

Mustard Seed

*“Lock-step” Venture —
How Impact Wins*

2017

“Lock Step” Venture — How Impact Wins

There was a time when common sense truth held that the Earth was at the centre of the universe.

Considering that the bulk of human progress has occurred through radical breaks in received wisdom, what might be possible if we applied the same lens of disbelief to today’s prevailing financial wisdom?

Although the notion of considering the social consequences of business has likely been around as long as business itself, the traditional view has been that this consideration is either imposed from without or practiced sporadically by individual investors and companies based on idiosyncratic, personal and moral commitments. In recent decades, however, there has been a revolution quietly gathering steam regarding the relationship between business and society.

Impact investing, which seeks a measurable social return alongside a financial one, emerged as a defined concept in the mid-2000s amidst a Babel-like tower of buzzwords (social investing, mission-driven investing, ethical investing, double or triple-bottom investing) describing the broad and largely uncoordinated spectrum of social finance. As these disparate phenomena have begun to converge into a coherent investment sector, social finance has shown robust signs of growth across the board. J.P. Morgan and the Global Impact Investing Network (GIIN) surveyed 146 impact fund managers, foundations and development finance institutions, identifying over \$60 billion in investments under management, with expected growth of nearly 20% in 2015^[1]. Having outgrown their origins in the philanthropic sector, impact investments now boast increasingly significant allocations in the portfolios of major financial institutions like BlackRock and Goldman Sachs, with retail investors increasingly becoming incentivized to participate.

It’s Mustard Seed’s contention that understanding the social dimension of business in a millennial age will be key in assessing competitive differentiation, and thus, economic outperformance.

The Problem with Impact

As the idea of corporate social responsibility (“CSR”) has drawn increasing attention over the past several decades, both the academic and corporate worlds have struggled to define the relationship between profit generation and public benefit. Perhaps the most lasting influence has come from the theoretical perspective of Milton Friedman, where a business’s responsibility is synonymous with increasing shareholder profits and pursuing any other objective can only interfere with this duty. But even more empirical and research-oriented approaches have more often than not presumed a fundamental disjunction.

Academic perspectives regarding the relationships between social objective and firm performance generally fall into one of three schools of thought. 1) The negative camp – Vance (1975) presented evidence of a negative relationship between share price and social responsibility, while Hirigoyen and Poulain-Rehm (2015) determined corporate social responsibility objectives negatively affect financial performance metrics such as returns on equity and assets, and market to book ratio. 2) Neutrality – McWilliams and Seigel (2001) have held that the relationship between CSR investment and profit is neutral, as the revenue benefits of CSR efforts are offset by their increased costs in an equilibrium state. 3) The cheerleaders (Mustard Seed included) – CSR investment increases a firm’s bottom-line performance due to the goodwill it generates among employees, customers, and external stakeholders. Thus, the beneficial side effects and minimized firm risk associated with being socially responsible have a positive impact on a firm’s bottom line.

Investment horizon is key. The past several decades have seen a shift from longer-term views on growth and market share to short-term focus on shareholder value and share price. This emphasis has led managers to exercise bolder forms of financial entrepreneurship while decreasing discretionary spending on valuable but less immediately tangible assets.

The effects of short-termism have not been insignificant, as companies like Enron, once praised by academics and consultants for their perceived growth, have crumbled as a result of short-term profit maximization strategies. Furthermore, the cost of these strategies has been born by those furthest removed from the decision making, as cost minimization has often coincided

with significant negative externalities, ultimately maximizing return for shareholders at the expense of the rest of society.

At the same time, the concept of CSR has emerged largely as a counterbalance to these sorts of practices. Amidst the conversations taking place in the media and the boardroom, those in favor of CSR have tended to centre their arguments around four central themes – moral obligation, sustainability, stakeholder approval, and reputation. These conversations tend to feed into a double bottom line approach that separately measures monetary and social performance. Thus, there remains a fundamental disconnect between social perception and operational execution. Not only does this pose difficulties for profitability, but the social impact itself is intrinsically limited by incongruity between the CSR objective and firm’s core objective.

To have lasting, truly sustainable impact, corporates must align CSR activities with maximizing profits through their core business. Our hypothesis is that such a relationship between social responsibility and financial profit is not only possible, but that companies who commit to this approach can ultimately outperform those solely focused on revenue generation.

The Solution – the Future

In the last half-century, the world has witnessed heady expansion, with the global economy growing sixfold. But as the population ages, growth will significantly slow and governments will struggle to meet debt and social obligations. The Brexit Vote is a clarion call to meet such obligations. The Vote is as much a reflection of disgruntlement on EU mismanagement, as it is on the woeful state of present day capitalism, with the richest 1% now in control of 99% of global wealth. Even assuming that productivity increases at an annual rate of 1.8%, the rate of GDP growth could still decline by 40% over the next 50 years^[2]. Yet there exists a major unmet opportunity for capital markets, and the key to it lies in rethinking how we pursue solutions to the world’s toughest social and environmental problems.

Social enterprise and shared value offer an alternative and more equitable system of sustainable growth and development. While the common view still holds that the objectives of seeking profit and pursuing social impact are at worst fundamentally opposed or at best unrelated to each other, Mustard Seed exists

precisely to help change this outdated paradigm. Not only does Mustard Seed reject the inevitability of a tradeoff, it believes that the two can ultimately be made synonymous and mutually reinforcing through what we term the Virtuous Venture Cycle (vvc). In this process, the vicious cycle of negative externalities is replaced by a system of value creating positive impact aligned with commercial return, whereby the bottom line and impact are not only strongly correlated but also mutually reinforcing.

Many companies are able to create real, lasting value by aligning their social and environmental activities with rigorous commercial strategy designed to mitigate risks, promote sales and decrease costs. We believe this is at the heart of a sustainable and effective model for social change, and presents compelling economic logic.

The key stakeholders in a business can be broken down as follows – consumers, employees and shareholders. In very crude terms, consumers are stronger advocates for causes they care about, driving higher returns. Employees work harder for businesses that do something they believe in, driving higher returns. And shareholders are more willing to help businesses with some form of social mission, further improving returns. As impact grows, willingness to engage by these stakeholder groups increases further, which in turn drives more impact, and so on. The whole activity does, in effect, become profit maximising, mutually reinforcing, and virtuous.

As global supply chains cross borders and promote participation from an increasingly interconnected populace, all macro trends point to the emerging potential of a more conscious capitalism – applications of investment that marry technological innovation, integrated reforms, and ultimate return to growth in order to uniquely align investors, policymakers, and the public. And over the past 30 years, this trend has become increasingly evident across all industries, as leaders of multinational corporations play a vocal and visible role alongside governments and nonprofits in addressing a spectrum of social, environmental, and governance issues^[3].

Ultimately, we are all stakeholders in this global phenomenon – with tangible short and long-term interests in optimizing the positive impact of technological and social change while minimizing the detrimental impacts that emerge alongside socio-economic progress.

Mustard Seed was incorporated in February 2015, and we felt it was about time that we took stock of what we have done to date. We rather naively set out to back ventures solving global social issues, under the ‘lock step’ model described above. How have we done? Are we making a difference? We have now backed 14 ventures, of which 11 are based in London, 1 in the Philippines, 1 in Portugal and 1 in the US (Note this report excludes Edukasyon and Hype Labs, ventures we invested in early 2017). Measuring the impact generated by these ventures is no easy task, in light of the very wide ranging areas in which they operate – how do we equate the impact of a geolocation company providing addresses to the 4bn unaddressed, to another company that reduces food waste in commercial kitchens? More essentially, how does the creation of an address for a family in rural Ghana compare with a tonne of food waste saved? We explore the quantitative impact of our ventures towards the end of this publication, using our imperfect impact measurement method (which may improve over time, but will remain nevertheless imperfect – ultimately, it will never be possible to compare the worth of one life with another).

We thought it might be best to ask the Founders directly, and conducted a series of interviews. In particular, we were keen to explore the motivations of our founders, and the complex thread of life that has conjured these inspired ventures. As a capital allocator, with a fiduciary responsibility, and a stated mission to change the way capital is allocated towards societal and environmental good, we have also asked our members and investors how their interaction with Mustard Seed has shaped their outlook on ‘good’ (in every sense of the word) investment.

[1] Global Social Finance, Eyes on the Horizon [2015]

[2] How Short-Term Thinking Hampers Long-Term Economic Growth [2015]

[3] Valuing Social Responsibility Programs [2009]

Ventures

2017

Ventures

AtoCap

Dr. Stride and Dr. Mohan are revolutionizing drug delivery.

Beulah London

Lavinia and Natasha empower survivors of human trafficking.

Crowdsurfer

Emily brings transparency to the crowd economy.

knok

José delivers quality healthcare, everywhere.

mush

Katie and Sarah combat loneliness amongst new mothers.

OLIO

Saasha and Tessa are ushering in the food sharing revolution.

Rubies in the Rubble

Alicia and Jenny fight food waste with relish.

Skin Analytics

Neil saves lives by detecting skin cancer earlier.

Switchee

Adam and Ian prevent fuel poverty for social housing tenants.

what3words

Chris and Jack provide addresses to 4 billion people worldwide.

Winnow Solutions

Marc and Kevin halve food waste in commercial kitchens.

Note: This report excludes detailed information on Edukasyon and Hype Labs, as Mustard Seed invested in these ventures in Q1 2017.



AtoCap is developing a novel microencapsulation technology for the preparation of a wide range of encapsulated structures. This platform technology has potential applications spanning the pharmaceutical, cosmetic and food manufacturing sectors. The company has identified its first potential blockbuster application in the treatment of chronic urinary tract infections, a debilitating condition that remains inadequately addressed, costing over \$1.5bn per year in the US alone.

When I was a child, I wanted to become...

A ballerina, although this changed fairly regularly. I still dance a lot – it's my other life and I currently teach dancing at Oxford. At age 16 I was very confused and did 6 A levels, one of which was art. My art teacher took me to the Royal College of Art's industrial engineering show. As a child I always loved Lego very much and engineering was a logical choice. I ultimately studied mechanical engineering in university, which led to my professional career.

How and why did you found AtoCap...

The main application of the technology was a bit of an accident. I'd just become a lecturer at UCL and Professor Mohan (*co-founder at AtoCap*) had joined as a professor. Mohan was giving a talk on his research – electrohydrodynamic atomization. We ended up developing several new techniques over the next several years. We then were introduced to Bill Bonfield (*Chairman of AtoCap*) who was keen to commercialize this technology. The final trigger leading to the creation of AtoCap as a business came through another fortuitous encounter with Professor James Malone Lee, a urologist at UCLH, at a dinner where we ended up discussing antibiotic resistance and chronic UTI (urinary tract infections) amongst his patients (definitely a lively dinner conversation!). James asked, "Could we encapsulate antibiotics?"

And that's how the project started. The moral here perhaps is have dinner!

The influencers who helped me create this business...

As mentioned, Bill has been a huge influencer, both on running the business and connecting our team with various partners. For example, Andrew Lynn (previously Bill's PhD student and now one of AtoCap's non-executive directors) has lent his experience in previously setting up 2 businesses. On the clinical side, none of this would have existed without James because this is such a multi-disciplinary approach and thus team.

Looking back 10 years from now, I want to have achieved...

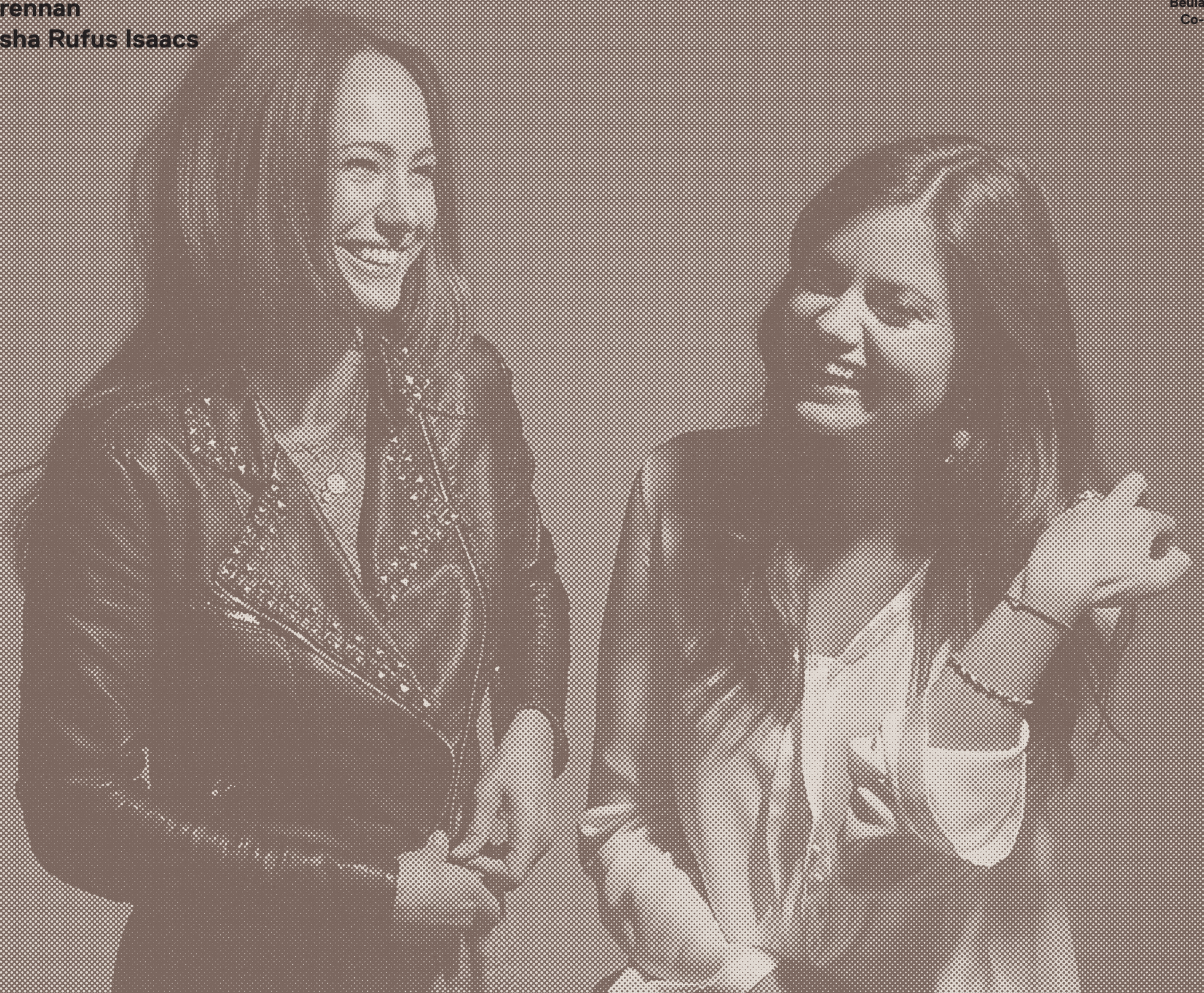
Undoubtedly I want this technology being used routinely within the NHS in the treatment of chronic UTIs. There are a few products out there (vaccine and drugs), but these don't work effectively as the problem remains unaddressed especially for the elderly – this is a silent and large population who's suffering every day. But because the conditions aren't acute, there isn't enough attention paid to these patients. Yet the healthcare burden in terms of costs is huge.

If I could be any type of chocolate, I'd be...

I love this question – I love chocolate! There's a Côte-d'Or dark praline that's absolute heaven. It's hugely complex with a range of textures and tastes.

**Lavinia Brennan
and Natasha Rufus Isaacs**

**Beulah London
Co-Founders**



Beulah is establishing a luxury brand that inextricably links classic, heritage fashion with empowering survivors of human-trafficking. Beulah provides both direct skill-based training and job security as well as building awareness and advocacy around the global issue of human-trafficking.

**Interview with
Lavinia Brennan, Co-Founder**

When I was a child, I wanted to become...

Pocahontas. I'm free spirited but strong willed and love nature.

How and why did you found Beulah London...

I was previously in India working with victims of sex-trafficking, before launching Beulah. I didn't want to come back to the UK and forget the reality of the horrors. I saw and identified employment as a catalyst for change, to empower these individuals and create long-term impact. For a woman who had previously lost her dignity, work was an opportunity to get it back.

The influencers who helped me create this business...

Early influencers include my parents who were a source of support and perhaps more importantly belief. As we were getting the business off the ground, the Portobello Business Center helped us navigate pitfalls for the business. Mustard Seed helped our team think differently, focusing our efforts on making a measurable difference. The team at Rubies in the Rubble were also influential in helping us craft our impact story more efficiently and effectively, putting joy at the heart of our story.

Looking back 10 years from now, I want to have achieved...

I see Beulah as an internationally renowned flagship brand, but one with social impact in everything we do – a "hive" of social enterprises. Personally, I want to be more involved with the Beulah Trust and spending more time with each of the women we seek to help.

If I could be any type of chocolate, I'd be...

I don't like this question... but I'd be a Crunchie because I'm soft on the outside but hard on the inside.



Emily Mackay

Crowdsurfer
Founder

Crowdsurfer brings transparency to the crowd economy, having built the world's richest data intelligence platform for the global crowd finance industry. Crowdsurfer aims to be the trusted data service in an era of increasingly democratic, accessible and digital finance.

When I was a child, I wanted to become...

An artist! I loved painting and drawing and thought it'd be a very happy thing to be (and not at all boring). I loved building dens in the garden as well, always using various branches that had been chopped off, usually from itchy conifer. We spent hours and hours trying to craft the perfect hideaway, preferably that kept the rain out, then taking sandwiches inside!

How and why did you found Crowdsurfer...

I founded a cooperative shares platform back in 2011 (now called Community Shares) and found myself in the middle of a very high-growth crowd finance movement. I was frustrated at the lack of organised information about the new industry, and all the multiple requests for information and the huge need to promote the industry in a positive way. I realised then that some order was needed to help the industry grow. Inefficiency really gets to me! I'm an organisation nerd, which means I love the world of data and what it can achieve when put to good use.

The influencers who helped me create this business...

Mustard Seed has helped in so many ways! Mustard Seed is very active in bringing amazing new people to the business – investors, contributors, like-minded companies. Being in touch with other founders at Mustard Seed is great too – it's nice to know there are other people on the same journey as you!

Looking back 10 years from now, I want to have achieved...

Success will be commercial numbers (obviously!) and a really amazing, supportive company culture and continuously breaking new ground.

If I could be any type of chocolate, I'd be...

Aero – fun and bubbly. I'm not naturally either of those things – I take everything far too seriously for my own good, but I'm really really working on it!



knok provides doctors on demand, improving the speed and convenience of access to medical care. knok aims to enhance patient care for the most vulnerable members of society, including the very young and elderly, through a personally tailored service at an affordable price point.

When I was a child, I wanted to become...

Luke Skywalker because the Force is strong with this one.

How and why did you found knok...

I experienced primary care issues for my children, parents and grandparents. The major issue was receiving quality primary care in a timely manner – and why not at home? Intellectually and practically the business model we developed was compelling and implementable, with relatively low friction to bring into market.

The influencers who helped me create this business...

Working tirelessly with Orson (*on the Mustard Seed team*), we changed the business model to ensure scalability. Through the Mustard Seed Network we are achieving international expansion faster and more feasibly than we ever believed possible. I've particularly learned much from Mush on discerning content that appeals to young parents, which has contributed to the growth of the company.

Looking back 10 years from now, I want to have achieved...

Success will mean realizing that through knok, the number of people who attend A&E unnecessarily will reduce by 30%. I want knok to be seen as the gold standard of primary care globally.

If I could be any type of chocolate, I'd be...

Green and Black's because it's top quality and sustainable.

**Katie Massie-Taylor
and Sarah Hesz**

**mush
Co-Founders**



mush is creating a social platform to connect new mothers on a localised basis. One in five new mothers suffer from loneliness and a sense of isolation, a major cause of postnatal depression that costs the UK nearly £8.1bn a year. mush helps address this with a platform that provides new mums with a direct support network and highly-tailored content.

When I was a child, I wanted to become...

Katie: A sailor, preferably in the Med – I love boats, sunshine, underwater life, new ports each night... I still harbour this ambition (excuse the pun).
Sarah: A newsreader or foreign correspondent. I wanted to explore the world.

How and why did you found Mush...

Katie & Sarah: We met at a playground with two children under the age of two each. We instantly bonded over mutual desperation to be out of the house; we were the only ones mad enough to be out there in the November drizzle. There was an awkward exchange of small talk, but before we left Sarah just asked, "Can I have your number so we can hang out?" It was very unnatural but I [Katie] was so grateful. We soon realised that the lifeline we had found in each other was something every mum should have, so we set out on the social mission to bring mums together. We also quickly ascertained the business case, that a platform for reaching mums was every advertiser's dream. That was two years ago.

The influencers who helped me create this business...

Katie & Sarah: You name any successful entrepreneur (especially female) and the chances are, we have read the biography. And then there is the bedside table piled high with business books... We realised quickly from talking to other founders that a good idea was only a third of the battle, the rest is about execution.

Backing from Mustard Seed catalysed support from other private investors, including approval and investment from advertising experts. Orson (*from the Mustard Seed team*) is always on the other end of our phone, whenever we need advice on any aspect of the business. Mums, dads, brothers, husbands, children, friends – they have all had a huge part to play in Mush.

Looking back 10 years from now, I want to have achieved...

Katie & Sarah: We want mush to be the go-to service for mums with children under the age of 3 so that all mums have a more sociable and fun experience as a mum. As well as that, we'd both like to be in a position where we can invest in other pioneering and disruptive female founders. There haven't been enough women investors during our journey.

If I could be any type of chocolate, I'd be...

Katie: I'd be a Picnic – lots of surprises, and vaguely chaotic. (But I've been off chocolate for 15 months in a bid to control my chocoaholism).

Sarah: Cadbury's Giant Buttons because they're not trendy but consistently very nice.



Tessa Cook and Saasha Celestial-One

OLIO
Co-Founders

OLIO is tackling the problem of preventable food waste by connecting neighbors and local businesses to share and access surplus foods and goods. Globally, food waste accounts for over £80bn in associated costs, with a lion's share of this waste occurring in the home – in the UK alone over 4 million tonnes of edible food is thrown away each year.

Interview with Tessa Cook, Co-Founder

When I was a child, I wanted to become...

The honest answer? I had no clue. But I did know that although I loved being brought up on a farm, I didn't want to be a farmer – I wanted to do something more oriented around people and business. Given that I didn't know what I wanted to be, becoming a strategy consultant straight out of Uni made a lot of sense. After that I moved into industry and tried out media, retail and financial services, but still didn't feel I'd found my passion. It's only since starting OLIO with Saasha 2 years ago that I've finally figured out what I want to do when I grow up – and I'm doing it now!

A note on Saasha (as she wasn't able to make today's interview): Saasha was brought up in Iowa and her parents were hippies. From an early age she learned to be incredibly entrepreneurial and to let nothing of value go to waste. Perhaps in rebellion against her upbringing, she also ended up pursuing a very conventional career path in investment banking and consulting. She then co-founded a pay as you go childcare business in North London before launching OLIO with me, and so it very much feels like we've both gone full circle and back to our roots through OLIO.

How and why did you found OLIO...

You've probably heard this a million times now, but I grew up understanding first-hand just how much hard work goes into producing the food we eat every day, and so have always

hated throwing it away. The light bulb moment came two years ago when I was moving back to the UK from living overseas and I found myself on moving day with some food that we hadn't managed to eat. The removal men told me I had to bin it, but clearly I wasn't going to do that, and so I set off on a bit of wild goose chase to try and find someone to give it to. I failed miserably. Through the whole process it seemed to me crazy that I should have to throw this food away when there were surely plenty of people within hundreds of metres of me who would love it, the problem was they just didn't know about it. And so the idea of OLIO, a mobile app where neighbours, local shops and cafes can share surplus food, came about. I pitched the idea to my good friend Saasha who I had met at Stanford Business School, and she immediately got it, and we just knew that we had to bring OLIO to life.

The influencers who helped me create this business...

One word – Saasha. We complement each other incredibly well and are more powerful together than alone. It works phenomenally well.

Looking back 10 years from now, I want to have achieved...

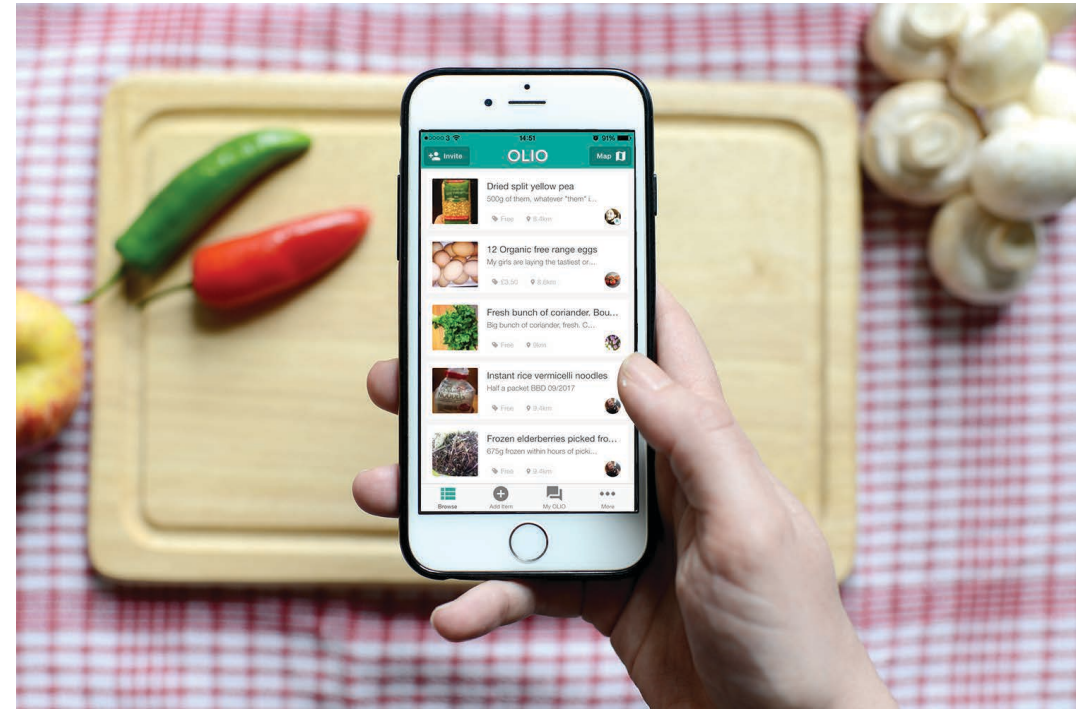
Our ambition is for hundreds of millions of people all over the world to be using OLIO, so that good food is eaten rather than thrown away. When we achieve this then the net impact of humanity on the planet will be significantly reduced – not only because our demand for 'virgin' food per capita (and all the resources that are used

to produce it) will decrease, but also because food will no longer end up in landfills creating methane.

Even bigger than this vision though is our belief that we are starting to transition from an 'ownership' economy to what we call a 'guardianship' economy – this is where local communities, enabled by mobile technology, become increasingly close-knit and self-sufficient with more and more of our resources being shared and reused, rather than briefly consumed and thrown away. The impact of this transition to a more sustainable economic model will be incredibly profound, and we intend to play a leading role in this.

If I could be any type of chocolate, I'd be...

I'm an absolute chocoholic, which is why this is an extremely difficult question! I'd probably be Lindt Excellence 'Intense Mint' – strong, good for you, but slightly indulgent with a little mint twist!





Rubies in the Rubble transforms surplus fruits and vegetables into a range of food products, starting with chutneys and condiments. The UK alone throws away 15 million tonnes of food per year, 26% of which occurs at the manufacturing stage, including harvest, storage and packaging. Rubies provides a clear economic incentive for farmers to repurpose previously wasted produce while simultaneously reducing associated carbon emissions.

When I was a child, I wanted to become...

The BFG (Big Friendly Giant). He's the least predictable super hero – taking on giants and planting dreams. And he's just lovely – with his funny words and secret night-time adventures.

How and why did you found Rubies in the Rubble...

I was brought up in a sustainably minded family in west Scotland. That's probably where the roots of Rubies starts. However, I studied maths in uni and went straight to working at a hedge fund. I realized I had no interest in finance and wanted to do something tangible and something on my own. I ended up picking up an edition of the Evening Standard with an article on bin divers, which got me thinking about food waste. I saw that there was a clear environmental and financial impact to food waste – 60% of it remains avoidable. I started going to farmer's markets and speaking with farmers and saw the waste first-hand. I ultimately married this thinking with my memories of my mother's preserves and decided to create a fun brand around food sustainability and valuing the food supply.

The influencers who helped me create this business...

My previous boss was very supportive when I first took the plunge. And there's a long list of others, including family and friends, organizations like UnLtd and Fortnum & Mason's. It took so long to realize what we could do and Mustard Seed provided the focus to help us scale. Gary Bull (*Mustard Seed Member and board member of Rubies*) has been fantastic in providing time and involvement – his engagement has been phenomenal.

Looking back 10 years from now, I want to have achieved...

I'd like Rubies in the Rubble to become a household name brand – like the BodyShop for food – making great tasting products in the most resourceful way. The brand would be recognized for its social mission and great quality - and we'd all still love what we do and the day to day!

If I could be any type of chocolate, I'd be...

A deep fried Mars bar. Because I'm a classic, greedy Scot.



Skin Analytics applies artificial intelligence to screen for melanoma, enabling anyone to proactively check for skin cancer.

When I was a child, I wanted to become...

An international sports star, in cricket and basketball. These were my sports as a young man. But alas, my skills (and height) were distinctly lacking. My childhood in Australia was ideal – playing out in the sun, from beach volleyball to cricket and basketball. When I realized I wasn't going to hit 6'6" as a teenager, I got interested in physics and science. This led to uni, where I started thinking about science and technology and how to use these to solve real world problems. I eventually got caught up in the corporate world after uni, until I started thinking about how to apply what I'd learned along the way to help solve a real world problem I could relate to since my childhood in Australia.

How and why did you found Skin Analytics...

You know what, I actually don't have a "good" story for this. I was lucky enough to work for a company that was trying to make mobile financial services work in emerging markets. The central premise of the company was if we can provide access to financial services to people in need, then this service could be life-changing. This mission, although socially important, didn't resonate with me and I began thinking about how mobile could disrupt the healthcare space. Putting together my interest and background in physics with my hyper-awareness of skin cancer in Australia, I started testing the idea behind Skin Analytics five years ago.

The influencers who helped me create this business...

We were really lucky very early on with this idea. We approached the late Bill Fitzgerald, a professor at Cambridge University. We previously

had approached many people with this idea who said it'd be too hard. Bill said "This is cool, why don't we give this a try?" and connected us to various contacts who helped us get the idea off the ground. This led to our meeting several advisors, including Jon Emery and Fiona Walter (also at Cambridge) who are both cancer researchers and GPs. They helped us understand the role we want to play in the cancer treatment pathway and a lot of what we now know about skin cancer. This is an unending list, including Juan (*on the Board of Skin Analytics*), who has been a huge advocate and pillar of strength – always only a phone call away. The depth and breadth of the support from our investors has been incredible, strengthening both our commercial progress and building our confidence.

Looking back 10 years from now, I want to have achieved...

I want our AI (artificial intelligence) system to be in every GP's office and used as the standard way of diagnosing melanoma. I want people to consume skin cancer screening like going to a dentist and for survival rates to climb up from 75% worldwide to over 95%. On the other end, I want melanoma to be a tiny line item in terms of costs of medical treatment. And personally, I want to be sitting in a winery back in southwest Australia along with all our supporters!

If I could be any type of chocolate, I'd be...

That's a good one, but a tough one. I want to be something that is a bit chaotic, where every bite is a different experience and always changing. This doesn't exist yet, I think, but let's call it a kaleidoscopic chocolate bar, with lots of different angles and perspectives in taste.



Switchee is designing a smart, connected device tailored specifically for social housing providers and tenants. Over 5.4 million households in the UK live in fuel poverty – the condition of being unable to afford to keep one’s home adequately heated. The device uses data analytics to simultaneously help tenants reduce energy bills by up to 15% while reducing service delivery costs for social landlords.

**Interview with
Adam Fudakowski, Co-Founder**

When I was a child, I wanted to become...

It’s funny – I was always useless in school. I was bottom of every class till age 16 till I grew up and everything turned fine. I don’t remember ever wanting to be a fireman or policeman. I loved building stuff – spent a lot of time in tech labs building things and gadgets. Age 16 onwards I knew I wanted to do something around creating new products. I also always knew I wanted to run my own business. This was my ambition all the way through Cambridge. When it came to applying to first jobs, I thought that was the thing to do, and spent two years at BCG. When the opportunity came up to leave and start up a medical business, I jumped on it and never looked back (although I don’t think I’m employable now! – I can’t have a boss).

How and why did you found Switchee...

I went to business school with the expressed desire to found a business after. My previous business was running well and I wanted a change and to meet people who would be good to start a business with. I met Russ who is one of the smartest guys I’ve ever met, and started working on electronics projects. He had this idea of a home innovation system that fits in a light switch. Then we met Ed who had 10 years experience in social housing and told us there

would be real application for this in social housing. So we went around to 8 housing associations that summer and asked them if this would be something they’d be interested in and built a product around that. We identified there was a real problem. It’s important to me to be doing something meaningful, but the circumstances that brought about Switchee was planned serendipitously. My passion is running product-based business rather than having particular passion for energy savings or particular field we’re working in.

The influencers who helped me create this business...

At every stage of the business there have been different influencers. In the early stages these were actually the early customers who encouraged us to keep going. East Thames, who gave us our first orders, gave us both motivation and ability to get off the ground. Innovate UK helped us with funding in the early days. And in our first funding round, this included Clearly So and Mustard Seed.

Other influencers include our first tenant (an 80 year old man) at New Era Estate in East London. The product then became real and we were controlling a real person’s heating – the feedback we got from him really changed the product and we now refer to him as the strawman behind the product design. We name a lot of our development after people who’ve suggested them.

Tying to specific individuals helps our product dev team take something



conceptual and relate to a real individual.

Looking back 10 years from now, I want to have achieved...

Success is definitely wide roll-out. A big part of our mission is to get into as many homes as possible to save energy. From an early stage, however, we knew that selling just energy savings wouldn't result in volume. So we focused on providing value to social landlords. This product is definitely designed to be a mass market product in the UK and other EU territories.

The influence you can have over people's heating is huge – given the amount of energy that is used to heat

residential properties, by changing that by a small amount, this actually has a big impact on climate change. The short answer is success means by fiddling with margins we are having a material impact.

If I could be any type of chocolate, I'd be...

Bread and butter pudding because it's comforting and warm. But, I really like tiramisu.

Ian Napier

Switchchee
Co-Founder



The what3words system divides the world into 57 trillion 3m by 3m squares, each identified by a unique 3 word address, providing a universal address and location reference system that solves the problem of inadequate addressing for both businesses and end users. It's a solution for the 4 billion people worldwide who remain without an address.

**Interview with
Jack Waley-Cohen, Co-Founder**

When I was a child, I wanted to become...

I never had specific ambitions about what I wanted to do. I'm a great believer in not having a predetermined path – taking the learnings from one activity and applying to another subject area. As time passed, I've learned and done various things from stage to stage, from many music-related subjects to maths, and then learning various languages. I ended up studying psychology in university and then moved into banking. I've also always enjoyed entertaining, and thought "What could I do to capture people's imaginations?"

How and why did you found what3words...

In some ways, the story of our origins are now well documented. Chris discovered the problem to some extent from his previous business where people had a problem finding and communicating locations. He took this problem to our friend, a mathematician, who helped devise a technological solution. Chris then came to me to see how we could commercialize this into a business. We realized early on that this needed to be high impact from day one. So we planned a launch with lots of publicity, with a set of products in decent MVP (minimum viable product) form. The key thing, and in hindsight possibly the best commercial decision we made, was deciding to launch with an API. We had some ideas about

commercialization, but we didn't realize the sheer number of people and businesses with problems we couldn't envisage solving for. We knew we had something clever but having an open idea allows for more natural discovery.

The influencers who helped me create this business...

Quite early on, a lot of interest came from the "tech for good" sector. It was something we pushed quite hard (and still do), with 4bn people in the world not having an address. The impact side was helping people understand how big this problem is – people in the developed world don't often know this is such a significant problem and its benefits in both the developed and developing world. It introduces new incentives to enter markets they previously didn't consider.

We realized early on that we need to be a sales and marketing business, not a pure tech business. It's quite unusual to see such a startup that spends so much time on sales and marketing. We're a nightmare for recruitment agencies because we keep searching until we find someone who's superb. That really makes a big difference – we're not a startup of inexperienced people. Even the youngest people on our team have diverse experiences that have gotten them to where they are now. A mistake a lot of people make, I've realized, is "if they build it they will come."



Looking back 10 years from now, I want to have achieved...

what3words was incorporated on the day my son was born. That's when Chris and I were working together from neighborhood pubs. On his [my son's] first birthday, we made a time capsule to open when he's 18. In it, I wrote a letter – a snapshot of what I'm doing now. I wrote, in 18 years time, we'll either have quite literally changed the world, where sharing a 3 word address is as normal as giving someone your phone number. Or, the record will say they've tried really hard, and even if we haven't become a global standard for addressing, we'll still have achieved something. Even if we don't get to that point, we've already made a big difference to people, both commercially and socially, and that's all the motivation and confidence to making this a big thing.

If I could be any type of chocolate, I'd be...

I think I'd be a 65% dark chocolate from somewhere out of the ordinary. I guess the analogy here is to do things people can relate to (like chocolate) but slightly out of the ordinary.

Chris Sheldrick

what3words
Co-Founder



Kevin Duffy and Marc Zornes

Winnow Solutions
Co-Founders



Winnow leverages big data to reduce food waste in kitchens. Over \$80 billion is wasted in avoidable food service losses in developed food service kitchens globally, which is only a fraction of the \$1 trillion food waste problem. Winnow aims to reduce this waste in half in every kitchen.

Interview with Kevin Duffy, Co-Founder

When I was a child, I wanted to become...

Paleontologist. Traveling and dinosaurs, that was it for me. I was one of those kids whose dreams would change every 6 months. Paleontology was probably a 12 month window for me.

How and why did you found Winnow...

Effectively, Marc and I were both in management consultancy and he was doing research into sustainability themes and looking at those with healthy investment returns. He had ranked global themes based on global ROI on ways of solving them. Food waste surprisingly came in second on that list, with other themes including electric vehicles, solar power, etc. They were all things that had tremendous capital and energy going into solving them. Food waste really stood out. Everything else was getting a lot of attention – there was no Tesla of food waste. This was because there wasn't good data on food waste. There was idiosyncratic and transactional data – no energy in sizing the problem. Personally, we were both in consulting looking at other peoples' businesses and keen to do something ourselves, and to solve something with both legitimate financial opportunity paired with significant impact and a cause.

The influencers who helped me create this business...

One of them has got to be Jeremy

Oppenheim who was Marc's old boss at McKinsey. He headed up their sustainability practice and co-founded SystemIQ. He's been a mentor to Marc and an investor in Winnow. He was part of the seminal work in seeding the company at the very start. It was Marc, myself and our third co-founder Hrair, who were all out of business school together. We got it up and running based on the vision of what it could be. We got an MVP (minimum viable product) up and running in a couple months and it surprisingly worked really well, and then invested in it full time. The Mustard Seed team, especially Alex and Henry, have been really helpful along that journey.

Looking back 10 years from now, I want to have achieved...

We fundamentally want to have impact on a global scale. The businesses who use Winnow operate at higher profitability – in some cases by up to 40%. They will then outcompete those who aren't using Winnow – this will eventually apply economic pressure to become a must have. Effectively food waste can then be halved in at least that slice of the world. In just commercial kitchens, that's \$40bn in food waste. Obviously there are other bits we can get involved with, but there are lots of other businesses solving the spectrum of the food waste problem.

If I could be any type of chocolate, I'd be...

Marshmallow. In my house chocolate doesn't survive very long. The longest lasting sweets are marshmallows.

Summary of Impact

Mustard Seed seeks to profoundly affect the way society allocates capital, for social good.

Introduction – A Little Framing

Mustard Seed's mission is to profoundly affect the way society allocates capital, for social good. This is our *raison d'être*, the purpose behind our efforts to invest in similarly motivated entrepreneurs and to support the growth of their businesses to address some of the world's most pressing social and environmental quandaries. Yet, the precipice rests at the pinnacle of our fall. There is an endless array of social and environmental problems affecting our collective and inherent rights to life, liberty and the pursuit of happiness. And there is an endlessly growing list (reassuringly) of individuals, organizations and countries collaborating to create and deliver solutions to these problems. For instance the United Nations created on September 25th 2015 a set of goals (now 17) to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years. With this statement, there was a call for help:

“For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and people like you.”

We aim to profoundly affect the way society allocates capital, for social good. Pardon the repetition, but how do we transform this mere rhetoric into sustainable actions and outcomes? And where do we begin to think about addressing these systemic problems that continually persist?

A part of how we do this is framed by our approach to the status quo. It's easy to say the status quo is broken. It's even easier to say we seek solutions in any of these 17 SDGs. That being said, we have identified what we believe is a suitable model for augmenting the genesis and growth of highly-scalable businesses solving these very problems. We call this the *Virtuous Venture Cycle™*, which we've introduced at the start of this report.

Design Principals – Impact Framework

As a young organization ourselves, we designed our own thinking around our target outcomes in a simple framework. Over the next 10 years, we hope to create lasting outcomes in 5 areas – Economic Inclusion, Education, Environmental Sustainability, Family & Community, and Health. These are foremost the key emotive areas of interest that we've identified with as the people behind Mustard Seed. But each of these areas also present a commercially compelling opportunity. We've purposefully designed this framework to be wide-ranging, allowing us to encompass a vast array of possible investment opportunities and associated outcomes.

For each of these five Action Areas, we've created 10 year outcome targets aligned with the architecture of our investment fund and overall strategy. These targets are outlined below (Yes, the aspirational nature of these targets may be symptomatic of over-optimistic forecasting; however, we find having somewhat exaggerated targets is a motivational impetus for transforming these targets into reality). Each one of Mustard Seed's investments fall into one or multiple of these 5 areas.

The axis of this framework revolves around our companies. We collaborate with each of our entrepreneurs to design company-specific metrics to first define and then measure the outcomes generated over time. However, we realize and fervently believe that measurement shouldn't be done solely for measurement's sake – each company-level “KPI” (key performance indicator) is co-created with our entrepreneurs to provide commercially strategic guidance on both retrospective performance and prospective forecasting for the business. As revenue is often a lagging indicator of success for these early stage companies, we believe these KPIs more accurately and relevantly gauge the value captured by each product or service.

In addition to commercial relevance, we believe these social KPIs should be venture-centric. Our founders, and likely most entrepreneurs globally, are faced with the common problem of scarcity of time. Thus, measuring and managing these social KPIs should not be a burden but rather a boon to each venture's operations. We adopt an 80-20 approach in designing each framework, adopting methodologies that either utilize existing data capture or create additional value to maximize return on effort. For example, when working with Rubies in the Rubble, we helped identify

and translate existing inputs for each product sold into a relevant commercial and social KPI. A jar of (delicious!) Pink Onion and Chilli relish includes at least 8 onions which would have previously been discarded. These onions translate to an average savings of over a half kilogram of carbon dioxide emissions per jar. These savings are an inextricable component of both the venture's brand (each jar features the amount of saved produce within) and business model (cost savings from re-purposing unwanted produce drive higher margins), and are measurable at scale with minimal effort.

These company-level metrics are then aggregated at the top level into each of the target outcomes for our 5 action areas. This aggregation process is a challenge – an approximation must be made to coalesce company-specific data into each headline metric. Thus, to prevent loss of granularity in measuring these outcomes over time we report using both the high-level and company-specific metrics for each of our companies.

Mustard Seed Target Outcomes

Mustard Seed expects to generate significant positive social outcomes across our 5 Action Areas over the next decade:



ECONOMIC INCLUSION

EMPOWERING PEOPLE ECONOMICALLY

100m people receiving “game changing” opportunities



EDUCATION

IMPROVED LEARNING OUTCOMES

28m academic years created (2.2m entire education spans)



ENVIRONMENT

REDUCED EMISSION AND INCREASED
RESOURCE EFFICIENCY

7.5m tons of CO₂e reduced (350m trees)



FAMILY & COMMUNITY

CREATING MEANINGFUL AND ENDURING RELATIONSHIPS
BETWEEN INDIVIDUALS

30m meaningful new relationships created



HEALTH

IMPROVEMENT IN QUALITY DAYS OF LIFE

150m human life days improved (5k equivalent lives)

Economic Inclusion *



what3words



26.7m people
People with addresses now recognized by their national post

Crowdsurfer



10,555 interactions
Number of interactions on platform

Beulah London



8,184 Hours
Number of hours of employment created

Hype Labs



Investment made in 2017

Environment



Winnow Solutions



5,200 tonnes of CO₂ emissions saved **
Tonnes of CO₂ emissions saved

Rubies in the Rubble



102 tonnes of CO₂ emissions saved
Tonnes of food waste saved

Switchee



£275k in savings **
GBP savings for social housing tenants

OLIO



34 tonnes
Tonnes of food waste saved

Health



Skin Analytics



567 lesions
Number of skin lesions analyzed

AtoCap



Company currently in pre-clinical testing
Proposed metric – Human life days improved.

knok



282 appointments
Number of appointments

Family & Community



Mush



70,000 connections
Number of connections

Education



Edukasyon



Investment made in 2017

* Indicative of percent of portfolio in each Action Area.

** Emissions and cost savings calculated off annualized figures of installed devices.

Note: All company-specific metrics are cumulative, from initial date of investment to end of 2016.

Mustard Seed's Impact

The core of what we do at Mustard Seed, and subsequently our own impact on society as a business, revolves around our ventures. This is central to our mission. However, we also seek to have a direct impact on our own stakeholders and the ecosystem we co-habitate with other investors, entrepreneurs and various partners across government, corporate and academia.

Our thoughts around Mustard Seed's impact have evolved as we've discovered where and how the organization is best positioned to support the ecosystem. Since Mustard Seed's genesis we've collaborated with a diverse array of key partners. For example, starting with our first university event in February 2013 at London Business School, we've now held 32 events at 14 different universities across the world. The Member Network now extends across 5 continents, having started from a modest yet inspirational group of like-minded investors. To be frank, quite a few of our earliest engagements were reactive in nature – we had identified an unmet need to support early-stage entrepreneurs with a social mission, but we were unsure and (still) learning *how* to best support these entrepreneurs. Over the past couple years, we've conceptualized how we think we're best positioned to provide a layer of this support: through Advocacy and Community.

Advocacy

The origin (of this somewhat generic term) is from the Latin *advocare* – to call to one's aid. We've applied the roots of this word to the common predicament we've seen shared by entrepreneurs, investors and others: the journey alone is lonely. Entrepreneurs and investors alike suffer from the various symptoms that originate from asymmetry of information and lack of transparency, often resulting in siloed existences. As an organization we aim to bridge that divide by providing aid along two avenues: (1) peer-based support networks and (2) external voice and reach. Our mechanism for achieving these outcomes revolve around a pipeline of internal and external events, held in partnership

with various stakeholders including leading universities such as Copenhagen Business School, IESE Business School, Imperial College, INSEAD, London Business School and University of Oxford. Through these events we aim to connect entrepreneurs to fellow students, industry experts, investors and the general public to accelerate the growth of their ventures. We've realized that many (if not all) of these socially minded entrepreneurs are addressing systemic social problems – a systemic problem is best solved when broken down into addressable parts. However, no one individual or entity is an expert across all these components and thus requires the engagement and collaboration of various stakeholders. Through these entrepreneur-centric events, we hope to provide some aid in helping coalesce the interest, insights and investment in supporting the growth of these ventures.

Over the past two years, Mustard Seed have organized 32 university events, with over 2,200 live attendees and reaching over 300,000 campus students. The purpose of these events is to raise awareness and help build profiles for budding social entrepreneurs, as well as activating support networks in and around campuses to directly support the growth of these early-stage ventures. Just as our own humble beginnings originate from a single event held in the halls of a local London university, the genesis of many of the ventures we have met emerge from and around universities.

Community

Family & Community is one of the five key Action Areas at the focus of Mustard Seed's investments: we seek to create meaningful and enduring relationships. As an organization, we act as a 'Network Accelerator' – we place entrepreneurs at the center of expanding partnerships to amplify and scale their growth. However, we also aim to create meaningful relationships between and amongst our Member Network of investors. These individuals range from a diverse array of professional and personal backgrounds; however, they are united by a shared motivation in supporting socially impactful ventures. One of our key objectives is to help forge new and significant relationships across this network and ultimately create a community united by conscious purpose. Thus, our own measures of success revolve around how we engage with each of our Members and various partners.

300,000 campus students reached
2,200 live attendees at our events
600 venture pitches received
200 event finalist pitches
32 university events
12 countries

For instance, per each member across the Member Network, we've created on average 5 new connections with other like-minded investors. These connections revolve around both professional and personal pursuits, most often orbiting and intersecting across the support nodes investors create around our ventures: across the portfolio we have on average 7 Members directly investing in and supporting each company, with support varying from strategic commercial advice and relevant business introductions to talent and press referrals.

The Future

This report is in its first iteration. It remains very much a work in progress and is a reflection of our continually evolving learnings since our own genesis in 2015. We appreciate there may (indeed) be flaws in our approach and see this as an open opportunity for improvement as we continue working with and alongside our founders. Although we are steadfast in, and dedicated to, our belief around lock-step ventures, we equally acknowledge that there is no “wrong or right” way to impact investing. Each entrepreneur and investor’s approach provides an additional lens to examine, refract and then reflect on the effects of capital allocation in this sector. The Virtuous Venture Cycle remains a concept to be proven, with every venture we work with hopefully a testament to realizing positive social change at scale. We look forward to presenting the improved iteration of this report next year.

**60 Mustard Seed Members,
from over 17 countries,
attended 10 Monthly Mustard Events,
and actively supporting
13 socially impactful ventures**

Our Team

Connecting capital
with purpose



Our Team

Alex Pitt

Co-Founder

Formerly SVP at Mubadala, Project Leader at The Boston Consulting Group and investment banker at Goldman Sachs. MBA from Stanford and BSc degree in Government and Economics from the London School of Economics. Unfailingly polite, as befits the ultimate British gentleman. Secretly stealthy illustrator. Proud father of three little boys.

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