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Data analysis in Athena SWAN

June Webinar

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Outline

1. Establishing purpose
2. Types of data
3. Conducting an analysis of gender equality
4. Overcoming challenges in data analysis
5. Data presentation

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Establishing purpose

Why collect equality data?

Legislative framework (e.g. Irish Human Rights and Equality Act 2014; Public Sector Equality and Human Rights Duty)

Sector level and local data (e.g. institutional/departmental):

= **Analyse** underrepresentation of different groups

= **Identify** differential experience or outcomes between different groups

= **Inform** interventions and mitigate risk

= **Evaluate** the impact/success of interventions

= **Measure** progress in achieving inclusive environments

= **Communicate** and **advocate** for change

Why collect data for Athena SWAN?

What can your data do for you?

= Identify key areas of underrepresentation

= Identify strengths and weaknesses in current policy, practice and culture

= Identify possible solutions to inequalities

75% of Professors are men
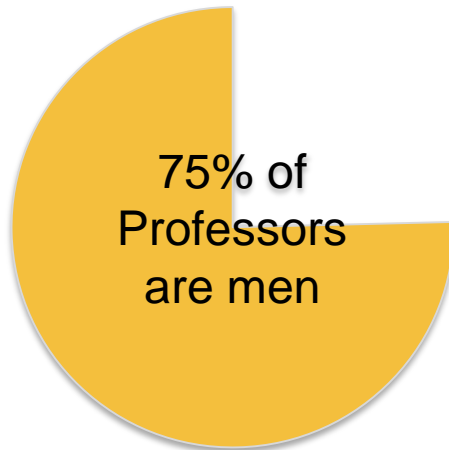
46% female staff vs 70% male staff understand the promotion criteria

"I'm frustrated by the lack of female seminar speakers, there should be a policy to prohibit all male speakers" – female, PGR

Types of data

Types of data (some examples)

Quantitative data:

= Population data (internal and sector-wide)

= Application and success rates (e.g. recruitment or promotion)

= Uptake rates (e.g. of training or appraisal)

= Survey results (e.g. awareness policies/practices or satisfaction ratings)

Qualitative data:

= Summaries of focus group findings

= Quotes from interviews/focus groups

= Free text comments from surveys

= Feedback form or suggestion box comments

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Types of data: baselines and benchmarks

Baseline—internal data from the self-assessment process:

= e.g. population data; application/success rates; uptake rates; awareness and feedback ratings (# and %)

Benchmarks—external context for analysis of internal data:

= comparison with sector averages

= discipline-specific comparison

= identify key areas for action

= Develop realistic and ambitious targets

NB: Benchmarks should not be used as success measures

The Application Form

1. Letter of endorsement from the Head of the Institution/Department
2. Description of the Institution/Department
3. The self-assessment process
4. **A picture of the institution/department**
   - Student data*
   - Staff data
5. **Supporting and advancing careers**
   - Key career transition points
   - Career development
   - Flexible working & managing career breaks
   - Organisation & culture
6. Supporting trans people**
7. Further information
8. Action plan

*Not required at (HEI) institution level
**Not required at departmental level

An evidence-based self-assessment

"Promotion processes work well"

= Awareness
= Feedback
= Applications
= Success rates

= Membership
= Meetings/contact
= Awareness of policies
= Uptake of leave
= Feedback
= Return rate/retention

"The parents network has been very successful"

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Conducting an analysis of gender equality

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Assessment of gender equality

Athena SWAN requires:

'An assessment of gender equality in the institution/department, including quantitative and qualitative evidence' (Handbook, pp. 10,13)
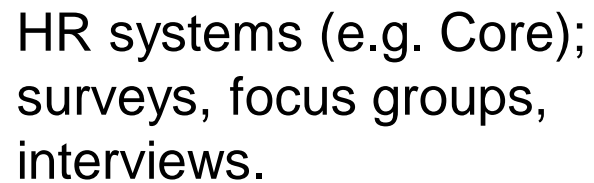
= A gendered analysis should be apparent across the entire application

= Avoid slipping into a narrative that is not focused on identifying gender equality challenges and opportunities

= Plan how self-assessment findings will be communicated to staff.
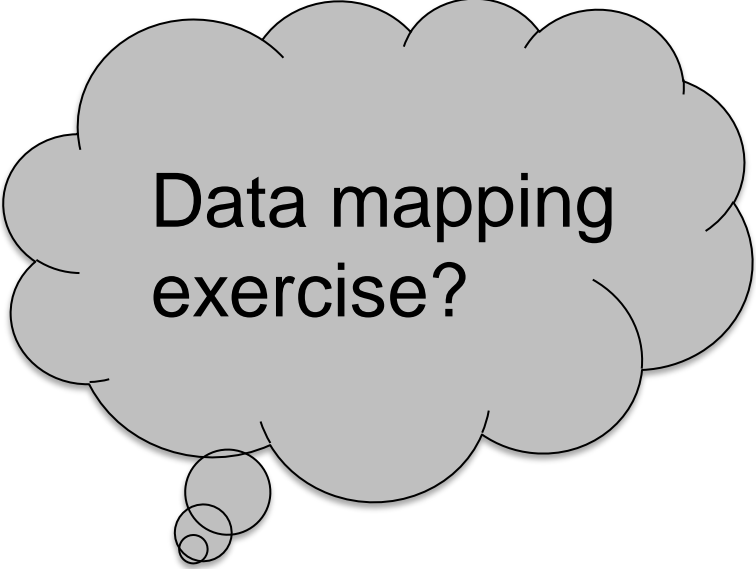
Remember to disaggregate data by gender

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Steps in a gendered analysis

Collect qualitative and quantitative data

Data mapping exercise?
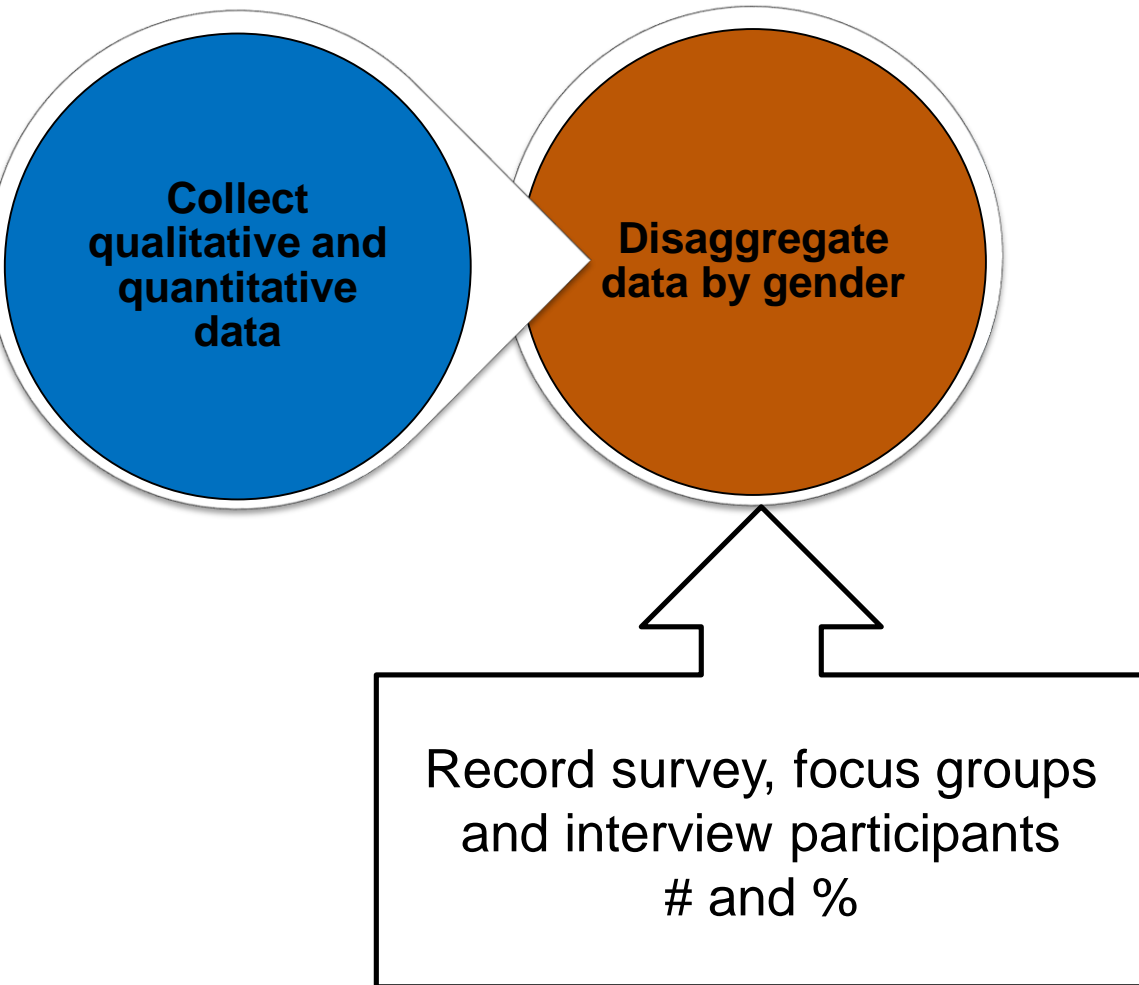
HR systems (e.g. Core); surveys, focus groups, interviews.

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Steps in a gendered analysis

Collect qualitative and quantitative data

Disaggregate data by gender

Record survey, focus groups and interview participants # and %

Steps in a gendered analysis

Steps in a gendered analysis

Collect qualitative and quantitative data

Disaggregate data by gender

Critically analyse data for gender equality

Populations (e.g. student/staff im/balance)

Approaching data:
- Collaboratively (e.g. diverse SAT)
- proactively and with curiosity

Policies, practices and culture (e.g. outreach; student support; recruitment; promotion)

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Steps in a gendered analysis

Collect qualitative and quantitative data

Disaggregate data by gender
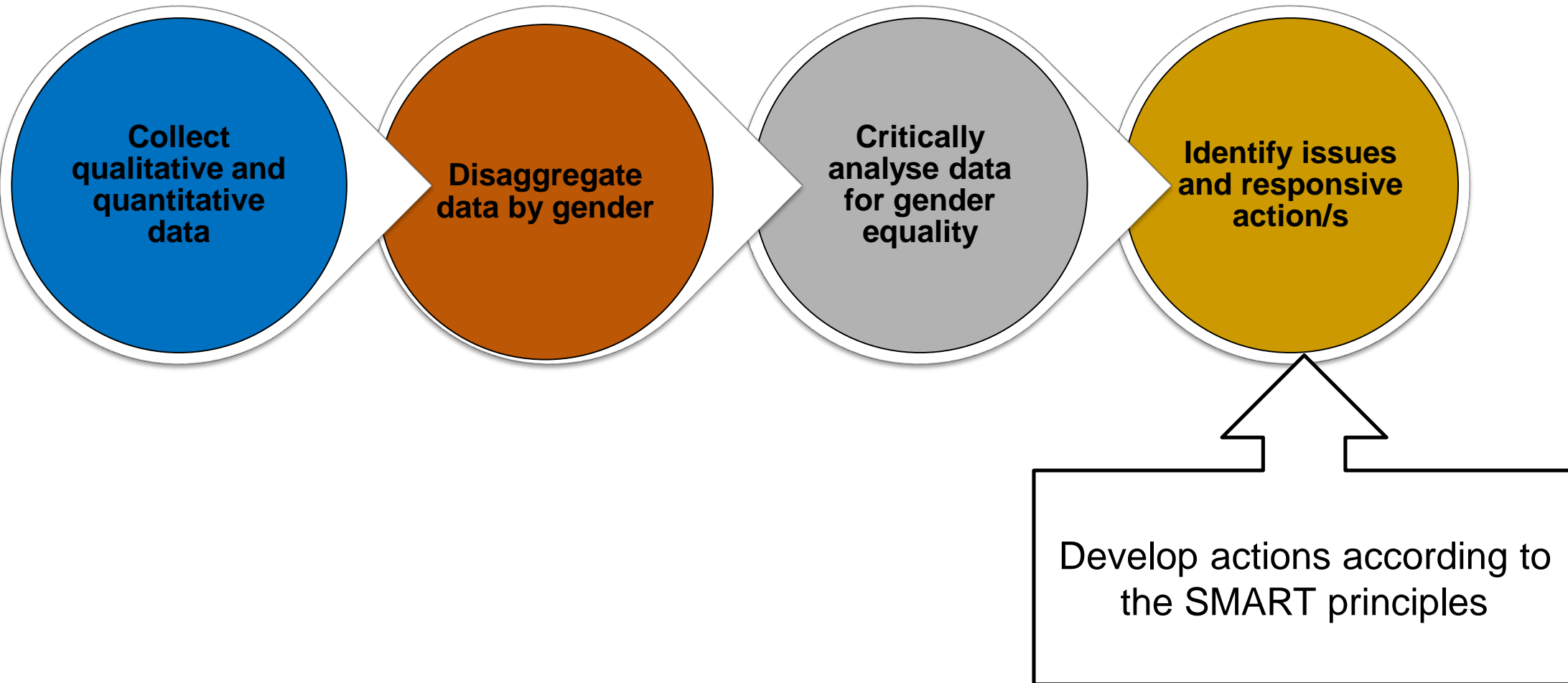
Critically analyse data for gender equality

Advance HE and data confidentiality:

- data sharing agreements
- panellist NDAs.
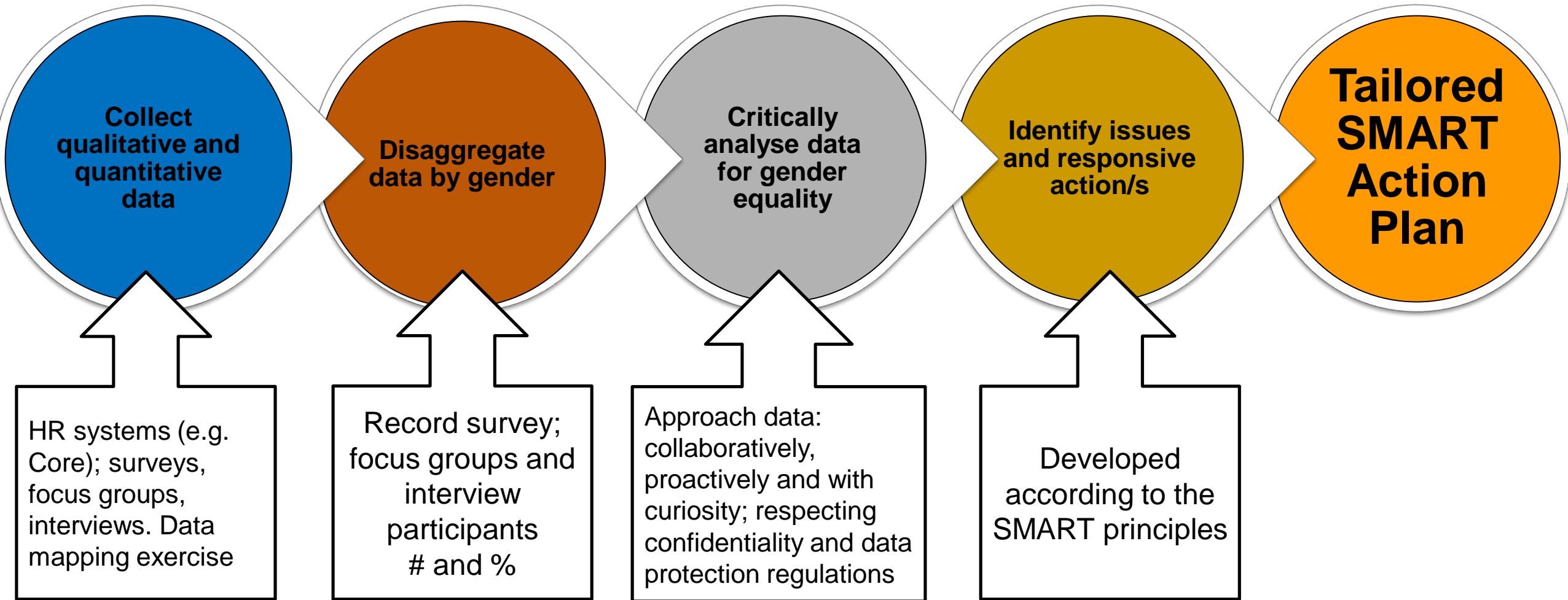- applicant redaction and publication of submissions: see our guidance

Approaching data:
- collaboratively
- proactively and with curiosity
- **respecting confidentiality and data protection regulations (see GDPR FAQ).**

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Steps in a gendered analysis

Collect qualitative and quantitative data

Disaggregate data by gender

Critically analyse data for gender equality

Identify issues and responsive action/s

Develop actions according to the SMART principles

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Steps in a gendered analysis

Collect qualitative and quantitative data

Disaggregate data by gender

Critically analyse data for gender equality

Identify issues and responsive action/s

Tailored SMART Action Plan

HR systems (e.g. Core); surveys, focus groups, interviews. Data mapping exercise

Record survey; focus groups and interview participants # and %

Approach data: collaboratively, proactively and with curiosity; respecting confidentiality and data protection regulations

Developed according to the SMART principles

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Academic and research staff data: career pipeline

Data & analysis requirements

4.2. Academic and research staff data

(i)   Academic staff by grade, contract function and gender: research-only, teaching and research or teaching-only

Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type.

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Data & analysis requirements

Quantitative data requirement:

Academic staff data (x3 years)	→	grade and gender	→	contract function and gender

Analysis requirement:

Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type.

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Data & analysis requirements

Quantitative data requirement:

| Academic staff data (x3 years) | → | grade and gender | → | contract function and gender |

*How equitable are we and **why** might this be the case?*

Analysis requirement:

Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type.

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Identifying issues

Academic staff by grade, contract function and gender **will indicate**:

= overall gender balance in current population

= recent fluctuations in gender balance of population (e.g. impact of recruitment, retirement)

= where men/women may be under/overrepresentation at particular grades

= any "leaks" in the pipeline (e.g. L>SL.)

= gender differences in staff function (e.g. research only vs. teaching and research)

Academic staff by grade, contract function and gender **may provide insight on**:

= gendered patterns in recent recruitment (c.f. Section 5.1 (i): Recruitment)

= gendered patterns in staff progression (c.f. Section 5.1 (iii): Promotion)

= gendered patterns in fixed-term contracts/leavers (c.f. Section 4.2 (ii;iii); e.g. contract expiry)

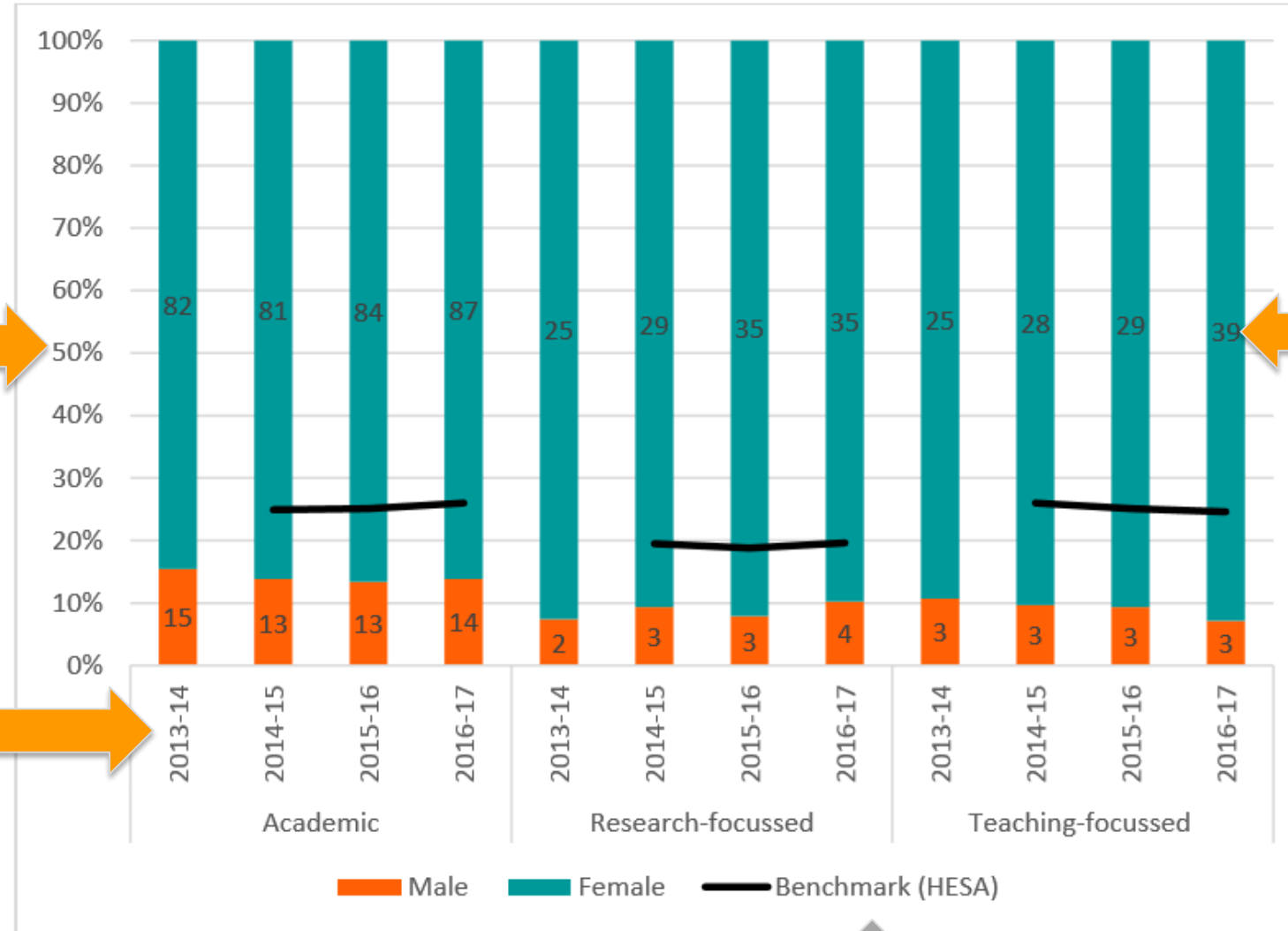= gender balance of the discipline (c.f. Section 4.1: Student data; e.g. PGR>PDR)

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Applicant example: academic and research staff data (career pipeline)

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Nursing and midwifery applicant

Figure 4.8: Gender representation of staff, labels show headcount by contract function: academic (teaching & research), research-focussed staff and teaching-focussed staff.
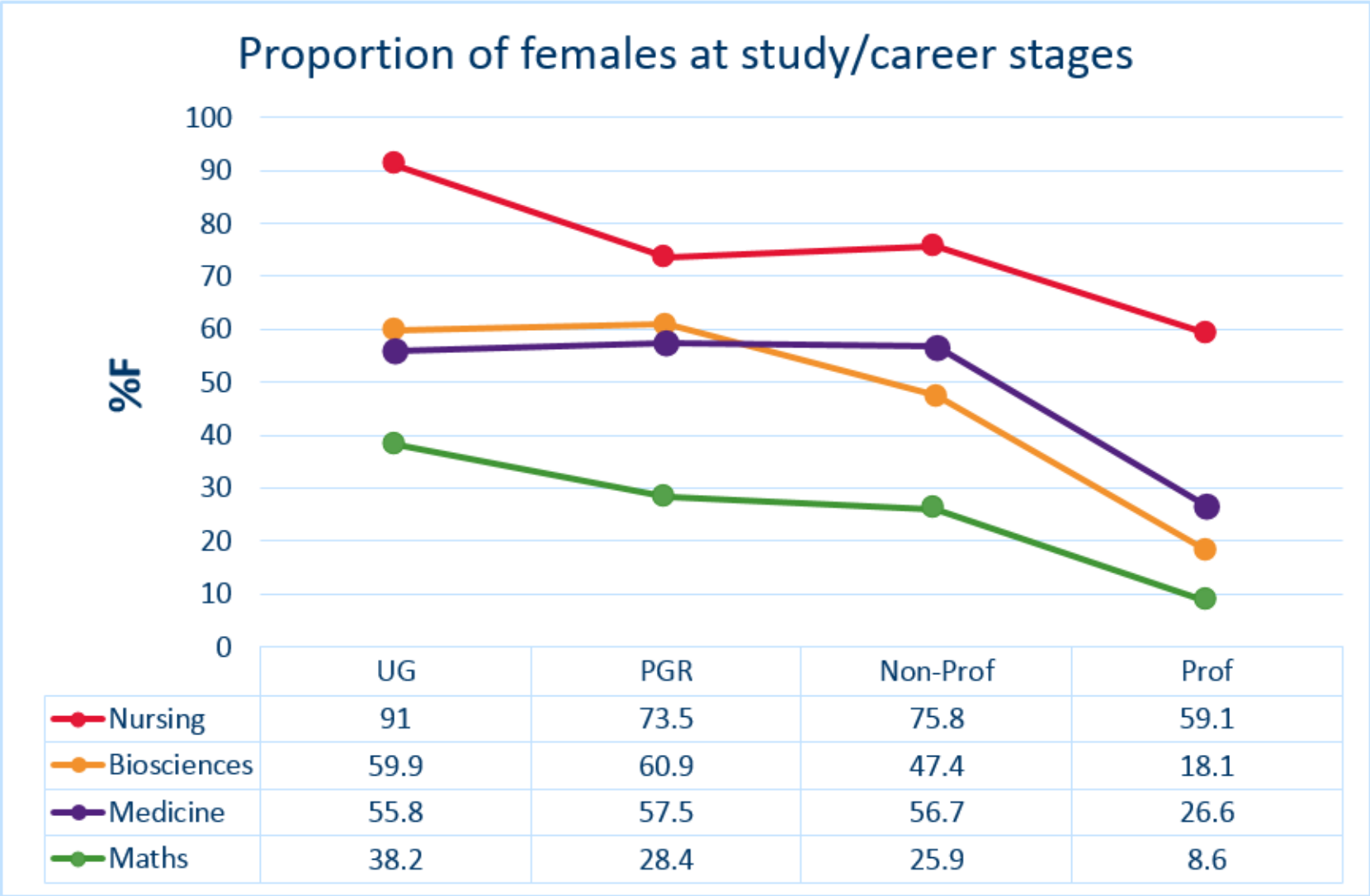

%

#

4 years of data
(NB. only 3 are required)

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Sector trends for Nursing

Proportion of females at study/career stages

	UG	PGR	Non-Prof	Prof
Nursing	91	73.5	75.8	59.1
Biosciences	59.9	60.9	47.4	18.1
Medicine	55.8	57.5	56.7	26.6
Maths	38.2	28.4	25.9	8.6

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Gender imbalance in overall staff population

Figure 4.8: Gender representation of staff, labels show headcount by contract function: academic (teaching & research), research-focussed staff and teaching-focussed staff.
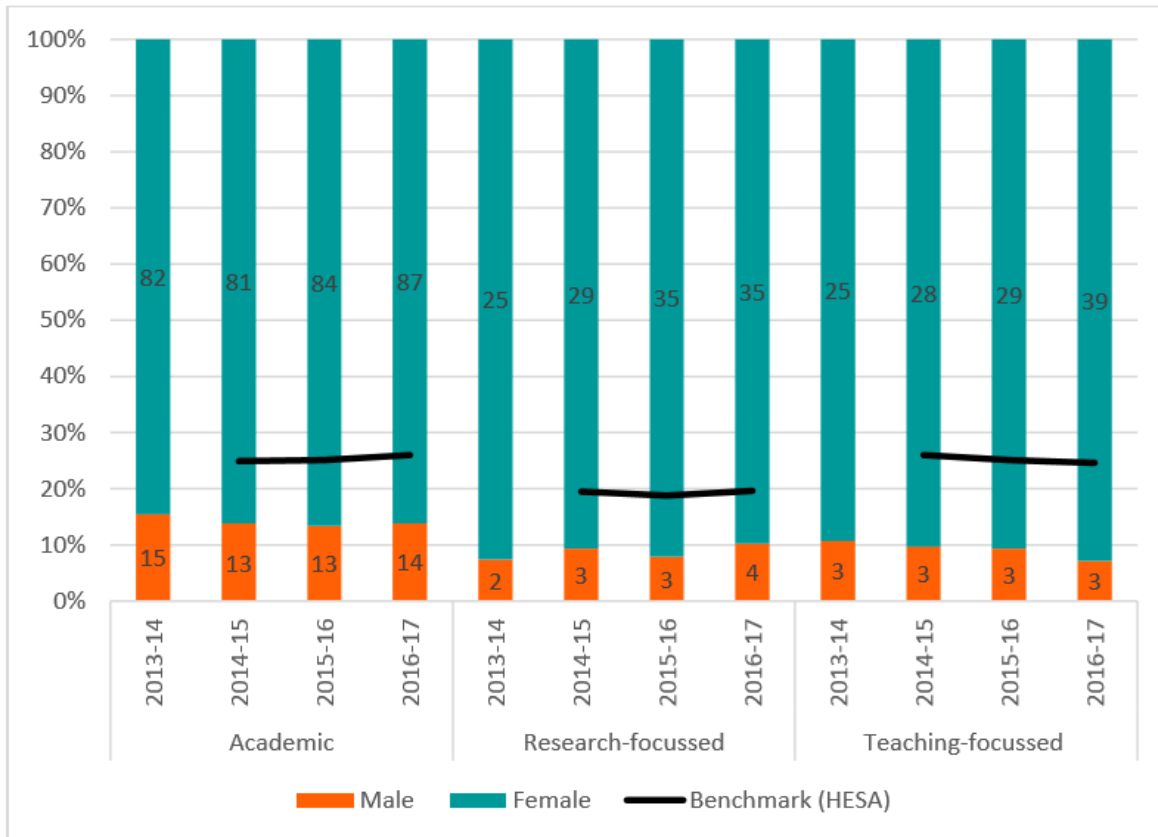
= **Academic staff**: proportion is in line with NMC registrations but numbers of **men below HESA benchmark**

= **Research staff**: male numbers are **below HESA benchmark**

= **Teaching-focussed**: numbers of men are **below the HESA** benchmark

"The low number of men needs to be addressed through positive action and recruitment strategies to improve gender balance and steps to increase number of male role models for students".

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Figure 4.9: Teaching-focussed and academic staff by grade and gender. Columns show the gender representation, labels show headcount.

Broken down by grade:

There is a **lower proportion of male staff** at lecturer and senior lecturer/reader level compared to ███ (10.0% and 8.2% difference respectively).

There is a **significantly higher proportion of women** at professorial level than HESA data and ███ but this still requires monitoring and efforts to recruit women.

NB. Staff by grade and gender over four years also provided in a table

Moving from issue to action

Figure 4.10: Pipeline from Lecturer to Professor. Lines show percentages.

Male Staff Recruitment:
Increase male recruitment for early careers academic, research and teaching-focussed staff in line with our aspirations for 15-20% male staff by 2022.

Female Senior Leaders:
Monitor and increase female recruitment at senior levels (to be in line with proportion of staff at earlier grades (currently 80%F)

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No.	Objective	Rationale & achievements to date	Actions going forward	Responsibility	Timescale		Success measure (s)
2.2	**Female Senior Leaders** Monitor and increase female representation and recruitment at senior levels in line with department gender balance	Female professors have made up 63-75% of this level and need to more closely reflect the staff profile.	With Marketing and HR, co-design and implement a positive action campaign for female senior staff that use existing networks, national / international collaborators, advisors and recruitment company as appropriate. to increase the pool of applicants.	Executive Dean ▮ SAT Group 1 monitor annually	Nov 2018	Nov 2022	Increased female applicants pool with percentage of female professors (i.e. 80-85%) reflecting the staff gender balance by 2022.

No.	Objective	Rationale & achievements to date	Actions going forward	Responsibility	Timescale		Success measure (s)
		Academic, Research and Teaching Focussed Staff					
2.1	**Male Staff Recruitment** Increase male recruitment for early careers academic, research and teaching-focussed staff in line with our aspirations for 15-20% male staff by 2022.	Provide opportunities for teaching only and research staff and role models for students.	With Marketing and HR, co-design and implement a positive action campaign for male recruitment for early career academic, research and teaching staff.	Executive Dean ▮ / Heads of Department	Jan 2019	Sept 2023	Increase male staff to 15-20% benchmarks by 2023. Annual monitoring by the SAT.
			Use social media channels and groups (e.g. Twitter -Men In Nursing Together) to support campaigns and internal opportunities.	Comms team (ZD/CB)	Feb 2019	Ongoing – review annually	Engagement in social media campaigns and presence on own AS website.
			Update AS website- work with male students and staff.	SAT -Group 1 (monitoring)	Sept 2019	Jan 2020	Updated website.

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Overcoming data challenges

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Data gaps

Data gaps

Missing data (e.g. no training uptake data)

= consider feasibility of manual data collection (e.g. local uptake of recent training)

= ascertain if any information may be locally available (e.g. sign up sheets for open days)

= acknowledge gaps and put in place actions to begin/improve future data collection (e.g. digitisation)

Partially complete data set (e.g. missing year/s; missing staff cohort)

= as above

= consider supplementing data with targeted questions in staff consultation (e.g. survey; interviews)

Low response rate to survey

= analyse respondents (gender; PMSS/academic; grade)

= ascertain any gaps and target supplementary consultation (e.g. pulse survey/s; focus groups)

= consider action/s to improve awareness/engagement

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NB. avoid % targets for staff consultation. Instead ask, is the # of respondents/participants representative of the department/institution

Data gaps: applicant solutions

(iii)   Promotion

Provide data on staff applying for promotion and comment on applications and success rates by gender, grade and full- and part-time status. Comment on any evidence of a gender pay gap in promotions at any grade.

- no promotion rounds in the last three years
- progression and promotion identified as 'main issues' in staff consultation process (staff survey; focus group)

Most of us will never progress no matter what we achieve.

F, Academic, staff survey

Currently there are no guidelines for how a staff member may progress

F, academic, staff survey

Promotion opportunities are not universally available, You may be told "no" without any explanation. This is worse for people working flexibly and for women, who generally aren't as forthright as male colleagues in applying/advocating for promotion

F, academic, focus group

Action 5.3.1: Introduce annual promotions rounds with associated criteria that recognises teaching, research, service to institution and civic engagement; produce associated guidelines and training

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Data gaps: applicant solutions

Through the self-assessment process, data collection around recruitment was a key issue and records regarding 2019 recruitment were not complete. While detailed analysis was available for 2017 – 2018, data for 2019 activity was not as thorough. Action Item 5.1.4 ensures that all future recruitment is recorded in a detailed and thorough system and managed centrally through HR. While the lack of data may explain some of the decline in female applicants in 2019, the difference between 2017, where 40% of applicants were female to 2019 where 23% of the applicants were female is a significant issue.

Candidates currently submit their application via an email to HR, which limits opportunity to collect broad EDI data and often gender is assumed. Action Item 5.1.4 outlines a commitment to transition to an online e-recruitment system which will incorporate EDI Data gathering (including gender).

Introduction of eRecruit Software	Data collection around recruitment was not comprehensive and often EDI markers were assumed in candidates. eRecruit software will allow for collection of EDI Data Monitoring and future analysis and reporting.	HR has submitted costing proposal for the introduction of eRecruit software with view to introduce for all future recruitment from early 2021	September 2019 (budget proposed)	June 2021	Director of HR; IT Manager	All recruitment will run through eRecruit software. 60% of candidates will complete at least some EDI Data Monitoring questions >75% of candidate will provide gender data December 2021	1

Small numbers

Small numbers

Common challenges

= Small departments

= Small cohorts within departments (e.g. promotion/maternity data sets)

= Small cohorts within smaller institutions (e.g. researchers, HPT).

= Small number of responses ➔ concern with confidentiality

Solutions to consider:

= small data working group ➔ present overall findings to SAT

= redaction of application for wider reading

= reflection on additional years of data (longitudinal analysis)

= analysing aggregated data of years or grades (e.g. averaging to ascertain trends)

= utilising additional qualitative methods

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Aggregation to ascertain trends

Recruitment:

Although there is some fluctuation over the three years due to small numbers, when we analysed over the entire period, gender is balanced across applications, offers, and acceptance rates and in line with the national benchmark of 59%.

Leavers:

As numbers are small we consider leavers from 2014-18 together. The primary reason for research staff to leave is the expiry of their contract due to lack of further funding. Men are more likely to resign at this stage than women, which may indicate disproportionate success at obtaining further positions.

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Supplementing with qualitative data

Promotion: low numbers applying

Recruitment: few roles advertised/low numbers of applications

	M	F
I understand the promotion process and criteria	83%	67%

Figure 5.1: Staff perceptions of recruitment processes

The survey revealed that one in five staff believe that recruitment and selection processes are 'not at all' fair and transparent (20%F, 18%M), Figure 5.1.

Figure. 5.1: Gender-Based Perceptions of Fair Recruitment Treatment in Relation to Gender

Supplementing with qualitative data

■ circulated the annual EDI Survey to departmental staff in November 2018. The department had a 64% response rate (compared to 63% at ■■■-wide level). The survey included Athena SWAN specific questions, and results were disaggregated to include the department's feedback by gender or job category.

> Department EDI survey response rate (63%) with M/F respondents given for each question

In April 2019, and for the first time in the ■■■, we circulated a standalone EDI survey to postgraduate research students and had a 61% response rate (compared to 25% at ■■■ wide level). Due to the small number of male PGRs, in line with data protection advice from ■■■■■■■■ we are unable to disaggregate this survey by gender

> PGR survey (61% response rate). Low #s M PGR mean cannot disaggregate by gender

In July and August ■■■, the Athena SWAN Project Officer conducted 21 (48% F) 1-to-1 interviews with staff and postgraduate research students.

> Supplemented with 1:1 interviews with staff and students

Because of the small size of the department, we attribute interview participants and quotes to individuals by gender or role, but rarely both, to retain the anonymity of the interviewees.

> Attribution information

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Acknowledging limitations

'Staff numbers are so small that a change of one or two could markedly alter proportions'.

'Due to the small number of posts advertised it is difficult to draw conclusions'

'Numbers on programmes are small even minor shifts exaggerate gender balance'

'Numbers are too small to be statistically significant; nevertheless, the consistent female underrepresentation in PGT registrations is cause for concern'.

'PT/PGR student numbers are small and we tend to have more males than females. However, it is difficult to draw any solid conclusion as a result of the small numbers'

Multiple disciplines

Multiple disciplines

Department/School ➔ multiple discipline areas

Faculty ➔ multiple departments or schools ➔ multiple discipline areas

Possible solutions

- disaggregate staff/student population data by discipline area (i.e. look out for discipline specific trends).
- consider staff feedback on policies, practices and culture by school (i.e. identifying and addressing challenges in particular schools/discipline areas
- collate by gender trends, drawing out outliers in data and analysis
- develop targeted specific actions as needed

Analysis across multiple disciplines

Academic staff by subject area

When separated by subject it is apparent that:
- **English** has **increasing female representation**. Since 2015 the proportions are nearly equal but the proportion of women has been **below both benchmark and pipeline expectations**. However, changes since Dec 2018 (not shown) take us to 58%F, **in line with benchmarks**.
- Over time, **History** and **Media** are broadly **in line with benchmark and pipeline expectations,** although small numbers generate fluctuations.
- **Music** and **Music Technology** has historically had very poor representation of women in the staff cohort. We **successfully appointed** a woman to the only post we have advertised…However, the **balance remains very poor.**

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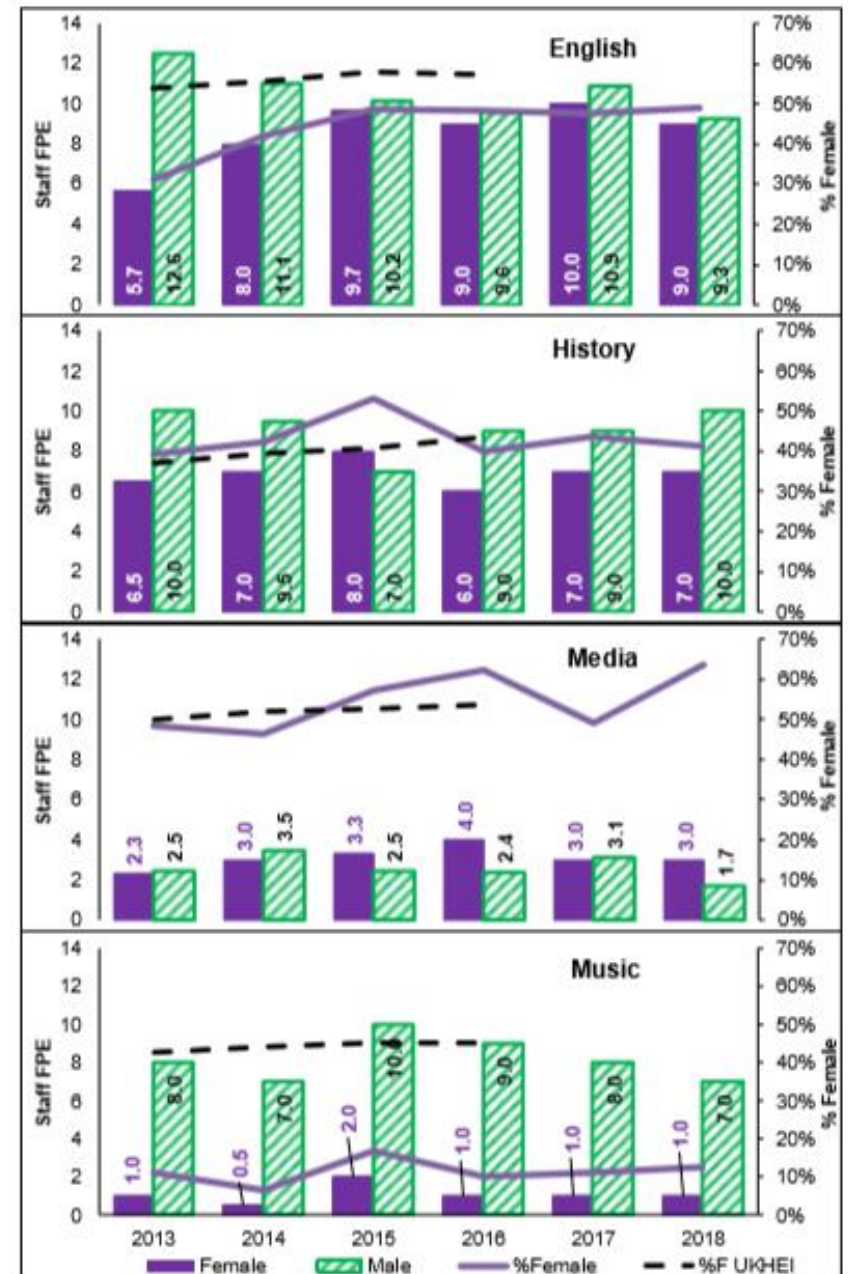
Tips on data presentation

Data presentation checklist

=   Provide 3 years of data (to be able to identify trends)

=   Provide raw numbers (#) and percentages (%) by gender consistently

=   Provide context for data (benchmark, eligible pool, etc.)

=   Design tables/graphs to show quantitative trends as clearly as possible

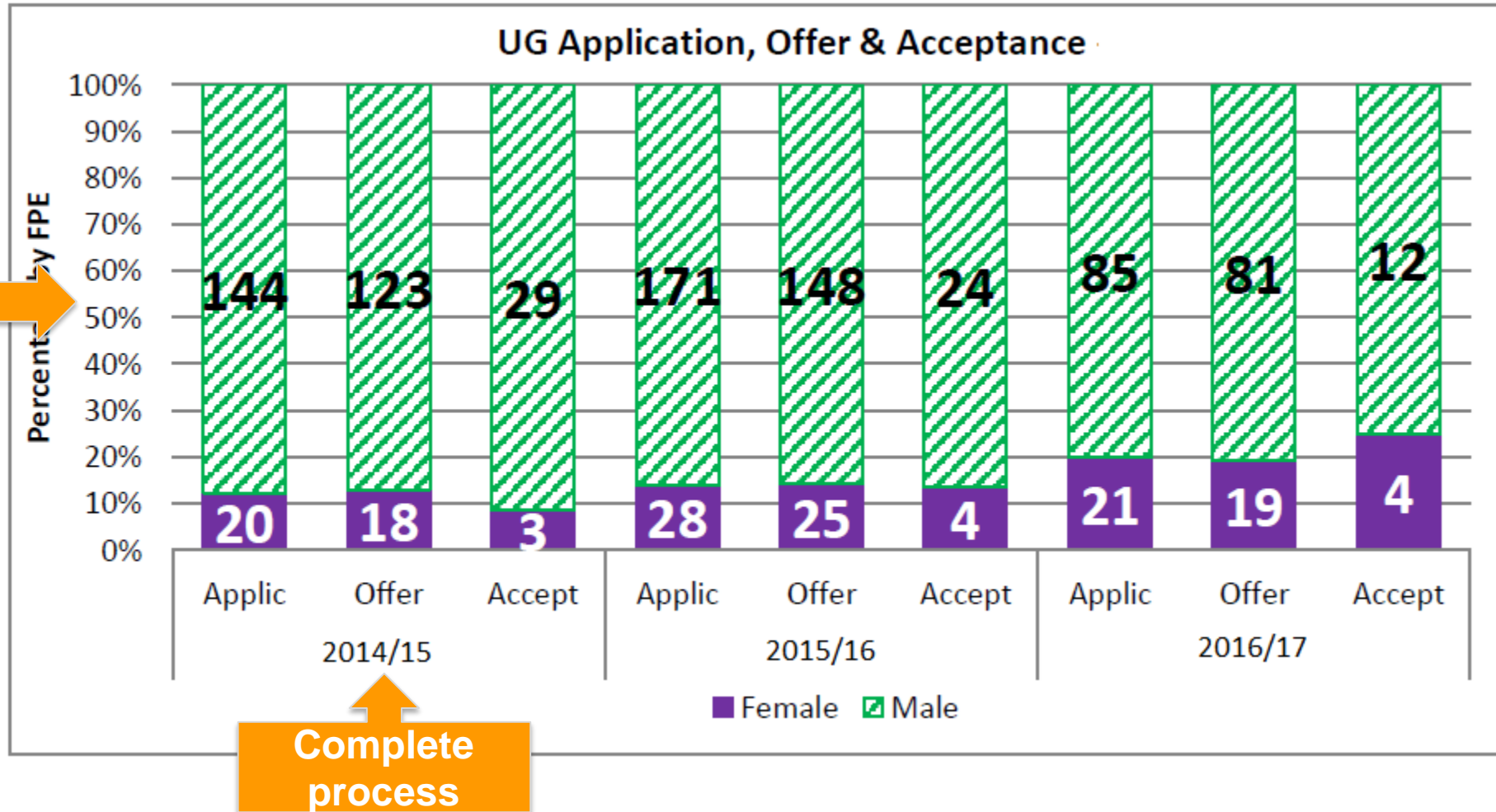=   Application narrative should focus on the factors behind the data and possible interventions

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Presenting data

Figure 4.1.2: Proportion of undergraduate applicants given an offer - all degrees

Presenting data

UG Application, Offer & Acceptance

	2014/15			2015/16			2016/17		
	Applic	Offer	Accept	Applic	Offer	Accept	Applic	Offer	Accept
Male	144	123	29	171	148	24	85	81	12
Female	20	18	3	28	25	4	21	19	4

%s and #s

Complete process
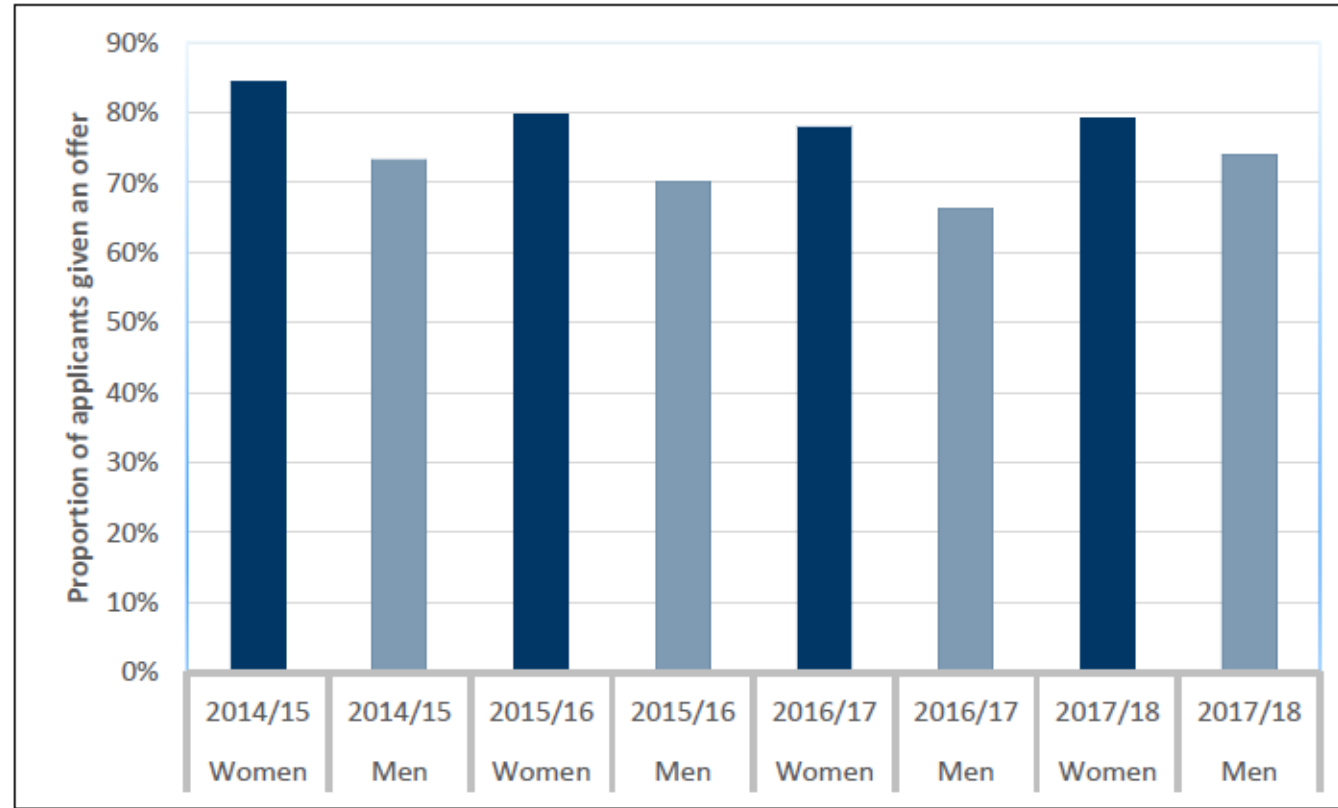
Advance HE data guidance

Support for your SAT

- No webinars July-September due to panel assessment
- Resume face to face training in autumn/winter 2020/21
- Continue to offer online training for SATs

- **Future webinars:** share your thoughts in the chat box or via the online feedback from.

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For more information, tips, and resources, see our website:

https://www.ecu.ac.uk/equality-charters/athena-swan/athena-swan-resources/

Contact: Athena.Swan@advance-he.ac.uk;
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