Imperial College London

UKRI Research England

What do women need to progress in academia?

Dr Natalie James, Dr Jo Collins, Dr Liz McDonnell (Research Coach)
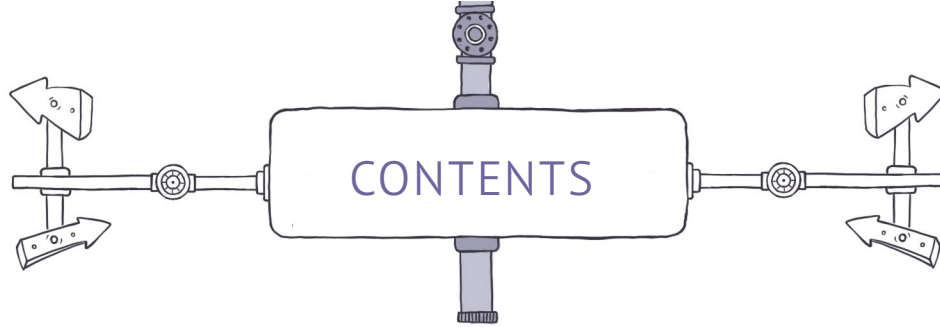
PFDC lead: Dr Karen Hinxman

POSTDOC AND FELLOWS DEVELOPMENT CENTRE
Tailored support and development for postdocs, fellows and clinicians

What do women need to progress in academia?

A qualitative study of women's experiences of academia at Imperial College London

CONTENTS

About the authors

Research Coach Ltd is a consultancy and coaching practice specialising in professional development for researchers, academics and Higher Education professionals.

Dr Natalie James Is a professional development consultant, coach and founding director of Research Coach. She has over 15 years' experience in the research and higher education sector from a range of complementary perspectives including doctoral research, UK Research Councils funding and policy, postdoc and academic researcher development and HE consulting and coaching.

Dr Liz McDonnell is a Senior Lecturer in Sociology at the University of Sussex. She is an experienced qualitative researcher who has worked across issues such as gender, inequalities, university cultures, as well as personal life. She teaches research methods to undergraduate and postgraduate students.

Dr Jo Collins is a consultant researcher and coach at Research Coach. She has two decades of experience of researching, teaching and publishing in higher education, and her research interests are in wellbeing and support for international postgraduates and staff.

Contact us

To discuss any aspect of the review or report, or for support with the implementation of the recommendations, please contact **Natalie.James@researchcoach.co.uk**

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A key part of our research process was to use illustrations and design to bring key themes and concepts to life and to promote ideas and discussions. You'll notice these illustrations throughout this report.

EXECUTIVE SUMMARY
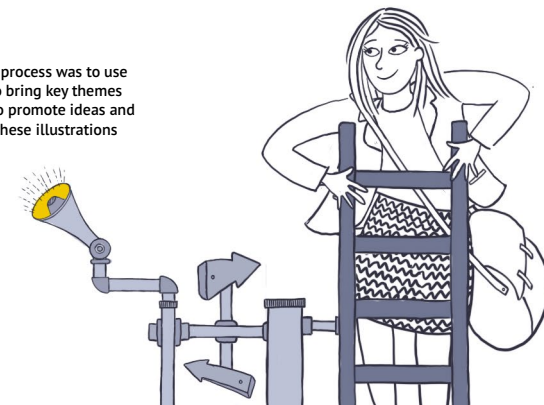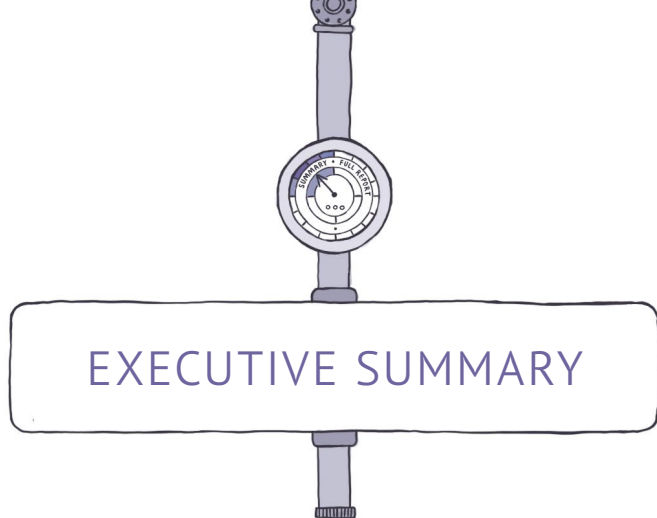
Project overview

The challenges of the 'leaky pipeline' and the underrepresentation of women in senior academic and research roles are persistent and well documented.[1,2,3,4] Recent UK figures show that fewer than 30% of all UK professors are women.[5] At Imperial College London, despite concerted actions to tackle gender inequality, academic women*:

- account for just a third of the overall academic/research workforce
- account for just 17.2% of Academic Professors, 22% of Clinical Professors, and 11% of Principal Research Fellows (well below UK average)
- occupy fewer than a third of senior leadership roles
- are more likely to be employed on fixed-term contracts than men (W: 65% M:51%)
- are more likely than men to be employed in 'entry level' roles** (W:60% M:50%)
- lead/co-lead just 6.9% of Imperial startup companies***

*Data in the following bullet points acquired from Imperial HR April 2022
**Lecturer, Clinical Lecturer, Research Assistant & Associate
***Data acquired from Enterprise April 2022

Figure 1
Summary of the methodological approach

MARCH–APRIL 2022

SCOPING

Mapping current data and initiatives | Project shaping event *(30 participants)* | Sector policy and literature review

APRIL–MAY 2022

NARRATIVE IMMERSION

Narrative interviews (n=27) | Career narratives (n=16) | 'Story to Action' groups Story sessions 1 & 2 *(3x groups, 18 participants)*

MAY–JUNE 2022

CONSOLIDATION

'Story to Action' groups Action sessions 3 & 4 *(3x groups)* | Development of visual composite case studies

JULY–SEPTEMBER 2022

REPORTING

Discussion of key findings with PFDC and RDC | Written report and recommendations | End of project event including display of visual case studies

VISUALS

Work with illustrators and designers to develop a 'live' visual record of the research process.

Create illustrated case studies to represent the experiences of women at different career stages and choice points.

In recognition of the College's continuing challenges relating to gender inequity in academic career paths, Imperial commissioned an independent, qualitative scoping study, *'What do women need to progress in academia?'*, conducted by Research Coach between March and July 2022. The study used narrative interviews, career stories and action groups to get to the heart of Imperial women's lived experiences of academia, understand the challenges they face and identify tangible, realistic recommendations to actively improve academic women's representation and progression. In total, the project team spent over 50 hours hearing directly from academic women at Imperial about the complexities of their experiences, the factors that support them in their careers, and the challenges they have/need to overcome to progress their careers (figure 1).

This study is not a comparison between men and women. Indeed, all genders will likely identify with many of the themes in this report. However, academic women are a minority group at Imperial, and to adequately address persistent inequity, it is essential that the voices of minority groups (in this case women) are heard above the generalised 'norms'.[6] Consequently, this study put Imperial women at the centre of the story, to purposefully amplify women's voices, to enable Imperial to hear about their experiences directly, to ensure that resulting actions are built upon real life testimony. Throughout the research process and in this report, key themes were brought to life through illustration and design to provide a visual means to highlight and discuss the complexities of women's experiences of their academic journey.

Key findings

(a) Existing activity to support academic women's progress at Imperial

Information provided by several academic departments, central services, and a review of College webpages and Athena Swan action plans identified a wealth of initiatives and practices that have been implemented to promote gender equality and positive experiences for women at Imperial. The College and departments' commitment to the Athena Swan agenda has resulted in a wide range of commendable activity across the College, and situates Imperial as one of the leading institutions in the UK in relation to institutional investment and infrastructure relating to gender equality.

In addition to the Athena Swan related actions, the College also has an exceptional range of professional development opportunities on offer to academic women provided by the Postdoc and Fellows Development Centre (PFDC) and People and Organisational Development (POD) to support many aspects of career development and progression. Also notable are the recent College exercises to redefine the College's institutional values and develop the Imperial Together programme to connect important cultural change initiatives, which, once fully embedded, will assist in promoting collective action to drive positive cultures.

It is unquestionable that the College has a diverse range of initiatives to support gender equality. However, it was evident in discussions with project participants that there are variable levels of awareness of the College-wide and departmental support on offer. There is also significant variation in the extent to which College-level policies and initiatives are implemented within departments, and a broad scepticism and sometimes mistrust about the efficacy of gender-related policies when translated into day-to-day practice and women's lived experiences in the workplace.

(b) Challenges to women's progression in the academic system

All contributors to this project discussed a variety of complex challenges to women's progression in the academic system. As summarised in figure 2, the challenges described by contributors are multi-layered and reflect the complexity of the organisational and societal systems in which academic careers develop. Challenges to women's progression exist at every level of the academic system at Imperial and are rooted in the higher education sector and the society in which the College operates.

The key challenges identified at each systemic level are discussed at length in the report and briefly summarised here:

Societal challenges
For any organisation to truly work towards equity of progression in the workplace, it is essential to acknowledge the societal barriers that are at play. In the UK in 2022 women consistently earn less than men, are more likely to be victims of gender-related violence,[7] are significantly underrepresented in positions of power and governance,[8] undertake a higher proportion of unpaid care and domestic duties than men[9] and are subjected to gender-based stereotypes from birth.[10] Pervasive societal gender inequality means that women do not start their academic careers on an equal footing with men and that there are implicitly more obstacles to women's career progression. When intersectional factors (e.g. race, class, socioeconomic background, sexual orientation, disability etc) are included, the divides are substantially compounded. Therefore, for demonstrable change to occur, institutional **systems must work significantly harder for women** to attempt to bridge the gender divides established within society.

Sector challenges

In recent years, the UK HE sector has continued to demonstrate considerable efforts to support inclusive practices and greater equality within the academic ecosystem. However, the project contributors discussed a range of issues still present within the academic sector that present challenges to women's academic progression.

'Sector maleness' was described as a key issue, with men outnumbering women in senior roles across the sector, most significantly in Science, Engineering and Technology (SET) disciplines. Project contributors noted how the impacts of these sector-wide gender disparities play out in a wide range of scenarios important for career progression such as male dominated funding panels, hiring committees and editorial boards, conferences dominated by male speakers and higher proportions of male peer reviewers for papers and grants. Contributors were concerned that few women in decision making roles in academia results in unconscious bias in outcomes and/or overlooking the value of women's specific contributions and career trajectories, which may differ from the 'male norms'.

The sector-level practice of short-term research funding which leads to persistent job precarity for early-career academics was cited amongst the top 'push factors' for women to decide to leave an academic career. Project contributors also discussed sector-endemic issues of high workloads, long hours working cultures, heightened expectations of students, competitive cultures, pressure to publish, expectations of mobility, scarcity of funding, and output focused assessment processes as key challenges to academic progression.
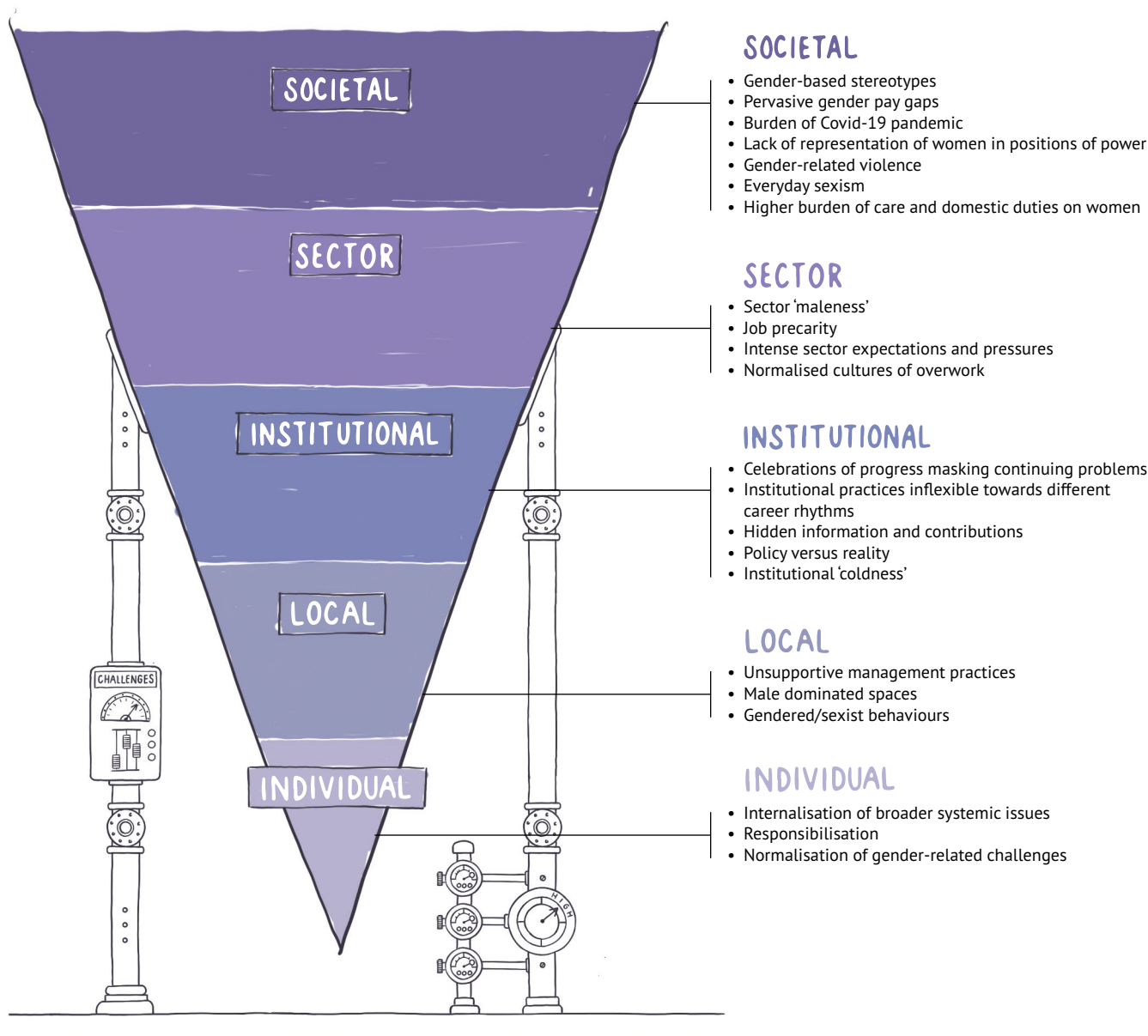
Figure 2. **The multi-layered obstacles to women's progression in the academic system as identified in this study**

SOCIETAL
- Gender-based stereotypes
- Pervasive gender pay gaps
- Burden of Covid-19 pandemic
- Lack of representation of women in positions of power
- Gender-related violence
- Everyday sexism
- Higher burden of care and domestic duties on women

SECTOR
- Sector 'maleness'
- Job precarity
- Intense sector expectations and pressures
- Normalised cultures of overwork

INSTITUTIONAL
- Celebrations of progress masking continuing problems
- Institutional practices inflexible towards different career rhythms
- Hidden information and contributions
- Policy versus reality
- Institutional 'coldness'

LOCAL
- Unsupportive management practices
- Male dominated spaces
- Gendered/sexist behaviours

INDIVIDUAL
- Internalisation of broader systemic issues
- Responsibilisation
- Normalisation of gender-related challenges

Institutional challenges

Contributors perceived a breadth of challenges within the institutional system at Imperial. There was concern that Imperial's drive to demonstrate/celebrate 'excellence' in gender equality work, celebrating the quantity of Athena Swan awards and top-level female appointments, can serve to mask the remaining challenges within the system. In some instances, this can lead to a downplaying of issues and, at worst, denial that problems with gender inequity exist at Imperial at all.

Many contributors also discussed practices within the College that were inflexible towards different working patterns and career rhythms and felt that women were often doing a significant amount of 'hidden work' due to inequities in the type of work that falls to them, for example student pastoral care, organisational/administrative duties, mentorship of junior colleagues. Contributors also perceived that women may shoulder a greater burden of panel and committee work due to fewer women in the 'pool' to undertake these responsibilities, particularly in departments where women are significantly underrepresented. Some women described feeling isolated from male dominated groups/networks leading to fewer opportunities to learn about the 'hidden/unwritten rules' of academia through word-of-mouth advice channels.

Whilst project contributors recognised the range of Institutional policies that have been implemented to address gender-equality issues, there was scepticism and mistrust about how these policies are enacted and enforced day-to-day. There was also a sentiment from many of the women in the study that Imperial's exceptionally competitive culture did not make it a safe place to discuss challenges and/or disclose personal struggles, which can lead to internalisation of issues and impact on individual motivation and ability to make progress.

Local challenges

The day-to-day experiences of academic women varied significantly and are heavily influenced by their local working environments, particularly with respect to working relationships, group dynamics, departmental cultures, and management practices. Women that were working in groups/departments with positive, supportive practices identified fewer immediate challenges and were more able to identify the factors that have helped them with career progression. However, a considerable proportion of our contributors described challenges within their immediate workplace that not only affected their day-to-day experiences and general wellbeing, but also impacted their longer-term ability to make progress.

Unfortunately, a high volume of examples were described of sexist/gendered behaviours towards women at Imperial, which often had lasting impacts on the victims, undermining their sense of belonging within the academic system. Many contributors described the challenges of being 'the only woman in the room' in male-dominated spaces, where it can be more difficult for women to be heard and feel that their contributions are welcomed. Finally, some participants described unsupportive management practices that actively blocked women's progress, denied development opportunities, did not accommodate women's caring responsibilities, undermined women's achievements, demanded unreasonable working hours/expectations or underestimated women's abilities.

Individual challenges

Without exception, every woman involved in the study had experienced, to varying degrees, a combination of the plethora of challenges within the academic system. Often there was a conscious recognition of the variety of factors that hinder women's progression within contributors' stories, but for some, it was more subtle, normalised and/or downplayed as 'the way things are'. Some women indicated that the systemic challenges act as drivers to push them

to overcome obstacles and succeed despite perceived barriers. However, for others the weight of the challenges in the broader academic system leads to an 'internalisation' of the issues. This generates a range of challenges for women that emerge at the individual level. These included feelings of self-doubt, imposter syndrome, guilt, challenges with confidence, fear, feeling responsible to be better/prove oneself, feeling responsible for fixing their own and others' challenges. Over time, for some women these internalisations can become difficult to forge a path through and can have a significant detrimental impact on a woman's ability to progress her career in academia. Informed by the stories of our project contributors, six composite illustrated character case studies were designed to encapsulate some of the individual challenges experienced by women at different stages and choice points of their careers (Annex 4).

It is our confident assertion that academic women experience these individual challenges, **not** because they are any less equipped to succeed in academia. Instead, individual challenges arise because the academic system, and the broader society in which it operates, provide women, from a very early age, consistent messaging that they might not belong in an academic career.

It is essential that women's individual challenges to progression are recognised as *symptoms* of the current academic system and ***not the cause*** of the lack of senior women in academia. Individualised interventions will not address the systemic problems. When considering what women need to progress in academia, Imperial and the academic sector must look for opportunities to address the multitude of challenges at the layers above the individuals in the academic ecosystem in order to effect meaningful, lasting change.

(c) What do women need to progress in academia? Facilitating factors for women's progession

Throughout all phases of the project, contributors reflected on not only the challenges they have encountered on their academic journeys, but also on the factors have played an important positive role in shaping their career progression to date. Many women, particularly those in senior roles, discussed the importance of individual characteristics such as persistence, determination, and self-motivation for their progression. However, as discussed, the challenges facing academic women's progression are so systemic and multifaceted, that it cannot and should not be left simply to individuals to 'tough it out' drawing on all their personal resolve, resilience, energy, grit and determination to survive their academic career and hope that against the odds they are the ones that beat the system.

Over the course of our last three projects with Imperial College London, this project team has spent well over 150 hours working directly with and hearing the stories of academic women at Imperial. From the knowledge we have acquired throughout our work at the College, it is our strong belief that women forging their academic careers at Imperial are already well equipped with the personal attributes that they need to progress in academia. Therefore, we argue that instead of asking what do *women* need to progress in academia? the question we must ask here is: what does the *academic system* need to do to enable women's progression?

Every woman's experience of the academic system is unique and of course there is no 'magic bullet' that will solve all the challenges that stand in the way of an equitable institutional ecosystem. Nevertheless, the reflections of our contributors identified 10 key factors that can/do facilitate academic women's progression, summarised in figure 3 and discussed at length in the full report.
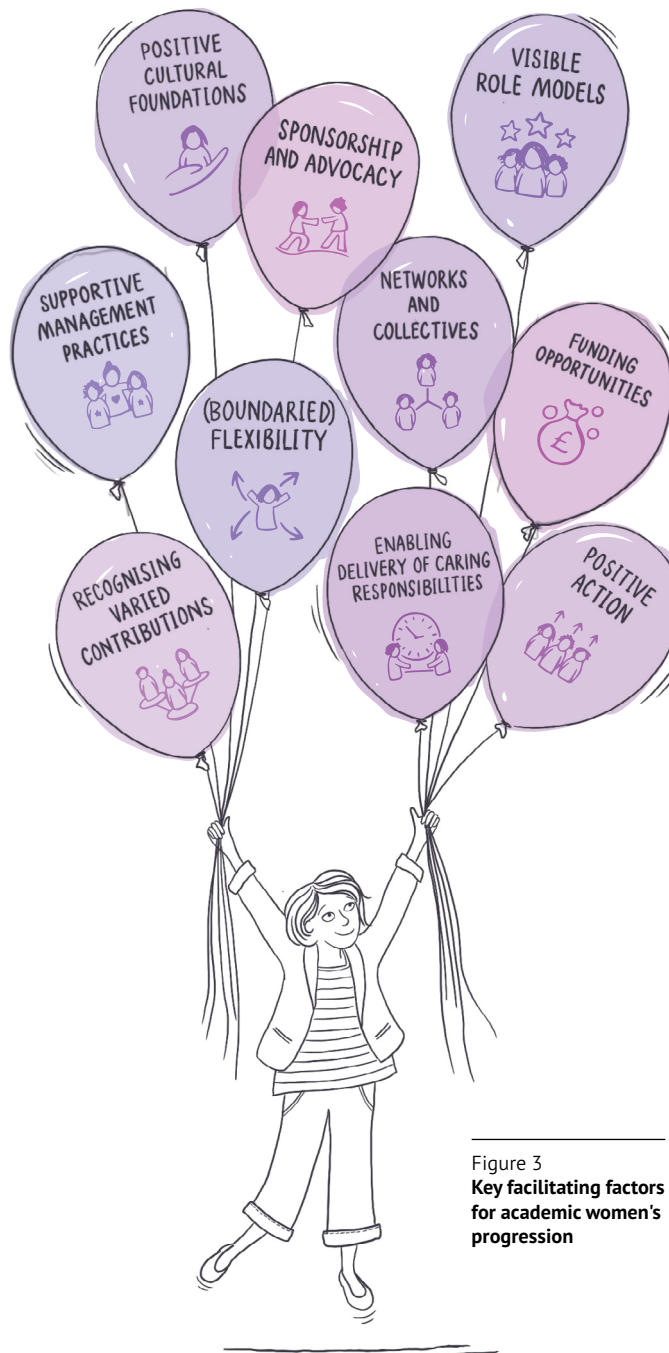

Figure 3
Key facilitating factors for academic women's progression

It was evident that at Imperial there are already some excellent examples of positive practices that fall into each of these core categories, which are making meaningful impacts for the women that benefit from them. However, at present, these practices are inconsistently applied/experienced across organisational system. This leads to significant variation in women's experiences and opportunities for progression that still too often depends on the 'luck' of each woman's individual set of circumstances in her immediate workplace.

To support Imperial's continued drive towards gender equity, it is essential that the College builds on the existing good practice by identifying and acting upon opportunities to improve consistency and embed positive practices at every level of the organisational system. As a starting point, we invite the College as a whole and every department/unit at Imperial, to reflect on the 10 facilitating factors and ask:

What else can we do to consistently integrate these practices into our organisational system(s)?

Call to action

Gender inequity in academia is an exceptionally complex topic. This qualitative study provides a snapshot of the experiences and challenges of Imperial's academic women in 2022. The outcomes of this scoping study offer the starting point for the next phase of Imperial's journey to understand and address the persistent challenges of gender inequity within the Institution and the higher education sector more broadly.

Here we do not offer a 'conclusion', as this is not an end of a story. Instead, we offer a 'call to action', in the hope that **every** member of the College will consider what the insights from this project mean for them and identify what actions they will take to work towards gender equity in the

academic system on a day-to-day basis. Gender inequity is not a women's issue. The challenges associated with inequity and lack of diversity affect everyone. Diversity brings new perspectives, it brings challenge, it stimulates growth, new insights, and inspiration. In the long run, a diverse team will always outperform a team comprised of individuals who have similar skills, expertise and backgrounds. An institution that acts with **integrity** and **respects** the value of diversity will foster a culture of **collaboration**, **innovation** and **excellence**.

It is evident that over recent years Imperial has put concerted efforts into practices, policies and initiatives to support women's recruitment, progression and experiences within the College and this is to be commended. However, we need only to look at Imperial's current gender facts to understand that there is still a long way to go, and it would be dangerous to presume the suite of initiatives and Athena Swan awards mean that Imperial has solved its gender inequity issues.

The current inconsistency that exists across the College with respect to the extent to which positive gender-related policies/initiatives/practices are implemented is problematic. It leads to significant variation in experiences and opportunities for women, and all too often women's progression at Imperial depends on the 'luck' of whether the local 'ecosystem' creates an environment that supports/hinders women's progression. Additionally, Imperial's unrelenting drive towards outcomes, achievement and excellence promotes and rewards working practices that have little time or space for empathy, supportive interpersonal interactions, and consideration of people's circumstances beyond the immediate outcomes of their work. This creates a culture in which women do not feel able to speak up about issues or challenge unhelpful behaviours. It leads to masking of difficulties, normalisation of unacceptable behaviours and women's internalisation/responsibilisation of challenges; all of

which can cause significant damage to women's ability to progress their careers and in some instances push them to leave the system entirely.

The challenges we describe in this report are not for individual women to fix, and the responsibility for driving change cannot rest simply with Athena Swan panels, EDI units and Researcher Development Committees. These issues affect everyone and must be owned by everyone. Meaningful, lasting change can only occur if the whole institutional community is willing to actively face into the challenges that persist in the organisational system and to act boldly to drive improvements. This will require everyone at all levels of the College, to openly acknowledge the issues discussed in this report and take an active stance towards addressing challenges of gender inequity.

The College has a significant opportunity, even stronger, **a duty**, to exert a positive influence, demonstrate leadership and push for meaningful improvements within the broader sector. By acting upon the recommendations from this project, being willing to acknowledge remaining challenges, visibly committing to change, modelling good practices and being willing to challenge others to act, Imperial will lead the way towards collective and organised action to tackle deep rooted gender inequity in academia.

It is time for change. Women in academia deserve for Imperial, the Sector and Society to do better. Imperial College London will drive meaningful progress if everyone at every level of the organisation acknowledges gender inequity, refuses to accept the status quo, and commits to embedding positive actions that support women to progress.

This is the call to action.

Our recommendations provide practical suggestions of ways Imperial's community can take up this call to action in the short-medium term. We also invite everyone in the College to reflect on this report and consider what additional actions they could implement to address the themes we have discussed here. We invite you to be bold, to try new ideas, to share your practices and to learn from successes and failures. The only wrong action is inaction.

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THIS IS YOUR CALL TO ACTION!

Full report and recommendations

1

INTRODUCTION

The challenges of the 'leaky pipeline' and the underrepresentation of women in senior academic and research roles are persistent and well documented.[1,2,3,4] Recent UK figures show that fewer than 30% of all UK professors are women.[5] When the intersection of race and gender are included, the figures are startling. Only 2.7% of UK professors are Black, Asian and Minority Ethnic women.

Imperial College London is a global top ten university with a world-class reputation in science, engineering, business and medicine. Across its academic and research staff populations, men significantly outnumber women, particularly in senior roles. Whilst a suite of College equality, diversity and inclusion (EDI) initiatives have resulted in improvements to proportions of female staff recruited and promoted, Imperial's proportion of women at professorial level (18%) remains well below the national average and gender pay gaps persist.[6] In recognition of this continuing problem, Imperial commissioned *'What do women need to progress in academia?'* an independent qualitative scoping study, conducted by Research Coach

between March – July 2022. The study used narrative interviews, career stories and action groups to get to the heart of Imperial women's lived experiences of academia, understand the challenges they face and identify tangible, realistic recommendations to actively improve women's representation and progression in academic research. Throughout the research process, key themes were brought to life through illustration and design to provide a visual means to highlight and discuss the complexities of women's experiences of their academic journey.

This report summarises the key findings from the 'what do women need to progress in academia?' project and provides a suite of recommendations for consideration by the College to further enhance opportunities for academic women's progression at Imperial. It is essential to note that the significant complexities of the contexts in which academic careers develop are evident throughout our data. Individuals cannot be separated from the systems and societies in which they are developing, and responses that focus on 'fixing' individuals will have limited efficacy in addressing issues that are rooted at systemic levels. Consequently, our report and recommendations consider an 'ecological' viewpoint of the academic system, identifying opportunities to develop systems, cultures and environments that will facilitate equity of opportunities for academic staff.

Whilst the focus of this report is academic women's progression, it must be argued that striving for equity* at all levels of the organisational system will benefit everyone within it. Ultimately, greater diversity within the academic system will lead to enhanced creativity, new perspectives and possibilities that are only generated by moving beyond the 'status quo'. Whilst the College has already made discernible progress and good practice is evident, the system is still far from equitable, the rate of change is slow, and Imperial can and must do more if meaningful outcomes are to be achieved.

We conclude our report with a 'call to action'. It is our belief that, as a global leader in the HE sector, Imperial has a golden opportunity to model brave and bold organisational approaches to tackling gender inequity in academia and to challenge the sector as a whole to do better.

Where Imperial acts, others will follow.

> **Only when diverse perspectives are included, respected, and valued can we start to get a full picture of the world.**
>
> **Brené Brown**

*Throughout the report we deliberately use the term equity as opposed to equality. Equality means each individual or group of people are given the same resources or opportunities. Equity however, recognises that each person has different circumstances and allocates the exact resources and opportunities to reach an equal outcome. This is likely to mean that some individuals/groups will need alternative/additional resources than others to progress at similar rates, this is entirely appropriate and necessary to facilitate equity.
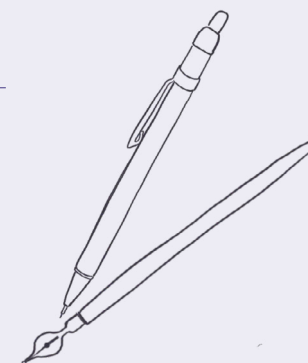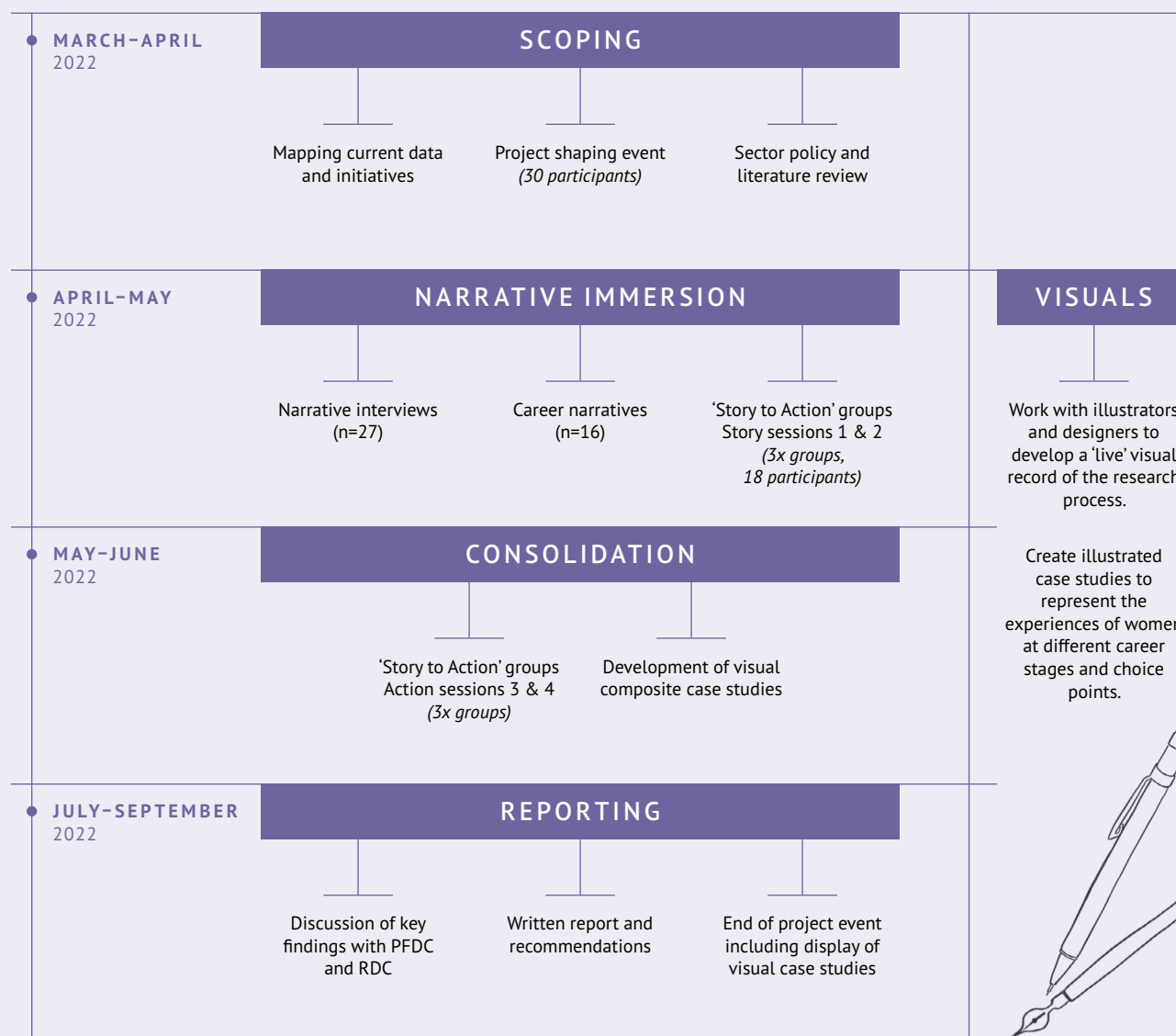
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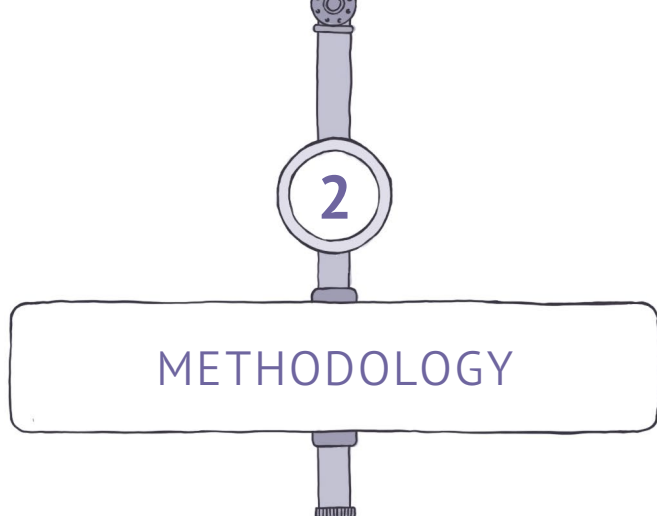
METHODOLOGY

'What do women need to progress in academia?' was a qualitative study of women's lived experiences of academia at Imperial College London, conducted by Research Coach between March- July 2022.

2.1 Methodological rationale and approach

The aim of this study was to understand, from the perspectives of women at Imperial (present and past), what factors influence(d) their progress in their academic careers, what challenges exist, and to explore tangible prospects for Imperial to enhance women's experiences of academia and opportunities for progression at all levels of the institution.

This study is not a comparison between men and women. Indeed, we acknowledge that all genders will likely identify with many of the themes in this report. However, as we shall discuss (Section 4), academic women are a minority group at Imperial, and to acknowledge and adequately address persistent inequity, it is essential that the voices of minority groups (in this case women) are

Figure 1
Summary of the methodological approach

MARCH–APRIL 2022

SCOPING

Mapping current data and initiatives | Project shaping event *(30 participants)* | Sector policy and literature review

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NARRATIVE IMMERSION

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Work with illustrators and designers to develop a 'live' visual record of the research process.

Create illustrated case studies to represent the experiences of women at different career stages and choice points.

MAY–JUNE 2022

CONSOLIDATION

'Story to Action' groups Action sessions 3 & 4 *(3x groups)* | Development of visual composite case studies

JULY–SEPTEMBER 2022

REPORTING

Discussion of key findings with PFDC and RDC | Written report and recommendations | End of project event including display of visual case studies

heard above the generalised 'norms'.[7] Consequently, our study put Imperial women at the centre of the story, to purposefully amplify women's voices, to enable Imperial to hear about their experiences directly, to ensure that resulting actions are built upon real life testimony.

The methodological design of the 'what do women need to progress in academia?' project, summarised in figure 1, targeted three key methodological aims:

Six illustrated composite case study 'characters' were developed to amalgamate themes identified from the career stories and experiences of project contributors.

You will meet the characters throughout this report and can view the full set of case studies in Annex 4.

Find out more ❯
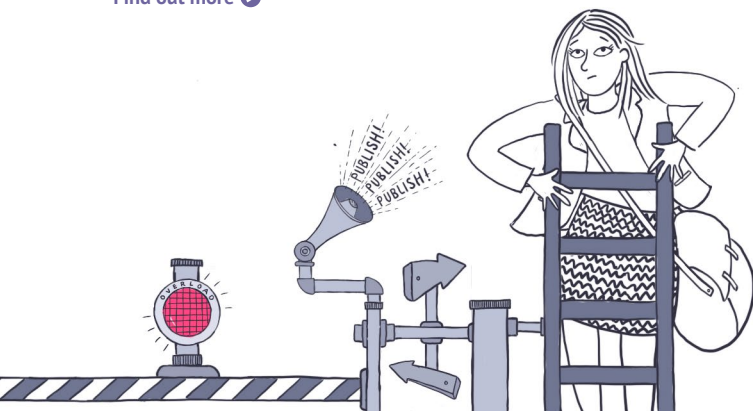
Methodological aim 1
Get to the heart of women's academic career stories and experiences in their own words

Whilst academic women at Imperial are forging careers in the same sector and organisational systems, each woman's experience and their resulting choices and actions are unique, due to a multitude of complex and intersecting factors. For this reason, it was important for this project's methodology to provide dedicated spaces for women to tell their own story of academia in their own words. We therefore adopted a narrative approach, inviting women to tell their stories via:

- 27 x 45min. interviews. Participants included:

  - Academic women from different career stages, disciplines, and departments
  - Staff responsible for managing/supporting academic women
  - Women who left academic/research roles at Imperial to pursue careers beyond academia

- Written career narratives: 16 career narratives received in written format from academic women from different career stages and disciplines.

- 'Story to solution' action groups: 18 participants across three action groups. Participants were self-selecting and were primarily women in academic/research roles (different departments, career stages, disciplines). Some groups also included academic men and professional services staff with an interest in academic women's progression. Each action group met four times (two hours per session) in total during the project.

In total the project team spent over 50 hours hearing directly from academic women at Imperial about the complexities of their academic experiences, the factors that support them in their careers and the challenges they have/need to overcome to progress their careers.

Methodological aim 2
Work collaboratively with the Imperial community from the project outset to its delivery

For the recommendations of this project to be tailored and meaningful, it was essential that the project be grounded in the organisational context and informed by the Imperial community. Colleagues from across the College contributed to the project at every stage of the research process including:

- An initial 'shaping meeting', where over 25 participants representing all Imperial faculties provided insight into the key issues for consideration in the later stages of the project, informing both interview and action group format and question design.

- Departments and professional services units were invited to contribute information (via an online form) about their current activities supporting academic women's progression.

- Anonymous contributors provided feedback via an online form about key challenges and ideas for improvements.

- Alongside their career stories, interviewees and career narrative contributors provided insight into what Imperial already does well for academic women and ideas for future improvements.

- The action groups were instrumental in considering the key themes identified from the project data to develop concrete ideas for the project recommendations.

Methodological aim 3
**Develop visual resources as lasting assets
and learning tools for the College**

Visual imagery and illustration can be helpful tools for promoting discussion and communication of complex issues, making challenging subject matters accessible, and key arguments memorable.[8,9] Illustrative approaches were important elements of our methodology. Action group discussions were documented by 'live illustration'.* The resulting illustrations and time-lapse videos visually captured the discussions as they unfolded during the meetings (Annex 2). The live illustrations provide a graphic record of the key outcomes from the action group process that can be shared with the wider College community without compromising the anonymity of the participants.

Following analysis of the key themes from the narrative immersion phase of the project (Fig. 1), a set of six illustrated, composite case studies were developed by the research team in collaboration with a designer/illustrator,** incorporating feedback from action group participants to shape the final designs (Annex 4). The six new 'characters' amalgamate themes identified from the career stories and experiences described by contributors and visualise the key issues and challenges for women at different stages and choice points in their career. The composite case studies were used with the action groups in their final session to stimulate discussion and consideration of potential actions on the part of individuals, managers, institution and sector to address the challenges encountered at different career stages. Beyond the project, the case studies are lasting assets that can be used by Imperial as discussion and training aids for managers and staff considering matters relating to gender and progression in academia.

2.2 Project contributors and data limitations

Contributions to the project were made on a voluntary basis and contributors (interviewees, narrative contributors, action group participants) were self-selecting.

Project contributors included:

- Academic women from all faculties, incorporating a wide range of departments and career stages.
- Former academic/research staff who left Imperial to take roles outside academia.
- Staff (men and women) involved in leadership/management of academics.
- Professional services staff (men and women) with interest and/or roles related to gender equality in academia.

Contributors were of varied nationalities, and many had lived and worked outside the UK prior to their roles at Imperial. White contributors were in the significant majority, with very few academics of colour coming forward to participate. Interviewees were also asked about other intersecting factors and career narrative contributors were asked if they considered themselves to be a member of any underrepresented groups. In most cases no further intersecting factors were declared. Consequently, the primary data set does not enable us to examine or report on issues of gender equity in relation to other intersecting factors and characteristics. In addition, we had only a very small number of contributors who are clinical academics, therefore in our reporting it is not possible to specifically distil out the distinctive/additional challenges that are associated with combining clinical and academic roles.

To build on the findings of this report, it would be essential for Imperial to consider further work that specifically examines intersectional issues and the complexities of clinical academic careers for women at Imperial.

2.3 Role of the consultancy team

The project team members from Research Coach are all women with our own lived experiences of academia. We also work in roles in which we champion and support other academic women in their career progress and we have each led/contributed to institutional initiatives related to gender equity, and women's progression.

As feminist women, whose philosophies informed the choice and execution of the project's collaborative methodological approaches, we feel it is important to signal that as researchers, we play an active role in the shaping and delivery of this research. According to Sang "academia traditionally values so-called objective, knowledge whereby the researcher adopts a neutral, value-free position to her research. In contrast, feminist research often produces work which values personalised knowledge".[10] Our robust research processes place our primary data at centre stage in the findings described in this report. Notwithstanding this, our own knowledge/experiences as feminist researchers are inevitably inherent within the discussion of the data, the call to action and recommendations. Within qualitative research practices, research integrity is enhanced by researchers being clear about our positions/stances in relation to the social and political context of the study. Additionally in the Imperial context where gendered behaviour and processes were to some extent invisibilised, it is part of our agenda as consultants to make it visible so that it can be addressed.

3

EXISTING ACTIVITY TO SUPPORT ACADEMIC WOMEN'S PROGRESS AT IMPERIAL

Information provided by several academic departments, central services, and a review of College webpages and Athena Swan action plans identified a wealth of initiatives and practices that have been implemented to promote gender equality and positive experiences for women at Imperial (Table 1).

The Athena Swan agenda remains a key driving force for action across the College and within departments. The College holds an institutional silver Athena Swan award, with a renewal application submitted in May 2022, and currently 23 of 24 departments in the College hold either a Bronze (11), Silver (11) or Gold (1) award. The College and departmental commitment to Athena Swan has resulted in a wide range of positive activity listed in table 1, which is to be commended and situates Imperial as one of the leading institutions in the UK in relation to institutional investment and infrastructure relating to gender equality.

In addition to the specific actions listed in table 1, there are a range of professional development opportunities available via both the Postdoc and Fellows Development Centre (PFDC) and People and Organisational Development (POD) to support many aspects of career development and progression. These include workshops and courses, staff networks, leadership development programmes, College-wide coaching services and mentoring provision. Most of these opportunities are open to staff of all genders; however, women often make up a higher proportion of attendees at professional development events. There are also several examples of women-only events and initiatives such as the Springboard women's development programme and women's networks. Also notable are the recent College exercises to redefine the College's institutional values (figure 2) and develop the Imperial Together programme to connect important cultural change initiatives, which, once fully embedded, will assist in promoting collective action to drive positive cultures.

It is unquestionable that the College has a diverse range of initiatives to support gender equality. However, as we will discuss in the following sections of this report, it was evident in discussions with our project participants that there are variable levels of awareness of the College-wide and departmental support on offer. There is also significant variation in the extent to which College-level policies and initiatives are implemented within departments, and a broad scepticism and sometimes mistrust about the efficacy of gender-related policies when translated into day-to-day practice and women's lived experiences in the workplace.

We must acknowledge the continued commitment, concerted efforts, and action on the part of the College, faculties and departments to date, and the excellent range of initiatives already implemented. Nevertheless, as a consultancy team it is our role to emphasise that our findings demonstrate that Imperial still has considerable challenges ahead to create an environment in which academic women can consistently thrive and progress. As we will discuss in the following sections of this report, good infrastructure and investment is an excellent starting point. However, this must be complemented by consistency of practices, enacting of values, enforcement of policies and organisational cultures that demonstrate empathy for the breadth of challenges encountered by women aiming to progress in academia.

Figure 2
Imperial's organisational values
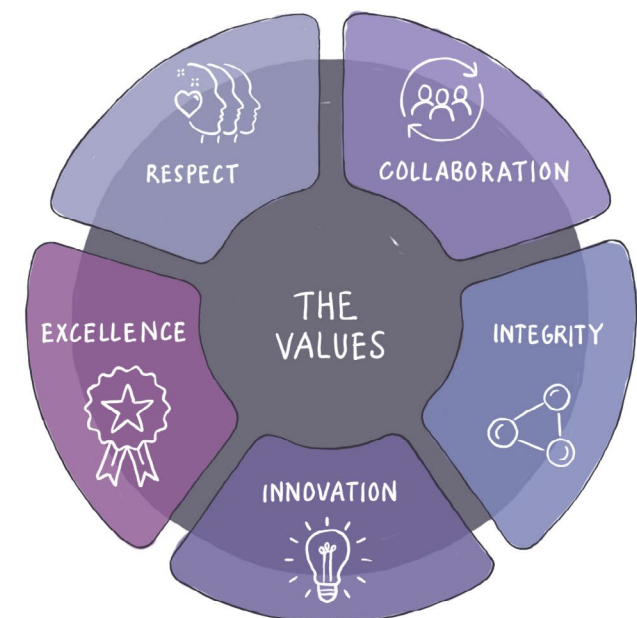
In a key step to promote positive institutional cultures, a College-wide consultation in 2021/22 resulted in the definition of five core values for the College. To build on this exercise Imperial must now continue efforts to embed these values at all levels of the organisation to promote cultures that align with these values and offer workplaces in which people can thrive regardless of gender and backgrounds.

Table 1. **Summary of College and departmental actions to support gender equality**

Significant College-wide actions to support gender equality from 2016-present (from Athena Swan 2022 Renewal Application)

2016

- **Nursing rooms** established at different campuses
- **My Family Care** contract extended, now part of core provision to parents
- **Girls engineering summer school** established as annual programme
- 'Preferred Gender Identity' question added to ICIS
- PFDC 'Rules of the Game – from B to C' workshop established
- Two female **Consuls** elected (replacing two men). First time in College history majority female Consuls
- Launch of **Staff Supporters** scheme
- Start of unconscious bias training for UG in FoE
- Maternity (31% response rate) and paternity (34% response rate) surveys

2017

- Support for PAAN transferred to EDIC Staff Network Coordinator. Career and training events organised
- **Elsie Widdowson Fellowship** revised. Opened to all genders. (six-month minimum of parental leave changed in November 2017 to 16 weeks)
- Pilot of **Carers' Support fund** to help with caring costs when attending training, conferences, etc. Turned into permanent scheme January 2019 (up to £250)
- New **PRDP forms, guidance and website**
- **Imperial signed Technician's Commitment (Action 5.15)**
- Appointment of Assistant Provost (EDI)
- Increased support for Fellows with dedicated post in (newly re-named) **Postdoc and Fellows Development Centre**, to support Fellows. Post stopped in September 2020
- New **eRecruitment system (TalentLink)**, enables better recruitment data monitoring

2018

- Launch of **Technician's Portal** as hub of information
- **Gender Pay Gap** published for first time
- Sexual Harassment Working Group established
- Launch of **You Make Imperial campaign**. Declaration rates of EDI data have increased
- Central unconscious bias training course established. Nov 2020 **new online course**
- **Active Bystander** established as part of EDIC's training, following FoE pilot

2019

- **Women@Imperial Week portraits** project
- **Career Moves** toolkit and workshops launched
- Workshop on workload allocation models
- Reduced qualification time for **enhanced parental leave**
- New **Conference policy** launched
- New **Provision of toilet facilities policy** launched
- Launch of **Reverse Mentoring Scheme** for senior leaders
- Creation of £10,000 annual **EDI Seed Fund**
- **Textio tool** adopted, enables gendered language review
- Upgrade work to **College nursery** (£8 million) increased capacity (by 56 places)

2020

- Family leave survey (38% response rate)
- College workloads group established. **New workload principles** published November 2021
- Women in Clinical Academia network established by FoM
- **Imperial Artworks Group established. First recommendations in March 2021**

- Annual promotions wash-up meeting now specifically considers and reviews gender and ethnicity
- Academic recruitment **case studies and toolkit produced**
- New **Sexual Harassment, Sexual Misconduct and Sexual Violence policy**
- **Report+Support tool** launched
- **New Trans Staff policy,** and supporting documents, published after review

2021

- Second phase of the Reverse Mentoring scheme
- If both parents are Imperial employees, then both entitled to **16 weeks of Shared Parental Leave** at full pay
- **Guidance** produced on eliminating gender bias from references and letters of recommendation
- Appointment of **Proconsuls**, providing more diverse pool
- Launch of **Parents' Portal** to provide guidance and support to parents and line managers
- Publication of **College policy** for Trans and Non-binary Students
- **New White City nursery opened** (spaces for up to 20 children)
- **Athena Swan gender equality townhall event**. 141 registrations, 93 people attended
- Period poverty action. Free vending machines installed across **all campuses**
- **Imperial Together** and **College Values**

> ⊙ **Find out more**
> The names of intiatives and actions in **bold** are links to the relevant web pages.

Initiatives from departments*

- Various local networks or groups (including. Women in STEMM group, Women in SET student society, Women@MechEng society, Women in Engineering Forum, Women in Computing group, Women in Physics group, Clinical Women network in Medicine (WiAM), and new project establishing Academic Women Association in Medicine
- Head of Department fund for small grants to start an independent project for postdocs/fellows returning from career breaks
- Audits of staff members to identify individuals to encourage for promotion
- Mentoring schemes
- Departmental expansion of the College Elsie Widdowson fellowship scheme to include fellows in eligibility
- Menopause awareness events
- Celebrations and showcases of women's research
- Gender balanced seminar programmes
- Departmental EDI surveys
- Postdoc maternity champions
- Contribution matrix to assess workloads
- Prizes, scholarships and awards named after notable underrepresented historical figures
- Outreach activities to encourage more women to enter scientific disciplines
- Unconscious bias summary sheets for promotions and recruitment panels
- Departmental culture and values reviews
- Use of software to identify gender bias in job adverts
- Revised interview processes toward open/ curiosity driven questioning and away from combative/adversarial approaches
- Support for flexible working
- Department meetings restricted to core hours

*The examples listed are not common across all departments, but serve to highlight the range of good practices that exist at departmental levels.
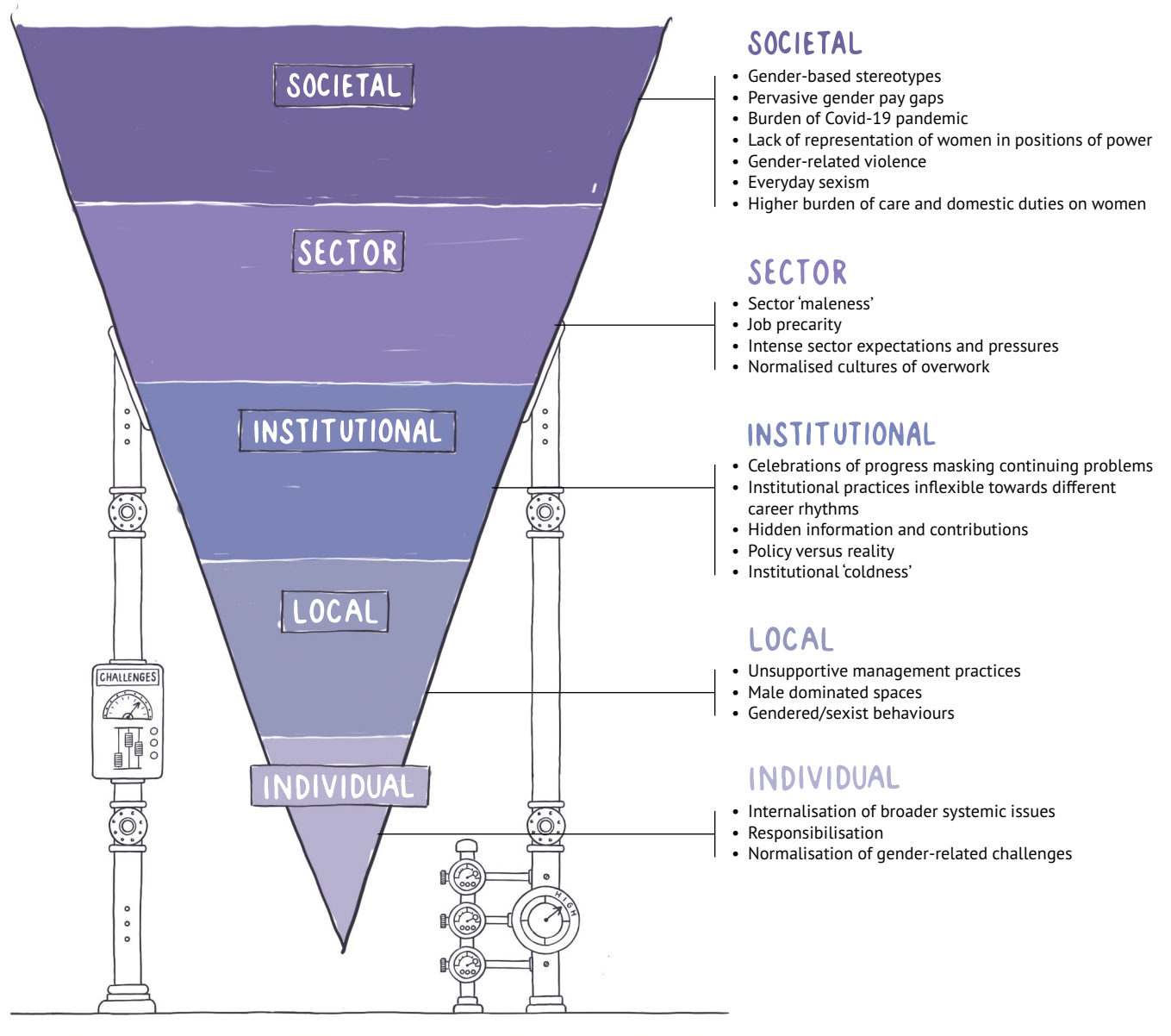
4

CHALLENGES TO WOMEN'S PROGRESSION IN THE ACADEMIC SYSTEM

Whilst many contributors recognised the good practice and initiatives already present at Imperial (Section 3), and many had benefitted directly in some way from these, without exception, contributors to this project also described complex challenges to women's progression in the academic system.

As summarised in figure 3, the challenges described by contributors are multi-layered and reflect the complexity of the organisational and societal systems in which academic careers develop. Given the 'weight' of challenges present in the academic ecosystem, it is ineffective to consider how to support individual academics to develop without first acknowledging and, wherever possible, addressing the challenges that exist in the broader systems in which women are striving to progress.

Figure 3. **The multi-layered obstacles to women's progression in the academic system as identified in this study**

SOCIETAL
- Gender-based stereotypes
- Pervasive gender pay gaps
- Burden of Covid-19 pandemic
- Lack of representation of women in positions of power
- Gender-related violence
- Everyday sexism
- Higher burden of care and domestic duties on women

SECTOR
- Sector 'maleness'
- Job precarity
- Intense sector expectations and pressures
- Normalised cultures of overwork

INSTITUTIONAL
- Celebrations of progress masking continuing problems
- Institutional practices inflexible towards different career rhythms
- Hidden information and contributions
- Policy versus reality
- Institutional 'coldness'

LOCAL
- Unsupportive management practices
- Male dominated spaces
- Gendered/sexist behaviours

INDIVIDUAL
- Internalisation of broader systemic issues
- Responsibilisation
- Normalisation of gender-related challenges

Building on the excellent foundations described in Section 3, Imperial must continue to take a proactive role in ensuring that its organisational ecosystems consistently enable women's progression, and act boldly to address the challenges that persist within the organisation so that inclusive and equitable practices are embedded across the College.

The challenges to academic women's progression extend beyond the institutional system into the HE sector and society as a whole. Whilst Imperial does not have control over these broader systems, there is no doubt that, as a globally leading university, Imperial has significant power and influence within these systems, a fact clearly demonstrated by the visible scientific leadership the College demonstrated throughout the Covid-19 pandemic. If Imperial chooses to purposefully exert its influence to robustly advocate for and lead the way towards gender equity in academia, it will be a powerful catalyst to drive meaningful positive change more broadly.

In the following sections we summarise the key challenges for academic women's progression present at each level of the academic system as identified by project contributors.

4.1 Societal challenges

Organisations are microcosms of the societies in which they operate. Societal issues have a direct impact on workplace environments and therefore must be considered alongside institutional factors.

The information in figure 4 offers just a small snapshot of the persistent societal inequalities for women in the UK in 2022. Alongside systemic inequalities, women and girls are subject to pervasive gender-based stereotypes and expectations from a very young age, which can contribute to limiting educational goals and career choices, mental health challenges, low self-esteem, avoidance of certain subjects/disciplines/activities and a range of other challenges that can compound to hold women back into adulthood.[20]

"It starts when girls go to school and are told that they're not going to last [in science]"

Academic women at Imperial have already succeeded in pushing through complex societal barriers (for many, in multiple countries) to progress to a role at one of the world's leading institutions. However, whilst the broader society in which Imperial operates remains fundamentally gender biased, women will continue to face societal barriers to progression at every step of their career.

"This issue is bigger than Imperial, how do you change a societal issue?"

"Because there is no equality in society at large and so academia simply reflects the way it works"

For any organisation to truly work towards equity of progression in the workplace, it is essential to acknowledge the societal barriers that are at play.

Figure 4. **Gender inequality in UK society in 2022**

Women in the UK are less likely to be employed full-time than men,[14] more likely to be providing care[15] and do more housework than men in 93% of British households.[16]

The UK is ranked only 23rd on the World Economic Forum's Gender Gap Index[11]

The mean UK gender pay gap for all employees is 15.4%[12]

The Covid-19 pandemic served to exacerbate existing societal inequalities between women and men in terms of domestic duties:

LOCKDOWN 1
Women spent 55% more time than men on unpaid childcare

LOCKDOWN 2
Women spent 99% more time on unpaid childcare than men.[17]

"The responsibilities for outside work continue to be more heavily skewed towards women. There's plenty of data out there…"

Sexual offences against women are at a record high.[13]

Women have a one-in-four chance of being a victim of domestic violence.

just **8%** of FTSE 100 CEOs are women none are women of colour.[18]

IN MOST SECTORS WOMEN ARE OUTNUMBERED BY MEN 2:1 IN POSITIONS OF POWER.[18]

Only a third of members of UK Parliament are women

Women rarely get a seat at the table where crucial decisions are made, an issue which is reflected across the board in UK academia where women only occupy[19]:

29%
of UK Vice Chancellor roles

37%
of UK University Executive team roles

31%
of UK University Executive team roles

This society is built by men for men. […] everything [is] designed for men, from a safety belt to machines in hospital[…] So I think the problem is … the world is built for men by men. Therefore it isn't so surprising that women feel inadequate to meet the criteria that are set by men for men.
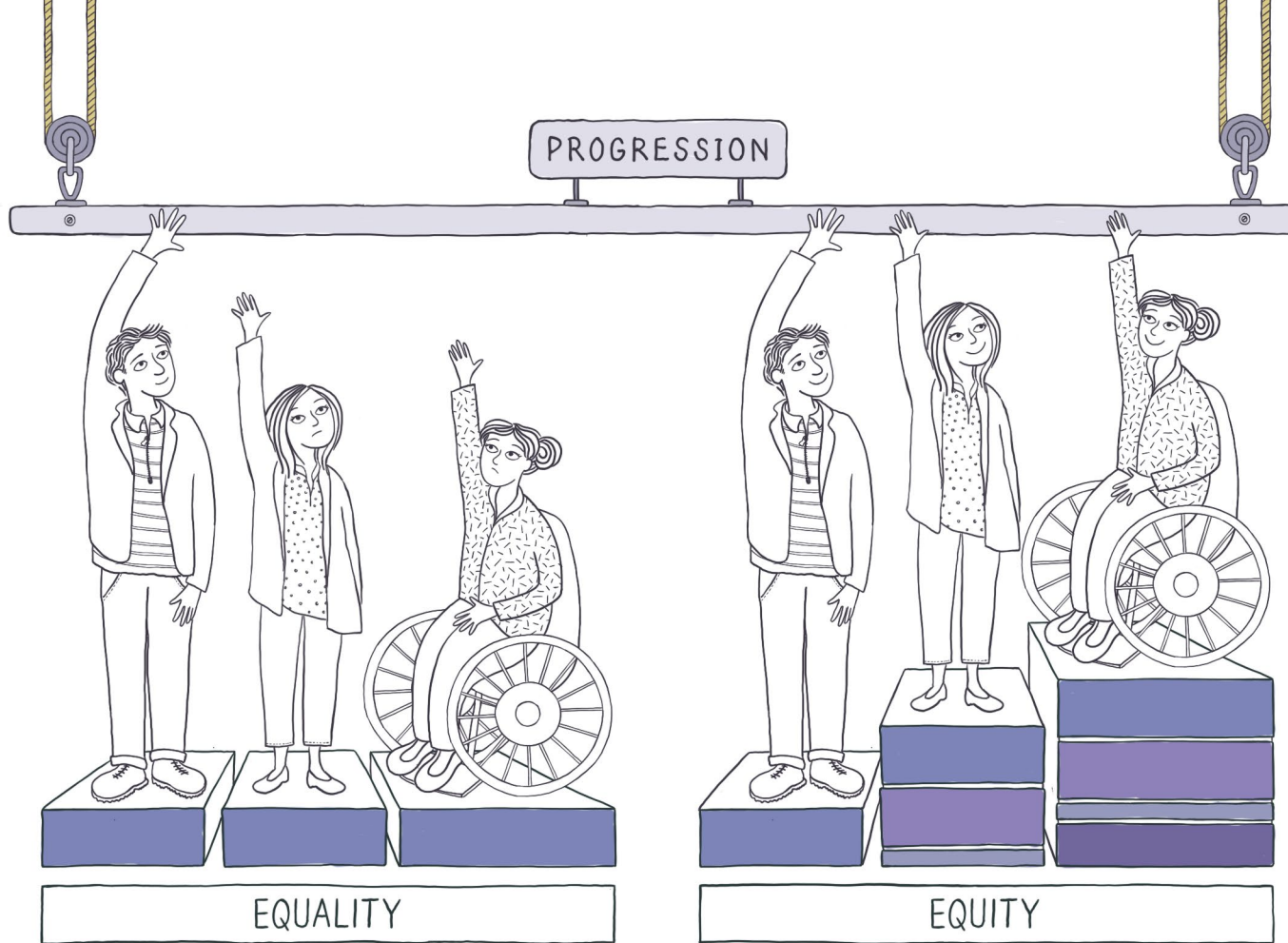
Figure 5. **Equality vs Equity**

Pervasive societal gender inequality means that women do not start their academic careers on an equal footing with men and that there are implicitly more obstacles to women's career progression. When intersectional factors (e.g. race, class, socioeconomic background, sexual orientation, disability etc) are included, the divides are substantially compounded. Therefore, for demonstrable

change to occur it is not enough to simply treat women and men equally and offer the same opportunities to both (equality). This will only serve to (at best) maintain existing gaps (fig. 5). Instead, to achieve workplace **equity**, institutional **systems must work significantly harder for women** to attempt to bridge the gender divides established within society.

4.2 Sector challenges

In recent years, the UK HE sector has continued to demonstrate considerable efforts to support inclusive practices and greater equality within the academic ecosystem with initiatives such as:

- The Athena Swan and Race Equality Charter[21]
- 2019 revised Concordat to Support the Career Development of Researchers[22]
- Wellcome Trust research culture report[23]
- Consultation on the first UKRI EDI strategy[24]
- Funders piloting the new 'resumé for researchers' narrative CVs[25]
- Widespread uptake of the Declaration on Research Assessment (DORA) amongst UK research organisations[26]
- British Council report into gender equality in HE[27]
- Studies into the impact of the Covid-19 pandemic on researchers and research[28]

Nevertheless, our project contributors discussed a range of issues still present within the sector that present challenges to women's academic progression. Key themes included:

4.2.1 Sector 'maleness'
Within the UK HE sector, as the seniority of contract level increases, the proportion of female staff decreases. Across the sector, men significantly outnumber women in senior management and professorial appointments (both >70% male for STEM disciplines). Gender pay gaps are also wider amongst academic staff groups than non-academic staff.[29] Project contributors noted how the impacts of these sector-wide gender disparities play out in a wide range of scenarios such as male dominated funding panels, hiring committees and editorial boards, conferences dominated by male speakers and higher proportions of male peer reviewers for papers and grants.

"When I entered academia in the UK, [...] my impression was that despite a very civilised front, there really was the old boys network."

Contributors discussed how the significant lack of representation of women in decision making roles in academia may result in unconscious bias in outcomes and/or overlooking the value of women's specific contributions and career trajectories, which may differ from the 'male norms'.

"And so quite often I hear male colleagues saying, 'Oh [she] hasn't achieved anywhere near what was expected of her'. And I will say, 'but she has brought two children up on her own at the same time as doing that'. And they'll go, 'oh yeah, well', and I'm like, 'no, yes really that's quite something'. So those sorts of biases still exist."

The dominant 'maleness' of the senior levels of the sector was also described as a barrier from the perspective of a lack of visible 'role models' and female mentors for women, which can cause women to question their place within the broader system of academia.

"The problem will be solved when the role of the professor is not equal to alpha male. That is the key. That's what we need to work towards."

"...not really seeing that many women, especially not in leadership positions, is also very off-putting."
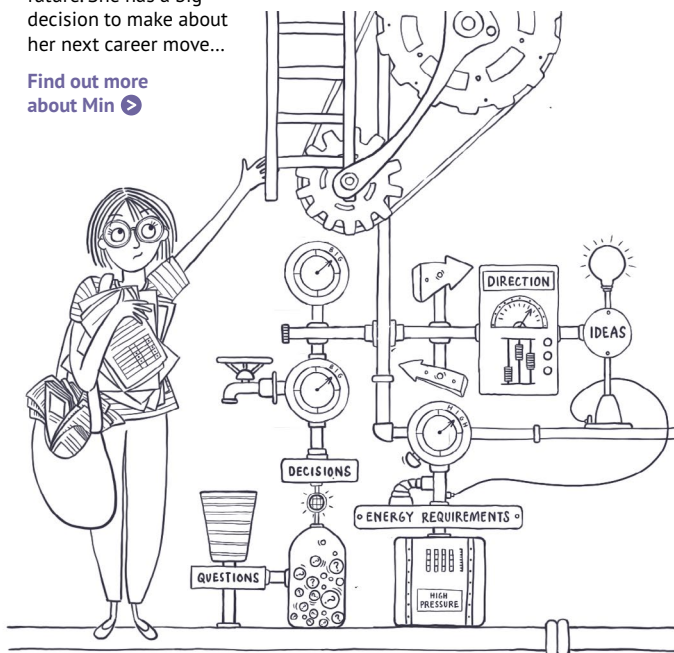
4.2.3 Precarity
Across the sector, the short-term nature of grant funding for research establishes a system of short-term employment at the early stages of an academic research career. The precarity of fixed-term contracts was consistently cited as a challenge for career progression amongst early career researchers. Across the sector academic (incl. research staff) women (35%) are more likely than men (32%) to be employed on fixed-term contracts (FTCs).[30] At Imperial these statistics are considerably

higher than the sector averages, with 65% of women in academic and research roles (inc. clinical) employed on FTCs compared with 51% of men.* Therefore, whilst precarity is an issue that impacts both men and women, a greater proportion of women are affected by the challenges associated with fixed-term employment, which include stress, job-related anxiety, overwork, visa issues, financial concerns, ineligibility to apply as a PI for funding, ineligibility to supervise PhD students, difficulty in making longer term career plans.[31,32] Coupled to this, several contributors described examples of women employed on short-term contracts being ineligible for or experiencing difficulties accessing maternity pay and/or contracts expiring during maternity leave, which in some instances had resulted in women exiting academia.

This is Min, she's feeling uncertain about her future. She has a big decision to make about her next career move...

Find out more about Min ➤

> ## If there was career stability, there would be more women, but it's basically impossible.

The issues associated with job precarity can significantly inhibit productivity and individuals' ability to focus on career building activities and were frequently cited by contributors amongst the key reasons why women question whether to continue in academia or pursue more stable non-academic employment options.

"I think being under constant pressure to produce good work and short contracts has negatively affected [me]. There's a whole load of events [...] I've missed out on because I've been under quite a lot of pressure to do this stuff."

"I could imagine being in this career for quite a while but on the flip side of that is like all the negative stuff about higher education, like insecure contracts and the pension being cut and all this kind of stuff and [...] it's like really frustrating[...], for the first time I had my contract, like the first day I was like okay, what's my CV now?"

4.2.2 Sector expectations and cultures
Throughout all phases of the project, contributors discussed sector-endemic issues of high workloads, long hours working cultures, heightened expectations of students, competitive cultures, pressure to publish, expectations of mobility, scarcity of funding, and output focused assessment processes as key challenges to academic progression.

*Data provided by Imperial HR 2022

"That kind of mentality that everyone's got to constantly be online and I think that needs to stop."

"I think sometimes there's a pretence of sort of superhuman capabilities in academics. But all it does is it creates an unsustainable situation where people feel they can't ask for help or they have to be on tap 24 hours a day."

"There's definitely an issue at sector level [...] I think a lot of it is to do with the historical working style of universities [...] there's that culture of working all hours being valued"

Whilst these issues are relevant to all genders, the facts that academic women are more likely than men to:

- Take (potentially multiple) extended periods of leave for maternity/caring reasons
- Be employed on fixed-term contracts
- Work part-time
- Be allocated student focused administrative roles
- Be subject to gender-based biases and/or discrimination

Leads to compounded impacts of these sector-level challenges for academic women.

4.3 Institutional challenges

Whilst recognising that Imperial has put considerable effort into gender-equality related initiatives in recent years, project contributors discussed a variety of challenges for academic women that continue to manifest at the institutional level. The major themes identified in the data are discussed in the following sections.

4.3.1 Celebrations of progress masking continuing problems

As discussed in Section 3, the College and departments have implemented a wide range of initiatives and practices to attempt to address gender disparities, many of which our contributors acknowledged as facilitating factors for their career progression (see Section 5 for

discussion). There is a good story to tell with respect to Athena Swan, positive initiatives, increasing proportions of women recruited and promoted and women occupying some of the top roles in the institution. Despite this progress however, Imperial remains an unequal organisation for women to develop their academic career. Imperial's institutional gender facts (fig. 6) indisputably demonstrate that the College still has a long way to go to build an equitable workplace in which women can progress their academic careers and be equally represented in the academic system.

Some contributors expressed concerns that Imperial's positive news stories and focus on communication of achievements with respect to gender equality serve to mask the remaining issues and lead to a downplaying/denial of the remaining institutional challenges.

"They also hold up individual star people, to say, 'Well this means the system can't be bad'. So I have my head of department saying, 'Oh well we don't have problems at Imperial because she exists'. You're like, no, it's more nuanced than that."

"I have sat in meetings only a few years ago where 'alpha males', so to speak, would challenge the need for equality."

"People [are] not acknowledging there's something to be changed."

It is of course important and appropriate to recognise positive progress and achievements, however, this needs to go hand in hand with facing into the challenging side of the story, acknowledging, and raising awareness of the remaining struggles still ahead, to ensure that gender equity remains a priority focus at every level of the College.

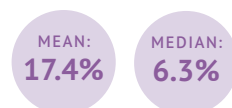Figure 6. **Gender facts at Imperial College London 2022**

Academic women at Imperial*:
incl. research staff and clinical academics/researchers

Only **1/3** of the overall academic/research workforce at Imperial are women

Women occupy fewer than a third of Imperial's senior leadership roles.

Gender pay gap (all staff) at Imperial

MEAN: **17.4%** MEDIAN: **6.3%**

Academic women at Imperial are:

more likely to be employed on fixed-term contracts than men (W:65% M:51%)

more likely than men to be employed in 'entry level'** roles (W:60% M:50%)

At Imperial women account for just:

17.2% of Academic Professors

22% of Clinical Professors

11% of Principal Research Fellows

These figures are well below the UK average.

Women lead, or co-lead, just **6.9%** of Imperial startup companies***

*Data acquired from Imperial HR April 2022. **Lecturer, Clinical Lecturer, Research Assistant & Associate. ***Data acquired from Enterprise April 2022.

4.3.2 Institutional practices/processes inflexible towards different career rhythms

It is evident from our participants' stories that the pace and progression of a woman's career can vary significantly at different stages in her life. There were a wide variety of factors described by contributors that disrupted (sometimes positively, sometimes negatively) their career rhythms at different stages of their life. Key influences on academic career rhythms included pregnancy and parenting, caring responsibilities, career breaks, health issues, contractual changes, funding, workload, and additional professional responsibilities (e.g. clinical work). Our contributors indicated that institutional processes often did not fully allow for/acknowledge different career rhythms.

This is Bree. She has recently returned from maternity leave and is navigating the challenges of being a working parent.

Find out more about Bree ⊘
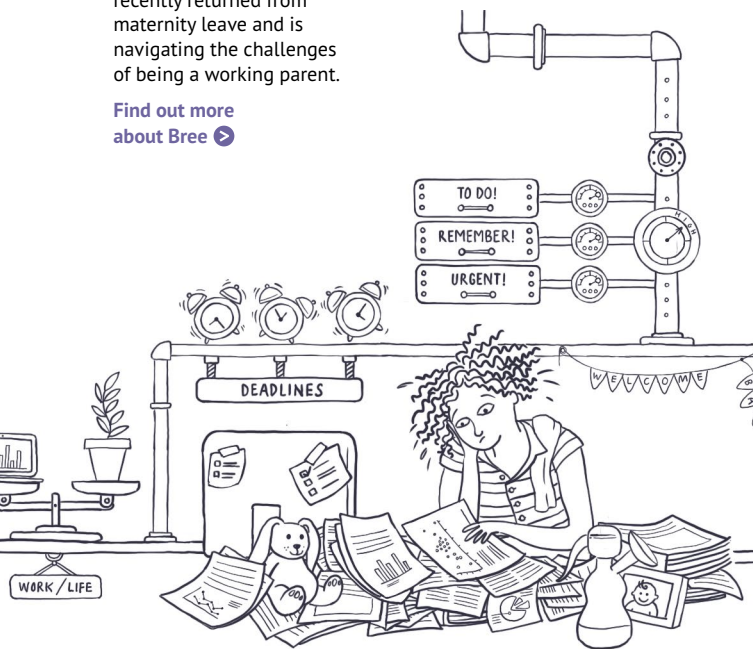
For example,

- Part-time academics being given the same deadlines for internal processes such as funding opportunities/ promotion effectively meaning they have less time than full time workers to complete the same tasks.

- A perception that probationary and promotions processes rely heavily on a 'normalised view' of the rate at which a career should develop and the level of outputs and achievements expected.

- Workloads not being adjusted to accommodate changes in rhythm.

- (Some) managers not being supportive/accommodating of temporary changes in rhythm (e.g. if an individual needs to take time away for caring responsibilities, still expecting them to be in touch/working).

"Firstly, the very short timeline, when it's advertised by the department, the promotion application process. Not a lot of notice is given if you consider that people might have deadlines and all that sort of thing. But also considering if someone's part-time and doesn't work say a Friday and a Monday then it might actually extremely disadvantage them because they've had even less time."

"It's not like there's anyone else to pick up the slack at a difficult or pressured time. Your role is your role. And likewise with me being part-time, my role would be no different if I was five days a week, if I was full-time. My role is exactly the same as it would be. So of course that just means things take longer or are more pressured or whatever."

"I emailed to say "Will it be taken into account that I'm not full-time?" Because presumably if you're 0.8 you might not achieve the same as someone who was full-time. And I never really got an answer […] there was a big lack of recognition of part-time working and whether that can be taken into account in probation."

4.3.3 Hidden information and contributions

A clear theme of 'hiddenness' was identified in contributors' experiences and has two key elements which are addressed here in turn:

(a) Information, knowledge, and access that is 'hidden' from women

Navigating and building a career in a complex organisation requires individuals to develop and act upon an understanding of the procedures, policies, practices, requirements, opportunities, and groups that have a bearing on career progression. Contributors perceived that this information was not always easy to find or transparent and that there seemed to be unwritten 'rules of the game' that were not easy to gain knowledge of. Women perceived that often this knowledge is acquired through 'word of mouth' discussions, signposting of information by others and that navigation of the 'system' is easier if you have access to a network of peers and influential supporters to guide you (see section 5.2 re. advocacy). Women often described needing to 'find things out for themselves' and feeling unsure about how best to meet requirements and expectations that seemed somewhat opaque.

❝

It's a bit like the more senior people; they've figured it out, they know the rules of the game, but when you're just coming to it it's kind of like a new culture in a way where it's just sort of like what are the unspoken rules? Am I following them? Am I breaking them?

❞

"So I was still - even in the basics like at which point do you decide that a paper should be submitted for publication? Where should you submit it for publication? These kind of unspoken things."

"you don't realise the insider knowledge other people are getting. Like you think you are being given all of the information. So for example, around promotion, there's paperwork around this and so you feel like you have most of the information. You don't realise until you have a conversation with someone who's willing to speak a little bit more off the cuff."

This issue of course, is not limited to women; understanding the complexities of academia and organisations is challenging regardless of gender. However, as discussed, women are in the significant minority at Imperial and can find it challenging to access the networks that might otherwise support their navigation of the academic environment. This means that to progress, those women who miss out on signposting, 'inside information' or support from others to understand the institutional system must spend more time and energy to build their awareness and to figure things out alone. Even then, no amount of individual investigation will reveal 'unknown unknowns' if there is a lack of clarity and/or unwritten rules in relation to academic career progression.

(b) Women's contributions that are 'hidden' or unrecognised
Many contributors discussed perceptions that being a woman in academia results in a substantive proportion of 'extra work' which is neither accounted for nor adequately recognised within institutional practices. Examples of this additional workload described by participants included:

- Higher burden of student pastoral care – students are increasingly in need of pastoral support and appear more inclined to seek such support from female staff.
- Mentoring/role modeling for others – e.g. being one of

few women in a department means a higher mentorship load if other women seek out female mentors.
- Often being required to be the 'female representative' e.g. in meetings/committees/panels in the male dominated workplace.
- The administrative load that comes with the roles women are more commonly assigned (e.g. student facing, organisation, events, EDI)

Mostly, women were not resentful of undertaking this work and often described a sense of pride and/or satisfaction from these activities. However, they were concerned that the time and often emotional labour spent on these roles can be at the expense of other activities that are perceived to be of higher value to the institution in terms of career progression.

This is Valentina, a mid-career academic who is juggling multiple responsibilities.

Find out more about Valentina ⊙
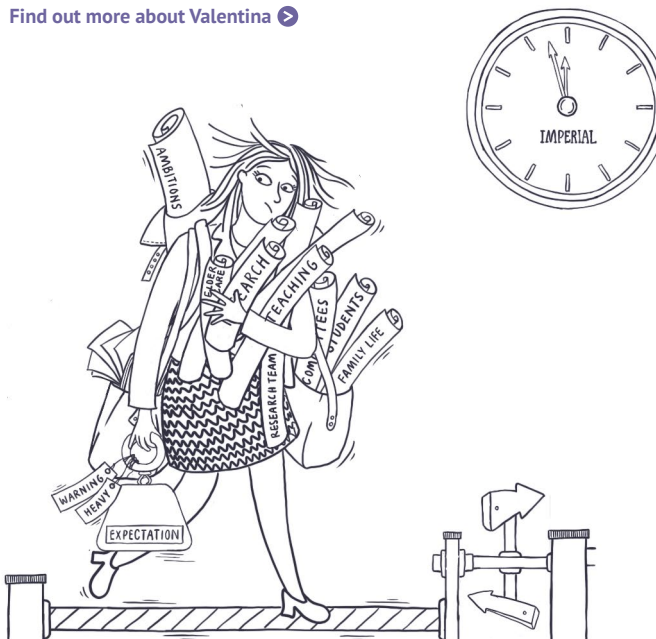
"The issue I have at the moment is that I see that women get asked to do a lot of the extra stuff. And because there's relatively few women at a certain level, therefore you have to be on every management committee, every job interview, you're the token woman."

"Even if roles are defined it might be just that students are more likely to go to women for those kind of conversations."

"[I took] on a heavy admin role a bit too early on - good for visibility and experience, but it impacted research outputs from my group."

"I know [with] other female colleagues, there is a bit of a push towards women being more involved in pastoral care, I think, which I think comes down to gender stereotypes, doesn't it really?"

"I now have female colleges that have come to me and have asked me to be their witness in HR complaints, procedures and stuff. Again I'm very happy to support them in any way I can but that's a thing on my time that is not going to be asked of my male colleagues."

"Especially if you've also done undergraduate education with the massive degrees of pastoral care and like have you done this mental health training to make sure they don't [hurt] themselves, [...] And all of that is at the expense of research, industry engagement and writing because it takes a huge amount of time and you do it all without any support. So on paper it looks like you had two modules with X number of students but the work is three times that much."

"[There's] a lot of work on the relatively few senior women and so I spend my life in committees. But then it's questioned why have I not published that paper or done whatever bit of research, because that's what in theory we're all here to do."

The sentiment from contributors was not that women should necessarily do less of these types of work (this would need to be judged on an individual basis), but that where women engage in these activities, institutional processes should allow for them to be robustly accounted for, valued, and recognised in relation to their progression.

4.3.4 Policy versus reality

Contributors identified that a wide range of Institutional policies, processes and training already exist at Imperial to promote inclusive, transparent, and fair practices to facilitate equal opportunities, and eliminate bias/discriminatory practices in the workplace. However, many participants expressed scepticism about how effective these are in reality at addressing the gender-related barriers to progression. There was a perception that often well-intentioned policies are not well known, monitored or enforced, that managers are reluctant to attend EDI related training, and that undesirable practices or behaviours are allowed to pass without significant consequence.

In alignment with the discussion in (section 4.3.1), concerns were raised that the presence of a policy/procedure can lead to an institutional belief that an issue has been addressed and that no further action is required, despite challenges remaining unresolved. Additionally, policies that are implemented without visible monitoring or consequences, lead to a lack of faith in the processes and undermine staff confidence to engage with the policies and practices intended to support them.

"As an institution, unwilling or uncomfortable to take action against those who fail to comply with policy"

"Getting people on the ground, local management, PIs and line managers to change what they do and how they behave. Institutions can implement a fantastic policy, but if it is not followed......."

4.3.5 Institutional 'coldness'

As a project team we were overwhelmed by the number of women at Imperial who volunteered to give their time to tell us their career stories for this project. We were also struck by the deeply personal and challenging nature of many of the stories they chose to share with us. These included stories of personal tragedy and bereavement, physical illness, long-term caring roles, infertility, miscarriage, relationship breakdowns, bullying, sexism, sexual harassment, mental health issues. It was evident that in most instances women had not previously discussed these experiences with managers/colleagues in the workplace and had largely forged ahead aiming to minimise any interruption to work whilst dealing with intensely personal challenges. In several cases women explicitly stated that they did not feel able to disclose personal challenges at work in case it would count against them, indicate a sign of weakness, and/or a lack of commitment to their work.

"I think people don't think about you as a whole person, it's always about this is what you have to do to be academically successful."

"I actually had a miscarriage, and I was too scared to tell any of the senior people that I was miscarrying because I was actually worried about my future as a postdoc."

As an institution, Imperial's overriding commitment is to excellence. As identified in the 2015 review of Imperial's institutional culture[34] this establishes a culture that is driven, competitive and achievement focused. This enables Imperial to recruit the best students and world leading staff and consistently top the league tables. However, it also establishes a culture which seemingly lacks empathy, leaves little space for people to attend to their physical and emotional wellbeing, and feels unsafe for staff to be able to bring their whole selves into the workplace. This we term here as institutional 'coldness'.

> **I was so petrified to have the senior people in that department to know that I was even considering falling pregnant, for the sake of my career.**

It was clear from our discussions with contributors that academic women at Imperial are intensely committed to and focused on their work and to achieving the best possible results in all aspects of their role(s). As human beings they also encounter a wealth of experiences (positive and negative) within their personal lives, which will inevitably at times intertwine with the ways in which they need to approach their work. An institution where people do not feel psychologically safe[35]/supported to raise issues and request adjustments during times of personal need risks staff being open to range of negative consequences. These might include a decrease in morale, motivation and productivity, resentment of the workplace and/or managers, isolation, disenfranchisement with academia, stress related illness, burnout, depression and potential for other mental health complications.

For women striving for progression at Imperial, institutional 'coldness' is, at best, a hinderance for their academic journey and at worst can be catastrophic, not only for their science and academic career, but for their long-term personal wellbeing.

So the way I look at my academic career is very much the way I would look at a divorce. In the sense that I loved it deeply, like it was my life, and I fell out of love with it, and I feel like it became an abusive relationship where I needed to take care of myself and that's why I left.

We note that Imperial has recently redefined its core organisational values of which collaboration and respect are two of the five defined values. This is a positive development in recognising the importance of the human beings behind the institutional excellence. To address institutional 'coldness' Imperial will need to fully embrace and enact these values at all levels of the organisation and, in addition, identify opportunities to emphasise the importance of empathy and psychological safety for the benefit of all staff.

4.4   Local challenges

The day-to-day experiences of the women we spoke to varied significantly and are heavily influenced by their local working environments, particularly with respect to working relationships, group dynamics, departmental culture and management practices. Women that were working in groups/departments with positive, supportive practices identified fewer immediate challenges and were more able to identify the factors that have helped them with career progression (section 5). However, a considerable proportion of our contributors described challenges within their immediate workplace that not only affected their day-to-day experiences and general wellbeing, but also impacted their longer-term ability to make progress. The key themes of localised challenges are discussed in the following sections.

4.4.1 Unsupportive management practices
We have written extensively in previous projects,[36,37] about the influence of management practices on experiences of academic staff, and once again this was identified as an important theme relating to women's progress in academia. The experiences of management practices amongst our contributors were extremely varied. In Section 5 we will consider how good management practices are a key facilitating factor in women's progression, and many of our contributors described excellent experiences and support from their managers. However, unfortunately we also heard several stories (many on the understanding that they would not be directly quoted) of managers who actively blocked women's progress, denied development opportunities, exhibited sexist behaviours, were unwilling to flex to accommodate women's caring responsibilities, undermined women's achievements, demanded unreasonable working hours/expectations or underestimated women's abilities.

"my line manager, mentor, department head, he was all of the things at the same time, so maybe that's flag. He [...] said, you are already on a fellowship, why do you want another fellowship? [...] He was also someone who said don't write grant applications."

"I remember sending an email to my line manager saying, I'm feeling really anxious, I'm struggling [with] how to cope with this and he never replied."

Academic management structures, particularly for early career researchers, establish a hierarchy in which managers have significant influence/power over the career progression of their staff. Therefore, unsupportive management practices will likely impact anyone's progression opportunities, regardless of their gender. However, when taken into consideration amongst the range of other gender-related challenges women in academia must overcome to progress, it is understandable that, when faced with the additional obstacle of an unsupportive manager(s), for some women the managerial relationship becomes a determining factor in the decision whether or not to continue their academic journey.

"I guess the academic setting is still very hierarchical and it's still very much dependent on [...]like one person and if that relationship isn't highly supportive, for whatever reason, then you're at a huge disadvantage compared to other people."

4.4.2 Male dominated spaces
As already discussed, academic women are in the minority at Imperial, outnumbered by men 2:1. At all phases of the project we heard from women about the challenges of often finding themselves in male dominated spaces, and the concept of being 'the only woman in the room' was frequently discussed. Some contributors had consistently worked in male dominated environments from being one of few girls in their chosen subjects at school and/or the beginning of University on male dominated degree courses. Others had not noticed a difference in male/female numbers until they progressed to their first academic positions and started attending staff meetings where very few women were present. Often the women who were working in male dominated environments spoke about it just being 'how it is' or 'being used to it', having grown accustomed to a normalised view of the male dominated workplace. However, it was evident from these

> **I was in a very male dominated team, I absolutely hated it. We had like discussions and I was told oh, you're the only one who feels like that, people kind of not willing to change because there was a problem with me rather than a problem with the group.**

women's stories that male dominated spaces present a range of challenges for their day-to-day experiences and progression including:

- Lad culture/machoism in workspaces
- Gendered/sexist behaviours (see 4.4.3)
- Gendered assumptions and role assignments (e.g. the woman in the group does the organising, makes arrangements for others, deals with students, works on EDI issues)
- Being excluded from social activities
- Being spoken over or ignored in meetings
- Being overlooked for opportunities and/or underestimated
- Denial of gender-related issues
- Being the 'token woman' for panels, committees (see 4.3.3 re. additional work)

This is Ameera, she is ambitious for her future. She's the only woman in her research group.

Find out more about Ameera ▶

Whilst not all women in male dominated environments experience these challenges equally, it was evident from our contributors that the impacts of these challenges can manifest in making women feel unwelcome, uncomfortable, isolated, unrecognised, and undervalued. Being one of few women selected for opportunities (e.g. talks, prizes, leadership etc) can lead to women questioning whether they were selected on the basis of merit or gender. In some instances, this is reinforced by male colleagues undermining women's achievements.

"It's a bit of a double-edged sword but I think that being invited to things, you know, there's always that feeling of like am I being invited because they need better stats?"

"...she won a [name] Fellowship, which is of course one of the most competitive and one of the best fellowships you can get and her colleague, who still works at Imperial, said to her, "Oh, they must not have had many applications this year.""

None of our contributors indicated that male dominated spaces would be a significant driving factor in questioning whether to remain/progress in academia. However, it was clear that longer-term, the impacts can significantly damage women's sense of belonging within their workplace and broader academic community. This in turn can lead to 'internalisation' of issues (see Section 4.5) that contribute to self-doubt, responsibilisation and questions of worthiness, which can serve to undermine women's efforts to progress.

"Sometimes in meetings you see that a woman maybe gets talked over a bit more. Then you doubt yourself, like 'Oh, maybe what I was saying was stupid so that's why that person has just talked over me'. [...]I don't see that happening as much to men."

"I think if you perceive to be the odd one out in some way, and even if it's not a direct sense of not belonging, I think it's harder to kind of flourish in that scenario."

"...other guys who would, you know, they would both go to the gym together and then they would go to have a drink together, I was never invited to that."

"[My] professor [...] kind of actually apologised for having underestimated me all the time I'd been his PhD student."

"Sometimes people ask you to be part of a grant or collaboration just because they need a woman."

*"Just the lads, lads, lads jokes, that kind of thing that are so off-putting"*

"Most of the Athena Swan Committee was women. Now you could say positively well at least women's issues are getting represented, but negatively why are women doing all the work?"

"I can feel ignored and not listened to and sometimes, overlooked."

"If you want to really get your point through, you need to, they don't really make the room for you, you have to make the room for yourself."

"[I was] not getting invited to conferences, not getting chosen for speaking panels. Not physically and psychologically able to stay out and go to the cigar bar at 3am at a conference, or the whisky bar for the new faculty retreat."

"With my first supervisor, he kind of was like making hints of, 'Oh this is too hard for you, you should just drop out'.""
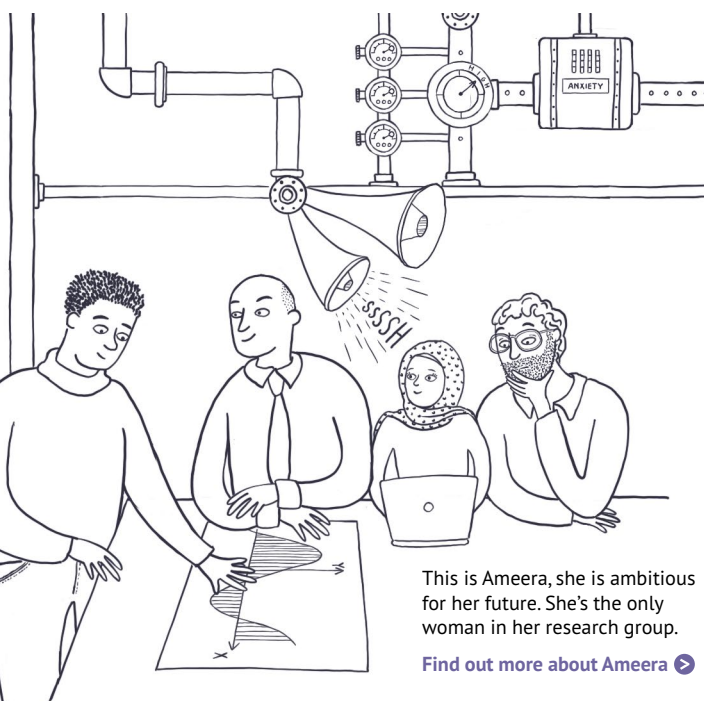
4.4.3 Gendered/sexist behaviours

Experiences of overt and covert sexist and/or gendered behaviours were commonly described by contributors at every stage of our data collection. This ranged from overtly sexist remarks from colleagues, to gendered assumptions (e.g. assumptions that women will take meeting minutes, arrange catering etc), to women being ignored/spoken over in meetings, gendered student feedback, and women being advised to act, speak, dress in particular ways in order to progress.

It is likely that in many instances the perpetrators of sexist/gendered acts are acting without malintent and may not be aware of the damaging outcomes of their behaviours. Indeed, even the victims of incidents of more 'diffuse' sexist behaviours, whilst often recognising situations didn't 'feel right', were not always explicitly aware that they had experienced sexism/gender-based aggression until this became validated in discussions with others. Nevertheless, each and every act of sexism and gender-based aggression counts and adds to an environment of marginalisation and hostility towards women. However seemingly 'harmless' or insignificant individual incidents might appear, every time such acts occur women are served with messages (either explicit or implicit) that they do not belong, are not welcome and are not deserving of equal rights and respect.

Gendered behaviours present a significant obstacle to women's overall day-to-day experiences of work. Additionally, the knock-on effects can have tangible consequences for longer term progression. Whilst usually these incidents are isolated events, rather than systemic organisational behaviours, they left long lasting impressions on the women who experience them, leading to a range of negative individualised outcomes including discomfort/avoidance in certain situations (e.g. meetings/events), a sense of not-belonging/not being valued, self-doubt, disengagement or loss of energy or motivation.

"When I was pregnant, somebody told me to hide my stomach going into a meeting."

"I find that some of the things that students would say were not related to performance for lecturing. It was kind of personal let's say [...] students expect us to be is either really friendly to them, almost motherly like and if we're not, sometimes the students don't like that."

"One of my colleagues was very sexist and he gave the task to one of the men. They didn't end up doing that, it was given to me and he was no longer interested in the results."

"There are still a few dinosaurs that think women shouldn't be in these positions everywhere. They will basically discourage or do low-level things, like accidentally forget your contributions and leave you off a paper, that kind of thing."

"I was the only woman in the group. And I remember that sometimes I was presenting and someone was asking a question and someone else was replying in my place."

"My professor at one point asked me about my biological clock and I just thought I don't think I'd be getting this question if I was a male postdoc."

"[I was] asked if I was a secretary [...] in meetings."

"But what I do know is that as an assertive woman that puts things forward in a pretty clear way, you really get a label of the bossy, oh god, a pain."

"Even still sometimes, like, he will just take control of the meeting, like, just by talking a lot or, like, he knows best, even though, [...] I finished my PhD the year before him, and we have different experiences that we can both bring to the table."

Yeah, I mean I did have a couple of things that were a bit odd and I do think they were to do with me being female like, for example, people saying how I dressed was meaning that I didn't have, what was the word they used? 'Gravitas'.

Sexist and gendered behaviours deserve no place at an institution where **respect** is a publicly stated core value. Moving forward it is imperative that Imperial acts firmly and decisively to address such behaviours and ensure that all members of the College are fully aware of what constitutes sexism and gender-based aggression in all guises. A lack of awareness cannot be an excuse.
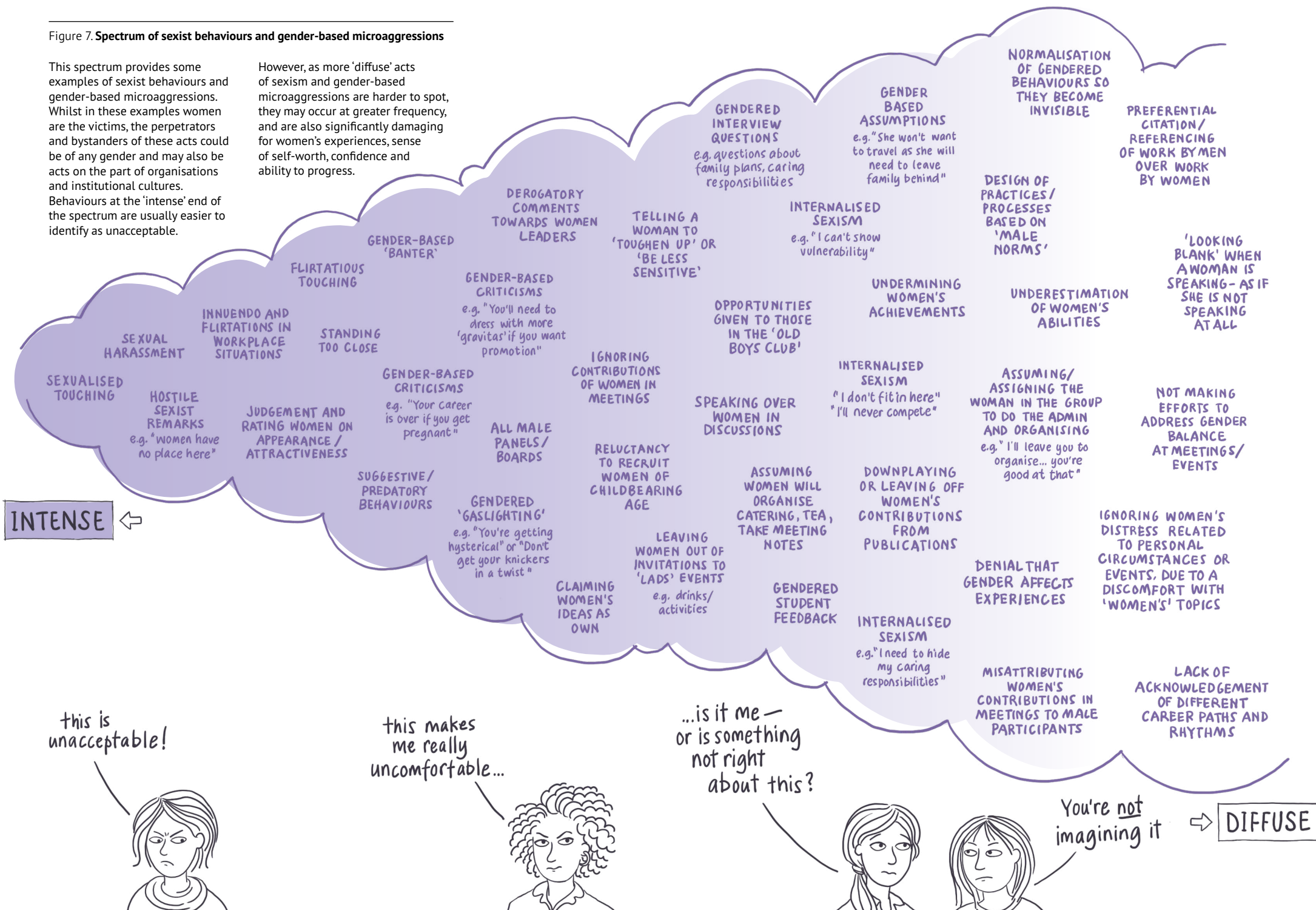
Figure 7, was developed by the project team, informed by the experiences shared by our project contributors along with our own subject knowledge, to model the broad spectrum of behaviours that constitute sexist/gendered behaviours in academic settings. These examples are by no means exhaustive, but are intended as a tool to aid future discussions and learning around these topics at Imperial.

Figure 7. **Spectrum of sexist behaviours and gender-based microaggressions**

This spectrum provides some examples of sexist behaviours and gender-based microaggressions. Whilst in these examples women are the victims, the perpetrators and bystanders of these acts could be of any gender and may also be acts on the part of organisations and institutional cultures. Behaviours at the 'intense' end of the spectrum are usually easier to identify as unacceptable.

However, as more 'diffuse' acts of sexism and gender-based microaggressions are harder to spot, they may occur at greater frequency, and are also significantly damaging for women's experiences, sense of self-worth, confidence and ability to progress.

NORMALISATION OF GENDERED BEHAVIOURS SO THEY BECOME INVISIBLE

GENDER BASED ASSUMPTIONS e.g. "She won't want to travel as she will need to leave family behind"

PREFERENTIAL CITATION/ REFERENCING OF WORK BY MEN OVER WORK BY WOMEN

GENDERED INTERVIEW QUESTIONS e.g. questions about family plans, caring responsibilities

INTERNALISED SEXISM e.g. "I can't show vulnerability"

DESIGN OF PRACTICES/ PROCESSES BASED ON 'MALE NORMS'

DEROGATORY COMMENTS TOWARDS WOMEN LEADERS

TELLING A WOMAN TO 'TOUGHEN UP' OR 'BE LESS SENSITIVE'

UNDERMINING WOMEN'S ACHIEVEMENTS

UNDERESTIMATION OF WOMEN'S ABILITIES

'LOOKING BLANK' WHEN A WOMAN IS SPEAKING- AS IF SHE IS NOT SPEAKING AT ALL

GENDER-BASED 'BANTER'

FLIRTATIOUS TOUCHING

GENDER-BASED CRITICISMS e.g. "You'll need to dress with more 'gravitas' if you want promotion"

INNUENDO AND FLIRTATIONS IN WORKPLACE SITUATIONS

STANDING TOO CLOSE

OPPORTUNITIES GIVEN TO THOSE IN THE 'OLD BOYS CLUB'

INTERNALISED SEXISM "I don't fit in here" "I'll never compete"

ASSUMING/ ASSIGNING THE WOMAN IN THE GROUP TO DO THE ADMIN AND ORGANISING e.g. "I'll leave you to organise... you're good at that"

SEXUAL HARASSMENT

IGNORING CONTRIBUTIONS OF WOMEN IN MEETINGS

SPEAKING OVER WOMEN IN DISCUSSIONS

NOT MAKING EFFORTS TO ADDRESS GENDER BALANCE AT MEETINGS/ EVENTS

SEXUALISED TOUCHING

HOSTILE SEXIST REMARKS e.g. "women have no place here"

JUDGEMENT AND RATING WOMEN ON APPEARANCE / ATTRACTIVENESS

GENDER-BASED CRITICISMS e.g. "Your career is over if you get pregnant"

ALL MALE PANELS/ BOARDS

RELUCTANCY TO RECRUIT WOMEN OF CHILDBEARING AGE

ASSUMING WOMEN WILL ORGANISE CATERING, TEA, TAKE MEETING NOTES

DOWNPLAYING OR LEAVING OFF WOMEN'S CONTRIBUTIONS FROM PUBLICATIONS

SUGGESTIVE/ PREDATORY BEHAVIOURS

GENDERED 'GASLIGHTING' e.g. "You're getting hysterical" or "Don't get your knickers in a twist"

LEAVING WOMEN OUT OF INVITATIONS TO 'LADS' EVENTS e.g. drinks/ activities

GENDERED STUDENT FEEDBACK

DENIAL THAT GENDER AFFECTS EXPERIENCES

IGNORING WOMEN'S DISTRESS RELATED TO PERSONAL CIRCUMSTANCES OR EVENTS, DUE TO A DISCOMFORT WITH 'WOMEN'S' TOPICS

INTENSE

CLAIMING WOMEN'S IDEAS AS OWN

INTERNALISED SEXISM e.g. "I need to hide my caring responsibilities"

MISATTRIBUTING WOMEN'S CONTRIBUTIONS IN MEETINGS TO MALE PARTICIPANTS

LACK OF ACKNOWLEDGEMENT OF DIFFERENT CAREER PATHS AND RHYTHMS

this is unacceptable!

this makes me really uncomfortable...

...is it me— or is something not right about this?

You're **not** imagining it

DIFFUSE

4.5 Individual challenges

As discussed in the preceding sections, academic women are aiming to progress their careers within a complex ecosystem that presents a broad array of systemic challenges at every level.

Without exception, every woman we heard from throughout this project had experienced, to varying degrees, a combination of this plethora of issues within the academic system. Often there was a conscious recognition of the variety of factors that hinder women's progression within our contributors' stories, however, for some it was more subtle, normalised and/or downplayed as 'the way things are'.

Some women indicated that the systemic challenges act as drivers to push them to overcome and succeed despite perceived barriers. Many of the senior women that contributed to the study discussed requiring significant 'grit' and individual determination to be able to overcome challenges and progress.

"[I have had] to have [...] mountains of determination and to have worked/work very hard (not conducive for a balanced work-family life!)."

"[I have] determination, not easily deterred. Persistence. Having interesting and original ideas."

"I'm very, very stubborn and if people try to put me off, it's different if I think there's a legitimate reason, but if it's just, "Oh, you're a female", then no, that's not good enough for me so I don't – I'm quite good at not listening to those voices."

However, for others the weight of the challenges in the broader academic system leads to an 'internalisation' of the issues, which generates a range of challenges for women that emerge at the individual level. These included feelings of self-doubt, imposter syndrome, guilt, challenges with confidence, fear, feeling responsible to

be better/prove oneself, feeling responsible for fixing their own and others challenges.

"Self-doubt is one of the things that can slow you up."

"I kind of wish somebody would sort of challenge some of my behaviour. We all have that voice in our head that's telling us something."

"You have to network, you have to put yourself out there, but there is a huge amount of inequality there."

> **"**
> **Some are kind of internal factors, it's like classic imposter syndrome, self-confidence, so I think that is a daily doubting yourself kind of thing.**
> **"**

Over time, for some women these internalisations can become difficult to forge a path through and can result in overwork, exhaustion, resentment, loss of motivation, drop in productivity, resignment, or 'checking-out' of the system entirely, all of which will have a significant detrimental impact on a woman's ability to progress her career in academia.

Informed by the stories of our project contributors, we have developed six composite illustrated character case studies designed to encapsulate some of the individual challenges experienced by women at different stages and choice points of their careers (Annex 4). These case studies

are intended as tools to stimulate discussions about what changes within the organisational system(s) might address these challenges at crucial points in the academic career journey. In the project 'story to solution' action groups, the case studies were used to consider what actions could be taken (at individual, managerial, institutional and sector levels) to address the challenges experienced by each 'character' (Annex 2, Session 4: Live illustration from Group 1's discussion).

It is our confident assertion that academic women experience these individual challenges, **not** because they are any less equipped to succeed in academia or that their gender somehow makes them more susceptible to these feelings. Instead, individual challenges arise because, as argued in sections 4.1 to 4.4, the academic system, and the broader society in which it operates, provide women, from a very early age, consistent messaging that they might not belong in an academic career.

It's essential that women's individual challenges to progression are recognised as ***symptoms*** of the current academic system and ***not the cause*** of the lack of senior women in academia. Therefore, while individualised interventions may be appreciated by women who benefit from them, they target the symptoms and not the root cause of gender inequity in academia. Instead, when considering what women need to progress in academia, Imperial and the academic sector must look for opportunities to address the multitude of challenges at the layers above the individuals in the academic ecosystem.
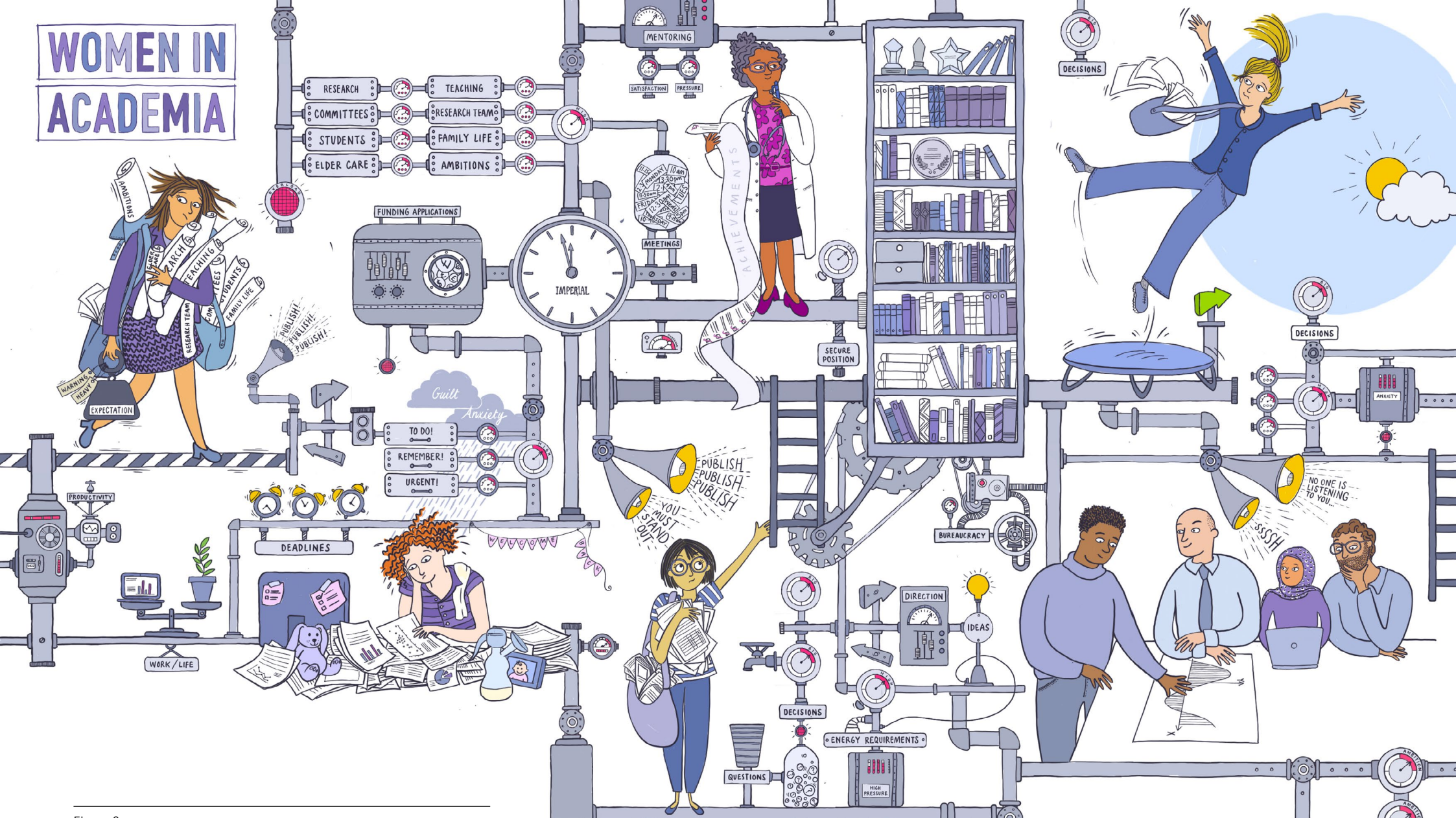
Figure 8
Women in the academic system

Six composite case studies were developed to illustrate the challenges women experience at different stages and choice points in their academic career.
Meet these six characters in Annex 4 ❯

5

WHAT DO WOMEN NEED TO PROGRESS IN ACADEMIA?

Throughout all phases of the project our contributors reflected on not only the challenges they have encountered on their academic journeys, but also on the factors have played an important positive role in shaping their career progression to date.

Many women discussed the importance of individual characteristics such persistence, determination and self-motivation for their progression. Without exception, it was evident that all the women that took part in this study (and every woman studying and working at Imperial) exhibit these qualities in abundance by the very fact that they progressed to a career at Imperial College London. Nevertheless, the challenges facing academic women's progression are so systemic and multifaceted, that it must not be left simply to individuals to 'tough it out' drawing on all their personal grit, resilience, and energy to survive their academic career and hope that against the odds they are the ones that beat the system.

Over the course of our last three projects with Imperial College London, this project team has spent well over 150 hours working directly with academic women at Imperial. From the knowledge we have acquired throughout our work at the College, it is our strong belief that women at Imperial are already well equipped with the personal attributes that they need to progress. Therefore, we argue that instead of asking what do **women** need to progress in academia? the question we must ask here is: what does the **academic system** need to do to enable women's progression?

Every woman's experience of the academic system is unique and of course there is no 'magic bullet' that will create an equitable institutional ecosystem. Nevertheless, through the reflections of our contributors about factors in the system that can/do facilitate women's progression, we identified 10 key themes (figure 9), which are summarised in the following sections of the report. It is evident that at Imperial there are already some excellent examples of positive practices in each of these core categories, which are making meaningful impacts. However, at present, these practices are inconsistently applied/experienced across organisational system. This leads to significant variation in women's experiences that still too often depends on the 'luck' of each women's individual set of circumstances in her immediate workplace.

To support Imperial's continued drive towards gender equity, it is essential that the College builds on the existing good practice by acting upon opportunities to improve consistency and embed positive practices at every level of the organisational system. As a starting point, we invite the College as a whole and every Department/Unit at Imperial, to reflect on the following 10 themes and ask:

What else can we do to consistently integrate these practices into our organisational system(s)?
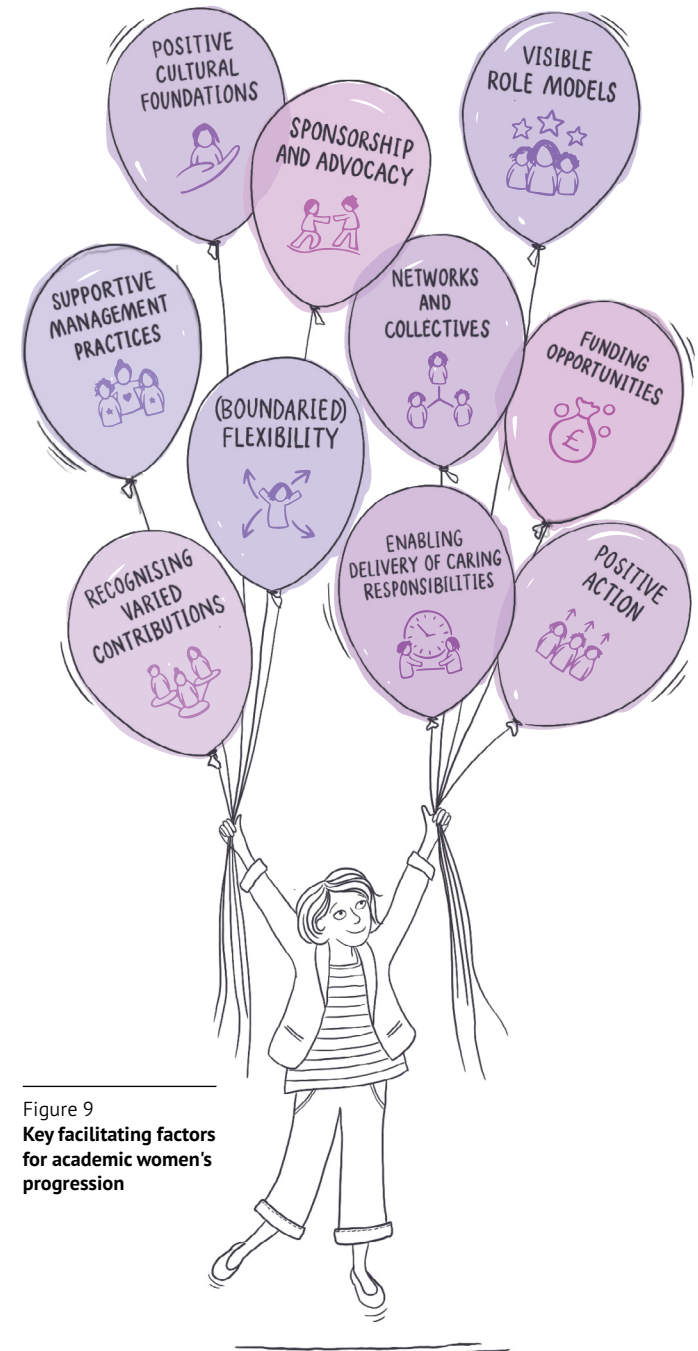
Figure 9
Key facilitating factors for academic women's progression

5.1 Positive cultural foundations

It was evident from the stories of our contributors that academic women who are working in departments and research groups that proactively work to create open, positive cultures, and a sense of belonging and community, were less likely to describe feeling that the challenges for their academic career were insurmountable. We heard examples of positive local workplace cultures that:

- provide spaces for discussion and acknowledgement of issues and challenges

- face into challenges and are open to trying new approaches to tackle difficulties in workplace cultures/practices

- are open to and normalise the range of different career paths/trajectories

- promote transparency of processes to ensure everyone has the information they need to meet expectations

- actively value and recognise the wide range of contributions from staff

- provide active encouragement for people to act upon opportunities for progression

- are accepting and accommodating of people's personal circumstances

- take positive action to promote diversity

- create opportunities for community building and practice sharing

- proactively monitor their approaches and take decisive action to drive positive change where required

"I think the key thing there was a kind of collective discussion of what was going well and being a busy place as you probably picked up and sometimes stressful place, you know, things can go wrong. And it's really how you eliminate those by being more supportive of each other, more understanding of each other, more inclusive as well. More understanding of diversity and so on."

"I guess that helps everyone's progression if there's more transparency within the College at every kind of step."

"I think they're a really great bunch of people and I really enjoy working with them and I kind of enjoying the collaborations that I've built up within the department and working with people on kind of generating ideas together, that's really nice. "

"My department's full of people I can go to. It's a very good department. My Head of Department first of all, the old one, the new one, they are very nice people [...] they are very understanding and very supportive, and my colleagues as well."

Women working in such environments felt supported, recognised and that there were possibilities for them to move in career directions that were meaningful to them. These positive cultural foundations act, to an extent, as a buffer to the range of challenges discussed in Section 4, as the local system is working with and for women. Women working in these types of groups/departments are therefore more able to focus on driving forwards with career possibilities rather than needing to battle with their organisational systems and cultures.

Unfortunately, however, due to the wide variation in practices and cultures in departments and research groups across the College, not all women at Imperial are working in such positive cultures and thus are more exposed to the impacts of the myriad challenges to women's academic progression described previously. This still too often means

that it is up to the 'luck of the draw' as to whether women find themselves in cultures that support or hinder their progression. Imperial must therefore work to promote and embed greater consistency with respect to positive workplace cultures. The College must draw upon and share good practices and act robustly when undesirable cultures and practices are identified and/or reported. In so doing, Imperial can lead the way in developing positive research cultures that serve to attract, retain, and promote diversity within the academic system.

5.2 Sponsorship and advocacy

A very significant theme from women who had made progress their career was the importance of the people who had actively encouraged and 'lifted' them at key moments (for example, encouraging a women to apply for a job opportunity/promotion, introducing them to a potential new collaborator/employer, facilitating attendance at an important meeting/event). Often these moments of encouragement and sponsorship came when women had an element of self-doubt and the input of individual sponsors at these moments were crucial to provide the momentum and confidence for them to take the leap towards their goal (or indeed to consider goals they hadn't thought of for themselves).

"So I didn't know whether to go for it because I had loads of other stuff going on and I very, very nearly didn't go for it, but I was encouraged to and ended up getting the promotion."

"I think somebody approached me and said you really need to think about now applying for senior lectureship and then I became much more... I think when I started doing that, I started to understand the process and what was expected of me and then I sort of grew from there."

Sponsorship/advocacy not only comes from individuals. Also notable was the role that institutional sponsorship

has played for some of our contributors – for example the Elsie Widdowson Fellowship for parents, the Springboard programme, Academic Women's programme, PFDC support, the institutional mentoring scheme, funding for conference attendance and internal fellowship opportunities are all examples of positive institutional advocacy that were noted by contributors. In addition, in recognition that some people may be hesitant to put themselves forwards for promotion, some departments indicated that they undertake annual audits each year to identify staff that should be actively encouraged to apply for promotion.

Our data shows that, individual sponsorship and advocacy are not evenly experienced by women at Imperial and that women are not equally aware of/able to benefit from institutional advocacy approaches. This leads to inconsistency of opportunities for women to benefit from active 'lifting' from individuals and the Institution. Figure 10 summarises the spectrum of behaviours experienced by our contributors, which ranged from active sponsorship and advocacy, to active discouragement and refusal of support/opportunities.

There is scope for the College to identify ways to further encourage consistent opportunities for sponsorship and advocacy from individuals and to take action where suppressive practices from individuals are identified. Additionally, Imperial should continue to invest in, raise awareness/access to, and broaden the range of institutional advocacy activities across the college.

Figure 10
Spectrum of sponsorship and advocacy

Project contributors described a wide spectrum of experiences related to sponsorship and advocacy, ranging from positive actions that supported and lifted them in their careers, to negative suppressive behaviours that held them back.
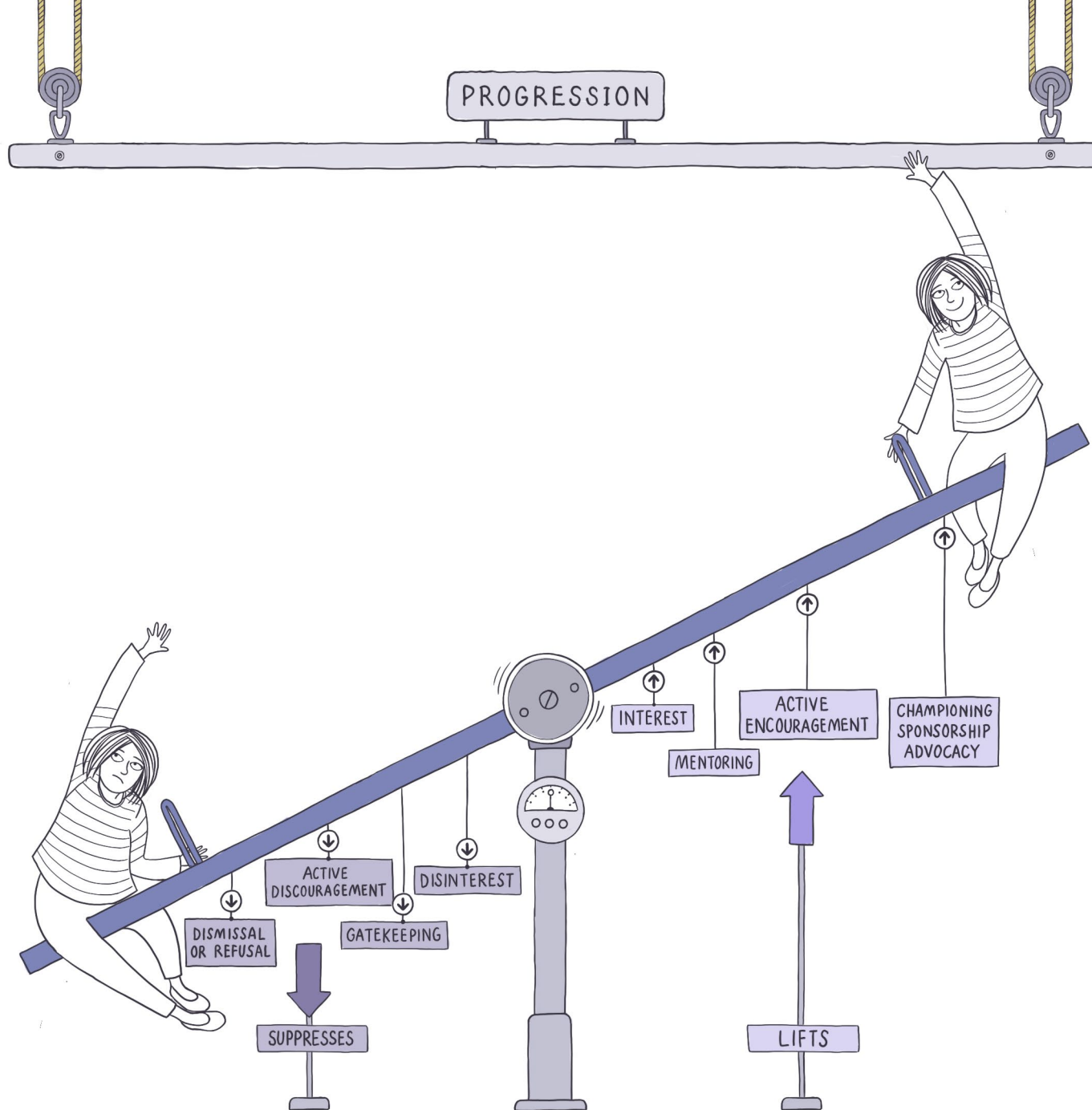
5.3 Visible role models

Many contributors noted the positive difference being able to see and learn from other successful women makes to their own motivation and confidence to pursue their careers. The importance of seeing women represented in senior leadership roles was also discussed.

"So, you know, there was no doubt that by working alongside her I upped my game [....and] made me perform at a higher level. So ultimately, without a doubt more women in senior roles, that is absolutely the fact ... the role model really does make a difference."

"Having women mentors as well, although whether it's formal mentors or like this person who just was almost mentoring me in that moment. But actually seeing women in those higher up roles I think is really important."

It is evident that across the College there has been concerted and commendable efforts to increase the visibility of women in academia with a drive for 50/50 balance of female/male speakers at events, celebrations of International Women's Day and 'Women at Imperial Week', profiles of academic women on internal webpages, academic women portraits project, and various departmental events and activities that showcase women's progress and achievements. Imperial's activity in this respect is commendable and should be maintained, and best practice shared between different areas of the College to ensure continued visibility of women across all levels and departments within the organisation.

Whilst increasing visibility of the current women within the College is important, as discussed in section 4, there is still the fundamental issue of underrepresentation of women in the overall staff body at at Imperial, particularly at senior levels and in leadership roles. This means the responsibility of 'role modelling' for others falls on the

> **...because there are such high-profile women, it doesn't feel like your career is limited. Having more female professors will encourage more people to apply...**

This is Bernadette, she is established in her career and wants to make things easier for junior women.

Find out more about Bernadette ▶

minority of academic women who have been able to progress to senior levels. It is, therefore, essential that Imperial be willing to take even bolder steps to recruit, retain and promote more academic women, to improve the representation of women at every level of the organisation, to increase the overall number of women in the academic system for students and junior staff to be inspired by and to learn from.

5.4 Supportive management practices

It was evident that academic women's progression is substantially facilitated by managers that:

- recognise their strengths and capability
- demonstrate empathy and genuine interest
- provide regular feedback and encouragement
- champion them for opportunities
- accommodate/adapt to personal circumstances
- demonstrate belief in their competence and ability to succeed

"And I remember that I was asking him 'What do you think about I want to be a researcher but I also want to be a mum, I want to be a wife, what do you think about it?' He told me, 'My suggestion is that you plan your job around your life, not your life around your job. Just do whatever you want with your life and the rest will work out in a way.' And that was very useful for me and that gave me a lot of peace."

"Having a really good mentor from my postdoc who has supported my career financially and through scientific discussion and showing interest."

"So, I had to have surgery [...] my Head of Teaching was, you know, I had a chat with him and he was like, you know, right, I'm taking everything away for that term and that was really positive."

"[I had] a supportive head of department and a positive attitude from Imperial."

"My PhD supervisor was key in allowing me to have constant discussions about work, collaboration with other groups and showing me how to tackle problems [...] and I have now gotten to learn new skills during my postdoc both thanks to the group and to my current supervisor."

The women we spoke to who had experienced supportive management practices often attributed significant credit to the managers/supervisors who had played a role in enabling them to navigate challenges and take opportunities to progress. However, as discussed in section 4.4.1, women's experiences of management practices are significantly varied across the College, and there was a sense from contributors that too often undesirable practices go unchecked by the College.

In striving to create an environment that is supportive for women's academic progression, Imperial should look to take every opportunity to encourage and recognise excellent management practices, improve consistency in experiences of management and take firm action where undesirable practices are identified and/or reported.

5.5 Networks and collectives

Project contributors identified the usefulness of having opportunities to connect with other academics, work collaboratively, exchange ideas, and discuss challenges and solutions within supportive groups. It was not considered essential that networks/collectives needed to be 'women only' and the benefit of being able to connect with a diverse range of colleagues to build a sense of community was recognised. Moreover, non-judgemental spaces where women could openly discuss the challenges of career progression with people with similar experiences, were thought to be particularly beneficial.

"So you've got like the parents' network through the PFDC and [...] I think especially, you know, they help all parents, but I do think especially it will have a huge impact on women."

Examples of existing regular networks/spaces at Imperial include the Imperial parents' network and women's networks in faculties/departments (e.g. Women in Physics, Women in Engineering, Women in Computing, Clinical

Women's Network). Additionally, a variety of events and training that bring together women across the College also take place throughout the year. These were appreciated by women that had attended and contributors considered it important for Imperial to continue to promote and raise awareness of existing opportunities as well as to explore options to develop additional spaces for women across the College to connect, learn from and support each other.

"Organise events where women can network and find people who can help with career progression, e.g. women's network so women can exchange ideas/resources, sponsorship network where sponsors can help support women, etc."

"A network that organises events for women to connect and support each other, this could be a monthly coffee session or a workshop for women, etc this will allow women who have relocated to build up new support networks and better adapt to their new careers."

5.6 Funding opportunities

Access to funding was considered by many contributors to be a crucial facilitating factor towards career progression. The women we heard from that had secured research funding identified that it helped them towards building their research profile and group, increasing visibility within their academic community, and meeting the expected requirements for probation/promotion.

"Just having resources and having that Imperial College fellowship behind me with such a large amount of budget under my control, meant that I could say yes to things and not worry if I could afford them."

"To have been successful in obtaining an MRC Career Establishment Grant that allowed me to start my research group."

One funding decision changed my career trajectory [...] from zero to hero.

"Internal funding calls [...] have been very useful to get projects off the ground, before applying for competitive funding."

For early career researchers, fellowship funding was considered particularly beneficial to act as a launchpad for their future academic career, and several women we spoke to had benefitted from Imperial's own internal research fellowship scheme. There was, however, recognition that research fellowship schemes are exceptionally competitive, and that the language used in calls for fellowship applications can sometimes be off-putting for women. Concerns about implicit gender-bias in funding processes were also discussed by some project participants. Additionally, the intense workload associated with making grant applications was noted as a potentially prohibitive factor for women in making applications, particularly for people working part-time and/or those with restricted schedules due to caring responsibilities outside of work. Several contributors indicated that additional/prioritised administrative support for applicants with these circumstances could facilitate a greater proportion of women successfully applying for research grants.

Aside from research funding, contributors also identified that funding to support parents/carers is also a key enabler. Imperial's Elsie Widdowson Fellowship that provides funds for parents on return from maternity/adoption/surrogacy/shared-parental leave to fully

concentrate on research work upon their return to work was widely praised amongst project contributors. It was noted however that independent research fellows (who are currently ineligible for the College-level scheme) would also benefit from access to funding to support their return to work following leave.

"The Elsie Widdowson Fellowship is fantastic[...]I think [...] if I came back and was also delivering a whole module, possibly two, I think the whole year would have been completely shot for me. That would have taken all of my energy and research absolutely would have been to a standstill. So the fellowship is fantastic."

Contributors also appreciated College contributions towards childcare costs incurred to attend work-related events, but indicated that the available funds were not always sufficient to enable people to take time away from their family and that the process for obtaining funds could be further streamlined.

Given the importance of funding for academic progression, there is scope for Imperial to consider ways in which the organisation can further support women in the process of grant capture. In addition, the College should ensure that all academic women across the Institution are (a) aware of and (b) eligible for the range of internal funding opportunities to support their career development, and consider options for future investment in internal flexible funding programmes that will benefit women's progression.

5.7 Recognising varied contributions

As discussed (Section 4.3.3), women's contributions to the academic system can be varied, hidden and are not always adequately recognised or valued within institutional pathways for progression. For women to progress it is essential that institutional practices are regularly reviewed

> ## ...normalise that careers for women may not follow the trajectory that men can take.

and updated to ensure that robust mechanisms exist to recognise the wide range of service and achievements from academic women. Although in most instances contributors indicated that this is an area in which the College could improve, we did hear some examples of good practice from departments that have taken a proactive approach to consider the spread of contributions and workloads of staff. For example, the Department of Chemical Engineering introduced a 'contribution matrix' to take an active overview of the range of activities undertaken by academic staff and to enable inequity/ imbalances to be addressed. An approach that is also being adopted by several other departments across the College.

"So we have something called a contribution matrix [...] and we just see who's doing what. [...] We look for balance in two respects. That we're not overloading anybody with these service roles. Because traditionally what we've seen is sometimes women get overloaded on service roles. So we use this matrix, it's very visual and you can quickly see who's overloaded. The other thing [...] it allows us to see who's missing an opportunity for career development and we can then allocate or we can talk to the right person about an opportunity. Then the third thing is [...] we can look at the committees and see if there's a balance of career stage and gender particularly in each of the committees or working groups. So it's been a very useful tool."

Action group participants indicated that amongst funders and across the sector more broadly there is a move towards 'Narrative CVs'[38] which provide a more open format for academics to account for their broad contributions to the academic environment as opposed to the more traditional, metrics-driven, style of CV (number of grants, number of publications etc).

To facilitate greater equity in progression, within all institutional processes related to career advancement (e.g. appointment, annual review, probation, promotion, allocation of opportunities/workload, nomination for awards), Imperial should systematically look for opportunities to move beyond approaches that favour a narrow and outdated definition of academic 'success' to build processes that allow for the full and varied range of contributions of academic staff to be appropriately recognised and rewarded.

5.8 (Boundaried) flexibility

Many of our contributors appreciated the flexibility that academia affords them to work autonomously, determine the directions of their research and (to a greater/lesser extent depending on the role) their working patterns and locations. Many people we spoke to incorporate some element of flexible working into their work patterns and were appreciative of the College policies in this respect. Some participants indicated that the pandemic had served to highlight further possibilities for flexible working practices and that possibilities for remote participation means that they have been able to attend conferences and events that would have previously been prohibited by the need to travel to attend in-person (i.e. if travel costs are too high, time away from the lab/teaching is not possible, or if responsibilities outside of work make travel difficult).

"[IC] has other benefits as well, like, you know, flexible working, you know, I can still work from home and do all of my work from here pretty much. Good additional college closure days and, you know, I feel like I have a better work life balance because that's a value of mine."

"I think the pandemic, kind of, was in some way helpful because we learned that we can be a lot more flexible,[...] just, kind of, having the flexibility there that if something can be done and will be inclusive or makes things easier for someone then we should really consider it."

However, contributors also discussed the flip side of workplace flexibility. Without clear and consistently communicated boundaries a flexible work culture can slip into a system that expects people to be ever present:

"And I think in academia those lines are so blurred and it is almost expected that on annual leave you will still be answering emails whilst trying to multi-task, look after your child, or whatever."

There is no doubt that enabling women to have flexibility and choice over their working patterns and practices is a positive factor in supporting women to progress. However, this needs to be coupled with organisational cultures and management practices that respect the importance of balance and make it appropriate and acceptable for people to communicate and protect the boundaries around their working life to avoid pressures and expectations to be always 'on call'. We note that the College workload principles are a positive step towards this and that it is essential that the College regularly monitors and enacts these principles at all levels of the College to move towards a culture that values flexibility whilst preventing overload.

5.9 Enabling delivery of caring responsibilities

Many of our contributors have caring responsibilities for others outside of work, many are mothers, and/or are caring for other relatives. The topic of combining caring responsibilities with academia was discussed by participants extensively throughout all phases of the study, often with the implication that the larger share of unpaid care is undertaken by women and can have significant impacts on their career progression in a wide variety of ways including:

- Physical and psychological impacts of motherhood and/or caring responsibilities
- Time out of lab during pregnancy
- Extended periods of caring related leave
- Restricted working hours
- Limited ability to travel for work
- Restricted geographical location for jobs

"It's the intersection of gender and caring responsibilities. So I did not take the opportunities to move geography because I had significant elder care responsibilities."

The caring needs, that are inevitably, more commonly on women's shoulders and, you know, it is a big thing.

"In my experience, I feel it's much more about being a parent or being a parent who has decided to work part-time and not be full-time that has impacted upon things more."

"I can't be in the lab at that time, I have a child, so I'm limited."

Overall, the range of practical College-wide and departmental support for parents and carers at Imperial is commendable and is one of the key strengths identified in this study. As discussed in previous sections, Imperial has implemented a wide range of family friendly policies and practices including funding (carers support fund, Elsie Widdowson Fellowship), nursing rooms, parents network, enhanced parental leave, 'My Family Care' service, extended nursery capacity and parents web-portal. It was noted by the project team that, whilst some schemes are open to all staff with caring responsibilities, the information often appears to be directed at parents. Therefore, there is scope to enhance acknowledgement of and specific information/support for staff caring for sick, disabled or elderly relatives.

Alongside the College-wide support, women also discussed the importance of supportive managers when they are balancing work with caring responsibilities. We heard a variety of positive examples of managers who were accepting and proactive in accommodating women's needs with respect to their caring responsibilities. This immediately put women at ease, enabled them to fulfil their caring duties without negative career consequences, and instilled a belief that career progression is possible alongside caring responsibilities.

However, as discussed, management practices are extremely varied and the positive experiences were counterbalanced by women who described managers who were unreceptive, refused to accommodate needs related to caring responsibilities and/or were disparaging when women disclosed their personal circumstances. These

> **I said, 'Okay, I'm pregnant' and he was like, 'Okay, I have extra funds to cover your maternity leave after your post-doc'. So yes, he immediately gave me the feedback, 'Don't worry'.**

"So about a year and a half after starting I ended up taking maternity leave and my contract was due to finish shortly after [...] But the department worked out that they could keep me on basically. So they worked it out so that I would get paid maternity leave and I would have something to come back to afterwards, which was very helpful."

So what my department did for me was, 'Okay, if you go two days to your conference and you need to cover some childcare, you don't worry about what is there', the amount of course is not three thousand pounds, 'but we will cover it'. So the Head of Department just signed it [...] even if it was much higher than what Imperial would cover.

"Going on maternity leave really shocked me as despite my department having an Athena Swan award I was met with some very unhelpful comments. Coming back from maternity leave [...] has been a real challenge. I felt very isolated from colleagues but with high expectations from the college and conflicting priorities. I really questioned whether this is the lifestyle for me and whether working in such a pressurised environment is good for me and my family."

"Having a baby (and not being given ANY contract extension so that I have had to cut my maternity leave short to at least somewhat wrap up my projects, and I am now seen as much less productive than someone who hasn't taken parental leave), lack of support from PI."

> **This was only one person, but when I told someone quite high up that I was expecting again, I think the comment was, 'Oh, another one'.**

incidents were often significantly damaging to women, not only in terms of their ability to balance their commitments, but also by creating psychological barriers to the concept that it is possible to be both an academic and mother/carer.

Imperial has already taken a range very positive organisational action with respect to enabling women to deliver their caring responsibilities. There is now scope to build upon this further by working closely with departments and managers to ensure that all women with current/future caring roles are treated with respect and encouragement when disclosing/discussing their caring responsibilities and that their needs are consistently and proactively accommodated by managers. Doing so will further enable academic women to balance their caring commitments without undue impact on their career progression.

5.10 Positive action

The Equality Act 2010 allows for organisations to lawfully undertake a range of positive actions to promote equity of opportunities in the workplace for people from underrepresented groups. Positive action is not to be confused with 'positive discrimination' (favouring someone with a protected characteristic(s) over other candidates without considering whether they have the correct skill-set), which is unlawful.

Usually, positive actions are used to diversify the 'pool' of candidates for roles and/or other opportunities, without bypassing or interfering with legitimate merit-based selection processes. Using positive action can act to encourage more people from underrepresented groups to come forward for opportunities and ensure that they are in a position to compete with other candidates in selection processes.

This study identified some good examples of positive action taking place across the College, particularly with respect to recruitment including:

- Use of software to screen job adverts for unintended gender bias in language

- Updating criteria in person specifications to emphasise a broader range of contributions

- Inclusion of wording in job adverts to specifically welcome applications from underrepresented groups

- Flexible working message on job adverts

- Updated recruitment processes to ensure interviews take place in core-hours and are focused on broad skills and contributions

- Taking an open and curiosity driven approach to interview style, moving away from adversarial interviews

We noted that the College has developed a set of guidance, case studies and toolkits to share good practice with respect to broadening diversity in recruitment practices, based on the positive actions taken by different departments.

"So instead of only quantitative things that you can measure easily like how many things had they taught and how many publications had they got and how many grants [...] We were looking in the criteria what evidence is there of somebody who is supportive of their team, provides service to their department and to their profession and who has a broader set of values [...] So we had certain criteria that we included in our shortlisting which were more around those sorts of characteristics."

There are also some examples of positive action with respect to promotion, for example:

- Promotions workshops/clinics
- Mentoring schemes and leadership development programmes
- Audit of staff to identify people to encourage to apply for promotion
- Unconscious bias information sheets included in promotions panel documentation

"My department considers everyone for promotion at a panel with all professors and people who didn't put themselves forward will get encouraged to do so if their CV reflects it. Also mentoring is available."

It was evident that good practice with respect to positive action exists both at College level and within departments, and that there are efforts to share this practice across the College. However, the extent to which these practices are adopted and embedded is variable and not yet consistent at all levels/units across Imperial. To build upon the existing good foundations it is important that Imperial continues to embed positive action-based approaches at every level of the organisation, to develop awareness of these strategies amongst leaders/managers and actively monitor positive action measures to ensure their consistent application. The College should also be proactive in identifying new/additional positive measures, particularly with respect to promotion/progression and internal funding processes, in which positive action was not as evident in comparison with recruitment processes.

There is also further scope for Imperial to consider bolder positive action, for example publicly and visibly committing to and communicating gender-based targets* with respect to recruitment and progression, and to use its institutional influence to actively push for greater positive action in the broader sector (e.g. with funders and HE policy makers).

Our interview process used to involve a dinner and an overnight stay [...] that was already going to be a problem for anybody with caring responsibilities. So we scrapped all of that and said all the interview important stuff will happen within some core hours.

*Within positive action, stated goals/targets with respect to underrepresented groups are permissible within equality legislation and are distinct from 'quotas' which are unlawful.
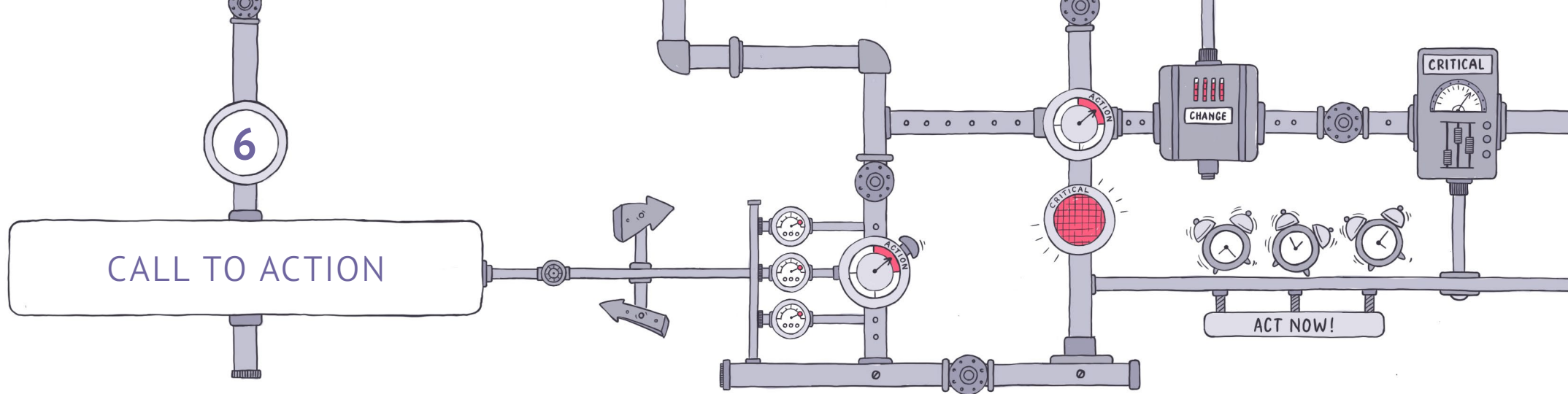
6

CALL TO ACTION

Gender inequity in academia is an exceptionally complex topic. This qualitative study provides a snapshot of the experiences and challenges of Imperial's academic women in 2022. We must stress that whilst we have identified a range of themes and suggestions for future actions, there is far greater complexity in the academic system than we can give full justice to in a four-month study. Therefore, the outcomes of this study offer the starting point for the next phase of Imperial's journey to understand and address the persistent challenges of gender inequity within the College and the higher education sector more broadly.

Consequently, here we do not offer a 'conclusion', as this is certainly not an end of a story. Instead, we offer a 'call to action', in the hope that every member of Imperial College London will consider what the insights from this project mean for them as individuals and as part of the College community and identify what actions they will take to work towards gender equity in the academic system on a day-to-day basis.

Gender inequity is not a women's issue. The challenges associated with inequity and lack of diversity affect everyone. From the students who miss out on being taught by a diverse staff body, to the junior researchers who cannot learn from different leadership styles and approaches, to the leaders who are not challenged to think in new ways or take different paths to 'the way we've always done things'.

Diversity brings new perspectives, it brings challenge, it stimulates growth, new insights and inspiration. In the long-run, a diverse team will always outperform a team comprised of individuals who have similar skills, expertise and backgrounds. An institution that acts with **integrity** and **respects** the value of diversity will foster a culture of **collaboration**, **innovation** and **excellence**.

It is evident that over recent years Imperial has put concerted efforts into practices, policies and initiatives to support women's recruitment, progression and experiences within the College and this is to be commended. Indeed, the range of College and department level initiatives are

extensive, are appreciated by the women we spoke to who had benefited from them, are reflected in the abundance of Athena Swan awards across the College and put Imperial ahead of most UK institutions with respect to institutional infrastructure to support gender equity.

However, we need only to look at Imperial's current gender facts to understand that there is still a long way to go, and it would be dangerous to presume the suite of initiatives and Athena Swan awards mean that Imperial has solved its gender inequity issues. Unfortunately, this is still far from the truth and our participants' stories, along with the Institution's gender-related data, reveal that Imperial remains an unequal place for women to develop their careers and can, at times, also be a cold and unwelcoming workplace for academic women.

The current inconsistency that exists across the College with respect to the extent to which positive gender-related policies/initiatives/practices are implemented, promoted and enforced is problematic. It leads to significant variation in experiences and opportunities for

women, and all too often women's progression at Imperial depends on the 'luck' of whether the local 'ecosystem' (research group, management, departmental culture and practices) creates an environment that either supports or hinders women's progression.

Additionally, Imperial's unrelenting drive towards scientific outcomes, achievement and excellence promotes and rewards working practices that have little time or space for empathy, supportive interpersonal interactions, or consideration of people's circumstances beyond the immediate outcomes of their work. This creates a culture in which women do not feel able to speak up about issues or challenge unhelpful behaviours. It leads to masking of difficulties, normalisation of unacceptable behaviours and women's internalisation/responsibilisation of challenges; all of which can cause significant damage to women's ability to progress their careers and in some instances push them to leave the system entirely.

The challenges we describe in this report are not for individual women to fix, and the responsibility for driving change cannot rest simply with Athena Swan panels, EDI units and Researcher Development Committees. These issues affect everyone and must be owned by everyone. Meaningful, lasting change can only occur if the College as a whole is willing to actively face into the challenges that persist in the organisational system and to act boldly to drive improvements. This will require everyone at all levels of the College, to openly acknowledge the issues discussed in this report and take an active stance towards addressing challenges of gender inequity. Our recommendations identify practical ways that Imperial can act to both (a) address the factors that hinder women's progression and (b) build upon existing foundations of good practice to create an organisational system that welcomes women, acknowledges and recognises their individual strengths and responsibilities, demonstrates empathy, accommodates different patterns/rhythms, and actively advocates for women to move forward in directions that are meaningful and rewarding to them.

As discussed, issues of gender inequity are, of course, far larger than Imperial and run deep within the higher education sector and broader societal systems. However, as a global leader within these systems, Imperial is a 'role model' to which others look for examples, ideas and practices. The College has a significant opportunity, even stronger, **a duty**, to exert a positive influence, and push for meaningful improvements within the broader sector/society. By acting upon the recommendations from this project, being willing to acknowledge remaining challenges, visibly committing to change, being open to trying bold approaches, modelling good practices and being willing to challenge others to act, Imperial will lead the way towards collective and organised action to tackle deep rooted gender inequity in academia.

It is time for change. Women in academia deserve for Imperial, the Sector and Society to do better. Imperial College London will drive meaningful progress if everyone at every level of the organisation acknowledges gender inequity, refuses to accept the status quo, and commits to embedding positive actions that support women to progress.

This is the call to action.

Our recommendations provide some practical suggestions of ways that Imperial's community can take up this call to action in the short-medium term. We also invite *everyone* at Imperial to reflect on this report and consider what additional actions they could implement to address the themes we have discussed here. We invite you to be bold, to try new ideas, to share your practices and to learn from successes and failures. The only wrong action is inaction.

THIS IS YOUR CALL TO ACTION!

7 RECOMMENDATIONS

To support Imperial to act upon the findings of this project, here we detail 15 top-level recommendations for consideration by the College. These recommendations were actively informed by the members of the three 'story to solution' action groups and we must acknowledge them here, along with all the project participants, for their tremendous efforts and contributions to this process.

Whilst we strongly encourage Imperial to consider **all** the recommendations, for ease of prioritisation they have been divided into two categories 'Critical' and 'Highly Recommended'. Under each top-level recommendation we have identified some practical actions that can be implemented in the short-medium term to make tangible progress against each recommendation. We also encourage members of Imperial to think boldly, creatively, and collectively about any additional practical opportunities to address these recommendations.

CRITICAL

7.1   Maximise the public visibility of Imperial's commitment to gender equity

- Make Imperial's gender equity facts, targets and ongoing actions **highly visible** as a top-level link from the institutional homepage.

- Require every department to commit to department-level gender targets and make these (and related action plans) visible from departmental homepages.

- Develop a gender-facts poster, to be displayed in all public spaces, lecture/seminar rooms and offices/labs across campuses to raise awareness of challenges faced by women in HE and give information about (a) what the college is doing to address challenges (b) what to do if you need support/need to report and (b) what **everyone** can do to create positive environments for women to study and work.

- Hold an annual College-wide open event (*Towards Gender Equity at Imperial*) to report on progress towards gender targets, update the Imperial community on actions (successful and unsuccessful) and remaining challenges, facilitate cross-College ideas generation and practice sharing of gender-equity practices.

7.2   Explicitly address sexism and gender-based microaggressions within current College policies and practices

- Extend the scope and guidance of the 'Report and Support' tool to specifically welcome reports of acts of sexism and gender-related microaggressions.
(The current scope includes 'sexual misconduct' but does not specifically extend to the more 'diffuse' forms of sexist/ gendered behaviours.)

- Extend the *'Sexual Harassment, Sexual Misconduct and Sexual Violence'* policy to specifically include guidance and definitions related to more 'diffuse' acts of sexism and gender-related microaggressions.

- As part of the annual gender equity at Imperial event (see recommendation 7.1), report on the number of gender-related reports/complaints and provide information about actions taken (general information only to protect anonymity and confidentiality).

- Develop a short guidance document/poster to explain the spectrum of sexist behaviours, and information about what to do if you are a victim/witness of such behaviours, to be cascaded through all line management chains in the College and displayed as part of the gender equity poster (see 7.1).

- Ensure that guidance and training related to all forms of sexism and gender-related microaggressions are incorporated into the *Imperial Essentials* compliance training. This should include guidance and helpful phrases for victims/witnesses of these behaviours to use 'in the moment' that such acts occur.

- Include specific guidance/training related to sexism and gender-related microaggressions in all management and leadership development programmes, active bystander training and handbooks/guidance documents for managers and PIs.

- Incorporate reference (and links to guidance) to sexism and gender-related microaggressions into the *Imperial Together Behaviours Framework* and student codes of conduct.

- Embed a specific reminder of the <u>*Imperial Together Behaviours Framework*</u> as a standing item at the start of all College/Faculty/Departmental meetings and events.

- Consider implementing an insititutional version of the 'Everyday Sexism Project' to make visible the acts of everyday sexism in the institution and inform Imperial's ongoing actions to kerb sexist and gender-based microagressions.

7.3   Require positive action measures to be embedded *consistently* in *all* departments

- College to mandate that all departments make consistent use of positive action practices in recruitment (examples included in section 5.10 of the report).

- Incorporate the contributions matrix (or equivalent) into workload discussions and planning in *all* departments.

- Department leadership teams to consistently undertake an annual audit of workloads and take a proactive approach to redistribution of work if people are overloaded and to ensure there is equitable distribution/ rotation of roles that are typically useful to assist career progression.

- All departments to undertake an annual overview of staff to actively identify and encourage staff to apply for promotion wherever appropriate, with a particular focus on encouragement for staff from underrepresented groups.

- Enforce the requirement for regular unconscious bias training for *all* staff involved in decision making in *any* progression related activity (including student admissions activity, recruitment, probation reviews, PDRP, promotions) and make unconscious bias information/guidance part of all progression related documentation.

7.4   Equip managers with tools and skills to support and accommodate their staff members' diverse professional and personal circumstances

- Embed scenario-based examples (e.g. Annex 4, case studies) and guidance relating to different challenges experienced by women into managers handbooks, guidance and training.

- Provide specific training and guidance for managers about supportive and appropriate responses when staff/ students disclose personal circumstances and/or display strong emotional responses.

- Provide guidance and example phrases for managers to use to proactively open spaces for students/staff to raise issues/concerns, for example 'Is there anything you would like us to know/consider when we are planning X?" or at the end of a meeting "is there anything else you'd like to discuss?".

- Provide guidance to managers about good practice in supporting staff returning from extended leave (for caring and/or health reasons), for example proactively welcoming them back, reviewing workload, communicating the member of staff's new working patterns (if changed) to team members.

7.5   Encourage collective reflection on issues of gender equity amongst *all* members of the Imperial Community

- Promote the end of project event (23 September 2022) throughout the Imperial community and ensure visible representation from senior members of the College.

- Disseminate this report and recommendations to the whole staff community at Imperial.

- Develop a 'checklist' and reflective questions for the 10 facilitating factors discussed in section 5 of this report and invite individuals, research groups, and departments to consider the actions they will take to integrate these practices into their own working environments.

- Encourage practice sharing amongst departments by establishing gender equity buddying between departments.

7.6   Harness the influence of Imperial College London to push for sector improvements towards gender equity in academia

- Identify and publicly act upon opportunities to hold funders, policy makers and other sector stakeholders to account on issues of gender equity issues in academia.

- Provide robust Insitutional contributions to high-level consultations relating to gender-equity in academia.

- Wherever possible actively share Imperial's institutional learning (positive and negative) related to gender-equity with other Higher Education Institutions.

- In alignment with recommendation 7.1. take bold and highly visible (to the sector) approaches to demonstrate Imperial's commitment and targets towards gender equity. Bravely and visibly *own* the institutional struggles as well as successes, to encourage greater openness and honesty within the sector about the challenges still ahead for all institutions.

HIGHLY RECOMMENDED

7.7 Ensure women's voices are consistently heard in meetings, events and decision making

- Develop guidance for meeting chairs and managers about recognising and inviting contributions from members of minority groups in meetings.

- Continue to work towards greater representation of women in College, Faculty and Department governance structures/committees.

- Aim for 50:50 representation of women speakers at College and Department events.

- Continue to raise awareness of the College's conference policy and code of conduct and enforce its use for all College events.

- Extend the conference policy to specifically provide guidance for organisers of events about ways to amplify minority voices in events (for example, people coordinating roaming mics to be conscious of the selection of people who ask questions/make comments).

7.8 Provide flexible funding to accelerate promotion applications from underrepresented groups

- Develop a new College-wide 'Boost' highly flexible funding scheme for academics from groups underrepresented at mid/senior career stages who are working towards promotion in the next 1-3 years. Within the scheme they would be eligible to request funding for support/activities/resources that will assist them to develop their strongest case for promotion. Funds could be used towards support such as (*non-exhaustive list*):

- Research/technical assistants to support research activities to support funding applications and/or publications.
- National/international travel to speak at conferences and/or build collaborative activity.
- Enhanced Childcare/care support to enable travel and research/engagement activity.
- Enterprise support to develop proof of concept, apply for patents, company spin-out.
- Publication fees.
- Professional development training or coaching
- Other reasonable and justified requests related to developing a strong case for promotion.

7.9 Explore new ways to recognise the varied contributions of staff in progression processes

- Review workload management, PDRP and promotions processes and documentation to provide ample opportunity for people to have their wide portfolio of contributions recognised and for 'hidden' work to be made visible within workloads and institutional mechanisms for recognition and reward.

- Consider piloting the use of narrative CVs for recruitment, internal funding, and progression processes.

- Develop guidance documentation and pre-meeting prompts for all hiring and promotions panels to remind panel members to make space for gender-based differences in career trajectories and to actively challenge normative assumptions of a 'successful academic career path'.

- Systematically provide workload allocation for typically 'hidden' activities such as mentoring, student pastoral support and committee work (over and above the usual committee load due to gender balance issues).

7.10 Celebrate and reward good practice related to sponsorship, advocacy and gender equity

- Develop and actively publicise a public online space where staff and students can post good examples of activities/actions that have supported gender equity and women's progress in the College. This could be recognition of an individual's act of support and/or recognising a group's activity. Each year (e.g. at the gender equity event) these good examples can be displayed as a showcase of the good practice by individuals and groups across the College and serve as a learning tool for others wanting to take action towards advocacy and gender equity.

- Incorporate requirements for **evidence** of taking **proactive actions** for sponsorship/advocacy for colleagues and gender equity as an essential selection criterion for job roles, progression in the institution, and appointment for **all** leadership roles.

7.11 Develop mechanisms to minimise gender bias in student feedback and interactions with staff

- Undertake a scoping project to examine sector-best practice and recommendations in minimising gender bias in student feedback.

- Provide unconscious bias training for students and guidance to support constructive, unbiased feedback on teaching staff.

- Raise student awareness/consciousness of the challenges and impacts of implicitly gendered student feedback.

- Review student feedback mechanisms to identify opportunities to standardise fields for feedback and ensure that students are rating their teachers on consistent non-gendered frameworks.

- Identify ways to minimise pastoral load overburdening women, for example, regular communications of expectations relating to sources of pastoral support for students, clear communication and enforcement (at managerial levels) of email/office hours policies for students, additional College/department resources dedicated to student pastoral care.

7.12 Remain connected to and learn from staff who leave Imperial

- Implement a consistent College-wide process of exit interviews to give leavers an opportunity to provide feedback on their experiences. Collect EDI data in relation to the exit interviews to enable examination and monitoring of themes in relation to gender and other protected characteristics.

This is Carla, she has decided to leave academia for a new role and has mixed feelings about this.

Find out more about Carla ▶

- Have a clear mechanism for remaining in touch with former staff (e.g. staff alumni network) to ensure people have the opportunity to remain part of the Imperial community. This should come with benefits such as continued library access, newsletters, careers support (for a limited time after contract) and alumni events. If well maintained the alumni network will be a valuable source of support for current staff (e.g. for careers after Imperial) and information for the College.

7.13 Visibly celebrate and acknowledge academic carers and raise the visibility of College support for carers

- Develop a range of case studies/spotlight profiles of academic parents and carers across the College to amplify the visibility of academics who combine work with caring responsibilities. Ensure that case studies discuss both the achievements **and** challenges of balancing academic careers with care to avoid the appearance of academic carers as 'superhuman'.

- Consider an annual 'carers day/week' to raise the profile of Imperial staff who are carers, enabling carers to network and share experiences, and showcase the range of support on offer for those with caring responsibilities.

- In existing online information and guidance, emphasise the eligibility of staff with non-parental caring responsibilities (e.g. for sick, disabled, or elderly relatives) for the range of schemes that support carers, to ensure that it is clear that these schemes are for all carers, not only for parents.

7.14 Actively encourage and support cross-College spaces for women to share experiences and work collectively

- Collate a full list of existing women's networks in the College and publish (and publicise) information in a single location about how to join/access these networks.

- Provide workload allocation for women's network coordinators/leaders.

- Provide College funding resources for networks to apply for to support their activities.

7.15 Conduct further scoping studies to specifically examine other intersecting factors that add further complexity to women's progression in academia

- Consider future qualitative studies and/or surveys to specifically explore the experiences of academic women through the lenses of additional protected characteristics (e.g. race, class, age, sexual orientation, dis/ability).

- Consider a study to explore the experiences and challenges of women pursuing clinical academic career pathways.

8

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Interviews were 45 minutes and were semi-structured around the following question themes. Depending on the discussion not all interviewees were asked every question and in some instances discussions were broader than the scope of the themes below.

1. Starting wherever you want, what is the story of your career to this point?

1a. particularly reflecting on your time at Imperial. Feel free to reflect on any highs/lows and any significant career turning points, key decisions you've taken etc.

2. What does the term 'career progression' mean to you?

3. Thinking about your career story, what has helped you to progress in your career? (e.g. people, opportunities, serendipities)

4. What if anything has been in the way of progressing your career? (e.g. people, processes, systems, events)

5. In what ways (if any) do you think your gender shaped your career progression?

6. What about other intersecting identities such as racial, sexual orientation, class, dis/ability? How have any of these identities played a role in how you have progressed?

7. What role does IC play in your career story?

7a. Do/did you access any particular provision/support at Imperial for your career development?

8. What does Imperial do well for women in academia? What could it do better?

9. Is there anything else you think we should know to help us answer our research question 'what do women need to progress in academia?'

The three action groups met for four two-hour sessions during the project. A common structure was used across all three action groups for each session. The session structures are summarised here (see right).

Links to the final illustrations (graphic recordings), and a time-lapse video are shown for each of the relevant sessions.

A 'live illustrator'* was present at during the following sessions:

• Session 2: Group 2
• Session 3: Group 3
• Session 4: Group 1

The live illustrator was not present at any groups for session 1.

Session 1 (w/c 28th March)

This session focused on the factors that enable women to progress in academia, using individual, paired, small group and whole group exercises.

Session aims:

• Getting to know each other
• Collectively exploring what makes it possible for women to progress in academia
• Identifying common 'plot points' in our career stories

Questions explored:

• What interests me about the topic of women's progression in academia? (individual writing exercise)
• Why have you chosen to participate in these sessions? What would you like the group to achieve? (group discussion)
• What factors have helped you to progress in your career so far? What role might gender have played in your career story? (paired discussion)
• What commonalities and difference did you notice in your career stories? (paired discussion and whole group reflection)

Session 2 (w/c 4th April)

This session focused on the obstacles to women's progression in academia, using individual and group discussions.

Session aims:

• Collectively exploring the obstacles to women's progress in academia
• Considering what might make a difference to these challenges
• Working together to chart major themes

Questions explored:

• What do you perceive is the biggest obstacle or challenge you've faced individually so far in progressing in your career? What thoughts/feelings do you have about this challenge/obstacle? (Individual writing)
• Thinking beyond your individual experiences now, what knowledge do you have of barriers to women's progression in academia? What sources/evidence have informed this knowledge? (group discussion)
• Create a collage of images, words, phrases, gifs, quotes etc. that represent: a) the challenges (personal, institutional, sectoral etc.) working against women's progression in academia, and b) the supporting structures working for women's progression in academia. (Group padlet exercise.)
• If you were to recommend one practical change to Imperial about how it supports women in academia, what would it be and why? (individual reflection followed by whole group discussion)

You can view the final result of the 'live illustration' (two pages), and a time-lapse video from the links below:

SESSION 2 / **GROUP 2**

◪ Final illustration (page 1)

◪ Final illustration (page 2)

▶ Time-lapse video

Note: Links to websites were correct when last accessed 20 July 2022.

Annex 2 (continued)
'Story to Solution' Action Groups Schedule

Annex 3
Reading List

Annex 4
Composite Case Studies of Women in Academia

Session 3 (w/c 13th June)

This session reviewed four major themes from the project data to focus on potential actions for the College to take to address each theme. In each instance members of the group spent five minutes brainstorming their individual ideas, before adding these to a padlet for whole group discussion and prioritisation.

- Dealing with gendered behaviours: *What tangible actions could the college take in relation to this theme in the short-medium term?*
- Facilitating sponsorship and advocacy: *What further actions could Imperial take to facilitate active sponsorship/advocacy for women and tackle the current disparities/variation in this regard?*
- Responding to different career rhythms: *What practical actions could Imperial take to acknowledge and accommodate for the variety of career rhythms that people might encounter when progressing through their careers?*
- Unmasking the hidden: *What concrete actions can imperial take to unmask hidden information and address hidden contributions?*

You can view the final result of the 'live illustration', and a time-lapse video from the links below:

SESSION 3 / **GROUP 3**

🗎 Final illustration

▶ Time-lapse video

Session 4 (w/c 20th June)

This session focused on six visual composite case studies of women in academia at different stages and choice points of their career (Annex 4). The groups were asked to consider each 'character and discuss:

- What (if anything) might the individual do to help?
- What (if anything) might their manager do to help?
- What (if anything) might the College do to help?
- What (if anything) can academic sector do to help?

The groups collated their solutions on a padlet for each character.

You can view the final result of the 'live illustration' (two pages), and a time-lapse video from the links below:

SESSION 4 / **GROUP 1**

🗎 Final illustration (page 1)

🗎 Final illustration (page 2)

▶ Time-lapse video

Click the link below to access a list of reading materials that informed the project team's thinking in relation to the question: What do women need to progress in academia?

These materials are not all cited in the full report.

🗏 Women in Academia reading list

Following analysis of the key themes from the narrative immersion phase of the project, a set of six illustrated composite case studies were developed by the research team in collaboration with a designer/illustrator*, incorporating feedback from action group participants to shape the final designs.

The six new 'characters' amalgamate themes identified from the career stories and experiences described by contributors and visualise the key issues and challenges for women at different stages and choice points in their career.

The composite case studies were used with the action groups in their final session to stimulate discussion and consideration of potential actions on the part of individuals, managers, institution and sector to address the challenges encountered at different career stages.

Beyond the project, the case studies are lasting assets that can be used by Imperial as discussion and training aids for managers and staff considering matters relating to gender and progression in academia.

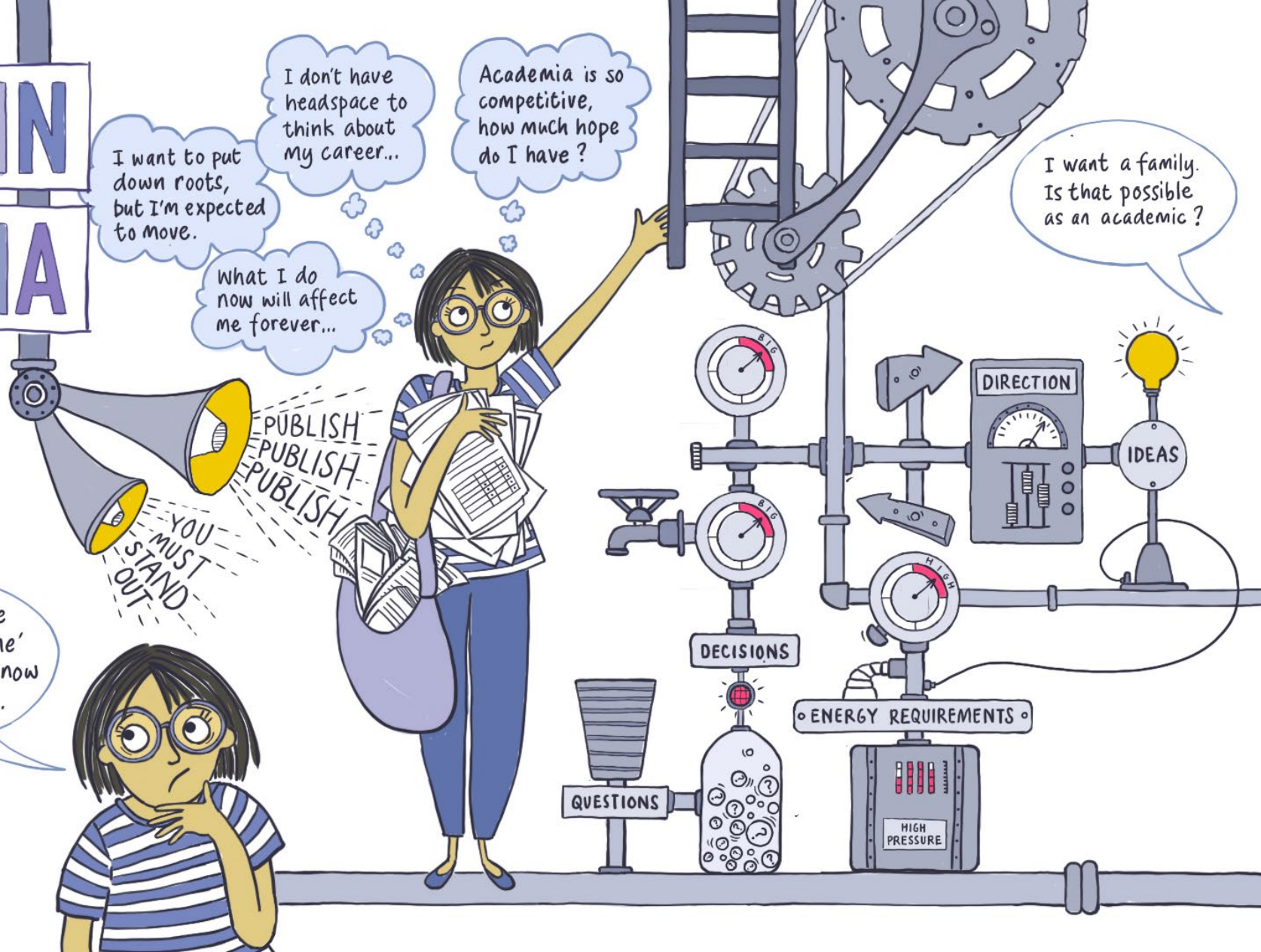**The six composite case studies are shown on pages 48–53.**

*Phipps Design
https://www.phippsdesign.co.uk/home/

WOMEN IN ACADEMIA

This is Min

She has been at the University for three years. She feels that there is an impending big decision about her career path: will she stay in academia or leave for industry?

I want to put down roots, but I'm expected to move.

I don't have headspace to think about my career...

Academia is so competitive, how much hope do I have?

What I do now will affect me forever...

I want a family. Is that possible as an academic?

PUBLISH PUBLISH PUBLISH

YOU MUST STAND OUT

I don't know the rules of this 'game' — and I don't know how to find out.

BIG

BIG

HIGH

DIRECTION

IDEAS

DECISIONS

QUESTIONS

ENERGY REQUIREMENTS

HIGH PRESSURE

RESEARCH COACH

WOMEN IN ACADEMIA

This is Bree

She has worked at the University for four years. She has recently returned from maternity leave and is now working part-time.

RESEARCH COACH
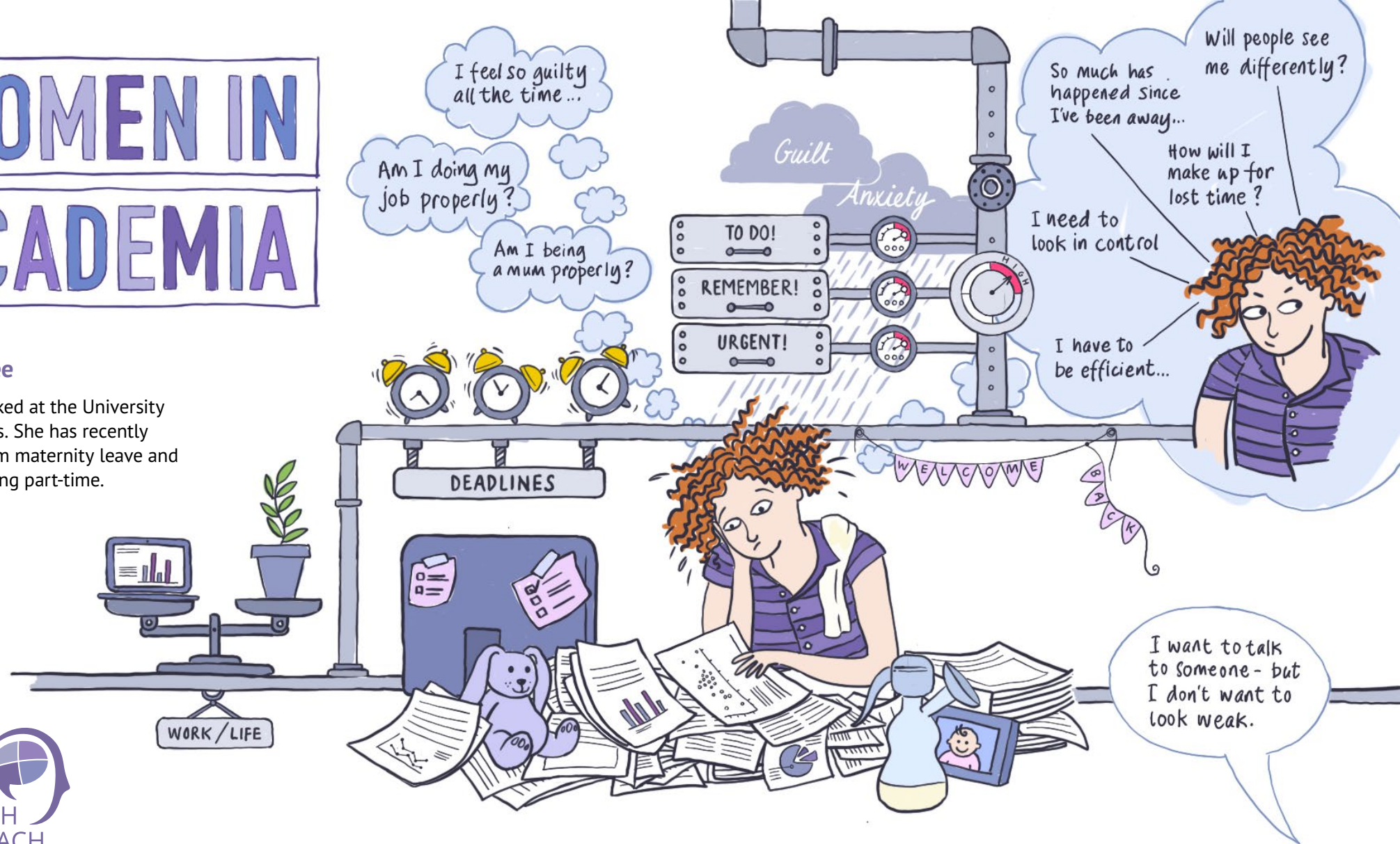
WOMEN IN ACADEMIA

This is Ameera

She is an early-career academic, developing her career in a male-dominated research field. She has ambitions to progress within academia, but feels overlooked and that she has no visible role models.
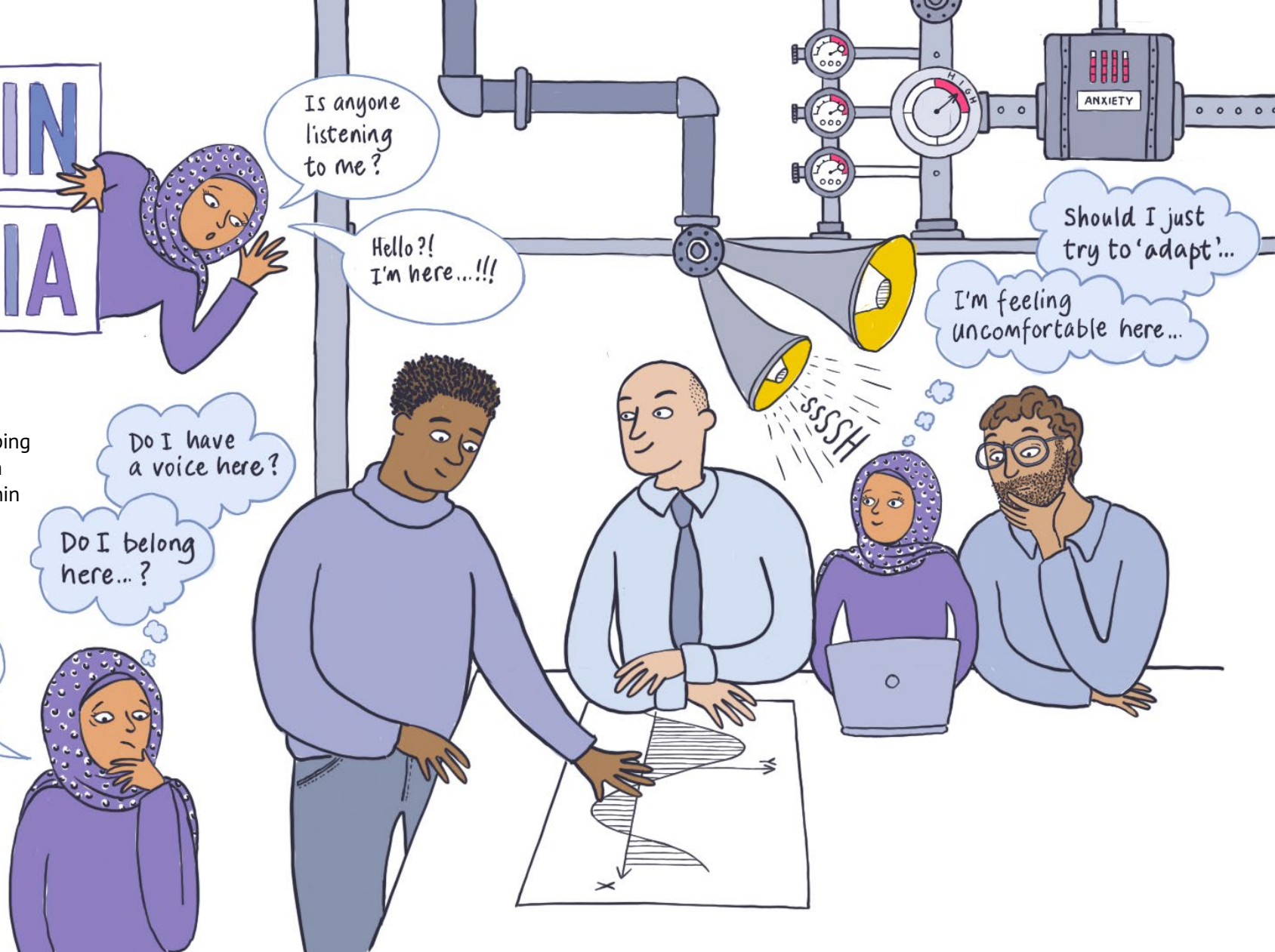
WOMEN IN ACADEMIA

This is Valentina

She has been at the University for over seven years and has various institutional responsibilities for research groups, teaching, and in committees; as well as caring responsibilities outside of work.
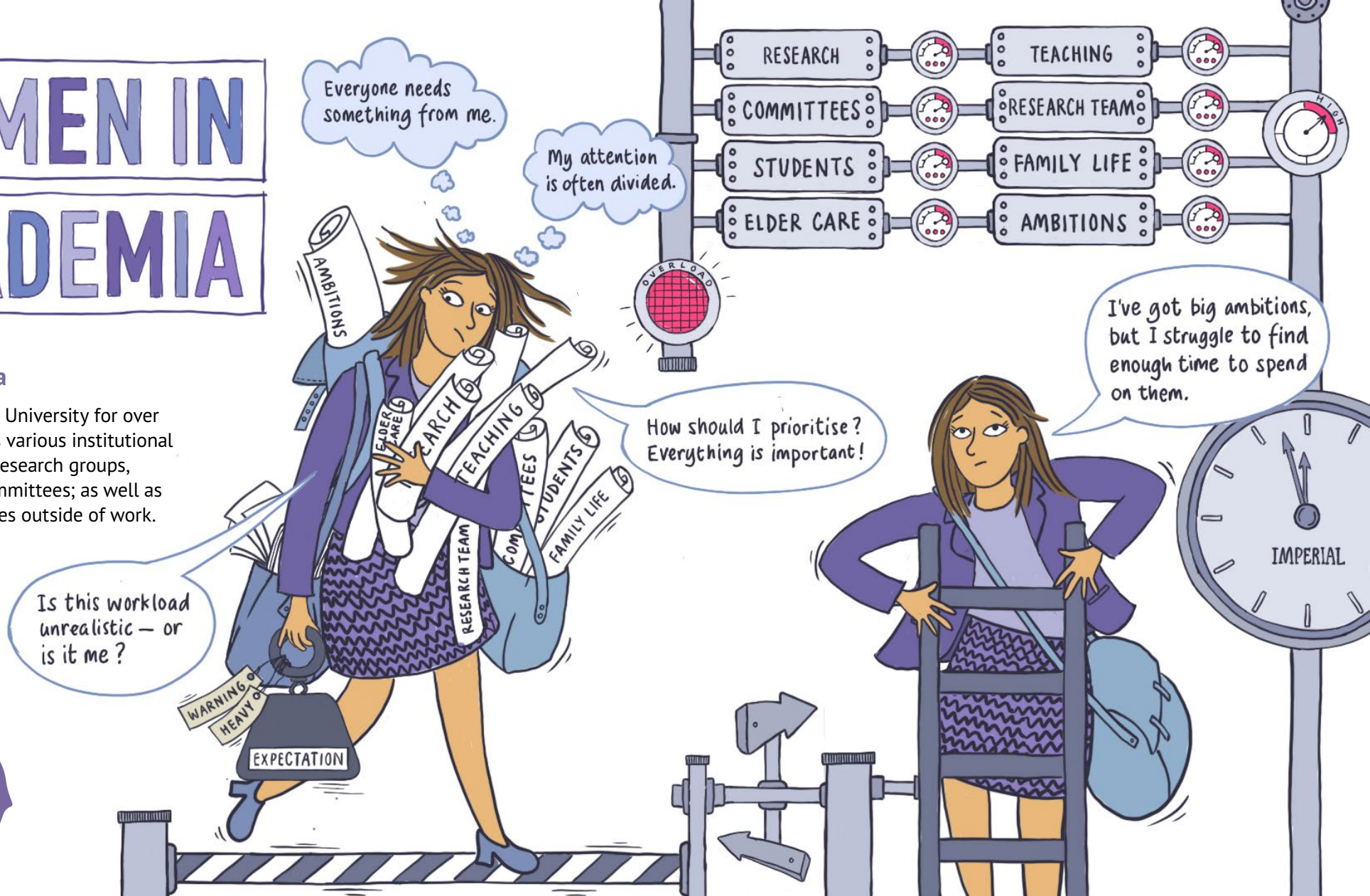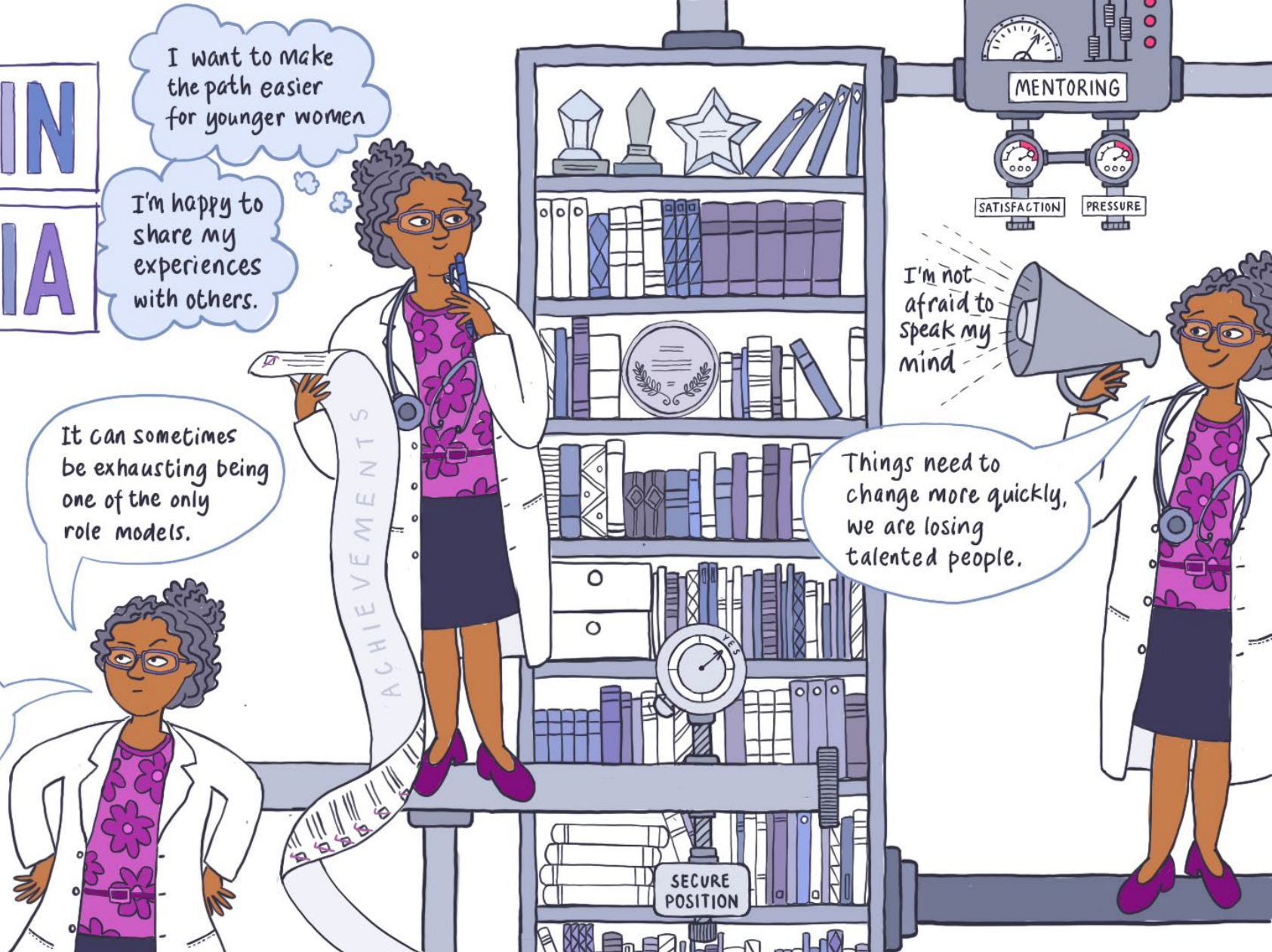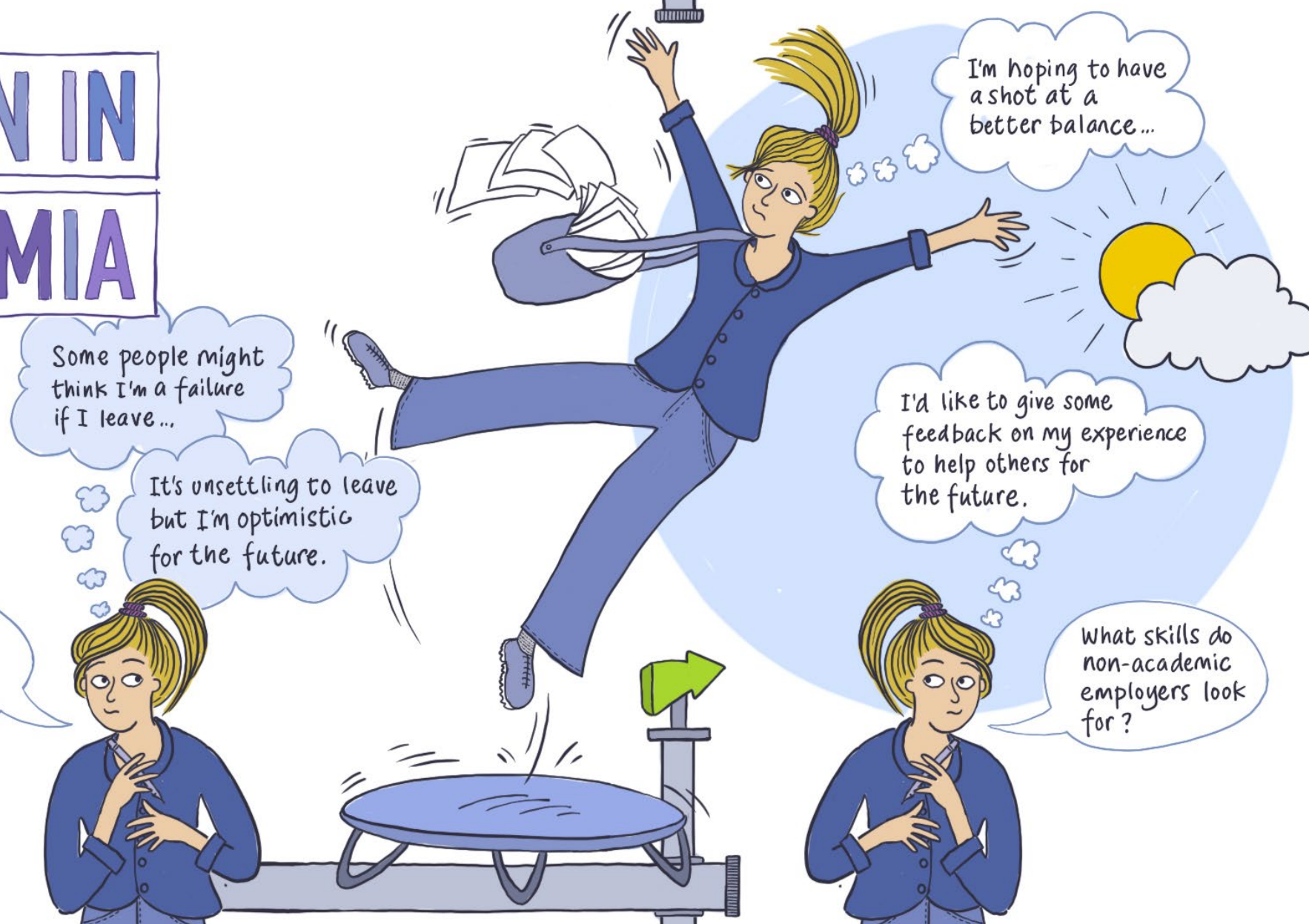
WOMEN IN ACADEMIA

This is Bernadette

She has been at the University for over 15 years. She has achieved international recognition in her field. She holds a senior role in her department and advocates for and mentors junior colleagues. Despite her own success, she is frustrated by the inequalities she perceives in academia.

To discuss any aspect of the review or report,
or for support with the implementation of the
recommendations, please contact Dr Natalie James

Natalie.James@researchcoach.co.uk

RESEARCH
COACH

pfdc-support@imperial.ac.uk
www.imperial.ac.uk/pfdc
@ImperialPFDC

POSTDOC AND FELLOWS DEVELOPMENT CENTRE

Tailored support and development for postdocs, fellows and clinicians