





## Promoting diversity in MedTech innovation



DR ANNE BLACKWOOD

AUGUST 2022

### Medtech Navigator

The Medtech Navigator (www.medtechnavigator.co.uk), part-funded by the European Regional Development Fund (ERDF), is a three-year programme, delivered by Health Enterprise East Ltd., to facilitate knowledge exchange between the medtech industry, many of whom are small and medium sized enterprises (SMEs), the NHS, and academia. The programme seeks to enable companies to identify potential market opportunities in a variety of specific disease areas and apply for Innovation Grant funding through the programme, thereby engaging SMEs in new R&D projects that are both customer-focussed and collaborative in nature. This will allow the creation of partnerships between clinicians, academics, and industry to develop novel medical technologies which will improve healthcare and quality of life for patients and the healthcare market of the future.

### Health Tech Enterprise

At Health Tech Enterprise, we believe in improving healthcare through technology and innovation. We work with the NHS, medical technology industry and government organisations to help turn innovative ideas into products and services that will benefit patients.

Our experienced team offers clients a diverse range of business and innovation management services. Our strengths include IP management, technology commercialisation, health economics and strategic market access advice.

Based in Cambridge, we work with over 20 NHS organisations nationally and medtech companies globally. Our aim is to help our clients address the challenges faced along the product development pathway, connecting them with relevant healthcare experts and funding opportunities.

### Contents

1.	Overview
2.	Women in MedTech
Case	e study: Rebecca Bright, Chief Executive at Therapy Box9
	10
3.	Racial and ethnic diversity in healthcare
	e study: Dr Gita Khalili Moghaddam, Chief Executive at nourVue12
	Does medicine discriminate against non-white people and nen?
Case	e study: Sameer Kothari, Chief Executive at Zilico
6.	Five key ways we can promote equality in the workplace 17
6.1	Addressing unconscious bias
6.2	Increasing funding directed towards specific groups 17
6.3	Flexible working arrangements
	Increased non-financial support for entrepreneurs locally uding access to mentors and networks
	Engage and empower more young people from al kgrounds into STEM carers17
7.	References 18



#### 1. Overview

This report looks at the opportunity to promote equality and diversity in the MedTech industry. In the report we explore ways in which organisations can recruit, motivate, retain, promote and support people from all backgrounds in life and asks the question 'does medicine discriminate against non-white people and women'?

The MedTech industry is a key sector within the UK economy. According to recent figures from the Association of British Healthcare Industries, the HealthTech industry is the largest employer in the broader Life Sciences sector, employing more than 138,000 people in over 4,100 companies contributing £27.6bn to the UK economy. Around 85% of these companies are small and medium-sized companies (SMEs) employing fewer than 250 staff.

Technology is changing the way we live our lives and nowhere is this more evident than in healthcare. The health technology community is constantly innovating new products and services that can help empower individuals to keep healthy and safe. Technology can be an enabler for healthcare providers to deliver efficient and cost-effective services in order to cope with rising demand, the increasing complexity of healthcare needs and crises, such as the 2019 coronavirus pandemic.

As an industry, there are opportunities to widen the participation of people from under-represented communities. Despite some progress being made in the last few years, the figures remain stark: less than 20% of MedTech Company executive peers identify as women; only 8.4% of

NHS Trust board members in 2019 identified as being from non-white ethnic minority groups; and of the £5.6bn of venture capital invested in 2017 in the UK, 89% went to all-male founder teams.

The 2020 McKinsey & Company report 'Diversity wins: How inclusion matters' provided plenty of evidence to suggest that wider inclusion leads to better decision making in the boardroom. The most diverse companies are more likely to outperform their industry peers leading to above average profitability<sup>1</sup>. The Diversity Matters data set shows companies with more ethnic diversity outperform competitors by 35%. Those that achieve more gender diversity outperform competitors by 15%.

In addition to improved economic performance, diversity can also lead to other benefits in innovation and opportunities to deliver better services, create better products, open new markets and even business survival.

Some progress is being made. New initiatives promoting greater inclusion in the venture capital sector, access to more non-financial support, including mentoring and coaching networks, as well as more flexible working arrangements, in part brought about the coronavirus pandemic, are all contributing to increasing participation from wider sections of the community.

There is room to do much more however to increase equality and diversity within our industry, which will bring societal and economic benefits.

#### 2. Women in MedTech

There are barriers to entry for female entrepreneurship in the UK. The Alison Rose Review of Female Entrepreneurship<sup>2</sup>, published in March 2019, identified key factors holding back female entrepreneurs in all industries, including perceived bias of venture finance communities, lack of flexible working environments, lack of accessibility to relatable peer networks and mentors and a lack of confidence in their own entrepreneurial skills.

It is no surprise then that an estimated average of only 17% of global MedTech company executive peers are women<sup>1</sup>. The percentage of female executive representation remains below 25% across all major industries, with the average female representation in healthcare more widely just 24%.

In Europe, despite making up almost half of the workforce, only 18% of senior management in all sectors were female in 2019<sup>3</sup>. Amongst the largest publicly listed companies in the EU in 2020, only 7.9% are women<sup>4</sup>.

In the US, despite a record high number of Fortune 500 female CEOs in 2020, overall, only 7.4% of the CEOs were female<sup>5</sup>. The percentage of women of colour in management positions in 2019 was also low<sup>6</sup>: Latinas: 4.3%; Black women: 4.0% and Asian women: 2.5%.

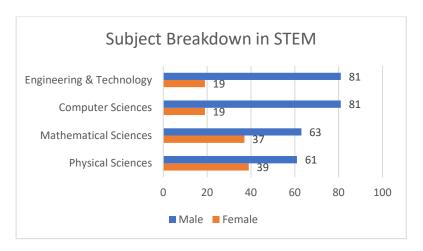
Having more women in senior management teams and the boardroom will bring new perspectives and insight to the sector. There continues to be a gender imbalance in female entrepreneurship in the technology sector, but the reasons are multi-factorial and it starts at school age. "Women are the largest untapped reservoir of talent in the World."

Hillary Clinton

#### Gender imbalance in STEM

The percentage of girls and boys studying maths and science at GSCE level is similar, since these subjects are mandatory, but there is a massive drop off in the number of girls studying STEM (science, technology, engineering, mathematical) subjects beyond GSCE (35%).

The graph below shows the percentage subject breakdown in higher education between 2017 and 2018<sup>7</sup>.



An Accenture report "Girls in STEM" identified that girls at a very young age have their ability defined by their gender, while their parents and teachers identified the same unconscious gender stereotyping and bias,

82% and 88%, respectively. On the same lines, 52% of parents and 57% of teachers admit to having personally made subconscious stereotypes about girls and boys.

#### Women in the workplace

Once in the workplace, working environments have not always been flexible enough to support better work-life balance for those interested in pursuing a career in the sciences and engineering.

Data from the UK's Office for National Statistics Labour Force Survey shows some recent improvement in the numbers of women in core-STEM occupations. In 2019 there were approximately 1 million women in the STEM workforce (24%), compared to just over 800,000 in 2016 (21%). Overall, there is still a need for promotion of women in tech roles, given they currently occupy only one quarter of the STEM workforce.

According to UNESCO, less than 30% of the world's scientific researchers are women<sup>10</sup>. More effort is being made to understand the dynamics that shape women's decisions whether to pursue STEM careers. Factors that can influence this decision include starting a family and the workplace environment.

Debate about the gender pay gap continues but, according to the Office of National Statistics, men in full time employment are still paid, on average, 9% more than women. The gap is edging closer to zero among younger generations but, at board room level, the gap continues to rise. Of a group of female entrepreneurs in a recent study, 65% either disagreed

or strongly disagreed that women "would find it difficult keeping up the skills needed to do the job in the technology industry".

Apart from the salary and employment gap, progress remains slow in the start-up sector too. Only one quarter of tech start-ups have a female founder and women have a place on the board of 37% of start-ups according to a study from Silicon Valley Bank<sup>11</sup>. There is hope on the horizon however as nearly four in ten US healthcare start-ups in 2020 had at least one woman on the founding team.

In Europe, some countries aim to tackle this issue by using quotas to increase women on corporate boards of public companies, such as in France, Germany, Italy and Belgium. In 2019, France was the only member state with more than a 40% share of women on boards, with Italy, Sweden and Finland close behind. There was an increase from 17.9% in 2018 to 20% of women in board director seats, worldwide<sup>12</sup>.

Some healthcare corporates have taken matters into their own hands. For example, Johnson & Johnson have company set initiatives involving recruiting, promoting and retaining women – factually, "43% of management positions in the US are now held by women"<sup>13</sup>.

#### Hope on the horizon

Women have also been adversely impacted by the recent coronavirus pandemic. More women than men lost their jobs due to the impact of the crisis new research found, particularly in sectors such as food and hospitality, retail, public services and administration. Women also continue to carry the majority of childcare duties and caring for the sick and elderly at home, leaving many to juggle the demands of working from home and looking after relatives.

There is hope on the horizon however, as more information and awareness of the challenges and opportunities become available. Publications are raising awareness of and celebrating female leaders in the field, for example publications on the <u>top 100 women in Fem Tech and Health Tech</u>, the <u>fiercest women in Life Sciences</u>, the <u>top 25 women leaders in Biotech</u>, the <u>top 25 medical device executives</u>, and <u>the 7 women in MedTech you</u> should know.

UK Government initiatives, such as Innovate UK's Women in Innovation awards<sup>14</sup>, are also a step in the right direction, providing UK funding and mentoring, coaching and business support to UK businesswomen to develop their ideas. New female led businesses backed by the scheme in 2019 included Virtue Health—a tool to help clinicians assess patient health more efficiently—led by Alex Haslehurst and Run3D, led by Jessica Bruce—which uses 3D gait analysis, originally conceived for runners, to help older adults and those recovering from surgery to walk pain-free.

Over 76% of the 1.3 million NHS workforce is female and yet in our work at Health Tech Enterprise, only around a third of the clinical entrepreneurs submitting ideas for new medical technologies are female.

Fortunately, there is a new breed of female entrepreneur coming through, who took a traditional medical training path but is now applying their clinical knowledge and expertise to innovation.

Dr Gita Khalili Moghaddan, Chief Executive at TumourVue, is another example of a female entrepreneur applying her scientific knowledge and expertise to solve a problem in healthcare. Featured in a case study on page 11, Gita was inspired to work on a device to improve surgical outcomes for brain tumour patients following a family illness.

New female medical innovators like Gita are being supported by clinical entrepreneur programmes that will equip them with the skills and knowledge needed to deliver the new medical technology innovation the NHS and wider healthcare industry desperately need if we are to deliver safe, effective and efficient care in the next 10 years. They are motivated less by money and more by solving a problem that can have a direct benefit for patients and the wider society.

There has never been a better time to become a health tech entrepreneur and female led businesses and innovators have a huge role to play.

# Case study: Rebecca Bright, Chief Executive at Therapy Box

As a former speech and language therapist, Rebecca Bright brings her clinical expertise to product development and research projects in her role as co-founder at health tech company Therapy Box. Therapy Box specialises in developing tools for patients and clinicians using acoustic and linguistic analysis for products ranging from clinical decision-making tools to assistive technology.

Therapy Box has a range of products available including Predictable, the company's first app which was launched in 2011. Predictable is used in 10 languages around the world by people living with ALS/MND to be able to communicate. It utilises self-learning word prediction and cutting-edge access methods to enable people with little or no speech to be able to communicate.

Rebecca's work as a speech and language therapist lead to the development of the company's first app. Frustration at the lack of affordable app-based communication aids, lead to the development of Predictable. While her patients waited for funding or abandoned their more traditional communication aids, Rebecca sought to develop an innovative iPhone and iPad app which could make life easier for people with MND.

Rebecca is the principal investigator of the NIHR funded i4i project to develop an automated transcription and language analysis tool to be used to assess child language development. In 2016 Rebecca received an MBE

in the Queen's honours list, recognising her contributions to innovation and inclusive design, and promoting the role of women in technology.

The NIHR i4i Connect programme was set up to fund SMEs to lead research projects related to health tech product development. Rebecca says being one of the first companies to be funded by this scheme helped overcome some of the previous barriers that were in place when a non-academic wanted to lead a research project. After half a dozen projects collaborating with academics it has been a learning curve to find the best ways for commercial and university partners to work together - where each partner appreciates the point of view and experience and context of the other.

"There is still some way to go to bring gender equality into the world of technology and health tech research. During the pandemic we saw mums having to juggle childcare and providing affordable flexible childcare is essential if we want women to be able to have a level playing field."







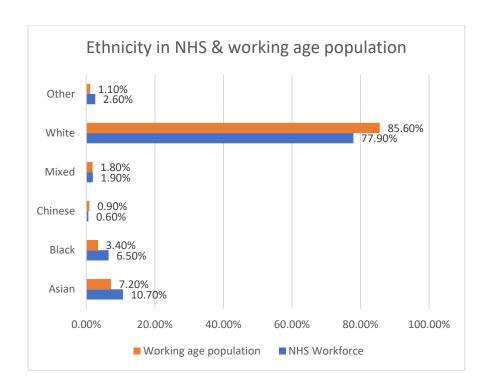
### 3. Racial and ethnic diversity in healthcare

The Black Lives Matter campaign and the recent COVID-19 pandemic show how far we still have to travel to ensure everyone is treated equally in all aspects of life.

In 2019, in the UK, only 6% of senior managers in industry were from a Black, Asian or minority ethnic background. SMEs often have small leadership teams which can create infrequent opportunities at the top level, nonetheless many SMEs in the health technology sector have pledged to widen participation to create meaningful change.

Inclusive solutions can bridge the healthcare gaps and mobilise innovators from minority ethnic backgrounds to initiate lasting change. These include BAME-focused initiatives, such as the pledge for 'Diversity and Innovation – a celebration of BAME innovators and our pledges to do more' led by the Academic Health Science Network last year. With this pledge, industry leaders recognise their role in championing and developing diversity within the NHS innovation pipeline.

As of March 2020, NHS workforce statistics reveal that staff from different ethnic minority groups constitute a significant 22.1% of NHS staff<sup>15</sup>. A higher percentage of junior doctors than senior doctors were from the Black, Chinese and Mixed ethnic groups. Among non-medical staff, there was a higher percentage of people from Asian, Black, Mixed and Other ethnic backgrounds in 'support' and 'middle' grades compared with 'senior' and 'very senior manager' grades.



In 2019, black and ethnic minority staff made up 19.7% of the NHS workforce but only 8.4% of them were trust board members, an increase from 7.4% in 2018.

Some NHS Trusts are taking a lead in becoming NHS exemplars for equality, diversity and inclusion by creating new roles to support an open culture and trust within their organisations. The Queen Elizabeth King's Lynn NHS Hospital, as well as creating a new Equality, Diversity and Inclusion Manager role to support staff, has also increased its number of female executive members to seven (out of eight) over the last couple of years.

# Case study: Dr Gita Khalili Moghaddam, Chief Executive at TumourVue

The widespread disruption caused by COVID-19 means that the NHS is now facing a looming crisis in cancer care. Urgent cancer operations are being put on hold in many hospitals, and the latest figures from Cancer Research UK state that 40,000 fewer people started cancer treatment across the UK last year.

Tackling this backlog is a mammoth and complex task but there is scope for new technologies to help ease the strain. One new device making headway in this area is TumourVue, a new Al-driven imaging device with the potential to dramatically improve surgical outcomes for brain tumour patients and reduce costs at the same time.

To address the current surgical limitations, Dr Gita Khalili Moghaddam and a colleague from the University of Cambridge, Professor Chris Lowe, founded TumourVue Ltd in 2018. Using a funding award from the Medtech Accelerator and an Innovation Grant from the MedTech Navigator, the team are collaborating with Cambridge University Hospitals to offer a disruptive medical imaging technology for intraoperative (i.e. during surgery) visualisation of brain tumours.

Writing a book on mobile healthcare, Gita looked at a wide range of sensor technologies and how they could be implemented in healthcare. It was then that she first thought of TumourVue's technology. Having also recently started work on another innovation to improve diabetes outcomes, Gita is

a serial entrepreneur whose innovative thinking should profoundly impact the Medtech space.

In recognition of her innovation, she was recently named as one of Cofinitive's 2021's #21 People, Companies and Things to Watch.

The inspiration behind the innovation is a very personal story from Gita.



"My father had more than 15 cancer surgeries over a number of years, mainly because the surgeons could not get a clear margin (total resection of tumours) using a combination of imaging and subjective judgements. For this reason, I had always wanted to use my scientific training and expertise to help tackle this critical healthcare challenge, of which I had witnessed the ramifications of first-hand."

### 4. Diversity in Venture Capital

The UK is a great place to start a new medical technology business. With its world-leading life sciences research base and an established pool of venture capital and angel investors, there is an opportunity to grow global businesses if we nurture the talent pool.

The British Private Equity and Venture Association (BVCA) acknowledges however that there is still a long way to go to encourage and support diversity in the industry and lower the financial barriers holding back entrepreneurs.

In a report by the British Business Bank in collaboration with the BVCA, it reports that of the £5.6bn of venture capital invested in 2017 in the UK, 89% went to all-male founder teams<sup>16</sup>. Only 4% of all firms seen by VCs that year were all-female. From 22,257 businesses surveyed (in 2020), approximately 7205 were launched by female entrepreneurs. This sets the number of UK businesses currently owned by women at 32.37%, highlighting a remarkable shift from four years ago, when just 17% of founders were female<sup>17</sup>.

The report highlighted a number of other alarming discrepancies:

- Only 13% of senior people on UK VC investment teams were women
- For every £1 of VC investment in the UK, all-female founder teams get less than 1P
- Teams with at least one women appear less likely to get follow on funding

 Having a warm introduction to a VC means you are 13 times more likely to reach Investment Committee and be funded than cold submissions; all-female teams are less likely to achieve warm introductions than males.

Without investment, talented women struggle to turn their bright ideas into reality. Help is at hand however with a new wave for female led angel networks springing up both here in the UK and overseas.

One such example is the <u>Angel Academe</u> network, where most of the angel investors are women seeking to invest in highly scalable, ambitious businesses that have at least one woman on the founding team. They don't just invest in promising start ups, but provide mentoring, education and coaching too, looking to share their experiences with the entrepreneurs they invest in.

Leading the way for female representation in the UK life sciences investment scene are Dr Anne Horgan, Partner at Cambridge Innovation Capital, Dr Fiona Pathiraja, Founder and Managing Partner at Crista Galli Ventures and Dr Cassie Doherty, Investment Director at Parkwalk Advisors.

A report by Diversity VC in 2019 of 223 UK venture capitalists suggest similar under-representation of ethnic minorities<sup>18</sup>. It estimated that 24% of the venture workforce is non-white.

One Tech is a venture community which aims to tackle inequality and the lack of diversity in tech by increasing the number of female-led and Black, Asian & Ethnic Minority founders who raise capital for their businesses. One

Tech helps entrepreneurs connect to opportunities across the London tech scene and enable more representation for underrepresented minorities.

# 5. Does medicine discriminate against non-white people and women?

Health outcomes in the UK remain unequal. The Marmot Ten Years On Review highlighted that adults over 60 from minority ethnic groups are more likely than white British people to report poor health.<sup>19</sup> We know that the coronavirus pandemic has further widened this gap, with reports suggesting people from ethnic minorities had between 10 and 50% higher risk of death when compared to White British.<sup>20</sup>

There is evidence too that devices and treatments do not always work as well for people from diverse backgrounds. One recent example of this is the widespread use of pulse oximeters during covid-19. These small devices clip onto your finger and monitor oxygen levels in the blood.

These relatively low-cost devices can be used by individuals at home to monitor their symptoms and help alert them to low blood oxygen levels before the individuals start to feel particularly unwell or notice other symptoms.

With some doctors recommending their use for people suffering from Long Covid, or for those more vulnerable to the disease, these devices can help provide early-warning that all is not well. A clinical trial in England called 'COVID oximetry @home,' is studying people in certain groups (Covid positive, symptomatic and 65 or older, symptomatic and under 65 but clinically vulnerable) who have been supplied with a pulse oximeter to monitor their blood oxygen levels at regular intervals<sup>21</sup>. It's not clear however whether these devices can provide effective monitoring for people of colour.

The device uses infrared and light beams to measure oxygen saturation of the blood and pulse rate and is more likely to miss low levels in people with darker skin.



The independent NHS Race and Health Observatory<sup>22</sup> has published a rapid review into pulse oximeters, suggesting that readings for Black and Minority Ethnic people could be misleading.

The leader of the review, Olamide Dada, said: "As this review clearly shows, more evidence is needed to examine the effectiveness of pulse oximeters for all patients. It is essential that clinicians and carers have full knowledge of diverse clinical signs when observing ethnic minority patients at risk of Covid-19, and particularly those using home devices. More detailed analysis is needed to help determine the reliance on, and future development of, pulse oximetry devices going forward."

This review follows on from a study in the New England Journal of Medicine that found that pulse oximeters were more likely to record false readings for Black patients – recording a value in the 'normal' range when the person actually had lowered blood oxygen levels<sup>23</sup>. The report found incorrect readings in about 12% of all cases, happening to Black people about three times as much as white people. This doesn't mean that pulse oximeters are not effective for people with darker skin, but more research is needed.

Another example of potential physics related bias includes the mechanical design of hip implants, which may not be sufficiently optimised for the distinct bone structure of female hips.<sup>24</sup> Failure of hip implants can cause serious complications, including inflammation, painful growths, dislocations and metal toxicity. Most models are available in a variety of sizes but women are not simply smaller men and there are gender differences in basic activities involving the hip such as walking.

Research suggests that the 'load bearing' on hip implants is greater in women during certain activities which could result in faster wearing and greater degree of failure in women versus men.

There is insufficient evidence collected on the rates of wear in hip implants based on gender differences but international regulators are beginning to step up their requirements for safety data and transparency around device recalls. These, albeit often unintentional, biases need to be addressed when designing new medical devices and treatments.



### Case study: Sameer Kothari, Chief Executive at Zilico

Sameer Kothari has been Chief Executive of Zilico since 2007. Zilico is developing the next generation of cancer diagnostic devices that remove subjectivity, increase accuracy and deliver results immediately. These characteristics allow for the improvement and extension of clinical screening programmes, globally.



Zilico's product portfolio is centred on its patented Electrical Impedance Spectroscopy (EIS) technology, which has applicability across a wide range of neoplastic conditions. EIS is an objective, scientifically-proven method to differentiate between normal, pre-cancerous and cancerous tissues (neoplasias) according to its electrical properties.

A number of clinical pathways rely on subjective visible indicators to diagnose disease, such as oral and cervical cancers. The challenge is that these visible indicators are not disease specific meaning that patients can be either over-treated or disease missed. The technology offers a non-visual, objective analysis of the tissue structure to give a more accurate diagnosis helping support clinical decision making.

Zilico's lead product ZedScan is utilised within the cervical cancer diagnostic pathway. Data from a study with ZedScan, in routine use at Sheffield NHS Teaching



Hospital, demonstrated a 13.25% increase in pre-cancerous disease detected when compared to colposcopy alone.

Sameer brings over 20 years commercial experience to Zilico as a senior executive. In addition to his commercial roles, Sameer is a fellow of the Winston Churchill Trust and travels overseas to bring back fresh ideas and new solutions to today's issues, for the benefit of others in the UK.

Sameer is also a founding council member of the Bessemer Society - a forum and mutual society formed of 'entrepreneurs who are committed to creating successful new companies based on technological innovation'.

"Working within healthcare and developing products which address a clinical need is very rewarding. Seeing these products make an impact within the pathway is gratifying and motivating for the multi-disciplinary teams that are involved in bringing these products into routine clinical practice.

Healthcare across the world should be a basic right for citizens. Governments should strive to ensure healthcare is available to all at the point of care regardless of sex, sexual orientation, nationality, ethnicity, race, colour, age, disability, religion, or wealth. However, citizens should also understand healthcare is expensive and governments have to raise money to pay for this right to ensure there remains a fit and well population."

### 6. Five key ways we can promote equality in the workplace

#### 6.1 Addressing unconscious bias

Whether in the selection and recruitment of new staff, promotion within the workplace or in the design of new devices and treatments, having a good understanding of those that seem different from you should create empathy and remove bias.

For leaders it is not enough to say the right words, we must be judged on our actions and decisions.

#### 6.2 Increasing funding directed towards specific groups

Angel investor groups such as the Angel Academe are leading the way in investing in women-founded tech businesses. UK banks and investment funds could do more to assist greater diversity and inclusion both amongst the investment community itself and the businesses in which they invest.

#### 6.3 Flexible working arrangements

The coronavirus pandemic has taught us a number of incontrovertible truths. With more of the working population working from home now and likely in the med-longer term, we need flexible working policies that better fit our individual family care giver roles.

# 6.4 Increased non-financial support for entrepreneurs locally including access to mentors and networks

Role models matter. Whatever your political persuasion, the election of Kamala Harris as the United States first female vice president, the first Asian vice president and only the second African American to take a presidential position, serves as a timely reminder not only of how far we have come, but how far we still have to go.

Access to relatable role models, networks and mentors locally that can inspire entrepreneurs from all backgrounds to reach their full potential.

# 6.5 Engage and empower more young people from all backgrounds into STEM carers

Your gender, ethnicity or social class should not be a barrier to entry to careers in science and engineering. Inclusion of a wider variety of backgrounds in venture financing, research and development and the implementation of ideas will help to create new products and services that meet the needs of all sectors of society.

#### 7. References

- 1. <u>Diversity wins: How inclusion matters | McKinsey</u>
- 2. The Alison Rose Review of Female Entrepreneurship- GOV.UK
- 3. "Only 1 manager out of 3 in the EU is a woman..." Eurostat News Release, March 8, 2020
- 4. European Institute for Gender Equality, "<u>Largest Listed</u>
  <u>Companies: CEOs, Executives and Non-Executives</u>," *Gender Statistics Database* (2019)
- 5. Catalyst, <u>Historical List of Women CEOs of the Fortune Lists:</u> 1972-2020 | Catalyst, 1972-2020 (May 2020)
- 6. Catalyst, <a href="https://www.catalyst.org/research/women-in-management/">https://www.catalyst.org/research/women-in-management/</a>, (Aug 2020)
- 7. Stem Women, <u>Women in STEM | Percentages of Women in STEM Statistics STEM Women</u>, (Jan 2021)
- 8. Accenture, Girls in STEM (accenture.com) (Sep 2017)
- 9. Wise Campaigns 2018 and 2019 workforce data sets, <u>WISE</u> Diversity and Inclusion changemakers since 1984 (wisecampaign.org.uk)
- 10. UNESCO report, <u>Just 30% of the world's researchers are women.</u>
  What's the situation in your country? (unesco.org)
- 11. Silicon Valley Bank, <u>Women in US Technology Leadership | Silicon Valley Bank (svb.com)</u>
- 12. European Commission Report on Equality, annual report ge 2019 en 1.pdf (europa.eu) (2019)
- 13. Johnson and Johnson, Our Commitment to Women | Johnson & Johnson (jnj.com)

- 14. Innovate UK 2019 Women in Innovation awards,
  <a href="https://www.gov.uk/government/news/women-in-innovation-9-female-led-businesses-backed">https://www.gov.uk/government/news/women-in-innovation-9-female-led-businesses-backed</a>
- 15. UK Government, <u>NHS workforce GOV.UK Ethnicity facts and figures (ethnicity-facts-figures.service.gov.uk)</u>, (Jan 2021)
- 16. British Business Bank,
  <u>UK VC and Female Founders Report British Business Bank.pdf</u>
  (bvca.co.uk), 2017
- 17. https://ueni.com/blog/report-gender-small-business-female/
- 18. Diversity in Venture Capital 2019, <u>Diversity in VC Report</u> <u>Diversity</u>
- 19. Toleikyte L, Salway S. Local action on health inequalities Understanding and reducing ethnic inequalities in health. Public Health England and Institute of Health Equity; 2018
- 20. Beyond the Data: <u>Understanding the Impact of COVID-19 on</u>
  BAME Communities
- 21. NHS England, NHS England » COVID Oximetry @home
- 22. NHS Race and Health Observatory Rapid Review, <u>Pulse oximetry</u> and racial bias
- 23. N Engl J Med 2020, <u>Racial Bias in Pulse Oximetry Measurement</u> NEJM
- 24. JAMA Internal Medicine 2013, <u>Sex and Risk of Hip Implant Failure:</u>
  <u>Assessing Total Hip Arthroplasty Outcomes in the United States</u>