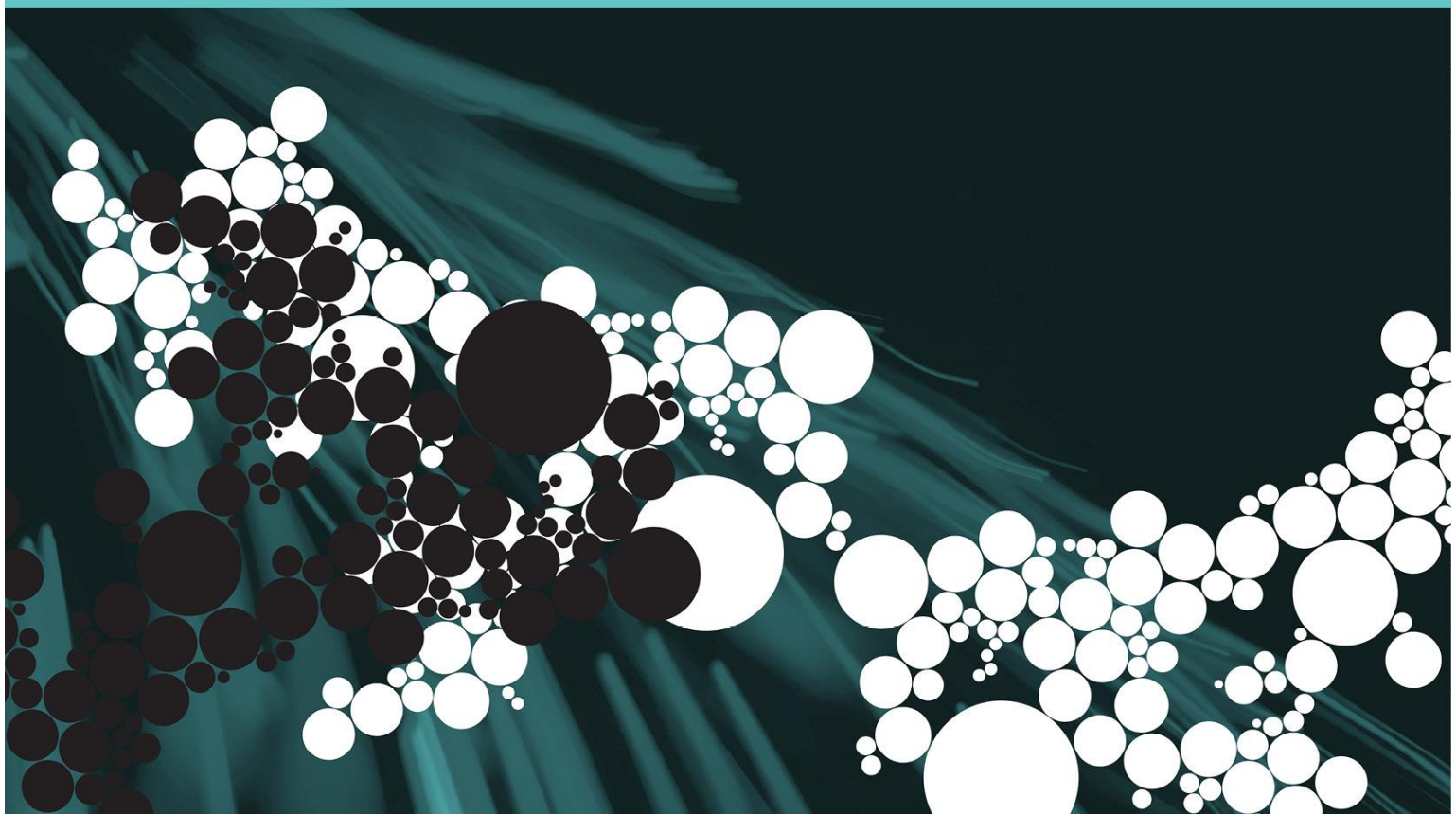




Australian Government
**Department of Industry,
Innovation and Science**



National Survey of Research Commercialisation (NSRC)

Data Summary 2013 – 2015

www.industry.gov.au/nsrc

This document presents a summary of key results from the 2015 National Survey of Research Commercialisation (NSRC) and provides a comparison against data from the 2013 and 2014 surveys. Please note that:

- All dollar figures are adjusted for inflation and given in 2015 values.
- Figures provided in this summary document may differ slightly from those reported elsewhere due to rounding.
- The survey population may differ between the data years being represented. This is due to annual changes in the survey population as a result of new, amalgamated and/or out of scope participants as well as non-responses.
- In 2014, data on start-up company activity was collected through an administrative process outside of the NSRC instrument and the collection method may have impacted on the data results.

1. National Survey of Research Commercialisation participation

The NSRC provides a collection of data on different types of research engagement and commercialisation activities occurring within Australian universities, publicly funded research agencies (PFRAs) and medical research institutes (MRIs).

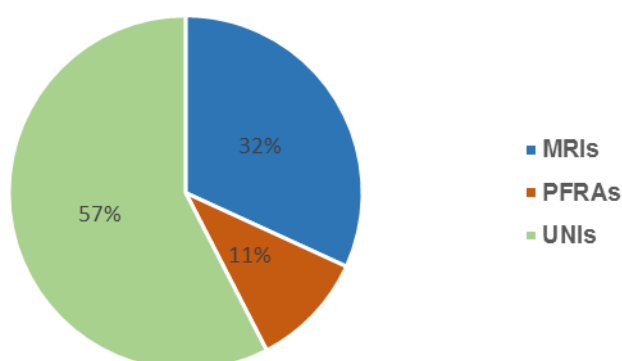
- The 2015 NSRC survey had a participation rate of 99 percent. Sixty seven organisations were invited to participate with 66 organisations responding.
- Participation included seven PFRAs, 38 universities and 21 MRIs.
- There has been a slight change to the 2015 survey respondents compared to 2014. A comprehensive list is provided in the [NSRC 2015 Data Collection Methodology](#).

Table 1: NSRC Survey population

| | 2013 | 2014 | 2015 |
|--------------|-----------|-----------|-----------|
| PFRAs | 5 | 7 | 7 |
| UNIs | 38 | 37 | 38 |
| MRIs | 23 | 19 | 21 |
| Total | 66 | 63 | 66 |

Note: Survey population between the reporting years may differ.

Figure 1: 2015 NSRC Survey population



2. Resourcing

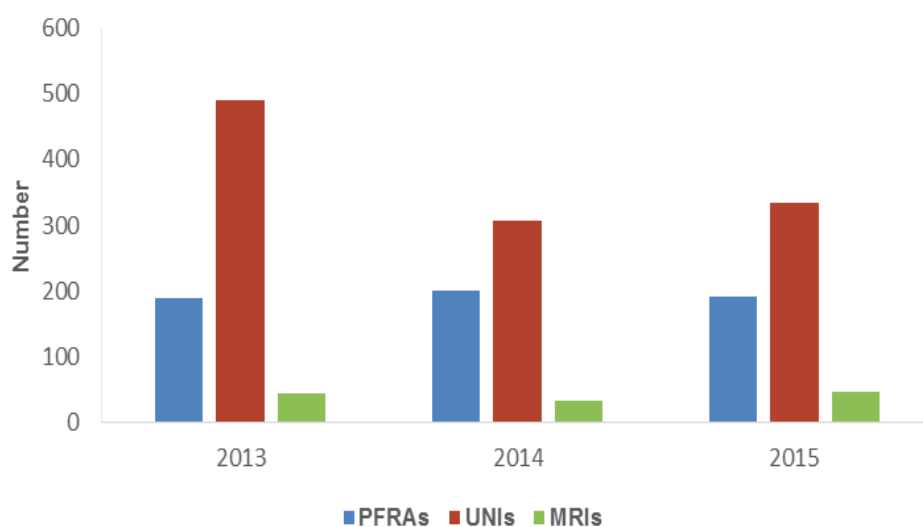
Research commercialisation resourcing includes staff whose duties are specifically involved with research commercialisation activities including: licensing and patenting processes; licensing solicitation; marketing of technology; technology valuation and start-up activity.

- In 2015, research organisations reported a total of 571 Full Time Equivalent (FTE) staff employed for commercialisation activities compared to 540 in 2014.
- Universities employed 58% of the commercialisation workforce in 2015, followed by PFRAs and MRIs at 34% and 8% respectively.
- Commercialisation staff employed in the medical research and university sectors increased in 2015 while commercialisation staff employed in PFRAs decreased slightly.

Table 2: Number of FTE commercialisation staff

| | 2013 | 2014 | 2015 |
|--------------|------------|------------|------------|
| PFRAs | 189 | 201 | 192 |
| UNIs | 490 | 306 | 333 |
| MRIs | 45 | 33 | 46 |
| Total | 724 | 540 | 571 |

Figure 2: Number of FTE commercialisation staff



3. Invention Disclosures and Material Transfer Agreements

Invention disclosures and material transfer agreements (MTAs) are measures of knowledge creation and knowledge exchange.

3.1 Invention Disclosures

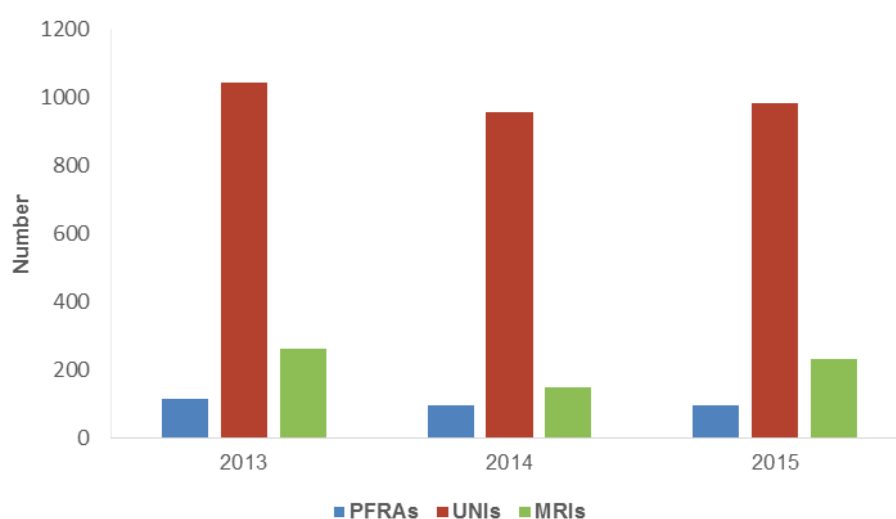
An invention disclosure is a confidential document outlining a new invention, product or process which helps an organisation (or external patent attorney) to determine whether patent protection should be sought.

- In 2015, total invention disclosures numbered 1,307, an increase of 9% from 2014.
- Universities accounted for 75% of total invention disclosures reported in 2015, followed by MRIs and PFRAs at 18% and 7% respectively.
- MRIs reported the greatest increase in the number of invention disclosures up 54% in 2015 from 2014.

Table 3.1: Number of Invention disclosures

| | 2013 | 2014 | 2015 |
|--------------|--------------|--------------|--------------|
| PFRAs | 115 | 96 | 94 |
| UNIs | 1,044 | 957 | 982 |
| MRIs | 261 | 150 | 231 |
| Total | 1,420 | 1,203 | 1,307 |

Figure 3.1: Number of Invention disclosures



3.2 Material Transfer Agreements

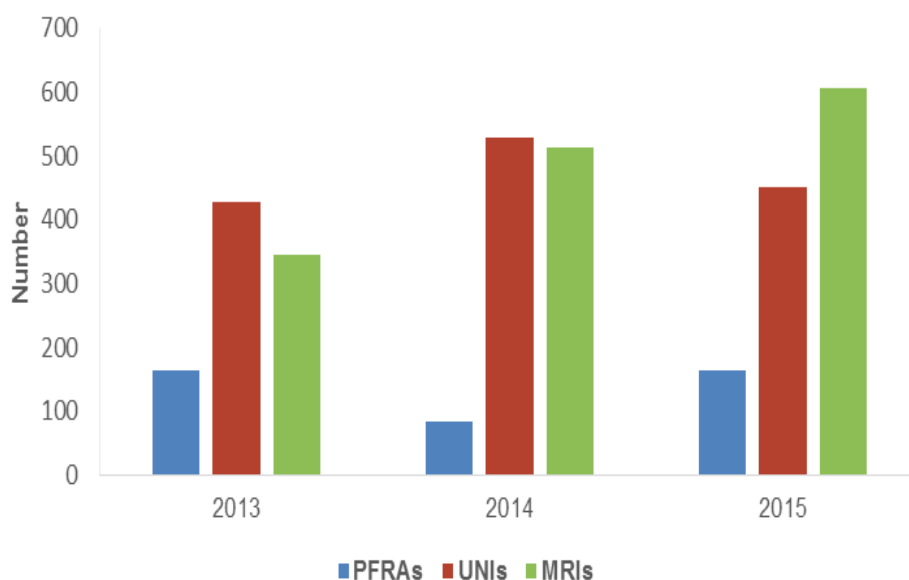
MTAs outline conditions under which material is provided from the owner to another entity for a specific use.

- In 2015, research organisations entered into 1,223 MTAs, an increase of 9% compared to 1,124 reported in 2014.
- MRIs accounted for 50% of total MTAs entered into in 2015, followed by Universities and PFRAs with 37% and 13% respectively.
- The PFRAs reported the largest increase of 99% in 2015 with 165 MTAs compared to 83 in 2014.

Table 3.2: Number of Material Transfer Agreements

| | 2013 | 2014 | 2015 |
|--------------|------------|--------------|--------------|
| PFRAs | 165 | 83 | 165 |
| UNIs | 427 | 528 | 451 |
| MRIs | 346 | 513 | 607 |
| Total | 938 | 1,124 | 1,223 |

Figure 3.2: Number of Material Transfer Agreements



4. Commercialisation Outcomes

Research commercialisation is the process of converting ideas and research into marketable products and processes.

4.1 Licences, Options and Agreements (LOAs)

A licence agreement formalises the transfer of technology between two parties, where the owner of the technology grants rights to the other party. An option agreement grants the potential licensee a time period during which it may evaluate the technology and negotiate the terms of a licence agreement. An assignment agreement conveys all rights, title and interest in the licenced subject matter to the named assignee.

4.1.1 Executed LOAs

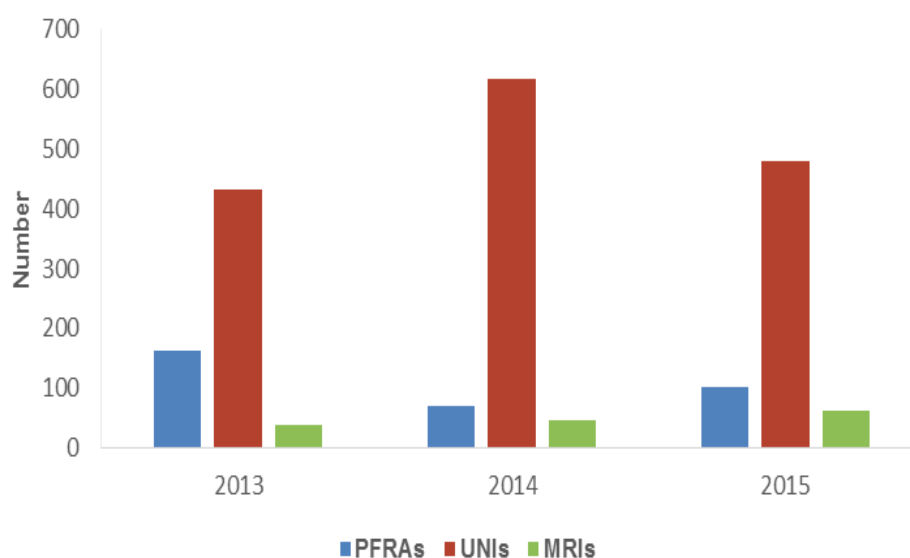
Executed LOAs represent a count of the number of LOAs executed in 2015 for all technologies.

- In 2015, research organisations executed 645 LOAs, a 12% decrease from the previous year.
- The number of LOAs executed by PFRAAs and MRIs increased 46% and 40% respectively between 2014 and 2015. By contrast, universities reported a 22% decline in the number of LOAs executed in the same period.
- Universities accounted for 74% of all LOAs executed by research organisations in 2015.

Table 4.1.1: Number of LOAs executed

| | 2013 | 2014 | 2015 |
|--------------|------------|------------|------------|
| PFRAAs | 162 | 70 | 102 |
| UNIs | 431 | 617 | 480 |
| MRIs | 38 | 45 | 63 |
| Total | 631 | 732 | 645 |

Figure 4.1.1: Number of LOAs executed



4.1.2 Active LOAs

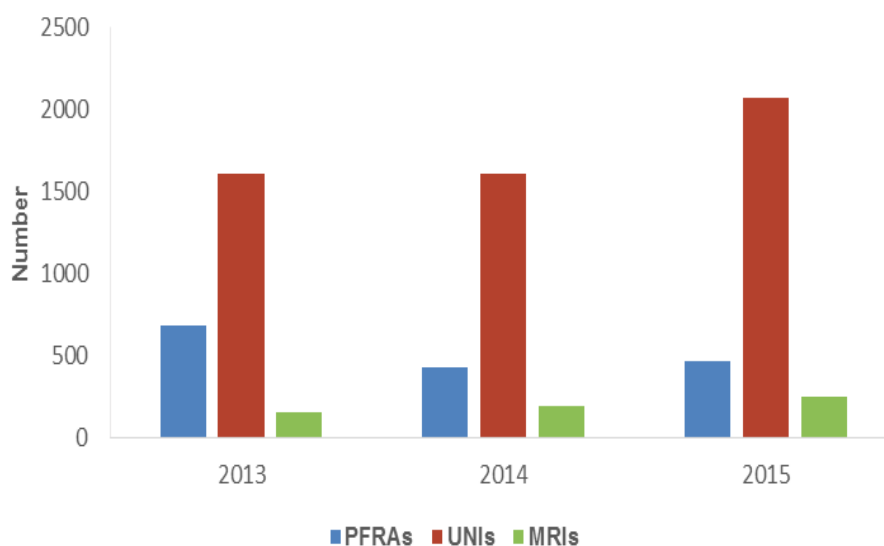
Active LOAs are 'legally enforceable' licences, options and assignments that earned income in 2015, or which are contracted to provide income in future years and for which there is a reasonable expectation that income will be paid.

- In 2015, research organisations reported a total number of 2,790 active LOAs, a 25% increase from the previous year.
- Active LOAs reported by universities and MRIs increased by 29% and 26% respectively compared to 2014. PFRAs also reported a 9% increase in the number of active LOAs.
- Universities accounted for 74% of active LOAs in 2015.

Table 4.1.2: Number of active LOAs

| | 2013 | 2014 | 2015 |
|--------------|--------------|--------------|--------------|
| PFRAs | 686 | 429 | 468 |
| UNIs | 1,611 | 1,609 | 2,073 |
| MRIs | 157 | 198 | 249 |
| Total | 2,454 | 2,236 | 2,790 |

Figure 4.1.2: Number of active LOAs



4.1.3 Adjusted income yielded from active LOAs

Total LOA income is adjusted by **excluding** the LOA income paid to other institutions.

Aggregate LOA income includes all income yielded from active LOAs and **includes** the amount paid to other institutions.

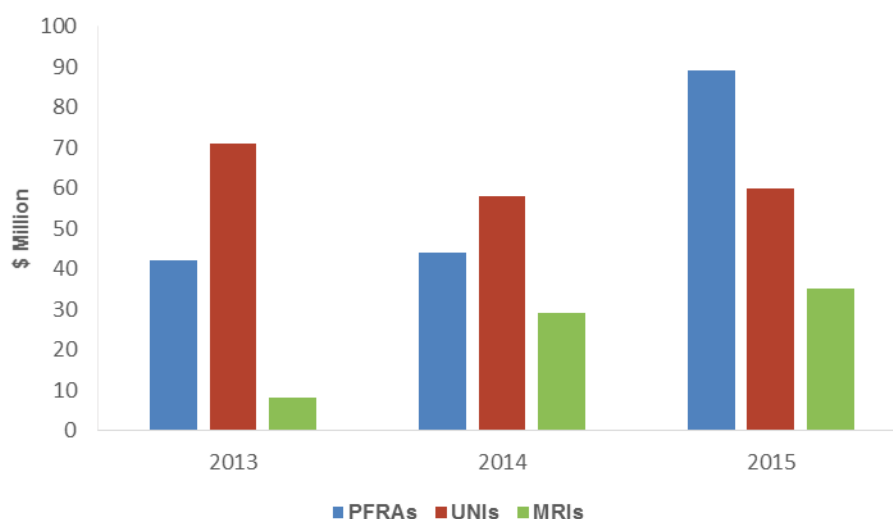
- In 2015, the total adjusted value of income yielded from active LOAs was \$182,915,105.
- The value of income paid to other institutions was \$8,706,395.
- The aggregate value of income yielded from active LOAs was \$191,621,500.
- The largest increase is represented in the PFRA sector with a 103% increase in 2015 over the previous year.

Table 4.1.3: Adjusted income yielded from active LOAs (\$ Million)

| | 2013 | 2014 | 2015 |
|--------------|------------|------------|------------|
| PFRA | 42 | 44 | 89 |
| UNIs | 71 | 58 | 60 |
| MRIs | 8 | 29 | 35 |
| Total | 121 | 130 | 183 |

Note: Figures are rounded to the nearest whole number. All dollar values have been adjusted to 2015 prices.

Figure 4.1.3: Adjusted income yielded from active LOAs (\$Million)



4.2 Research commercialisation equity holdings

The value of equity holdings refers to equity that is related to the licensing/intellectual property assignment activity of the institution.

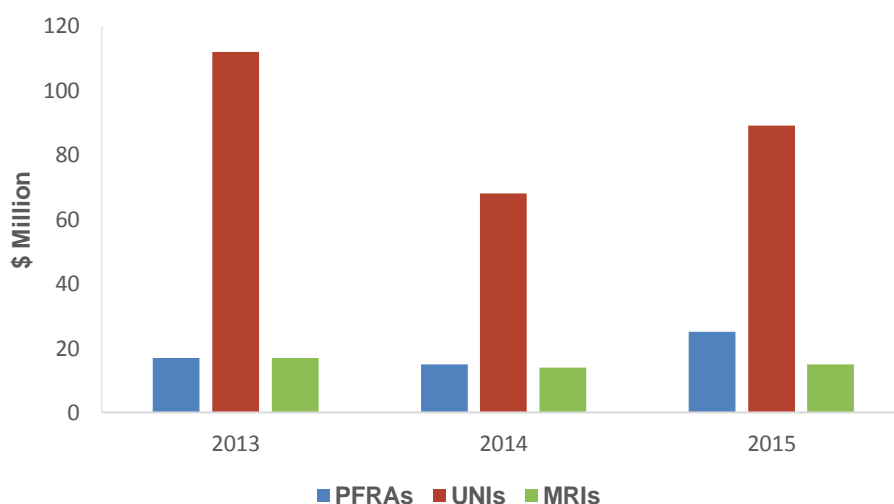
- In 2015, the value of equity holdings by research organisations reached \$129 million.
- The university sector reported \$89 million, representing 69% of the total research commercialisation equity in 2015.
- PFRAs recorded an increase of 67% in 2015. The university sector and MRIs also reported 31% and 7% increase respectively from 2014.

Table 4.2: Value of research commercialisation equity holdings (\$ Million)

| | 2013 | 2014 | 2015 |
|--------------|------------|-----------|------------|
| PFRAs | 17 | 15 | 25 |
| UNIs | 112 | 68 | 89 |
| MRIs | 17 | 14 | 15 |
| Total | 145 | 96 | 129 |

Note: Figures are rounded to the nearest whole number. Total may not add up due to rounding. All dollar values have been adjusted to 2015 prices.

Figure 4.2: Value of research commercialisation equity holdings (\$Million)



4.3 Start-up companies

Start-up company formation is an indicator of research commercialisation activity as start-up companies are partially or entirely dependent on the licensing or assignment of an institution's technology for initiation. The number of start-up companies reported in 2015 is substantially higher compared to previous years. This may be due to the 2014 data on start-up company activity being collected through an administrative process outside of the NSRC instrument, this collection method may have impacted on the data results.

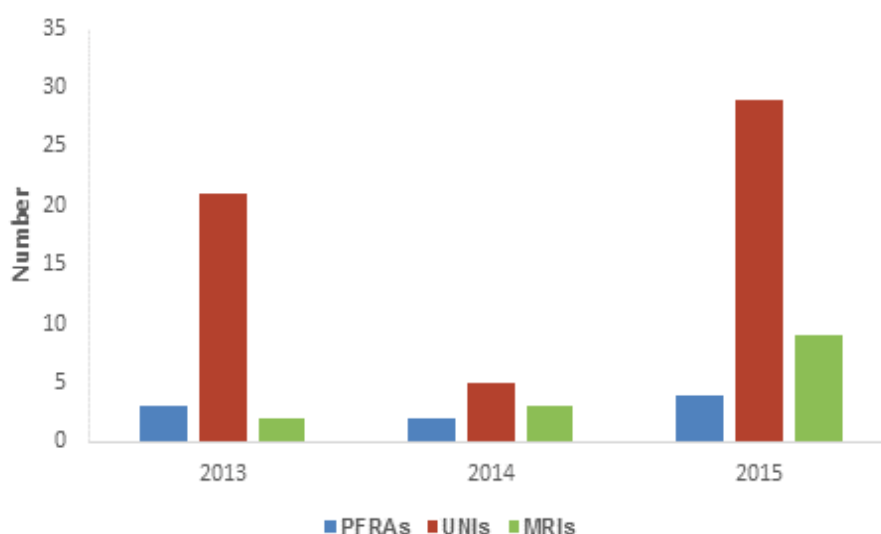
- In 2015, a total of 42 start-up companies were reported including 29 by universities, 9 by MRIs and 4 by PFRAs.
- Universities reported the greatest number of start-up companies for 2015 representing 69%, with MRIs and PFRAs representing 21% and 10% respectively.
- Each sector reported an increase in start-up companies in 2015 compared to both 2014 and 2013.
- The MRI sector represents the largest increase in the number of start-up companies between 2013 and 2015.

Table 4.3: Number of start-up companies

| | 2013 | 2014 | 2015 |
|--------------|-----------|-----------|-----------|
| PFRAs | 3 | 2 | 4 |
| UNIs | 21 | 5 | 29 |
| MRIs | 2 | 3 | 9 |
| Total | 26 | 10 | 42 |

Note: In 2014, data on start-up company activity was collected through an administrative process outside of the NSRC instrument and the collection method may have impacted on the data results.

Figure 4.3: Number of start-up companies



4.4 Research Contracts, Consultancies and Collaborations

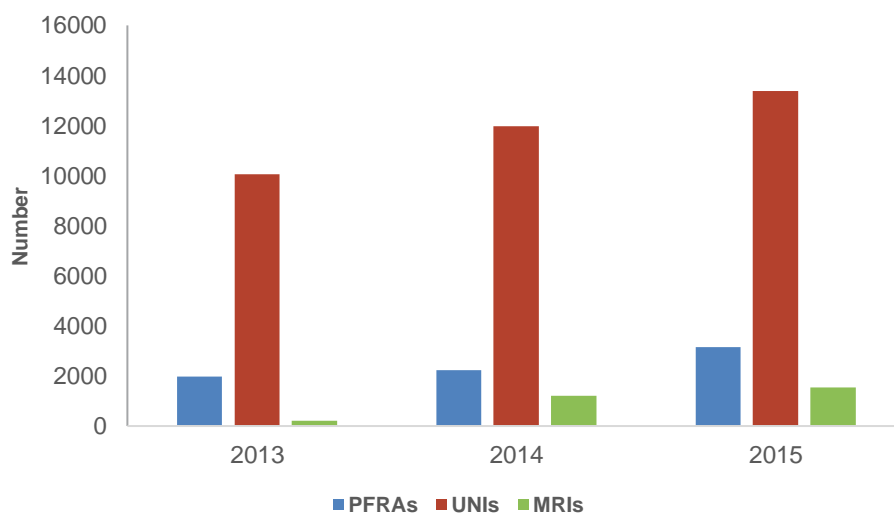
The number of research contracts, consultancies and collaborations provides useful insights on levels of engagement between research organisations and end users, particularly industry partners at an early stage in the commercialisation pipeline.

- Research organisations entered into 18,076 research contracts, consultancies and collaborations in 2015. This represents a 17% increase from the previous year¹.
- In 2015, PFRAs, MRIs and Universities all reported growth in the number of research contracts, consultancies and collaborations.
- Universities held 13,391 research contracts, consultancies and collaborations, representing 74% of the total in 2015.

Table 4.4: Number of research contracts, consultancies and collaborations

| | 2013 | 2014 | 2015 |
|--------------|---------------|---------------|---------------|
| PFRAs | 1,965 | 2,224 | 3,139 |
| UNIs | 10,046 | 11,966 | 13,391 |
| MRIs | 217 | 1,198 | 1,546 |
| Total | 12,228 | 15,388 | 18,076 |

Figure 4.4: Number of research contracts, consultancies and collaborations



¹ Trends may be impacted by the introduction of a separate reporting field for research collaborations in the 2014 NSRC. Previously, research contracts and collaborations were a combined metric and this may have resulted in under reporting by MRIs.

4.5 Value of Research Contracts, Consultancies and Collaborations

The value of research contracts, consultancies and collaborations shows the income generated by research organisations from end users particularly industry partners.

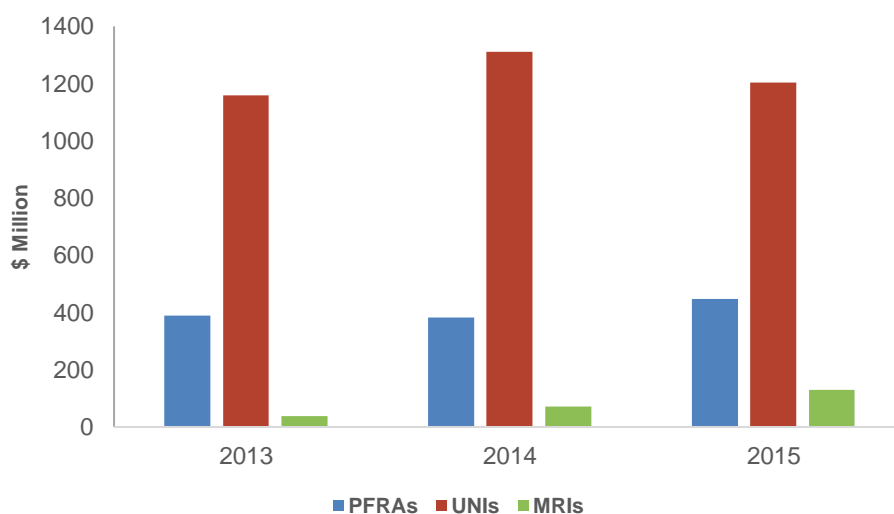
- The total value of the research contracts, consultancies and collaborations in 2015 is \$1,783 million, this represents a 1% increase from 2014.
- By contrast, MRIs reported an increase of 81% from \$72 million in 2014 to \$130 million in 2015.
- Universities reported an 8% decrease.

Table 4.5: Value of contracts, consultancies and collaborations (\$ Millions)

| | 2013 | 2014 | 2015 |
|--------------|--------------|--------------|--------------|
| PFRAs | 388 | 382 | 448 |
| UNIs | 1,160 | 1,310 | 1,205 |
| MRIs | 39 | 72 | 130 |
| Total | 1,587 | 1,764 | 1,783 |

Note: Figures are rounded to the nearest whole number. All dollar values have been adjusted to 2015 prices.

Figure 4.5: Value of contracts, consultancies and collaborations (\$ Millions)



5. Skills development and transfer

5.1 Organisations providing industry skills training

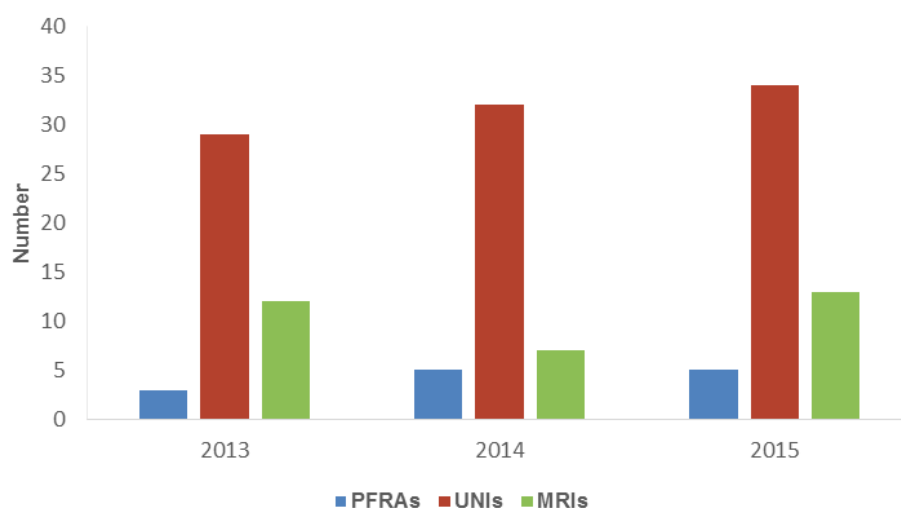
Industry skills prepare researchers and research students for collaborating with industry from within research organisations as well as preparing them for jobs in industry after they graduate.

- In 2015, 52 organisations reported research training provision in industry skills for academic researchers and research students. This represents an increase of 18% in 2015 compared with 2014.²
- The university sector remains the leading provider of training in industry skills, with 34 out of the 38 universities offering training in 2015.
- The MRI sector reported the greatest increase of 86% in 2015, going from 7 organisations providing industry skills training in 2014 to 13 in 2015.

Table 5.1: Number of organisations providing industry skills training

| | 2013 | 2014 | 2015 |
|--------------|-----------|-----------|-----------|
| PFRAs | 3 | 5 | 5 |
| UNIs | 29 | 32 | 34 |
| MRIs | 12 | 7 | 13 |
| Total | 44 | 44 | 52 |

Figure 5.1: Number of organisations providing industry skills training



² Definition of the “industry skills training” is not consistent for the period. In 2013 industry skill training included commercialisation and entrepreneurship training for researchers and research students as part of their professional development. In 2014, it became broader encompassing industry skills training which may include but not limited to entrepreneurship, commercialisation, business management, communication and teamwork.

5.2 Participants undertaking Industry skills training

- In 2015, industry-skills research training was delivered to a total of 10,138 participants, including academic researchers and research students.
- The university sector represents the largest participation, with 8,471 participants followed by PFRAs and MRIs with 1,066 and 601 participants respectively.

Table 5.2: Number of participants by sector undertaking Industry skills training in 2015

| | Academic Researchers | Research Students | Not Specified | Total |
|--------------|----------------------|-------------------|---------------|---------------|
| PFRAs | 856 | 210 | 0 | 1,066 |
| UNIs | 3,135 | 1,240 | 4,096 | 8,471 |
| MRIs | 430 | 171 | 0 | 601 |
| Total | 4,421 | 1,621 | 4,096 | 10,138 |

NOTE: Some reporting universities provided a total figure only, and did not specify whether participants were academic researchers or research students.

Figure 5.2: Number of participants by sector undertaking Industry skills training in 2015

