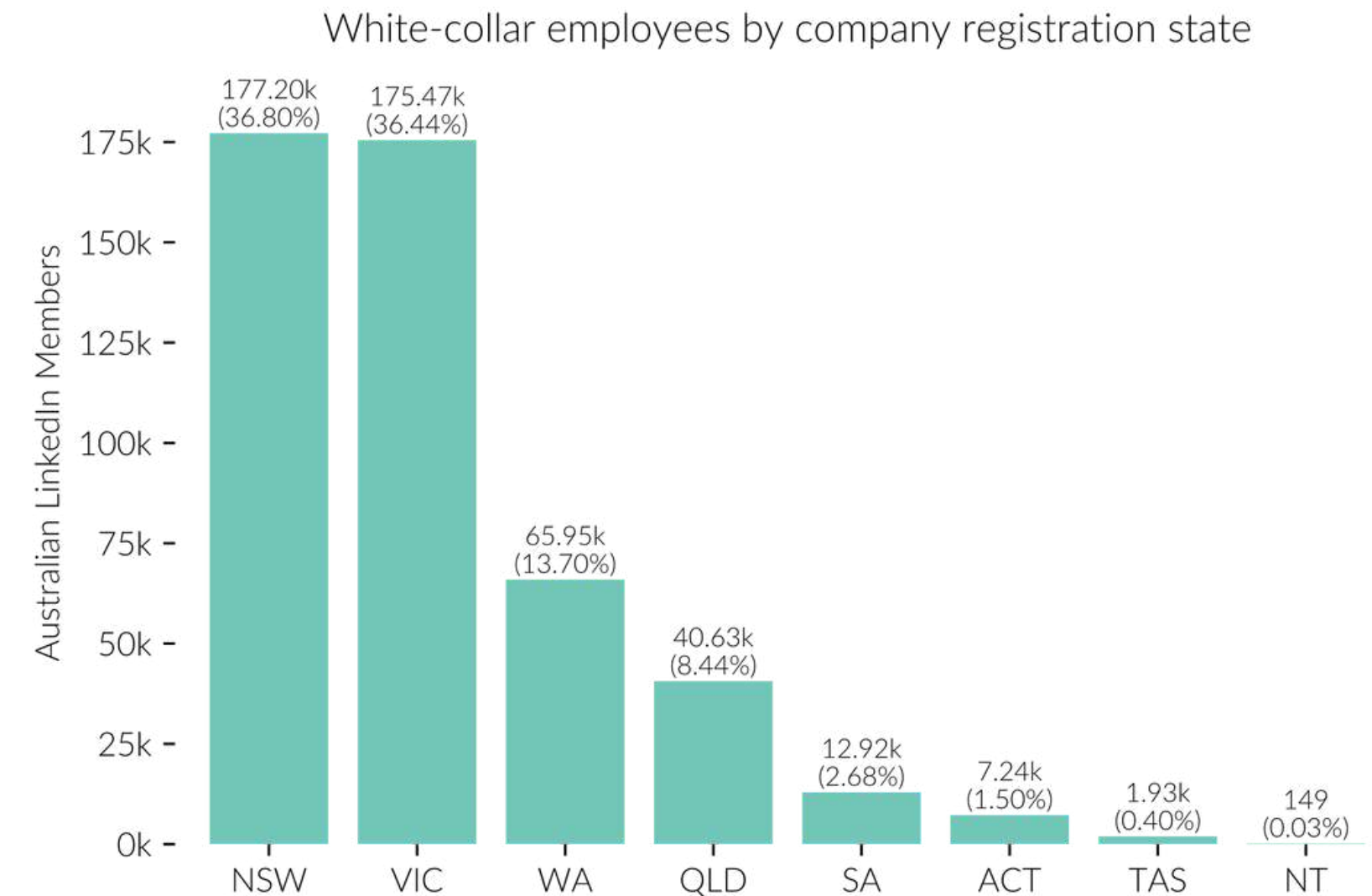
We found 481,488 Australian-based LinkedIn members employed by RDTI companies, despite only identifying websites for 73.2%²⁰ of the dataset.

Factoring in many smaller entities without public-facing websites, we estimate over half a million white-collar workers are employed by the total RDTI participants. As mentioned earlier, we estimate ~95k employees to be FTEs employed for R&D: roughly 20% of the total LinkedIn members we identified.

Companies based in NSW & VIC captured over 73% of Australian LinkedIn members categorised. This heavy concentration aligns with broader economic trends, where these two states dominate Australia's corporate landscape.

WA accounts for 13.7% of employment in RDTI-participating companies, significantly outpacing QLD (8.4%) - a notable contrast given QLD's larger human population. This suggests WA has a higher concentration of large-scale corporate employers engaged in R&D, such as Wesfarmers (18.39k AusLAMs).

SA, ACT, TAS, and NT registered companies together employ under 5% of all categorised white-collar employees found.



²⁰As mentioned previously, LinkedIn information for all companies was not able to be found.



The RDTI helps SMEs to hire, retain, and develop technical talent. Behind the RDTI claims are teams of developers, engineers, scientists, and support personnel that contribute not only to the company's overall developmental goals, but to the overall Australian economy.

— Kelly Morgan, Azure Group



Australia's R&D System

The RDTI is the Australian Government's flagship R&D program	<u>53</u>
Australia's total government R&D spend lags the OECD average	<u>54</u>
Australia's RDTI is generous but has a low participation rate	<u>55</u>
Refundable vs. non-refundable RDTI claims	<u>56</u>

kashcade

The RDTI is the Australian Government's flagship R&D program

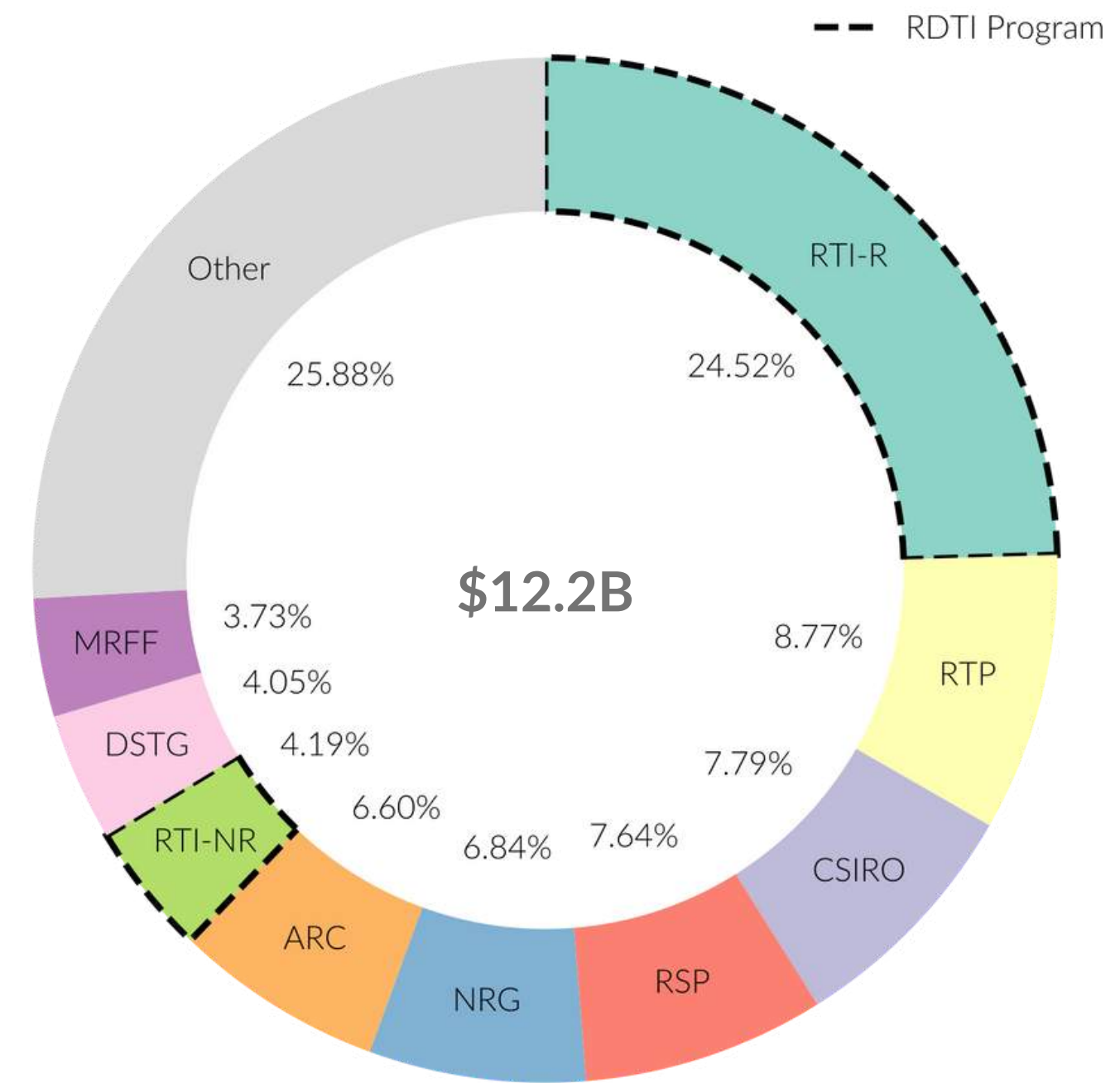
Australian Government's R&D portfolio.

Beyond the RDTI (labelled RTI-R and RTI-NR for the refundable and non-refundable components, respectively), several major programs form the rest of the government's R&D investment portfolio. These mostly provide targeted grants to universities and public research institutions through competitive, supply-driven processes.

The primary constituents include:

- Research Training Program (RTP): \$1.07B (9%)
 - Funds postgraduate research students, developing Australia's future research talent.
- Commonwealth Scientific and Industrial Research Organisation (CSIRO): \$949M (8%)
 - The national science agency delivering mission-driven research in priority areas and commercialising outcomes with industry partners.
- Research Support Program (RSP): \$931M (8%)
 - Provides base infrastructure funding to universities to support effective research delivery.
- NHMRC Research Grants (NRG): \$833M (7%)
 - Supports high-quality medical research aligned to national health priorities.
- ARC National Competitive Grants Program (ARC): \$804M (7%)
 - Funds fundamental and applied research across all disciplines except clinical medicine.

R&D Government Spend by Program (FY22)



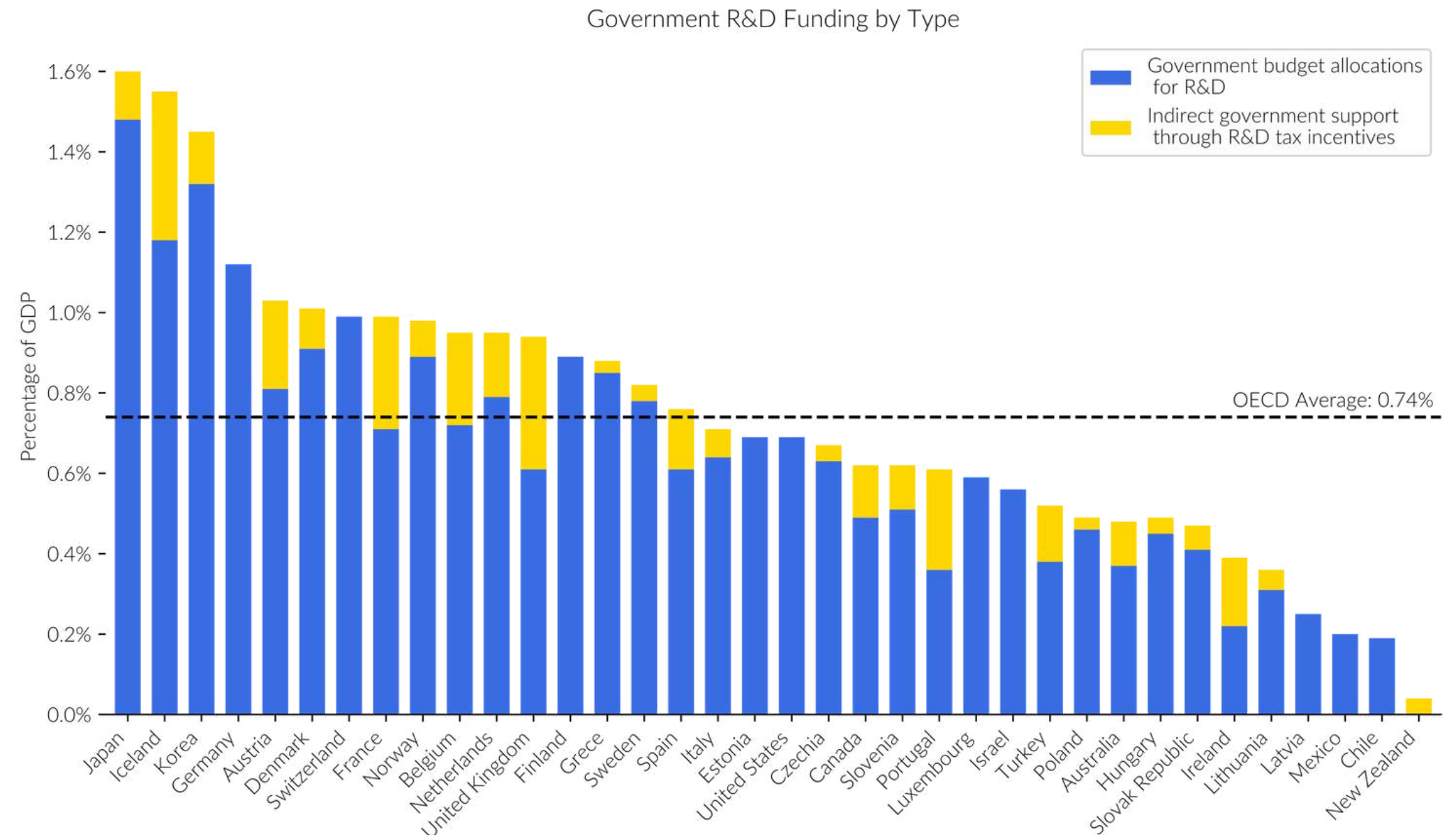
Australia's total government R&D spend lags the OECD average

Australian Government R&D investment vs. OECD member countries in FY2021-22.

At present, there is public debate about how effectively the Australian Government's R&D investment efforts position the country in the global innovation landscape.

As the global race for innovation accelerates, it is vital to evaluate Australia's R&D programs against other relevant economies, such as the Organisation for Economic Co-operation and Development (OECD) members. Australia's government R&D investment as a proportion of GDP remained notably low compared to other OECD nations, ranking 9th lowest in 2021.²¹

According to the Department of Industry, Science and Resources,²¹ Australia's government investment was 0.49% of GDP, lagging behind the 0.74% OECD average.



²¹Source: [Department of Industry, Science and Resources \(2024\)](#).



Australia has built a strong foundation for supporting innovation. However, as global competition intensifies, we need to be bold in lifting total government investment - both direct and indirect - if we want to keep pace with our international peers and lead in emerging technologies.

— Damian Kassabgi, Tech Council of Australia



Australia's RDTI is generous, yet attracts a low participation rate

Australia's RDTI versus comparable international programs.

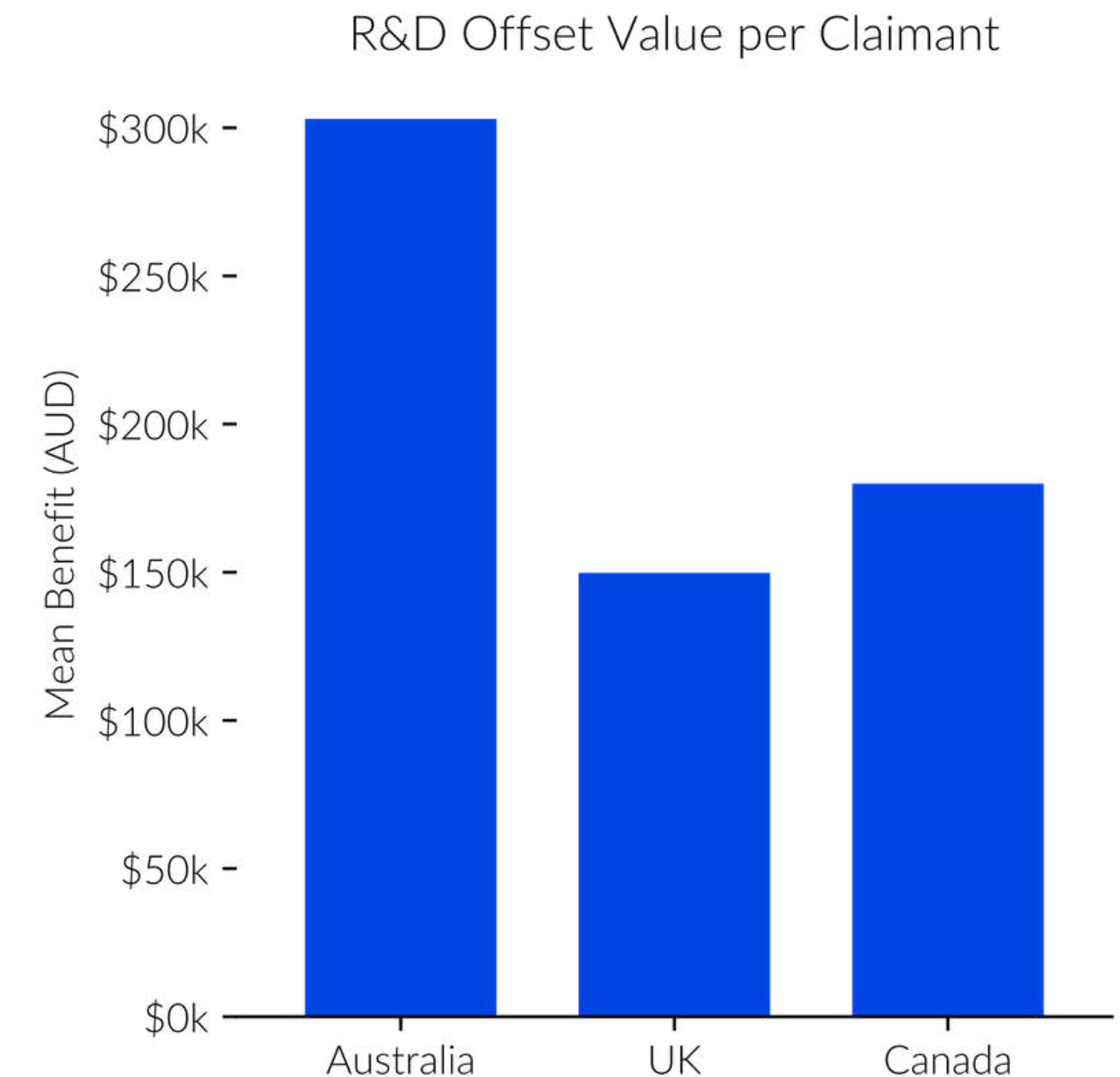
Despite the Australian government's low R&D spend relative to GDP, Australia's RDTI provides a higher average benefit per claim compared to its international counterparts.

On average, Australian FY2021-22 claimants received approximately AUD \$300k as a tax benefit, outpacing the UK's \$150k AUD and Canada's \$180k AUD.

However, Australia's participation rate is much lower: less than 30% the participation rate seen in Canada and the UK. 0.58% of all Australian businesses participated in the local R&D program in FY2021-22, versus ~1.67% in Canada²² and ~1.51% in the UK.²³ These discrepancies raise questions about participation and accessibility.

While Australia has made efforts to adapt the RDTI to industries like software development through improved guidance, participation could be expanded three-fold before being in line with comparable nations. SMEs dominate participation in Australia and the UK, however data suggests that in Canada, large businesses have benefited disproportionately from the program historically.

To remain competitive, Australia must explore how to enhance participation and encourage innovation across a wider range of industries and projects. Addressing these gaps will be critical to ensuring Australian businesses can thrive in a fiercely competitive global environment.



²²Statistics Canada (2021) indicates 20k R&D entities out of 1.2M Canadian companies.

²³Gov.UK indicates 83k R&D entities over 5.5M UK companies.

“Australia's R&D Tax Incentive has stricter rules and a lower offset for some large companies, which partly explains lower participation compared to places like the UK and Canada. But for businesses doing genuine innovation, the program still offers a valuable opportunity, especially for SMEs, startups, or companies investing heavily in R&D. With the right guidance and tools, many more Australian businesses could be confidently claiming and benefiting from the incentive.”

— Tom Moore, BlueRock

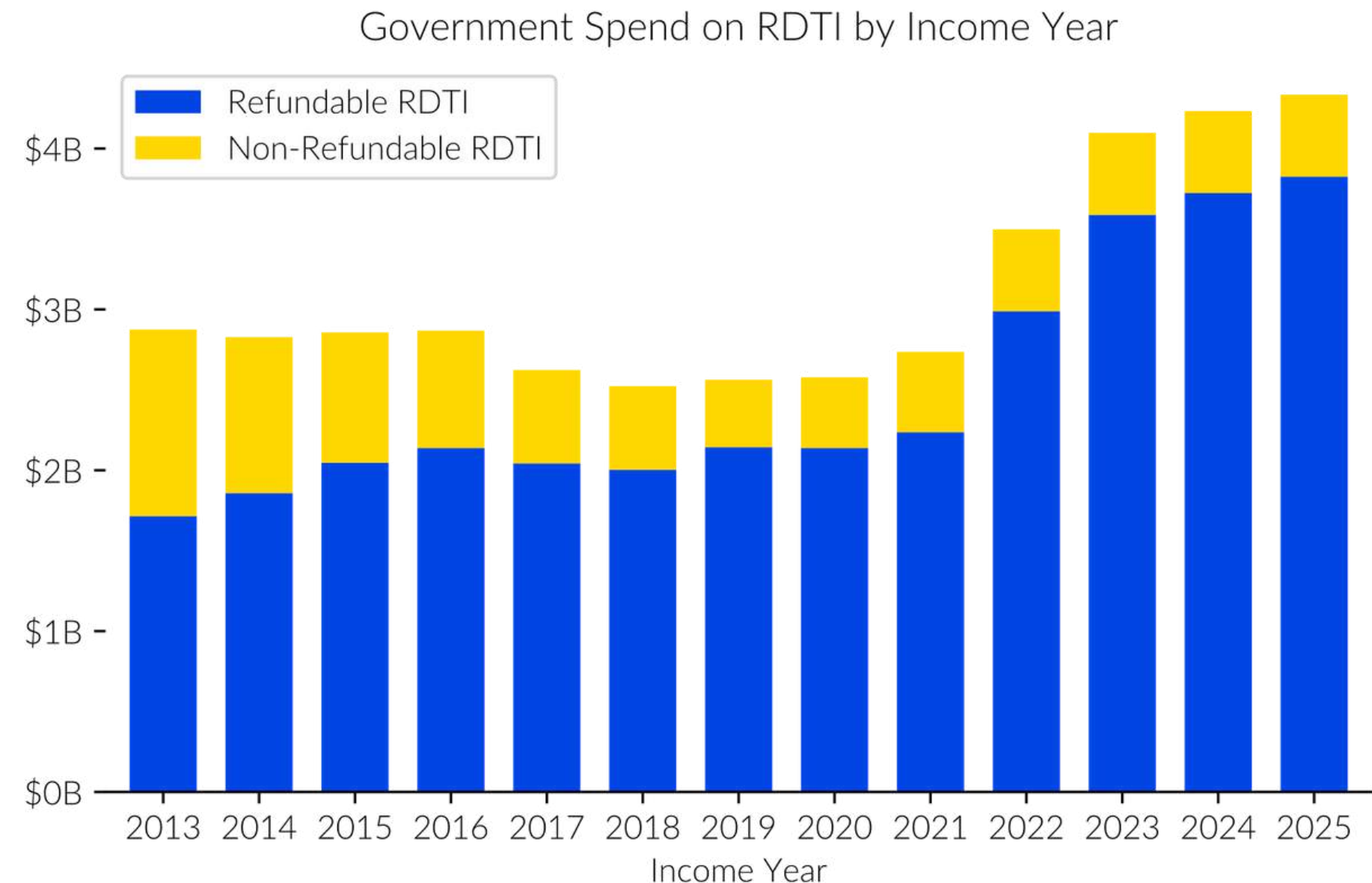
Refundable vs. non-refundable RDTI claims

The Australian Government invested approximately \$13.2B in research and development in FY2021-22. The RDTI accounted for roughly 29% of this, with a strong and growing focus on small and emerging businesses.

Federal spend on the RDTI as a whole has grown at a compounded annual rate of 3.5%²⁴ since 2013, though its two components have trended in opposite directions:

- **Refundable Tax Offset (25% of federal R&D spend):**
Directed toward small, early-stage companies, this portion of the program **has grown at 7% per annum since 2013**, highlighting the increasing contribution of start-up businesses to national innovation.
- **Non-Refundable Tax Offset (4% of federal R&D spend):**
Available to larger, mature businesses. Unlike the refundable stream, this component **has declined by 7% per annum since 2013**, reflecting reduced R&D investment and/or claims from established businesses.

²⁴ Figures for FY24 and FY25 are forward budget estimates.



It's encouraging to see small businesses driving innovation through the RDTI, but the decline in large enterprise participation is a concern. For Australia to remain globally competitive, we need both startups and established companies investing ambitiously in R&D.

— Rehan D'Almeida, Fintech Australia



Closing Note: Food For Thought

kashcade

RDTI is a cornerstone of Australia's innovation landscape

With expenditure incurred by program participants growing steadily, it reflects an initiative that is both expanding in participation and adapting to the evolving needs of Australian companies.

Notably, the growth of the refundable component of the RDTI highlights the increasing involvement of early-stage companies, supported by a maturing startup ecosystem and the rising prominence of venture capital in Australia.

While public sentiment toward the RDTI program has largely been positive, recognising it as a vital enabler of Australia's R&D efforts, criticisms remain. One recurring critique is Australia's relatively low government R&D investment as a proportion of GDP compared to its OECD peers. This disparity suggests room for improvement in driving greater participation across industries and increasing the economy's overall commitment to innovation.

Another key point of debate relates to the industries supported by the program. Some argue that certain sectors, such as gambling and tobacco, do not align with Australia's broader innovation goals. As a result, it is intended that these two industries will be made ineligible under the RDTI from 1 July 2025.

kashcade

Public commentary and insights from the ATO suggests that RDTI expenditure is expected to grow further in the coming years. While Kashcade is not experienced in national R&D strategy, our analysis revealed several questions that warrant further consideration:

- Should certain industries be excluded from the RDTI based on ethical or moral considerations?
- Is there a case for encouraging a more even geographical spread of R&D efforts?
- How can we incentivise the number of companies in all states to match expected levels of participation?
- Is Australia investing enough in innovation compared to its global competitors?

As the RDTI program evolves, public discussion and government refinement will play a key role in ensuring it is effective in fostering innovation and positioning Australia as a global leader in R&D. At Kashcade, we look forward to continuing to support the businesses leveraging the RDTI to push the boundaries of what's possible.

Kashcade will continue to analyse the ATO's Transparency Report data annually.

Have questions or suggestions for next year's report? Please reach out with your notes to RDTIReview@kashcade.com – we'd love to hear what you have to say.

Appendix

kashcade

Appendix - R&D Government Spend by Program in FY22

R&D Government Spend by Program in FY22	Code	\$ Millions	Proportion
R&D Tax Incentives - Refundable	RTI-R	2,988	24.52%
Research Training Program	RTP	1,069	8.77%
Commonwealth Scientific and Industrial Research Organisation	CSIRO	949	7.79%
Research Support Program	RSP	931	7.64%
NHMRC Research Grants	NRG	833	6.84%
Australian Research Council - National Competitive Grants Program	ARC	804	6.60%
R&D Tax Incentives – Non-Refundable	RTI-NR	510	4.19%
Defence Science and Technology Group	DSTG	493	4.05%
Medical Research Future Fund	MRFF	455	3.73%
Other Programs	OTHER	3,153	25.88%

Appendix - Top 10 SA3s by Participation

Rank	SA3	State	R&D Entities	Total companies	Median R&D Expenditure	Total Expenditure	Participation Rate of RDTI
1	Lord Howe Island	NSW	2	40	\$127,901	\$255,801	5.00%
2	Yarra	VIC	288	15540	\$459,334	\$460,633,178	1.85%
3	South East Coast	TAS	5	297	\$159,823	\$11,820,567	1.68%
4	Perth City	WA	422	29501	\$500,028	\$579,193,228	1.43%
5	Fremantle	WA	54	3912	\$348,989	\$37,144,240	1.38%
6	Melbourne City	VIC	679	49985	\$542,574	\$1,206,267,934	1.36%
7	Sydney Inner City	NSW	1209	90837	\$514,813	\$2,047,713,534	1.33%
8	Port Phillip	VIC	204	16572	\$424,360	\$165,771,086	1.23%
9	Cockburn	WA	93	7777	\$341,616	\$88,403,744	1.20%
10	Adelaide City	SA	143	12679	\$490,376	\$160,380,841	1.13%