



# STEM Women Whitepaper 2019-2021.

**Understanding the gender imbalance in STEM.**

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Written by  
**Katie Davies**



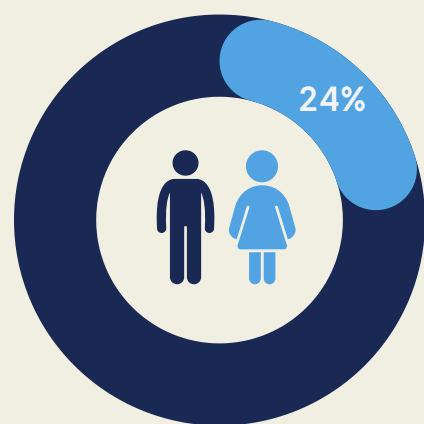


# Introduction

As part of our mission to address the gender imbalance in STEM, we have compiled a report for three years running with the aim of understanding why there are less women working in industries like science, technology, and engineering.

We have surveyed STEM students and recent graduates who identify as female or non-binary, asking a range of questions that have helped us gain a view of why students choose certain career paths, and the typical barriers they face during their job search.

In this report, we will cover a range of topics, from gender pay gap reports to the importance of diversity initiatives and issues surrounding imposter syndrome. Following the global pandemic in 2020, we have also factored in questions surrounding COVID-19 and the impact it has had on young women in STEM. Plus, we have introduced new questions for 2021 which focus on career confidence.



*According to a WISE report, from 2019 to 2020 just 24% of the UK STEM workforce was made up of women.*

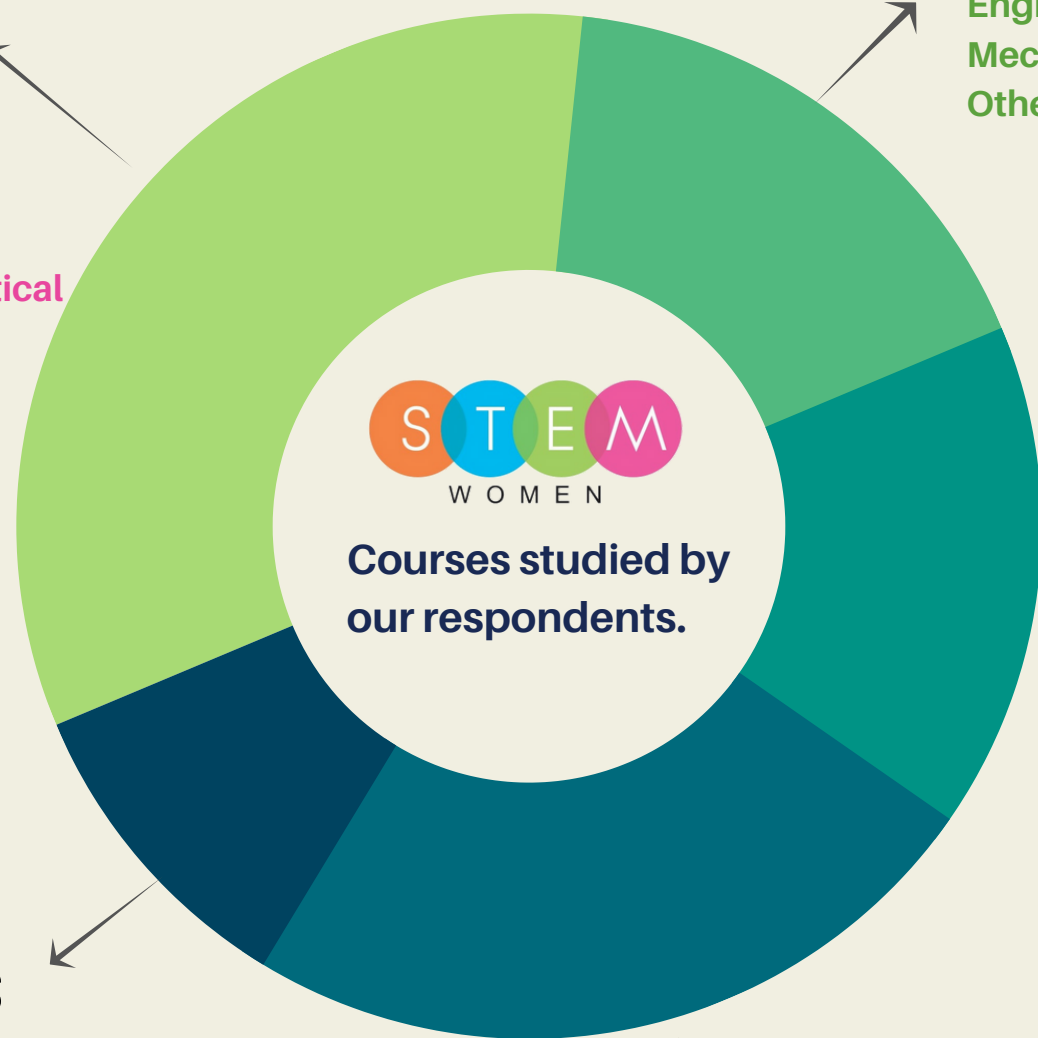


33% COMPUTER SCIENCE,  
DATA AND MATHEMATICS

Computer Science  
Software Engineering  
Information Systems  
Computer Gaming  
Artificial Intelligence  
Mathematics  
Statistics  
Data Sciences  
Other IT and Mathematical  
Sciences

#### STUDY LEVEL

BACHELORS 55%  
MASTERS 42%  
PHD 3%



10% PHYSICAL SCIENCES

Chemistry  
Physics  
Materials Science  
Other Physical Sciences

17% ENGINEERING

Civil & Structural Engineering  
Chemical Engineering  
Electronic & Electrical Engineering  
Aerospace & Automotive  
Engineering  
Mechanical Engineering  
Other Engineering

16% EARTH AND LIFE SCIENCES

Pharmaceutical Sciences  
Bio-sciences  
Geology  
Environmental Sciences  
Other Earth and Life Sciences

24% BUSINESS, FINANCE AND OTHER

Finance and Accounting  
Economics  
Banking  
Management  
Business Analytics

#### GRADUATION YEAR SPLIT

44% IN FINAL YEAR  
20% PENULTIMATE YEAR  
26% EARLIER YEARS  
10% ALREADY GRADUATED

# Our respondents.

From 2019 -2021, we have surveyed people who identify as female or non-binary, studying a range of STEM subjects at universities across the UK and Ireland.

Over three years we have now collected data from:

**557 respondents.**

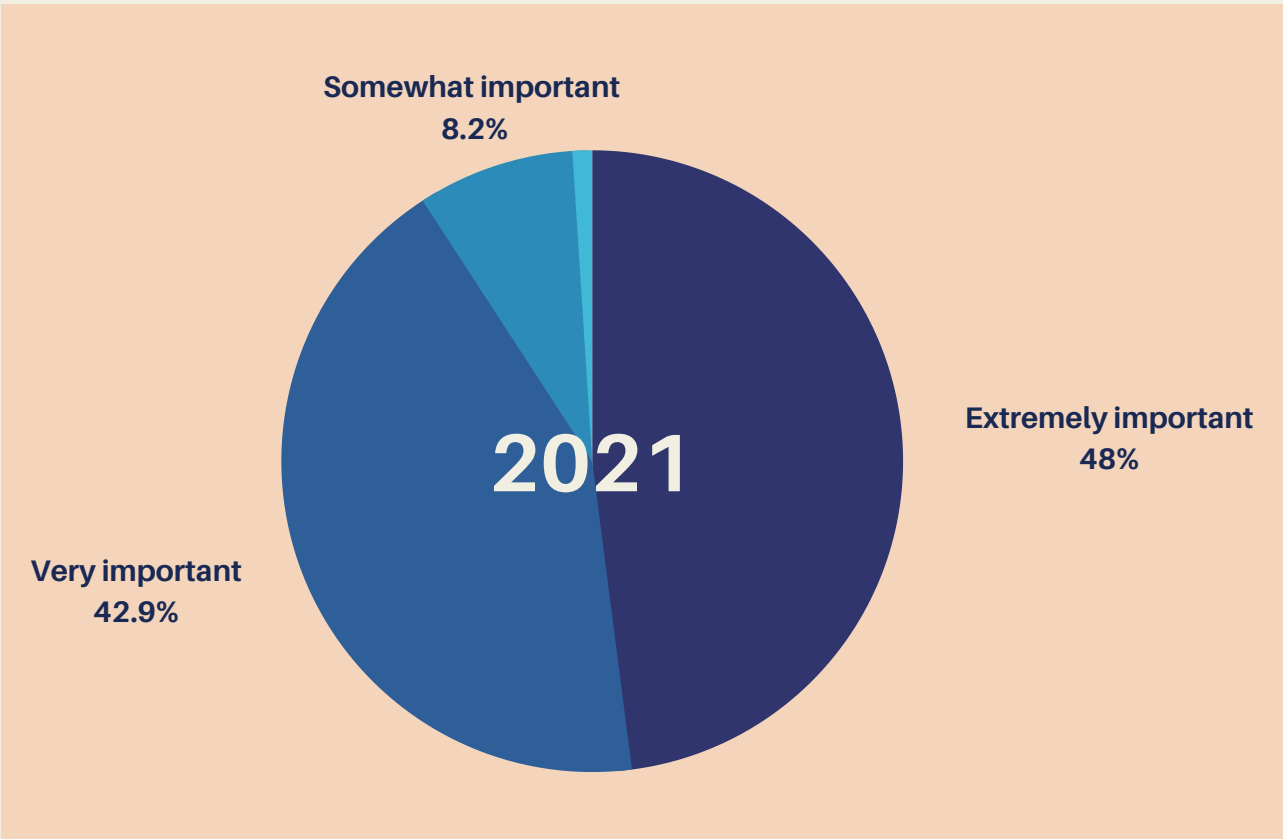
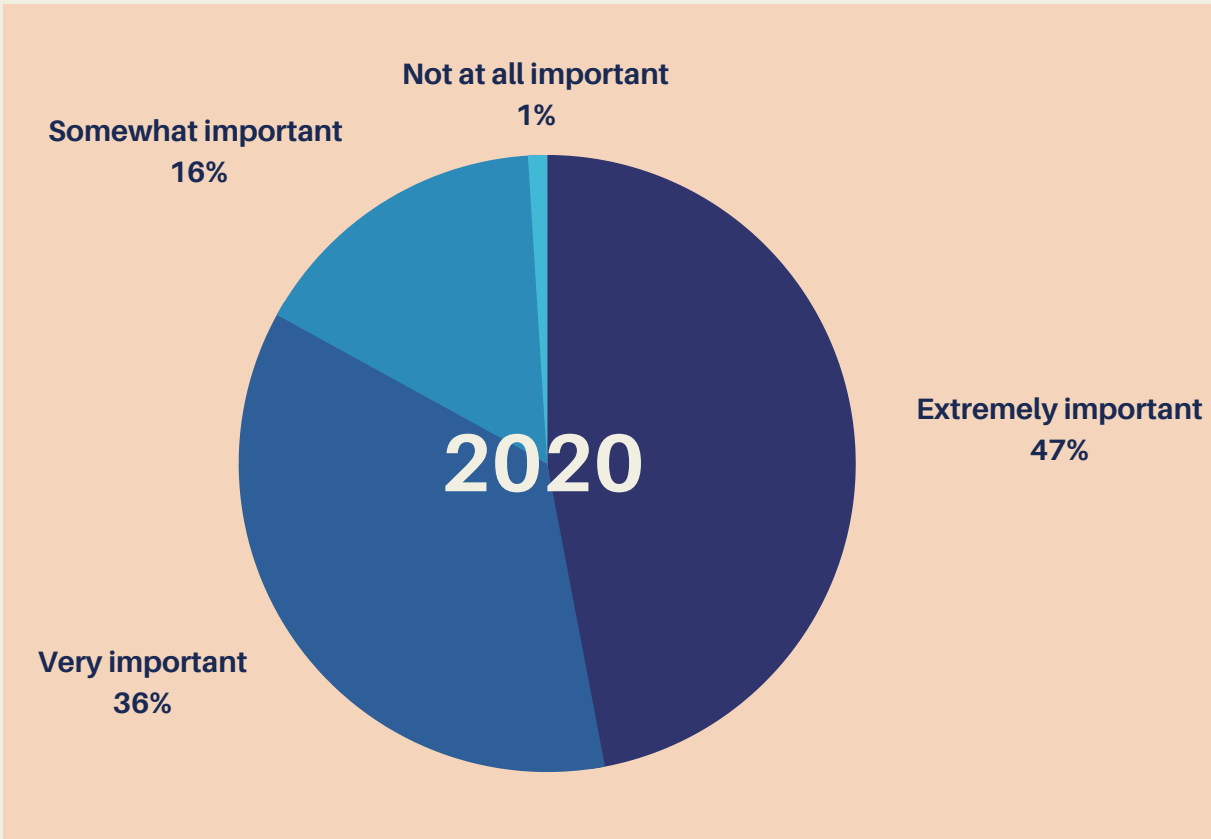
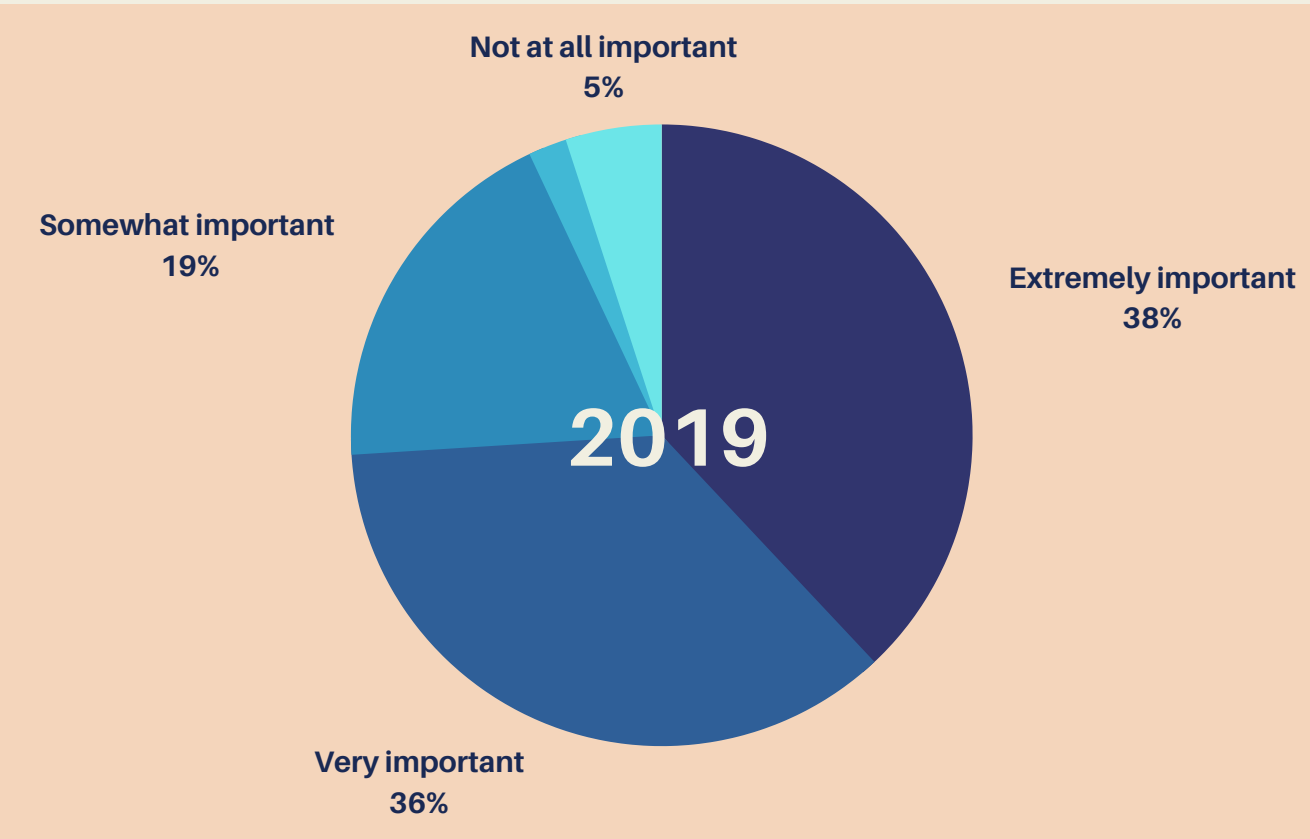
In 2019, we collected data from **176** respondents, in 2020 we had **89** respondents, and in 2021 we surveyed **292** respondents.

To conduct our research, we surveyed a cross-section of students who took part in our 2019, 2020, and 2021 autumn STEM Women events. These respondents were all either currently at university, or had recently graduated and were actively looking to start their careers within a STEM industry. The adjacent diagram shows the course, graduation year and study level splits of the students who signed up for a STEM Women event in 2020 and 2021.

On the surveys, we asked respondents a range of questions surrounding women in STEM and what makes them choose certain career paths. As well as multiple choice questions, we allowed respondents to add comments to explain their views, we have included a range of these as quotes.

The questions we asked respondents have varied slightly from year to year, we have removed certain questions and introduced new themes to reflect the jobs market and current events.

# How important are diversity initiatives to you?



For the past three years running, the majority of respondents feel that diversity initiatives are either extremely or very important. When you consider the gender disparity in the current STEM workforce, this is completely understandable.

**“Being from an ethnic minority background can sometimes make you feel left out and secluded. I wouldn’t want to feel that way at work.” - London and Home Counties 2020 Event Attendee.**

In 2019, 74% of respondents said diversity initiatives were either extremely or very important, this increased to 83% in 2020 and a further 89% in 2021. Since 2019, 15% more respondents see diversity initiatives as extremely or very important. This suggests that the benefits of diversity initiatives are becoming universally accepted by more students every year, and their value is widely recognised.

**“Initiatives drive towards equality for all and that will always be essential for a growing society. I believe everyone deserves a chance to succeed regardless of extenuating factors.” - Attendee at STEM Women London 2019 event.**

The comments relating to the importance of diversity demonstrated a thorough understanding of the topic. The respondents are aware that diversity is more than just something that is 'right', they also highlight that it leads to healthier work cultures, which impacts the success of the company and its innovation.

**“It suggests the people I will be working with will be from a diverse range of backgrounds, which is a much healthier environment to be working in, in my opinion. It also demonstrates the company is diversity conscious, which suggests they will be open to new ideas and the prospect of change.” - Felicity Lewis, Physics and Philosophy student at the University of Bristol.**

For those respondents who answered that they were only ‘somewhat important’, many highlighted issues surrounding the integrity of diversity initiatives and raised concerns over tokenism.

**“Everyone should be examined on their merits. No one should be hired to tick a box.” - Gemma Ranson, MEng Mechanical Engineering, London South Bank.**

**“I think diversity is very important but sometimes these initiatives can come across slightly fake and as more of a PR stunt than a genuine desire for a diverse workplace.” - Emma Pamment, MChem Chemistry with Industrial Training, University of Bath.**

This suggests that it is not ‘diversity’ that they don’t find important, instead it is the way in which companies go about promoting these ‘initiatives’ and whether they actually work in the real world. With such an informed knowledge of the subject, it’s unsurprising that some students see beyond a company statement and expect more tangible action.



# How important are diversity initiatives to you?

**"I want to work in a place which actively participates in improving its diversity and respecting its diverse members. Diversity initiatives, especially ones that help them get to senior management positions, indicate a commitment to creating a more fair workplace and reducing the impact of white and male privilege, rather than simply using them as a statistic for their website." - London and Home Counties 2020 Event Attendee.**

Companies should do more than just set quotas or make pledges, respondents want to see that employers are actually implementing these changes, whether it be through training and support networks, or new approaches to work culture and hiring.

Another theme that emerged from our 2020 and 2021 respondents was the importance of feeling like they belong within a company. They highlighted the importance of feeling comfortable and having their voices heard.

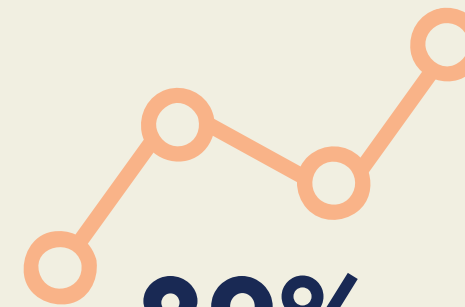
**"I think they're really important to reassure marginalised groups that they are valued and desired among employers. There have definitely been times that I have decided not to apply for a job because it doesn't seem like somewhere that I would fit in/looks like a boy's club. Diversity initiatives tell me that even if a company appears to be male-dominated, they are trying to address a gender imbalance and actively want women to apply." - Yorkshire, North West, & North East 2020 Event Attendee.**

**"I am a woman of colour trying to get into a male dominated field of Finance and Consulting. If a firm has diversity initiatives, it makes me feel more welcome knowing they are trying to be inclusive." - Sofia Eyo, Economics, University of Edinburgh.**

**"I feel the struggles of feeling like an imposter and it is important to me that I don't feel this way and it fills me with joy when I see companies working so hard on this." - Lauren Poole, Applied Engineering, Warwick University.**

Cultivating a diverse employee population where everyone feels able to bring their best selves to work is not only the right thing to do, but it's also better for business. However, as our respondents point out, it's important that these initiatives have been properly researched and implemented. Students want to feel like they fit into a company, and feel supported.

Diversity isn't a problem that can be fixed by simply imposing 'quotas', instead, it is an opportunity to learn, reinvent, and make meaningful changes that will benefit both individuals and the company as a whole.



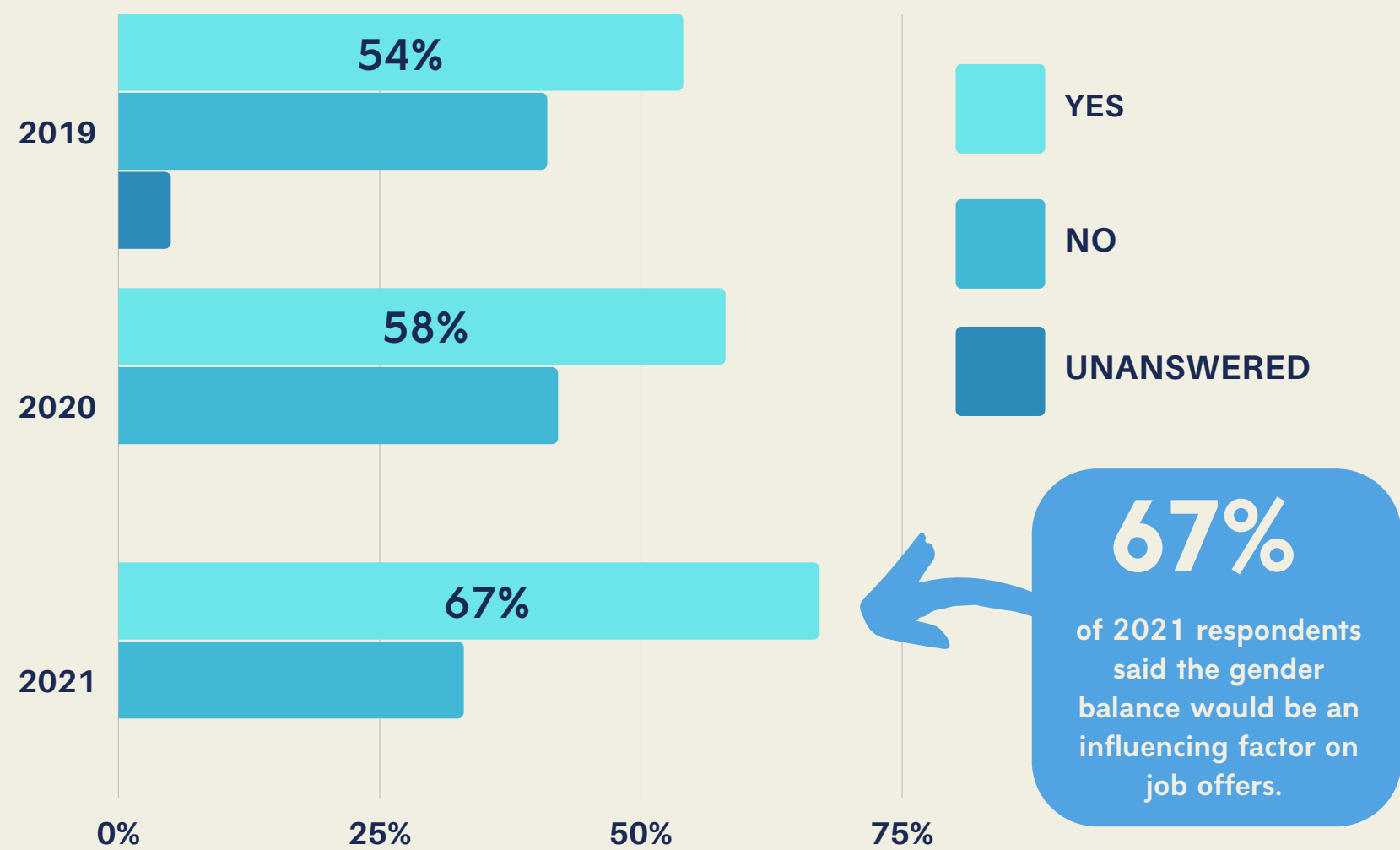
**89%**

**of 2021 respondents said that diversity initiatives were either extremely or very important to them.**

## What is a diversity initiative?

**Some examples of diversity initiatives include:** the company mission statement, attending diversity events, programmes and strategies, implementing a steering group within the business to support people, employing a Head of Diversity and Inclusion and working towards a clear company target of hires.

# Would the gender balance of a company be an influencing factor on job offers?



Since 2019, the number of respondents who said that the gender balance of a company would influence whether they would accept a job offer rose from 54% to 67%, that's **an increase of 13%**.

*"I want to work in a diverse working environment, I feel better work is done when a wide variety of people work together. If there is very little diversity, then there is probably an issue."* - Alex Porter, MSc Chemical Physics, Bristol University.

*"A company with no/ very few women implies a "boy's club" culture that I would find very off-putting."* - Ireland 2020 Event Attendee.

This shows that the respondents are continuing to consider how the gender balance can affect them in the workplace and opting more towards an equal future. Many said that unbalanced teams would make them feel uneasy and would be enough to dissuade them from accepting a job.

*"If they do not support gender equality in the workplace, I would not choose to work for the company."* - Theofani Leganti, Business Analysis and Technology, University of Strathclyde.

Many respondents highlighted that in a workplace without gender balance, they would feel a lack of confidence, and fear that their opinion may not be heard.

*"I've worked in various jobs in retail and in those jobs, when a team has a higher proportion of men than women, I've found I have less confidence than in more gender-balanced roles, find it harder to have my opinions heard, and just generally enjoy the job less."* - Yorkshire, North West and North East, 2020 Event Attendee.

A new theme that emerged from our 2021 respondents who answered 'Yes' was the importance of role models in prospective companies. Being able to connect over shared experience and feel that they can relate to other employees is very important to the students, especially those who identify as BAME.

*"It would make me feel more comfortable knowing that other women would be surrounding me in my day-to-day life at work, as they probably would have faced the same struggles as me."* - Gul Zahra, Mchem Chemistry with Medicinal Chemistry, University of Manchester.

*"Seeing women and women of colour in a company with high impact and leading positions is a good sign that the company gives those opportunities to women and so tells me that I will be able to have that opportunity too."* - Sayuri Fonseka, Product Design & Manufacture, University of Nottingham.

However, the respondents who answered 'No', signalled that they would still apply to companies with a gender imbalance for a number of reasons, but the most common was the need to enact change. Gender balance is still important to these respondents, but there is no hope of change for the future if women do not accept jobs in male-dominated workplaces.

*"No, because things cannot change if we choose to segregate ourselves from these environments."* - Tanya Morris, Computer Science at the University of Cambridge.

*"If I was to turn a job down because of the gender imbalance in a company, then I wouldn't have a job. Very few companies are balanced equally or female dominant. I also think it's my opportunity to increase the number of females, and people who identify as female, in the workplace."* - Ellen Milne, BSc Combined STEM with The Open University.

In 2020 and 2021, we saw respondents answer 'No', due to the fact that they believed the current jobs market was too competitive to turn down opportunities. This is clearly a reaction to the COVID-19 pandemic and the impact it has had on the job market, graduate confidence, and job security. We will cover more on this later in the report.

*"My focus is getting a job. Jobs are hard to find and I think that I couldn't afford to be fussy."* - 2020 Event Attendee.



# The Gender Pay Gap.

From 2019 to 2021, you can see that the percentage of respondents who would expect to read the gender pay gap reports when researching employers has moved from 65%, down to 35% in 2020, and then back up to 60% in 2021. There could be many factors that contributed to this dip, but one of the clearest is the COVID-19 pandemic. The Government decided to suspend enforcement of the gender pay gap deadlines for 2019-2020, which meant it was absent from news headlines. Also, with such an unprecedented health crisis, it is easy to see why respondents may not have had gender pay gaps at the forefront of their minds.

Many respondents in 2020 also said that they believe they cannot be picky, due to the current jobs market, and were more interested in securing their first job.

**“Unfortunately, I tend to expect a pay gap, and given that I’m a debt-ridden student, I am still willing to take on a job regardless of this. I tend not to look at the pay gap, but I do look to see what they’re doing to increase diversity of gender and race in their institution, as well as the current percentage of women and ethnic minorities working there, especially in senior management positions.” - London and Home Counties 2020 Event Attendee.**

However, of those who answered ‘Yes’, many were keen to highlight that if a company had a large gender pay gap, it could be a deal breaker when it came to deciding to work there.

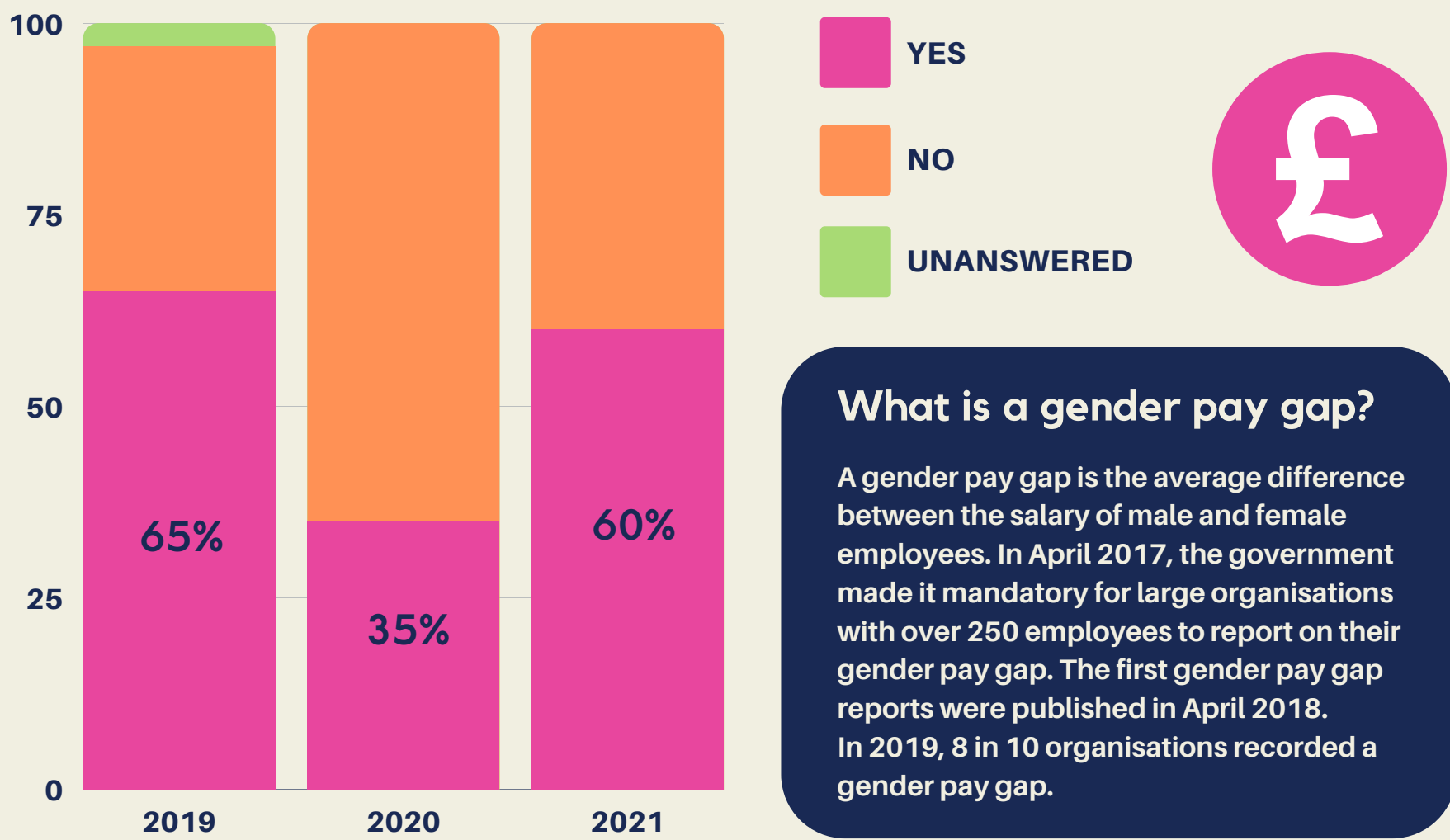
**“Absolutely. I understand different roles require different pay however, two people doing the same role and being paid differently based on their gender is not acceptable.” - Abbie Ralph, Biochemistry, NUI Galway.**

**“I would like to know if the company values my work and effort equally to a male in my position. I strongly believe in equality in the workplace and wouldn’t want to work at a company that doesn’t value me for who I am.” - London and Home Counties 2020 Event Attendee.**

Some respondents even talked about past experiences, where they had been paid less than their male counterparts. Generally, the respondents who had either experienced a gender pay gap first hand or had done research were more focused on finding these reports and taking them into consideration.

**“This initially interested me in my first job. I hadn't received a pay rise when other people of my level had, so I had a look into their gender pay reports and found that I should be paid the same as the males in the company. From here I always like to check as my experience is worth as much as anyone else.” - Ellen Milne, BSc Combined STEM with The Open University.**

## When you are researching potential employers, do you expect to read their gender pay gap reports?



Many of the students also felt strongly about aligning the company values with their world views and that they would choose a certain company over another due to their equal pay policies.

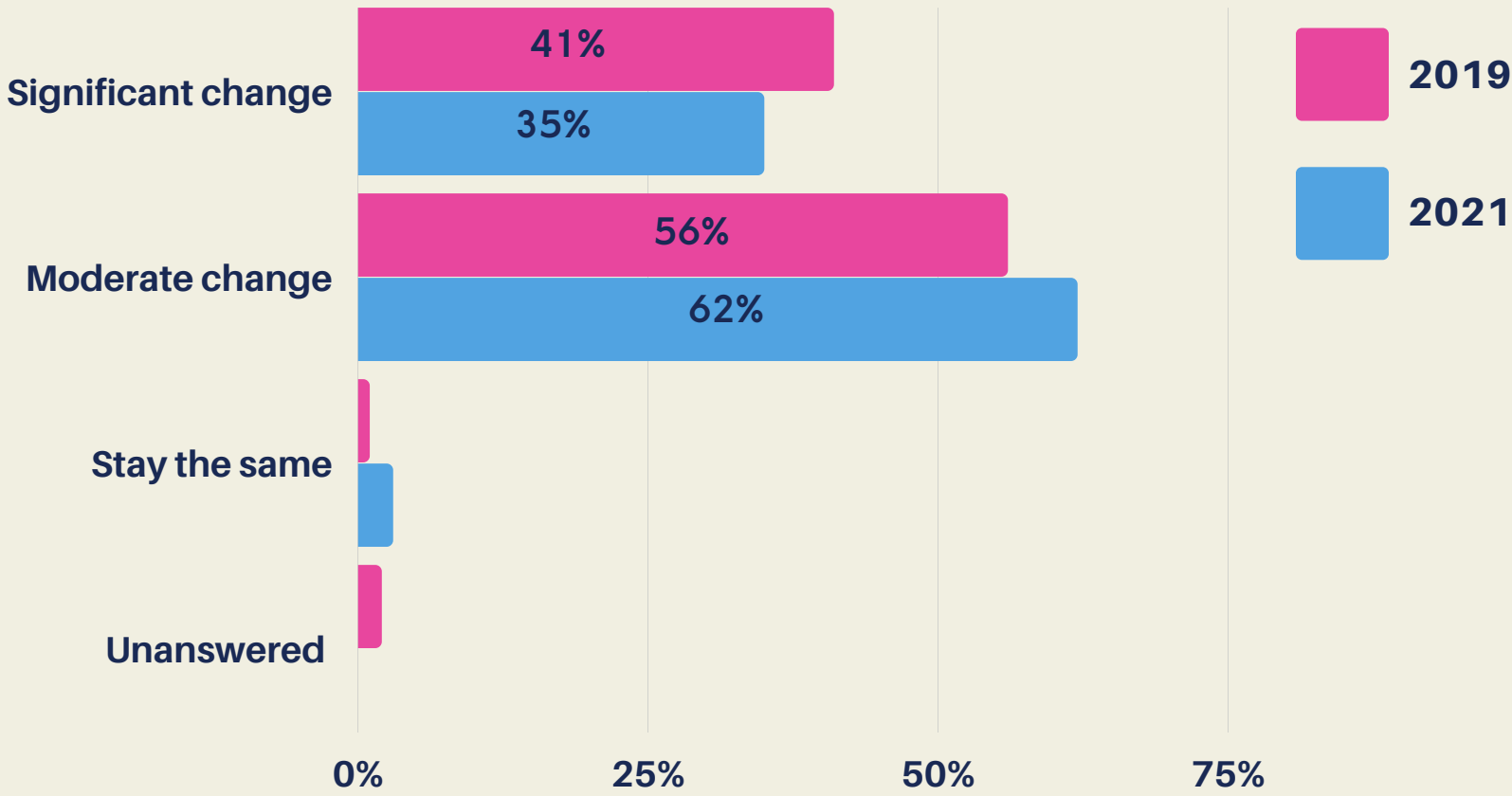
**“Being a woman, it is important to me that I associate myself with a corporation that reflects me.” - Rama Panchanadibal, MSc Gender and International Relations, University of Bristol.**

**“If a company publicises this information and it is positive, it would make me more likely to apply.” - Georgia Morris, Biomedical Sciences, Newcastle University.**

From 2019-2021, respondents who answered ‘No’, highlighted that they were unaware that this information was available. There clearly needs to be more done to publicise these reports and have them more readily available.

**“I haven't so far, but I now realise that I should.” - Shruti Badole. PhD Astrophysics, University of Manchester.**

# In 10 years time, how do you think the gender imbalance will have changed in IT and Engineering industries?



Of the students and graduates surveyed in 2019, 41% said that they thought the gender imbalance in IT and Engineering industries will have significantly changed in 10 years' time. However, 56% said that they thought there would only be moderate change and just 1% believed that the gender balance will stay the same.

After a gap in 2020, we asked our 2021 respondents this question and found that 35% said they expect a significant change, 62% said there would be a moderate change and 3% said it would stay the same. So from 2019 to 2021, respondents felt slightly less confident of a significant change and thought it would be closer to moderate.

Of those who believed that there would only be a moderate change, issues were raised surrounding ingrained beliefs within society that make drastic change difficult to enact.

**"With the rise of female movements such as '#MeToo' and a larger number of people speaking out for equal pay there will be a slight/moderate change. However, 75% of males are CEOs of FTSE 100 and if attitudes do not change rapidly, I believe the change will not be significant."** - Sumaiyah Rahman, Global Health, Queen Mary.

**"There will always be a perceived perception of male and female industries/clothes/toys etc, society needs to improve before companies can."** - Gemma Ranson, Mechanical Engineering, London South Bank University.

It's clear that respondents understand that to see a significant change, there are larger, more societal issues that need to be addressed before the male dominated industries make a significant transition. However, some students believed that the movement towards change would gain traction quickly and in 10 years' time there would be significant differences in these fields.

**"As gender stereotypes are made less and less relevant, men and women will feel less pressured to join a specific industry or take on a gender-specific role. Change is a positive feedback loop in this case, as the industries that adopt positive change will reap the benefits more than industries or organisations that refuse to update their ideas."** - Dublin 2019 Event Attendee.





# Have you ever suffered from or experienced imposter syndrome?

In 2021, **57% of respondents said they had suffered from or experienced imposter syndrome**, that is over half. In recent years, we have seen many more people talk openly about their struggles with imposter syndrome, both in the media but also during careers events and keynote speeches.

Many respondents highlighted that these feelings usually arose from ‘being out of place’ or not having a sense of belonging.

**“It stemmed from a lack of confidence in my capabilities and being surrounded by only men.” - Bristol Event Attendee.**

**“I interviewed for 2 software development internships, got 2 interviews and 2 offers. I still think I fooled them somehow in the technical interviews. Or worse, they only hired me because of my gender.” - London Event Attendee.**

Imposter syndrome affects people across the world, it isn't linked to gender. However, when we look at environments where there are gender imbalances or people who feel they are in the minority, feelings of imposter syndrome are much more prevalent. For example, if you are the only woman working in a tech company, you may feel added pressure to represent ‘all women’, which can contribute to feelings of impostor syndrome.

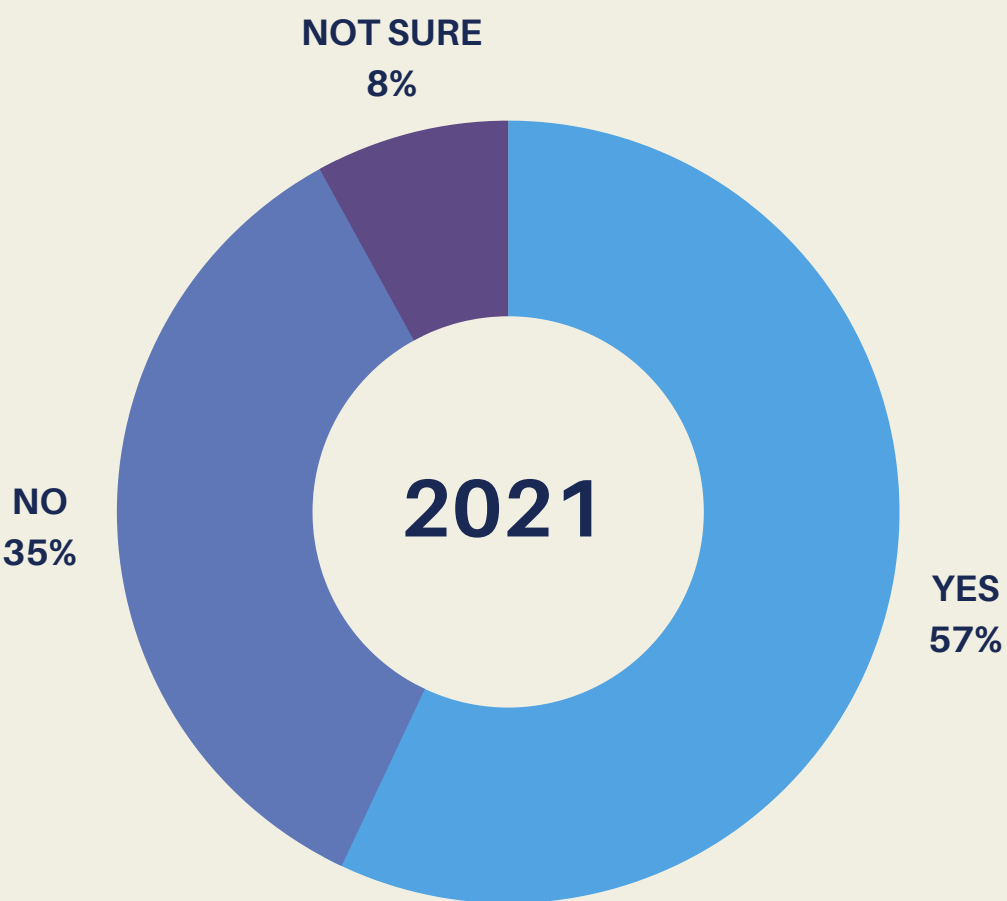
A sense of belonging fosters confidence. When you walk into a classroom or a meeting, studies have shown that the more people that sound and look like you, the more confident you will feel.

**“I have always doubted my abilities, but I don't fully know if this is as a result of being in a male-dominated field or my own characteristics.” - Emily Astins. Environmental Geoscience. Swansea University.**

**“Ever since I started pursuing a career in engineering I saw the difference in attitude towards me. I had often been subjected to joke and because of that, I was really questioning myself if engineering is the career I want to do. No person should ever question themselves, because of the 'normalised' opinions of the others.” - Plamena Andreeva, Computer Hardware and Software Engineering, Coventry University.**

Of the 35% of respondents who answered ‘No, many said that they felt confident in their abilities and that if they worked hard enough, they would deserve their achievements.

**“I believe that I’ve worked hard. If I did not get a job, it means that a better one is waiting for me.” - Ran Al-Najjar, BEng Architectural Engineering, Cardiff University.**



## Definition.

Imposter syndrome is a term that was first used by psychologists Suzanna Imes and Pauline Rose Clance in the 1970s. It can be defined as a collection of feelings of inadequacy that persist despite evident success. ‘Imposters’ suffer from chronic self-doubt and a sense of intellectual fraudulence that override any feelings of success or external proof of their competence. (Harvard Business Review).

When the concept was first introduced, it was mainly applied to high-achieving women. However, since then, it has been recognised as being more widely experienced. It is usually closely linked with perfectionism and can cause stress anxiety, low self confidence and low motivation.

Research has shown that imposter syndrome is usually more prevalent in high achievers or people who work in high-stress environments, such as academics, researchers, business people, and university students. It is a form of intellectual self-doubt.

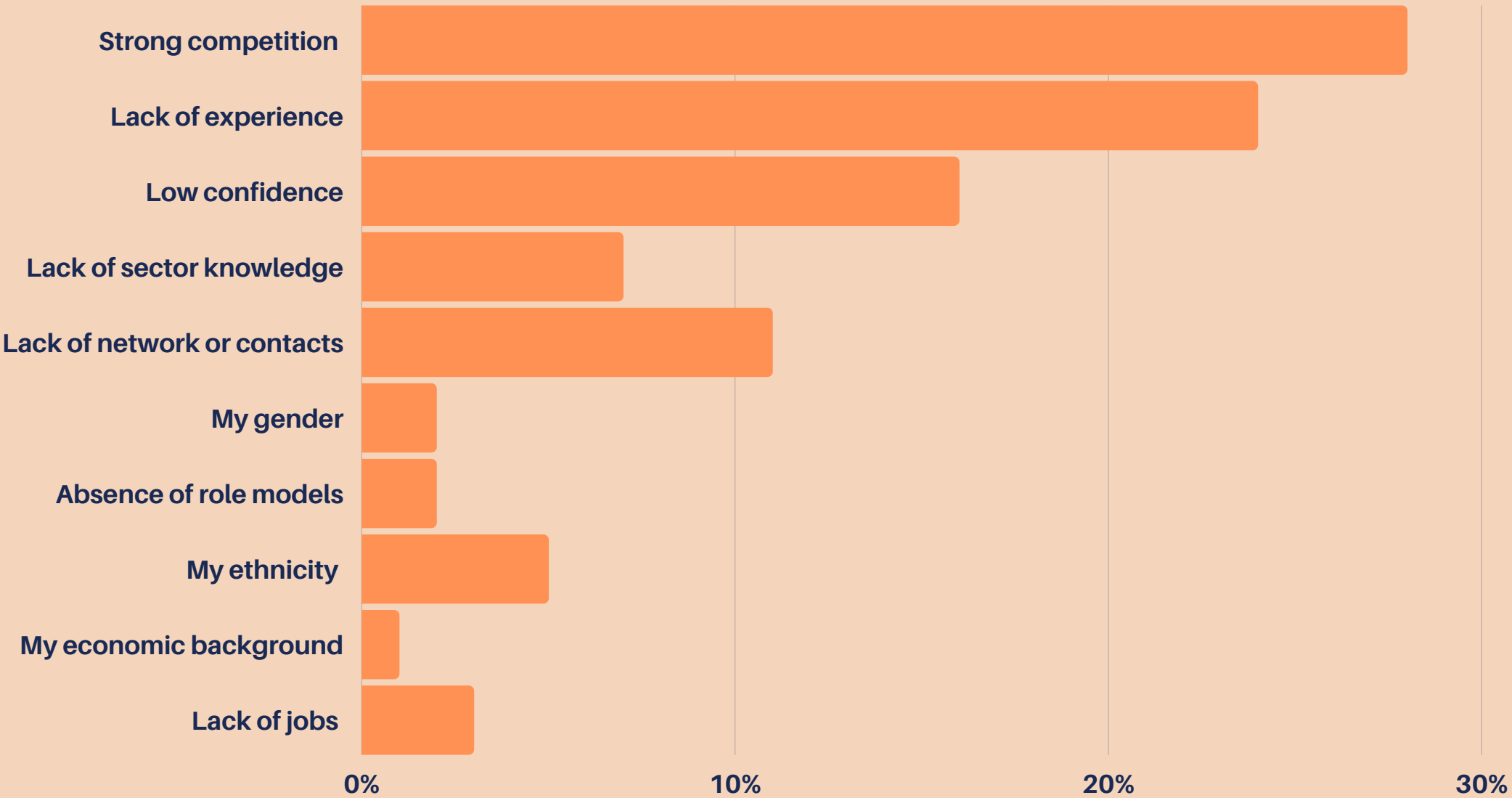
# Career barriers and confidence.

In 2021, we decided to introduce some new questions which focused on career barriers and confidence. Firstly, we asked respondents what they believed the biggest barrier to overcome was in order to pursue any career path they wished. We gave respondents a variety of 'barriers', of which they could only choose one.

The barrier chosen the most was 'strong competition', which had 28% of the votes. This was followed by 'lack of experience' at 24% and 'lack of confidence' with 16%. The least frequently chosen 'barriers' were 'my economic background' and 'absence of role models'.

In the comments, respondents also added some extra 'barriers' they believe they are faced with, these included: location, native language, visa, gap in work history, and doubts.

## What do you think is the biggest barrier to overcome if you would like to pursue any career path you wish?



## On a scale of 0-100, how confident are you that you will have a successful career after graduation?



We wanted to understand more about the confidence students recent graduates have when entering into the world of work after leaving university.

We asked respondents to measure their confidence on a scale of 0-100. For all respondents that answered, the average score was 67%.

Although over 50%, the average score for confidence is still low. It's clear that many respondents have doubts about their future career prospects, despite being very high calibre candidates for a range of roles within STEM industries.

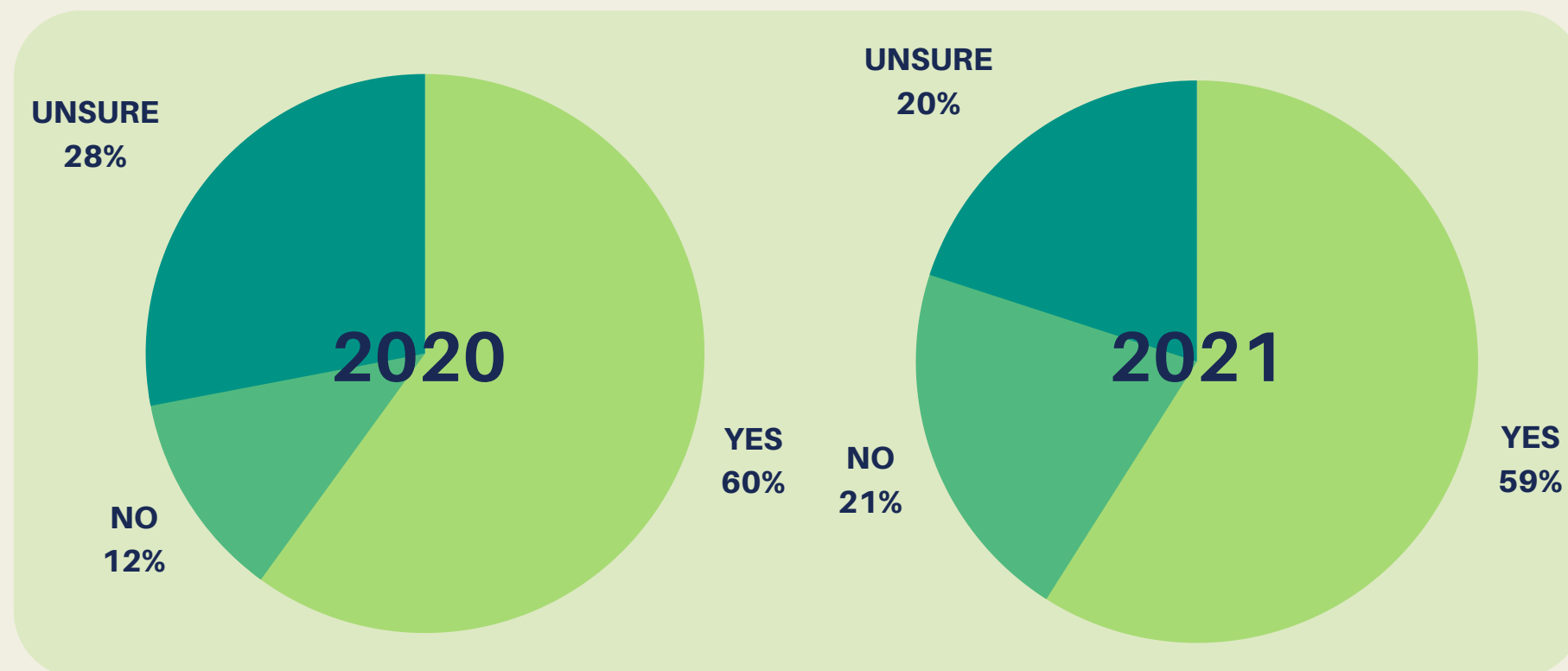
There have been numerous reports which have looked into the confidence differences between men and women. A Hewlett Packard internal report found that men are more likely to apply for a job or promotion when they meet only 60% of the qualifications, but women are more likely to only apply if they meet 100% of them. Another study also found that men are far more at ease with self-promotion than women, which contributes to a broad disparity in promotions and pay.



# The impact of COVID-19: Has the COVID-19 pandemic affected your job hunting and future career prospects?

In 2020, we wanted to ask STEM students and graduates who identify as female or non-binary about how the COVID-19 pandemic had affected them and their career prospects. We asked two new survey questions in 2020, and we decided to include them again in 2021.

Firstly, we asked if the pandemic had directly affected their job hunting and future career prospects. In 2020, **60% of respondents said that the COVID-19 pandemic had affected their future career prospects**. In 2021, this number remained high, with **59%** of respondents saying that the pandemic had affected their future career prospects.



One of the most common themes that emerged from this question in 2020 was a lack of opportunities, leading to a feeling of increased uncertainty and competition when it came to the job market. Respondents highlighted that many roles, internships and placements had been cancelled due to the pandemic. Many respondents highlighted that companies had actively stopped recruiting, and at times were making redundancies.

**"Several companies implemented a hiring freeze, including the one I did my internship in and would really like work in."** - Scotland 2020 Event Attendee.

In 2021, instead of complete hiring freezes and redundancies, respondents highlighted that there were just less opportunities available, and because of this, much higher competition for roles.

**"Many of my MBA cohort has experienced tough situations in job hunting due to COVID-19. Many employers have cut their vacancies. I have to lower my expectation in job hunting."** - Elaine Yin, MBA, University of Glasgow.

In both 2020 and 2021, respondents said that due to the instability of the jobs market, they were considering staying in education longer or focusing on upskilling, rather than job hunting in the difficult climate.

**"Considering a masters to join the workforce a year later and with a higher qualification since it is more competitive now."** - Financial Services 2020 Event Attendee.

**"It made me realise that jobs can be lost very quickly and unexpectedly but qualifications will stick with you forever. I wish to do postgraduate studies."** - Amber Hunt, BSc Mathematics, Cardiff University.

Alongside further study options, respondents in both years also said that they have been forced to look for roles outside of their chosen industry.

**"There are not as many jobs and I will have to get any job to keep the bills paid, not necessarily in an industry in which I have qualifications."** - London and Home Counties 2020 Event Attendee.

A new theme that arose from our 2021 respondents was the anxiety around remote work and how a lack of face-to-face interactions could hinder them in the future. Plus, many highlighted that they struggled with the pressure of interviews and assessments now being online.

**"More competitive, less clear on what the job entails, remote work isn't clear either and it's hard to connect and make the same connections you would face to face."** - Maths student 2021.

**"Less positions being offered, and the use of online-based assessments and interviews makes it difficult as it requires [candidates] to be almost perfect."** - Nelly Mwaniki, MSc. Financial Mathematics, University of Aberdeen.

From 2020 to 2021, the number of respondents who answered 'No', increased by 9%. These respondents said that the pandemic had actually opened up new opportunities that they wouldn't have had access to previously, plus many companies began remote hiring and onboarding in 2021.

**"The covid pandemic actually allowed me to work in a tech company creating covid testing machines which was something I never would've been able to experience before."** Emily Hanlon, University of Warwick.

# The impact of COVID-19.

In 2020 and 2021 we also asked respondents if they had directly had career opportunities cancelled due to the pandemic, and what these opportunities were. Of the students who were in a position to actively seek work opportunities in 2020, more were affected than not affected, with 44% answering 'Yes'.

However, in 2021, this number had dropped 13%, with 31% of respondents saying that they had career opportunities cancelled. Instead, almost half of respondents said that they had not had opportunities cancelled, highlighting that the jobs market has perhaps improved since 2020.

Of those who answered 'Yes', many listed some examples, in 2020 these were: summer internships, careers events, year placements, graduate schemes, summer school, work shadowing and spring insight weeks.

In 2021, the list was slightly shorter and didn't include things like careers events and graduate schemes, instead students listed: internships, travel and working abroad, lab-based projects and office work.

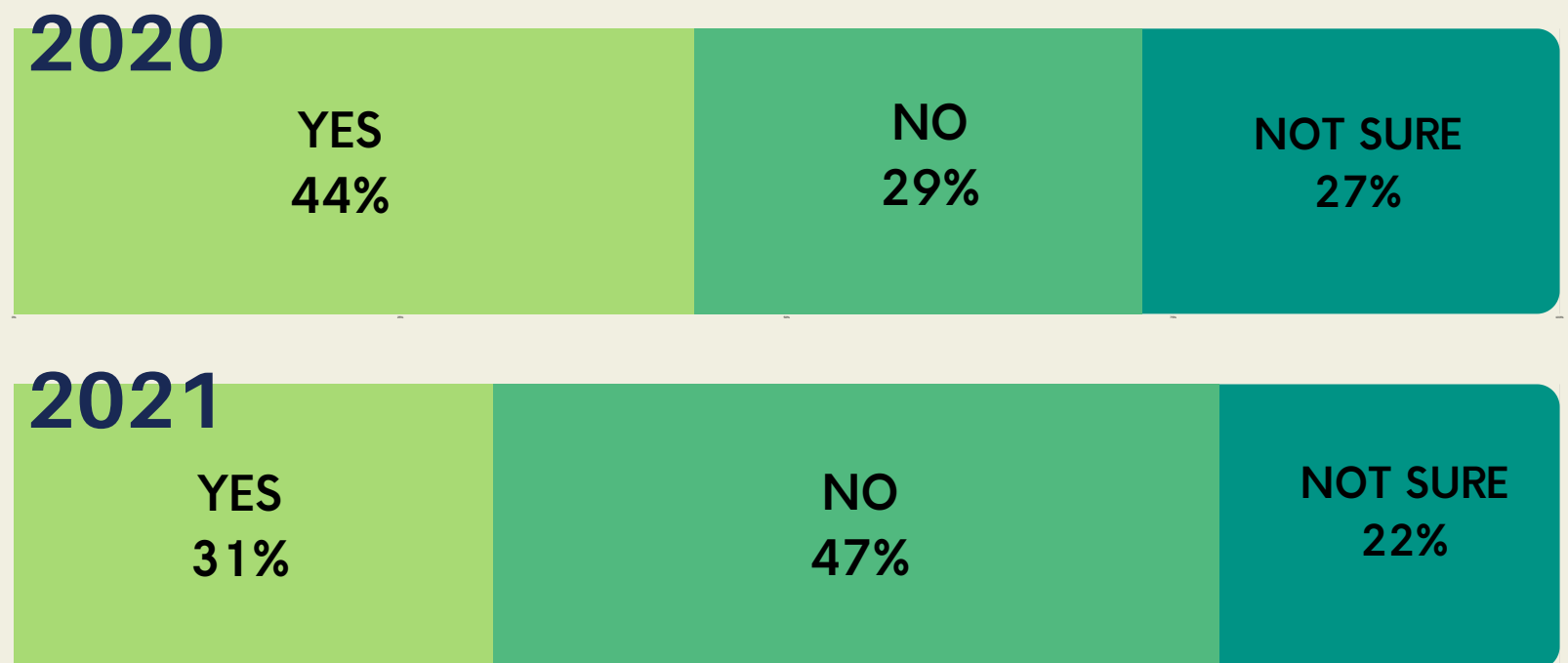
It's clear that opportunities like work placements, insight weeks and careers events have resumed, however these are now likely to be online.

*"I was not able to go into the office for my internship and I only met one person in real life on my team." - Ailbhe Bennett, Bachelor of Science Computing year 4, National College of Ireland.*

It is promising that these opportunities have resumed, however, there is still a sense that respondents feel they aren't getting the same kind of experience or benefit from the new online setting.

It is possible that students who said they "weren't sure" if career opportunities had been cancelled could have been unsuccessful in applying for roles, but they may have been unsure if this was due to their application, the impact of Covid on opportunity numbers, or any other factors.

## Have you had career opportunities cancelled due to the pandemic?



## 2020 Questions on COVID-19

In 2020, we also asked respondents about their views towards remote working and how they would feel starting a new role working from home. We saw very split results, with **41%** of respondents saying they would be happy or very happy to start a new role working remotely, **30%** saying they would be neither happy nor happy and **28%** saying they would be unhappy or extremely unhappy.

Working from home can be very lonely, and many respondents highlighted their fears of becoming isolated or having little social interaction with their new colleagues. However, there were many respondents who said that working from home is ideal for them and offered a better work-life balance.

We also asked respondents to suggest some solutions that would make working remotely more attractive to them when starting a new role. The key themes centred around the importance of social interaction and communication. Students were eager for companies to make time for online activities that would allow them to meet their colleagues in a relaxed environment and build their professional networks.

*"I would be happy to work remotely as long as the company made an effort to create a culture where I could ask questions and feel included. I started an internship during the pandemic where the team would have a weekly meeting to chat and catch up and it made a huge difference to feeling enthusiastic about my work." - Ireland 2020 Event Attendee.*





Autumn 2019 - we hosted 8 events in the UK and Ireland. These were face-to-face events in London, Edinburgh, Bristol, Manchester, Birmingham, and Dublin.

Autumn 2020 - our events were moved online due to COVID-19. We hosted 8 events for the UK, Ireland and The Netherlands.

Autumn 2021 - Our events were all online and we hosted 8 for the UK, Ireland and Benelux Region.

# Careers Events.

Because our respondents had all attended one or more of our STEM Women events, we wanted to ask how they had found these events, what they get out of them and how certain aspects of the agenda influence their decisions.

**Are you more likely to apply to a company who you have heard present a live speaker session?**

2019 -  **70%**      2021 -  **77%**

In both 2019 during our physical events and 2021 during our virtual events, 70% and 77% of respondents were more likely to apply to a company that they had heard speak during the event,

“Hearing someone talk with enthusiasm about their company definitely makes it a more attractive place to apply as you can tell their company treats them well.” - Millie Ward, Durham University, Computer Science.

“I feel as if I know more about the company and what to expect if I was to work there.” - Victoria Wright, Mechanical Engineering Meng, University of Manchester.



# Careers Events.

Did the STEM Women event change your mind about potential career paths?

2019



2020



2021



72% of respondents said a STEM Women event had changed their mind about career paths.

From 2019 to 2021, the percentage of respondents who said that a STEM Women event had changed their mind about potential careers grew from **58% to 72%**. Many highlighted that the events introduced them to new industries or roles that they had never heard of.

**"It opened my eyes to new and exciting companies that I hadn't been made aware of before, as well as different career paths that I could take."** - London Technology Graduate 2020 Event Attendee.

Respondents also said that the events showed that they could apply to roles that weren't directly linked to their degree background, and so opened up more opportunities.

**"It showed that you could be using your degree in different fields and different disciplines which I hadn't really heard about before, it also encouraged people to think more about what they enjoy rather than being insistent on using their degree knowledge."** - Scotland 2020 Event Attendee.

**"As a chemist I would only have thought about lab-based work but after the career fair, I could see that the skills acquired from my degree are interchangeable and could be applied in finance and data science."** - Financial Services 2019 Event Attendee.

In 2021, many of the respondents said that the events had given them more confidence to apply for roles that they thought were maybe out of their depth. As one attendee says, a company reached out to her on the platform, which is something unique to the online format.

**"Employers I had not considered myself suitable for came forward and spoke to me about how I could be suitable for their programmes."** - Kirsty Mitchell, Chemical Engineering - Heriot-Watt University.

There was an emphasis put on the importance of seeing and hearing from real women working at these companies, talking honestly about their experiences.

**"It allowed me to see real people and hear about their authentic experiences. Before, I thought that the people in these career paths were above me and that they would not be interested in my career development. However, they were all very encouraging."** - Felicity Lewis, Physics and Philosophy, University of Bristol.

**"Seeing women out in the industry in positions I could imagine myself being in 5 years has motivated me and given me a sense of "I could do that too" - Rebecka Evans, BSc Computer Science, Brunel University.**

Of those who answered 'No', many said that the STEM Women events had confirmed the career path they were already interested in.

**"It just confirmed the route I've taken to study cyber security and digital forensics was the best decision ever. Each woman that joins the industry can make a difference!"** - Sadaf Davari, BSc Cyber Security and Digital Forensics at Kingston University.

# Conclusion

This report has tried to highlight some of the key issues surrounding the gender imbalance in STEM, with an aim of understanding why there are less women working in STEM industries. We have asked students and recent graduates who identify as female or non-binary to share their insights into the jobs market, diversity, how the pandemic has affected them the barriers they face during the job search.

## Key themes and insights:

- Diversity, gender imbalances and the gender pay gap
- Imposter syndrome, confidence and career barriers
- The impact of COVID-19
- Attitudes to careers events

Diversity has remained either extremely or very important to the majority of our respondents from 2019 to 2021, and over half of respondents, year on year, said that the gender balance of a company would influence their decision on job offers.

In fact, from 2019 to 2021, 15% more respondents see diversity initiatives as extremely or very important and there was a 13% increase in respondents who said the gender balance would be a factor when accepting job offers.

It's clear that respondents **see the value and importance in a diverse workplace**, explaining that they believe these environments help them to thrive, feel a sense of belonging and therefore benefit the innovation and culture of the company.

In 2021, respondents were very vocal about the importance of feeling like they fit into a company before they accept a job offer. This is an important point for employers to note, as it shows the approach students are taking to their job searching following university. The actual job and day-to-day tasks are important, but a **healthy working environment and inclusive culture is integral to attracting these candidates**.

With regards to how companies can go about implementing diversity initiatives and a more gender balanced workforce, respondents were keen to show that they can see through 'PR stunts', or lack lustre hiring quotas and half-hearted mission statements. Instead, they were impressed by seeing people like them in positions of authority, having support from people within the company who understand them and their personal struggles, and implementing training and strategies that work hard to make distinct changes to the industry.

When it came to discussing the gender pay gap, we found that there was a staggering number of respondents who either were unaware that these reports were available or had never even thought to question them. From 2019 to 2021, the percentage of respondents who would expect to read the gender pay gap reports when researching employers has moved from 65%, down to 35% in 2020, and then back up to 60% in 2021.

There could be a number of reasons for the dip, however, one of the clearest is the COVID-19 pandemic. The Government decided to suspend enforcement of the gender pay gap deadlines for 2019-2020, this has meant that it has been absent from the news headlines, as everyone was understandably consumed by the unprecedented global health crisis.





# Conclusion

However, this is a worrying trend, as even in 2019 and 2021, there were only around 60% of respondents who said they actively seek out these reports. Many respondents highlighted that they believed they couldn't be picky about which jobs they accept, even if there was a gender pay gap. It's clear that more needs to be done to publicise this information and have it at the forefront of everyone's mind in order to really make important steps forward to reach equality.

This brings us to the question of how our respondents view the future of diversity in STEM. We asked for their views of how they think the gender imbalance in IT and Engineering may have changed in the next 10 years. We found that the majority of respondents said they believed there would only be a moderate change, and this was mainly due to the **stigma and ingrained beliefs that are still linked to these industries**. Many said that there was still a perceived perception of 'women's work' and 'men's work', which is so deeply rooted within society that it would take much longer to unpick before any significant change could be implemented.

Next, we wanted to explore the key themes surrounding career confidence, career barriers, and imposter syndrome. In 2021, we asked whether the respondents had ever experienced imposter syndrome, 57% said they had, which is over half. It is encouraging that students feel comfortable talking about issues like this, and were very open with their responses. This perhaps shows that publicity and admittance to imposter syndrome is gaining traction, which can only benefit us in the future.

Many respondents said they believed the feelings of imposter syndrome arose from not having a sense of belonging or feeling like the 'odd one out'. For people to bring their best selves to work and perform at their peak, **employees need to feel that they are welcome, which in turn will foster confidence**.

When exploring more around confidence, we asked respondents to measure how confident they were that they would have a successful career after graduation, on a scale of 0-100. For all respondents that answered, the average score was 67%. When we look at the calibre of respondents who took part in the survey, the average score for confidence is low. It's clear that many **respondents have doubts about their future career prospects, despite having excellent qualifications and an enthusiasm for STEM industries**. This raises questions around why these students do not feel confident about having a successful career.

We then asked respondents to highlight a key barrier they faced when pursuing a career path. The barrier chosen most was 'strong competition', followed by 'lack of experience' and 'lack of confidence'. These are interesting choices for a number of reasons. Competition being the highest barrier chosen perhaps reflects the state of the current jobs market following the outbreak of COVID-19. Many companies implemented hiring freezes in 2020, which means there could be a back log of students who are looking for roles, coupled with many companies also cutting their graduate intake in 2021.

Lack of experience could also signal that many respondents have missed out on internships, placements and voluntary work during lockdown, which has heightened their fear of not having enough experience to be successful in their careers. These factors, coupled with societal pressures, will all enhance the feeling of uncertainty which can affect confidence.

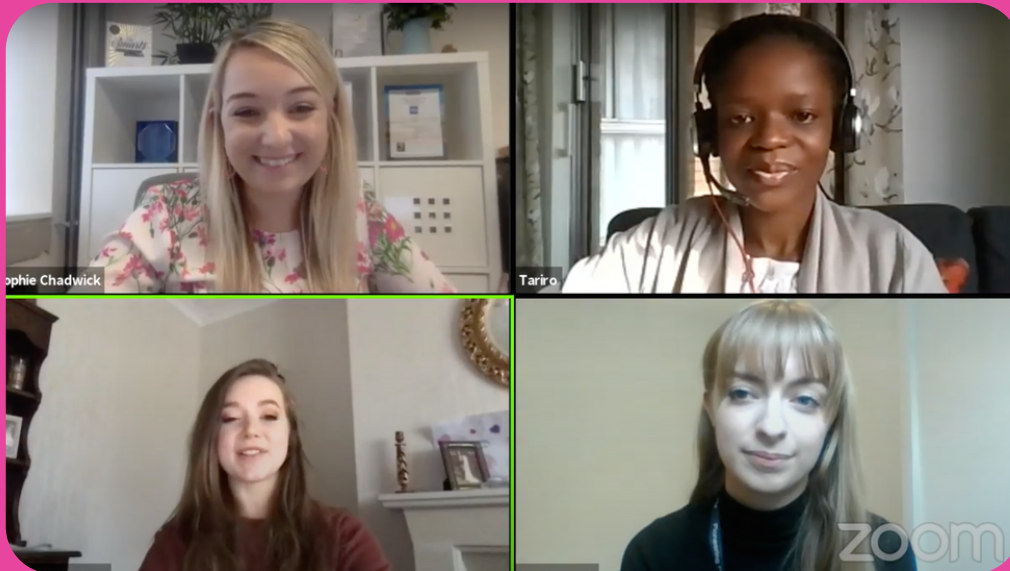
This leads onto our questions surrounding the COVID-19 pandemic and how it has impacted students and recent graduates who identify as female or non-binary. Firstly, we asked if the pandemic had directly affected their job hunting and future career prospects. In 2020, 60% of respondents said that the COVID-19 pandemic had affected their future career prospects. In 2021, this number remained high at 59%. This shows that career prospects for students and graduates is still being negatively impacted by the pandemic, which may continue for years to come.

However, when we asked respondents if they had directly had career opportunities cancelled due to the pandemic, 44% said 'Yes' in 2020, but this number dropped to 31% in 2021. Instead, almost half of respondents said that they had not had opportunities cancelled, highlighting that the jobs market has perhaps improved since 2020.

However, one new theme that emerged from our 2021 respondents was a fear and **anxiety over interviews, assessments, and working life now all being online**. Whereas in our 2020 survey, many respondents said they were happy to work remotely, this feeling saw a shift in 2021, with many saying that a lack of face-to-face interaction was negatively affecting their experiences. Respondents were concerned about not meeting their work colleagues, finding it hard to make real connections, and missing out on office and lab-based work. This could explain why fewer respondents said they had opportunities cancelled, but a similar percentage felt that the pandemic had affected their future.

Finally, we asked our respondents about careers events and how they interact with them during their job search. We found that in 2019, 70% of respondents said they were more likely to apply to a company who had presented a live speaker session, this increased to 77% in 2021. This shows that **respondents felt more connected to companies who shared personal career journeys and real stories from their employees**. We also found that **attending careers events has a strong impact on the potential career paths students choose to follow**. From 2019 to 2021, the percentage of respondents who said that a STEM Women event had changed their mind about potential careers grew from 58% to 72%. Many highlighted that the events introduced them to new industries or roles that they had never heard of.

This is hugely encouraging for companies who occupy slightly lesser-known areas of STEM, as it shows that event attendees are open-minded and willing to learn about these unknown avenues. We also saw that **career events boosted our respondent's confidence when applying for roles within STEM**, with many saying they felt more at ease and welcome after hearing from company representatives.



# About us

At STEM Women, we are on a mission to address the gender imbalance in STEM. We host networking and careers events for students and recent graduates who identify as female or non-binary, who are looking to start careers in STEM industries.

Our graduate events allow students and recent graduates with a science, technology, engineering or mathematics-related degree to network with a range of top employers, hear talks from a range of representatives working in STEM, and get inspired to follow in their footsteps.

Alongside our general STEM career events, we run industry specific events, and bespoke career events for companies who are looking to recruit more niche candidates. We also offer employers access to a year-round job board with candidate sourcing features.

## Our community

STEM Women has held **43** inspiring online and face-to-face careers events since February 2018.

We have introduced over **20,000** STEM students and recent graduates to **303** exhibiting companies.

**28,500+**

Page followers on LinkedIn, where we promote all event exhibitors.

**17,441**

Online community members, comprising STEM students and recent graduates who identify as female or non-binary.

**66%**

Year on year increase of registered event attendees from 2020 to 2021.






## 2022 WITH STEM WOMEN

 **VMWARE BESPOKE EVENT**  
WEDNESDAY 26TH JANUARY 2022

 **UK VIRTUAL STEM CAREERS EVENT**  
WEDNESDAY 16TH FEBRUARY 2022

 **AUSTRALIA & NEW ZEALAND VIRTUAL STEM CAREERS EVENT**  
THURSDAY 10TH MARCH 2022

 **UK TECHNOLOGY VIRTUAL CAREERS EVENT**  
WEDNESDAY 30TH MARCH 2022

 **HYBRID UK STEM CAREERS EVENT**  
DATE TBC JUNE 2022

 **UK, IRELAND, WIDER EUROPE & INDUSTRY SPECIFIC EVENTS**  
AUTUMN 2022

**Attendees can network with employers, hear inspiring company talks and apply to graduate roles and internships.**

**Companies can choose from a range of packages that allow them to;**

- **Network live** with hundreds of students.
- **Receive valuable attendee data** for ongoing outreach.
- **Highlight company opportunities and benefits through interactive stalls, presentations, one-to-one chats and video calls!**

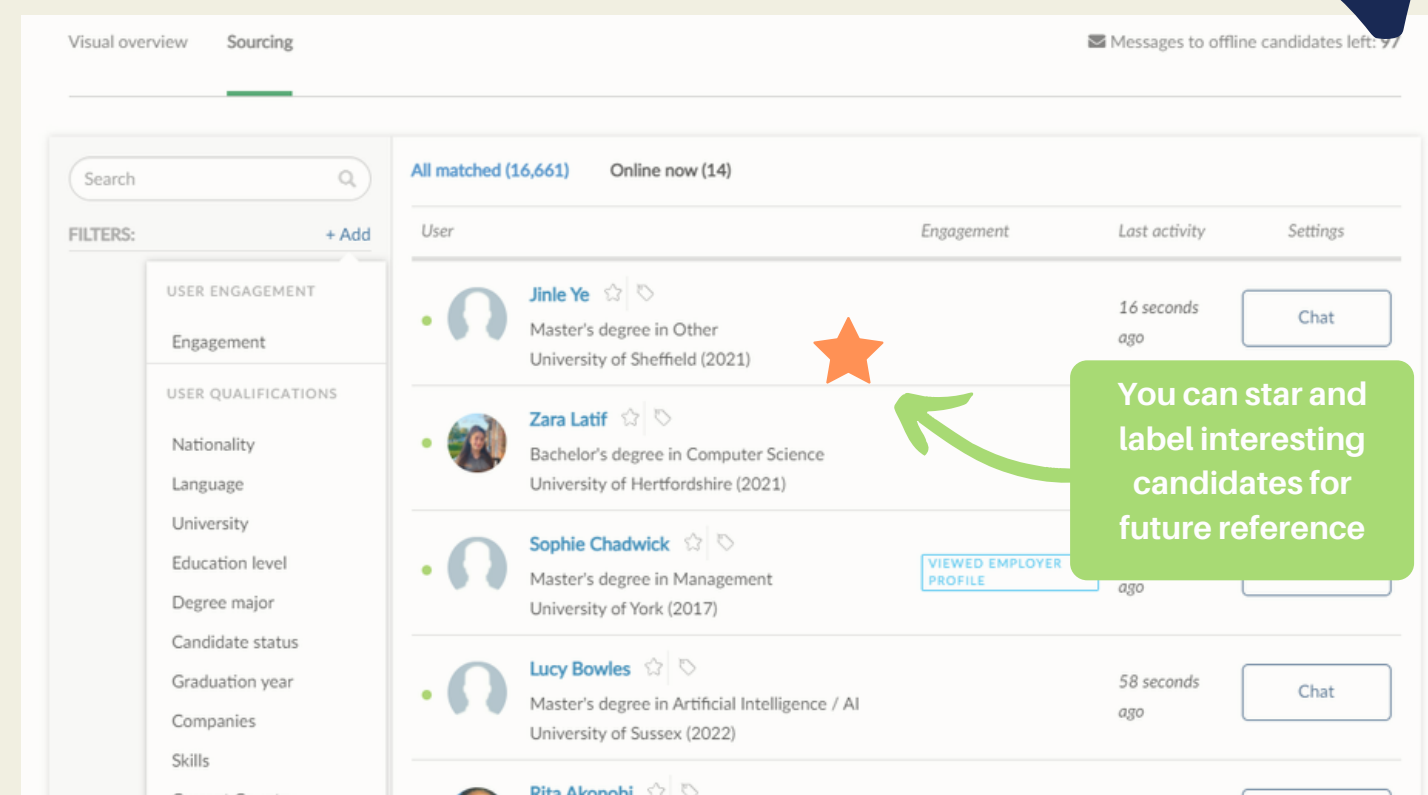
# Our services

- Virtual and hybrid career events
- Job board
- Direct candidate sourcing through our platform

We have an exciting line up of **hybrid and virtual events for 2022**, covering a variety of locations and industries. These events are for students and recent graduates who identify as female or non-binary.

A new service we have recently launched is our **job board portal and candidate sourcing service.**

- Post new jobs at any time.
- Gain access to over 17,000 candidates from our STEM Women database and source using filters.
- Send up to 100 messages to high calibre candidates per month.
- Arrange voice and video calls with online candidates.



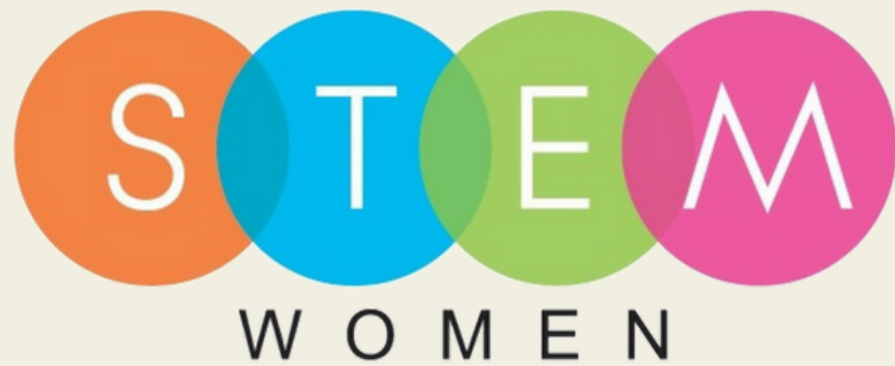
**Contact us for  
a free  
platform  
demonstration!**



**info@stemwomen.com**







Thank you to everyone who took part in the research and has contributed to this report.

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