Appendix A: Quantitative analysis method

Quantitative analysis is based on the following data sources:

- Joint Council for Qualifications A Level Results Tables (https://www.jcq.org.uk/examination-results/a-levels)
- Higher Education Statistics Agency Student Record (https://www.hesa.ac.uk/collection/c16051)
- Higher Education Statistics Agency Staff Record (https://www.hesa.ac.uk/collection/c17025)

A Level students

Data count individual candidates sitting A Level examinations in each year.

HE graduates

Data count individual graduates in each year from the mathematical sciences subject area, by level of study.

HE staff

Data count the full time equivalent (FTE) number of academic staff in the mathematics cost centre, by contract level and academic employment function.

HESA requires Higher Education Institutions (HEIs) to map their constituent departments to cost centres as a way of distinguishing between different activities. Departments can be apportioned across a number of cost centres, which can lead to anomalies: in some cases, HEIs report mathematical sciences staff even though there is no recognised mathematical sciences department; in other cases staff numbers may not match those in a specific mathematical sciences department as staff from other departments may be counted as belonging to the mathematics cost centre, and/or staff working in a mathematical sciences department may be assigned to another cost centre.

Staff full-time equivalent numbers are defined by contract(s) of employment and are apportioned to each activity's cost centre. FTE indicates the proportion of a full-time year being undertaken over the course of the reporting period 1 August to 31 July. The FTE is therefore counted using a population of staff who were active during the reporting period, not just on a given snapshot date.

Contract level and academic employment function combine to identify the different types of staff described in this report. From 2012/13, staff with the contract level of 'F1 Professor' constitute the 'Professors' category in the analysis; prior to 2011/12, a separate Professor marker was available. The two are not directly comparable. Other staff (i.e. those not identified as Professors) with an academic employment function of either 'teaching' or 'teaching and research' are counted as 'senior lecturers/lecturers', while those with an academic employment function of 'research only' are counted as 'researchers'.

Appendix B: Benchmarking data – women in mathematics by quartile

The following tables show quartiles for the proportion of females at various stages of the mathematical sciences pipeline, by institution. Data are provided to facilitate departmental benchmarking. Further benchmarking data is published separately by the London Mathematical Society, alongside this report.

Table 28: Proportion of first degree Mathematical Sciences graduates who are female, by quartile

Quartile	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Minimum	20.3%	19.4%	19.5%	18.3%	17.6%	16.7%	14.6%	13.8%	15.0%
1st quartile	37.9%	38.5%	38.4%	38.6%	37.3%	36.0%	35.7%	34.8%	33.7%
Median	40.9%	42.6%	42.1%	41.8%	40.9%	40.8%	39.1%	38.3%	39.4%
3rd quartile	45.7%	46.8%	46.6%	45.0%	44.8%	43.6%	44.6%	42.8%	43.0%
Maximum	90.6%	90.0%	89.6%	81.7%	83.5%	82.5%	76.4%	76.4%	78.0%

Source: HESA Student Record

Table 29: Proportion of Masters' degree Mathematical Sciences graduates who are female, by quartile

Quartile	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Minimum	12.9%	18.4%	12.5%	14.7%	17.4%	17.4%	18.9%	13.1%	15.6%
1st quartile	29.4%	29.7%	30.8%	33.4%	29.1%	29.4%	33.9%	33.0%	37.2%
Median	36.9%	39.4%	40.7%	38.5%	37.4%	36.3%	44.0%	40.8%	43.3%
3rd quartile	45.8%	45.0%	45.5%	47.1%	42.8%	41.8%	48.5%	46.8%	47.2%
Maximum	52.6%	51.5%	71.3%	76.8%	70.8%	62.6%	58.5%	60.0%	59.1%

Source: HESA Student Record

Table 30: Proportion of Doctorate Mathematical Sciences graduates who are female, by quartile

Quartile	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Minimum	16.2%	16.1%	15.3%	17.4%	13.8%	15.9%	16.7%	11.5%	14.6%
1st quartile	24.7%	25.8%	26.7%	26.4%	23.0%	22.2%	22.6%	22.9%	21.8%
Median	31.1%	33.2%	33.3%	29.3%	27.4%	27.8%	26.1%	28.8%	30.7%
3rd quartile	35.6%	38.0%	38.6%	37.1%	33.1%	34.0%	34.8%	34.8%	34.5%
Maximum	56.2%	54.7%	46.9%	46.5%	41.4%	46.2%	48.0%	43.9%	47.7%

Source: HESA Student Record

Due to relatively small student numbers in many institutions, the proportion of females among other postgraduates and other undergraduates is not shown.

Table 31: Proportion of lecturers/senior lecturers in the Mathematics cost centre who are female, by quartile

Quartile	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Minimum	5.4%	4.3%	0%	3.6%	2.8%	3.2%	4.7%	4.9%	7.1%
1st quartile	9.5%	9.9%	9.9%	11.0%	10.2%	11.0%	11.7%	13.7%	14.0%
Median	14.7%	16.2%	18.4%	16.0%	17.6%	19.4%	17.9%	18.2%	18.8%
3rd quartile	20.7%	23.5%	24.3%	23.2%	26.0%	24.5%	22.8%	24.0%	24.3%
Maximum	39.0%	39.0%	39.5%	43.9%	45.6%	43.7%	40.6%	47.5%	48.4%

Source: HESA Staff Record

Due to relatively small staff numbers in many institutions, the proportion of females among professors and research-only staff is not shown.

Appendix C: Benchmarking data – UK HEIs by quartile

The following tables show the distribution of UK Higher Education institutions by level of their mathematical sciences departments' Athena SWAN application and the proportion of females at various stages of the mathematical sciences pipeline in 2016/17, by quartile. Because of the small number of mathematics departments applying for an award at Gold level, only Bronze and Silver applications are shown, along with institutions with mathematical sciences graduates and/or staff in the mathematics cost centre which have never submitted an Athena SWAN application.

Data suppression rules (designed to protect the confidentiality of individual data subjects) mean that due to small numbers of students and staff at some stages of the mathematical sciences pipeline, many institutions cannot be ranked in this manner. These are counted in the 'Not ranked' column.

Table 32: Number of UK Mathematical Sciences departments by Athena SWAN application level and proportion of 2016/17 first degree Mathematical Sciences graduates who are female, by quartile

Level of application	Quartile					Total
	Bottom	Lower middle	Top middle	Top	Not ranked	
Bronze, successful	7	4	6	3		20
Bronze, unsuccessful	2	2	4			8
Bronze total	*9*	*6*	*10*	*3*		*28*
Silver, successful	2		2	1		5
Silver, unsuccessful	4	3	2	3		12
Silver total	*6*	*3*	*4*	*4*		*17*
No application	5	10	6	14	24	59
Grand total	*20*	*19*	*20*	*21*	*24*	*104*

Source: Ortus Economic Research analysis of Athena SWAN applications and HESA Student Record

Table 33: Number of UK Mathematical Sciences departments by Athena SWAN application level and proportion of 2016/17 Masters' degree Mathematical Sciences graduates who are female, by quartile

Level of application	Quartile					Total
	Bottom	Lower middle	Top middle	Top	Not ranked	
Bronze, successful	3	5	2	4	5	19
Bronze, unsuccessful	1			2	4	7
Bronze total	*4*	*5*	*2*	*6*	*9*	*26*
Silver, successful	1		2	1	1	5
Silver, unsuccessful	2	2	3	2	3	12
Silver total	*3*	*2*	*5*	*3*	*4*	*17*
No application	2	1	1		33	37
Grand total	*9*	*8*	*8*	*9*	*46*	*80*

Source: Ortus Economic Research analysis of Athena SWAN applications and HESA Student Record

Table 34: Number of UK Mathematical Sciences departments by Athena SWAN application level and proportion of 2016/17 Doctorate Mathematical Sciences graduates who are female, by quartile

Level of application	Quartile					Total
	Bottom	Lower middle	Top middle	Top	Not ranked	
Bronze, successful	5	3	3	3	5	19
Bronze, unsuccessful			1			7	8
Bronze total	5	4	3	3	12	27
Silver, successful	*1*	*2*	*1*	*1*		*5*
Silver, unsuccessful	3	2	4	1	2	12
Silver total	4	4	5	2	2	17
No application				3	32	35
Grand total	*9*	*8*	*8*	*8*	*46*	*79*

Source: Ortus Economic Research analysis of Athena SWAN applications and HESA Student Record

Due to small student numbers in many institutions, the distribution of mathematical sciences departments according to the proportion of females among other postgraduates and other undergraduates is not shown.

Table 35: Number of UK Mathematical Sciences departments by Athena SWAN application level and proportion of 2016/17 lecturers/senior lecturers in the Mathematics cost centre who are female, by quartile

Level of application	Quartile					Total
	Bottom	Lower middle	Top middle	Top	Not ranked	
Bronze, successful	6	2	6	3	3	20
Bronze, unsuccessful	1		1	1	5	8
Bronze total	7	2	7	4	8	28
Silver, successful		2	2	1		5
Silver, unsuccessful	3	5		4		12
Silver total	*3*	*7*	*2*	*5*		*17*
No application	1	2	1	3	33	40
Grand total	*11*	*11*	*10*	*12*	*41*	*85*

Source: Ortus Economic Research analysis of Athena SWAN applications and HESA Student Record

Due to small staff numbers in many institutions, the distribution of mathematical sciences departments according to the proportion of females among professors and research-only staff is not shown.

Appendix D: Additional Qualitative Analysis Tables

Table 36: Full List of Common Practices

Practice	Proportion of applications
Data gathering	94%
More targeted/proactive recruitment	91%
Promoting postgraduate opportunities	75%
Review/improve promotional material	72%
Review/improve student recruitment activities	72%
Recruitment training	69%
Review/improve promotions processes	69%
Review/improve recruitment materials	69%
Review/improve student support	69%
Review/improve workload allocation	69%
More proactive/targeted approach to career development	66%
Review/improve recruitment processes	66%
Staff mentoring	66%
Improve staff career support	63%
Review/improve staff support information	63%
Review/improve staff support processes	63%
Improve access to relevant information	59%
Improving gender balance	53%
Raise awareness of equality/diversity activity/issues	53%
Review/improve appraisal processes	53%
Review/improve promotions information	53%
Visibility of positive role models	53%
Widen/review SAT membership	53%
Improving academic support for students	50%
Better gender balance of seminar speakers	47%
Improve staff support	47%
Review/improve induction processes	47%
Review/improve training processes	47%
Introduction of core hours	41%
Student funding	41%
Student mentoring	41%
Diversity training	38%
More proactive/targeted approach to promotions	38%
Review/improve outreach	38%
Improve visibility in promoting department	34%
Review/improve flexible working processes	34%
Improving promotions processes	31%
Review/improve information about workload	31%
Outreach activities for females	28%
Raise awareness of Athena SWAN activities	28%

Practice	Proportion of applications
Review/improve committee membership recruitment	28%
Informal networking	25%
Physical surroundings	25%
Staff funding for career development	25%
Gender monitoring of workload	22%
Review/improve career development information	22%
HR training	19%
Improve gender balance in outreach	19%
Improve visibility to current students/staff	19%
Improving careers support for students	19%
Managing Athena SWAN action plan	19%
Outreach in workload allocation	19%
Review/improve research processes	19%
Social events	19%
Student funding for career development	19%
Widen access to meetings/availability of information from meetings	19%
More proactive/targeted approach to training	16%
Outreach activities promoting maths	16%
Promote part time working	16%
Review/improve information for students	16%
Review/improve outreach activities	16%
Raise awareness of achievements	13%
Review/improve appraisal information	13%
Review/improve induction material	13%
Review/improve outreach materials	13%
Workload allocation	13%
Family friendly social events	9%
Improve research support for staff	9%
Improved opportunities for staff feedback	9%
Include Athena SWAN in workload	9%
Knowledge sharing	9%
Review/improve scheduling information	9%
Support/budget for Athena SWAN	9%
Address exit issues	6%
Dedicated outreach roles	6%
Improve staff development opportunities	6%
More proactive/targeted approach to flexible working	6%
More support for outreach activities	6%
Promoting part-time study	6%
Promotions training	6%
Raise awareness of Athena SWAN activities	6%
Recruiting overseas students	6%
Widening staff participation	6%

Practice	Proportion of applications
Workload model	6%
Childcare support	3%
Core hours	3%
Development opportunities for students	3%
Improve administration of meetings	3%
Improved appraisal process	3%
Improving appraisal/review processes	3%
Monitoring gender balance	3%
More proactive/targeted approach to promotion	3%
Outreach activities encouraging further maths	3%
Providing funding for research	3%
Review workload	3%
Review/improve maternity support	3%
Review/improve promotion information	3%
Timetabling flexibility for staff	3%
Timings of social events	3%
Unconscious bias	3%
Workload accreditation	3%

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 37: Words/Terms used to Define Departmental Culture by level/success

Word/term	Bronze – Successful	Bronze – Unsuccessful	Silver – Successful	Silver – Unsuccessful	All
Social events	69%	50%	75%	73%	70%
Athena SWAN commitment	46%	75%	75%	82%	67%
Internal communication	54%	25%	50%	27%	42%
Physical environment	31%	25%	50%	18%	30%
Social space	31%	0%	25%	18%	24%
Atmosphere	31%	0%	0%	36%	24%
Open door policy	15%	50%	50%	9%	21%
Diversity training/awareness	23%	0%	25%	18%	18%
Diverse website	15%	0%	25%	18%	15%
Visible role models	15%	0%	25%	18%	15%
Childcare support	8%	25%	0%	18%	12%
Flexible working	15%	0%	0%	9%	9%
Work/life balance	8%	0%	0%	18%	9%
Hierarchy	8%	0%	0%	9%	6%
Females in leadership roles	0%	25%	25%	0%	6%
Networking opportunities	8%	0%	0%	9%	6%
Diverse range of speakers	0%	0%	0%	9%	3%
Decision making processes	0%	25%	0%	0%	3%
Mentoring	0%	0%	0%	9%	3%

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 38: Words/Terms used to Define Departmental Culture by female staff quartile

Word/term	Bottom quartile	Lower middle quartile	Upper middle quartile	Top quartile	All
Social events	67%	73%	82%	40%	70%
Athena SWAN commitment	83%	64%	55%	80%	67%
Internal communication	50%	64%	27%	20%	42%
Physical environment	33%	45%	27%	0%	30%
Social space	17%	45%	18%	0%	24%
Atmosphere	17%	45%	9%	20%	24%
Open door policy	0%	18%	45%	0%	21%
Diversity training/awareness	17%	9%	36%	0%	18%
Diverse website	0%	0%	45%	0%	15%
Visible role models	67%	0%	9%	0%	15%
Childcare support	17%	9%	18%	0%	12%
Flexible working	17%	9%	9%	0%	9%
Work/life balance	0%	9%	18%	0%	9%
Hierarchy	0%	9%	9%	0%	6%
Females in leadership roles	0%	18%	0%	0%	6%
Networking opportunities	0%	9%	0%	20%	6%
Diverse range of speakers	0%	0%	9%	0%	3%
Decision making processes	0%	0%	9%	0%	3%
Mentoring	0%	9%	0%	0%	3%

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 39: Mechanisms for Measuring Culture by level/success

Word/term	Bronze – Successful	Bronze – Unsuccessful	Silver – Successful	Silver – Unsuccessful	All
Staff survey responses	69%	100%	75%	64%	73%
Number of social events	31%	25%	0%	18%	24%
Student survey responses	23%	25%	25%	18%	24%
Percentage of female speakers	15%	0%	50%	27%	21%
Attendance at events	23%	0%	25%	9%	15%
Diversity training rates	8%	25%	0%	18%	15%
Gender balance of department	8%	50%	0%	9%	12%
Student awards	15%	0%	0%	18%	12%
Staff awards	0%	0%	25%	18%	9%
Number of staff working flexibly	8%	0%	0%	9%	6%
Informal staff feedback	0%	0%	25%	9%	6%
Engagement with Athena SWAN	0%	0%	25%	0%	3%
Number of female role models on website	0%	0%	25%	0%	3%
Webpage views	0%	0%	25%	0%	3%
£s in Professional Development Accounts	0%	0%	25%	0%	3%
Workload points for ED&I	8%	0%	0%	0%	3%
Number of children using childcare provision	0%	0%	0%	9%	3%
REF data	0%	0%	0%	9%	3%
Percentage of staff with caring responsibilities	0%	25%	0%	0%	3%

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 40: Mechanisms for Measuring Culture by female staff quartile

Word/term	Bottom quartile	Lower middle quartile	Upper middle quartile	Top quartile	All
Staff survey responses	67%	64%	82%	80%	73%
Number of social events	17%	45%	9%	20%	24%
Student survey responses	17%	18%	36%	20%	24%
Percentage of female speakers	50%	27%	9%	0%	21%
Attendance at events	17%	9%	9%	40%	15%
Diversity training rates	0%	18%	27%	0%	15%
Gender balance of department	0%	9%	18%	20%	12%
Student awards	33%	18%	0%	0%	12%
Staff awards	17%	9%	0%	20%	9%
Number of staff working flexibly	17%	9%	0%	0%	6%
Informal staff feedback	0%	9%	0%	20%	6%
Engagement with Athena SWAN	0%	0%	0%	20%	3%
Number of female role models on website	0%	9%	0%	0%	3%
Webpage views	0%	9%	0%	0%	3%
£s in Professional Development Accounts	0%	9%	0%	0%	3%
Workload points for ED&I	0%	0%	9%	0%	3%
Number of children using childcare provision	17%	0%	0%	0%	3%
REF data	17%	0%	0%	0%	3%
Percentage of staff with caring responsibilities	0%	0%	9%	0%	3%

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 41: Words/terms used to describe departmental Culture by level/success

Word/term	Bronze - Successful	Bronze - Unsuccessful	Silver - Successful	Silver - Unsuccessful	All
friendly	69%	75%	50%	73%	70%
diverse/diversity	62%	75%	75%	64%	67%
supportive	46%	50%	50%	91%	64%
equal/equality	69%	75%	50%	55%	64%
inclusive	69%	75%	50%	36%	58%
excellence	31%	50%	25%	27%	33%
welcoming	46%	0%	25%	0%	24%
respectful	15%	25%	25%	9%	15%
positive	23%	0%	0%	18%	15%
open	8%	25%	25%	9%	12%
fairness	8%	25%	0%	18%	12%
dynamic	15%	25%	0%	9%	12%
safe	15%	0%	25%	0%	9%
flexible	0%	0%	0%	27%	9%
informal	15%	0%	0%	9%	9%
happy	8%	0%	0%	9%	9%
stimulating	15%	25%	0%	0%	9%
proud	8%	0%	0%	9%	6%
outstanding	0%	0%	25%	9%	6%
inspiring	0%	25%	0%	9%	6%
caring	0%	0%	25%	0%	3%
approachable	0%	0%	0%	9%	3%
help	0%	0%	0%	9%	3%
dignity	0%	0%	25%	0%	3%
productive	8%	0%	0%	0%	3%
competitive	0%	0%	0%	0%	3%

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 42: Words/terms used to describe departmental Culture by female staff quartile

Word/term	Bottom quartile	Lower middle quartile	Upper middle quartile	Top quartile	All
friendly	50%	73%	73%	80%	70%
diverse/diversity	83%	73%	64%	40%	67%
supportive	67%	64%	45%	100%	64%
equal/equality	67%	45%	91%	40%	64%
inclusive	67%	64%	55%	40%	58%
excellence	50%	36%	36%	0%	33%
welcoming	50%	9%	27%	20%	24%
respectful	17%	18%	18%	0%	15%
positive	17%	9%	27%	0%	15%
open	17%	9%	18%	0%	12%
fairness	17%	9%	9%	20%	12%
dynamic	17%	9%	18%	0%	12%
safe	17%	9%	9%	0%	9%
flexible	0%	9%	9%	20%	9%
informal	0%	9%	18%	0%	9%
happy	17%	9%	0%	20%	9%
stimulating	17%	0%	9%	20%	9%
proud	17%	0%	9%	0%	6%
outstanding	17%	9%	0%	0%	6%
inspiring	0%	9%	9%	0%	6%
caring	0%	9%	0%	0%	3%
approachable	0%	0%	0%	20%	3%
help	0%	0%	0%	20%	3%
dignity	0%	9%	0%	0%	3%
productive	17%	0%	0%	0%	3%
competitive	0%	9%	0%	0%	3%

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 43: Average number of terms defining culture by level/success

Theme	Bronze – Successful	Bronze – Unsuccessful	Silver – Successful	Silver – Unsuccessful
Defining culture	3.8	3.0	4.3	4.0
Measuring culture	2.1	2.5	3.3	2.4
Describing culture	5.3	5.5	4.8	5.0

Source: Ortus Economic Research analysis of Athena SWAN applications

Table 44: Average number of terms defining culture by female staff quartile

Theme	Bottom quartile	Lower middle quartile	Upper middle quartile	Top quartile
Defining culture	3.8	4.4	4.3	1.8
Measuring culture	2.7	2.5	2.1	2.4
Describing culture	6.2	4.6	5.5	4.4

Source: Ortus Economic Research analysis of Athena SWAN applications

Appendix E: Participating departments

33 departments participated in the research:

- Department of Mathematical Sciences, University of Bath
- Department of Economics, Mathematics and Statistics, Birkbeck, University of London
- School of Mathematics, University of Birmingham
- Department of Mathematics, University of Bristol
- Faculty of Mathematics, University of Cambridge
- School of Mathematics, Cardiff University
- Department of Mathematical Sciences, Durham University
- School of Mathematics, University of East Anglia
- Department of Mathematics and Computer Science, University of Exeter
- Department of Mathematics, Statistics and Actuarial Science, University of Kent
- Department of Mathematics, King's College London
- Department of Mathematics and Statistics, Lancaster University
- Faculty of Maths and Physical Sciences, University of Leeds
- Department of Mathematics, University of Leicester
- Mathematical Sciences Department / Mathematics Education Centre, Loughborough University
- Department of Mathematics, London School of Economics
- Department of Mathematics, University of Manchester
- Department of Mathematical Sciences, University of Nottingham
- Department of Mathematics and Statistics, Open University
- Mathematical Institute, University of Oxford
- Department of Mathematical Sciences, Queen Mary University of London
- School of Mathematical, Physical, and Computational Science, University of Reading
- Department of Mathematics, Royal Holloway, University of London
- School of Mathematics and Statistics, University of Sheffield
- School of Mathematics, University of Southampton
- School of Mathematics and Statistics, University of St Andrews
- Department of Computing Science and Mathematics, University of Stirling
- Department of Mathematics and Statistics, University of Strathclyde
- Department of Mathematics, University of Sussex
- Department of Mathematics, University College London
- Department of Engineering, Design and Mathematics, University of the West of England, Bristol
- Mathematics Institute, University of Warwick
- Department of Mathematics, University of York

Appendix F: Evidence-based practices

Evidence-based example	Challenge	Action	Output/outcome	Evidence	Theme
Evidence-based: Improved promotion applications and success rates by women and men since AS bronze award.	Increase the number of female staff across all staff grades	A range of actions designed to ensure that all staff are aware of the University promotion process, for example regular communications regarding procedures and deadlines, and how to obtain support and mentoring.	Improved promotion applications and success rates by women and men: 4 out of 7 women (57%), 11 out of 16 men (68%), indicating no gender bias	Staff survey	Improve numbers
Evidence-based: One SAT proposed and secured a policy on financial support for childcare during conference attendance and has received and approved three successful applications for support	Encourage more women to attend conferences as part of their career development	The creation of a childcare conference grant to cover childcare costs for conference attendance.	The initiative has already supported a number of staff who might otherwise have had difficulty attending conferences	Internal information	Improve numbers
Evidence-based: At the post-offer Visit Days where, additionally, UG applicants attend a talk by two current students (but never by two male students). Surveys show this is the most popular and influential element of the day, with 93% of attendees showing a positive experience.	Attracting/retaining greater numbers of female students	Improve the visibility of female role models at open days and post-offer visit days (e.g. ensure a lecture is given by at least one female staff member, display picture of male and female staff, highlight Athena SWAN and success of female students, enhance diversity messages on admission materials and web pages)	The proportion of offers accepted by female students greatly increased	Internal information	Improve numbers

Evidence-based example	Challenge	Action	Output/outcome	Evidence	Theme
Evidence-based: Strong evidence that encouraging more female undergraduates to study the 4-year Masters programmes is working, with female Masters graduates rising from 24% to 43% over three years.	Improving the number of women going on to further study (i.e. staying in the pipeline)	Personal tutors to encourage undergraduates to consider MSci and postgraduate studies	The number of female students progressing to the 4-year MSci programmes is increasing, with female MSci graduates rising from 6 (24%) to 20 (43%) over three years	Internal information	Improve numbers
Evidence-based: Changes were made to the format of open days after a survey indicated that female UGs were less impressed than male UGs by their first visit to the campus. Changes included increasing visibility of female staff and students and explicitly referencing the commitment to AS. Subsequent surveys indicate that these changes have been a success, with a much higher level of satisfaction reported.	Attracting/retaining greater numbers of female students	Improved the experience of potential female applicants at Open Days. Female staff and student volunteers are well represented and the department's commitment to gender equality is outlined in presentations and leaflets.	Proportion of students who had attended Open Days and reported being impressed has increased	Student survey	Improve numbers
Evidence-based: In its first year of operating, 100% of the student intake for a new course was male. Following this, the department consulted with the London Mathematical Society (LMS) Women in Mathematics Committee to improve gender balance in recruitment materials, webpages, and interviews with female staff, corresponding with measures taken for UG recruitment. 50% of the next cohort was female and has remained high.	Attracting/retaining greater numbers of female students	Consulted with the London Mathematical Society (LMS) Women in Mathematics committee to improve gender balance in recruitment materials, CDT webpages, and interviews with female staff, corresponding with measures taken for UG recruitment	Improve proportion of female undergraduate students from 0% to 50%	Internal information	Improve numbers

Evidence-based example	Challenge	Action	Output/outcome	Evidence	Theme
Evidence-based: A department had developed a proactive recruitment strategy to encourage women to apply. For example, using carefully worded advertising materials and by encouraging all staff to approach research leaders worldwide asking for suggestions of possible candidates. This approach is now reaping success.	Increase the number of female staff across all staff grades	The development of a proactive recruitment strategy which targets women, including carefully wording advertising materials and encouraging all staff to approach research leaders worldwide asking for suggestions of possible candidates	50% of new appointments were women	Internal information	Improve numbers
Evidence-based: Changing the format and content of training courses following on from a history of low attendance from graduate students in particular. The weekly seminar series preceded or followed by a social event resulted in a much higher uptake.	Improving career development for staff in order to improve retention	A fundamental overhaul of the format and timing of training sessions (including	The proportion of research staff and research students attending training sessions has increased	Internal information	Improve numbers/experience/ culture
Evidence-based: One department set up a new initiative to offer eight postdoctoral 'career development fellowships' which were designed to offer greater opportunities for career progression: the researcher would not be tied to a particular research project and would be free to conduct their own research programme. The positions were thus seen as a very attractive 'step up', allowing greater opportunity for progression to a permanent academic role. The eight positions drew a very strong field of applicants and two of the new appointments were women. Both of these postholders have now secured highly prestigious positions.	Increase the number of female staff across all staff grades	A new initiative to offer eight postdoctoral 'career development fellowships' which were designed to offer greater opportunities for career progression	The 8 positions drew a very strong field of applicants and 2 of the new appointments were women (both of which have now secured highly prestigious positions).	Internal information	Improve numbers/experience

Evidence-based example	Challenge	Action	Output/outcome	Evidence	Theme
Evidence-based: One department has a Grants Director who provides support to all new staff writing their first grants, including both a grants workshop and detailed individual feedback on drafts. This has helped increase the grant capture of the department considerably over the last few years.	Increase the number of female staff across all staff grades	The department has established a Grants Director who provides support to all new staff writing their first grants, including both a grants workshop, held for groups of staff from time to time as needed, and detailed individual feedback on drafts.	Considerable increase in the grant capture of the school over recent years	Internal information	Improve numbers/experience
Evidence-based: One maternity returner was awarded teaching replacement money, to allow protected research time upon return, and found this very beneficial to her career development.	Ensure that those returning from maternity/parental leave are fully supported	A 'Returning Carers' has been established which allows staff to apply for up to £10k to support their return to research.	A maternity returner was awarded teaching replacement money, to allow protected research time upon return, and found this very beneficial to her career development.	Internal information	Improve numbers/experience/ culture
Evidence-based: By periodically reminding seminar organisers about the target to increase the number of female speakers and requiring them to report progress, there has been success in increasing the female representation for academic seminar speakers.	Attracting/retaining greater numbers of female students	Periodically reminding seminar organisers about the target to ensure that 20% of speakers at seminars/workshops are women and requiring them to report progress	Increase in the female representation for academic seminar speakers (from 14% to 22% over three years), with similar increases for workshops	Internal information	Improve numbers/culture