



ESG & IMPACT
REPORT
2023

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INTRODUCTION

We are delighted to present Northstar Ventures' ESG and Impact Report 2023. We are proud of the progress we have made towards our mission of investing in ambitious teams who are leveraging technology to solve societal and environmental challenges at global scale. This report highlights our commitment to ESG principles and showcases the impact we have made, both in our local communities and further afield.

Over the past few years we have been working hard to integrate ESG and impact considerations throughout our culture, operations and investment activities, and the publication of our first ESG and Impact Report marks the next milestone on this journey.

We back teams who are driven by a societal or environmental mission – and in many cases both – and who have the potential to drive a material improvement in Healthy Life Expectancy (HLE), for people living in underserved regions in the UK and across the globe. We see this report as an opportunity to highlight some of the investments we have made that are actively contributing to this goal.

We continue to evolve our impact measurement framework, which is aligned to a sub-set of the UN Sustainable Development Goals (SDGs) that have particular relevance to our “Northstar” view of HLE. The framework highlights both the overall impact of our investment activities, as well as the more focused and targeted impact of our individual portfolio companies' products, services and business models.

From an ESG perspective, we are dedicated to a culture of continuous improvement, whether on carbon impact, diversity and inclusion, or governance standards, both for ourselves and also for the companies in which we invest. ESG considerations are embedded across our operations and integrated into all stages of the investment lifecycle. They guide our relationships with our investors, portfolio companies, advisors and our own team members.

We continue to support the Investing in Women Code, actively promoting and fostering a diverse and inclusive culture, which we believe is critical to building innovative, high performing teams. This is reinforced by our support for Diversity VC, where we provide active mentoring and internship opportunities. We are a signatory to the Principles for Responsible Investment (PRI), whose six principles aim to foster good governance, integrity and accountability. Finally, through our charity, the Northstar Foundation, we continue to support our local community.

We remain committed to generating venture scale returns for our investors, whilst driving prosperity and social improvement in our region and creating a better tomorrow for people across the globe.

NORTHSTAR VENTURES

December 2023

NORTHSTAR VENTURES

DRIVES ECONOMIC TRANSFORMATION IN UNDERSERVED REGIONS.

MISSION We invest in ambitious teams who are leveraging technology to solve societal and environmental challenges at global scale.

VALUES

1 APPROACHABLE

We make ourselves available for entrepreneurs and ecosystem partners and consider opportunities that may be overlooked by others.

2 COMMITTED

We engage and are aligned closely with the companies that we invest in to help them to achieve their vision.

3 COLLABORATIVE

We make investment decisions as a team, though trust individuals to act autonomously in line with our values, managing our own time to balance work and personal priorities.

4 STRAIGHTFORWARD

We are committed to clear and direct communication. We believe in remaining honest in our position and encourage our team members to express their thoughts openly.

5 INSIGHTFUL

We're experienced investors that understand how difficult the company journey is. We endeavour to provide relevant and timely sector insights and guidance.

6 PROACTIVE

We strive to achieve goals that have meaning and have a positive impact on people, organisations and communities.

ESG & IMPACT FRAMEWORK

Northstar Ventures has worked to create an over-arching ESG and impact framework.

ESG and impact are evolving priorities of venture investing. We believe that, done right, they have the power to not only create a better world but also to catalyse outsized returns to investors.

DATA COLLECTION

Within our data collection process, we utilise easily accessible tools such as the ESG_VC Measurement Framework to monitor and report on key metrics both on our own organisation and on our portfolio companies.

IMPACT

The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. We have identified seven SDGs that are particularly relevant to our investment thesis.

Our funds not only help to drive prosperity across the regions we invest in, particularly the North East of England, but also - via the companies we invest in - societal and environmental improvement across the globe.

We map all active investments to the primary SDG they address. From the North East Innovation Fund, over 75% of our portfolio contributes to the seven SDGs listed below.



OUR ESG

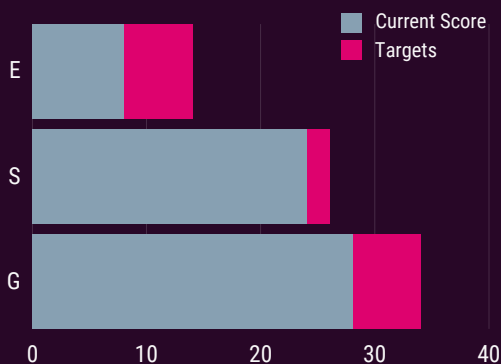
Over the past 24-months we have integrated Environmental, Social, and Governance (ESG) metrics into our own organisation.

We have appointed an internal ESG and Impact Committee and set out a 12-month implementation roadmap.

Shown in the graph below is our ESG_VC Measurement Score, which benchmarks our current performance against where we believe we can reach by the end of the 12-month period.

Simple improvements we can make are to change energy provider and provide Equality, Diversity and Inclusion training for our staff.

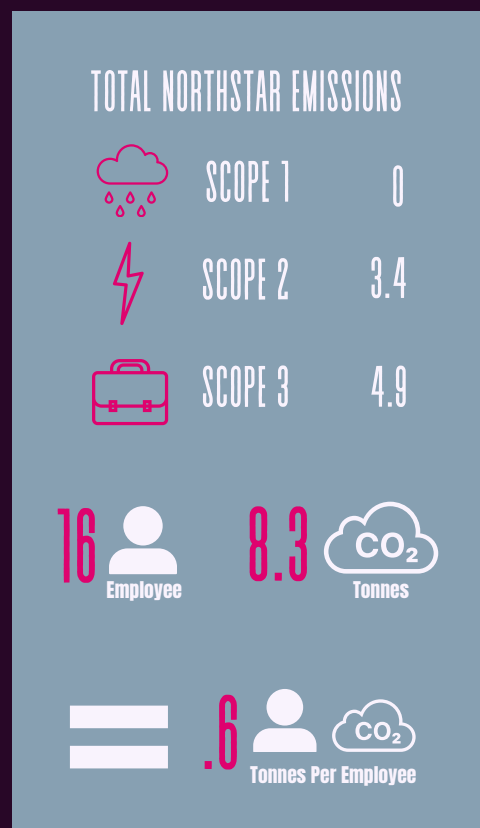
ESG_VC MEASUREMENT SCORE



ENVIRONMENTAL

Calculated below are our Emissions as an organisation, classified by Scope 1, 2 and 3 emissions categories. A few basic definitions to further understand the scope classifications:

- **Scope 1** - direct emissions from sources owned or controlled by the company;
- **Scope 2** - indirect emissions from purchased electricity, steam, heat, and cooling;
- **Scope 3** - all other emissions associated with a company's activities, e.g. commuting to and from work



OUR ESG

SOCIAL

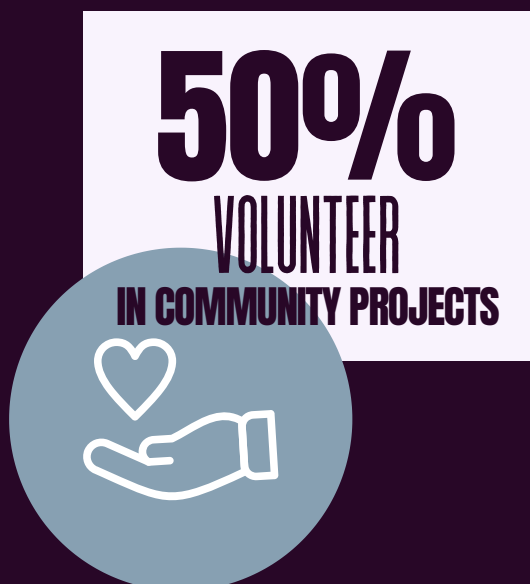
Northstar Ventures encourages mixed gender teams, both in our own organisation and the companies we invest in. 50% of our employees are female, 33% of our Senior Leadership is female, as well as 17% of our Board.

We also take pride in the fact that 50% of our staff volunteer in community projects, alongside our organisation's contributions to charity.

The Northstar Foundation also plays an important community role, working in collaboration with other bodies to make grants and indirect social investments into charitable and voluntary organisations.



50% OF OUR TEAM ARE FEMALE



GOVERNANCE

Northstar Ventures has had strong governance since its formation with a Board of directors including an independent Chair and Non-executive directors. All key decisions require Board approval and the Board provides independent scrutiny and oversight of all of Northstar Ventures' activities.

Supporting the Board is a Management Committee responsible for ensuring Northstar Ventures' operations run smoothly.

All investments and divestments and portfolio valuations for the funds managed by Northstar Ventures require the approval of the Investment Committee, which includes non-executive and executive director members.

Northstar Ventures has an appropriate and proportionate suite of policies and procedures in place to support all team members in complying with all relevant laws and regulations.



THE NORTHSTAR FOUNDATION

FOUNDATION PURPOSE

The principal objectives of the Foundation are to encourage entrepreneurship, employment and social investment in the North East to reduce poverty and improve the life chances of those living in poverty by:

- promoting entrepreneurship and the benefits of social enterprise within all sectors of the regional community,
- improving social and educational deprivation within the region,
- enhancing the educational and training opportunities for young people to raise their aspirational levels particularly for those from deprived backgrounds,
- create employment opportunities for young people, women and minority groups in promising growth sectors of the regional economy,
- and encourage young people to start their own micro-businesses as a way of developing their self-confidence and financial security.

The Foundation also works in collaboration with other bodies to make grants and social investments into charitable and voluntary organisations.

Northstar Ventures contributes a proportion of its profits each year to The Northstar Foundation.

ORGANISATIONS WE'VE SUPPORTED



Prince's Trust



THE SKILL MILL



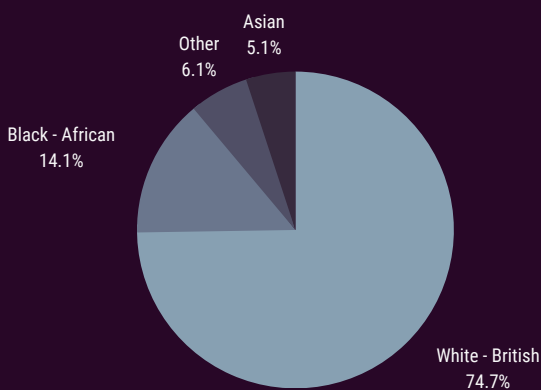
Durham
University

OUR PORTFOLIO ESG

EQUALITY, DIVERSITY & INCLUSION

We champion diversity and inclusivity across our portfolio companies, fostering an environment where all employees can thrive. We strive to close gender gaps and promote diversity at all levels of the organisations we invest in. Our portfolio diversity is shown below.

Ethnicity Breakdown



40% OF JOBS CREATED WERE FOR FEMALE PROFESSIONALS

INVESTING IN WOMEN

Northstar Ventures strives to achieve mixed gender teams in all of the companies we invest in. With the North East Innovation Fund, we have invested 21% of our capital into mixed gender leadership teams. At the same time, we have invested 15% (7x industry average) into female founded and female led businesses.

Diversity is also important across the businesses as a whole. With the North East Innovation Fund we've helped create and sustain 484 jobs, of which 40% were positions filled by females.



NORTH EAST INNOVATION FUND

The North East Innovation Fund is a £34m fund investing in ambitious and innovative teams with big ideas that will bring real societal improvements as well as strong commercial returns.

FUND SUMMARY

The Fund invests in a range of sectors including digital technology, health and life sciences, clean tech, and manufacturing. Our portfolio includes organisations such as Advanced Electric Machines producing next-generation motors for the electric cars of the future, Low Carbon Materials recycling plastics into building materials and AMLo Biosciences providing early cancer diagnostics.

Below we've listed the metrics for our North East Innovation Fund, which is supported by the European Regional Development Fund.



INNOVATION FUND METRICS

134

Total Investments

£33.1M

Total Invested

21%

Capital Invested into
Mixed Gender Teams

£104M

Funds Leveraged

447

Jobs Created

ADVANCED ELECTRIC MACHINES



ADVANCED ELECTRIC MACHINES CASE STUDY

£1.9M INVESTED

To design and build the most sustainable electric motors on the planet.

BACKGROUND

AEM is a spin out from Newcastle University that has developed a suite of electric traction technologies that eliminate rare-earth metals (REMs) and copper windings. This reduces the environmental impact of production and removes reliance on unsustainable materials. Unlike other electric motors AEM's products are fully and easily recyclable. The cost of production is consistently lower than Permanent Magnet motors while performance is better than the current market competitors. AEM's electric motors are on the market and being sold across the world for commercial vehicle, passenger car, and off-highway customer applications.

OUR INVESTMENT

Our investment has funded the development of both commercial and passenger motors and built out the manufacturing capability to manufacture up to 12,000 motors per year.

7 AFFORDABLE AND
CLEAN ENERGY



90%

reduction in environmental
impact of production

15%

increase in efficiency
compared to PM motors

-2KG

of REMs used per motor
sustainably created



AMLO BIOSCIENCES CASE STUDY

£1.3M INVESTED

To improve the patient journey for those suffering from skin cancer, making diagnosis and treatment streamlined, cost efficient and as effective as possible.

BACKGROUND

AMLo Biosciences is a spin out from Newcastle University by an all-female founding team. They have developed a suite of prognostic tests, including AMBLor®, for melanoma, which can determine whether the cancer will spread to other areas of the body from two specific protein markers. This enables doctors to better identify low-risk patients and concentrate on those with a more significant risk of later stage disease. This has both a significant positive impact on patient welfare, by reducing anxiety and unnecessary invasive procedures, and an economic benefit by targeting intensive care on those who need it most.

OUR INVESTMENT

We invested in AMLo Biosciences to commercialise the academic research from the University. AMLo's aim was to formulate a transformational diagnostic test that met the aims of the NHS, such as ageing better and addressing Net Zero aspirations. AMBLor® is currently being rolled out in the UK and US and early sales are proving interest in the hypothesis.

3 GOOD HEALTH AND WELL-BEING



97%

accuracy of AMBLor to identify low risk melanomas

£10K

estimated saving per 100 NHS melanoma patients using AMBLor®

500K

people in US and UK could benefit from AMLo's tests each year

On Hand

BE ON HAND



BE ON HAND CASE STUDY

£1.1M INVESTED

To help teams fight climate change and deliver social good across poverty, mentoring, elderly help and more.

BACKGROUND

OnHand is a local on-demand, gamified platform for corporate volunteering and eco action. The platform empowers users to learn, take action and make an impact for the better of our community and planet. By simply creating a catalogue of “to do’s” for those in the local community who need support, and connecting them to others who feel passionate about those acts of kindness or ‘doing good’ activities, everyone can give back in a way that suits their ethos. The platform tracks and measures actions which allow employers to collect data on their ESG and CSR initiatives, meaning everyone is rewarded for doing good.

OUR INVESTMENT

Northstar Ventures’ investment enabled the company to rapidly develop the platform and expand the team to grow its customer and user bases and nurture its referral partners.

3 GOOD HEALTH
AND WELL-BEING



212

active businesses as
customers

19,256

new employees signed up
to the platform

LOW CARBON MATERIALS



LOW CARBON MATERIALS CASE STUDY

£300K INVESTED

To be the world leader in low carbon and environmentally friendly building materials.

BACKGROUND

Low Carbon Materials develops new solutions for the built environment. The clean tech company was founded by three Durham University postdoctoral researchers and is developing products and processes to help the construction industry achieve net-zero. Originally the female led organisation aimed to replace a proportion of the sand in concrete via a recycled plastic aggregate. Over time they realised that they could manufacture the construction blockwork themselves, and speed up the process. The company utilises plastic, or polyurethane foam, otherwise intended for landfill to create a suite of products that offer negative carbon footprints and thermal conductivity when compared with traditional products. Low Carbon Materials has developed three products to date.

OUR INVESTMENT

We invested in Low Carbon Materials to accelerate the production of carbon negative building materials and get products to market.

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



2.5X

Lighter than traditional mineral aggregates

>7.3

Product is >7.3N/mm² block compressional strength

1,450

kg/m³ in particle density



XR THERAPEUTICS



XR THERAPEUTICS CASE STUDY

£400K INVESTED

To support people with mental health conditions through groundbreaking interventions and immersive VR technology.

BACKGROUND

XR Therapeutics (XRT) combines traditional CBT and exposure therapies through a wide range of virtual reality environments. Administering traditional CBT to an individual can take anywhere between 10 to 20 sessions before the patient observes noticeable impact. XRT's method can reduce this to as little as four sessions held over just two weeks.

The initial research was carried out by Prof Jeremy Parr, Dr Morag Maskey and Dr Barry Ingham for over 9 years. The research was spun-out of Newcastle University and CNTW NHS Trust in early 2020, with Billy Webber, Shaun Allen and Penny Day joining the company.

OUR INVESTMENT

We invested £400k, alongside a Healthy Ageing Investment Accelerator Grant, provided by Innovate UK, managed by Northstar Ventures, to support the launch of the business into 2 NHS Trusts, to further the development of the VR platform and hire key talent.

3 GOOD HEALTH AND WELL-BEING



500%

More efficient than current therapies available

95%

of patients see improved well being

85%

reduction in treatment time

NORTHERN ACCELERATOR SEED INVESTMENT FUND

The Northern Accelerator Seed Investment Fund (NASIF) is a £1.8m fund which invested into university spin-outs which had been supported by the Northern Accelerator programme, a collaboration between the North East of England's universities, to help commercialise innovation in the region.

FUND SUMMARY

NASIF was funded by the initial university partners in the Northern Accelerator programme, comprising: Durham University, Newcastle University, Northumbria University, and the University of Sunderland. Teesside University and the University of York joined the programme after the fund was fully invested. The fund's aim was to commercialise a pipeline of high potential university spin-outs across a number of sectors including healthcare, clean technology and data.

The nine investments in the NASIF portfolio were: AMLo Biosciences, Advanced Electric Machines, CellulaREvolution, Dragonfly Insulation, Gliff.ai, LightOx, Low Carbon Materials, Glycoscore and X R Therapeutics.

NASIF METRICS

9

Total Investments

£1.8M

Total Invested

£4.4M

Funds Leveraged

47%

**Capital Invested
into Mixed
Gender Teams**

LIGHTOX®

LIGHTOX



LIGHTOX

CASE STUDY

£399K INVESTED

To develop a new class of light activated cytotoxic therapeutics to treat cancers in a less intrusive way.

BACKGROUND

LightOx is a spin out from Durham University formed in 2016 to develop the work of two academics, Carrie Ambler and Andrew Whiting, in the field of fluorescent retinoid chemistry. The LightOx team have developed and are patent pending on a new class of light activated cytotoxic therapeutics that have been formulated for use in the treatment of oral and skin cancers via a topical delivery method.

Further applications are being developed by LightOx in other clinical and non-clinical areas.

OUR INVESTMENT

Our investment from NASIF funded the development of LightOx's lead candidate LXD191, through the submitting and approval process of the technology's Phase 1 Clinical Trials.

3 GOOD HEALTH AND WELL-BEING



5

technologies in development

2

alternative therapeutics in pre-clinical testing phase

NORTH EAST SOCIAL INVESTMENT FUND

The North East Social Investment Fund is a £10.2m fund that provides capital to organisations who make a positive social impact and take on social challenges faced by the region.

FUND SUMMARY

We invest in social enterprises and charities making an impact on the people in which they serve in the North East region. The Urban Factory and The Junction Foundation are good examples of organisations within our portfolio. The sectors we are currently focusing on are:



SOCIAL INVESTMENT FUND METRICS

29 Total Investments **£7.1M** Total Invested

£745K Grants Leveraged

ENTERPRISE LEVEL IMPACT

We use the Big Society Capital Enterprise Level Impact Framework to assess the effect of Social Investment on enterprise resilience and growth. The study included a survey sent to our portfolio, canvassing their view of how resilient they are and the social impact growth they have observed since receiving the loan.

SUSTAINABILITY 82% reported increased resilience after receiving their loan	FINANCIAL RESILIENCE 73% reported increased financial resilience, moving away from grants
FUTURE PLANNING 91% said they were better able to plan for the future and seize opportunities	SHORT TERM RESILIENCE 91% reported an ability to better withstand short term shocks
SOCIAL IMPACT 100% reported increased social impact delivered	INDIVIDUALS REACHED 91% reported an increase in the number of individuals reached
OUTCOMES 100% reported and increase in the quality of outcomes generated	

THE URBAN FACTORY



THE URBAN FACTORY CASE STUDY

£150K INVESTED

To create opportunity and change for young people.

BACKGROUND

The Community Network CIC, trading as The Urban Factory, is a health and wellbeing focused non-profit that aims to create opportunity and change for young people. The Urban Factory provides a wealth of activities and opportunities for people in the South Tyneside area, at two primary sites, with a focus on health and wellbeing. Activities include wrap around child care, nursery provision, holiday camps and sporting activities, targeting hard to reach young people.

OUR INVESTMENT

Our investment funded the lease and refurbishment of an industrial unit in Hebburn trading as The Urban Factory. The Urban Factory offers access to non-traditional sports such as free running, cheerleading, tumbling, break dancing and martial arts. It also offers more traditional trampolining and dance/fitness sessions, at a low cost for families with young children alongside affordable SEN sessions for children with additional needs.

3 GOOD HEALTH
AND WELL-BEING



3

intervention pathways for
young people

1,600

engaged members of The
Urban Factory



THE JUNCTION FOUNDATION



THE JUNCTION FOUNDATION

CASE STUDY

£185K INVESTED

To empower children, young people and families to embrace life with confidence, facing life's challenges in a positive way.

BACKGROUND

The Junction Foundation is a well renowned organisation offering a range of support to young people and families across the Tees Valley. Its main focus is to deliver interventions for different complex needs. The challenges faced by young people in the Tees Valley are wide ranging and complex. Many are subject to health inequalities, challenging economic backgrounds, low wages and insecure working situations, lack of education and lack of access to social and work opportunities. The Junction Foundation and its staff breathe life into the communities they serve. Their aim is to create pathways to wellness and to see young people thrive.

OUR INVESTMENT

Our investment went towards purchasing The Junction Foundation's central hub, which they had occupied for 19 years. The Team wanted to carry out refurbishment to the building to make it fit for purpose for their beneficiaries, offering consulting rooms and a better space for their community outreach.

3 GOOD HEALTH AND WELL-BEING



3,443

individual children, young people and families supported

30K

attendances at supported services

12K

1-on-1 and group work sessions provided

WE THANK YOU

FOR YOUR CONTINUED SUPPORT



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