TRACELESS | What key factors contribute to the success of a sustainable business entering an emerging market?

01 | About the Company

- The start-up traceless was founded by Dr. Anne Lamp and Johanna Baare in 2020. It transforms agricultural by-products into the innovative biomaterial traceless®.
- The company can be categorised as "sustainable entrepreneurship" (Schaltegger et al., 2016). It draws inspiration from the Cradle to Cradle® design philosophy, aiming to create products that are fully biodegradable or recyclable, thereby contributing positively to the environment rather than merely minimising the negative.
- Traceless aligns with the sustainable business model archetype "creating value from waste" (Bocken et al., 2014, p.48) and operates within the intersection of the "Ecodesign" and "Closing-the-loop" patterns for sustainable business models (Lüdeke-Freund et al., 2022).

02 | Sustainable Business Model Canvas

The Business Model Canvas is a tool for capturing and visualising business model designs, highlighting key elements, identifying outdated components and enabling the transformation of models through new strategies (Pigneur & Fritscher, 2014). Osterwalder and Pigneur developed the Business Model Canvas in 2011. Since then, the canvas has evolved, especially to address the missing environmental and social dimensions (Cardeal et al., 2020). Most sustainability-focused canvases only add a few elements (Osterwalder & Pigneur, 2011), adapt limited elements towards sustainability (Foxon et al., 2015), or use separate canvases for environmental, social, and economic spheres (Joyce & Paquin, 2016). These adaptations are suitable for business models with a CSR approach. But for businesses like Traceless, which embed sustainability at their core, Gerlach's (2015) Sustainable Business Model is most appropriate. It adapts all nine original blocks for sustainability, adds four new blocks, and includes guiding questions on key aspects of sustainability.

Positive Impact

Planet: less pollution, harmful chemicals and global warming
Society: less negative health effects and conflict due to climate change
Economy: fewer resources for recycling and more competitive advantages

Maximise by

- implementing an energy-efficient and low-emission manufacturing process
- collaboration with new sustainable partners
- growing the business

Negative Impact

- business is not 100% CO2 neutral
- unsustainable partners (e.g. C&A)
- no detailed disclosure of information on the supply chain

Possible rebound effects or new technological risks are sustainable packaging materials leading to higher material consumption, and new competitors could enter the market.

Minimise by

- investing in research on renewable energy within the supply chain
- only collaborating with partners that follow sustainable practices
- giving more detailed information about production and supply chain

1. Sust. Partners

consu-mers, brand owners, insti-tutes, trace-less, sup-pliers, manu-factu-rers, media

Direct partners are: manufacturers and brand owners, as well as agricultural companies
Make the supply chain more sustainable by: using data analytics to optimise supply chain and optimising energy use throughout the supply chain
Possible new partners: NGOs

2. Sust. Value Creation

Key activities: Product, Business & Technology Development, Marketing, Communication, Sales, Management
Improve sustainability by: optimizing production processes and using analytics to measure sustainability performance

3. Sust. Resources

Natural: biopolymers, raw materials.
Energy: production, IT infrastructure & office building
Technical: manufacturing facilities, machinery
Sustainable alternatives: sustainable production of machinery, e-trucks

4. Sust. Value Proposition

Problem: Single use plastic, pollution, climate change
Value: Replacing single-use plastic, competitive advantage, business conforming with the laws concerning single use plastic
Function and form of the product: Traceless delivers material pellets made from agricultural industry residues to manufacturers, who transform them into products and packaging for brand owners

5. Sust. Customer Relationship

Personalised interaction strategy
Omnichannel customer service
Improve the relationship by using data-driven insights from CRM

6. Sust. Channels

Social Media & Web Channels to communicate sustainable impact
Indirect: partnerships with retailers and other sustainable companies
Direct: possible e-commerce platforms

7. Responsible customers

Companies looking to replace conventional plastics with sustainable alternatives
Potential new customers are other sustainable businesses that have a relevant impact on sustainability issues

8. End of Life

Product breaks down under **natural composting conditions** into water, humus & CO2 within a few weeks serving as food for bacteria or to produce renewable energy

9. Cost Structure & Additional Costs

Required costs and investments: salaries, materials (natural biopolymers), marketing campaigns, research & development
Resources that are the least sustainable: machinery, transportation

10. Subsidisation

etc.

11. Revenue & Sustainability Premium

Way to generate revenue: sale of natural biopolymers
Customers are willing to **pay a premium** for sustainability
Business creates a **unique advantage** due to sustainable proposition elements

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03 | SWOT and it's matrix

The most important insights gained from the analysis using the canvas are summarised in the SWOT and prioritised according to categories A to C.
The SWOT is one of the most well-known and widely adopted strategy tools, originating in the 1960s and primarily attributed to R.F. Stewart (Puyt et al., 2023).

With the help of the SWOT matrix, risks are turned into strengths and weaknesses into opportunities, highlighting Traceless´ potential when it comes to dealing with weaknesses and risks.

Internal Analyses

STRENGTHS

A: Innovative product: Development of bio-based, compostable material with plastic-like properties
B: Technological expertise: In-depth expertise in chemistry, materials science, and technology
B: Funding: Supported by state and venture capital, thus having the financial means to scale
C Resource Supply: Resource needs are predictable, working with one material and specific customers
C: Positive Image: Sustainability in every area and focus on long-term partnerships with stakeholders

WEAKNESSES

A. High costs: Sustainable materials are often more expensive to produce than conventional plastics
A. Scalability: Most likely, the facilities cannot keep up with expected demand
B: Technical challenges: Technical limitations in durability and shelf life, which limit certain applications, long transportation, and storage
C: Market awareness: Traceless is less well-known compared to competitors

External Analyses

OPPORTUNITIES

A: Competition: No significant threats regarding competitors with similar products currently
B: Market Opportunity: One of first movers targeting a highly emerging, rapidly growing market
B: Demand: Increase in demand for sustainable packaging solutions, e.g., due to EU regulations
C: Patent: Key resources cannot be replicated easily, significant investments in research needed

EXPANDING

What strengths exist? How can strengths increase the realisation of opportunities?

A&A: Innovative product increases opportunity and competitive advantage in a growing market
A&B: Company's product positions it uniquely and opens a completely new market

CATCHING UP

How can weaknesses be turned into opportunities and strengths?

A&A: Due to no competition, there is time to make production cheaper and become more resilient against future competition
A&B: With no significant competitors in the market, Traceless has the opportunity to focus on R&D to enhance product durability and shelf life

THREATS

A: Market acceptance: Consumers and companies may not be prepared to bear higher costs for sustainable materials and smaller production volumes
B: Possibility of competition: Market is becoming increasingly competitive
B: Location: Founded in Germany, staying competitive worldwide is incredibly difficult
C: Dependence: They depend on one material and thus on resource suppliers. Disruptions in the supply would make them vulnerable (unlikely)

SECURING

Which risks can be countered with strengths? How can strengths prevent certain risks?

A&A: Increase companies´ acceptance to pay more due to the possible competitive advantage by using an innovative product
B&B: Being one of few German start-ups with very high potential, increased attention as a lighthouse project can be used for publicity and special funding

AVOIDING

Where do weaknesses meet risks? Which activities should be avoided?

A&A: Sustainable products are more expensive to produce excluding toxic chemicals; companies may not want to pay more for the green option
B&A: Quick scaling is very difficult, and there is a realistic chance for emerging competitors, especially from abroad

04 | Take-Away-Message

Key factors contributing to sustainable businesses successfully entering emerging markets:

- having **partnerships and funding** that help the business grow, and **align product with the demand** from consumers and political institutions.
- be **transparent** about the core business idea and base business model on **innovation and invest into R&D**.
- having a business that brings a simple and meaningful **solution to an urgent problem**; **sustainability** does not have to be seen as a burden but rather as an **opportunity**.

Higher production costs compared to conventional plastics, limited scalability of their production facilities, emerging competition and a relatively low international profile could prevent further market expansion. In order to face and overcome these challenges, there are strategies the company could implement, such as focusing on **production efficiency** and **operations scalability**, investing in **global marketing** and staying ahead of **technological trends.**

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