GENDER-INCLUSIVITY:
A CATALYST FOR INNOVATION

Why you should care, and what steps to take

Advanced Oxford

OXFORD BROOKES UNIVERSITY

Contents

Executive Summary 3

Forewords 4

Introduction 7

A research-based approach 10

Culture 11

Values 13

A gender-neutral facade 15

Cracks in the facade 18

Call for action 23

Summary of recommendations 24

About this study 28

Acknowledgements 29

Advanced Oxford & Oxford Brookes University 30

Executive Summary

Research conducted by Oxford Brookes University in the Oxfordshire region in 2021 acknowledged a lack of gender diversity within the region's science and technology industrial base, where 90% of the companies were led by CEOs who are men, and 85% were founded exclusively by men. *Oxfordshire's Innovation Engine* report[1] showed that only 18% of technology and IP-based companies in the region have at least one woman founder, only slightly higher than the national average of 17%. Just 4% of companies have all women founding teams and only 19% have at least 30% of women as key people (senior leadership/executive teams), which is below a rather low national average of respectively 6% and 21%. We know that participation of women within science and technology companies, beyond the data reported above on founders and leadership teams, is poor and there are still many companies which are predominantly male.

This report presents findings from a comprehensive three-year PhD research project, undertaken at Oxford Brookes Business School, in collaboration with Advanced Oxford, conducted in the innovation ecosystem of Oxfordshire. The research seeks to understand the factors that shape inclusion and innovation, taking into account labour market dynamics, career trajectories, and company culture.

The research does not suggest ways to create a gender-balanced workforce – this is a long term and multi-factor endeavour. This research examined innovation through a gender-inclusive lens, emphasising that for companies to be truly gender-inclusive, they must create environments where individuals of all genders have equal opportunities to contribute to, and benefit from, innovative processes and outcomes.

By incorporating diverse perspectives, experiences, and talents, a gender-inclusive approach can lead to more creative solutions, thoughtful products and services, and increased competitiveness in the marketplace.

Highlights from the research

- **Many companies believe they are gender-neutral, but their policies often create a facade, masking a different reality.**
- **Both women and men experience a masculine culture in their workplaces.**
- **A masculine culture negatively impacts innovation for all employees.**
- **A masculine culture decreases career satisfaction for both women and men, and career satisfaction is linked to higher levels of innovation.**

Our research suggests companies often fall into the trap of a 'gender-neutral facade,' where the focus is the presentation of an image of inclusivity, while gender differences in culture, behaviour, and practice persist, and are obscured or ignored. These facades, built through policies intended to signal inclusivity, can overlook or perpetuate behaviours that disadvantage or exclude women. When gender equality is perceived as a 'now-resolved' or 'sorted' issue, it becomes more challenging for gender issues to be raised and hampers efforts to change organisational structures and practices.

Evidence of a masculine culture was found within the ecosystem and its companies. This culture is perceived both by women and men. Additionally, a non-inclusive culture, along with non-inclusive values, systems, policies and practices, has a detrimental impact on innovation.

The report concludes with a call for action. Efforts to foster a gender-inclusive culture, structure and practices can help to deliver the full potential for innovation within your company. We present a set of recommendations, tools, and guidance to support companies to explore these issues and to drive change.

1. Advanced Oxford. (2023).

Forewords

Bal Johal

Director Research and Development
Owen Mumford

I am really pleased to see, and support, this research, undertaken by Oxford Brookes University and Advanced Oxford. This is an incredibly important issue. We need to create environments that support innovation, and environments that support and encourage an inclusive approach to innovation.

Through my career in science and technology, I have seen the need for companies of all sizes to pay attention, and take action, to ensure we have truly inclusive workplaces, that allow everyone to participate fully. Working in an inclusive and gender diverse environment has fostered unique perspectives that have created and accelerated new innovations that are important for societal wellbeing. Varying perspectives have been imperative to driving the right workplace initiatives to help propagate innovation. With my sector being life sciences, this is what is needed to bring ideas to the fore and improve the lives of patients worldwide.

This work shows a clear relationship between innovation potential within companies and the extent to which they have a culture and structure that is inclusive. This means that there is a clear argument for taking action – inclusive workplaces result in better innovation, and this, in turn, will have a positive impact on your bottom line.

The report contains a set of recommendations for action. These can be used by any science and technology company – indeed by any company. It doesn't matter what size your company is, how long you have been going, or what technology lies behind what you do. Although this research was undertaken in Oxfordshire, it is applicable to any company, wherever you are located. I encourage you to read the report, to think about what resonates with you, and to think about how you can use these recommendations to create the best, and most inclusive environment that you can. Advanced Oxford has also created a set of resources and tools that can help you too and these can be found at www.advancedoxford.com.

You may say that your company is too busy and focused on its research and development, its customers, or raising funding right now, and that dealing with these issues is a lesser priority activity. I would argue that time taken to establish your culture, to set or reassess the values of your organisation, to ensure that policies are supportive of your workforce and not acting to reinforce stereotypes, and getting structures and systems right is time well-invested and will pay dividends. Getting it right will create an environment and an innovation environment that works for everyone, regardless of their gender, age, educational background, ethnicity or any other characteristic.

Professor Simonetta Manfredi

Director of Research, Innovation and Enterprise
Oxford Brookes University

Over the last few years my colleagues and I at the Centre for Diversity Policy Research and Practice, have worked on a project, funded by the Engineering and Physical Sciences Research Council, to support and increase representation of women as founders of university spinout companies. That research highlighted a number of barriers preventing women's engagement with spinout leadership, including the lack of gender diversity and a predominantly male culture in the wider innovation ecosystem. This led us to develop a collaboration with Advanced Oxford to look at our regional innovation ecosystem through a gender lens. We started by looking at rates of women's participation as founders and leaders of R&D companies which revealed a very disappointing picture. Numbers however, only signal that there is a problem, and a much more in-depth investigation was needed to understand what lies behind the figures.

To dig deeper into this issue, we offered a PhD studentship with support from Advanced Oxford to research the problem and ultimately find solutions. Hannah Isabelle Tornow successfully applied for the scholarship and this report presents the key finding from the research that she conducted under the expert supervision of my esteemed colleagues Professor Anne Laure Humbert and Dr. Charikleia (Charoula) Tzanakou. Throughout her work Hannah has also benefitted from the guidance and advice of Sarah Haywood, Managing Director at Advanced Oxford. We are very grateful to Sarah for her involvement which has been instrumental to the success of this project by enabling Hannah to connect with local companies and enrich her doctoral experience through working at the interface between industry and academia.

The research has produced valuable insights into the experiences of women and men working in the Oxfordshire innovation ecosystem which are presented in this report and translated into actionable recommendations for local companies and beyond. I think there are three key messages that stand out from this report, which I hope will encourage reflection and change, and these are:

- Diversity of people, and by implication diversity of experiences and ideas are at the core of producing cutting-edge innovation that meets scientific, technological and societal challenges;
- The 'gender neutral facade' often provides only an appearance of inclusiveness and it confuses 'gender neutrality' with 'gender blindness';
- Both women and men do not relate to what is being perceived as a 'masculine culture' in the innovation working environment. Such culture tends to be centred around competitiveness and no room for failure, as opposed to collaboration and admission of and learning from failure which, as highlighted by this report, are crucial traits in the innovation process.

Finally, the Centre for Diversity Policy Research and Practice this year celebrates its 20th birthday! I can't think of a better way to mark the occasion with this report based on Hannah's impactful research and successful collaboration with Advanced Oxford.

Gillian Burgess

Chair
Advanced Oxford

Advanced Oxford has been interested in questions of diversity, equality and inclusion, and how poor diversity and inclusion impacts the innovation ecosystem of our region, since we started our work back in 2018. We have collaborated throughout with colleagues at Oxford Brookes University and Oxford Brookes Business School, in particular with the Centre for Diversity Policy Research and Practice. If you look at the 'Our Research' section of the Advanced Oxford website, you will find some of the work we have engaged in with our colleagues – research that demonstrates the scale of the problem. We simply do not have fully inclusive nor diverse teams within our science and technology companies. This is shown in the founding of companies: only 18% have at least one female founder, and it is shown starkly in the management and leadership of companies within the Oxfordshire region.

We were pleased to have the opportunity to collaborate on the PhD studentship project, that has been completed by Hannah Isabelle Tornow, as she has examined gender inclusive innovation across and within the Oxfordshire innovation landscape. We were clear from the start though – this research must have practical application and it would be essential to put the findings and learning from it into the hands of companies, so it could make a difference. This report takes Hannah's research and turns it into actionable insight and guidance for science and technology companies.

We have been asked, why the focus on gender, rather than other important characteristics? The answer is simple – we want to see all equality, diversity and inclusion issues addressed. However, examining and addressing gender imbalances is more tractable – it is easier to collect data and to protect the identity of participants. Nevertheless, while the research focused on inclusion related to gender, future research should take an intersectional approach. When developing the recommendations made within this report, we have tried to ensure that they are translatable across all inclusion and diversity issues and characteristics. Taking forward these recommendations should help you to address ED&I issues across the whole or your workforce.

We are very grateful to the companies and individuals who supported this research, whether it was giving access to events, giving time for interviews, or completing the research questionnaire for employees. Your investment of time has allowed us to provide evidence of a relationship between inclusive culture, structure and workplaces and a positive impact on innovation. The message is clear – if you care about innovation within your company, you need to provide an environment which supports and fosters inclusion.

We know that we cannot flip a switch and change the constitution of our companies overnight. Gender imbalances in companies are driven by long-term and deep-rooted issues, such as the number of girls studying STEM at school and beyond. We know that some companies, particularly deep-tech and physics-based companies, face challenges in finding and attracting women employees as they are under-represented in the labour market. Nevertheless, if there are things that can be done to encourage women to apply for jobs, to fully participate, and to be able to work in inclusive environments, we should act. This report addresses the things that companies can do now, and we ask you to please read on and consider how your company stands vis a vis these recommendations, and whether there are things you can do to drive positive change.

Introduction

The effects of gender diversity on company performance and innovation have been well-studied in academic research[2] and through business and professional research.[3]

Despite efforts to achieve equal participation of women and men in the workforce, women's participation remains significantly lower than men's, especially in the tech industry. Current data shows that women constitute only 26% of the tech workforce, with men occupying 77% of tech director positions. Additionally, a survey of women in tech in 2023 found that 76% of women reported experiencing bias or gender discrimination, this is an increase of 24% from the previous survey in 2019.[4] These figures pose the critical question: *what are the consequences if we don't manage to create environments where everyone is able, and feels comfortable, to contribute to innovation?*

In *'Invisible Women'* Caroline Criado Perez vividly provides a series of examples which shows how exclusion of women in innovation processes can have, at worse, life-threatening consequences. Take the example of the seat belt: originally designed based on men's body proportion, the result was a product that was unsuitable to protect pregnant women and the foetus in the event of a crash.[5] Despite having a lower risk of a crash, women are at higher risk of death or serious injuries when in a car accident.[6] Overlooking women in innovation can have significant outcomes regardless of sector. Recognition of this issue has now been extended into medicine, where traditionally, medical research and diagnostic criteria were based on symptoms experienced by men. A now well recognised example is cardiovascular disease, with women and men experiencing different symptoms when having a heart attack.[5] In 2016, a study found that women are 50% more likely than men to be given an incorrect diagnosis following a heart attack.[7] By involving both women and men in the design and development of medical diagnostics and treatments, healthcare solutions can effectively address the diverse needs of all individuals, leading to better health outcomes. Urban planning also often neglects the safety and accessibility needs of women. For instance, many cities are designed with a focus on car traffic, resulting in poorly lit streets, lack of public transportation options, and unsafe walking routes. This disproportionately affects women, who are more likely to rely on public transportation and walk for daily activities.[8] The oversight in infrastructure design not only poses safety risks but also limits women's mobility and access to essential services.[5]

> *"I genuinely believe I get a better team, better ideas, and better products from diverse talent"*
>
> GINNI ROMETTY
> CHAIRMAN, PRESIDENT AND CEO OF IBM

This sobering reality underscores the critical importance of including a diverse workforce in the innovation process. By incorporating diverse perspectives and experiences, innovative products

2. Dai, Y., Byun, G. and Ding, F. (2019)., Hoobler, J. M., Masterson, C. R., Nkomo, S. M. and Michel, E. J. (2018)., Joecks, J., Pull, K. and Vetter, K. (2013)., Lee, J. and Chung, J. (2021).

3. Dixon-Fyle, S., Hunt, V., Dolan, K. and Prince, S. (2020)., Hewlett, S., Marshall, M. and Sherbin, L. (2013)., Somers, M. (2022)., Turban, S., Wu, D. and Zhang, L. (2019).

4. Women in Tech. (2023).

5. Criado-Perez, C. (2019).

6. Cullen, P., Möller, H., Woodward, M., Senserrick, T., Boufous, S., Rogers, K., Brown, J. and Ivers, R. (2021)., Geddes, L. (2022).

7. British Heart Foundation. (2016).

8. Goel, R., Oyebode, O., Foley, L., Tatah, L., Millett, C. and Woodcock, J. (2022).

and services are more likely to be, not only inclusive, but also safer, more effective, and more responsive to the needs of all individuals in society.[9]

For this research, we looked at innovation through a gender-inclusive lens, meaning for companies to be gender-inclusive they have to create an environment where people of all genders have equal opportunities to contribute to, and benefit from, innovative processes and outcomes.[10] Taking a gender-inclusive approach in innovation is imperative for fostering diversity, equity, and representation in STEM. By incorporating diverse perspectives, experiences, and talents, a gender-inclusive approach can lead to more creative solutions, thoughtful products and services, and increased competitiveness in the marketplace. Moreover, it promotes social justice by addressing systemic inequalities and biases that have historically marginalised certain groups. Overall, gender-inclusive innovation is essential for building a more inclusive and prosperous future for everyone.[11]

How gender diverse is the Oxfordshire Innovation Ecosystem?

In 2021, research conducted by Oxford Brookes University shone a spotlight on the lack of gender diversity in Oxfordshire, where 90% of the companies were led by CEOs who are men, and 85% were founded exclusively by men. In contrast, only 13.6% of the region's companies had at least one founder who is a woman.[12] More recently the Oxfordshire Innovation Engine (OIE) 2023 report showed that only 18% of companies have at least one woman founder, only slightly higher than the national average of 17%. Just 4% of companies have all women teams and only 19% have 30% of women as key people (senior leadership/executive teams) which is below the national average of respectively 6% and 21%. As highlighted in the OIE report *"this data suggests that, in spite of the resources and capabilities existing in the Oxfordshire ecosystem (...) women remain largely excluded"* from the innovation ecosystem. Comfort should not be taken by the fact that in some instances these figures match the national average, as this level is generally poor in terms of women's participation.[13]

It is very difficult to determine the number of people employed in science and technology-based businesses within the region (see *Oxfordshire's Innovation Engine, 2023* for further consideration of this issue), even before we start to consider the participation of women within companies. Identifying individuals that are within other groups, such as age, ethnicity, disability, is even more difficult still as data is not reported and may not even be collected. Yet we know that participation of women within science and technology companies, beyond the data reported above on founders and leadership teams, is poor and there are still many companies which are predominantly male.[14]

On a more positive note, many companies in Oxfordshire recognise the need to tackle the lack of gender diversity, and research on talent and skills, undertaken by Advanced Oxford, showed that a key challenge is to ensure long-term gender-inclusive innovation in the area. Despite the implementation of policies to tackle gender imbalances, continuing inequalities clearly demonstrate that previous policies have failed to bring about significant change in the gender composition of Oxfordshire's innovation landscape, and by extension, other regions of the UK.

9. Vorley, T., Smith, H. L. and Owalla, B. (2022).

10. Foster, C. and Heeks, R. (2013).

11. Codagnone, C., Biagi, F. and Cilli, V. (2009).

12. Still, A. and Manfredi, S. (2021).

13. Advanced Oxford. (2023).

14. Women in STEM. (2023). WISE. (2023).

Evidence-based recommendations

This report presents findings from a comprehensive three-year PhD research project, undertaken at Oxford Brookes Business School, in collaboration with Advanced Oxford, conducted in the innovation ecosystem of Oxfordshire. The research seeks to understand the factors that shape inclusion and innovation taking into account labour market dynamics, career trajectories, and company culture. Unveiling a masculine culture within the ecosystem and its companies, this research study uncovers a sobering reality perceived by both women and men. Yet, what is even more alarming is the detrimental impact this culture exerts on 'innovation'. We encourage your company to take heed, for failure to disrupt the status quo risks squandering the very lifeblood of your company: its capacity to innovate. In conclusion, this report asserts that only through culture change and taking a deliberate gender-inclusive approach to designing policies, can your company cultivate the fertile ground necessary for innovation to flourish.

Data for this PhD was collected between April 2022 and January 2023. A mixed-method approach was taken, which involved a survey for employees within science and technology companies, one to one interviews with senior leaders within companies, and ethnography, which allowed us to study diversity and inclusion at the ecosystem level. Companies were drawn from a range of sectors, but all were using science and technology to underpin their activities, and all had innovation (development of new products and services) at the core of their mission. Companies of different sizes, age, ownership and funding models were included in the study.

Courtesy of BIA

A research-based approach:
what do the results tell us?

HIGHLIGHTS

- Many companies think they are gender-neutral but in reality, they are not. The existence of policies can create a facade behind which the reality is very different from the intent
- Both women and men employees responding to the survey felt that their company had a masculine culture
- Where women and men experience a masculine culture, there is a negative effect on innovation
- A masculine culture has a negative effect on how satisfied women and men are with their career. The more satisfied women and men are with their career, the more innovative they are
- This research suggests it is necessary to consider a gender-inclusive approach to *both* culture and structure in companies

Further details on the sample size and how this research was conducted, can be found at the end of this report.

While the research behind this report and the accompanying resources was conducted within Oxfordshire's knowledge economy, the findings and recommendations for action are relevant to any science and technology-based company, regardless of location within the UK, and potentially beyond.

Courtesy of RAEng via UnSplash

Culture catalyst:
fuelling innovation success through key values

Thirty-eight companies participated in this research, and 100% perceived their company culture as crucial for their innovative success.

76% of employees surveyed work in innovation-related roles and 100% of the companies participating recognise innovation as crucial for the survival of their company. The goal – innovation – not only dominates the company landscape, but also permeated discussions at the ecosystem level. Through several events at the innovation ecosystem level, examined as part of the ethnographic research, the relevance of innovation in Oxfordshire was highlighted.

Ethnographic and interview data collected showed that the ecosystem as a whole, and individual companies that make up the ecosystem, highlight three key values or activities that were consistently identified as enablers for innovation:

"So, I generally believe culture is our superpower when it comes to innovation, because it pushed people to work harder, stay loyal, and trust each other better."

COMPANY PARTICIPANT

"Oxfordshire's innovation is life changing, the research that we do is historically incredible"

INNOVATION ECOSYSTEM PARTICIPANT

1 **Collaboration** is crucial in the innovation process for individuals and companies, but also the innovation ecosystem as a whole. Interaction and exchange within companies, among companies and between individuals in the broader ecosystem is key. Innovation is also recognised as a team-based activity.

"Collaboration, that's where the disruptive innovation comes from"

COMPANY PARTICIPANT

"Science is a team sport"

INNOVATION ECOSYSTEM PARTICIPANT

2 **Transparency** is perceived as an integral part of the culture for innovation within the ecosystem and its companies. Transparency builds trust in relationships. As one participant in this research highlights, leadership teams in particular need to be transparent to gain trust, particularly given the need for quick decision making in innovation based companies.

"Transparent leadership is important because things do pivot all the time and you don't want to be constantly telling people to do something different without justifying why you're changing."

COMPANY PARTICIPANT

Courtesy of RAEng via UnSplash

3 **Communication** – complementary to transparency – is essential for achieving shared understanding, given the focus on collaboration and teamworking, to ensure collective contribution to shared goals. One participant in this research emphasised that with a diverse workforce, communication is crucial, being two-way, to understand all perspectives.

"Communication is key when working and innovating with so many different people together."

COMPANY PARTICIPANT

RECOMMENDATIONS FOR ACTION

The values discussed above are supportive of an inclusive culture, which, in turn is a key driver of diversity and gender inclusive innovation. Culture can emerge, evolve and/or be deliberately set and developed. Therefore, the following action points are recommended in relation to designing and setting culture:

- **Intentionally develop a gender-inclusive culture**
  Companies should be deliberate about shaping an inclusive culture and engage widely within and across the company to define, agree and set culture.

- **Regularly assess culture**
  Continuously evaluate company culture to ensure that reality aligns with the stated vision. This can be done through a variety of methods, such as employee surveys, focus-groups, and 360-degree feedback systems.

- **Monitor micro-behaviours**
  Be alert to 'micro-behaviours' and assess whether employee actions reflect the cultural vision. Examples of micro-behaviours observed in companies are discussed in this report and can be found on page 21 and 22. These might include regularly interrupting people in meetings, dominating conversations or encouraging competitive behaviour.

Values are important
but only when they are truly inclusive

While collaboration, transparency and communication appear to be valuable in creating the right environment for innovation to flourish, our research found that the reality may be somewhat different.

According to survey data from a sample of 168 employees contributing to this research, 26% of women and 13% of men agree with the statement ***'[I] witness negative attitudes towards women'***. As long as individuals feel excluded, perceive or experience negative attitudes towards women, collaboration, which is essential for innovation, will be sub-optimal. Furthermore, while there may be an assumption that the activity or value of 'collaboration' might include everyone, the reality may be very different as highlighted by a participant at an event:

> *"[women] still struggle to take a seat at the table"*
>
> INNOVATION ECOSYSTEM PARTICIPANT

35% of women and 22% of men agree with the statement that ***'negative perceptions and stereotypes about women's professional capabilities constitute barriers to women's advancement'***. If career pathways and promotion practices are designed, interpreted and implemented transparently, there is an opportunity for both women and men to benefit equally from promotion practices and negative stereotypes about women might change over time.

> *"So it [promotion practices] could be better, especially on the job role side of things, you know, so that people can be very clear on what they need to do to be promoted or certain rules."*
>
> COMPANY PARTICIPANT

Courtesy of OAS

Despite communication being assumed to be gender-neutral initially, it became apparent at various conferences and meetings in Oxfordshire's innovation ecosystem that communication patterns are not always gender-neutral. An example is patterns of interruption, where women are interrupted more often than men. This was emphasised by one woman during a conference.

> *"women are being spoken over."*
>
> INNOVATION ECOSYSTEM PARTICIPANT

Ethnographic observations and interview data relating to gender differences in communication activities was also supported by survey data, where 34% of women and 13% of men agree with the statement ***'men fail to pay attention to what women say in meetings'***. An environment where both women and men raise ideas, and are heard and listened to, is essential for innovation.

Gorodenkoff/shutterstock

RECOMMENDATIONS FOR ACTION

Establishing values for an organisation is crucial for developing a strong culture conducive to innovation. Our research suggests that values around [open] communication; transparency; collaboration are key to companies that have innovation at the heart of what they do. The following action points illustrate how values can be integrated in the culture and structure of the company:

- **Define values collaboratively**
  Involve employees in establishing the company's values and discuss how these values should manifest in daily business operations.

- **Align values with innovation goals**
  Engage with your employees to explore how these values support the company's innovation goals.

- **Integrate values into policies and structure**
  Assess how the established values are reflected in the company's policies and structure. For example, establish meeting protocols to encourage inclusive communication. This might include proscribing interruptions, discouraging people from speaking across each other, ensuring that all participants are actively invited to participate. Reflective practices can be helpful, and may include encouraging meeting leaders to reflect on meetings – did everyone participate? Was the meeting dominated by particular individuals? Were particular participants spoken over, ignored, or did someone make the same point after it had been made by another contributor? Are roles, tasks and responsibilities shared and/or allocated equally across the team? Who is in the room – does this represent the mix of people within your organisation, if not, what action do you need to take?

A gender-neutral facade?

The innovation ecosystem and its component organisations often present themselves as gender-neutral or suggest that they are blind to gender. Is there a reason for doing that? Both the ecosystem and its companies face political, historical, and socio-cultural pressures to present an inclusive culture and implement EDI initiatives, signalling inclusivity. For instance, current political debates and movements such as #Metoo and #NiUnaMenos highlight the need for equality, diversity and inclusion policies and an inclusive culture.

The calls for action have become louder, to the point where companies, institutions and regions are taking action to address these issues. However, our research suggests that sometimes actions can result in a 'gender-neutral facade' where the focus is presentation of an image of inclusivity, when in reality, gender differences in culture, behaviour and practice still exist, but become obscured, or at worse, ignored. Some companies claim to be gender-neutral, as highlighted in the examples below:

> *"I'd like to say that we're kind of gender-neutral, gender blind"*
>
> COMPANY PARTICIPANT

> *"Don't think we have any (biases), I'm not aware of any barriers related to gender..."*
>
> COMPANY PARTICIPANT

> *"We don't have a written policy to advance gender equality because we don't need it..."*
>
> COMPANY PARTICIPANT

Gender being perceived as a 'now-resolved' or 'sorted' issue makes it harder for women to reason that gender should still be debated and in turn this hampers willingness to change structures and practices.[15]

15. Acker, J. (2006b)., Benschop, Y. and Verloo, M. (2011)., Buswell, C. and Jenkins, S. (1994)., Calvert, L. M. and Ramsey, V. J. (1996)., Hervías Parejo, V. and Radulović, B. (2023)., Smolović Jones, O., Smolović Jones, S., Taylor, S. and Yarrow, E. (2021).

Gorodenkoff/shutterstock

There is a notable irony and a paradox to gender-related issues here. While gender-neutral facades can obscure or ignore behaviours and practices that overtly or inadvertently disadvantage or exclude women, these facades are often built through policies intended to signal inclusivity. Seemingly, gender-neutral policies and procedures can be used to assert that inequalities for minoritised groups, such as women, no longer exist.

> *"Yeah, I am sure we must be biased [...] But the company does have policies for gender equality and has done a review of the company."*
>
> **COMPANY PARTICIPANT**

> *"We've got the basic policies written down in the handbook that we don't discriminate, and you know yada, yada ya!"*
>
> **COMPANY PARTICIPANT**

> *"There is an organisation handbook, I couldn't say in detail if it includes stuff on ED&I."*
>
> **COMPANY PARTICIPANT**

Why do the policies that were designed to tackle inequalities in companies fail to produce the anticipated effect? There are two reasons. First, the culture in the ecosystem and in companies hinders usage of these policies. This is a well-known phenomenon that has been examined through academic and business research. Work-life balance policies are mainly used by women to cope with the double burden of managing work and care/home related tasks.[16] When women use these policies, or take career breaks, they are perceived as less dedicated to work, compared to men. This creates a stigma around use of such policies, making them ineffective.[17] Consequently, men are less likely to use such policies, but women often do not have a choice. Secondly, the policies are often not designed inclusively. Decision-making and policy-making activities are dominated by men, which means men design policies they believe women need, rather than getting women to design the policies they want.[18]

Not all policies are negative for gender-inclusivity, however they need to be designed in an inclusive way, and within an underlying gender-inclusive culture, to function properly. Currently the culture in the ecosystem and its companies frequently hampers the effectiveness of policies designed to promote inclusivity and participation.

16. Pedulla, D. S. and Thébaud, S. (2015)., Ronda, L., Ollo-López, A. and Goñi-Legaz, S. (2016).
17. Chung, H. and Van der Horst, M. (2018)., Chung, H. and Van der Lippe, T. (2020)., Fuller, S. and Hirsh, C. E. (2019)., Williams, J. C., Blair-Loy, M. and Berdahl, J. L. (2013).
18. Baltes, B. B., Briggs, T. E., Huff, J. W., Wright, J. A. and Neuman, G. A. (1999)., Ely, R. J. and Padavic, I. (2020)., Ely, R. J., Ibarra, H. and Kolb, D. M. (2011).

RECOMMENDATIONS FOR ACTION

This report considers how 'policies' can be used to signal inclusivity, even if in practice, policy can reinforce stereotypes or lack of inclusion. This report uses the term policy, but this also incorporates practices and norms as well as formal, statutory employment rights, and company constituted policies. Our research found a gender imbalance in how policies are used, for example there is still an imbalance in most companies in how flexible working is used among women and men. This highlights the need for companies to review and establish effective policies and practices that support inclusivity and diversity. The following action points provide guidance on policy development:

- **Implement inclusive policies**
  Establish policies that enhance or go beyond the key statutory employment rights, such as maternity/paternity leave. Is your company prepared to provide enhanced maternity/paternity leave for example? Aside from policies, consider practices too – for example, do team meetings and afterwork socials exclude individuals working remotely? Are all job specifications advertised as full-time jobs, or do you consider advertising roles both full-time and part-time as well as a job share? Practices to enhance inclusivity can evolve into formal company policies.

- **Regularly evaluate policies**
  Similar to culture, policies should be regularly reviewed to ensure they still align with the values and culture of the company.

- **Monitor policy usage**
  Examine who is using your company policies and identify any unintended consequences, such as one gender being the predominant user of the policies or potential stigmas associated with their use.

metamorworks/shutterstock

Cracks in the facade
– what actually happens?

Our research asked employees how they perceive culture in the company in which they work. Culture in the ecosystem and its companies is influenced by certain values and norms. Among these, masculine norms often emerged as prominent. To better understand whether masculine norms were identified by employees, we measured them as a part of culture, using a scale based on previous academic research. The results are surprising: if a company culture is perceived as masculine, it is both women and men who tend to share this perception.

Measuring a masculine culture

Although we did not conduct qualitative assessments, such as interviews, to define masculinity, our ethnographic data pointed towards masculine norms. It was one of the surprising findings of this research. This is what led us to explore this further through the survey of company employees. The scale we used to measure masculine culture in companies has its origin in academic literature.* Future research could explore how the concept of masculinity is understood by individuals within the ecosystem. Details of scales and measures used to measure a masculine culture are provided as part of the toolkit accompanying this report on Advanced Oxford's website.

*Glick, P., Berdahl, J. L. and Alonso, N. M. (2018) *'Development and validation of the masculinity contest culture scale'*, Journal of Social Issues, 74(3), pp. 449-476.

But what does a 'masculine culture' actually mean? The representation of various forms of masculinity in cinematic and social media contexts, exemplified in, for example "The Wolf of Wallstreet", "The twitter fight, Musk vs. Zuckerberg", "Fight Club", or "Barbie", is exaggerated, and an extreme. The masculine culture is much less overt within contemporary professional environments. We can find these artistic representations of masculine culture and environments amusing and they are parodies. Of course, not all aspects of masculinity are negative; masculinity is multifaceted and comprises a wide range of traits and behaviours. Some aspects of masculinity, such as assertiveness and confidence can be beneficial for companies and for innovation. However, certain notions of masculinity, particularly those centred around dominance, competence without any room for failure and aggressiveness can hinder innovation.[19] These traits might discourage open collaboration, communication, willingness to put forward ideas, and admission of failure, all of which are crucial in the innovation process. Masculinity can be reflected in practices such as 'micro-behaviour' patterns (e.g. clothing, language), but also in structures (e.g. career pathways, policies). It is worth noting that there is often a distinction in the perception of certain traits between women and men. For example, an assertive leadership style in men is viewed as a sign of strength and competence, whereas women are often labelled as bossy.[20]

19. Connell, R. (2000)., Galea, N. and Chappell, L. (2022)., Knights, D. (2015)., Weller, S. L., Clarke, C. A. and Brown, A. D. (2021).
20. Gluckman, P. R. (2018).

Lost innovation: the shadow of a masculine culture on structure

The masculine culture, manifested in the ecosystem and its companies, hampers innovation. A masculine culture affects the talent pipeline in innovation and technology, which already shows significant gender imbalances, with women being particularly underrepresented in STEM areas. The lack of an inclusive talent pipeline has been shown to hamper long-term innovation.[21]

There is an enormous body of good practice that can be referenced in relation to recruitment processes and practices, such as 'blinding' CVs/applications so that no inferences about characteristics can be made and using several stage recruitment methods including ways of assessing candidates that do not rely solely on interviews. This report supports the use of truly inclusive recruitment practices but given that these can be resource-intensive and expensive, some initial suggestions for inclusive practices – ones that communicate an inclusive approach and organisation for new and potential employees, are given below.

RECRUITMENT PRACTICES

Ensure your commitment to diversity and inclusion is clearly communicated through the following actions:

- **Inclusive communication**
  Review job descriptions, job specifications, and external recruitment representations to ensure they appeal to both women and men, adopting inclusive language.
- **Balanced imagery**
  Use diverse and inclusive imagery on your website to reflect a realistic, balanced company, and communicate your values and culture through all external channels. If your team/leadership team is all made up of men, reflect on what this portrays to potential employees, partners, and customers? How can you make it more diverse?
- **Dedicated career section**
  Develop a career page 'Working for us' on your website. As well as using it to promote job opportunities within your organisation, use it to highlight your commitment to diversity, inclusion, and fostering an inclusive work environment to drive innovation.

A masculine culture may lead to structural design which is not inclusive, and instead organisations are frequently structured around the needs of men.

The lack of inclusive career structures can lead to representation imbalances in leadership teams. Decision making roles – leadership and senior management – are often filled by men, which can lead to viewpoints of minoritised groups, such as women, being overlooked. Excluding or disregarding a range of viewpoints in innovation processes leads to less inclusive innovation outputs.[22]

Our survey results indicate that having an inclusive career structure in place can mediate the relationship between a masculine culture and innovation. However, inclusive design of training courses will not move the dial alone.

21. Advanced Oxford. (2021)., Kuschel, K., Ettl, K., Díaz-García, C. and Alsos, G. A. (2020).
22. Biswas, P. K., Roberts, H. and Stainback, K. (2021).

RECOMMENDATIONS FOR ACTION

Career pathways:

- **Transparency in career development**
  Ensure that opportunities for career development and criteria for career progression in your company are transparent and easily understood by all employees.

- **Inclusive promotion practices**
  Regularly review promotion practices and career systems to ensure they are effective and inclusive for all employees.

- **Balanced teams**
  Assess whether teams, including project-related teams, are balanced in terms of skills, potential, and opportunities. If administrative tasks are predominantly assigned to women and technical tasks to men, reconsider task allocation. Promote transparency in the distribution of tasks, by discussing tasks and roles of the team.

The masculine culture not only effects innovation within companies, it also impacts on how companies get started, and by whom, and is also manifested in issues such as the gender investment gap. The gender investment gap refers to the disparity in funding received by women entrepreneurs compared to men entrepreneurs, which hinders innovation by limiting the diversity of ideas and solutions.[23] It is well understood that a lack of investment hinders women's participation and contribution to innovation.[24] This becomes even more apparent when we look at the differences in representation of gender when looking at company founder numbers of science and technology-based companies.

A masculine environment shapes the culture in companies, which in turn impacts on industry and sectoral culture, as it influences behaviour patterns and the effectiveness of policies.[25]

Academic literature shows that the company culture in highly masculine environments is often not welcoming for employees, especially for women, and thereby affects their ability to contribute, including to innovation.[26]

While the concept of a masculine culture might be dismissed, or be seen as an uncomfortable notion, it exists and persists within a wide range of companies and organisations. Below, we set out a number of examples of behaviours, practices and responses in a masculine culture. Consider whether any of them seem familiar from your company. Attention is needed because the masculine environment makes it challenging for women to contribute to innovation.[27] As our research found that men perceive a masculine culture too, it may well be affecting the way in which they behave and contribute to innovation also.

23. Brush, C., Greene, P., Balachandra, L. and Davis, A. (2018).
24. Bligh, J. and Manfredi, S. (2022)., Cukier, W. and Hassannezhad Chavoushi, Z. (2020)., HM Treasury. (2021)., Saparito, P., Elam, A. and Brush, C. (2013).
25. Orser, B., Elliott, C. and Cukier, W. (2019).
26. Fouad, N. A., Chang, W.-H., Wan, M. and Singh, R. (2017).
27. Poggesi, S., Mari, M., De Vita, L. and Foss, L. (2020).

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Dress to impress – or dress to blend in?

Through the ethnographic research we found that at events with a higher proportion of men, women tend to wear dark coloured clothes and minimal or discreet makeup. However, at events with a higher share of women, women exhibit a preference for brighter-coloured and patterned clothing, more often opting for skirts or dresses symbolling femininity. Simultaneously, it was found that men consistently dress similarly throughout all events in jeans, dark clothing, smart shirts and jackets or suits. To validate these findings, we asked around 100 participants at an event whether their attire choices were influenced by the gender composition of meetings. The feedback indicated that while this is often an unconscious decision, many women acknowledge this behaviour. These findings might not be generalisable across all contexts, however they provide food for thought.

The power play

Men in the ecosystem and its companies frequently aim to portray themselves as 'strong', further reinforcing a masculine culture. For example, at one event, several men refused the use of a microphone when speaking, yet women were instructed to use a microphone. This sort of behaviour reinforces the gender stereotype that women are weak, and men are strong.

> *"My voice is loud enough, I don't need a microphone, right folks?" [laughter and nodding in the audience]*
>
> INNOVATION ECOSYSTEM PARTICIPANT

Earlier in this report we considered communication practices and identified behaviours in relation to interruption and participation in meetings. We asked around 100 female participants at an event whether they had ever experienced being interrupted or talked over by men in meetings and/or their work setting. 100% agreed that they had experienced this behaviour. Others identified behaviours include disregarding the contributions of women in meetings, or making the same point as a woman contributor, as if their contribution was not sufficient or valid.

Language as a weapon

Language can signal not only power, but also, on occasions, aggression. This includes, for example, the use of vulgar language used in one social event that was observed during the research. While the observations are based on a limited number of meetings, nonetheless they are indicative that these issues still exist. Using vulgar language such as particularly sexualised language and terms, that have historically been used against women, often with an intention to diminish them, can contribute to a hostile environment. This hostile environment will make women, and also frequently men, feel unwelcome and uncomfortable.

Liquid courage

Masculine behaviour patterns often surface at social events, especially when they involve alcohol. Social settings may provide an environment where individuals disregard policies, handbooks and norms focused on promoting inclusivity. Alcohol, perceived as part of the culture, can be exclusionary for individuals, regardless of gender, who do not drink for reasons such as health, travel restrictions, caring responsibilities, or religion. In some events that were observed it became apparent that there was an imbalance of alcohol consumption, with higher consumption levels among men compared to women. This might not be transferable to all contexts and all individuals, but, again, provides food for thought.

Stumbling blocks – women tripping over masculine terrain

Since the composition of leadership teams in STEM is often skewed towards men, structures such as career pathways and working patterns are built consciously or unconsciously around the needs of men.[28] For instance, our survey results revealed that 47% of women and 17% of men agree with the statement *'women must be more accomplished and pushy to be promoted'*. One reason for women struggling on their career pathways might be due to job design. For example, lab and innovation roles are often designed, or at least expected, to operate around the presumption that the jobholder has no other commitments, such as family or caring responsibilities; tasks often extend beyond normal working hours. One company participant points out that in order to innovate, work is required to go beyond office hours, posing challenges for people with family responsibilities.

> *"Innovation work takes place beyond the office hours and the labs"*
>
> COMPANY PARTICIPANT

Our research showed that women often take on more of the household chores, childcare and elderly care responsibilities compared to men. Consequently, it was found that the stress of balancing work and home related responsibilities for women (4.6) is on average nearly 1 point higher than for men (3.8) in the Oxfordshire region – measured on a scale from 1 *(my partner does most of the work)* to 7 *(I do most of the work)*. Despite these numbers, interestingly our data showed that more men (40%) in the Oxfordshire region work flexibly compared to women (34%). However, women work remotely more often (55%) compared to men (46%).

28. Kanter, R. M. (1975)., Makarem, Y. and Wang, J. (2020)., Wynn, A. T. (2020).

Call for action

This research underscores a strong case for action.

Many companies have started working on restructuring their work environments by, for example, reorganising tasks, changing methods of working[29] and flattening hierarchies.[30] Despite attempts to create an inclusive work environment, policies and practices have not always resulted in the anticipated effects on innovation.[31] Therefore, as has been suggested in this research, culture has to be taken into consideration, alongside the effectiveness of policies. One participant points out that both culture and structure need to be designed inclusively:

> *"I think everyone can develop a policy, I think it is more about creating the culture..."*
>
> COMPANY PARTICIPANT

It was found that the innovation ecosystem of Oxfordshire and its companies acknowledge the need for culture change. However, change processes are complex.[32]

Effective and **active** policies, practices and guidelines are needed to support culture change and to create an environment in alignment with the culture. A policy is only as effective as its use, and unintended consequences need to be considered too.

Without efforts to foster a gender-inclusive culture and structures within the Oxfordshire ecosystem and its companies, this research shows that we will not deliver the full potential for innovation within our companies and our innovation economy.

Our findings demonstrate that a masculine culture poses a barrier to innovation. However, there is reason for optimism: the analysis also shows that a gender-inclusive approach to policies and structures, such as gender-inclusive career development programmes, have shown promise in mitigating these challenges and can support culture change.

Yet, mere representation is not enough. A gender-inclusive approach to innovation thrives in environments that are not only diverse, but also designed in a gender-inclusive way, conducive to collaboration, with communication underpinned by transparency. Even if a semblance of gender balance has been achieved, there remain opportunities for improvement to ensure that all employees are empowered to contribute meaningfully to innovation.

To this end, this report offers actionable recommendations for businesses and other stakeholders within innovation ecosystems alike. These insights, along with tools and resources, are available on Advanced Oxford's website (www.advancedoxford.com). We invite you to not only explore these recommendations but also to actively engage in the ongoing dialogue and initiatives aimed at fostering gender inclusion and driving gender-inclusive innovation forward, because gender-inclusive innovation is not just good for women, it means better innovation outcomes, and therefore it is good for the success of companies, and it is good for your bottom line.

29. Villamor, I., Hill, N. S., Kossek, E. E. and Foley, K. O. (2023).

30. Hurst, W. R., Lee, S. and Frake, J. (2022).

31. Mah, J., Kolev, K. D., McNamara, G., Pan, L. and Devers, C. E. (2023)., Waldman, D. A. and Sparr, J. L. (2023).

32. Acker, J. (2006a).

Summary of Recommendations

This report contains findings from research conducted over the past three years in Oxfordshire, aiming to understand how companies can improve their potential for innovation while simultaneously becoming more inclusive. We have used the research and associated analysis to draw together a set of recommendations for action, directed at science and technology companies. Many of these recommendations are supported by further guidance, advice or tools, which can be found on the Advanced Oxford website (www.advancedoxford.com).

Culture

Culture within companies is identified as a key driver to support diversity and gender-inclusive innovation. Culture can emerge, evolve and / or be deliberately set and developed. We recommend an inclusive approach to designing and setting culture:

- **Intentionally develop a gender-inclusive culture**
  Companies should be deliberate about shaping an inclusive culture and engage widely within and across the company to do so.
- **Regularly assess culture**
  Continuously evaluate company culture to ensure that employees experience aligns with the organisational vision. This can be done through a variety of methods, such as employee surveys, focus-groups, and 360-degree feedback systems.
- **Monitor micro-behaviours**
  Be alert to 'micro-behaviours' and assess whether employee actions reflect the cultural vision of the company. Examples of micro-behaviours observed in companies are discussed in this report and can be found on pages 21 and 22. These might include regularly interrupting people in meetings, dominating conversations or encouraging competitive behaviour.

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Values

Establishing values for an organisation is crucial for developing a strong culture conducive to innovation. Our research suggests that values of [open] communication; transparency; collaboration are key to companies that have innovation at the heart of what they do. The following action points illustrate how values can be integrated in the culture and structure of the company:

- **Define values collaboratively**
  Involve, if possible, all employees in small companies, and representatives of different groups in larger companies in the process of establishing the company's values, Discuss how these values should manifest in daily business operations.
- **Align values with innovation goals**
  Engage with your employees to explore how values support the company's innovation goals.
- **Integrate values into policies and structures**
  Assess how the established values are reflected in the company's policies, practices and structure.

Policies and practice

This report considers how 'policies' can be used to signal inclusivity, even if in practice, policy can reinforce stereotypes or lack of inclusion. We use the term 'policy', but this also incorporates practices and norms as well as formal, statutory employment rights, and company constituted policies. Our research found a gender imbalance in how policies are used, for example there is still an imbalance in most companies in how flexible working is used by women and men. This highlights the need for companies to review and establish effective policies and practices that support inclusivity and diversity. The following action points provide guidance on policy development:

- **Implement inclusive policies**
  Establish policies that enhance or go beyond the key statutory employment rights, such as maternity/paternity leave. Is your company prepared to provide enhanced maternity/paternity leave for example? Alongside policies, consider practices too – for example, do team meetings and afterwork socials exclude individuals working remotely? Are all job specifications advertised as full-time jobs, or do you consider advertising roles both full-time and part-time as well as a job share? Practices to enhance inclusivity can evolve into formal company policies.
- **Regularly evaluate policies**
  Similar to culture, policies should be regularly reviewed to ensure they still align with the values and culture of the company.
- **Monitor policy usage**
  Examine who is using your company policies and identify any unintended consequences, such as one gender being the predominant user of the policies or potential stigmas associated with their use.

Structure and systems

Culture and values and should be reflected in the structure and systems of organisations and should be supported by company policies and practices (e.g. policies on promotions and career development and training). The following recommendations for action consider key structures and systems in relation to career pathways, recruitment practices, and event design in your company:

Career pathways

- **Transparency in career development**
  Ensure that opportunities for career development and criteria for career progression in your company are transparent and easily understood by all employees.
- **Inclusive promotion practices**
  Regularly review promotion practices and career systems to ensure they are effective and inclusive for all employees.
- **Balanced teams**
  Assess whether teams, including project-related teams, are balanced in terms of skills, potential, and opportunities. If administrative tasks are predominantly assigned to women and technical tasks to men, reconsider the task allocation. Promote transparency in the distribution of tasks, by discussing the tasks of the team.

Recruitment practices

Ensure your commitment to diversity and inclusion is clearly communicated through the following actions:

- **Inclusive communication**
  Review job descriptions, job specifications, and external recruitment representations to ensure they appeal to both women and men, adopting inclusive language.
- **Balanced imagery**
  Use diverse and inclusive imagery on your website to reflect a realistic, balanced company, and communicate your values and culture through all external channels. If your team/leadership team is all made up of men, reflect on what this portrays to potential employees, partners, and customers. How can you make it more diverse?
- **Dedicated career section**
  Develop a career page 'Working for us' on your website. As well as using it to promote job opportunities within your organisation, use it to highlight your commitment to diversity, inclusion, and fostering an inclusive work environment to drive innovation.

Events in your company

When organising events for staff, consider the following recommendations to ensure inclusivity and accessibility:

- **Timing and practical arrangements**
  Plan the timing of events and practical issues like travel arrangements thoughtfully. For example, beers in the pub on a Friday evening may not be suitable for many employees, especially those with family responsibilities or other commitments.

- **Inclusive activities**
  Diversify team-building activities and social gatherings to ensure inclusivity. Consider organising a range of events that accommodate the diverse interests of your employees. This approach will foster stronger team cohesion and commitment among all employees.

- **Facilitating networking**
  Recognise that some people find networking challenging, both internally and externally. Since informal networks are invaluable for personal career, and business development, identify and create opportunities that make networking accessible to everyone (for example, consider event timings, event advertisement, location). Are opportunities to participate in networks and external meetings shared across the organisation, or are they always allocated to certain individuals?

Culture, values, Human Resources (HR) and Equality Diversity and Inclusion (EDI) policies and structures should be planned from the earliest stages of establishing the company – retrofitting these into established and growing companies risks behaviours and norms becoming ingrained and these can be difficult to shift or change. However, established companies can still foster inclusive environments by revisiting and updating their existing culture and policies.

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About this study

Making full use of potential and existing talent is essential in any innovation ecosystem. Although gender diversity has improved in recent years, underrepresentation of women is still a problem and is still evident in the low numbers of women involved in the teams that spin out companies from our universities. Companies that participated in previous research with Advanced Oxford acknowledged that gender diversity is one of the challenges the innovation ecosystem of Oxfordshire is currently facing. So this research has sought to understand the barriers and to identify actions that companies can take to address them and maximise participation. We have found evidence that culture, structures and policy within companies can create barriers inadvertently, even where the intention was the opposite. We have also looked at the impact of poor inclusion and diversity on innovation potential, finding a direct relationship between cultures which tend towards the masculine having a negative impact on innovation activities.

Acknowledging the complexity of the ecosystem of Oxfordshire, a multilevel modelling approach was taken to paint a holistic picture of factors that shape gender-inclusive innovation. This means that this research captured the innovation ecosystem level by using ethnography to understand the context and culture in which innovation takes place. Ethnographic research enables researchers to make sense of people's action by observing them in the context of their environment and following up with informal conversations (www.advancedoxford.com/ethnography-blog/). The company perspective was captured using interviews with key informants (founders, CEOs, site leads, senior management), to understand the policies and practices that companies have in place to drive inclusion and to drive innovation. Finally, a survey was conducted among employees of participating companies to assess their perception of the company environment and their role in innovation. Both employees, those in innovation roles and non-innovation roles, as well as managerial roles (junior, middle, senior) and non-managerial roles were included, based on the assumption that, particularly in small companies, employees without innovation-specific titles still contribute to innovation activities.

A total of 14 observations were conducted in Oxfordshire's innovation ecosystem comprising meetings, conferences, networking events, and training activities. A total of 38 companies participated in this research from the following industries: advanced engineering, aerospace and defence, computer programming, electronic and electrical equipment, energy, medical equipment and diagnostics, pharmaceuticals and biotechnology, quantum technologies. A total of 168 employees engaged in the survey with equal participation from women and men across the companies.

The findings and results in this report are based on PhD research, supplemented by insights from industry dialogue and workshops. This holistic approach ensures that the recommendations provided are rooted firmly in both academic rigour and real-world industry perspectives.

The PhD research that underpins this report was based on data collection from April 2022 until January 2023. Approval for the research study was granted in April 2022 by the University Research Ethics Committee of Oxford Brookes University.

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The cover image is adapted from an image from Pixabay. The images are attributed as they are used throughout the report. We thank the companies and organisations who shared these images for use by Advanced Oxford.

Thanks to Corinne Welch (good-thinking.info) for her magnificent work in designing this report.

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Sarah Haywood
Managing Director, Advanced Oxford

Hannah Isabelle Tornow
Researcher

Hannah Isabelle Tornow's PhD research focuses on gender-inclusive innovation. She is currently involved in a research project on technology adoption, specifically the integration of AI in professional service firms. With a unique blend of industry and academic experience, Hannah specialises in bridging the gap between theory and practice, employing a data-driven, evidence-based approach to drive impactful change.

A full bibliography for the references mentioned in footnotes is provided on Advanced Oxford's website.

Courtesy of BIA

Advanced Oxford is a not-for-profit membership organisation with members drawn from R&D based/innovative companies working across Oxfordshire. Our membership includes companies, Oxford's two universities, the NHS and providers of innovation infrastructure and support.

Advanced Oxford is research-led, providing analysis and a united voice for our members on the key issues affecting the development of the innovation ecosystem in the Oxford region. We generate our own research and work to support and inform key stakeholders involved in the development of the business environment, infrastructure, and policy.

Advanced Oxford is working to support the long-term development and success of the Oxford region as a place to live and work. We do this by drawing on our collective experience of setting up, running, or working in knowledge-based, innovation-focused businesses and organisations. We use our connections to other businesses to generate evidence and undertake research.

For further information about Advanced Oxford, our members and our work see:
www.advancedoxford.com

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Oxford Brookes University has around 16,900 students. The student body is 58.5% female across all level of study and 41.1% of all students identify as from Black, Asian or Minority Ethnic (BAME). Oxford Brookes Students are taught and supported by a dedicated, thriving academic community and 70% of their research was judged to be 'world-leading' or 'internationally excellent' in the 2021 Research Excellence Framework. Oxford Brookes is also in the top ten UK Universities for Intellectual Property income.

Through its Enterprise Centre, established in collaboration with OxLEP in 2021, and the BioInnovation Hub, the university contributes to the richness of the Oxfordshire innovation ecosystem by nurturing and supporting spinouts and start-ups.

The University has a proud track record on equality, diversity and inclusion. Through its sustained effort over decades to promote gender as well as other equalities, women at Oxford Brookes hold 65.8% of senior academic positions and 48.8% of professors are female, which compares with a sector average of 29.7%. Cutting-edge research on equality, diversity and inclusion undertaken by several academics across a range of disciplines has made a difference to policies and practices both nationally and internationally.

For further information about research and innovation contact:
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Tornow, H.I. (2024) *'Gender Inclusivity: A Catalyst for Innovation – Why you should care and what steps to take'*, Oxford: Advanced Oxford.

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