Our Approach to Impact Measurement and Management

Mustard Seed does not accept the traditional dichotomy between profit and purpose. Rather, in a world that increasingly values positive impact and transparency, we see a mutually-reinforcing relationship between financial and social/environmental returns. We only invest in companies whose products or services inherently contribute to impact goals. Therefore, scaling profit necessarily implies scaling purpose.

![Virtuous Venture Cycle™](image)
Our Approach to Impact Measurement and Management

We know that early stage companies must be ruthless in their priorities and their allocation of resources. We approach metrics from the perspective of entrepreneurs who need to ensure company survival, while building long-term value.

We do not:

- Take an academic approach to measuring impact
- Focus on applying a one sized fits all set of metrics
- Ask our investee companies to report on anything that would only be used by us (i.e. which is not useful to them)

We do:

- Take an “entrepreneurs-first” approach – We work collaboratively with entrepreneurs who themselves drive the development of specific metrics for the company; metrics are (1) central to company operations; (2) indicative of company success/survival; (3) limited in number; and (4) useful to the team’s ongoing understanding of company performance
- Use a comparable metric for each Action Area – We use just 1 cross-cutting metric to logically compare companies within each of our 5 Action Areas
- Help CEOs align stakeholders – We help our companies develop metrics for right key levers, and align board members and others around those levers
We start with helping entrepreneurs have the right company-level metrics, onto which we layer important comparable metrics and financial metrics.

**Company Level Metrics**

These are metrics which are meaningful for this specific company, and which may or may not necessarily be the right measures to compare with other companies in that sector. These measures should drive tangible results and long-term value. Teams should find these measures critical in assessing company operations.

**Comparable Metrics**

These are metrics which allow for comparison between companies in the same Action Area (described below), through the use of just one or two metrics relevant to all companies. Example: In healthcare, we measure healthy days of life created. Comparable metrics also drive our investment decisions, and allocation of capital to maximize returns.

**Financial Metrics**

Rounding out the metrics for quarterly reporting, the financial metrics help with cash, resource, and fundraising management. They drive additional action around company survival. For example, the Business Development Pipeline indicates both customer traction and forecasted cash flows.¹

¹ Companies report financial metrics as part of overall investor updates, delivered monthly or quarterly. Mustard Seed selectively publishes these results, with permission from our companies.
Our impact metrics and reporting are not an academic exercise. These are core KPIs that drive our business growth and correlate to our success.”

Marc Zornes, Co-Founder, Winnow Solutions

1 A Mustard Seed Portfolio Company
Mission Mustard Seed

Mustard Seed invests across five Action Areas, through which we expect to generate significant positive outcomes over the next decade.

**Action Areas and Ten-Year Aspirational Targets**

1. **Economic Inclusion – Empowering People Economically**
   - 100m People Receiving “Game Changing” Opportunities

2. **Education – Improved Learning Outcomes**
   - 28m Academic Years Created (2.2m Entire Education Spans)

3. **Environment – Reduced Emission and Increased Resource Efficiency**
   - 7.5m Tons of CO$_2$e Reduced (350m Trees)

4. **Family & Community – Creating Meaningful and Enduring Relations Between Individuals**
   - 30m Meaningful New Relationships Created

5. **Health – Improvement in Quality Days of Life**
   - 150m Human Life Days Improved (5,000 Equivalent Lives)

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1. An explanation of our thinking and rational can be found in the Appendix
2. Assumes one academic year impact per child and an entire education of 12 years
3. Based on an average life expectancy of 75
Investments

1. Winnow Solutions (Environment)
2. AtoCap (Health)
3. Skin Analytics (Health)
4. Crowdsurfer (Economic Inclusion)
5. what3words (Economic Inclusion)
### Overview and outcome opportunity

**Overview**
- Winnow helps chefs reduce unnecessary food waste through smart scale IOT devices providing analytics to drive change

**Outcome opportunity**
- Facilitate massive food waste reduction
- In the UK alone, the hospitality sector wastes around £2.5bn worth of food every year

### Reinforcing outcome / financial model

**Revenue model**
- Income is driven by system sales and food saved for customers

**Outcome model**
- Successful waste reduction helps the environment while boosting client economics

### Mustard Seed involvement

- Board member with relevant experience
- Strategic / operational support
- Introductions to global catering chains and hotel groups
- Follow on funding strategy

### Founder and key management roles

#### Marc Zornes
- Co-founder
- MBA from INSEAD (met co-founder there)

#### Kevin Duffy
- Co-founder
- Former management consultant in London and commodities investment banker in New York
- MBA from INSEAD (met co-founder there)
Overview and Outcome opportunity

Overview
- Novel electro-hydrodynamic processing technology which enables controlled release of sensitive pharmaceuticals into the body

Outcome opportunity
- Potential to deliver antibiotics into the body in a targeted and therefore more effective manner, with the goal to reduce antibiotic overdosing and the global epidemic of antibiotic resistance
- Initial application for recurring UTI (Urinary Tract Infections); 15% are recurring and produce serious mental and physical health issues

Reinforcing Outcomes / Financial Model

Revenue Model
- Income is driven by royalty streams from the technology

Outcome Model
- Application of technology reduces days needed to cure diseases

Founder and key Management Roles

Professor William Bonfield
- Non-executive chairman
- Successfully funded and exited two MedTech companies: ApaTech and Orthomimetics
- Emeritus professor at Cambridge, Honorary Professor of Medical Materials at UCL

Andrew Lynn
- Non-executive director
- Previous CEO of Orthomimetics and CamGaN: led both to successful exit
- CEO of Fluidic Analytics, a University of Cambridge spin-out
Skin Analytics - Snapshot

**Overview and Outcome Opportunity**

**Overview**
- Remote skin cancer diagnostic service for use by individuals and medical professionals: uses camera attachment and phone app to connect data to diagnostic system
- Although application is B2C, involves significant interaction with insurers, doctors, retailers

**Outcome Opportunity**
- In the US and UK, the population has a 1 in 5 chance of developing skin cancer; in Australia it is 2 in 3
- Skin Analytics seeks to promote early detection, which greatly enhances survival rates

**Reinforcing Outcomes / Financial Model**

**Revenue Model**
- Income is driven by diagnostic units sold

**Impact Model**
- Successful early diagnostic gives more healthy days and saves lives

**Founder and Key Management Roles**

**Neil Daly**
- Founder and CEO
- Previous experience includes BD in Visa and consulting in Accenture
- MBA from LBS. BS in Physics / Math at University of Western Australia

**Tom White**
- CTO and full-stack developer
- Previous experience includes Queens College, RealVNC
- BS in Computer Science from Cambridge University

**Mustard Seed Involvement**
- Board member with relevant experience and credibility
- Strategic / operational support
- Introductions to relevant “gatekeepers” in the medical system in the UK and other target markets
- Follow on funding strategy
Crowdsurfer - Snapshot

**Overview and Outcome Opportunity**

**Overview**
- Search and analytics service covering crowdfunding and peer-to-peer financing, providing an aggregate repository of information
- Clients include Visa and other corporates, as well as governments interested in understanding disruptive innovation

**Outcome Opportunity**
- Potential to allow small and “off the radar” enterprises to be seen and supported relevant parties; developing countries and under-represented entrepreneurs (e.g. women) have the most to gain
- Potential to become the “authority,” toward influencing policy in the alternative finance arena

**Mustard Seed Involvement**

- Board member with relevant experience and commercial network
- Strategic, operational and technical support and advice, including via relevant partner firms
- Relevant senior level introductions for business development
- Follow on funding support and introductions

**Reinforcing Impact / Financial Model**

**Revenue Model**
- Income is driven by subscription fees for access and insights

**Impact Model**
- Application of technology may benefit under-represented groups

**Founder and Key Management Roles**

**Emily Mackay**
- Founder and CEO
- Experience in several startups. First exit was made in 2012 with Microgenius
- Worked in International Technology Consultancy

**Nick Brook**
- CTO
- Experience includes working on several startups like Scene Double Ltd., Camvine, Taptu
- MA Maths from Cambridge University

**Location**
- London, UK

**Year We Invested**
- March 2014
Overview and outcome opportunity

Overview
- Technology that provides a three word identification ‘address’ for every 3x3m² location anywhere in the world

Outcome opportunity
- Creating game changing opportunities by providing addresses for the world’s poorest, which ensures access to advocacy and aid
- Around 75% of the world’s countries suffer from inconsistent, complicated or inadequate addressing systems

Mustard Seed involvement
- Board member with relevant experience
- Strategic / operational support
- Introductions to development agencies and charities
- Follow on funding strategy

Source
Mustard Seed Network: Mustard Seed Employee Referral, Cambridge University

Reinforcing outcome / financial model

Revenue model
- Income is driven by increased users, business and government uptake

Outcome model
- Increased numbers of users, increase advocacy and access to aid

Founder and key management roles

Chris Sheldrick
- Co-founder
- Worked in the music industry for 10 years, managing events across the world
- BMus in Music from King’s College London

Jack Waley-Cohen
- Co-founder
- Led operations at translation company Lingo24 for 8 years
- St. John’s College, Oxford University graduate
Mustard Seed Impact Framework

Appendix

Updated: September 2015
# Thinking Behind our 10-Year Aspirational Goals and Targets

<table>
<thead>
<tr>
<th>Impact Area</th>
<th>Goal</th>
<th>Rationale for Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Inclusion</td>
<td>$x$ people to receive “game-changing” opportunities</td>
<td>While striving for this goal only works with rigorous application (and debate around) what constitutes a “game-changing” opportunity, we have found that it 1) works well for companies in this space, whose motivations are to change people’s life circumstances, and 2) forces the right debates on our Investment Committee. We experimented with dollars of income increased for target communities but quickly realized that this metric was not operationally helpful for most start-ups. We also cannot assume that more money in a community always equals better life outcomes.</td>
</tr>
<tr>
<td>Education</td>
<td>$x$ academic years to be created</td>
<td>We aim to measure learning in concrete terms, leveraging national education standards. Standards allow any individual to be determined as being at a particular grade level in a particular subject, according to his or her level of knowledge. We aim to capture the difference between where students performed previously and the value-added difference of educational interventions. Sometimes we will need to use proxies to assess impact.</td>
</tr>
<tr>
<td>Environment</td>
<td>$x$ tons of CO2 to be reduced</td>
<td>We will look at both dollars of resources saved and savings of CO2E. The methodology for CO2E reductions will be borrowed from widely accepted climate change scientists.</td>
</tr>
<tr>
<td>Family &amp; Community</td>
<td>$x$ meaningful new relationships to be created</td>
<td>Humans are hard-wired for connection. Research shows that human connection drives mental and physical health and, conversely, lack of connection drives the opposite. Human connection builds community and can cause significant positive side-effects, such as reducing conflict, more efficiently resolving issues, and generating a more balanced and positive overall environment. Our Investment Committee rigorously debates each venture’s ability to create meaningful relationships, to address well-documented issues.</td>
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<tr>
<td>Health</td>
<td>$x$ quality days of human life created</td>
<td>Ventures in the health space must improve the number of quality days of life that people live. Some ventures will add days of healthy life by curing life-threatening illnesses. Others will convert days of suffering to days that are pain-free, through more efficient or new ways to reduce the impact of disease.</td>
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</tbody>
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1 Targets for each area were set by assuming 1 blockbuster success per year (over 10 years) in each area, estimating annual impact returns for a blockbuster success, and making relevant calculations.
# Impact Framework Process for New Ventures

<table>
<thead>
<tr>
<th>Impact area</th>
<th>Pre-investment process</th>
<th>Post-investment process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pitch deck</td>
<td>Negotiations</td>
</tr>
<tr>
<td></td>
<td>Pre-investment process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Entrepreneur frames her idea within our action areas</td>
<td>Refined interlocking model proposition</td>
</tr>
<tr>
<td></td>
<td>First articulation of interlocking model</td>
<td>First presentation/discussion of proposed KPIs</td>
</tr>
<tr>
<td></td>
<td>KPI definition / elaboration</td>
<td>Final KPIs agreed for investment with MS</td>
</tr>
<tr>
<td></td>
<td>KPI measurement</td>
<td>Operational and impact KPIs measurement</td>
</tr>
</tbody>
</table>

- **Pitch event or first meeting**: 2-3 weeks typically
- **Could be very long for health**: 6 months – 1 year
- **> 1.5 years**