Analysis of gender success rates in the SFI review process and overview of SFI's gender redressing initiatives

5 December 2018

Executive Summary

- The success rate for both male and female applicants across SFI's portfolio of awards since 2011 is 30%
- 75% of all applications received by SFI for funding are from male researchers in Irish Higher Education Institutions
- Successful female applicants, on average, receive smaller awards, compared to male applicants, however, female applicants, on average, request less funding
- The success rate for female applicants to SFI Research Centres is 33% compared to 25% for male applicants
- 5 out of 12 SFI Research Centres (2012 and 2013 cohort) have reached or are within 2% of SFI's target of 40% gender balance within their team members
- There is significant gender imbalance amongst the Principal or Lead Investigator positions within SFI Research Centres. Towards redressing this, success in Phase 2 funding requires the SFI Research Centres to develop a Gender Action Plan that will be assessed during progress reviews. Furthermore, Phase 2 awardees will be required to set targets against a gender key performance indicator, which will be assessed on a 6-monthly basis.

Introduction

For a number of years, Science Foundation Ireland (SFI) has been at the forefront in developing initiatives to remove and mitigate any existing or perceived factors that may limit the participation of women in STEM careers. In 2016, SFI consolidated its position with the launch of its Gender Strategy [see Appendix 1] providing a comprehensive framework which enabled streamlining gender initiatives across all SFI's programmes, with the overarching aim of redressing gender imbalance amongst award holders.

SFI is taking several approaches towards realising its Gender Strategy. The first involves supporting researchers at the most critical junctures in their careers; the second encourages more applications from excellent female researchers to the SFI Research Professorship Programme; the third is focused on redressing gender imbalance within SFI team member cohorts and the fourth is top-down, whereby the institutional culture can be made more aware of gender issues and become proactive in redressing gender imbalance. The latter is being addressed by the Athena SWAN Charter in Ireland[1].

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[1] http://hea.ie/2017/04/15/prestigious-athena-swan-charter-awards-announced-for-irish-higher-education-institutions/

SFI has been collecting and analysing data on application submission and success rates by gender since 2011. These data have enabled it to monitor the effectiveness of its gender redressing initiatives, reveal if there are unintentional gender biases in review processes and examine gender balance across the portfolio of SFI research awards.

In support of SFI's commitment to the transparency of its review processes, we present analyses of gender disaggregated data across all SFI Funding Programmes since 2011. This paper summarises these data and describes ongoing and recently launched initiatives being undertaken by SFI towards attaining its Agenda 2020 Gender KPI targets.

Summary of SFI's Gender redressing initiatives

SFI has been aware for some time that we receive fewer applications from female candidates compared to their male counterparts however, there is no difference in male to female success rates following the agency review procedures. SFI has therefore focussed on initiatives to increase the number of applications received from excellent female researchers whilst maintaining its high standards of peer review for excellence and impact.

In particular, SFI has incorporated a gender initiative into the SFI Starting Investigator Research Grant (SIRG) Programme, which incentivises the Research Bodies to nominate excellent female candidates by permitting a maximum of 6 (out of a possible 12) male candidates to the funding call. Upon submission to SFI all applications are treated equally regardless of the gender of the applicant. Previously this gender initiative resulted in an increase in the number of female awardees from 27% in 2013 to 54% in 2015. The 2018 programme is currently in its closing stages, so no final data are available yet, however the initiative successfully encouraged a gender balance in applications with 48% received from women.

Further rollout of gender redressing initiatives amongst SFI programmes includes encouraging more applications from excellent female researchers to the SFI Research Professorship Programme. As part of this initiative SFI is mandating that for all institutions wishing to nominate candidates to the programme, one of the next two successful Expressions of Interest (i.e., approved by SFI) must be associated with a female candidate, which must then be followed up with the submission of a Full Proposal.

More recently, applicants to the SFI Centres for Research Training and the SFI Research Centres (2013) Phase 2 programmes are required to develop a Gender Action Plan that will be assessed as part of the review process and during progress reviews. These plans involve

setting targets for achieving gender balance at all team member levels for each year of the award; progress will be monitored annually. Furthermore, Phase 2 awardees and all SFI Research Centres will be required to set targets against a gender key performance indicator, which will be assessed on a 6-monthly basis.

SFI continues to implement specific grant management policies to deal with the needs of female researchers during periods of maternity and adoptive leave and will continue to innovate in this regard. SFI recently performed a survey of its award holders that availed of the SFI Maternity / Adoptive Leave Allowance since its inception to review the impact of this support. The results were positive and over 80% of respondents used the supplement to hire a replacement and maintain continuity of their research programme. The feedback from this survey will inform enhancements to the policy in the coming months.

With regard to SFI's Investigator and Career Development Award Programmes, SFI has been providing an opportunity (since circa 2006) for applicants who have taken periods of leave, including that corresponding to maternity, to avail of concessions that support their career progression. Periods of absence for maternity, adoptive leave are also taken into consideration by reviewers when evaluating an applicant's research active years / outputs.

The policies being developed by SFI and associated outcomes will complement and support the Athena SWAN initiative, whereby the Irish Research Council, SFI and the Health Research Board will require research bodies to have attained a bronze institutional Athena SWAN award by the end of 2019 (IoTs/TUs may be required to have applied for a bronze award by this date) and have attained a silver institutional Athena SWAN by the end of 2023, to be eligible for research-funding[2]. The Athena Swan Charter is the internationally recognised 'quality mark' for gender equality.

SFI is also committed to tackling implicit bias within the review process. To this end all SFI staff and members of the SFI Board receive face-to-face training on unconscious bias. Currently, all postal reviewers must agree to SFI's Reviewer Code of Conduct before gaining access to review documentation; as part of this they are requested to review and consider guidance provided in a training video, reproduced by kind permission of The Royal Society. Sitting review panels are also briefed on unconscious bias prior to the review process being

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[2] Institutions will be required to show evidence of having retained their bronze status in the absence of attaining a silver award http://hea.ie/assets/uploads/2018/11/Gender-Equality-Taskforce-Action-Plan-2018-2020.pdf

undertaken. SFI has recently developed its own training video and this will be used as part of a more extensive programme on unconscious bias training going forward.

Another aspect of SFI's Gender Strategy is to ensure that gender is integrated as a perspective in all the research SFI funds, when this is relevant. During 2017, wording was developed for inclusion in all call documents that required applicants to provide a statement articulating the sex/gender variables in their research, as well as guidance for applicants and a request for comment from the reviewers. This approach was 'soft' launched for a number of SFI programmes including Res Prof, FRL, TIDA. It included a link to the gender strategy and a recommendation to consider sex/gender in the research programme. The 'full launch' will be applied to the next iteration of the SFI Investigators programme or its equivalent. This 'full' launch will require applicants to provide a statement articulating the sex/gender variables in their research and will include guidance for applicants and a request for comment from the reviewers (as a subsection of the research programme comment).

Finally, SFI is a seed partner for Ireland and the UK in an EU gender project called ACT, which aims to improve access, sharing, and improvement of gender equality knowledge by advancing Communities of Practice (CoP) as agents for implementing gender equality actions amongst Research Performing Organisations and Research Funding Organisations in the European Research Area. This includes integration of the gender dimension into research content and process. As a Research Funding Organisation in ACT, SFI will setup and coordinate a CoP amongst RFOs across Europe.

Gender Data summary

The Research Policy team has undertaken a review of gender in the SFI peer review processes by analysing data on application submission and success rates since 2011.

The analyses detailed below include SFI research programmes from 2011 that were managed end to end in our Grants and Awards Management System, SESAME [see Appendix 2]. This enabled an assessment of success rates since all details pertaining to applications were available. Programmes were gradually managed through SESAME from 2011, and therefore awards made under programmes prior to 2011 were excluded as these data were not available in the system. Furthermore, non-research funded programmes (e.g. Science Week events, SFI Discover Programme awards) and programmes where SFI simply provided the funding to another organisation who solicit and process the applications, for example The Wellcome Trust, Royal Society, Joint Funding initiatives etc., were also excluded.

The analyses include awards offered by SFI, irrespective of whether the award was accepted or declined by the applicant, as this best represents completion of the SFI peer review processes. Where awards were transferred or underwent different ownership after their inception, data were based on the lead applicant's self-declared gender at the time the award decision was made. The award amounts refer to direct costs only.

It should be noted that allocating SFI Research Centre awards to a single lead applicant distorts the award amount data and therefore these data are presented with (Figure 1) and without (Figure 2) those corresponding to the SFI Research Centres.

In 2017, SFI achieved its Agenda 2020 target of making 25% of its awards to female researchers and this target has now been revised upwards to 30%. The most recent analysis of SFI award holders shows that the percentage of female SFI Award Holders Active in 2017 was 26%, up on 23% in 2016 and 21% in 2015 (Source: SFI Research Outputs Census 2017). The percentage of female team members (those employed on SFI awards) was 37%, an increase on 35% in 2016 (Source: SFI Research Outputs (Census) 2017), which represents progress towards redressing gender imbalance.

As part of this report, we present gender disaggregated data analyses for SFI's review processes (with exclusions as described previously) between 2011 and 2018. We also present gender data for the 2012 and 2013 SFI Research Centres.

Figure 1: *Analysis of SFI review process (**including** SFI Research Centres)*
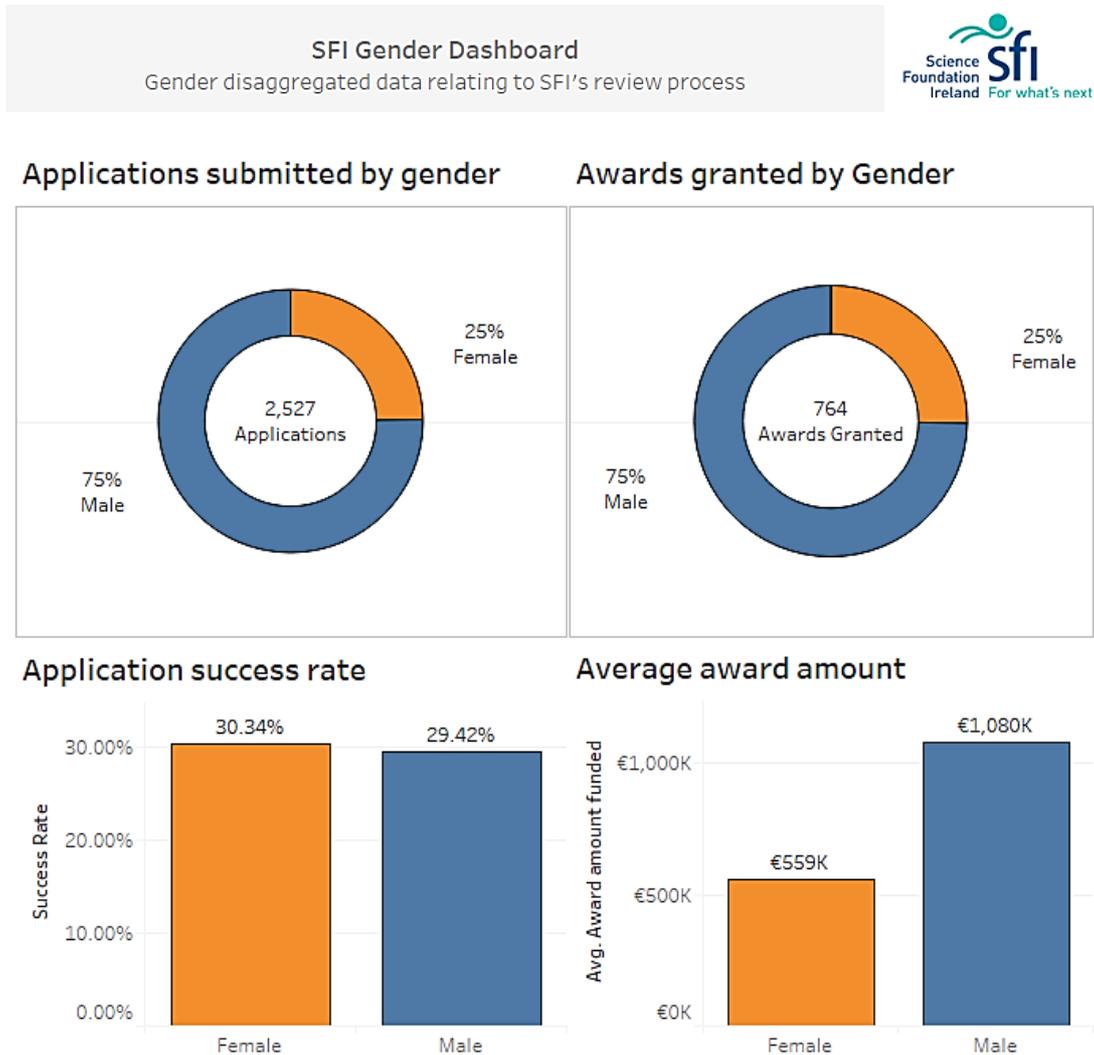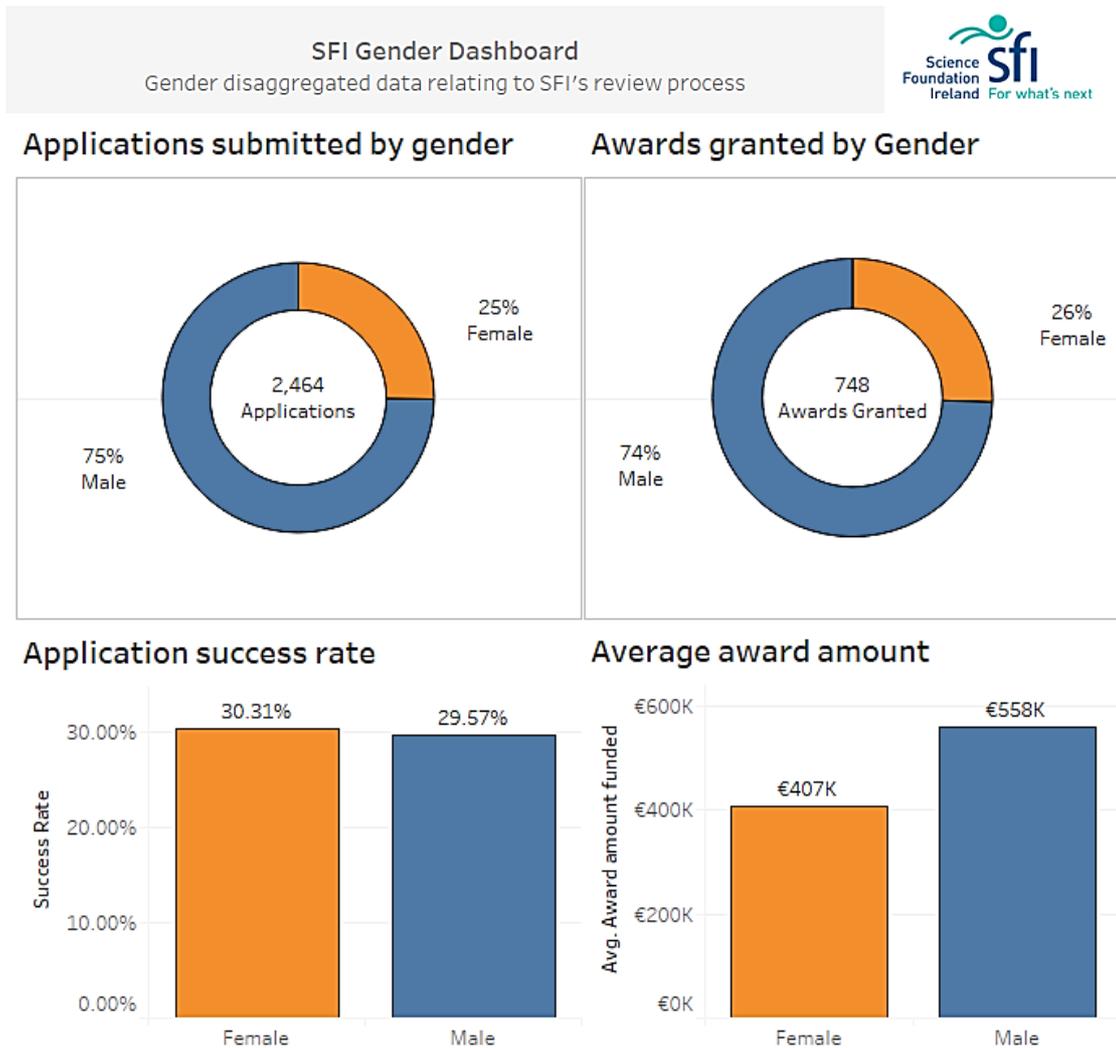
*Figure 2: Analysis of SFI review process (**excluding** SFI Research Centres)*

To fully understand the difference in average award amount funded we compared the total funding requested to the final amount funded (direct costs) which is presented in Figure 3.

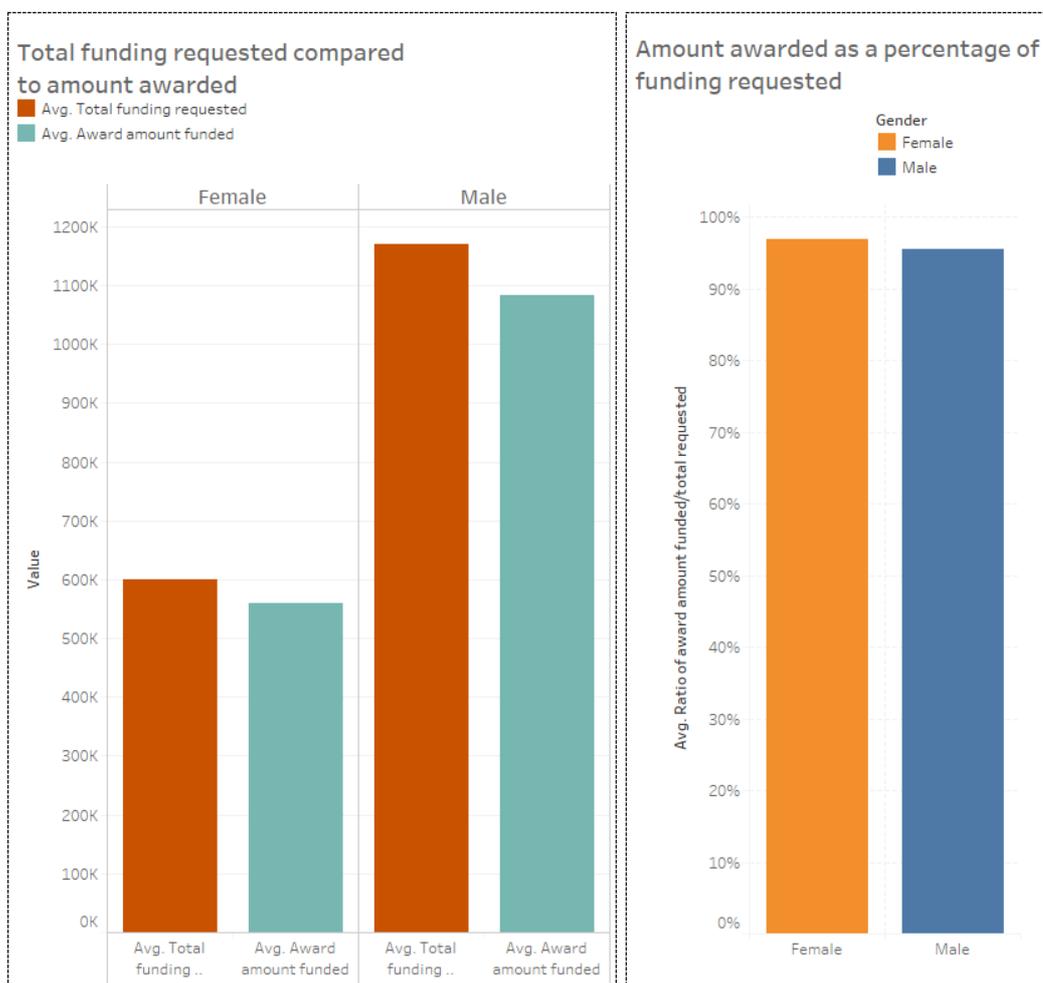*Figure 3:* *Total funding requested compared to final award (as per Letter of Offer)*
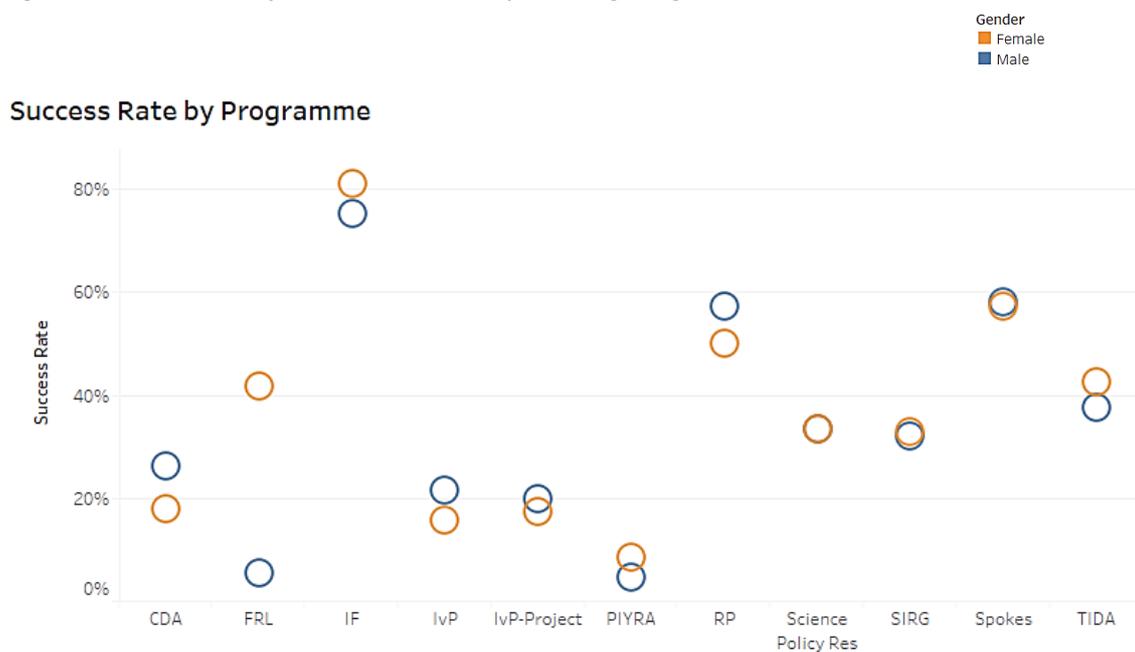
Figure 4: *Breakdown of SFI Success rates by Funding Programme*

Abbreviated programme name	Full Programme name
CDA	SFI Career Development Award
FRL	SFI President of Ireland Future Research Leaders
IF	SFI Industry Fellowship
IvP	SFI Investigator Programme
IvP-Project	SFI Investigator Programme – Project award
PIYRA	SFI President of Ireland Young Investigator Award
RC	SFI Research Centres
RP	SFI Research Professorship Programme
Science Policy Res	SFI Science Policy Research Programme
SIRG	SFI Starting Investigator Research Grant
Spokes	SFI Spokes Programme
TIDA	SFI Technology Innovation Development Award

SFI Research Centres review process

The following is an analysis of the applications, awards granted and success rates for SFI Research Centres in 2012, 2013 and 2016.
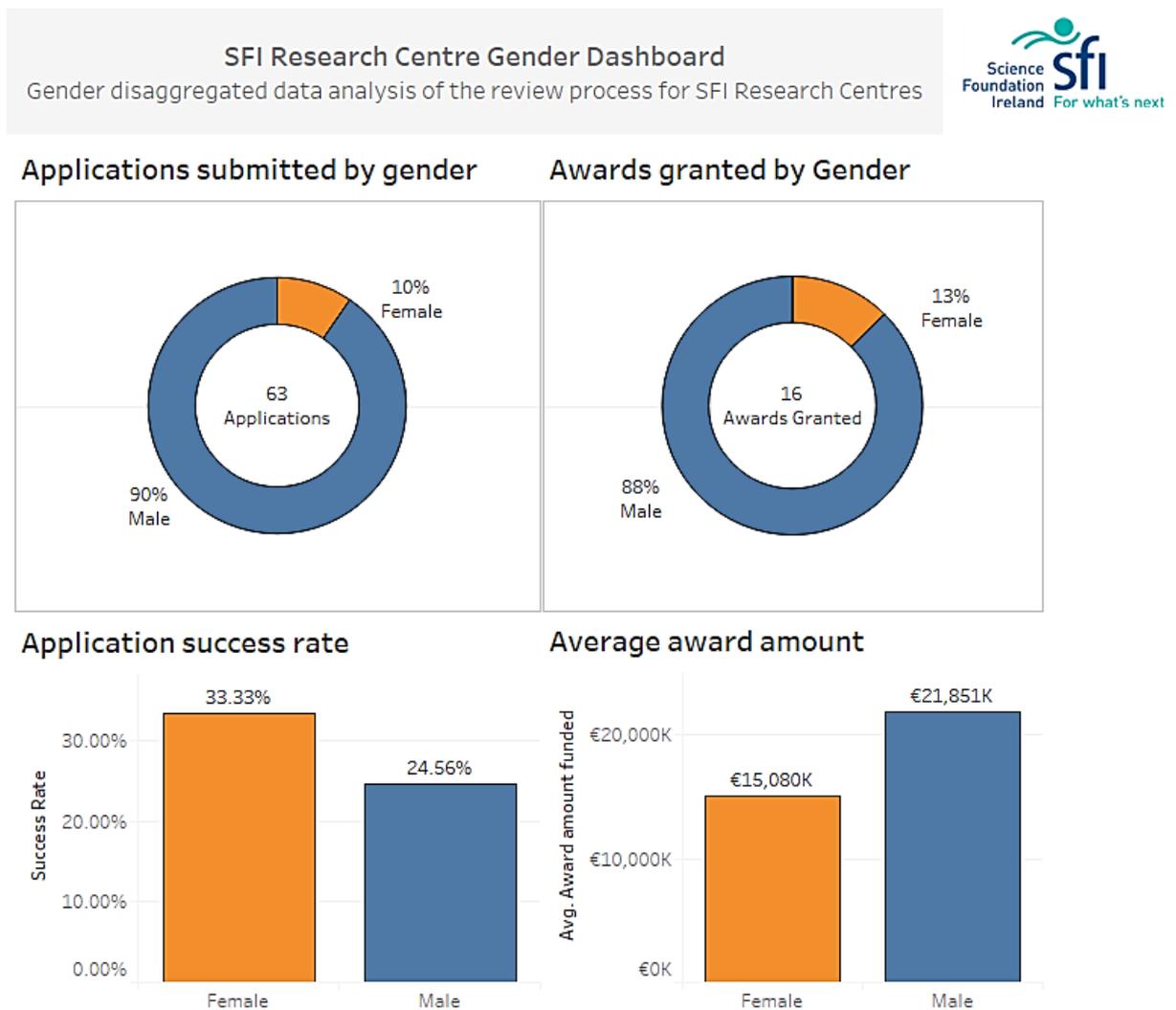
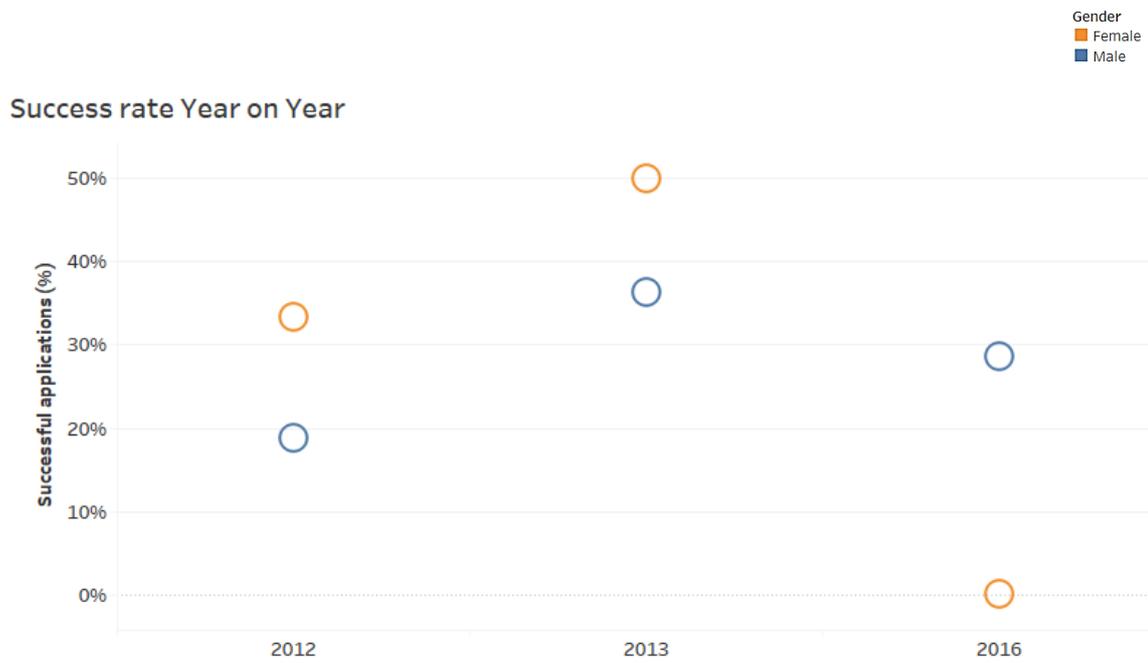*Figure 5*: *Analysis of SFI Research Centre review process*

Figure 6: *Success rates for SFI Research Centres year on year*

Success rate Year on Year

Gender
- ■ Female
- ■ Male

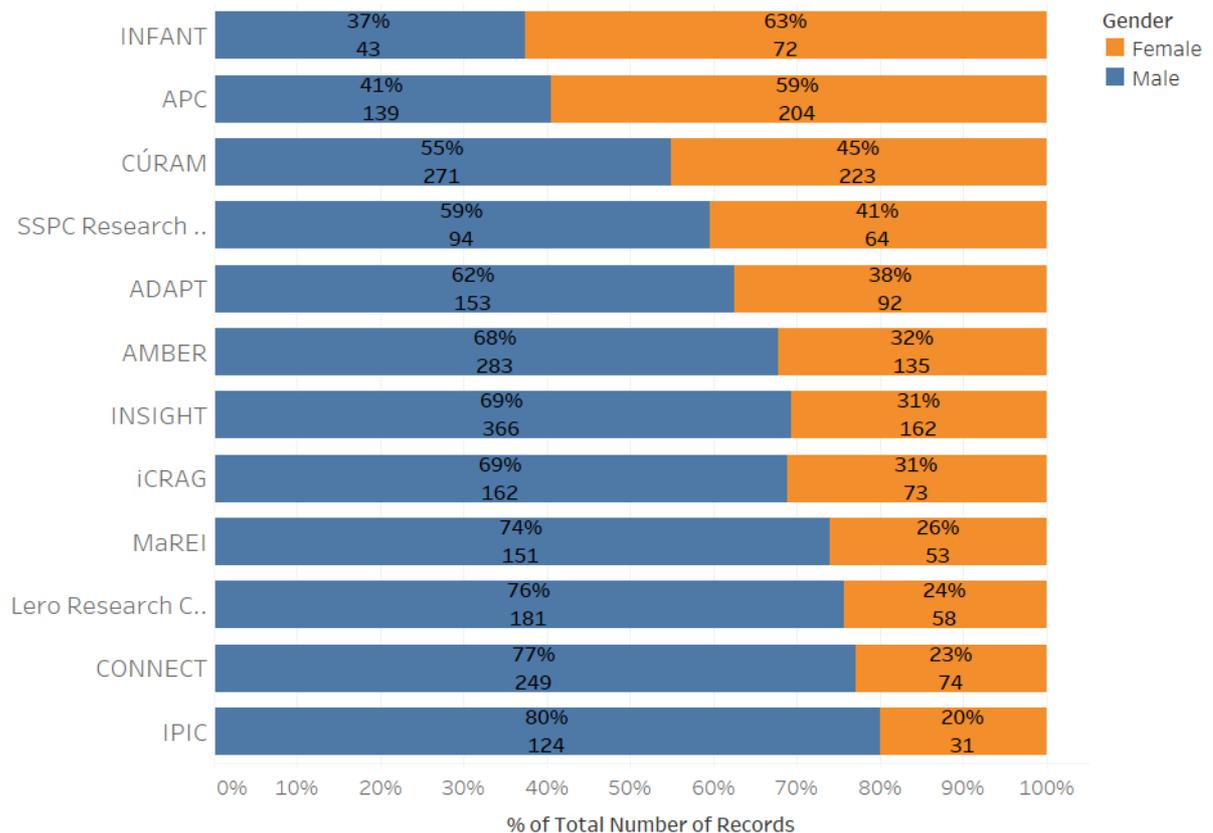**Current gender balance in the SFI Research Centres**

These data were compiled using 'team member' data for each SFI Research Centre available in SESAME. The data were verified by the SFI Research Centres team during H1 2018. They were then cross referenced to SFI's validated list of Principal Investigators and Funded Investigators.

These data reflect the original 12 SFI Research Centres (2012 and 2013) since recruitment within the five 2016 SFI Research Centres is still ongoing.

SFI's target for gender balance across team members in Agenda 2020 is 40%, and therefore it is encouraging to note that 5 of the original 12 Research Centres have reached, or are approaching, this target.

It is worth noting that as part of their Phase 2 application for funding SFI Research Centres are required to develop a Gender Action Plan and set a target for each year of the award against a 'gender balance' key performance indicator.

Figure 7: All team members in SFI Research Centres

SFI recognises that there is a gender imbalance at leadership level in the SFI Research Centres. Up until late 2017, 2 of the 12 SFI Research Centres (2012 and 2013 cohort) had female directors, some of whom have since taken up other senior university positions.

Professor Linda Doyle, previously the Director of Connect, was appointed Dean of Research at Trinity College Dublin in November 2017.

Professors Louise Kenny and Geraldine Boylan were co-directors of the Infant SFI Research Centre until December 2017, when Professor Kenny took up the position of Executive Pro Vice Chancellor of the Faculty of Health and Life Sciences at the University of Liverpool.

Appendix 1

Science Foundations Ireland's Gender Strategy sets out the agency's roadmap to improve the representation and progression of women in all aspects of STEM careers in Ireland. Full details can be found here. The strategy comprises three strands, which are a s follows:

- Strand 1 of the strategy focuses on gender equality across Science Foundation Ireland education and public engagement initiatives, with the aim of increasing the participation and interest of girls in STEM-related activities
- Strand 2 targets female representation within the Science Foundation Ireland funded portfolio and Science Foundation Ireland review panels. Concrete measures to achieve these targets are outlined
- Strand 3 will ensure that gender perspectives are integrated into the research content of Science Foundation Ireland-funded research programmes

Appendix 2

Science Foundation Ireland introduced a new grants and awards management system, SESAME, in 2011 to manage programmes from application through to award. The table below outlines the awards managed through SESAME which are included in the gender data.

Table of programmes included per year in the Gender Data

2011	2012	2013	2014	2015	2016	2017
IvP	IvP	CDA	IF	CDA	FRL	CDA
	IvP- Project	IF	IvP	IF	IF	FRL
	RC	IvP	Spokes	IvP	IvP	IF
		PIYRA	TIDA	PIYRA	RC	Science Policy
		RC		RP	RP	Spokes
		SIRG		SIRG	Spokes	TIDA
		Spokes		Spokes	TIDA	
				TIDA		