Partnerships and coalition building in the solar cooking industry: **Building the industry together- How to be partners, not competitors**

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Purpose: The aim of this paper is to raise awareness about the importance of partnerships and coalition building, and how the industry can be united with cross-company collaborations. The solar cooking industry is still small and fragmented, and we need to build this together. During the last years, One Earth Designs (OED) and Morpho Solar have deliberately chosen a strategy of collaboration, and this process is an example of how companies in the industry can work together to scale up and use each others strengths. This strategy has given several benefits, that also can be relevant for other companies in the industry.

This paper aims to explore the benefits and the challenges that One Earth Designs have met with their collaboration strategy and will give recommendations for other companies that are pursuing a similar strategy.

Methodology

This paper will discuss two cases: the partnership between Morpho Solar and One Earth Designs, and the cross-selling and marketing partnerships between One Earth Designs and Solavore. The two partnerships will be presented, and thereafter discussed.

Introduction to the companies:

One Earth Designs is a global company with headquarters in CA, US, and was founded by Catlin Powers and Scot Frank. Their flagship product SolSource was developed together with nomads in the Himalayas, and has been sold globally since 2013. SolSource is a highly efficient parabolic solar cooker and provides cooking temperatures up to 550 degrees F. Morpho Solar is a spin-off company from the Norwegian University of Science and Technology and develops heat storage technology for solar cookers. The company was founded in 2014 by Even Haug Larsen, Dag Haneberg and Guro Grytli Seim.

Solavore LLC is a US based company providing the solar oven Solavore, sold since the beginning of 2000s. Anne Patterson relaunched the product and the business in 2014.

A) Morpho Solar partnership

Introduction:

The founders of Morpho Solar and One Earth Designs first decided to work together at the Solar Cookers International convention in Sacramento in July 2014. They found that their technologies consisting of a paraobolic solar cooker and heat storage technology, were a perfect match. In addition to this, Morpho Solar wanted to sell SolSource in Europe. The partnership therefore started out as a distributor relationship, where Morpho Solar sold SolSource in Europe. In order to scale up more rapidly and use their resources more efficiently, the two companies decided to partner in 2015 and have since then used One Earth Designs as their global brand.

Results from collaboration between One Earth Designs and Morpho Solar:

Marketing: One Earth Designs have collaborated around marketing, and based on this

Marketing material: A significant drain of time and money is development of marketing material, such as photos, videos and recipes or blog posts. By co-creating and sharing marketing content, solar cooking companies can save both time and effort, and increase the overall quality of the solar cooking information on the internet. Of this reason, Morpho Solar and One Earth Designs have used one common brand. This allowed the companies to use the same website www.OneEarthDesigns.com, and co-develop videos, photos and share the same social media platform. The common brand and the co-development of marketing material have given higher quality material and saved significant time and money. The author recommends other solar cooking actors to deliberately explore opportunities to collaborate with other companies on marketing material.

Events, campaigns and PR: The companies have also organized marketing events together, like attending Earth Day Texas in the US and several events in Norway. In Norway, Morpho Solar arranged a midnight sun cook-off on a cruise-ship north of the arctic circle. Because of having an international team, this opened up for physical presence in many locations in the world. The local presence in both Europe and the US has also made more possibilities for PR, as the geographical relevant for local PR. As a result, SolSource has been covered in national newspapers, magazines and TV in both Europe and the US. Examples of such are the showcase of SolSource on Top Chef US in December 2015, and a 15 minute feature of SolSource on a children's TV show on Norwegian National TV. Collaboration can also evolve around specific campaigns, where the Solstice campaign that SCI arranged in 2016 is a good example. If the actors in the industry jointly agrees to run campaigns, this can increase the visibility and traction in the market, especially in social media. By focusing on the word of mouth effect, the actors can aim to create "viral campaigns" that gets spread and shared with people outside of the existing market.

Morpho Solar and One Earth Designs are open to explore ways in which to co-create both marketing content, marketing campaigns or attend events with other industry actors.

Distribution: collaborating for faster scale-up

Morpho Solar managed in 2015 to sell a bulk sale to Scandinavias's largest retailer within grill and barbeque, Jernia. Jernia had SolSource in-store in both Sweden and Norway during the summer of 2015. The retailer deal was a direct result of the local presence in Norway, and would have been difficult for a US based team alone. This gave larger production volume, and is an example for how international collaboration can help internationalize and scale up faster.

Technology collaboration. The author believes that collaboration around technology development and product improvements is a key to build the industry further and increase the adoption and sales of solar cookers. Partnerships between universities, research institutions and companies create unique opportunities to build bridges between market knowledge and research and development. In this way, the technology development can become more market driven, increasing the opportunity for a product-market-fit.

An example of such is that One Earth Designs has a research collaboration with Massachusetts Institute of Technology (MIT) and Harvard, and Morpho Solar are collaborating with the Norwegian University of Science and Technology (NTNU). This

allows an exchange of research and knowledge and creates synergies for both the companies and the research institutions.

Another important point is to contribute with market knowledge to the newcomers in the industry. Morpho Solar and One Earth Designs have worked together on heat storage technology, a highly complicated and resource intensive area of research. One Earth Designs had been several years in the market and contributed with market knowledge, and Morpho Solar contributed with technology from their university. The collaboration therefore gave the product development team in Morpho Solar in Norway more user insight into the solar cooking market and SolSource-users, and allowed a user-centric development process of the heat battery, improving the product-market fit.

In addition to this, Morpho Solar received very valuable inspiration from the solar cooking conference CONSOLFOOD in Faro, Portugal in January 2016. Here, the professor Antonio Lecuona shared his technology findings on a new phase change material, which triggered important changes in the design of Morpho Solar's heat battery.

Technology collaborations in the solar cooking industry can be evolved around many other research areas, and energy storage is just one area of research. The author see many other areas of potential technology collaboration, such as research on; automatic tracking systems, durable and affordable reflective materials, optimized and durable cookware (such as dehydration, pressure cooker or steam engines) or medical and health accessories (such as autoclaving).

Funding: Different geographical locations have enabled the companies to pursue funding opportunities in both Europe and the US. There are many soft funding alternatives in both Europe and the US, where the grant suppliers do not require a return on their investment. The collaboration between One Earth Designs and Morpho Solar gave a larger potential funding pool, where the technology development in Europe has given access to EU funding opportunities, like Horizon 2020. There are also great opportunities for funding collaborations between commercial actors and research institutions, which should be looked into. The author is also interested in exploring how solar cooker actors can collaborate in order to gain access to resources from the Global Alliance for clean cookstoves. This should be a topic for discussion at the SCI convention in India in January 2017.

B) Solavore: awareness building and complimentary products

One Earth Designs has since summer 2016 been piloting a partnership with Solavore Solar oven. The two companies are currently selling each others' products, and together delivering a "Solar Kitchen" with SolSource solar stove and Solavore oven to their customers. The products are showcased on both companies' websites, and this helps the customers to see the diversity of solar cooking. The author believes that many customers do not know that there exist different types of solar cooking technologies, and it is important to show that each product has its purpose. A parabolic solar cooker and a solar oven are distinctive products and highly complimentary, just as an oven and stove in an indoor kitchen. In the same way that customers have various cooking appliances in their indoor kitchen, the industry should stronger show how a mix of solar cooking technologies can fulfil the range of cooking techniques that people already are familiar with.

One Earth Designs has also experienced that people randomly come to our website but they are actually looking for a solar oven. By cross-selling we can meet all the needs of our customers.

Results:

Learnings from the partner selection process:

The author recommends a collaborative strategy for other companies, but also recommend to evaluate the coalition thoroughly beforehand. In order to evaluate the partnership potential, MS and OED did several steps to reduce the risk:

- **Trial period:** OED and MS started with a distributor relationship, where MS became a distributor in Europe with a standard distributor agreement. This allowed the companies to test the partnership before starting the closer partnership with technology collaboration.
- **Technology fit:** The technologies from both Morpho Solar and Solavore compliment One Earth Designs' technology. Each partner brought unique value to the table, which gave a balanced partnership where both parties have contributed.
- **Market fit:** All companies focus on the same entry market. They both saw the need for focusing on developed markets as an entry strategy, and it would have been difficult to collaborate if this same understanding was not in place.

Some potential challenges to be aware about:

Legal documents

It is important to agree on legal contracts early on in the partnership. The author recommends to have initial drafts signed early in the process, and to seek help from legal advisors as early as possible.

Geographical distance and time difference: aiming for north-south collaboration

Time difference can be a challenge in cross-country collaborations, especially if the partners are in need of daily meetings. As an example, it is challenging to schedule meetings when there is a 9 hour time difference between San Francisco and Norway. The author recommends to explore partnerships within the same time zones.

Need for local adaption

Even though Europe and North America both are developed markets, the continents are highly different. In 2015, Morpho Solar and One Earth Designs addressed both the US and the European markets simultaneously, and learnt that the focus was too wide. In 2016, the target was narrowed down to the US, but a large portion of the website content was still European. This is a challenge that other companies should be aware of when creating common marketing material.

Conclusion: One Earth Designs and Morpho Solar have deliberately chosen a strategy of collaboration, and this has led to more effective marketing, higher sales numbers, faster technology development and more funding opportunities. The experience shows that crossselling of solar cooking technologies can build awareness about the variety of products and increase the total market size. In order to build the solar cooking industry further, the author believes that strong partnerships must be built between other solar cooking organizations. It is time that all companies in the industry see the others as **partners**, not as competitors.