



SAGE

SCIENCE IN AUSTRALIA
GENDER EQUITY

SAGE Cygnet Awards
for the SAGE Athena Swan
Accreditation Pathway



Edith Cowan University (ECU)
Application Form

Decreasing gender disparity in the School of
Engineering

ABOUT THIS DOCUMENT

This document is for SAGE Institutions following the SAGE Athena Swan Pathway in Australia.

It includes:

SAGE Cygnet Awards Application Form (Blank Word Template)

This Blank Word Template may be used by institutions completing an application for a SAGE Cygnet Award. Institutions are welcome to apply their own institutional branding, styles and formatting, provided the application headings and action plan template layout are maintained.

This document should be used in conjunction with the SAGE guidance on **Identifying Key Barriers and selecting the five Key Priority Areas for Action**, and with the **SAGE Cygnet Awards Application Form & Guidelines**.

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SAGE CYGNET AWARD APPLICATION FORM



SAGE

SCIENCE IN AUSTRALIA
GENDER EQUITY

SAGE Cygnet Award Application

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GLOSSARY

ALEV	Academic level
ALEVA	Associate Lecturer
ALEVB	Lecturer
ALEVC	Senior Lecturer
ALEVD	Associate Professor
ALEVE	Professor
AS	Athena Swan
ASBA	ECU's Athena Swan Bronze Application document
ASBAP	ECU's Athena Swan Bronze Action Plan
CaLD	culturally and linguistically diverse
DVC	Deputy Vice-Chancellor
DVC RF	Deputy Vice-Chancellor (Regional Futures)
ECU	Edith Cowan University
ECUASCC	ECU Athena Swan Charter Committee
FTE	hours worked by one employee on a full-time basis
GEDI	Gender equality, diversity, and inclusion
HRSC	Human Resources Service Centre
LGBTIQA+	lesbian, gay, bisexual, transgender, intersex, queer community, asexual
+M (after STEM)	Medicine [includes Schools of Nursing and Midwifery (SNM) and School of Medical and Health Sciences (SMHS)]
ODVC RF	Office of the Deputy Vice-Chancellor (Regional Futures)
SENG	School of Engineering
SES	ECU's biennial Staff Engagement Survey
SMHS	School of Medical and Health Sciences
SNM	School of Nursing and Midwifery
SSCI	School of Science
STEM	science, technology, engineering, and mathematics [includes Schools of Engineering (SENG) and Science (SSCI)]
STEMM	science, technology, engineering, mathematics, and medicine
Tracking Dashboard	ECU 's Tracking Dashboard that monitors the <i>ECU Athena Swan Bronze Action Plan 2018 - 2023</i>
UE	University Executive – ECU's University Executive team meeting
VC	Vice-Chancellor
WA	Western Australia
wiE	Women in Engineering (School of Engineering)
wiS	women in STEMM disciplines (academic)

Edith Cowan University: SAGE CYGNET 3

Word limit – 2500 words (excluding the institutional context and excluding the action plan)

	✓ Current Cygnet	Barrier · List the Barrier addressed in this Cygnet · List the Barrier for Cygnets already submitted
Institution-wide barrier		Flexible Working Arrangements (FWA)
Sub-group barrier		Inadequate support systems inhibiting the promotion of women in STEM(M), specifically into academic levels C - E
Sub-group barrier	✓	Decreasing gender disparity in the School of Engineering (SENG)
Sub-group barrier		Gender Balanced Professorial Research Cohort
Sub-group barrier		Addressing diversity in the School of Nursing and Midwifery (SNM)

KEY BARRIER

Edith Cowan University (ECU) identified gender disparity within its School of Engineering (SENG) because of its lack of ability to recruit women within the discipline. Within SENG, academic staff numbers are skewed towards men and this disparity in turn impacts the student population through lack of inspirational female engineer role models and contributes to organisational cultural barriers which may limit the progression of gender diverse people and achieving diversity.

EVIDENCE OF BARRIER

A *Key Priority Area* for ECU's SENG is increasing the number of women, or female academic staff that identify as women, in the engineering discipline (wiE). In 2016 there were **no** wiE in the School with only two women joining in 2017, hence only 7% were wiE (2 out of 27 total academics). To reduce the barriers that prevent women from joining and remaining at the University, ECU has addressed the following sub-barriers, and through the Athena Swan (AS) Bronze Action Plan (ASBAP) set the following targets (Figure. 1):

SENG Sub-barriers and Targets from the Athena Swan Bronze Action Plan 2018 – 2023

Sub-barrier 1) Low number of women in SENG
Sub-barrier 2) Inequitable recruitment and promotion processes
Sub-barrier 3) Lack of awareness of workplace gender equality, diversity, and inclusion
Sub-barrier 4) Lack of female role models within senior positions in SENG
Target A: Aspire to achieve 18% female staffing in the School of Engineering by 2022. (Action Item 1.4)
Target B: Encourage an increase in applications from females for advertised positions in SENG (Action 1.5)
Target C: Select and appoint higher numbers of qualified female academic candidates for senior roles in SENG, including a female Professorial appointment (Action Item 1.6 & 1.7)

Figure 1. Sub-barrier and ECU Targets breakdown

The ECU AS Charter Committee (ECUASCC) originally conceptualised a Cygnet that might broadly address gender disparity within SENG, as well as in the School of Nursing and Midwifery (SNM) concurrently (Table. 1).

ECUASCC Rationale	Discussion for Cygnets
Pre-work from the preparations for Cygnet Awards in 2021	It was evident from data analysis in 2017 that SENG was male-dominated in its academic profile with 93% male and 7% female (N= 2 out of 27 staff total)
	The reverse situation was seen for SNM, which had a significantly female-dominated (89% female) academic profile and was identified as part of actions within the STEMM profiles (not specifically for increasing the number of women in the school). Therefore, although there were disparate similarities, the two were not comparable.
	ECU in all honestly could not address 'gender disparity' in the schools without looking at both schools. SENG and SNM both had different reasons for the lack of a specific gender. If ECU and the ASCC addressed one School's issue, it was clear an entire Cygnet should be assigned to each school to give the appropriate focus and attention where needed, as it was foreseen the required actions would be substantially different.

Table 1. Rationale for a Cygnet Award in SENG

However, an individual Cygnet has been chosen for SENG given its 2017 academic profile and as the School and its Executive Dean were explicitly assigned targeted actions by the Vice-Chancellor (VC) and the AS Lead, to redress specific gender equality, diversity, and inclusion (GEDI) concerns in the ASBAP.

As part of ECU's commitment to AS, the University tracked and monitored ASBAP actions through ECU's ASBAP 'Tracking Dashboard' with updates reported to ECU's University Executive (UE) fortnightly by the AS Lead under a standing item (See *Institutional Context*). As a result of this regular and documented reporting, specific discipline/School issues were identified through data analysis and feedback, and additionally when examining barriers for women in Science, Technology, Engineering, Mathematics and Medicine (STEMM) for Cygnet 2 (Table.2).

Cygnet 2: Identified STEMM issues	
Leadership	Historically, being a male-dominated school, SENG had no female Associate Deans and subsequently this resulted in male-dominated leadership groups.
Academic Promotion	SENG has never had women apply for academic promotion and therefore never been successful. Given that the school was male-dominated, further investigation was necessary to unpack barriers to career advancement for female staff.
Intersectional factors	Feedback from some culturally and linguistically diverse (CaLD) staff also alerted ECU to the absence of an adequate intersectional lens being applied to some outcome-based data findings in the original ASBAP analysis. Further investigation was undertaken for this Cygnet. Subsequently, the need to revisit the school profile and the promotions outcomes with a wider diversity and intersectional lens was acknowledged, and ultimately shaped the work that was undertaken.

Table 2. Cygnet 2 identified STEMM issues from 2017 - 2023.

In the wider context, lack of wiE disciplines is an ongoing issue across Australia¹. During the ASBAP development, ECU identified a range of sub-issues for the lack of wiE specifically within the School (Table.3).

ASBAP identified issues	
1.	The high demand of female engineering academics difficulty to attract suitably qualified senior female academics as their own institutions would bend over backwards to retain them.
2.	High competition from industry and other non-academic institutions.
3.	Need to grow ECU's own academics internally to cultivate a healthy pipeline of talent.
4.	Lack of role models and support networks.
5.	Lack of ability to informally discuss challenges and opportunities for the success of female academics as well as the strategies that can help to attract and retaining more female academics and students to the School.

Table 3. SENG ASBAP identified issues.

Evidence for Sub-barriers

The *Key Barrier* consists predominantly of four fundamental sub-barriers, contributing directly to the inability to attract women and other diverse genders into SENG.

Sub-barrier 1) Low number of women in the School of Engineering

In 2017, SENG was a male-dominated school with only 7% of staff being female (2 females to 27 males), well below the sector average of 12% wiE in the workforce² (Figure.2 & Table.4.).

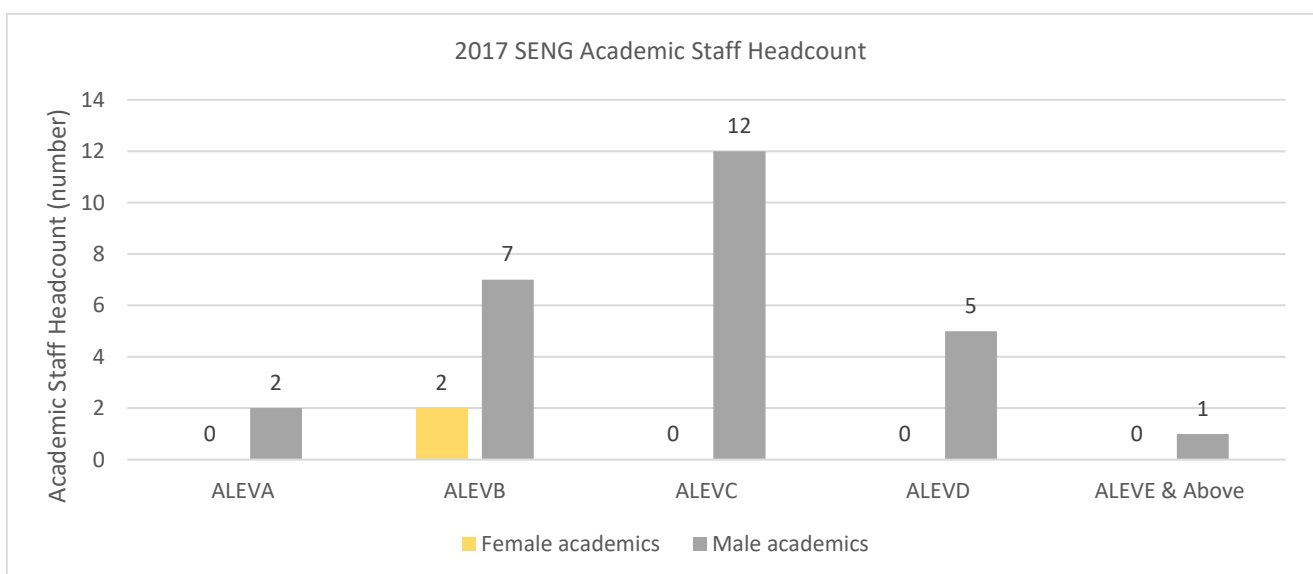


Figure 2. Graph of SENG academic Staff headcount 2017 (disaggregated by academic level)

¹ <https://www.engineersaustralia.org.au/sites/default/files/women-in-engineering-report-june-2022.pdf>

² In 2017 in Australia, on average 84% of academic were male and 93% of university professor were male - <https://www.engineersaustralia.org.au/sites/default/files/2022-06/women-in-engineering-2017.pdf>

	Number of Staff (No.)	Percentage of female (F) Staff (%)
Females	2	7.00%
Males	27	93.00%
Totals	29	100%

School of Engineering	ALEVA	ALEVB	ALEVC	ALEVD	ALEVE & Above
# Female staff	0	2	0	0	0
# Male staff	2	7	12	5	1
Difference between F and M	-2	-5	-12	-5	-1

(*numbers and percentages may be slightly different from previous reporting due to Human Resources Services Centre (HRSC) personnel reconciliation)

Table 4. SENG academic Staff headcount 2017 (disaggregated by academic level)

With only 7% of the SENG academic staff being women, ECU ranked at about the third lowest level of female representation in engineering schools across Australian universities (average was approximately 16.5% at the time). Also, the two women hired into SENG were at Academic Level (ALEV) B.

Sub-barrier 2) Inequitable recruitment and promotion processes

While ECU identified it generally has a stable academic workforce, recruitment challenges do occur across various disciplines including SENG and its difficulty in recruiting female academic staff. Recruitment and appointment data was examined across all STEM disciplines spanning 2012 to 2016 where reasonably complete quality data was assured. It showed SENG applicant rates appear to match the market pool reasonably well, however, women (2 out of 9 applications) were only shortlisted once, indicating shortlisting, interviewing and panel composition as key points of intervention moving forward.

Therefore, actions needed to focus on improving a range of support systems and structures, as well as the recruitment process itself (Table.5).

Recruitment Challenges	Description
Recruitment processes	Identify ways to accelerate progress of women in STEMM careers.
Application Rates	Two-step model of approaching women
Shortlisting outcomes	Woman who met criteria to go through to interview stages

Table 5. SENG recruitment challenges and proposed strategies in STEMM disciplines.

Since 2017, AS data collection activities and analysis (primarily number of academic women in schools, academic promotions rates, staff feedback when preparing the ASBAP, and subsequent data monitoring) showed no applications for promotion of wIE since the School's inception compared to men who in 2017 had 5 applications at an 80% success rate (Table.6).

2017 - SENG promotion application and success rates ALEVB - E				
Gender	F		M	
Number (No) of Applications/Success Rates	No. Apps.	% Success	No. Apps.	% Success
SENG	0	0%	5	80%

Table 6. Academic staff promotion application rates and success rates 2017

This finding is exacerbated by the standard norms for academic promotion - that being academic promotion would 'normally' be expected at top-of-level increments, or around 5 years since the last promotion or appointment. Hence female SENG academics are perceived as not 'promotion-ready'. Also, as promotion application rates (and hence promotion success rates) were extremely low, it made it difficult to set meaningful targets for improvement. To support the quantitative data, in June 2017, ECU conducted in-depth interviews with staff about their academic promotion experiences (Table.7) and used this to create more detailed action items.

AS Bronze Action Plan Staff consultation 2017 - In-depth Interviews feedback	
<i>A perception that women are less likely to be promotable/promoted;</i>	<i>A perception that some females are being promoted because of some sort of affirmative action policy;</i>
<i>The process is difficult (easier to be promoted by moving to another employer);</i>	<i>Issues for promotion of research staff employed as professional staff but with academic-like profiles - no real mechanism for promotion;</i>
<i>Externally-funded contract employees feel unable to apply due to impact on the budget of the grants under which they are employed.</i>	<i>Instances of male line managers/colleagues dissuading females from applying/lack of coaching from academic supervisors/leaders within the discipline;</i>

Examples of quotes include:
<ul style="list-style-type: none"> • “It’s not about how good you are, but how good you sell yourself.” • “People who have a more public profile or a champion on the panel get promoted.” • “Lack of clarity for promotion process.”

Table 7. Table of quotes from 2017 In-depth Interviews

Sub-barrier 3) Lack of awareness of workplace gender equality, diversity, and inclusion

SENG believed (and still believes) that increasing female staffing in the School will bring about a more diverse, productive workforce and would also increase the appeal of the School/ discipline to academic women. In 2017, as part of the ASBAP development it was evident the lack of awareness of the requirements to improve GEDI practices within SENG specifically for hiring/appointing women (Table.8).

SENG staff needed to address the culture of the School in becoming more cognisant of GEDI themes and issues.		
Evidence	Description	SENG
Understanding Unconscious Bias within SENG	Majority of the School did not have equity training of any kind, specifically on Unconscious Bias, unless they sat on recruitment panels, and as the Chair of the panel.	The only staff to have unconscious bias training were those involved in recruitment (as per HR requirements). As the Executive Dean is part of the University Executive, he was required to also complete the training. Being a male-dominated school, SENG was impacted by the fact they did not have an opportunity to consider a diversity of views.
Adjunct appointments	Adjunct appointments for the School showed that a ratio of men: women was 8:1 in favour of men.	Again, SENG had no diversity in the adjunct appointments they used for technical expertise. It is important female adjuncts had the opportunity to make connections and mutually beneficial relationships that could facilitate new wIE recruits for the School.

Table 8. SENG acknowledgement of the lack of awareness of GEDI issues within the School

As seen in the table above, at this time, SENG had no requirement for unconscious bias training beyond recruitment panel members. Furthermore, adjunct³ appointments for women were severely low and not given any consideration for future improvements. As such, awareness raising was identified as a key area for SENG to address given the significant gender disparity within the School.

Sub-barrier 4) Lack of female role models from senior positions in School of Engineering

Having role models for wIE was a priority for ECU, however without women present in the School, staff profiling, and promotion of women was taken from alternate STEMM schools. Both the VC and the AS Lead, the Deputy Vice-Chancellor (Regional Futures) [DVC RF] were (and remain) visible role models for gender equality in promotional materials and at public speaking events.

Maintaining and growing the pool of senior academic women is a key priority for ECU and the University is committed to recruiting more female professors (this is explored in Cygnet 4 also being submitted concurrently).

Intersectionality considerations

During the ASBAP development in 2017, there was a focus to increase the number of women in the School. However, on reflection of these actions, ECU acknowledged the need to conduct qualitative research (focus groups and in-depth interviews) with female academics, to explore how other intersectional disadvantages may contribute to or exasperate issues the School has alongside gender (such as having a culturally and linguistically diverse [CaLD] background, being an Aboriginal or Torres Strait Islander person or having a disability).

³ Adjunct appointments may be provided to staff employed in other institutions or agencies whose appointment will assist in developing and strengthening engagement with industry and the professions; and enhancing the levels of experience and expertise within the University.

ACTIVITIES AND OUTPUTS

Since 2017, ECU has coordinated a targeted approach with multiple actions from the ASBAP aimed specifically at addressing barriers to increasing the number of wiE (Table.9). The University is aware that no single specific action can directly improve the wiE headcount, rather, numerous factors influence promotion, recruitment, and career advancement at the University.

Actions directly related to improving the number of wiE at ECU are:

Activity/Output	Appraisal
SENG appointments (at all levels) monitored by the VC.	<ul style="list-style-type: none"> All SENNG appointments are monitored by the VC with female staff levels always part of discussions between the Executive Dean and the VC. All SENNG appointments are given due consideration in terms of how the appointment impacts the gender balance of staffing within the School. Continued action is still needed as the numbers are still low.
All interview panels are selected to ensure appropriate level of diversity.	<ul style="list-style-type: none"> All interview panels are selected to ensure appropriate diversity. Female staff members have completed training and are able to sit on panels. Normally this would not be the case (as the School's female academics are not in senior roles), however, to improve gender diversity and School culture, women now sit on recruitment panels.
Unconscious bias training is mandated for all SENNG staff.	<ul style="list-style-type: none"> 100% of SENNG staff have completed unconscious bias training. When new staff members commence, they will be informed that the training is mandatory. With 100% completion rates, all staff on recruitment interview panels will be compliant.
Communication channels within the School were extended to obtain ongoing staff and student feedback.	<ul style="list-style-type: none"> A female staff member leads monthly social catchups with female academic staff in providing an informal support network. Discussion groups conducted with female engineering students ensure staying across the School's cultural and retention issues.
Increasing adjunct appointment activity for SENNG female staff.	<ul style="list-style-type: none"> Female adjunct appointments in SENNG increased from 1 to 4 and numbers are now regularly monitored. In addition, the first female technical staff member was hired in 2022
Marketing and advertising were enhanced through ECU's firm commitment to gender diversity.	<ul style="list-style-type: none"> All promotional materials, job advertisements, and information packs for applicants include gender neutral language, non-stereotypical images and include visible female role models. There is a regular review of marketing materials. Clear representation of visible role models for wiE on ECU's webpages is ensured.
Position descriptions were reviewed.	<ul style="list-style-type: none"> All position descriptions are renewed each round and role specifications have been reshaped to appeal to women.
Recruitment processes were reviewed.	<ul style="list-style-type: none"> All women who meet the minimum role requirements of the advertised position go through to interview stage. There is a two-stage recruitment processes when considering appointments from qualified candidates for multiple positions other than to which they applied. All stages of recruitment consider the female candidate's potential, not solely their experiences. WiE have provided testimonials on ECU's recruitment web pages.
Flexible working approaches and ECU's parent-friendly environment were promoted in all stages of recruitment.	<ul style="list-style-type: none"> ECU recruitment advertising includes a range of diversity and inclusivity statements i.e., "ECU supports a work/life balance for staff. Content refers to benefits such as flexible working arrangements being possibly negotiated to meet personal circumstances.
Recruiting of women through ECU initiatives and Schemes.	<ul style="list-style-type: none"> SENG female staff have been hired through the: <ul style="list-style-type: none"> ECU Early Career Research (ECR) grant scheme VC Research Fellow Scheme

Table 9. Activities/outputs that directly support the number of wiE within SENNG.

Building an inclusive workplace

In addition to the ASBAP's SENG-specific actions, ECU undertook University-wide activities aimed at creating a supportive and inclusive workplace which encouraged individuals to feel safe to be themselves. Also, ECU endeavoured to address any intersectional issues through associated activities as per *Table 10*.

Activity/Output	Appraisal
Relating to Athena Swan	
Athena Swan Data Dashboard	<ul style="list-style-type: none"> As part of the AS Data Dashboard, leaders and managers in schools will continue to be able to review their gender profile during recruitment, including appointments by gender, academic level, and year. Additionally, the recruitment process is disaggregated by applicant numbers, panel composition, shortlisting numbers, and successful applicant gender.
Women in STEMM Focus Groups in 2019 and 2022	<ul style="list-style-type: none"> SENG staff participated in AS Focus Group activities which aimed to capture the lived experiences of women in STEMM disciplines. Issues on career advancement and promotion of female staff at the school level were explored.
University Wide processes	
Supporter of 'Racism. It Stops with me'.	<ul style="list-style-type: none"> ECU has pledged support to this campaign. It provides tools and resources to help the University learn about racism and how to take actions to create change.
Cultural and ceremonial leave for Aboriginal or Torres Strait Islander People.	<ul style="list-style-type: none"> ECU has several cultural and ceremonial leave provisions built into its Enterprise Bargaining Agreement. <p>Ensures staff who identify as members of Aboriginal or Torres Strait Islander communities, will be entitled to additional leave arrangements.</p>
Inclusive Language Guide	<ul style="list-style-type: none"> ECU has an Inclusive language guide with a specific section on Race, Ethnicity and Culture which refers to cross-cultural communication and avoiding stereotypes.
Visual profiling	
Sharing stories of success through media releases and social media posts.	<ul style="list-style-type: none"> There is SAGE Page articles in every fortnightly ECU Newsletters highlighting GEDI across the University. 'Our Stories' Page on the ECU intranet showcasing visible role models from various members of our community pursue their studies and careers at ECU in both academic and professional capacities. ECU will continue to showcase wiS as part of the series. Continue to ask, "as a woman in STEM, what or who inspired them to pursue their career in their chosen field", including women in the School of Engineering.
Promote role models of women in STEMM to the wider University.	
Building an inclusive workplace	
Reporting on gender equity strategies on a regular basis.	<ul style="list-style-type: none"> ASBAP Action Item 1.2 under the "Entrench Athena Swan" theme in the ASBAP ensures we have equity standing items on fortnightly UE meetings. AS Team to continue to report on a fortnightly basis to the VC and University Executive as well as presentations to ECU Council, Equity and Diversity Committee, Academic Board and Research and Higher Degrees Committee.
Commit to having diverse representation on panels and presentations for ECU internal events and on external event staff participate in.	<ul style="list-style-type: none"> ECU subscribes to the 'panel pledge', that we are committed if requested to participate in a panel or forum, to ask the organiser about the gender and diversity balance of the program. ECU continues to uphold those values and regularly turns down invitation to be part of panels where there is no diversity in existing speakers.

Table 10. Activities/outputs that indirectly support the increase in wiE within SENG.

OUTCOMES

Evidence this barrier is reducing is shown through **the number of wiE across the School increasing**, **the pipeline of wiE (in junior levels) growing** and **the women in the School reporting consistently positive feedback**.

Achievement of Cygnet targets

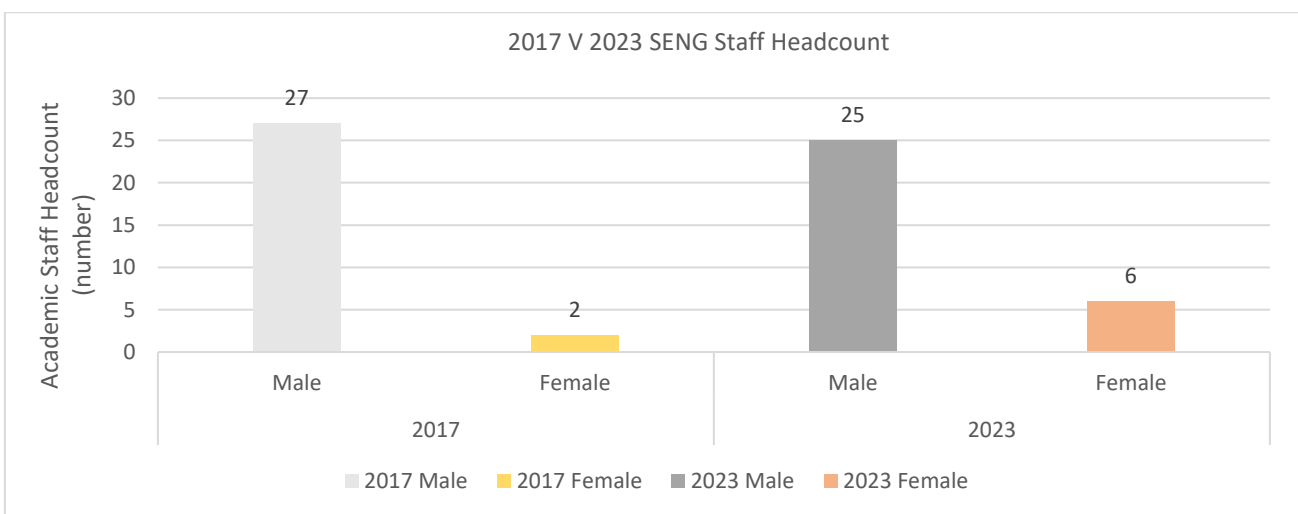
Target A)	Aspire to achieve 18% female staffing in SENG by 2022.	
Results = Achieved	The percentage of female SENG academics has reached its goal and currently sits at 19% in 2023. This places ECU's School of Engineering in a positive position for gender balance in Australia. The latest Engineers Australia report in 2022, showed the aggregate proportion of qualified professional engineers who are female, is still low at approximately 13% (Linked to ASAB Action 1.4)	✓
Target B)	Encourage an increase in applications from women for advertised positions in SENG.	
Results = Achieved	In 2020, SENG conducted its first 'women only' expression of interest (EOI) recruitment process to specifically encourage women to apply for opportunities within the School (Linked to ASAB Action 1.5)	✓
Target C)	Select and appoint higher numbers of qualified female academic candidates for senior roles in SENG, including a female Professorial appointment (Action Item 1.6 & 1.7)	
Results = Partially Achieved	While the School academic female staffing cohort is 19%, these women do not exceed ALEVB. A female Professorial appointment was offered but not accepted. (Linked to ASAB Action 1.5)	x

Table 11. Evidence of achievement for Cygnet targets

Outcomes of sub-barriers

Sub-barrier 1 Outcome - Number of women in the School of Engineering has increased.

Over the past five years, ECU has proactively tracked female hires and analysis has shown the number of women within the School has increased 200% (2 women in 2017 to 6 women to 2023) (Figure.3).



2017 V 2023 SENG Staff Headcount (Male – M, Female – F)			
	2017	2023	Total
# Female SENG staff	2	6*	+4
# Male SENG staff	27	25	-2
Difference between F and M	-25	-19	+6
F and M - 2017 V 2023	-2M	+4F	
Difference between the 2017 and 2023 gap		+6	

Figure 3. 2017 V 2023 SENG Staff Headcount

As per ECU's ASBAP, the University has worked proactively to achieve the following measures of success and as noted these have been achieved (Table. 12):

Step 1.	By Dec. 2019, the percentage of engineering academics who are women to reach 12%.
Step 2.	By Aug. 2022, the percentage of engineering academics who are women to reach 18%.

Table 12. Table of measure of success for SENG staff headcount for females

In 2023, with the School staff headcount for women now sitting at 19% (surpassing the ASBAP goal of 18% in August 2022), it now sits well above the national average. The 6 academic women that now reside in the School are all currently at ALEVB (*Table.13*). However, it is important to note there is a current academic promotion round in process but as yet, the outcomes have not yet been announced. Hence, while this is still a relatively junior stage of the career journey, it has directly contributed to the building of a pipeline. While the numbers themselves might be considered small, in respect to the discipline of engineering, they are significant.

2017 V 2023 SENG Staff Headcount by Academic Level and Gender					
School	ALEVA	ALEVB	ALEVC	ALEVD	ALEVE & Above
# Female staff	0	6	0	0	0
# Male staff	0	7	10	4	4
F and M - 2017 V 2023	-2M	+2F, =M	-2M	-1M	+3M
2023 Difference F to M	=	-1	-10	-4	-4
2017 Difference F to M	-2	-5	-12	-5	-1
2017 V 2023 gap change	+2	+4	+2	-1	-3

Table 13. 2017 V 2023 SENG Staff Headcount by Academic Level and Gender

Action 1.1	By December 2024, increase the number of female academics in the School of Engineering to 24%
Action 2.2	2.1 Aspire for female academics in SENG to be promoted to Academic Level (ALEV) C and above.

Sub-barrier 2) Revised and improved recruitment and promotion processes

As noted, while there have been limited recruitment opportunities for SENG due to the limited pool across the engineering sector, the School's recruitment trajectory appears promising with 4 women recruited since the initial two in 2017 (*Figures.4&5*).

Headcount for women							Recruitment for women						
Year	18	19	20	21	22	23	Year	18	19	20	21	22	23
ALEVB	2	3	5	4	4	6	ALEVB	0	2	2	0	0	2
ALEVC	0	0	0	0	0	0	ALEVC	0	0	0	0	0	0
ALEVD	0	0	0	0	0	0	ALEVD	0	0	0	0	0	0
ALEVE	0	0	0	0	0	0	ALEVE	0	0	0	0	0	0

Figure 4. SENG Academic staff headcount and recruitment 2018 -2023

Gender Profile during recruitment process

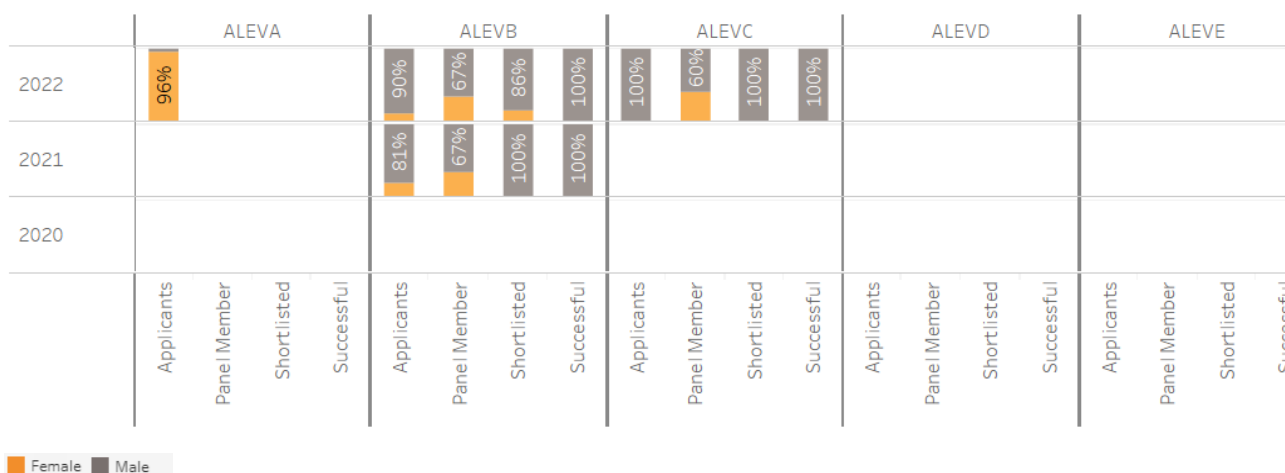


Figure 5. Gender Profile during SENG recruitment 2020-2022 from the AS Data Dashboard

Action 1.1.1	Continue targeted recruitment through the two-step method.
Action 1.1.2	Monitor application rates of female academics.
Action 1.2.3	Monitor shortlisting rates of female academics.

In considering this result, ECU re-evaluated evidence from focus groups, in-depth interviews, and desktop analysis, with findings indicating there remain significant opportunities to improve practices/processes for recruitment as well as promotion and career advancement more broadly. In 2020, SENG conducted its first 'women only' expression of interest (EOI) recruitment process. This was done to specifically encourage women to apply for opportunities within the School with the additional intent of less pressure placed on applying. This EOI remained open to ensure prospective women were kept informed about ongoing opportunities.

Given the low staff headcount for wiE is a key priority for the University and exasperated by compression at junior levels (Table.13), the DVC(RF) as ECU's AS Lead, serves on every Academic Promotions Assessment Committee to assess all applications each year with a gendered and intersectional lens.

The challenge for many schools appears to be in re-building numbers of women in the mid-senior career (ALEVC and D) part of the pipeline. Providing career progression opportunities for the women at ALEVC will impact the building of a pool of candidates for ALVED and ALEVE. While previous years have seen no applications from female academics in SENG for academic promotion, it is promising there are multiple applications from women in the 2023 round.

<i>Action 1.1</i>	<i>By December 2024, increase the number of female academics in the School of Engineering to 24%</i>
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Sub-barrier 3) Enhanced School-wide awareness of workplace gender equality, diversity, and inclusion.

To assess GEDI awareness within SENG, ECU re-evaluated evidence from focus groups and in-depth staff interviews, with findings indicating there remain significant opportunities to improve practices and processes for recruitment, promotion, and career advancement more broadly (Table.14).

Evidence	Contextual Background	Current Status
Training for Unconscious Bias (An equity and Diversity Training Course).	<ul style="list-style-type: none"> Majority of the School had limited exposure to equity and diversity training. 	<ul style="list-style-type: none"> 100% of members of all recruitment panels have undergone Equity & Diversity and Unconscious Bias training including staff who are direct appointments into roles. By December 2019, 100% staff in SENG completes unconscious bias training.
Updated process for of the composition of a recruitment panel.	<ul style="list-style-type: none"> The School needed to deconstruct the existing recruitment process to look for 'pipeline loss points'. A mandated gender balance recruitment panel was required. 	<ul style="list-style-type: none"> All recruitment panels have a minimum of four members with equal numbers of men and women (approx. 50:50 gender balance). The School is now focussed on recruitment attraction strategies including how it presents to the market to make the vacancies more appealing to women.
Staff and student engagement and feedback collection	<ul style="list-style-type: none"> Specific cultural change barriers and issues needed to be identified and addressed within the School. 	<ul style="list-style-type: none"> SENG student discussions group findings were analysed and addressed in specific cultural change actions for SENG. Workshops were conducted with SENG staff on what changes are needed to redress inequities.
Strategies to increase applications for SENG from women.	<ul style="list-style-type: none"> SENG aims to ensure all recruitment activities have references to ECU's commitment to gender diversity. Opportunity to recruit further female adjunct appointments were necessary. 	<ul style="list-style-type: none"> All promotional materials, job advertisements, and information packs for applicants, use gender neutral language, non-stereotypical images, and visible women role models. There has been an increase in female adjunct appoints and professional hires. SENG continues to develop and increase ways it can network and engage with women in the engineering space.

Table 14. Evidence for increasing awareness of workplace gender equality, diversity, and inclusion within SENG

Sub-barrier 4) Female role models from senior positions in SENG continues to be a challenge.

ECU made it a key priority to cultivate female role models within SENG. This could have been worked towards by hiring a SENG female professor which would have also contributed to the STEM Professoriate (ALEVD/E) reaching 25% women by 2022 (as per the ASBAP). Unfortunately, an appointment has not yet been achieved but remains a task in hand for the School.

In 2023, a female Professorial appointment (through the Vice-Chancellor's Professorial Research Fellow Scheme) was offered a contract but did not accept.

ECU continues to work towards increasing the academic wiE headcount, contributing to an ongoing pipeline of women in STEM (wiS) coming through ECU. A setback in 2020/2021 was the impact of the COVID-19 pandemic with several staff retiring from higher levels, severely depleting the wiS pool at the University. Data from 2022 revealed that (as was the case in 2017), women remain under-represented in SENG, particularly in senior levels.

Action 2.1	Actively pursue recruitment for a female Professor in the School of engineering, who can provide an aspirational role model
Action 2.2	Aspire for female academics in SENG to be promoted to Academic Level (ALEV) C and above

Data collection and limitations

WiS Focus Groups (wiSFG) in 2019 and 2022, were a primary source of data in assessing the lived experiences of wiE. They provided an abundance of positive feedback and opportunities for improvement. Additionally, due to small numbers of SENG women, in 2023 a series of semi-structured and in-depth confidential staff interviews were conducted with an external constant to further examine identified themes and findings (see 'Impact').

Intersectionality considerations

The extensive data collected over the past six years through the AS journey has allowed ECU to further develop targeted actions for wiS/wiE. The need for a more intensive intersectional approach was realised through more recent qualitative data collection (wiSFGs and interviews). ECU has begun to understand intersectional needs, including those of CaLD staff, Aboriginal and/ or Torres Strait Islander peoples, international staff and staff living with a disability. In collating diversity data, ECU relies on staff self-reporting⁴. In conducting the 2023 SENG staff interviews, confidentiality and anonymity was assured with the aim of securing honest feedback. An intensive intersectional approach was developed based on the qualitative data and feedback collected. This will be helpful when removing and/or reducing barriers, as consideration will be given to diverse perspectives driving targeted actions.

Action 3.1.1	Review the SENG staff interview data and develop a strategy to address any outstanding issues.
Action 3.1.2	Address various intersectional challenges faced by women from diverse backgrounds inclusive of different backgrounds and national origins (i.e., CALD women).

Constraints

As with previous and currently submitted Cygnet Awards and as already noted, the COVID-19 pandemic did contribute to the decline of senior women in STEMM disciplines. Coupled with competing priorities against the backdrop of pandemic, staff resourcing limitations, budget and funding changes and recruitment freezes did impact the progress of all wiS-related actions (Figure.6).

Impact on resourcing during the COVID-19 pandemic:	
With several staff being taken off business-as-usual tasks to work on projects/initiatives that supported the University's journey through the COVID-19 pandemic, the impacted resource allocation of support services resulted in leaner teams operating on core business. This was further exacerbated by challenges such as recruitment activity freezes and reduction to funding.	
Disruptions to staffing because of the pandemic response impacted the progression of wiS-related Athena Swan actions due to the redirecting of support services and resources. By way of example, key members of the HRSC were assigned other work relating to staffing measures aligned to mitigating the financial impact of COVID-19. This directly impacted progress on AS-related activities.	
In 2021, several staff transitioned into retirement, and this meant many staff, including senior women in STEMM disciplines, left the University. Although there was every effort to replace these wiS, the replacements were mostly in lower academic levels. This has further affected the gap in the headcount and pipeline for wiS and this was particularly impactful for SSC1 where 3 ALEVD, or 60% of women at ALEVD left.	
ECU managed the financial impacts and revenue shortfalls of COVID-19 through multiple cost-saving measures:	<ul style="list-style-type: none"> • Expenditure review • Temporary freeze on staff recruitment (and introduction of a decision-making recruitment panel) • Active management of staff leave; and • Targeted staffing measures for academic and professional staff members.

Figure 6. Explanation of partial progress due to the impact of the COVID-19 pandemic

⁴ Additionally, data such as disability data is collected from staff when at first commencement and changes may not be updated as issues/changes arise.

IMPACT

Although ECU has a biennial staff engagement survey, the reporting isn't granular enough to provide useful data⁵. Therefore, ECU has collected and analysed additional qualitative data captured between 2019-2023 identifying key factors that were associated with career advancement and success, along with identified barriers at the ECU STEMM level and narrowing down to the specific SENG context. This approach (*Figure.7*) saw semi-structured interviews held⁶ which had been developed based on recommendations from the SAGE AS website⁷. Encouragingly, it has also reinforced some of the original actions as being instrumental in improving gender balance in STEMM.

The qualitative data development model

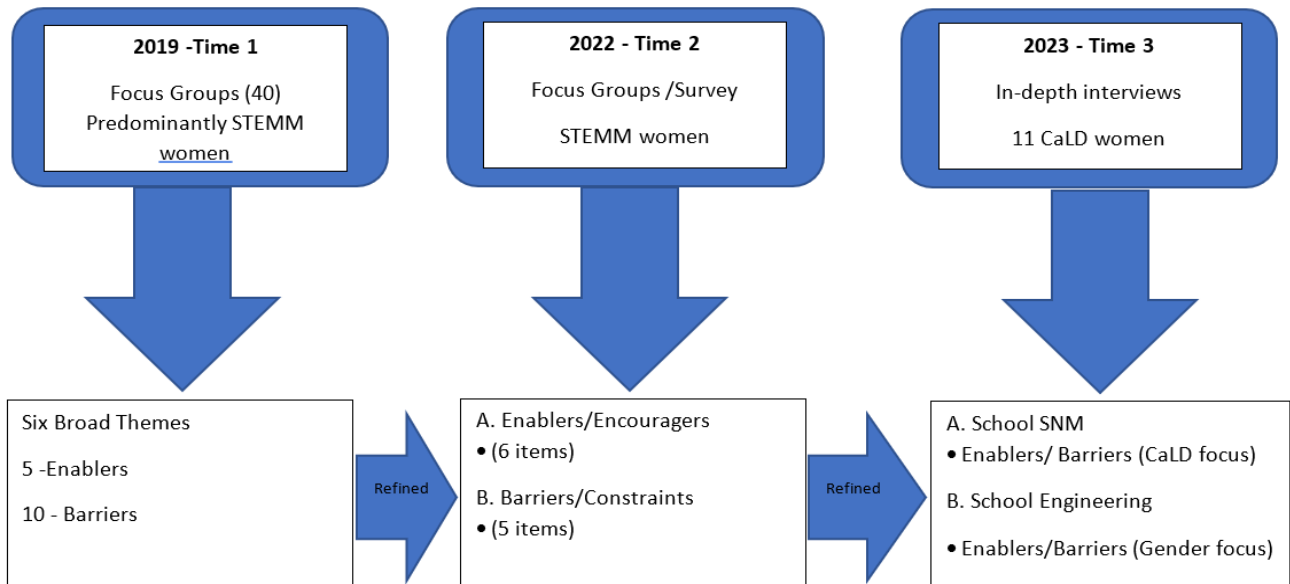


Figure 7. The qualitative data development model.

SENG has worked to recruit more women since the ASBAP. Having recruited several women into the lower end of the staff profile, the concern becomes retention. 5 women from SENG were interviewed for qualitative data collection (n=5, 83% of women in SENG). The summary findings are below (*Tables. 15&16*):

Findings	Description	Quotes from female participants
SENG has a positive culture	SENG was assessed by these women as providing very good levels of support and seeing themselves as mostly 'thriving' more than 'just surviving' within culture of the School.	<i>"The first words I would say is very welcoming. I was welcomed in terms of the important I bring to the school as a staff member."</i>
SENG provides wiE support and development opportunities	Findings auger well for retention and development of SENG women into more senior levels within the School profile in due course.	<i>"For all VC fellows we had mentors as part of the program. One within the school and research mentor was from the school of science. Any time that I asked something, she was supportive".</i>
Line managers in SENG are supportive	Without exception, the women acknowledged the support of their managers, the Executive Dean, and their colleagues. They felt they were a good 'fit' with the School culture and ascribed this to a careful and considered assessment of their individual 'fit' during the recruitment process.	<i>"The mentorship even though it wasn't mandated the Exec Dean took it upon himself to provide indirect mentorship in terms of research".</i>

Table 15. Quotes from SENG staff interviews.

⁵ The ECU Staff Engagement Survey, which assesses a range of staff-related issues including equity and diversity, due to the gender disparity is unable to assess sentiment of gender in many cases let alone intersectional cohorts, at the school level due to confidentiality protocols.

⁶Held with an external consultant working with the Office of the Deputy Vice-Chancellor (Regional Futures) AS Team

⁷ . It has supported a more nuanced and intersectional examination of the data profiles and areas than was available for the original AS bronze application for accreditation.

Findings	Description	Quotes from female participants
WiE are hired on merit selection	Participants were emphatic that they were selected on merit and their willingness to work on any areas that were needed to round out their academic profile. This was also seen as key to their acceptance and inclusion within the male-dominated School.	<i>“We are offered so many opportunities to do different things and build teaching and leadership skills, so the school does offer opportunity for growth and development. I am not the same person I was professionally in 2019.”</i>
Academic workload issues	Participants academic jobs were seen as highly demanding from a workload point of view. This was particularly challenging at the parental leave/return to work stages, where flexibility was key to managing demands across work/family boundaries.	<i>“So, 80% of my time this academic job in this School allows me to be more flexible. Even with that though, if you have more teaching load that would be harder for your family”.</i>
Research support considerations	The support for research was significantly important but not universally available - depending upon research activity-level and potential when they joined. However, if you have an issue, SENG is willing to listen.	<i>“People openly say if they have issues in academic and research forums. People have expressed their points. People have forums to raise issues and at these forums they can present their voice and people listen to them.</i>

Table 16. Quotes from female academics in SENG interviews

Also, the staging of support was seen as needing to be customised as the career stages moved from early-career into mid-career (Figure.8).

“It’s a good experience [to work in the School] – I appreciate the opportunities I’ve been given”.

“In terms of culture and interactions with other female academics... we have scheduled interactions together”.

“We have scheduled meeting every month with our ED and another member of school executive, it is an opportunity to raise anything. I have seen many attempts to change the culture, on several occasions the ED has raised with me is there anything happening that is of concern to me”.

“I had a research mentor who was very good and available but sometimes you don’t have the time to use these opportunities”.

Figure 8. Additional quotes from SENG staff interviews.

Whilst the women were generally unconcerned about the small number of female academic staff in SENG, as they were generally too busy to take advantage of networking with their female colleagues, building relationships with colleagues (usually male) about their projects/research/teaching was rated as more important.

“The number of women doesn’t impact me because we don’t really have time to meet/network [a lot] anyway”.

Female Academic in SENG

As expected, the existence of more senior woman in the School profile would show existing female staff the possibility for managing the balancing between family and demanding senior work roles.

For career advancement, those interviewed identified a period of consolidation that was required before they felt they would be ready to apply for academic promotion, but all were ambitious to do so in time. Moving forward, applicant rates and success rates data will continue to be tracked by the school on the AS Data Dashboard by gender and level.

<i>Action 1.1.4</i>	Review existing Athena Swan Dashboard to identify any room for improvement in reporting functionality.
<i>Action 2.2</i>	Aspire for female academics in SENG to be promoted to Academic Level (ALEV) C and above.
<i>Action 3.1</i>	Maintain the number of female academics in the School of engineering at 18% or above.

The findings above, highlight the factors that comprise this support from the School and can be mapped back to the main themes in the data model (Figure.7.) and flow into the key outcomes from the interviews.

A summary of key enablers and barriers from interviews is summarised in Table.17 below:

<p>SENG Enablers/support</p>	<ol style="list-style-type: none"> 1. Manager/Executive support – those interviewed felt they could raise issues and problems and get feedback. 2. Formal mentor program - all women recruited were provided with a mentor and this was highly rated as success factor. 3. Colleagues and peers support from both male and female colleagues - not just on work tasks but also psycho-social support. The Executive Dean provides support through regular morning tea events with the cohort. 4. Role and leadership development - encouraged to fulfil roles beyond teaching and research. 5. Research development support – including school grant funding. 6. Workplace flexibility to enable balancing across different roles inside and out of work. 7. Personal attributes such as strong skills, persistence, and confidence were considered important - that their appointment was genuinely merit-based because of a thorough and carefully considered recruitment process to ensure their personal 'fit' within the school.
<p>SENG Barriers/challenges</p>	<ol style="list-style-type: none"> 1. Managing workload and maintaining appropriate boundaries within family life such as work flexibility on return from maternity leave. 2. Balancing within-role workloads between teaching and research and service (particularly in disciplines with large units). 3. Developing research supports beyond the initial school support e.g., knowledge, networks and funding to progress career beyond early-mid career stage. 4. No role models at more senior academic levels to show it is achievable with family care responsibilities. 5. Insufficient time to leverage the female support network in the school or access network available in ECU more broadly.

Table 17. Enablers and barriers to improve women in senior positions in SENG.

As evidenced, SENG has a wealth of opportunity in building its female academic staffing cohort, which is had achieved in line with the ASBAP. SENG continues to work on a positive trajectory moving towards its future goals and actions.

FURTHER ACTION

Ref.	Rationale/ Evidence	Actions and Outputs	Timeframe (start & end)	Person/Group responsible for implementing action	Senior Leader accountable for action delivery	Desired Outcomes
1.	<ul style="list-style-type: none"> Still low numbers of women in School of Engineering (SENG). The School continues to encourage an increase in applications from women for advertised positions in SENEG. As part of the Science in Australia Gender Equity Cygnet Award Application, an external consultant completed a report on the culture and activities within SENEG. Continue to build the pipeline for women in STEM. 	<p>Actions</p> <p>1.1 Increase the number of female academic in the School of Engineering to 24%</p> <p>1.1.1 Continue targeted recruitment through the two-step method.</p> <p>1.1.2 Monitor application rates of female academics.</p> <p>1.1.3 Monitor shortlisting rates of female academics.</p> <p>1.1.4 Review existing Athena Swan Dashboard to identify any room for improvement in reporting functionality.</p> <p>1.2 Increase adjunct appointment and professional hires</p> <p>Outputs</p> <p>a) More women in SENEG in the academic space.</p>	Q4, 2024	<ul style="list-style-type: none"> Executive Dean (Engineering) SENG Executive Team SENG Athena Swan Champions Athena Swan Team 	<ul style="list-style-type: none"> Executive Dean (Engineering) Deputy Vice-Chancellor (Regional Futures (DVC RF)) 	<p>i. Improved number of women in SENEG to 24%.</p> <p>ii. Improve data tracking and monitoring capabilities through the Athena Swan Data Dashboard</p>
2.	<ul style="list-style-type: none"> In October 2023, there are still no women to have been promoted in SENEG. SENG need to hire senior women for role models with the idea of “you can’t be what you can’t see”. SENG to continue to support female ALEVB’s who want to be promoted and set a tone for future women to encourage applying for promotion, providing information to make the process easier to navigate. 	<p>Actions</p> <p>2.1 Actively pursue recruitment for a female Professor in SENEG who can provide an aspiration role model.</p> <p>2.2 Aspire for female academics in SENEG to be promoted to Academic Level (ALEV) C and above.</p> <p>2.2.1 Academic Promotion information sessions providing local and targeted information for female SENEG staff.</p> <p>2.2.2 School Executive to examine the barriers related to promotion identified in the staff interviews and address prevalent themes where possible which may impede on application rates.</p> <p>Outputs</p> <p>a) wiE at ALEVB and above within SENEG are aspiring to promotion and leadership roles, and visibly and actively supported in such pursuits.</p> <p>b) Show female academics in SENEG being promoted to ALEVC and above.</p>	<p>Q4, 2024</p> <p>Q1, 2024</p> <p>Q3, 2024</p> <p>Q2, 2024</p>	<ul style="list-style-type: none"> Executive Dean (Engineering) SENG Executive Team 	<ul style="list-style-type: none"> Executive Dean (Engineering) 	<p>i. Improved number of women in SENEG being promoted to 30% (N=2).</p> <p>ii. SENEG Executive increases awareness of nuanced barriers to academic promotion for female academic staff in SENEG.</p>

Ref.	Rationale/ Evidence	Actions and Outputs	Timeframe (start & end)	Person/Group responsible for implementing action	Senior Leader accountable for action delivery	Desired Outcomes
3.	<ul style="list-style-type: none"> The number of female academics is pooled towards lower levels in SENG. The six academic women are all currently at ALEVB. To ensure wiE have the support and tools they need to progress, analysis from feedback activities should be taken into consideration for decision making. To truly assess staff sentiment towards the School culture, it is important to regularly engage with female academics in obtaining honest feedback. To support SENG women from intersectional backgrounds, particularly those who were born or studied in different countries to be promoted and have career advancement. 	<p>Actions</p> <p>3.1 Maintain the number of female academics in the School of engineering at 18% or above.</p> <p>3.1.1 Review the SENG staff interview data and develop a strategy to address any outstanding issues.</p> <p>3.1.2 Address various intersectional challenges faced by women from diverse backgrounds inclusive of different backgrounds and national origins (i.e., CALD women).</p> <p>Outputs</p> <p>a) Table of actions and strategies to address feedback provided in the SENG staff interviews.</p> <p>b) Review and audit SENG's processes and polices ensuring they are inclusive of CaLD provisions, giving consideration to diversity and inclusion principles</p>	Q4, 2024	<ul style="list-style-type: none"> Executive Dean (Engineering) SENG Executive Team SENG Athena Swan Champions Athena Swan Team 	<ul style="list-style-type: none"> Executive Dean (Engineering) 	<ol style="list-style-type: none"> Improved number of women in SENG being promoted to 30% (N=2). SENG Executive increases awareness of nuanced barriers to academic promotion for female academic staff in SENG. Increased pipeline of SENG female staff progressing beyond ALEVB, creating potential for diverse growth in SENG senior levels.