

OCTOBER 2021

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# Inspiring Innovation

A Female Founders Forum Project

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ARIA BABU



In partnership with





In partnership with



# THE FEMALE FOUNDERS FORUM - A PROJECT CREATED BY THE ENTREPRENEURS NETWORK IN PARTNERSHIP WITH BARCLAYS - IS A GROUP OF SOME OF THE UK'S MOST SUCCESSFUL FEMALE ENTREPRENEURS.



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## **ARIA BABU**

Author

Aria Babu joined The Entrepreneurs Network in 2021 as a Senior Researcher and the Head of the Female Founders Forum. She has experience working at biodiversity startup Gentian, political consultancy Public First, and charity The Small Business Charter.

Her main areas of interest are female entrepreneurship, tech policy, and housing. She is the author of Resilience and Recovery, the 2020 report from the Female Founders Forum about how the COVID-19 pandemic impacted female entrepreneurs, an advisor at London YIMBY and the founder of The Take Machine.

“There is a clear economic case to address the gender disparity. By leaving these barriers in place we are holding back the development of cutting edge technologies.”

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# ABOUT THE FEMALE FOUNDERS FORUM

At its core, the Female Founders Forum is a group of some of the UK's most successful female entrepreneurs. More broadly, we are a group of key figures from within the financial industry, politicians, journalists and aspirational entrepreneurs on the cusp of growth.

## THE FEMALE FOUNDERS FORUM

The Female Founders Forum was founded in 2016. The Entrepreneurs Network, in partnership with Barclays, wanted to address a specific problem informed by academic evidence: why too few women-led businesses reach the same economic scale as that achieved by male-led companies. With support from Beauhurst, we were among the first to shed light on the gender funding gap with our groundbreaking *Untapped Unicorns* report. We followed up *Untapped Unicorns* with our *Mentoring Matters* report, which made the evidence-backed case for better access to networks and mentors to ensure female founders can thrive. In 2019, our *Here and Now* report revealed that the share of funding to women-led firms has doubled in less than a decade, and that equity-backed female-founded businesses were just as successful as male-led businesses and last year our report *Resilience and Recovery* found that female entrepreneurs had been hit harder by the COVID-19 pandemic.

We aren't just about research. We've brought like-minded entrepreneurs together in events around the country, including for speed mentoring events which matched established female founders with new entrepreneurs with ambitions to scale and we have hosted events in which successful female founders have shared their wisdom.



The Entrepreneurs Network is a think tank for Britain's most ambitious entrepreneurs. We bridge the gap between entrepreneurs and policymakers, with the aim of making Britain the best place in the world to start and grow a business. We have a network of over 10,000 entrepreneurs and are the Secretariat of the All Party Parliamentary Group (APPG) for Entrepreneurship, which sits across the House of Commons and House of Lords.



Plan and start. Build and grow. Expand and scale. It's not easy to start, grow and scale a business. We know it takes drive, determination and passion to see things through. You'll bring your ideas, vision and experience — we'll bring ours too. Whether you're seeking practical tools, expert knowledge, connections, or inspiration for your next big step, our innovative approach means you don't just bank with us — you bank on your future. To find out more about how Barclays supports high-growth business and entrepreneurs, search Barclays Entrepreneurs.

## Beauhurst

Beauhurst provides research and insight on the UK's high growth companies. Our data platform allows professionals to discover and track Britain's most ambitious businesses in unrivalled detail. For more information, visit [beauhurst.com](https://www.beauhurst.com).



# MEMBERS



**JUNE ANGELIDES**  
Founder  
Mums in Tech



**MARGOT JAMES**  
Former Minister of State  
for Digital and Creative  
Industries



**IRINA PAFOMOVA**  
Founder  
EngelWorks



**HARRIETT BALDWIN MP**  
Member of Parliament for  
West Worcestershire



**ANNABEL KARMEL MBE**  
Founder  
Annabel Karmel



**KATHRYN PARSON MBE**  
Co-Founder  
DeCoded



**ANNE BODEN**  
Founder  
Starling Bank



**BARONESS SUSAN  
KRAMER**



**COSMINA POPA**  
Co-Founder  
Conscious Venture Lab



**TANIA BOLER**  
Co-Founder  
Elvie



**MARTA KRUPINSKA**  
Co-Founder  
Azimo



**HEATHER RICHARDS**  
Founder  
Transversal



**ERIKA BRODNOCK**  
Founder  
Karisma Kidz



**TAMARA LITTLETON**  
Founder  
The Social Element



**JUSTINE ROBERTS CBE**  
Founder  
Mumsnet



**TUGCE BULUT**  
Co-founder  
Streetbees



**TAMARA LOHAN MBE**  
Co-Founder  
Mr & Mrs Smith



**JULIET ROGAN**  
Head of HG&E  
Barclays



**NANCY CRUICKSHANK**  
Founder  
MyShowcase



**DR JESSICA MANN**  
Co-Founder  
TrialReach



**RITA SHARMA OBE**  
Founder  
Best At Travel



**ALEXANDRA DALY**  
Founder  
AA Advisors



**DR SU METCALFE**  
Founder  
LIFNano



**EMMA SINCLAIR MBE**  
Founder  
EnterpriseAlumni



**ALEXANDRA DEPLEDGE**  
Founder  
Resi



**HENRIETTA MORRISON**  
Founder  
Lily's Kitchen



**SAMANTHA SMITH**  
Founder  
finnCap



**JULIA ELLIOTT-BROWN**  
Founder  
Enter the Arena



**SARA MURRAY OBE**  
Founder  
Buddi



**ANNE SOFAT**  
Founder  
Addidi Wealth



**HELEN HAYES MP**  
Member of Parliament for  
Dulwich and West Norwood



**FIONA NEILSEN**  
Founder  
Repositive



**LAURA TENISON MBE**  
Founder  
JoJo Maman Bébé



**FAYE HOLLAND**  
Founder  
Cofinitive



**GILLIAN NISSIM**  
Founder  
Working Mums



**DEBBIE WOSSKOW OBE**  
Co-Founder  
AllBright

## Regional Members

## EDINBURGH

**JULIE GRIEVE**

Founder  
Criton

**LEAH HUTCHEON**

Founder  
Appointedd

## LEEDS

**CAROLYN PEARSON**

Founder  
Maiden Voyage

**HELEN SCOTT**

Co-Founder  
Eris FX

## NEWCASTLE

**ISABELLA WEST**

Founder  
Hirestreet

**SARAH FERGUSON**

Founder  
The Algorithm People

**DR NICHOLA CONLON**

Co-Founder  
Nuchido

## MANCHESTER

**HANNAH DRAKE**

Founder  
EnergiMine

**DR HELEN SHAW**

Founder  
Proveca

**LOUISIE ROGERSON**

Co-Founder  
Howz

## CARDIFF

**KATE BACHE**

Founder  
Health & Her

**AIMEE BATEMAN**

Founder  
Careercake

## BIRMINGHAM

**MELISSA SNOVER**

Founder  
Nourished and Scripted

**TRACEY BLAKE**

Founder  
Student Nannies

**SONU BUBNA**

Co-Founder  
Shopper.com

## SOUTHAMPTON

**LOUISE HILL**

Co-Founder  
Gohenry

**JOANNA JENSEN**

Founder  
Childs Farm

# FOREWORD



**KATHERINE MORGAN**  
 Head of High Growth and  
 Entrepreneurs, Barclays  
 October 2021

This year marks the fifth anniversary of the Female Founders Forum - created by The Entrepreneurs Network in partnership with Barclays - to encourage, support and promote female entrepreneurship. It remains a flagship leader in facilitating thought-provoking discussions between female entrepreneurs.

Crucially, the Forum has used its insight and expertise to identify solutions to some of the biggest challenges and opportunities for its members, delivering well-researched policy recommendations to government. It has also provided countless opportunities for entrepreneurs to connect and collaborate, something we know is so valuable to female founders.

It has also published multiple pieces of research, discovering key findings that have tracked the way the female entrepreneurial landscape has progressed. In our first report, *Untapped Unicorns*,

the Forum was a pioneer in highlighting the gender funding gap, sparking a key focus for both enterprise and government.

Since then, we've gone on to identify positive shifts, with the share of funding doubling in less than a decade to women-led firms, and equity backed female-founded businesses becoming just as successful as their counterparts.<sup>i</sup> This year's findings are no different, they shine a light on the promising news that the gender funding gap within GreenTech is closed and female entrepreneurs in FinTech are receiving a proportionate amount of equity funding. But we must not rest on our laurels...

Although it is encouraging that we are making great strides within these particular sectors for female entrepreneurs, the report also indicates that these changes are not consistent across all sectors. Fundamentally, we must keep working until entrepreneurship is equal for all.

Ensuring female-led businesses have the same opportunities as male-led businesses is not only the right thing to do, but it makes economic sense as well. The Alison Rose Review of Female Entrepreneurship discovered that "up to £250 billion of new value could be added to the UK economy if women started and scaled new businesses at the same rate as UK men."<sup>ii</sup> This is a figure I think we should keep reminding ourselves of.

With our focus pivoting from the immediate response to COVID-19, it is clear that female entrepreneurs have a huge role to play in our economic recovery and growth agenda. We have to double-down on our efforts to tap into their potential and unleash the pent-up ideas and innovation. The

potential contribution to the UK through the development of skills and high value employment is quite startling. Furthermore, with many more of us working virtually and flexibly, entrepreneurs now have even more incentive to work with and develop the best talent, building their teams with a global mindset to broaden their thinking and expertise.

As the report highlights, role models are key to inspiring the next generation of female entrepreneurs and so we have made sure to highlight some inspiring female-led businesses, who are making a real impact within their respective fields. We also feature seven female entrepreneurs who have shared their stories and industry expertise. Each of them, in their own way, is breaking new ground. From Navrina at Credo AI, who is transforming the way businesses engage with artificial intelligence to Cecile at Seraphine, who has launched, grown and successfully exited her retail business. They are all paving the way for the next generation of future female business leaders.

But despite all of the progress we have made, from my conversations with female entrepreneurs, it is clear that there are some consistent challenges that they experience throughout their journey. For example, it can be lonely at the top. To build your business from scratch, to navigate the funding landscape and to develop a team you can trust, can at times make you feel isolated. This can be compounded if you do not have a support network around you to call upon for advice and reassurance. Mentoring and networking is key to resolving some of these obstacles, but how can we now go one step further to truly addressing the needs of female entrepreneurs?

i Babu, A. (2020). Resilience and Recovery.

ii Rose, A. (2019). The Alison Rose Review of Female Entrepreneurship





At Barclays, we're playing our part by providing ongoing and meaningful support for female entrepreneurs. As a founding signatory of the HM Treasury Investing in Women Code, we are working to improve female entrepreneurs' access to tools, resources and finance. As part of this, we have announced a series of three-year commitments:

1. Helping 100,000 women across the UK to start up and run businesses.
2. Connecting female-led businesses with the finance and support they need to succeed.
3. Providing skills for this generation and the next to help them into entrepreneurship.

One year on from announcing these commitments, considerable progress has been made. For example, we have launched training for Barclays colleagues to ensure they better understand the challenges faced by women-led businesses. We also established dedicated 'Diversity Champions' to help support and mentor female-led businesses, which is in addition to the coaching and events provided by our Eagle Labs, Rise Network and through our partnerships with Ethical Angels.

Additionally, we have flexible lending options to help women balance work and what matters most. The Female Innovators Lab, a \$30 million venture fund and studio which provides early stage investment and Fintech growth expertise by Barclays and Anthemis, was expanded into the UK and Europe. Furthermore, we have upskilled both established and aspiring female entrepreneurs through the Barclays LifeSkills programme, which has created content on the practical

elements for starting a business, such as developing a business idea or business plan, and how to turn business ideas into reality. We have also created specialist podcasts to offer insight and education.

However, our support for female entrepreneurs won't stop here. In 2022 and beyond, we will continue to evolve the support we offer so all women in business can realise their ambition.

We all need to play our part and there is still some way to go. It is imperative that we do more to tap into the enormous potential female entrepreneurs have to offer us, and we need to make a step change in our pace. We must strive to go beyond the provision of support for female entrepreneurs by also better understanding our own biases and misconceptions.

Collectively, as an industry and beyond, we need to be asking more questions, regularly challenging one another and holding each other to account. We are witnessing some positive changes – and I'm excited about what the future holds. But, let's now build on this progress and work together to create many more opportunities for entrepreneurs and in particular, for female entrepreneurs.

This year's report creates an important moment for us to reflect on what we can each do to commit to and further this vital work.

*The opinions, recommendations and conclusions within this report are those of The Entrepreneurs Network and the Female Founders Forum and do not represent those of Barclays.*

# FOREWORD



**RT HON CAROLINE NOKES MP**  
Member of Parliament for Romsey  
and Southampton North  
Chair of the Women and Equalities  
Select Committee  
October 2021

Across the country, decisions are being made which impact us all. We need more women around the table when these conversations are happening, to make sure that diverse viewpoints are taken into account.

In venture capital only 13% of senior decision makers are women, and half of all venture capital firms don't have a single woman on their investment teams.

This means that when investments are being made, women are often forgotten about. Female founders receive only 15% of all venture capital funding. This is costly to these firms, which lose out on lucrative investment opportunities; it is costly to female entrepreneurs, who may miss out on the funding they need to scale up their business; and it is costly to society as a whole, because we lose out on the products and services that would have been created by these entrepreneurs.

In the Life Sciences, women hold only 15% of senior decision making positions. This impacts women's health.

Only 2.5% of publicly funded research goes towards women's health issues, despite one in three women suffering from some kind of gynecological or reproductive health problem. The emergence of FemTech highlights what can happen when women are decision makers: they make products and services which help other women.

During the pandemic we have suffered the consequences of excluding women from the decision making process. Last year's Female Founders Forum report Resilience and Recovery found that female entrepreneurs were impacted worse by the pandemic than their male counterparts. This is not surprising when women are underrepresented in the cabinet.

**“Across the country, decisions are being made which impact us all. We need more women around the table when these conversations are happening.”**

During the first lockdown, parents were cut off from their access to childcare which prevented many women from being able to work from home. When lockdown was eased, we found that beauty salons and yoga studios were opened much later than other similar businesses like barbers and football clubs. These businesses are often founded by women, for women, and were overlooked by those at the top.

It is my role as the Chair of the Women and Equalities Select Committee to hold the Government to account

on issues which impact women. I'm encouraged that organisations like The Entrepreneurs Network and Barclays are working to provide us with the evidence base we need to design good policy that will open entrepreneurship up to people who have been historically underrepresented in the business world.

I am glad to support their calls for a more diverse venture capital industry, to tackle the “leaky pipeline” of talent in STEM, and suggest ways to make childcare more accessible for working mothers.

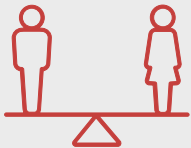
We cannot afford to have a recovery designed by men for men. As this report spells out, we will all end up poorer and less able to tackle the challenges of the next few decades if women are held back from founding companies and achieving their full potential as entrepreneurs, scientists, and inventors.

# EXECUTIVE SUMMARY

Entrepreneurship in high-growth, high-innovation sectors will determine what the next few decades will look like. New technologies will generate economic growth, solve climate change and treat previously terminal diseases. This needs the involvement of entrepreneurs and key advancements in these areas are being held back by unnecessary barriers placed before female entrepreneurs.

Women in the UK found fewer businesses than their counterparts in otherwise similar countries, like Australia and the Netherlands. This creates an opportunity for a £200bn uplift in our economic growth.<sup>1</sup>

## KEY RECOMMENDATIONS



### CLOSE THE GENDER FUNDING GAP

Female founders experience discrimination when trying to raise equity finance. They raise only 15% of all equity finance, which is a shortfall of £1.6bn. But this gap is not even across sectors. In FinTech female entrepreneurs receive a proportionate amount of equity funding and in GreenTech female entrepreneurs raise more than their male counterparts. However AI, Life Sciences and E-Commerce are behind with women receiving only 1.9%, 4.5%, and 3.1% of equity finance in each of these sectors respectively.<sup>2</sup> The venture capital industry in general should learn best practice from organisations that have overcome their bias and now invest more equitably. This will likely involve developing a pipeline of female talent at both junior and senior levels.



### TACKLE STEM DROP-OFF RATES

Most entrepreneurs found businesses in sectors they have worked in. Highly innovative businesses which involve technical products, like in AI and medicines, often need entrepreneurs with specialist knowledge. As teenagers, girls are only slightly less likely to study maths A level, making up 39% of students taking the subject. But by adulthood, the 'leaky pipeline' means that only 17% of tech workers in the UK are women.<sup>3</sup> The lack of women at the top levels of STEM, both in academia and industry, means that there are fewer female entrepreneurs in these sectors. Every part of the STEM ecosystem needs to support women and girls. We need teachers and parents to encourage girls to pursue STEM A Levels, we need schools and universities to encourage them to pursue STEM degrees, and we need industry and academia to support women in their STEM careers.



### PROVIDE ROLE MODELS

Role models are important for encouraging anyone to pursue entrepreneurship. Women and girls are no different. This is unfortunate as there is a lack of high profile female entrepreneurs in the media and four out of five teenage girls cannot even name a female entrepreneur.<sup>4</sup> Mentorship has proven to be an effective way of encouraging women to start and scale businesses.

<sup>1</sup> Rose, A. (2019). The Alison Rose Review of Female Entrepreneurship

<sup>2</sup> Beauhurst (August 2021).

<sup>3</sup> The Alan Turing Institute. (2021). Women in data science and AI

<sup>4</sup> Santander. (2020). Eight in ten young people can't name one female entrepreneur.

**“There is a clear economic case to address the gender disparity. If women across the UK started and scaled businesses at the same rate as British men, we could boost the economy by as much as £250bn.”**

## INTRODUCTION

Innovation in GreenTech will determine how much of the earth is given over to landfill, how many habitats get destroyed, and how humanity deals with one of the biggest risks we face - climate change. Innovation in the Life Sciences will determine how long we live and how healthy that life will be. Innovation in FinTech and E-Commerce will shape what we buy and how we do it. Innovation in AI will revolutionise everything about our economy. With AI personal assistants and delivery drivers, our jobs will change and media and games created by and with AI will revolutionise leisure too.

Young companies are the key drivers of growth: they create more jobs and are more innovative than incumbents.<sup>5</sup> So to maximise growth we want to maximise the number of entrepreneurs working in high-growth sectors. This means supporting all entrepreneurial talent, yet at the moment there are many people who are hindered or even dissuaded from becoming entrepreneurs. There are extra barriers facing female entrepreneurs and by leaving these barriers in place, society is collectively worse off.

The sectors we are focusing on are GreenTech, Life Science, FinTech, E-Commerce, and AI. We have chosen them because the UK is in a strong position to be a world-leader in all these industries and inventions in these sectors will have a positive global impact. The UK is home to some of the world's top universities and attracts leading researchers due to the quality of its institutions, London receives a quarter of all venture capital (VC) funding in Europe,<sup>6</sup> and DeepMind, which is one of the world's most impressive AI companies, was founded in the UK. The British public leads the way as an enthusiastic adopter of online shopping and digital payments over recent years. And the UK is the first country to put a net-zero commitment into law.<sup>7</sup>

But the UK falls behind many other countries in one key way. Women in the UK are less likely to found businesses than their peers abroad. Only 6% of women in the UK

run their own businesses, compared with 15% of women in Canada, 11% in the USA, and 9% in the Netherlands. For every ten male entrepreneurs in the UK, there are fewer than five female ones. In the Netherlands there are nine.<sup>8</sup>

There is a clear economic case to address the gender disparity. If women across the UK started and scaled businesses at the same rate as British men, we could boost the economy by as much as £250bn. If they merely started businesses at the same rate as Canadian, Australian or American women, then we could boost the economy by £200bn.<sup>9</sup> By leaving these barriers in place we are holding back the acceleration of cutting edge technologies like the invention of real-time translation software, the cure for cancer, or working carbon capture and storage.

We don't know what inventions could be created by talented women who are put off from founding companies, but considering the exceptional things that women who have managed to break through this glass ceiling have achieved, we know the opportunity cost is significant. Women who defied the odds, like Katalin Karikó, Hedy Lamarr, Henrietta Vansittart, and Eleanor Coade, were behind the development of mRNA vaccines, the underlying technology for Bluetooth and Wi-Fi, improvements to the screw propeller, and Coade stone, a highly durable building material.

5 Criscuolo, C et al (2014). DynEmp: New cross-country evidence on the role of young firms in job creation, growth, and innovation

6 Duke, S (2021, January 15) London leads Europe with \$10.5bn funding for tech start-ups. *The Times*.

7 Department for Business Energy and Industrial Strategy. (2019). UK becomes first major economy to pass net zero emissions law.

8 Global Entrepreneurial Monitor. (2017). Global Report 2016/17.

9 Rose, A. (2019). The Alison Rose Review of Female Entrepreneurship.

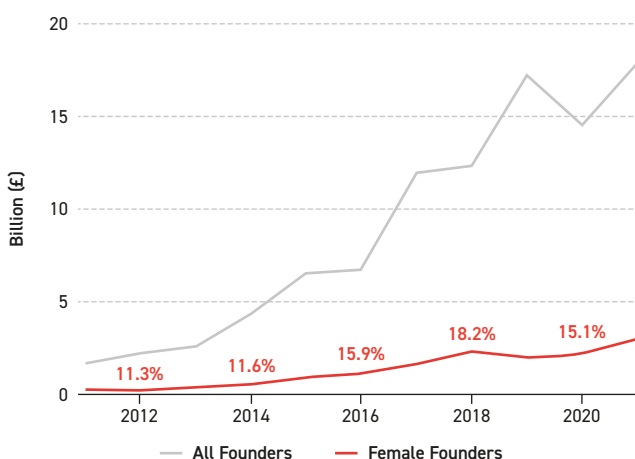
# KEY BARRIERS

## Barrier 1: Access to equity finance

Female founded businesses have less money. Women are less likely to take out loans or use their personal savings for their businesses, which means they start their businesses with only about half the capital that men do.<sup>10</sup> Grants are the only form of finance that women are more likely to use than men, but grants are on average twenty to thirty times smaller than angel investments.<sup>11</sup>

Equity funding is one of the most popular ways for high-growth businesses to raise capital and here women are at a clear disadvantage. Female entrepreneurs are much less likely to receive large sums of equity finance.

### VALUE OF EQUITY DEALS



Source: Beahurst

In 2010, female-founded companies received only 7% of all equity finance. Since then, the share has risen, and for the past five years female-founded companies have consistently received about 15%. But as over a quarter of high-growth businesses have at least one female founder, female entrepreneurs are still losing out on investment. In 2020 this amounted to female entrepreneurs missing out on about £1.6bn.<sup>12</sup> Although the funding gap has narrowed, it still has a long way to go.

Raising finance is not just about the money itself, although that is important. Investors often provide other kinds of support to the companies they have backed. In last year's report we asked members of the Female Founders Forum who they went to for advice when dealing with the pandemic. Elvie founder Tania Boler told us that being able to draw on her investors' experiences in handling past crises, such as the global financial crisis and the aftermath of 9/11, helped her respond to the pandemic. She was able to draw upon her investor's knowledge of crisis planning to generate helpful advice for the new challenges they faced.<sup>13</sup>

By making it clear that others with expertise endorse a female-founded business, investors can give the founders more credibility. They open founders up to more opportunities, better networks and more investment in the future. Such support may also help female entrepreneurs overcome 'imposter syndrome', from which they are more likely to suffer.<sup>14</sup>

Vitality, once female entrepreneurs have this initial support, they are just as likely as male entrepreneurs to raise finance in their second and third funding rounds.<sup>15</sup> This makes it clear that female founded businesses are just as viable as male founded businesses, they just need the same early-stage support that male entrepreneurs receive.

Venture capital suffers from a costly bias problem. Venture capitalists are more likely to invest in businesses run by people like them. Male investors are more likely to invest in male entrepreneurs and female investors are more likely to invest in female entrepreneurs. Venture capitalists are also more likely to co-invest with other investors with whom they have more in common, like gender, ethnicity, and educational background. But these co-investments with similar people tend to make less money. So it is vital for the industry to overcome all its biases, regardless of whether these investors are male or female.

As only 13% of senior decision makers at UK VC firms are women this bias currently favours men. Almost half (48%) of firms don't have any women on their investment teams.<sup>16</sup>

10 British Business Bank. (2019). UK VC & Female Founders.

11 Babu, A. (2020). Resilience and Recovery.

12 Beahurst (August 2021)

13 Babu, A. (2021). Resilience and Recovery.

14 RBS. (2019). 60% of women put off starting a business due to imposter syndrome

15 Babu, A. (2020). Resilience and Recovery.

16 Department for International Trade. (2019). UK FinTech - State of the Nation.

Ideally, the venture capital industry should be able to overcome its bias and investors would invest in businesses based purely on these businesses' merits. But this may be a difficult thing to achieve and involves deep-rooted culture change. In the United States, a 50% increase in the number of women working in venture capital was associated with an increase in the number of female entrepreneurs being invested in, so in the meantime

the industry should work to become more diverse so that these biases do not unfairly favour one group over another.<sup>17</sup>

If the UK VC industry becomes more diverse we may not see an end to bias but we will see a fairer, and more lucrative, distribution of capital.

## RECOMMENDATIONS

- **The Investing in Women Code:** In 2019, Her Majesty's Treasury launched an Investing in Women Code. The scheme is a commitment to support the advancement of female entrepreneurs in the UK by improving their access to tools, resources and finance from the financial services sector. Barclays is a founding signatory and has announced a series of three year commitments to provide ongoing and meaningful support for female entrepreneurs.

Organisations signed up have a member of the senior leadership team who is responsible for ensuring equality in all interactions. They agreed to adopt internal practices which help to improve support for female entrepreneurs and collect key gender data which can be aggregated with data from other signatories and published by the government.

The early data shows promising signs. Signatories to the code were just as likely to approve loans to male as to female entrepreneurs, although male entrepreneurs applied for, and received, bigger loans on average (£33,000 vs £25,000). However, in venture capital specifically, signatories to the code were more likely to invest in male entrepreneurs. But they were still more likely to invest in female entrepreneurs than non-signatories are.<sup>18</sup>

Organisations which have not signed up to the code should be persuaded to join, so that they commit to investing in female-founded businesses.

- **Venture Capital Talent Pipeline:** Female venture capital partners are three times as likely to invest in a company with a female CEO.<sup>19</sup> The venture capital industry is notably undiverse. People throughout the entrepreneurial ecosystem should work to address this problem.

Firms should commit to developing a pipeline of female talent. This should be done at both junior and senior levels. At the junior level, firms should actively seek to recruit female undergraduates and provide them with the training they need to become investors.

Lots of venture capital comes from successful founders. So at senior levels, female founders who have exited their companies should be encouraged to become investors.

Venture capital firms should offer mentorship and training to aid this transition, and the government should use its coordinating power to introduce these two groups to each other.

**“Once female entrepreneurs have this initial support, they are just as likely as male entrepreneurs to raise finance in their second and third funding rounds.”**



### DID YOU KNOW?

#### Barclays Investing in Women Code Commitments

Barclays is a founding signatory of the HM Treasury Investing in Women Code, a commitment from the financial services industry which was launched in 2019 to improve female entrepreneurs' access to tools, resources and finance. Barclays has announced a series of three-year commitments to provide ongoing and meaningful support for female entrepreneurs.

- Helping 100,000 women across the UK to start up and run businesses
- Connecting female-led businesses with the finance and support they need to succeed
- Providing the skills for this generation and the next to help them into entrepreneurship

17 Calder-Wang, S. (2021). Venture Capital's "Me Too" Moment.

18 HM Treasury. (2021). Investing in Women Code: Annual Progress Report 2021

19 Brush, C. (2014). Women Entrepreneurs 2014: Bridging the Gender Gap in Venture Capital

- **Venture Capital Networks:** Data collected from the Investing in Women Code has found that entrepreneurs with warm approaches, meaning those who already knew the investors, were twice as likely to receive funding than those with cold approaches.<sup>20</sup> This is not surprising, as we know that investors are more likely to give money to people who are similar to them as they may provide advice about pitches and applications to the people they know.

This will penalise female entrepreneurs who have smaller networks on average. Venture capital and angel investors should work with groups of female founders to add them to their networks.

## Barrier 2: Underrepresentation of female students in STEM subjects

Many of the fastest-growing companies are science and technology companies. Britain suffers from a sharp STEM drop-off rate for girls, where, despite being as capable as their male counterparts, girls and women are less likely to continue with science and maths at each stage of their education and careers.<sup>21</sup> As teenagers, girls are only slightly less likely to study maths A level, making up 39% of students taking the subject. But by adulthood, the 'leaky pipeline' means that only 17% of tech workers in the UK are women.<sup>22</sup>

This is partly due to women having many skills outside of STEM. Girls generally outperform boys in humanities subjects, which leads to talented girls having more options.<sup>23</sup> A girl who has an A in A level maths and an A\* in history would plausibly choose to study that subject at university, because she considers herself to be better at it even though it means she will probably end up earning less over the course of her career.<sup>24</sup>

Things are improving. The proportion of all students taking undergraduate STEM degrees has been increasing but this increase has been faster with female students. Between 2011 and 2020 the number of women taking full-time STEM undergraduate courses has increased by 50%.<sup>25</sup>

Women make up more than half the workforce in education, healthcare and public relations, and appear to generally be drawn towards people-facing careers. They are also less likely to work outside the home.<sup>26</sup> This means that we expect there to be industries where women are under-represented. There is, of course, no problem with women choosing life paths in different industries to men; the issue is that there appears to be evidence that women leave STEM fields because they face less supportive working environments and that women in STEM face more discrimination than their counterparts in non-STEM fields.<sup>27</sup>

This is problematic for female founders because high-growth businesses are disproportionately founded by people with masters and PhDs. This is because innovative companies often need founders with highly technical knowledge. The amount this is needed will vary from sector to sector. In retail it is less important for a founder to have been university educated, business acumen may be all that is necessary, but on the other end of the spectrum, Life Sciences and healthcare companies often require specialists. Research by Bloomberg found that 83% of biotech companies, which have received at least £14.6m (\$20m) of venture capital, have a founder with a PhD or masters.<sup>28</sup>

So by boosting the number of women who work in STEM and receive PhDs, we can boost the number of women starting businesses in high-growth sectors.<sup>29</sup>



### DID YOU KNOW?

#### Barclays LifeSkills

Barclays is committed to supporting women in business and entrepreneurship by providing skills for this generation and the next. Through the Barclays LifeSkills programme, the next generation of business owners is being supported with the skills they need to turn their plans into action and take steps towards being a successful entrepreneur. LifeSkills engages with secondary schools and all-girls schools across the UK, to highlight and share useful content, including steps to developing and starting a business.

20 HM Treasury. (2021). Investing in Women Code: Annual Progress Report 2021

21 Babu, A. (2020). Resilience and Recovery.

22 The Alan Turing Institute. (2021). Women in data science and AI

23 Department of Education and Skills. (2007). Gender and Education: The Evidence on Pupils in England

24 Britton, J. (2020). The impact of undergraduate degrees on lifetime earnings

25 Department for Education. (2021). Women in STEM Week 2021: How we're empowering the next generation

26 Francis Devine, B et al. (2021). Women and the Economy.

27 Funk, C & Parker, K. (2018) Women and Men in STEM Often at Odds Over Workplace Equity

28 Meisler, L. (2016). Who Gets Venture Capital Funding?

29 Rose, A. (2019). The Alison Rose Review of Female Entrepreneurship



**“Most women (84%) say they were never introduced to AI or machine learning careers at their campus careers fairs and 78% were not given the chance to do an internship in AI or machine learning at university. This means there is plenty of chance for companies to be the first to introduce young women to potential STEM and tech careers.”**

## RECOMMENDATIONS

- **Tackle the STEM drop-off rates:** Every stage of STEM’s leaky pipeline needs attention to encourage women to further their careers. This needs to start early. Parents, teachers and the media need to show girls role models of women in STEM. Universities should work with schools to encourage more girls to study STEM subjects at degree level.

There is a key opportunity for the private sector to engage with schools and universities. Most women (84%) say they were never introduced to AI or machine learning careers at their campus careers fairs and 78% were not given the chance to do an internship in AI or machine learning at university.<sup>30</sup> This means there is plenty of chance for companies to be the first to introduce young women to potential STEM and tech careers.

The private sector should take advantage of this opportunity and engage better with university careers fairs, highlighting the career opportunities they can offer to female undergraduates.

STEM companies should gather data on who they are hiring, who they are promoting, and who is leaving them. If they find that a disproportionate number of female employees are leaving, then they should be more proactive about finding out why, and what they can do to stop this from happening. Similarly, if they find that men are disproportionately being promoted over women, they should work to address this.

- **Retraining:** For people who have lost their jobs in the pandemic and for women who are looking to re-enter the workforce after having children, the government should support and start initiatives that teach people how to code.

BT has a partnership with Code First Girls, and Durham University runs an initiative called TechUp Women.<sup>31 32</sup> These both provide subsidised coding training for women and girls and aim to increase the number of women who work in tech. Initiatives such as these should be championed by the government.

- **Mentoring Opportunities:** The Women into Science and Engineering (WISE) campaign has a list of networks for women who work in STEM and many of them are focused on providing mentorship and role models for girls. Women who have successful careers in STEM should look to inspire the next generation of inventors and innovators by signing up to these initiatives and supporting younger women.



## GET INVOLVED

### Barclays Code Playground

Barclays Code Playground, through a series of free online coding sessions, aims to support teachers and parents in bringing the excitement of coding to life for their students and children.

30 Deloitte. (2021). Women in AI

31 BT. (2021). BT partners with Code First Girls to close the UK gender skills gap in tech.

32 TechUP Women. (2021). Welcome.



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“If we manage to achieve gender parity in our personal lives, this could provide women with extra time to invest in starting and scaling businesses and succeeding professionally.”



### Barrier 3: Unequal household and childcare responsibilities

Women often face an unequal share of household responsibilities. Women do an average of 60% more unpaid work in the home.<sup>33</sup> Only 10% of heterosexual married couples do an equal amount of housework, and in 77% of these families, the wife does more.<sup>34</sup>

If none of your focus or productivity is spent on laundry or childcare, you have more capacity to do more at your job. On the other hand, if you have to regularly leave the office early because of the school run, others may believe you lack the 'necessary' dedication. This makes it harder for women to succeed professionally.

This effect was exacerbated by COVID-19. When children were kept at home during lockdown, extra work increased and women were more likely to pick up the extra childcare responsibilities. Female entrepreneurs are 20-30% less likely to have been able to depend on their spouse for childcare during lockdown and they are more likely to agree with the statement "I struggle to balance my responsibility as a business owner with my personal commitments."<sup>35</sup>

Significant cultural change is happening, and more men are contributing to actively managing the household than ever before. But this change is not complete. If we manage to achieve gender parity in our personal lives, this could provide women with extra time to invest in starting and scaling businesses and succeeding professionally.

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#### RECOMMENDATIONS

- **Statutory shared parental pay:** We should change the expectation that only women stay at home after the birth of a child. This ultimately requires long-term social change, but government can help by making Statutory Shared Parental Pay (SSPP) the same as Statutory Maternity Pay (SMP). SMP is 90% of the mother's weekly earnings but SSPP is only 90% up to a maximum of £151.20 per week, meaning that couples are usually still better-off if the mother takes the bulk of the time off.
- **Make childcare more affordable:** The availability of low-cost, good quality childcare is fundamental to encouraging more women to join the labour market and found businesses, so a tangible reduction in the cost of childcare is crucial.<sup>36</sup>

Britain has the most expensive childcare in the developed world. The average family with two working parents will spend over a third of their post-tax income on childcare.<sup>37</sup> This is not due to a lack of subsidy, the UK government also spends more on early years than comparable countries.<sup>38</sup>

One reason why childcare is so expensive is because we have the strictest regulations in the world. The UK requires supervision by one adult for every three children under two. At the ages of two to three, this rises to one adult to four children, increasing to eight per adult for four year olds. From this point, at school entry age, classrooms are allowed to have thirty pupils with one teacher. This creates an opportunity to review childcare ratios to encourage higher ratios for early year care.

The evidence suggests that strict childcare ratios have only a weak impact on pastoral care. The quality of the training is more important, but has a significant impact on cost. Increasing the ratio by one extra child could save between 9% and 20% of the cost of childcare. Relaxing regulations to the same levels that are in Norway would halve childcare costs.<sup>39</sup> If we want to increase the number of women in work and make the lives of young families easier, this is an obvious way to help.

33 Office for National Statistics. (2016). Women shoulder the responsibility of 'unpaid work'

34 IPPR. (2012). Eight out of ten married women do more housework than their husbands

35 Babu, A. (2020). Resilience and Recovery.

36 Duncan, A et al. (2001). Mothers employment and the use of childcare in the United Kingdom.

37 OECD. (2017). Public spending on childcare and early education.

38 OECD. (2016). Society at a glance 2016.

39 Thomas, D & Gorry, D. (2015) Regulation and the Cost of Child Care

## Barrier 4: Limited access to networks and mentoring opportunities

Networking and mentoring are some of the best ways to overcome the barriers female founders face, which is why it is the subject of a number of our recommendations and was the focus of our 2018 report *Mentoring Matters*.<sup>40</sup>

This is because entrepreneurship is contagious.<sup>41</sup> For most people, the idea of founding a business does not come to them naturally. Instead, they have to see someone else make a success of it. People who work with or live in the same neighbourhoods as entrepreneurs are more likely to become entrepreneurs themselves.<sup>42,43</sup> Children raised by entrepreneurs are more likely to start businesses, even when they are adopted.<sup>44</sup>

But the degree to which entrepreneurship is contagious depends on how similar one is to the entrepreneur inspiring them. This makes sense. If to start a business, one needs to see someone else making a success of it, it follows that that person should be relatable in some respect.

Girls seem to be more susceptible to this than boys. Boys can often see male entrepreneurs in the news; Mark Zuckerberg, Sir Alan Sugar and Jeff Bezos are household names. They know that their gender will not hold them back. Except for

figures like Deborah Meaden, examples of high-profile female founders are less visible across mainstream and social media, and four out of five teenage girls are unable to name a female entrepreneur.<sup>45</sup>

Two main things determine what a person will grow up to be like, their nature and their nurture. For entrepreneurship, nurture appears to be more important. The adopted children of entrepreneurs are twice as likely to pursue entrepreneurship than children who were born to entrepreneurs but then adopted by non-entrepreneurs. But for girls this is only true if the entrepreneur in their family was their adopted mother. If their adopted father is an entrepreneur this has no impact on whether they become an entrepreneur further down the line.<sup>46</sup>

Similarly, not only are people who work with entrepreneurs more likely to become entrepreneurs, but this effect is stronger the more similar people are to each other, i.e. if they are the same gender, of similar ages, if they are both parents or both not parents, if they have the same educational background, or if they grew up in the same place.<sup>47</sup> This means there is a negative feedback loop. Women are 8% less likely to know an entrepreneur personally and so they are less likely to be inspired to become entrepreneurs.<sup>48</sup>

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## RECOMMENDATIONS

— **Mentorship and Role Models:** Mentorship is effective at inspiring women to become entrepreneurs. Students who were randomly assigned a mentor who was an entrepreneur were 9% more likely to start a business than those assigned a non-entrepreneur mentor.<sup>49</sup>

Entrepreneurs who have already successfully started ventures should 'give back' to the ecosystem and mentor the next generation of budding innovators. There are many formal programmes that entrepreneurs can join. Founders4Schools is a popular initiative that links business leaders with students, and they have supported over 250,000 interactions between students and business people.<sup>50</sup>

However, an entrepreneur may favour a less formal approach. Instead they might choose to take on a mentee who they have met through work or friends, or they may choose to support children from their home town or religious community. The important thing is that women support the next generation of talent by providing them with good role models and advice.

40 Jarvis, S. (2018). *Mentoring Matters*

41 Clancy, M. (2021). Entrepreneurship is contagious.

42 Nanda, R & Sørensen, J. (2010). *Workplace Peers and Entrepreneurship*.

43 Giannetti, M & Simonov, A. (2009). *Social Interactions and Entrepreneurial Activity*.

44 Lindquist, J. M. et al. (2015). *Why do entrepreneurial parents have entrepreneurial children?*

45 Santander. (2020). *Eight in ten young people can't name one female entrepreneur*.

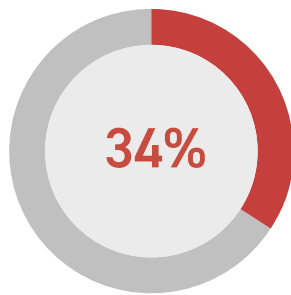
46 Lindquist, J. M. et al. (2015). *Why do entrepreneurial parents have entrepreneurial children?*

47 Rocha, V & van Praag, M. (2020). *Mind the gap: The role of gender in entrepreneurial career choice and social influence by founders*

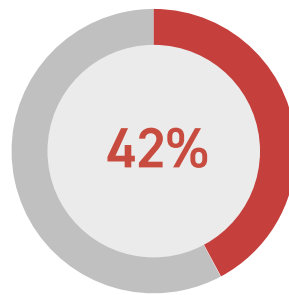
48 Rose, A. (2019). *The Alison Rose Review of Female Entrepreneurship*

49 Eesley, C & Wang, Y. (2017). *Social influence in career choice: Evidence from a randomized field experiment on entrepreneurial mentorship*

50 Founders4Schools. (2021).



34% OF COMPANIES IN GREENTECH HAVE AT LEAST ONE FEMALE FOUNDER



42% OF INVESTMENT IN GREENTECH GOES TO FEMALE-FOUNDED BUSINESSES

2780

HIGH GROWTH-POTENTIAL BUSINESSES ACTIVE IN GREENTECH  
Source: Beauhurst

## GREENTECH

**GreenTech companies are businesses which, via innovation, are helping the environment. GreenTech includes renewable, sustainable and low-emission replacements for things we already use and innovations which actively reverse the impacts of climate change.**

To combat climate change, the UK has committed to reaching Net Zero emissions by 2050.<sup>51</sup> This means that by 2050 we plan to remove a tonne of CO<sub>2</sub> from the atmosphere for every tonne we add. This will mostly be done by reducing our emissions and through natural carbon sinks like trees and soil. But the path to Net Zero will require dramatic technological change. Over the next few decades, we need to invent better batteries, cleaner methods of generating electricity, and new ways of creating carbon sinks. Entrepreneurship will be key, and entrepreneurs are ready to step up, with 61% of SMEs agreeing that a shift to a greener economy presents positive opportunities for business.<sup>52</sup>

The UK is home to a number of companies which are working to solve these problems. For example, Arcola Energy is developing zero-emission heavy duty vehicles to make deliveries zero-carbon.<sup>53</sup>

The UK was the first country to pass a law requiring the government to reach net zero emissions by 2050,<sup>54</sup> and as part of the UK's COVID-19 recovery plan the Prime Minister announced his ambition to “turn the UK into the world’s number one centre for green technology and finance, creating the foundations for decades of economic growth.”<sup>55</sup> COP26 will be a chance for the government to showcase what it is

doing to achieve this. Clear guidance from the government has provided certainty for investors and entrepreneurs working in the sector.

Female representation in GreenTech is higher than other high-potential sectors. Of the high-growth companies tracked by Beauhurst, 26% have female founders, but 34% of GreenTech businesses are female-founded.<sup>56</sup> This matches other trends. Women are more likely to proactively make personal considerations about the environment, like recycling, and they are more likely to encourage their friends and family to make similar choices.<sup>57</sup> Female entrepreneurs are 1.17 times more likely to found socially conscious businesses.<sup>58</sup> Together, these factors go some way to explain why there are more women founding GreenTech firms.

In GreenTech, businesses founded by women also received more than an equal proportion of equity funding. Having raised £2.8bn since 2018, they have received 42% of all venture capital going towards GreenTech businesses.

51 Institute for Government. (2019). UK net zero target.

52 Ives, E. (2020). Green Entrepreneurship.

53 Arcola Energy. (2021).

54 Department for Business Energy and Industrial Strategy. (2019).

UK becomes first major economy to pass net zero emissions law.

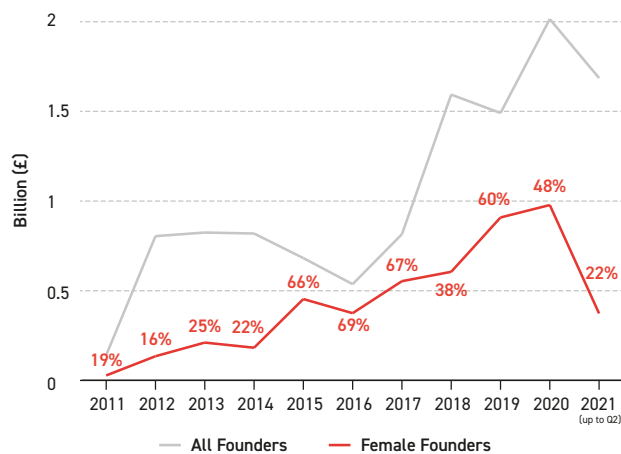
55 HM Government. (2020). The Ten Point Plan for a Green Industrial Revolution

56 Beauhurst. (August 2021).

57 Mintel. (2018). The Eco Gender Gap.

58 Stengel, G. (2016). Women Entrepreneurs Fuel Social Change and Economic Growth.

## GREENTECH EQUITY FINANCE



Source: Beauhurst

This was not always the case, and until 2015 GreenTech companies with all-male founders were receiving more than their female counterparts. Since then, however, equity funding has been reasonably evenly split. Of course, this does not mean that female founders in GreenTech do not face more barriers than male entrepreneurs, simply that they do not face major barriers as a result of their sector.

Women make up half the population, so founding a third of GreenTech businesses is still not full gender parity, and it is likely that most female entrepreneurs in GreenTech will still face issues that women across the economy can suffer from: unequal responsibilities at home,<sup>59</sup> fewer entrepreneurs in their personal networks,<sup>60</sup> and less of their own money to use when first starting a business.<sup>61</sup>

Venture capital has become increasingly interested in the opportunities offered by GreenTech. There are now several investors who focus exclusively on green and sustainable businesses, for example Zero Carbon Capital, Sustainable Ventures, and the Green Angel Syndicate. The extra finance available may somewhat explain why female founders who work on environmental issues are receiving more money than their counterparts in other sectors. If investors are competing for entrepreneurs as much as entrepreneurs are competing for investors, the investors cannot afford to pass over talented entrepreneurs based on biases they may unintentionally hold against them.

**“Entrepreneurship will be key, and entrepreneurs are ready to step up, with 61% of SMEs agreeing that a shift to a greener economy presents positive opportunities for business.”**

Another explanation is that many of the funds which focus on green issues are likely to be more socially conscious in general. The groups that are more concerned about the environment are also more likely to believe that more needs to be done to achieve gender equality in the workplace.<sup>62</sup> <sup>63</sup> So the investors who work in GreenTech are more likely to be cognisant of bias in the industry and actively working to overcome it.



## DID YOU KNOW?

## BEIS Energy Innovation Funding Programme

The BEIS Energy Innovation Funding Programme invests in projects that could accelerate the commercial viability of low-carbon technology with a view towards meeting the government's Net Zero targets.<sup>64</sup> The initial scheme ran from 2015 to 2021 and invested £505m in carbon capture and storage, energy efficient heating systems, and other similar areas. The new programme will run from 2021 to 2025 and invest £1bn in offshore wind, nuclear advanced modular reactors, energy storage and flexibility, bioenergy, hydrogen, efficient homes, carbon capture and storage, industrial fuel switching, and a more general category labelled disruptive technologies. There is also an accelerator.<sup>65</sup> This initiative will provide extra capital and support for companies which are helping to create new green technology.

59 Babu, A. (2020). Resilience and Recovery.

60 Rose, A. (2019). The Alison Rose Review of Female Entrepreneurship

61 Rose, A. (2019). The Alison Rose Review of Female Entrepreneurship

62 YouGov. (2021). Generally speaking, are you positive or negative about the future state of the environment?

63 YouGov (2021). Do Brits think gender equality has been achieved in relation to equal gender balance in the workplace?

64 Department for Business, Energy and Industrial Strategy. (2021). Energy Innovation.

65 Department for Business, Energy and Industrial Strategy. Register your interest for Phase 3 of the Industrial Energy Efficiency Accelerator

## RECOMMENDATIONS

- **Women in GreenTech:** Many of the sectors we have looked at have sector-specific women's networking groups. When the government works with entrepreneurs, they should signpost them towards these groups. We have highlighted many of these groups in the relevant chapters in the report.

The key place where this is not the case is GreenTech. There is no large organisation for women who start environmental companies. The government should support the creation of a Women in GreenTech organisation.

This should be modelled on the US-based Women in CleanTech and Sustainability. They advertise jobs, offer scholarships, have a mentorship program, and they run a pitch competition for entrepreneurs.<sup>66</sup> The government should use its convening power to help it initially, inviting women it has worked with for COP26, the BEIS Innovation Funding programme, and the UKRI green projects, to join, and Number 10 should host the inaugural event.



### GET INVOLVED

#### The Sustainable Innovation Forum

The Sustainable Innovation Forum brings people together from the private and public sectors with the goal of creating partnerships, showcasing innovations, and highlighting the benefits of green finance. This year it will be meeting at COP26. Attendees will include senior members of the UK government, representatives from the UN, alongside companies like Nestlé, Unilever and TataSteel. They will discuss a broad range of topics including ways to support SMEs, investing in carbon capture, and ways to create a digital and decentralised energy system. Female Founders working on GreenTech can register to attend to build their networks and showcase what they're doing to help the environment.<sup>67</sup>



### GET INVOLVED

#### Unreasonable Impact

Unreasonable Impact is an innovative, multi-year partnership between Barclays and Unreasonable to launch the world's first global network focused on scaling up entrepreneurial solutions that are tackling some of the world's greatest social and environmental challenges. The portfolio now includes over 200 ventures operating in more than 180 countries, who have collectively raised more than \$5B USD in funding, generated more than \$3.8B USD in revenue, and since joining the programme have supported the creation of more than 39,000 net new jobs.

## BARCLAYS INSIGHTS

### Katherine Morgan, Head of High Growth and Entrepreneurs

"GreenTech businesses are playing an important role in tackling climate change and developing a more sustainable way of living. It is positive to see female entrepreneurs bringing about change within this space, and with the GreenTech equity funding gap now closed, even more female innovators can start-up and grow."

<sup>66</sup> Women in CleanTech and Sustainability. (2021). WCS Pitch competition.

<sup>67</sup> Sustainable Innovation Forum. (2021).





CASE STUDY  
**GREYPARROT**

MIKELA DRUCKMAN



“I was incredibly inspired by examples of women who had to break barriers in their fields to pave the way that I knew I wanted to do the same for the next generation,” says entrepreneur Mikela Druckman. When China banned imports of waste from other nations in 2018, she knew this would create huge challenges – and a unique opportunity for innovation in waste management.

“Globally, we produce more than two billion tonnes of solid waste every year and only 19% of that is actually being recycled,” she says. Historically, a significant amount of waste was sent to China to be processed, so the country’s decision “created a shock to the system. It really brought to life that there’s this huge problem that has to be solved.”

Her solution was to use AI capabilities to tackle the problem. Founded in January 2019, her company, Greyparrot, provides a monitoring unit that can be placed on conveyor belts in recycling and waste management plants to analyse in real-time the types of waste making its way along them.

The system then analyses the composition of different materials and provides data to the processors and to regulators.

Ultimately, she says, the goal is to create “more transparency and accountability in the whole sector” – and to increase the amount of waste that is recycled.

### “The pandemic allowed us to scale more quickly”

Explaining the origins of the business’ name, Mikela says: “The African grey parrot is one of the smartest birds that exist. They have incredible cognitive abilities to recognise objects, repeat words, and keep learning from what they’re seeing around and mimicking that. And that’s very much how AI works.”

Since launch, Greyparrot has grown globally, installing systems as far afield as Asia and raising £4.1m in funding from investors and £500,000 from the UK’s Innovate UK. Mikela attributes its success in part to her decision to move to remote installation because of COVID-19 travel restrictions.

“That was a very big shift in our approach,” she says. “We shipped our units to Japan, to South Korea, to Germany, to Austria and had to find a way that was very easy to self-install. So we built everything in-house and had units that were almost ready to use.

“So Covid-19 actually meant we were able to scale much more quickly and be more international, much sooner than we might have been if the pandemic hadn’t happened.”

Greyparrot’s speed of growth has required external funding from a combination of venture capital and government grants. While the company has managed to raise the money it needs, Mikela says that, as a female founder, she does sometimes feel like she is at a disadvantage.

### “Being an entrepreneur is not an easy journey. But it’s probably one of the most rewarding journeys you can ever have.”

“When most of the people in the room are still all male, that creates an imbalance. There’s just so much unconscious bias in their mindsets.”

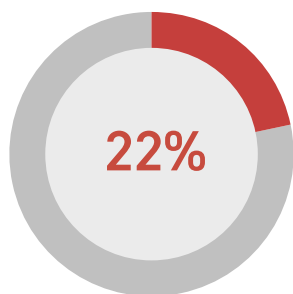
She says she has gained confidence from being part of Unreasonable Impact – a programme run in partnership with Barclays and Unreasonable to support companies tackling some of the world’s greatest social and environmental challenges.

“Being able to be connected with peers going through the same thing – who you can be open with and share insights with – is incredibly beneficial to the entrepreneurial journey,” she says. “Network is everything.”

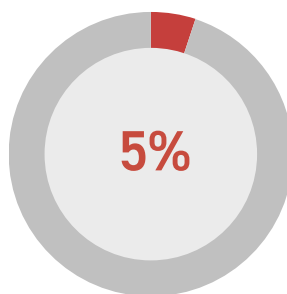
For women who want to found businesses she has a simple piece of advice: gain experience by working in other startups.

“Confidence is like a muscle,” she says. “As women, we start with a weaker muscle compared to men. I was able to build up that confidence through my startup experience, with women and men really pushing me forward.

“It’s not an easy journey. But it’s probably one of the most rewarding journeys you can ever have.”



22% OF COMPANIES IN LIFE SCIENCES HAVE AT LEAST ONE FEMALE FOUNDER



5% OF INVESTMENT IN LIFE SCIENCES GOES TO FEMALE-FOUNDED BUSINESSES

# 3841

HIGH GROWTH-POTENTIAL BUSINESSES ACTIVE IN LIFE SCIENCES ACTIVE IN LIFE SCIENCES

Source: Beauhurst

## LIFE SCIENCES

The UK has a world-leading Life Sciences sector. Life Sciences involve the study of living organisms. Companies in the sector include those that work with the human body like Abcodia,<sup>68</sup> which is developing tests to detect cancer early, and Express Microbiology, which works with microbes and tests food for potentially dangerous microorganisms.<sup>69</sup> It encompasses everything that is alive, so companies which work with pathogens, plants, animals, HealthTech, and medicines are all Life Science companies.

The Government's Life Sciences Vision spells out the sector's unique value: "In recent decades, advances in the Life Sciences have fundamentally improved the length and quality of life in the UK and globally, and we stand on the cusp of an era of cures, in which new technologies make previously terminal disease treatable or curable."<sup>70</sup>

Aside from the benefits to health and wellbeing, Life Sciences is one of the UK's most productive sectors. It employs almost half a million people with an average GVA (a measure of value added) per employee of £104,000 versus the UK average of £49,000.<sup>71</sup> When compared with other high-growth businesses, Life Science companies have a higher average turnover (£114m vs £45m), more employees (197 vs 60), and they are more likely to have successfully exited (9.2% vs 6.8%).<sup>72</sup>

Life Science companies have done much better than the rest of the economy during the pandemic.

This is not a surprise, as 21% of the Life Science companies experienced a surge in demand over the course of the pandemic, meaning that people wanted their products more.<sup>73</sup> For example, Baseimmune, founded by Ariane C. Gomes has received extra investment for its work in developing a variant-proof COVID-19 vaccine.<sup>74</sup> Many of the companies in this category are similar: they provide health services, make drugs, and perform research, so would have been working directly on COVID-19 or would have benefitted from people paying extra attention to their health in the face of the virus. Yet this effect has not been spread evenly. While 22% of Life Science companies have a female founder, during the pandemic only 4.5% of equity finance raised by Life Science companies went to companies with a female founder.<sup>75</sup> This is in line with the pre-pandemic trend.

Women are under-represented in the Life Sciences, despite showing a lot of interest in them while they are young. A majority (63%) of students studying A level biology are female, as are 60% of students studying for undergraduate biology degrees.<sup>76</sup> But at the top level, women hold only 15% of leadership positions in Life Science companies.<sup>77</sup> Like the rest of STEM, women and girls drop out at higher rates, despite performing as well as their male counterparts.

68 Abcodia. (2021). Company Overview.

69 Express Micro Science. (2021).

70 Department for Business, Energy & Industrial Strategy. (2021). Life Sciences Vision.

71 ABPI. (2017). The economic contribution of the UK Life Sciences industry

72 Beauhurst. (August 2021).

73 Ibid.

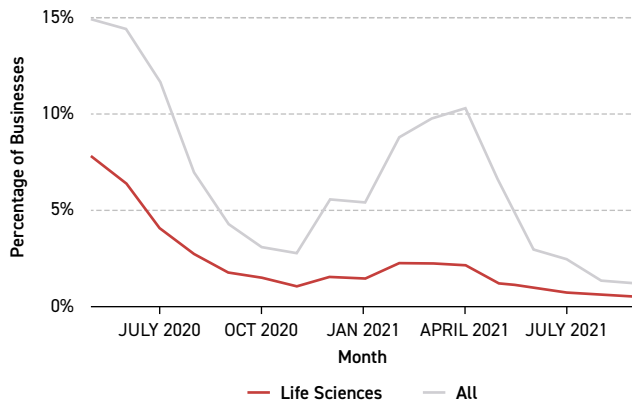
74 Baseimmune. (2021). Team of Oxford scientists raise investment to create variant-proof vaccines

75 Beauhurst. (August 2021).

76 STEM Women. (2019). Why are Female Students Now Outnumbering Males in A-level Science?

77 Peters, J, W. & Lane, N. J. (2015). The Status of Women in the Life Sciences.

### PERCENTAGE OF TRACKED COMPANIES NEGATIVELY IMPACTED BY THE COVID-19



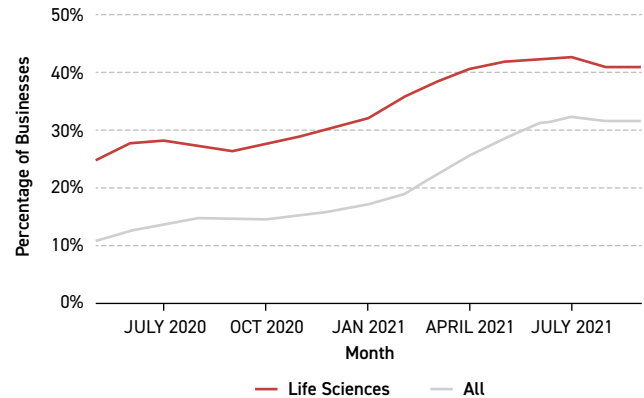
Source: Beauhurst

This has been left under-investigated because women outnumber men in biology and medicine at the lower levels, both in companies and in academia, meaning that organisations can look more equal than they actually are. Even if they have few or even no women at all in their senior leadership teams. This implies that women are very often being passed over for promotions, or are actively leaving the sector at very high rates.

There are two major benefits to having more female entrepreneurs founding Life Science companies. First, more women working at senior levels of the Life Sciences will mean even more talented and innovative people creating products, which could in turn have a profound impact on the pace at which we are able to discover new vaccines or treatments.

Second, women's health is severely impacted by the fact that they only make up a small proportion of decision makers at the top levels of medicine and Life Sciences. Women who work with radiation are more likely to develop cancer because labs tend to use a 75kg 'default male' to assess whether a work environment is sufficiently safe.<sup>78</sup> Only 2.5% of publicly funded research goes towards women's health issues,<sup>79</sup> despite one in three women suffering from some kind of gynecological or reproductive health problem.<sup>80</sup> It is crucial to have women involved with the innovation process so that we make sure the things we invent help everyone, not just half the population. During the pandemic, frontline workers were working with protective gear designed for male bodies, which therefore did not always fit the, often smaller and differently proportioned, bodies of women.<sup>81</sup> This has endangered these women's lives. In fact, the lives of all

### DOING BETTER THAN BEFORE COVID-19



Source: Beauhurst

women have been endangered by these biases. For years we have been using drugs and medical treatments that were never tested on women because their bodies were considered "too complex" for clinical trials.<sup>82</sup> In 1977, women of child-bearing potential were barred from participating in early phase clinical trials in the US - a decision that was only reversed in 1992.<sup>83</sup> This was after the development of things we still use today like Ibuprofen and Aspirin.

**“A majority (63%) of students studying A level biology are female, as are 60% of students studying for undergraduate biology degrees. But at the top level, women hold only 15% of leadership positions in Life Science companies.”**

One of the biggest issues facing the Life Sciences is that most science funding goes to Oxford, Cambridge and London. These are very expensive places to live, which drives up the costs for researchers and the businesses which spin out of such research. Due to higher rents the people employed in Life Science research, companies have to pay employees comparatively higher salaries to compete for a limited pool of talent, which drives up the costs for Life Science businesses.<sup>84 85</sup>

78 Rushton, L. (2012). The burden of occupational cancer in Great Britain

79 UK Clinical Research Collaboration. (2014). UK Health Research Analysis 2014.

80 Public Health England. (2018). Survey reveals women experience severe reproductive health issues

81 TUC. (2017). Personal protective equipment and women

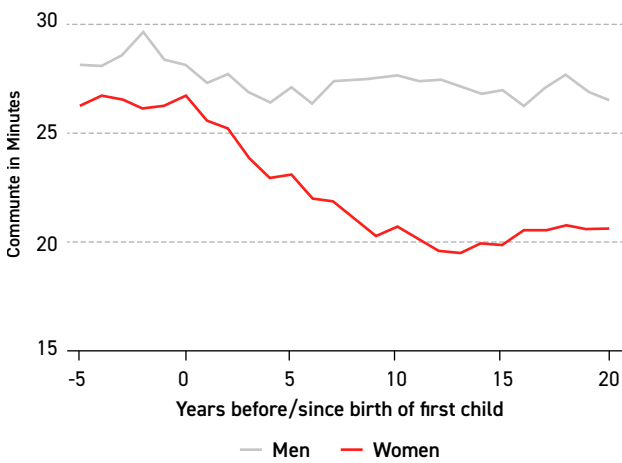
82 Liu, K. A. & Dipietro Mager, N. A. (2016). Women's involvement in clinical trials: historical perspective and future implications

83 Parakh, A. (2011). Adverse effects in women: implications for drug development and regulatory policies

84 Centre for Cities. (2019). Revealed: Cities offering the most - and least - living space per person

85 Bowman, S. & Westlake, S. (2019). Reviving Economic Thinking on the Right.

THE GENDER COMMUTING GAP



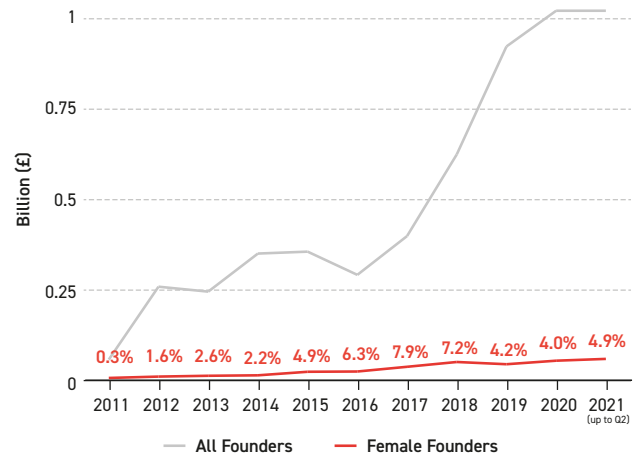
Source: Institute for Fiscal Studies

Polling of Life Science workers finds that commuting is a major issue, with around a quarter expressing concern about the lengths of their commute.<sup>86</sup> This is costly to the sector as a whole as it implies that there may be many talented people who decide to leave the sector entirely, to work in a place where they can live more cheaply and closer to where they work. It may also explain why women are less likely to pursue Life Science careers. Women are more likely to have caring responsibilities near their home, for example, the school run. If a parent wants to start and finish work at standard office hours and also drop-off and pick-up their children, then they do not have time for a long commute. In the UK, the ‘gender commuting gap’ shows that mothers have much shorter commutes than fathers, presumably because women choose jobs closer to home.<sup>87</sup>

Because the Life Sciences hubs are primarily located in expensive cities where long commutes are the norm, it is reasonable to conclude that women may be more likely to leave the sector as their life stages change, even despite early success in their careers. This re-enforces the requirement to broaden the locations of Life Sciences hubs to make them more accessible to talent.

Additionally, the UK lacks the lab space it needs to grow its research base in any sector, with analysis of planning data showing that there are few plans to build many new labs anywhere in the country. To put this shortage in perspective, London and Manchester have only 90,000 and 360,000 square feet of lab space respectively, while New York and Boston have 1.36m and 14.6m square feet available respectively.<sup>88</sup>

LIFE SCIENCES EQUITY



Source: Beauhurst.

“FemTech shows how lucrative it can be to have women make products for women.”

This means that for every £1 we spend on R&D in the UK, a higher proportion is going towards staff living costs, rents, and lab costs than in other places, placing the UK at a distinct disadvantage. We have to spend significantly more for the same amount of research than teams operating in the United States or other competitor countries. These problems would ideally be solved by making housing, office space, and lab space cheaper, by making it easier to build in Life Science clusters. If this cannot be achieved then we should look to allocate more of the UK’s £2.5bn healthcare R&D budget to places where research can be undertaken more cheaply.<sup>89</sup> These costs do not only affect established Life Sciences businesses, but startups too, exacerbating the gender gap among founders.

Another disadvantage UK-based Life Sciences companies suffer from, when compared to their US counterparts, is that they lack access to equivalent levels of finance. Funding is especially important to Life Sciences because it will often take years for a product to be created. Through this time highly qualified individuals need to be hired, lab space has to be rented, and often very expensive materials need to be bought. A lot of research is speculative and may not yield anything that can be sold. A successful product can deliver much more than necessary returns, but the industry does require large sums to be invested initially. Very few people have enough money to ‘bootstrap’ (start a business with their own money) the creation of new medicines.

86 Savills. (2020). Life Sciences: Trends & Outlook  
 87 Institute for Fiscal Studies. (2018). The ‘gender commuting gap’ widens considerably in the first decade after childbirth  
 88 Savills. (2020). Life Sciences: Trends & Outlook  
 89 OECD. (2021). Government budget allocations for R&D

Therefore, a lack of finance is a much greater impediment than it would be in other sectors and this has a more profound impact on female entrepreneurs as they receive a lower proportion of equity finance. Across Europe, Life Science companies report that a lack of funding is their main impediment to innovation. The UK is the best place in Europe to attract funding and even here Life Science companies can expect about 20-30% higher valuations if they list on the US Nasdaq than if they list on the London Stock Exchange.<sup>90</sup> This capital-intensivity may especially exacerbate the gender gap among Life Sciences founders, because the scarcity of funds relative to the supply of entrepreneurs results in those funds being allocated overwhelmingly to men.



### DID YOU KNOW?

#### Vaccitech

Vaccitech is a spin out from the University of Oxford. It was first established in 2016, working on flu vaccines. In April 2020 it partnered with AstraZeneca and the University of Oxford to develop a COVID-19 vaccine and they were successful in producing one of the first effective vaccines in the world.<sup>95</sup> Now 25 million people in the UK have received a vaccine produced by the partnership.<sup>96</sup>

Vaccitech has a female founder, Professor Sarah Gilbert. She has been making and testing vaccines for over 15 years. Since the creation of the COVID-19 vaccine, she has been appointed a Dame Commander of the Order of the British Empire,<sup>97</sup> given the Albert Medal by the Royal Society of Arts,<sup>98</sup> and even had a Barbie doll made of her. On the latter she says that she "is passionate about inspiring the next generation of girls into STEM careers and [hopes] that children who see [her] Barbie will realise how vital careers in science are to help the world".<sup>99</sup>

Vaccitech has now gone public, and chose to IPO on the US stock exchange, raising about \$110.5m.<sup>100</sup>



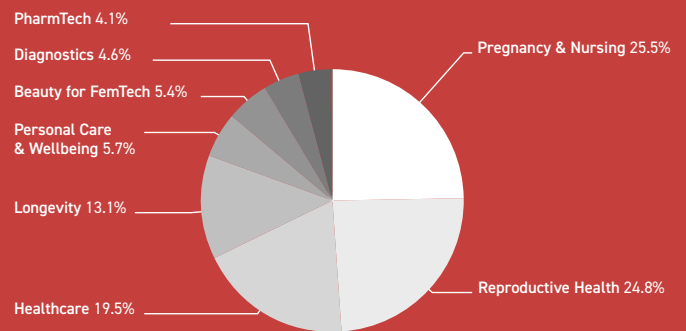
### DID YOU KNOW?

#### FemTech

FemTech refers to software, products and technology which pertains to women's health. It encompasses any healthcare related to the reproductive system. The largest sub-sectors are pregnancy and nursing and reproductive health.<sup>91</sup> FemTech highlights the value of having women involved in the innovation process. BalanceApp is a mobile app that provides support for women with the menopause, helping them to track their symptoms and download reports that they can share with their doctors.<sup>92</sup>

FemTech companies are more likely to have female founders (64%), and address problems for women that have been overlooked by a male-dominated Life Sciences sector. FemTech shows how lucrative it can be to have women make products for women. The global market is valued at about \$522m,<sup>93</sup> and current predictions have it growing by a further 13% over the next five years.<sup>94</sup>

### FEMTECH COMPANIES BY AGGREGATED SUBSECTORS, 2021



Source: FemTech Analytics

90 Department for Business, Energy & Industrial Strategy. (2021). Life Sciences Vision.

91 FemTech Analytics. (2021). FemTech Industry 2021 / Q2: Landscape Overview

92 Balance-app. (2021).

93 Frost & Sullivan. (2021). 5 Strategic Insights Set to Power the Femtech Market.

94 PR Newswire. (2021). The Worldwide Femtech Industry is Expected to Grow at a CAGR of 13% During 2021 to 2026

95 Vaccitech. (2020). Vaccitech and Oxford University announce landmark partnership with AstraZeneca for the development and large-scale distribution of the COVID-19 vaccine candidate

96 Medicines & Healthcare Regulatory Agency. (2021). Coronavirus vaccine - weekly summary of Yellow Card reporting

97 The London Gazette (Supplement). 12 June 2021. p. B8.

98 Oxford University. (2021). Oxford vaccine creator Professor Sarah Gilbert awarded RSA Albert Medal

99 Slawson, N. (2021 August 4). Vaccinologist Barbie: Prof Sarah Gilbert honoured with a doll. *The Guardian*.

100 Globe Newswire. (2021). Vaccitech Announces Closing of \$110.5 Million Initial Public Offering.

CASE STUDY  
THEOLYTICS

MARGARET DUFFY AND  
CHARLOTTE CASEBOURNE



“Finally, people at home actually want to know what I’m doing,” says Margaret Duffy. She’s reflecting on how the biotechnology company she co-founded with Charlotte Casebourne was unexpectedly catapulted into the limelight when the pandemic hit.

Theolytics, whose work is based on decades of research performed at Oxford University, is developing a treatment for ovarian cancer, but it is the company’s unique ‘virus library’ that has led to the recent spark in interest.

“My background is in virology and we’re harnessing the clever traits of viruses to tackle some of the most difficult to treat cancers,” Margaret explains. The therapies Theolytics is developing use adenoviruses to target and kill cancer cells – the viruses infect, replicate within, and then ‘burst’ the cancer cell’s outer membrane, in a process called ‘lysis’.

With one of the world’s leading coronavirus vaccines also using a modified adenovirus as its delivery mechanism, interest in Theolytics’ huge database of adenovirus variants is high.

“Suddenly there was a real focus on the potential of adenovirus-based products in terms of pandemic preparedness and finding vaccines that could protect against infectious diseases like COVID-19. That meant we started thinking about our technology and discovery platform more broadly than we had before.”

### “There’s a huge global focus on life sciences”

“There’s a huge global focus on the life sciences, which means that we’ve seen a lot of capital flowing into life-science focused venture funds, and record numbers of Initial Public Offerings (IPOs), even for early-stage companies - it’s a good environment for life science companies at the moment,” says Charlotte.

The company now has 24 employees and has moved from an Oxford University incubator building to its own space on the Oxford Science Park.

Theolytics’ scientific founders – originally used to working as academics in a university setting – have had to learn about the mechanics of business after taking their discoveries into the commercial sector.

“It’s a very different environment,” Margaret says. “Before, I was tinkering away on this idea by myself, whereas now we have a whole team of people united and working towards the same goal. So that side of it has been really fun.”

However, the learning curve has been steep at times.

“The night before our very first board meeting, I was on YouTube watching videos on how to run board meetings” remembers Charlotte.

Building a supportive network of colleagues and others in the sector has been vital.

“Margaret and I have worked hard to build an international network,” says Charlotte. “Our sector serves a global market, and it requires an international community to discover, develop and resource new therapies to the point that they are accessible to patients”.

### “Believe in yourself because if you don’t, then you’re never going to be able to convince anyone else.”

“You don’t go into the life sciences to develop transformative new therapies as a quick-flip. It takes time and endurance; we’re in it for the long haul. And the connections that you build come with you along that journey. It’s an incredibly collaborative sector.”

As female founders, both Charlotte and Margaret stress the importance of self-belief. “I thought I could only be credible if I had more letters after my name,” says Charlotte. “But at the end of the day it’s not about the letters, it’s about what you are able to create and contribute. I’m incredibly proud of what we’ve built together.”

Margaret’s advice for a would-be entrepreneur? “Believe in yourself because if you don’t, then you’re never going to be able to convince anyone else. I’d be really sorry to look back and see that I’d let an opportunity go because I didn’t back myself.”



## GET INVOLVED

### Barclays Eagle Labs

Barclays Eagle Labs are a growing national network of incubator spaces that provide business incubation, mentoring and working space for ambitious high-growth businesses as well as rapid prototyping through onsite digital fabrication equipment and industry 4.0 expertise at many sites.

By cultivating a community of like-minded entrepreneurs and providing a collaborative work environment, access to their peers and opportunities to maximise growth

through connections, mentoring, growth programmes, events and funding opportunities, Eagle Labs can help start-ups to scale.

Eagle Labs also specialises in transforming key industries (AgriTech, EnergyTech, HealthTech and LawTech) by bringing together key corporate players, industry bodies, leading universities and start-ups and encouraging collaboration that enables rapid industry innovation.

## RECOMMENDATIONS

- **Building more in hubs:** The government should make it a priority to address the high costs of living in Life Science hubs, in order to make it easier for people to work and start businesses in the sector, especially women who are more likely to have to make sacrifices in their careers to juggle their caring responsibilities.

The main reason for a lack of housing is that the planning system makes it difficult to build new homes in these hubs. The government is proposing reforms to the planning system, the details of which we are due to see in 2022. There are lots of ideas about how we can build more and any proposal which increases the number of houses, offices, and labs in London, Oxford and Cambridge will be a boon to the Life Science Sector.

A viable policy has been set out by Policy Exchange in their paper Strong Suburbs.<sup>101</sup> The idea is that residents on a street should, via a vote, be able to agree to build

more densely on their own street. For example, a street of suburban bungalows could agree on the right to create Georgian-style terraces. In many cases the extra floorspace offered by such a 'street plan' would greatly increase the value of their homes, and give them a strong reason to agree to densify. These proposals would foster intensification close to existing transport, town centres and hubs.

**“We should make it easy to turn shops into offices, homes into labs, cafes into co-working spaces, and we should make it easy to turn them back again.”**

## BARCLAYS INSIGHTS

### Jen Estherby, Barclays Eagle Lab HealthTech Lead

“FemTech, remote patient monitoring, and diagnostic tools, mental health and wellbeing solutions, as well as artificial intelligence in early detection, are just some of the key specialist areas we've seen growing over the years at our Barclays HealthTech Eagle Lab.”

“AI has had a significant impact on HealthTech by providing more precise and efficient diagnosis, as well as advancements in remote monitoring tools. Also, many more of us are now tracking and managing our own health and wellbeing, which the growth and development in tech solutions have made possible.”

101 Hughes, S. & Southwood, B. (2021). Strong Suburbs.



These ideas were supported by the previous Secretary of State for Housing, Communities and Local Government Robert Jenrick and they were added to the planning bill.<sup>102</sup>

Of course, street level democracy cannot be the only way new buildings are created. It is best suited to urban and suburban areas which already have public transport links and low density housing. There are many villages in the UK which will also need new homes, and it may not be viable to make street-by-street design codes. There may also be places in the country where we want to build entirely new garden villages, for example, along the HS2 and Crossrail lines. Poundbury is a new garden village in the South West endorsed by the Prince of Wales. It was created to be walkable and sustainable and it borrows from traditional forms of architecture. It is incredibly popular and homes in Poundbury are worth 43% more than those in neighbouring villages.<sup>103</sup> The core principles which created Poundbury should be expanded to apply to new settlements along public transport lines.

On top of these reforms it should be easy to convert properties between different types of use. The economy is fast-moving and dynamic. We have seen regions that used to be full of factories turn to wastelands as the economy has moved on. While people bemoan the death of the high-street, calls to allow commercial property to turn into other uses of building space are scarce. With a similar votes-based system, we should make it easy to turn shops into offices, homes into labs, cafes into co-working spaces, and we should make it easy to turn them back again.

- **NHS Procurement:** The NHS makes up 85% of healthcare spending in the UK, which means that procurement policies are key to driving innovation in health.<sup>104</sup> The NHS should create its procurement tenders in ways which will increase innovation as much as possible. SBRI Healthcare already exists to set up competitions and challenges that result in contracts between the winning companies and the NHS. This should go further, with the NHS listing procurement contracts as openly as possible. For example, a tender for treating urinary incontinence should allow a FemTech company to include Kegel trainers,<sup>105</sup> with approach-agnostic performance indicators like “cost per woman treated” rather than “cost per medicine cycle” or “cost per training programme”.

The US’s Department of Defense opened up its procurement by giving researchers the ability to apply for funding with more freedom to define their own projects, rather than through the pre-existing, narrow specifications.

This worked for both the department and for innovation in general. Successful applicants went on to receive more investment, more patents and more defence contracts in the future, and the government received more innovative products.<sup>106</sup> Such an approach would have the benefit of aiding entrepreneurs, and particularly female founders, rather than the procurement process being biased towards predominantly male-founded incumbent firms.



## GET INVOLVED

### Med-Tech Innovation Expo

Med-Tech Innovation Expo is a conference for medical design and manufacturing technology. It brings together designers, engineers, innovators and manufacturers and serves to connect people in the industry together. It is the biggest event of this kind in the country and will provide female entrepreneurs with a chance to network with researchers, other founders, and investors who are interested in the sector.



## GET INVOLVED

### Life Science Organisations

Networking is valuable for all entrepreneurs, more so for female founders. The government provides a list of UK Life Sciences trade organisations, membership associations, clusters, and research and innovation networks. They include general organisations like: the Knowledge Transfer Network, which works with universities and businesses across sectors to find opportunities to collaborate; more niche organisations like the British Dental Industry Association, which only works with organisations that provide oral healthcare; and BioNow, which works with startups and early stage companies.

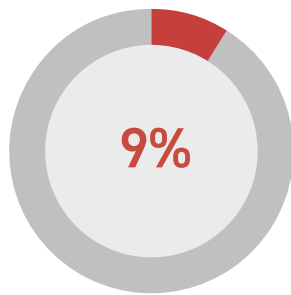
102 Diver, T. (2021, September, 14). Neighbours will be given a vote on what new houses look like under government plans. *The Telegraph*.

103 Savills. (2021). Significant premiums for developers and homeowners in sustainable mixed-use communities

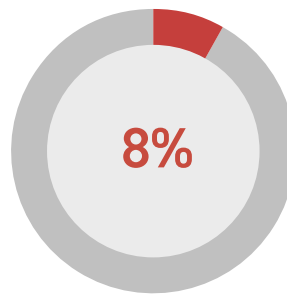
104 International Trade Administration. (2021). United Kingdom - Country Commercial Guide

105 Elvie. (2021). Elvie Trainer.

106 <https://www.iza.org/publications/dp/14297/opening-up-military-innovation-causal-effects-of-bottom-up-reforms-to-us-defense-research>



9% OF COMPANIES IN FINTECH HAVE AT LEAST ONE FEMALE FOUNDER



8% OF INVESTMENT IN FINTECH GOES TO FEMALE-FOUNDED BUSINESSES

1409

HIGH GROWTH-POTENTIAL BUSINESSES ACTIVE IN FINTECH  
Source: Beauhurst

## FINTECH

The UK's FinTech sector is world-leading and presents a model for other high growth sectors. Deloitte ranks London as the top city worldwide for FinTech,<sup>107</sup> and the sector as a whole employs 76,500 people.<sup>108</sup> FinTechs grow faster than other SMEs, by 16% per year vs 1.3%<sup>109</sup> and the number of FinTechs has greatly outpaced growth in other tech sectors. From 2011 to 2014 the number of FinTechs in the UK doubled, for the other tracked high-growth businesses, that rate of growth needed almost twice as long.

Like many high growth industries, FinTech is facing a skills shortage. One obvious place to look for more talent is women. Women make up just 29% of employees in FinTech, only 11% of executives,<sup>110</sup> and only 8.9% of founders.<sup>111</sup> General finance does better with women making up 22% of senior positions.<sup>112</sup>

**“Although there are fewer female entrepreneurs in this sector, with only 8.9% of FinTech companies having a female founder, they receive a proportionate (8.2%) amount of equity finance.”**

There is an economic reason to close this gap. FinTech companies with female founders outperform FinTech companies with only male founders. Their return on investment is more than double that of FinTechs with all-male founding teams.<sup>113</sup>

**“Women make up just 29% of employees in FinTech, only 11% of executives, and only 8.9% of founders.”**

There is some positive news, however, as female entrepreneurs in FinTech do not face the extra funding barriers they face in other sectors. Although there are fewer female entrepreneurs in this sector, with only 8.9% of FinTech companies having a female founder, they receive a proportionate (8.2%) amount of equity finance.<sup>114</sup>

Like with GreenTech, this could be explained by the popularity of the sector. In 2018 and 2019, FinTech companies raised £12bn, which is an average of £5.3m per tracked FinTech company. For comparison, the other companies tracked by Beauhurst raised a total of £30bn, which is an average £950,000 per company. This means that FinTechs have raised more than five times the average for all tracked high growth businesses.<sup>115</sup>

<sup>107</sup> The Global City. (2021). FinTech.

<sup>108</sup> Department for International Trade. (2021). FinTech.

<sup>109</sup> Kalifa, R. (2021). The FinTech Strategic Review.

<sup>110</sup> Department for International Trade. (2019). UK Fintech - State of the Nation.

<sup>111</sup> Beauhurst. (August 2021).

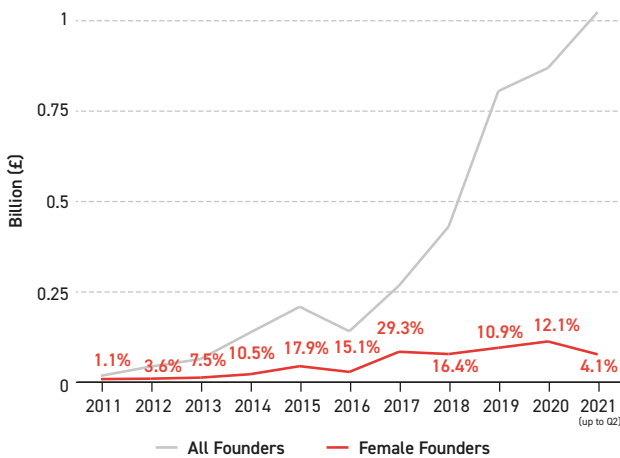
<sup>112</sup> Merchant, N. (2020, September, 5). Where Are All the Women in Fintech?. *The FinTech Times*.

<sup>113</sup> Invest Better. (2019). FinTechs founded by women are better investments, KPMG finds.

<sup>114</sup> Beauhurst. (August 2021).

<sup>115</sup> Ibid.

## EQUITY FUNDING IN FINTECH



Source: Beauhurst

Again, as with GreenTech, if investors are competing for entrepreneurs as much as entrepreneurs are competing for investors, the investors cannot afford to pass over talented entrepreneurs based on biases they may unintentionally hold against them.

## RECOMMENDATIONS

- **Women in Finance:** The lack of women in senior positions in FinTech seems to be caused by the double impact of there being a lack of women in finance and a lack of women in tech. The Women in Finance Charter is an initiative by HM Treasury, which seeks to address the gender imbalance in finance. It commits signatories to supporting the progression of women into senior roles by having at least one member of the senior executive team who is responsible and accountable for gender diversity, by setting internal targets, and publishing progress against these. It also ensures that the pay of the senior executive team is linked to the delivery against these targets. The charter is not just for banks. FinTechs and industry associations are signatories too. Any organisation which works in finance and is not already a member, should sign up.



## DID YOU KNOW?

### Female Founders First by Barclays and Techstars

With COVID-19 exacerbating the existing barriers that prevent women having equal access to networks, business advice and capital, many female-led companies have been disproportionately affected. Dedicated to addressing this, Female Founders First by Barclays and Techstars was created; a unique global opportunity aimed to create a path for 30 trailblazing female-led technology companies to reach their next stages of funding, scale, and success. Together, Barclays and Techstars created a 6-week programme placing the founders unique goals, challenges, and stories first.



## GET INVOLVED

### Innovate Finance

Innovate Finance is an industry body representing FinTechs. They help their members access capital by introducing them to investors, they work with regulators to make sure the industry is supported, and they run networks so their members can meet and collaborate with each other.

They run a Women in FinTech programme of events, publish a Powerlist that celebrates the achievements of women who work in FinTech, try to channel more investment into female-led firms, and generally encourage more women to become investors and entrepreneurs.

### FinTech Women

FinTech Women is a regular meet up in London for women who work in the sector. It was organised in recognition of the fact that women in FinTech may not have access to inspiring female role models within their own networks. It has over 1,000 members. They host events on hot-button issues in the sector.

## BARCLAYS INSIGHTS

### Charlotte Kanagasabapathy, Global FinTech Platform Director

"It is encouraging to see the success of the numerous initiatives to support and advance female FinTech founders, but we need to do more. Barclays is committed to promoting diversity through the expansion of our Female Innovators Lab into the UK and Europe. In partnership with Anthemis, female FinTech founders who join the Lab will be provided with mentoring, networking and direct investment."

CASE STUDY  
FILMCHAIN

IRINA ALBITA AND  
MARIA TANJALA



When childhood friends Irina Albita and Maria Tanjala decided to pool their expertise in the film and financing sectors, they came up with a product that is revolutionising the way those in the creative industries receive payment for their work.

Their joint venture, FilmChain, analyses and allocates the revenues from film, TV and digital, using blockchain technology to channel them towards rights' holders – from actors to producers. “It’s a huge step forward,” explains Irina, “in an industry where cutting-edge technology is often confined to what you see on screen.”

“People are often still paid by cheque,” she says. “There are huge accounting departments that still do manual reporting and payments before the money trickles down to the creator, the makers, the filmmakers, the producers, the investors; those that actually make a project happen.

“We are one of the only digital collection account management services out there – and we can help people access their money much faster.”

FilmChain was named one of the highest-growth startups in the UK last year, and the founders attribute its rapid growth – and that of the fintech sector as a whole – to evolving consumer expectations.

“More than ever, people want instantaneous access to money,” says Irina. “They no longer understand why Amazon can deliver in one day, but payments might take six months to reach their bank accounts.”

### Tackling a ‘bro culture’

As women in the male-dominated startup world, Maria and Irina say they have benefitted from their participation in Female Founders First by Barclays and Techstars, a unique opportunity for 30 trailblazing female-led tech companies from around the globe. Irina describes the virtual programme as a “very good and safe environment”.

“We’re trying to do the most we can with the not-so-generous resources we have. So any kind of support, particularly in this type of forum, is very much welcomed.”

Although the pair have been successful with funding in the past, Maria says they have noticed biases when trying to raise capital within what she calls a “bro culture”, with most funders and entrepreneurs raising capital still being male.

“It is proving to be more difficult and less open than they like to believe,” she says. “For us, it’s about how we can become part of that without altering our values and mission, and our DNA as founders.”

**“For us, it’s about how we can raise capital without altering our DNA as founders.”**

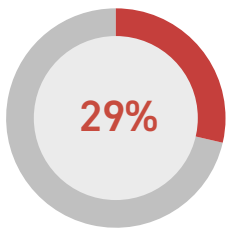
Despite the restrictions placed on filming during COVID-19, the company has continued to grow, hiring more members into its commercial team to take on opportunities in Europe, and with bigger budget productions. Irina says that although the pandemic was a difficult time for everyone, it was also a “big opportunity” for the business because it encouraged many established companies to try a different way of working. “Some of them, particularly the more traditional companies, weren’t as open pre-pandemic.”

FilmChain was named Startup of the Year at the London Business Awards in 2020, a moment that both founders describe as their proudest as entrepreneurs. “It’s incredible recognition,” Irina says.

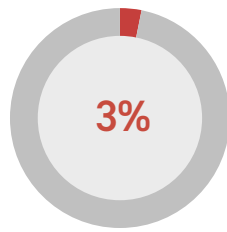
The company is now planning to open offices in Germany and the US. With clients around the world, FilmChain has found Barclays’ international network invaluable. “We’ve been banking with Barclays since we started,” says Maria. “Their support has been a cornerstone of delivering our service.”

Connecting with other female entrepreneurs through the Female Founders First programme has also been key. Their advice to other women thinking about starting their own business? “I always say, the best time to start is now,” says Irina.

RETAIL



29% OF COMPANIES IN RETAIL HAVE AT LEAST ONE FEMALE FOUNDER

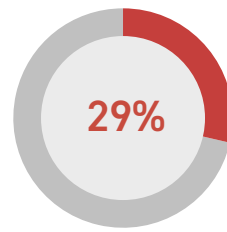


3% OF INVESTMENT IN RETAIL GOES TO FEMALE-FOUNDED BUSINESSES

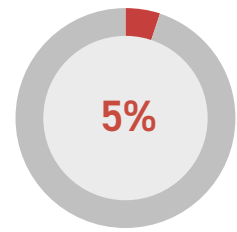
2692

HIGH GROWTH-POTENTIAL BUSINESSES ACTIVE IN RETAIL

E-COMMERCE



29% OF COMPANIES IN E-COMMERCE HAVE AT LEAST ONE FEMALE FOUNDER



5% OF INVESTMENT IN E-COMMERCE GOES TO FEMALE-FOUNDED BUSINESSES

1562

HIGH GROWTH-POTENTIAL BUSINESSES ACTIVE IN E-COMMERCE

Source: Beauhurst

# E-COMMERCE

The UK is the world leader in online shopping. Per capita we spend more online than anyone else.<sup>116</sup> COVID-19 has increased this lead. Online retail has grown by 68% over the past year, and while for some consumers the switch will have been temporary and a result of lockdowns or self-isolation, for others the change will become permanent.

Some entrepreneurs have been quick to grasp the opportunity, including female founders. For example, Expertly is an app for beauticians to sell their products to customers digitally, founded during the first lockdown by Erin Booth.<sup>117</sup> They raised an initial investment of £400,000 from Founders Factory and others in 2020.

E-Commerce has outperformed traditional retail over the course of the pandemic. During the first lockdown, 29% of retail businesses had been negatively impacted by lockdown versus 16% of E-Commerce businesses and in the second lockdown 26% of retail struggled versus 15% of E-Commerce businesses.

E-Commerce has also been raising more finance than traditional retail businesses too. Despite there being fewer E-Commerce businesses (2360 vs 3328) in the Beauhurst sample of high-growth companies, they have raised much more finance. £14bn (£5.9m per company) compared with £5.5bn (£1.7m per company).<sup>118</sup>

Unfortunately, the equity funding gaps are even starker. Female entrepreneurs receive only 4.9% of funding in retail, and a mere 3.1% in E-Commerce. These female-founded companies are generally smaller. In E-Commerce the average number of

employees is 18 vs 603 for male-founded and in retail 37 vs 699. Raising equity finance would help these female-founded companies grow and scale to the size of those run by their male counterparts.

For example, Watchfit is a company run by a female founder, Parisa Louie. On its platform people can buy fitness and diet plans. They raised £300,000 of equity finance in 2013 and used this money to grow the company. They now have between 500-1000 employees.<sup>119</sup>

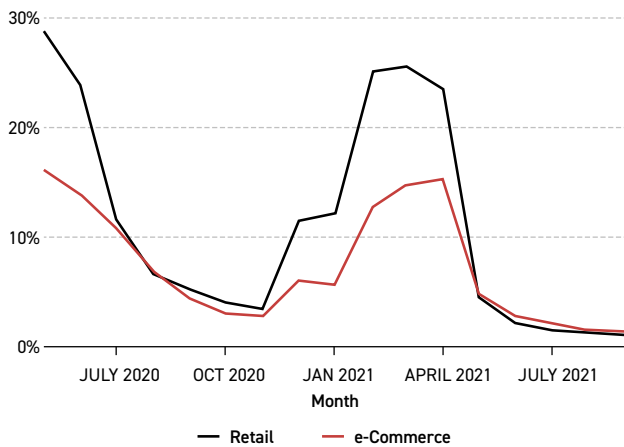


Erin Booth: Founder of Expertly

116 Frisby, J. (2021). The World's Biggest Online Spenders Revealed  
 117 Expertly. (2021).  
 118 Beauhurst (August 2021).  
 119 WatchFit (2021)

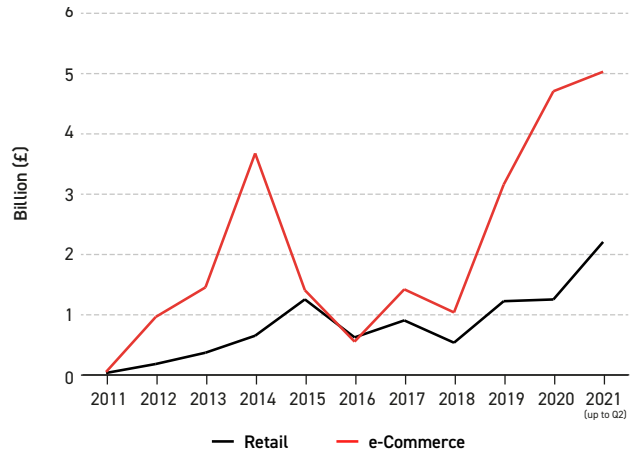


**PERCENTAGE OF TRACKED COMPANIES NEGATIVELY IMPACTED COVID-19**



Source: Beahurst

**RETAIL VS E-COMMERCE EQUITY RAISED**



Source: Beahurst



**GET INVOLVED**

**Help to Grow**

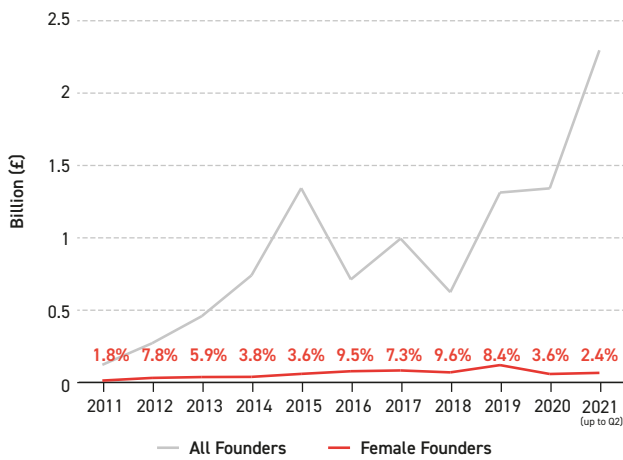
Help to Grow: Digital is a scheme by the government to give SMEs free advice about what technology can boost their businesses. The scheme also provides businesses with vouchers that provide them with a discount on the technology offered. The scheme teaches businesses with between 5 and 249 staff how to increase sales, make the most of selling online, and manage their finances digitally.

Help to Grow: Management supports senior members of SMEs to boost their business's performance. It is 90% subsidised by the government and supports businesses with leadership, innovation, digital adoption, employee engagement, marketing, and financial management.

Hannah Bernard, Head of Business Banking at Barclays, said: "We firmly believe that unlocking business skills and talent can drive the UK's economic recovery at pace. Barclays has invested in skills for many years, through LifeSkills, our Eagle Labs network, as well as a number of our accelerator programmes.

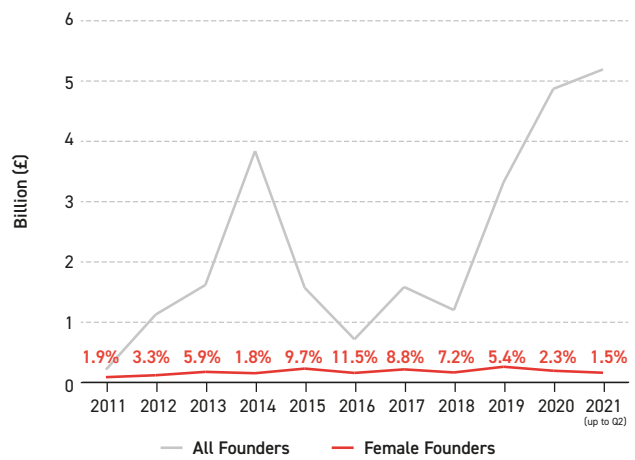
"We're pleased to support the Government with this drive to boost business growth and further develop the skills of the nation's small business owners."

**EQUITY FUNDING: RETAIL**



Source: Beauhurst

**EQUITY FUNDING: E-COMMERCE**



Source: Beauhurst

**RECOMMENDATIONS**

— **Expand Help to Grow: Digital:** Selling online boosts company sales by about 7.5% per employee. The difference between having online sales and not is likely to grow.<sup>120</sup> The government should boost the scheme to the number of SMEs trading online.

Help to Grow: Digital could benefit from two major improvements. First, it is currently not available to companies with fewer than 5 employees which locks out 95% of SMEs. There is no reason to believe that the positive impacts of trading online only exist for larger SMEs, so expanding the scope to include businesses with two to four employees would plausibly boost GVA by £66m.<sup>121</sup>

Similarly, the scheme only gives vouchers to three types of software that helps businesses to build customer relationships and increase sales; make the most of selling

online or manage their accounts and finances digitally. E-Commerce often requires multiple pieces of software, e.g. one for stock management and one for one for payments. So the scheme would have a greater impact by allowing the vouchers to be spent more broadly by participating firms.<sup>122</sup>

Uptake of schemes can be increased through more signposting via key organisations who have a strong relationship with the business community. For example, Barclays is working closely with the UK government to roll out engagement campaigns designed to increase awareness and take-up of the Help to Grow: Management programme of which it is a founding partner. When promoting the scheme, the government should also try to actively recruit female entrepreneurs through its networks of female founders.

**BARCLAYS INSIGHTS**

**Amandine Rochester, High Growth and Entrepreneurs Relationship Director**

“The death of the high street has long been predicted but not even successive lockdowns could bring it down. What COVID-19 has done, like every other recession, is exacerbate the gap between businesses, showing that the ones with a solid supply chain, multi-channel strategy and a strong brand identity were able to adapt to new customers’ behaviours.

Growth of the sector will come from tailored customer experiences with optimised online/face to face interactions, efficient stock management, brand authenticity with societal topics at heart and smart strategic partnerships.”

120 Enterprise Research Centre. (2018). State of Small Business Britain Report 2018.

121 Hallas, D. (2021). Making the Most of Help to Grow

122 Ibid.







CASE STUDY  
SERAPHINE

CÉCILE REINAUD

When Cécile Reinaud moved from France to the UK, she quickly spotted a gap in the British clothing market. Her maternity fashion label started as a single store in London and grew fast into an empire – becoming a household name for mothers around the world.

“Whenever my colleagues in advertising were pregnant, they would complain a lot about not finding any clothes,” Cécile explains. “I did a bit of market research and realised that, especially in the UK, the offering was very low.”

Cécile’s plan – to start Seraphine, a British fashion brand that offers upscale but accessible maternity clothing – has since grown into a £50m business.

“I had a strategy to offer every possible piece of clothing a pregnant woman would like, so the brand became the one stop shop for maternity,” explains the business graduate.

**“Being an entrepreneur is an emotional journey that people cannot understand until they’ve been in that seat.”**

The fact that the Duchess of Cambridge, Angelina Jolie and Gwen Stefani all wore the brand was a huge benefit. By the time Cécile left the business, officially ending her investment in December 2020, Seraphine had 10 physical stores, a huge online presence – and was delivering revenue growth of 30% a year.

**“To connect with other women is very helpful”**

Cécile describes being an entrepreneur as “a lifetime of learning”.

“I think the biggest learning was how to grow and manage a team. Recruiting talent always seemed to be the most challenging part of running a business – and the most rewarding.”

The COVID-19 pandemic was particularly difficult for the company, as the needs of pregnant women switched from workwear to fashion suitable for working from home.

The company quickly adapted by offering more loungewear and dealt with the impact of its store closures by further

increasing its e-commerce offer. Seraphine managed to retain its growth targets, but not without “momentous stress”, says Cécile.

“It was a real juggling act,” she says. “It was very complex, because our supplies were affected, as our manufacturing takes place all over the world, including China.”

Throughout her time as an entrepreneur, Cécile says she has benefited from the support of other women in the male-dominated business world. “In most instances, if I went to an entrepreneur event, I’d be the only woman. So to connect with other women is very helpful.”

She says that groups such as the Female Founders Forum are particularly important in providing support, promoting female entrepreneurship – and helping founders not to feel isolated.

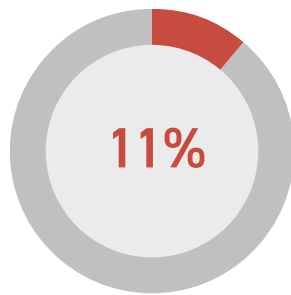
“In my friend circle, I was one of the only entrepreneurs. Being an entrepreneur is an emotional journey that people cannot understand until they’ve been in that seat.” Having now sold Seraphine, Cécile has begun a new phase in her career, supporting and funding other female entrepreneurs.

“I see this phase as ‘giving back’, hopefully trying to inspire some more female entrepreneurs to make the same journey,” she says.

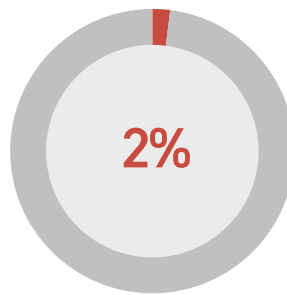
As well as sitting on the board of the Cherie Blair Foundation for Women, which helps businesswomen in developing countries, she has become a business angel, funding other women with business ideas.

“For every pound invested by private equity to businesses, only one penny goes to all female teams. It is quite staggering in 2021 that so few women are being backed by venture capital.”

“I think what we want is to have as much communication around the success of female entrepreneurs because at the end of the day, that’s what is going to motivate other women.”



11% OF COMPANIES IN AI HAVE AT LEAST ONE FEMALE FOUNDER



2% OF INVESTMENT IN AI GOES TO FEMALE-FOUNDED BUSINESSES

1409

HIGH GROWTH-POTENTIAL BUSINESSES ACTIVE IN AI

Source: Beauhurst

## AI

Artificial intelligence (AI) is intelligence demonstrated by machines. Applications involved in advanced web search and recommendations (like Google, YouTube, and Netflix), autonomous vehicles, understanding human speech (like Siri and Alexa), and competing in strategic games (like Go and Chess). AI may be the most important sector covered in this report. Developments in AI will have critical knock-on effects for the whole economy, but especially for the sectors we are writing about, which are already changing rapidly.

We are in the early stages of seeing how AI is going to impact the economy. The UK has been suffering from sluggish productivity growth since the financial crisis. From 2010 to 2015 productivity only rose by 0.2%. This is 90% below the pre-crisis trend of 2.4% annual productivity growth.<sup>123</sup> AI will play an important role in raising productivity levels by making it easier for people to create more products and services in less time. Autonomous vehicles would mean that taxi companies would not need to hire nearly so many drivers to deliver the same number of journeys to customers, in Australia AI is being used to predict when people are going to need healthcare more so hospitals can hire staff at times when they will have the most impact,<sup>124</sup> and BotsAndUs are developing customer service robots where the robots are able to do the repetitive tasks that are associated with running a customer-facing business.<sup>125</sup>

Economy-wide uptake of AI could boost the economy by as much as 22%. Already we are seeing that companies which are adopting AI have increased their top-line growth by 1.2% more than those which have not yet adopted AI.<sup>126</sup> PWC predicts that by 2030, AI will already have provided \$15.7 trillion of economic growth worldwide.<sup>127</sup>

In response, the government has taken steps to give the UK workforce the AI skills they need to confront the next decade. The government plans to fund 1,000 new PhDs in AI over five years,<sup>128</sup> and 2,500 Masters degrees.<sup>129</sup> It has set up the AI Council to facilitate networking between industry and academia,<sup>130</sup> and has established the Centre for Data Ethics and Innovation to provide recommendations for safe and ethical uses for AI.<sup>131</sup> The sector has grown quickly with the number of AI companies doubling between 2011 and 2014.<sup>132</sup>

123 Bughin, J. et al. (2018). Solving the United Kingdom's productivity puzzle in a digital age.

124 Chin, C. (2021). Four areas for predictive public services.

125 BotsAndUs (2021)

126 McKinsey. (2019). Artificial intelligence in the United Kingdom: Prospects and challenges.

127 PWC. (2021). Artificial Intelligence everywhere.

128 UKRI. (2019). Seventy five Centres for Doctoral Training announced by UKRI to develop the skills needed for UK prosperity

129 Department for Business, Energy & Industrial Strategy. (2019). Next generation of artificial intelligence talent to be trained at UK universities.

130 AI Council. (2021).

131 Department for Digital, Culture, Media & Sport. (2021). Centre for Data Ethics and Innovation

132 Beauhurst. (August 2021).



Oana Jinga, founder of BotsAndUs

Women are underrepresented in AI. Worldwide, women make up only 26% of data and AI employees, and in academia they make up just 16% of senior AI academics. Yet AI, like other STEM fields, faces costly skills shortages. If more women can be encouraged to pursue careers in STEM, this skills shortage could be alleviated, increasing the pace of AI development.

There are too few prominent female role models in AI or computer science. Research from Northern Ireland found that girls thought of the stereotypical computer scientist as being “male, socially awkward, and intense”. This is off-putting to them, with girls needing more encouragement to study computing, ICT, AI and similar subjects.<sup>133</sup> Deloitte surveyed women who work in AI and found that many of them would not have considered a STEM career if they had not had a female mentor, often their own mothers, with a career in science. Over two thirds of them said that they had faced gender-based stereotypes at work because they did not seem like the stereotypical computer scientist and this was an obstacle in their careers, and 57% of them said they had left an employer due to discrimination.<sup>134</sup>

As AI becomes more a part of our life, a lack of women working in the industry could mean bias is built into the algorithms. Currently, driverless cars are tested by drivers who are disproportionately male, with AI being trained on this data set. If this remains the case, then they will be better attuned to male driving habits, potentially putting female drivers at risk.<sup>135</sup> In some companies, AI is being used to filter CVs in hiring processes, and by American judges to help them with sentencing. We know that employers and judges have natural



## GET INVOLVED

### Digital Catapult

Digital Catapult works to increase the development and adoption of AI technologies. Digital Catapult connects established companies with leading startups and scale ups that work on AI and machine learning. They host events and workshops which cover AI adoption and identify areas of opportunity. They also run a series of different accelerators, covering different sub-sectors like 5G and immersive technology.

human biases and if algorithms that are trained to act on these biases then we will have people excluded from important career opportunities or given unnecessarily long or short prison sentences because there have not been sufficiently diverse groups of people developing algorithms to correct for these biases.

In Life Sciences, we have seen that a lack of female entrepreneurs has created a damaging impact on women’s health. However, an increase in female founders in the sector has seen the development of FemTech that helps with women’s health issues. A similar increase in female founders working in AI could see an increase in the AI created that improves women’s lives.

**“One in ten AI companies have a female founder, but these companies have only received 1.9% of equity finance.”**

On average, AI businesses run by women also struggle to raise finance. One in ten AI companies have a female founder, but these companies have only received 1.9% of equity finance. Additional funding for the entire sector may shrink the equity funding gap as it has in GreenTech and FinTech.

133 Millan, J. et al. (2019). Why Don’t More Young Women Study Computing?

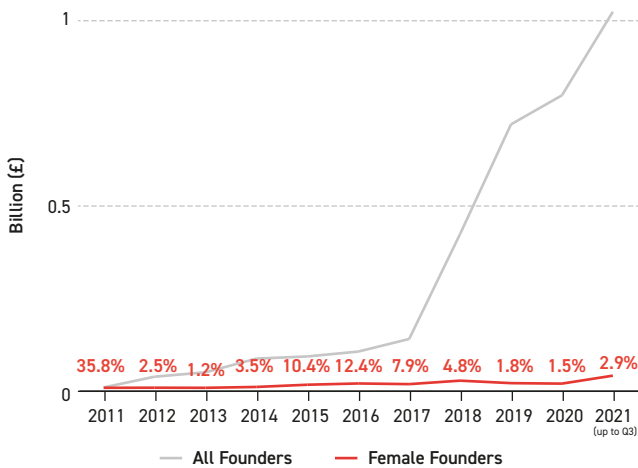
134 Deloitte. (2021). Women in AI.

135 Madgavkar, A. (2021). A conversation on artificial intelligence and gender bias.

**“Worldwide, women make up only 26% of data and AI employees, and in academia they make up just 16% of senior AI academics.”**

We may be starting to see this happen, venture capital investments in AI have been increasing quickly. £7.8bn was invested in 2020 and by August 2021 £11.5bn had already been invested in AI businesses.<sup>136</sup> If the trend in AI follows the trends in GreenTech and FinTech, it may show that increased interest from investors in AI leads to more investment going to female founders, as investors can no longer afford to turn down opportunities based on unfounded biases.

**AI EQUITY FUNDING**



Source: Beauhurst.

**RECOMMENDATIONS**

- **AI Infrastructure:** Breakthroughs in AI are highly demanding in computational power and therefore require expensive hardware. This makes it difficult to start AI businesses without a lot of initial capital or a way of accessing the computation power of a larger organisation like Google or a big university. The US has introduced the National AI Research Resource Task Force Act which involves developing a national cloud for scientists and students to use, meaning that AI experiments will be available to a wider range of institutions and researchers than is currently the case. The UK should set up something similar and grant startups credits to use the Cloud.<sup>137</sup>

Currently, because AI is so expensive, it is difficult for businesses and researchers to make a business case for testing algorithms for issues, bias included.<sup>138</sup> Charitable and civil society groups like the Ada Lovelace and Alan Turing institutes may not have the budgets to properly interrogate models. By bringing down the costs of working with AI, it will make it easier for people to test algorithms for bias and improve them.



**GET INVOLVED**

**Women in AI**

Women in AI is a nonprofit working towards increasing the representation and participation of women in AI. They are a global organisation with branches in 140 different countries. They work to encourage girls to pursue careers in AI, provide mentorship for women starting out their careers, and they have local networks.

**BARCLAYS INSIGHTS**

**Charlotte Goggin, London Head of High Growth and Entrepreneurs**

“AI continues to be a fast growing use of technology across various sectors and it has many benefits i.e., detecting fraud and terrorism, ensuring supermarket shelves are stocked during a pandemic and diagnosing medical conditions. However, we need to be mindful of the pitfalls and the reliance we as human beings place

on computers making decisions because sometimes using historical information to determine what to do in the here and now isn’t going to generate the best outcome. To maximise the opportunities of AI, humans and machines need to work harmoniously with good intent.”

<sup>136</sup> Beauhurst. (August 2021).

<sup>137</sup> Krier, S. (2021). Making Britain The Best Place for AI Innovation.

<sup>138</sup> Ibid.



## DID YOU KNOW?

### The Alan Turing Institute

The Alan Turing Institute exists to make leaps in data science and artificial intelligence to change the world for the better. They want to advance research, train the next generation of AI and data scientists, and lead the public conversation around AI. They fund research, run an AI Ethics advisory committee, and promote ways of increasing diversity in AI.



## GET INVOLVED

### NHS AI Lab

The NHS AI Lab has the goal to accelerate the adoption of AI in healthcare. It has a series of programmes, some of which are focused on specific healthcare outcomes like detecting diseases or managing the care of people with multiple conditions, others take ideas in their early stages and develop them into a proof of concept. It also has a £140m fund which gives money to AI products that can improve healthcare outcomes.



CASE STUDY  
CREDO AI

NAVRINA SINGH





It was Navrina Singh's experiences at some of the world's biggest tech firms that opened her eyes to the potential pitfalls of AI. AI was becoming "pervasive", she says, but "was anyone looking closely enough at the impacts it was knowingly or unknowingly going to have on our lives?"

Navrina, who was brought up in India and moved to the US 20 years ago, didn't think so. Her response was to found Credo AI – a startup on a mission to help companies create trustworthy, ethical and compliant AI.

"In machine learning, there are so many unintended risks that really need to be addressed from the time you're designing the system, before you can actually deploy it," she explains.

"People can get so excited and enthralled by the potential of AI, that they don't step back and think about the unintended consequences of this technology, and how it could potentially disrupt the world."

She describes Credo AI as "pioneers in AI governance", helping companies innovate with AI "within the guard rails". And hers is a growing sector – she says, with worldwide AI spending forecast to go above \$204 billion in 2025<sup>1</sup>. Of executives focused on AI, she says, 73% are struggling to establish processes to ensure responsible AI use<sup>2</sup>, even though over 600 responsible AI frameworks have emerged around the world in the past five years.

### **"Female founders are looked at from a very different lens"**

Navrina, a self-described "stubborn optimist", says it was her parents who "gave her the opportunities to think about technology as a tool to solve problems". It was while working at Microsoft that the seeds were planted for the idea around AI risk management that would develop into Credo AI – which she founded just before COVID-19 hit.

"We grew up in the pandemic," she says. "My first round of funding literally happened the week before people were told to stay home to keep safe. So we had this belief from our investors, our vision, we knew exactly what we wanted to build – and we had to do it all remotely."

In this challenging environment, she says support from other founders became even more essential.

"As an entrepreneur, your life is an experiment," she says. "As a first-time founder, you really don't know what you're getting into. And, as a female founder, there is always added scrutiny around whether you have the skillset or the credibility. You are measured against different standards."

**"People can get so excited by the potential of AI, that they don't step back and think about the unintended consequences of this technology, and how it could potentially disrupt the world."**

She says connecting with other women in a similar position through Female Founders First, a unique virtual programme run in partnership between Barclays and Techstars, has helped her to thrive, offering her expertise on everything from hiring, to sales, to raising funds.

"There was this massive amount of knowledge in one Zoom room where I could tap into all their experiences."

Even beyond the programme, she says Barclays has "really shown up" for her early-stage company, sharing knowledge and networks.

Asked what government can do to better support her sector, Navrina is clear: "Funding – and spotlighting the role of entrepreneurship in the global economy."

As she focuses on growing her customer base in the coming years, her advice to other female would-be founders is to take the leap.

"Don't let the noises in your head get in the way of what you can accomplish. Just go out and bet on yourself. You don't have to be great to start – you just have to start to be great."

1 <https://www.idc.com/getdoc.jsp?containerId=prUS48191221>

2 <https://www.prnewswire.com/news-releases/new-report-from-corinium-and-fico-finds-that-lack-of-urgency-around-responsible-ai-use-is-putting-most-companies-at-risk-301298434.html>

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**“If we are going to help more women to start and scale high-growth businesses and realise their full potential as entrepreneurs, then we need to make big changes throughout society.”**

## CONCLUSION

This report has focused on the issues faced by female entrepreneurs in high growth sectors. But many of the issues that women face in these sectors are, to a greater or lesser degree, shared by women who work in any sector. As such, many of our recommendations will help women regardless of their ambitions, and will have a positive benefit above and beyond the female-founded business community.

If we are going to help more women to start and scale high-growth businesses and realise their full potential as entrepreneurs, then we need to make big changes throughout society. While we need a supportive government, we also need everyone to participate in societal change. Which is why our recommendations do not focus solely on the government.

If we are going to inspire more young girls to pursue STEM careers, then that will involve support from their families and teachers who need to provide role-models for girls.<sup>139</sup> We should aim for every interaction that girls and women have with STEM to be a positive one. This starts with raising awareness with parents on the importance of engaging their children with the opportunities provided through STEM. Furthermore, we must ensure that the media, including social media, works even harder to portray STEM-related content as a positive career opportunity for all. This won't just create more successful female entrepreneurs over time, it will also mean that more women will be inspired to seek careers within STEM sectors.

We also need household tasks and childcare to be split evenly between partners. Low-cost and high-quality childcare will mean that we will have more successful female entrepreneurs.

Better networking and mentoring opportunities will help to inspire women to start businesses and will result in more successful female entrepreneurs, but it will also open up industries in other ways. Regardless of whether you want to start a business, your ability to progress in your career should not depend on whom you already happen to know. If we want everyone to have fulfilling careers then we want opportunities to be widely available. For this we need to open up networking and mentorship.

We need to start early and inspire young girls to achieve their full potential in STEM. We need household responsibilities to split evenly across the genders. We want to increase the number of networking and mentoring opportunities provided to everyone. We do not want a world in which anyone is held back by arbitrary matters of circumstance.

More female entrepreneurs will create more value and opportunities. Generating wealth and advancing technologies will improve society and generate economic growth. The changes we have to make to create more female founders will also make us all happier, healthier and more equal.

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139 González-Pérez, S. et al. (2020). Girls in STEM: Is It a Female Role-Model Thing?

# ACKNOWLEDGEMENTS

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## Organisations

All-Party Parliamentary Group for Entrepreneurship and Beauhurst.



Female Founders Forum  
[tenentrepreneurs.org/fff](http://tenentrepreneurs.org/fff)

A report by



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In partnership with

