

Global Case Writing Competition 2011

Social Entrepreneurship Track

Finalist

How to Establish and Manage a Social Business at the Bottom of the Pyramid - The Case of OSRAM in Africa

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Company Background¹

Having its headquarters in Munich, Germany, OSRAM GmbH, a fully-owned subsidiary of SIEMENS AG, was already registered in 1906. Since then, it has developed to one of the two leading lighting manufacturers in the world being active in the fields of general lighting, automotive lighting, ballasts and luminaires, opto semiconductors, precision materials & components and display/optics (Exhibit 1).

Currently, the lighting market is at the crossroads. Energy-efficient technologies and LED lighting, making a significant contribution to climate protection, are on the march. This trend is supported by legislations such as the EU directive, which came into force on September 1, 2009 and which indicates the end of incandescent lamps². Thus, OSRAM sees its future growth markets in products and processes that contribute to solving global sustainability issues, address economic needs and protect the environment. In order to being able to react to the new challenges and to meet the future demand, innovation plays a crucial role. Following its slogan being “passionate about intelligent light”, OSRAM spends 6.6 percent of its sales on R&D. In 2008, the company’s portfolio of energy-efficient products was acknowledged with the German Sustainability Award. Today, these products already generate over 66 percent of the company’s revenue and are expected to gain more and more shares of the total sales in the next few years.

Also, international markets have become increasingly important for OSRAM. In its 46 factories located in 17 countries the company manufactures lighting products that shine in about 150 countries. While sales in Europe and America declined during the financial downturn and currently stagnate, OSRAM repeatedly achieved a double digit growth in emerging markets³ in 2008. Now focusing on those countries due to the growth potential, OSRAM tries to further expand its production capacities and to explore new markets such as the Asia-Pacific region and Africa.

Historically, OSRAM’s first activities in Africa date back to 1971, when the company opened a first sales office in South Africa. Since then, it has developed to an independent organization serving the southern part of Africa with OSRAM products. Step by step, sales offices in Kenya, serving the East African market and Tunisia, serving the North African market, as well as a production joint venture in Egypt were opened. However, the West African business is still run by the German or Dubai office, while the Angolan market is handled from Portugal.

In the fiscal year 2009, OSRAM employed more than 39,000 people and generated a turnover of €4 billion as well as a profit of €89 million (Exhibit 2). Thereof, business outside

¹ The case study was developed solely as the basis for class discussion. It is not intended to serve as an endorsement, source of primary data, or illustration of effective or ineffective management. I would like to thank Jochen Berner, Project Manager of the Off-Grid Project at OSRAM, for his support and the interviews.

² See Annual Report 2008. Available at www.osram.com.

³ See Annual Report 2008. Available at www.osram.com.

Germany accounted for 88 percent⁴ and is expected to become even more important in the next ten years (Exhibit 3).

The Pilot Project “Energy for All”

Since September 2008, OSRAM runs a pilot off-grid project in the form of a social business in Kenya. The prevailing view on social businesses (Exhibit 4) is that they are enterprises with a social goal, targeting a need that is not yet satisfied by society, government or non-governmental organizations (NGOs). However, they have to act along the triple bottom line⁵, which means that they do not only have to be socially or environmentally sustainable, but also financially.

The idea for the project in Kenya came from different directions. The Global Nature Fund, an international NGO for environmental protection, observed the Lake Victoria being heavily polluted by the fishermen's kerosene, which is used for illumination in order to attract fishes at night. When the GNF finally found a solution to counteract the pollution, namely a battery box in combination with a lamp, it asked OSRAM to provide the technology. For OSRAM however, this was not sufficient because it had the necessary preconditions such as size, resources, technical knowledge and connections in order to found a proper social business itself. Hence, it would be able to develop corporate social responsibility (CSR) and to explore new markets in developing economies such as Kenya. With this idea, it felt that it could materialize the theory of a self-sustaining social business and target people living at the bottom of the pyramid (BOP) (Exhibit 5).

Therefore, OSRAM's corporate innovation management in cooperation with experts from various functions across the company developed a holistic approach to tackle this issue and to meet the peoples' needs. Thus, the company decided to pursue a feasibility study at three different locations in order to test the developed concept, the products and the technology which were all completely new to the company.

After a trial phase of one year, the project team recently presented the status quo to OSRAM's board, which has now to decide upon the project's future and whether to continue it at all. Even though the pilot phase was overall successful, the project is not yet able to compete with other OSRAM projects from a financial point of view. Therefore and especially now, during an economic downturn, where cost saving measures have to be undertaken everywhere, the decision whether to further invest in the project is not easy. A continuation in the form of an expansion, however, would require valuable resources.

The Market

Market Size

OSRAM found out that 77 billion liters of kerosene per year are used for off-grid lighting worldwide resulting in 190 million tons of CO₂ emissions. Depending on the actual market price of kerosene this consumption creates a market size of about €30 to €50 billion per year,

⁴ See Annual Report 2009. Available at www.osram.com.

⁵ The concept of the triple bottom line refers to the three pillars of a sustainable organization, being people, planet and profit.

nearly twice the size of OSRAM's normal illuminating market, which is about €22 billion worth⁶. Thus, neither OSRAM nor Philips but rather big oil companies represent the actual world market leaders for illumination.

Having conducted further research OSRAM found that out of 1.6 billion households without access to power supply worldwide 78 percent live in India and Africa⁷. Following, Africa has about 105 million households without electricity, thereof 30 million people living in the area around Lake Victoria⁸. Feeling that this could become a very important market where a lot of revenues can be generated, OSRAM decided to initiate a pilot project in this region by establishing three presences in Mbita, Sindo and Nyandiwa, all being very close to the Lake Victoria (Exhibit 6).

OSRAM chose the proximity to the lake for another reason as well: naturally, there are many fishermen who spend about 75 percent of their income on kerosene for lighting the boats to attract fishes at night (Exhibit 7). As light constitutes a central mean for work around Lake Victoria, each fishing boat uses about 1,200 liters of kerosene annually, amounting to a total of 20 million liters and emitting 50 tons of CO₂ per year⁹. This represents a great and clustered additional demand for illumination, where OSRAM could easily test its business model.

The Market's Character

Despite those promising numbers, the market shows the typical drawbacks of a BOP market, such as the inconvenience of reaching the people via common distribution and communication channels. Since people are rarely educated at all and live in rural villages that are dispersed over the country, physical reaching of people is difficult and usual advertisement and marketing strategies are less effective.

However, OSRAM identifies to other aspects as the greatest constraints for its social business: firstly, the local culture, which is completely different to the western culture OSRAM is normally used to. Nevertheless, the company gives itself the time to learn from experiences and additionally cooperates with a local partner, who supports OSRAM in any related issues. As a second market drawback, OSRAM names corruption. For compliance reasons, OSRAM decided not to engage in bribery. This created a difficult start, but after some time local authorities recognized that they do not receive bribe money from OSRAM. When they additionally saw the community benefits, OSRAM's prestige increased and it is now granted the rights on the official way and without hesitance. A final major disadvantage of the market is the political instability. During December 2007, for example, adherents from two different political leaders, Mwai Kibaki and Raila Odinga, started to fight and two months of violence followed in which businesses had to be put on hold ¹⁰ As a result, OSRAM decided to remain independent and not to cooperate with politicians, as they can change very quickly and the risk of a successor breaking a cooperation is too high.

⁶ See Rybak, 2008.

⁷ See Gregor, 2008.

⁸ See Dewald, 2009.

⁹ See Gregor, 2008.

¹⁰ See Zeug, 2009.

The O-Hub as the Core of the Off-Grid Project

Need for a Holistic Business Model

When OSRAM entered the market there were already many off-grid lighting solutions which were rather unsuccessful on a large scale because providers did not think “beyond the product”. OSRAM noticed that in order to be successful and to overcome income and distribution constraints of people living at the BOP it had to develop a holistic concept considering infrastructure and communication as well as engineering and maintenance issues.

Very quickly OSRAM discovered that its new customers live at or below the poverty line. This means that they have only very low or irregular income, which do not allow for major investments. Consequently, they are forced to live from day to day not being able to calculate their expenses over a week's time. Therefore, it is obvious that they cannot afford €400- the cost for an access to modern power supply in Kenya- even if this is the least expensive solution in the long run. Additionally, they cannot receive any credit for this investment. Thus, OSRAM developed a new way that would supply its products with electricity. By investigating why kerosene is so commonly used OSRAM revealed the fact that it has one crucial advantage in comparison to any other solution: it can be bought in very small portions whenever the customer needs it and has enough money to spend, thus allowing consumption despite the low and irregular income¹¹. Following this idea, OSRAM decided to create a similar off-grid model that delivers energy in very small quantities not requiring any up-front investment.

With this new approach, OSRAM does not only pursue its core business by providing lighting devices but also supplies the energy in form of charged batteries. For several reasons, which are discussed later, OSRAM decided to lease out charged lamps and later replace the empty devices by charged ones again. Thus, only the price for the charging, which is low and therefore affordable for many BOP consumers, has to be paid in order to receive high quality products.

The O-Hub

In order to reach people without access to the grid-based power supply, OSRAM bases its new concept on a charging station called O-Hub. This is a building with 48 solar panels on the roof (Exhibit 8). Out of them, 42 big panels are used for charging batteries and lanterns for illumination, which are then leased out. In times of good weather, 112 batteries can be recharged concurrently in two to three hours¹² (Exhibit 9). The remaining six small solar panels are used for recharging mobile phones, as well as for cleaning and purifying rain water in order to make it drinkable. OSRAM decided to use solar energy, because as a renewable and inexhaustible energy source, it does not have CO₂ emissions and is delivered for free by the sun. Since Kenya is located close to the equator, the sun rays hit the panels in a rectangular angle making the energy generation very efficient¹³.

¹¹ See Gregor, 2009.

¹² See Rybak, 2008.

¹³ See Mair, 2009.

Independent on Site

The pilot project's three O-Hubs, located in Mbita, Sindo and Nyandiwa, are operated by a local partner called Thames Electricals Ltd¹⁴. This partnership is necessary for legal as well as for other practical reasons, such as e.g. too high European wages. During construction and the first few weeks of operation, OSRAM experts flew to Kenya in order to train the local staff and to transfer all knowledge concerning the underlying technologies. Thus, local employees are now able to operate, repair and maintain the technologies, as well as to pursue daily operations themselves. Hence, OSRAM experts only have to come to Kenya for major repairs, general checks or to give further trainings.

However and due to the fact that there are only three O-Hubs, the social business' administration, organization and management are still conducted in Munich, because OSRAM's available resources are still sufficient to cover the project's current complexity degree. However, an increasing number of O-Hubs would require a higher administrative effort, which could not be conducted from OSRAM in Germany anymore, but would imply an own local venture to carry out this function.

Leasing as the Core Concept

The O-Hub's products are leased out instead of being sold for the following reasons: firstly, local customers do not have the burden of paying the price for owning the products (e.g. about 8000 KES¹⁵ for the battery), but only have to pay a deposit fee for the duration of usage. This fee is paid back once the contract ends and the product is properly returned. For many people though, the deposit of 1,000 KES for the lamp's battery or 750 KES for the lantern is still unaffordable. A cooperation with a local financial institute that offers micro credits, which can be paid back stepwise, however, allows every customer to disburse the expense of the deposit¹⁶. Therefore and because the O-Hub bills only small fees for the recharging, customers can now afford the products and profit of the approximately 50 percent cost savings¹⁷. A second motivation for the leasing model is the fact that OSRAM remains the owner of the products. This enables an all-inclusive service, which includes the complex maintenance and repair of batteries and lamps. Thus, empty or broken devices can be replaced directly by sound and recharged ones without causing idle time. The service is offered for free as long as customers do not destroy the products on purpose. A final reason is that OSRAM wants to prevent its lamps and batteries, containing toxic materials, to end up on a normal garbage dump. This would not only counteract the project's environmental benefits by polluting the soil, but would also throw a bad light on the company's reputation. For the mentioned motivations, OSRAM decided to remain the owner of the products and to be responsible for disposing and recycling it in a correctly manner.

The Budget

With the decision of owning the lighting devices and to lease instead of selling them, the initial investment per O-Hub increases by 34 percent to a total of approximately €190,000

¹⁴ See Mair, 2009.

¹⁵ 100 Kenyan Schilling (KES) currently equal about one Euro.

¹⁶ See Gregor, 2008.

¹⁷ See Dewald, 2009 and Iken, 2009.

(Exhibit 10). Also, technology and power contribute a major cost block, namely about 40 percent. However, when the hub is finally set up, there are only marginal operational costs, because the sun delivers energy for free and the costs for maintenance and the local staff are relatively low.

Initially, the budget for the pilot project was €1.2 million. This included the construction of three pilot hubs in Kenya and one year of operations. Due to the political crisis, repairs and underestimated costs for logistics, however, the total costs increased and additional €1 million were granted to the project¹⁸.

When the first O-Hub started its operations in September 2008, it quickly proved that the business model successfully pursues the triple bottom line paradigm. The project is not only advantageous for the environment and the local customers, but also promises positive financial returns for the second year, if a capacity utilization of 80 percent is achieved. Finally, the social business contributes a major part to OSRAM's and SIEMENS' corporate social responsibility and catches great attention in the media.

The Products

With the O-Hub and the leasing concept, OSRAM manages to imitate the only USP of kerosene-based lighting namely the ability to be sold in small portions overcoming income, maintenance and distribution constraints. Furthermore, kerosene-based lighting has several crucial disadvantages in comparison to OSRAM's products being charged with solar energy: firstly, it emits great amounts of CO₂, which is not the case with solar energy. Secondly, as the kerosene price shows a great correlation with the oil price, it gets increasingly expensive, and households have to spend more and more of their income on it. In the contrary to that, people can calculate with stable and low prizes when they use OSRAM's devices, which cost only half the prize of the kerosene solution, because they do not heavily depend on other factors than the sun. Furthermore, while OSRAM's products are completely safe, using kerosene for lighting is dangerous, because of the open flame risking fires and substantial health damages through toxic smoke. A final advantage of the OSRAM products is the higher lighting quality in comparison to kerosene-based lighting.

Currently, the social business' product portfolio consists of two illuminating products, namely the O-Box in combination with the O-Lamp and the O-Lantern, a water treatment system, which produces purified drinking water, as well as a mobile phone charging station. These products were all launched during the first year and help local people at the bottom of the pyramid to satisfy basic needs and to tremendously increase life quality.

The O-Hubs most important product is the O-Box, a rechargeable battery, together with the O-Lamp (Exhibit 11). This combination illuminates small houses, restaurants and shops for approximately 18 hours. As it is water and dust resistant, as well as comparatively inexpensive, it is the perfect solution for the local conditions and therefore attracts many diverse customers ranging from normal housewives to fishermen. The second illumination product is the O-Lantern (Exhibit 12) which has an integrated rechargeable battery and is therefore easy to carry around and perfect to use in small households. The mobile charging

¹⁸ See Iken, 2009.

station (Exhibit 13) uses the O-Hub's abundant energy to recharge mobile phones within electricity of higher quality than any other local alternative and therefore supports the lifetime of the mobile phones. Finally, OSRAM offers drinking water (Exhibit 14), rain water that is purified via different filtering and illuminating processes and therefore free of any bacteria and viruses.

Customers and Communication

Customers

As already described, OSRAM's off-grid project targets people living at the BOP in rural villages, having no access to the power supply or to clean and safe drinking water and living from very low and irregular incomes.

For these people, the O-Hub represents a possibility of satisfying a basic need. Therefore, the hub targets all people who need electricity for their daily lives or jobs, but did not get it before. This makes not only households and fishermen, but also restaurants, farms, and shops to OSRAM's clients, because they see that less expensive light and energy imply longer business hours and more customers, resulting in higher revenues. This effect was already proven within the first weeks of the O-Hubs' existence¹⁹. Consequently, the O-Hub also supports self-employment, the most efficient way of escaping poverty, and improves families' asset bases and therefore an area's overall economy.

Communication

From the beginning, OSRAM was thinking about an effective marketing strategy for its O-Hubs. As normal media such as radios, TVs and magazines lack in the areas around the O-Hubs, usual advertisement would have been very ineffective. Seeing the local community as an elementary part of people's lives, OSRAM decided to build its approach upon the impact of the word of mouth. Therefore, it firstly chose popular and inquisitive opinion leaders among the fishermen and convinced them of the products' benefits. Due to their business thinking and the immense cost block the kerosene consumption represented, they quickly recognized the saving potential, as well as the positive impact on their daily income. As a consequence, other fishermen saw and heard of the products' benefits and more and more of them became O-Hub customers. Today, fishermen still represent OSRAM's greatest customer group. Households and others, on the other hand, are more reluctant and harder to convince. Therefore, OSRAM employs people who walk from door to door, demonstrating the products' benefits by calculating the cost advantage and explaining the increased security through the eliminated fire risks and health damages caused by toxic gases.

Assessment of the Project's First Year

OSRAM's Strategy for the First Year

Looking at the social business' first year, OSRAM is very satisfied with the pilot phase. Initially, it did not have great expectations concerning the project and understood the pilot phase more as a feasibility study testing the market, the demand and the fit of the products.

¹⁹ See Dewald, 2009.

Even though the “Energy for All” project is OSRAM’s first social business, it instantly followed some major recommendations for a successful social business that can be found in the literature. Through cooperation with a local financial institute, it supports the locals’ buying power and assures that people are able to receive a credit in order to afford the rental rate and the charging fees for their products. Secondly, OSRAM innovated along the whole value chain, used new technologies and tailored solutions that fit the local habits and the environment, because it saw that its normal devices were not adequate for the different needs, infrastructures, environmental conditions, culture and habits. By reviewing its products and by creating a new business model, it is now able to meet the challenges of the bottom of the pyramid market in Kenya. Consequently, it offers high quality products, focusing on functionality and sustainability, for a price that is affordable for the people living at the poverty line. In addition, it takes care of the proper disposal of its recyclable products.

Performance Evaluation

Like in any of its other businesses, OSRAM also has to evaluate its social business in order to decide upon its future. However, a social business’ profitability is hard to measure, as it seeks more than just financial profit. OSRAM’s primary goal was founding a social business that acts along the triple bottom line, which means maximizing social, environmental and financial profit. In order to assess whether it achieved its aim, social and environmental, as well as financial profits are assessed separately and then summed up.

Social Profit

Firstly, the social business affects people by creating benefits for the community, its employees and its customers. Already during the construction phase, OSRAM was anxious to employ local companies using local material and employing local workers. Also nowadays, Thames Electricals, the Kenyan firm that is operating the O-Hub, only engages local staff as technical experts, security and sales personnel. Thus, the workforce is able to learn from OSRAM experts in the beginning so that the know-how concerning the products, the installation and business know-how is completely transferred (Exhibit 15). Moreover, OSRAM tries to avoid importing from Germany, but rather to source from the African surrounding, which reduces local poverty by stimulating production.

Consumers can not only benefit from OSRAM’s products because of lower costs, but also for the following reasons. Firstly, light and energy represents a means for work and education. Thus, children having to work during daytime are now able to study in the evening with high quality illumination, which may help reaching higher educational levels. In addition, the products support longer business hours and ideally more revenues. Thus, the O-Hub creates an infrastructure that has not been there before and helps the poor to being able to improve their situation themselves.

Finally, OSRAM’s products contribute to health and safety through clean energy and water. During the first year, OSRAM has seen enough demand and customers accept and even appreciate the O-Hubs products. Within that period, OSRAM managed to distribute about 3,180 products that were already recharged about 88,000 times across the three hubs. This equals a CO₂ abatement of approximately 400 tons.

Obviously, the total social profit of the project has various social and environmental sources, and is therefore nearly impossible to be put together and finally to be objectively calculated by means of a standardized measure such as e.g. the social return on investment.

Financial Profit

Looking at the financial benefit, OSRAM made a new experience. Before having started the social business, OSRAM did not think about any marketing effects the project might bring along. Nevertheless, newspapers and magazines became more and more interested and published articles about it. When calculating how much money OSRAM would have spent on marketing in print media in order to reach the same level of publicity, the company found that the equivalent value for the marketing expenses would have been €1 million. Being stunned by this remarkable effect and the attention the project draws upon itself and OSRAM, the company decided to place the project more specific, because it started to see this as another payback of its social business.

Research has found a positive correlation between social activities and the financial profit of a company, as well as the fact that consumers are willing to switch to companies engaging in social and environmental activities. Bearing in mind those two findings, one can only assume that the social business also convinces new consumers in the developed world to buy OSRAM products and thus stimulates sales. Furthermore and due to the social business, OSRAM gained valuable know-how in areas, where it did not have expertise before, such as water, battery and solar technology. These technologies will play a major role in the next few years, and the new knowledge may offer OSRAM a golden business opportunity, which it would miss out otherwise.

As showed in Exhibit 16, every O-Hub recorded losses during the first year. However, if everything turns out as calculated and the social business manages to lease more of its products and to hit the critical capacity utilization of 80 percent, first returns are expected for the second year, which would result in an amortization period of roughly 8.5 years.

During the first year, the average capacity has constantly grown, but it is still around 50 percent and subject to a strong cyclical volatility, having a low bottom point every four weeks (Exhibit 17). This is because fishermen do not go fishing during the week of full moon and therefore do not need to recharge their O-Boxes, resulting in a tremendous decline in sales. Therefore, OSRAM needs to find a way to smoothen the volatility and to lift the lowest points in order to achieve the critical value.

Assessing the Products' Performance

In its mobile charging station, OSRAM does not see an important means for neither substantial revenue generation nor for further growth. In fact, it quickly gained a lot of customers, but then stagnated and stabilized on a constant level. Nevertheless, the charging station attracts a lot of foot traffic, because customers understand that charging their phones in the O-Hub with constant electrical flows is better for the life-time of their batteries than any other option. Therefore, the O-Hub has emerged to the number one mobile charging destination in the entire region and is famous for its high quality mobile charging. Thus and even though OSRAM is not able to generate important revenues with it, it is a good mean to attract customers and to cross sell other products, but also to serve a basic need and to use the abundant energy effectively.

Of the total sales, the charging station and the purified water only hold a 10 percent share. However and in comparison to the former, OSRAM faces an immense demand for clean and safe drinking water and expect a great revenue potential. Hence, it plans to expand its water business to the second main pillar in its product portfolio and to make it another top seller. This undertaking, however, still faces various difficulties: as the O-Hubs are located close to the Lake Victoria, many local people feel that they have enough water in close proximity and therefore do not understand why they should buy clean water instead.

The O-Box in combination with the O-Lamp was certainly the top seller in OSRAM's product portfolio during the first year. In the beginning, initial results had shown small maintenance issues and technical adjustments, but after minor improvements have been made, the robust water and dust resistant O-Box and O-Lamp are the perfect solution for the rural use. Within the first 12 months, OSRAM had more than 1,900 O-Boxes in circulation and found that not only fishermen, but more and more households, restaurants, shops and farms used it for illumination and as energy source for other electronic devices.

The first-year result for the O-Lantern was less successful, because OSRAM faced major technical problems concerning quality and lifetime of the batteries. The necessary adjustments and improvements in order to fit to the rough surrounding took longer so that the lantern is not long on the market yet. Hence, it is still less known and less popular, but OSRAM expects a great demand and is confident about the lanterns' future.

Future Challenges and a Possible Roll-Out Plan

To summarize the first year, the social business reached its initial aim by getting to know the market and its customers properly, to build up new infrastructures and to develop adequate products fitting to BOP customers. Above that, it was able to generate a considerable social profit not only affecting its customers, but also the environment and the community.

Also, OSRAM was confirmed that there is a great demand for its products and it is therefore conducting minor product improvements in order to better tackle customers' needs. If it succeeds, OSRAM aspires to constantly hit the critical capacity utilization of 80 percent and to equalize the volatility of the demand for the second year. Hence, it would be able to cover its cost and to generate first profits, resulting in a compliance of the triple bottom line paradigm.

Overall, however, an objective evaluation of the project's total profit was not conducted yet. This does not represent a major issue for the small-scaled pilot phase, but may become inevitable for any expansion using more resources and therefore becoming more meaningful within the company. Additionally, such an evaluation might add credibility and competitiveness to the social business' status within OSRAM.

After the successful trial phase, expansion would be one logical way to continue the project. Nevertheless, this would impose several difficulties upon OSRAM. Firstly, an expansion requires own local organizational structure with an own administration, because more O-Hubs need too much resources and would become too complex to manage from OSRAM's headquarters in Germany. The profitability of such an independent venture, though, highly depends on the number of O-Hubs, in order to cover overhead costs and administration with the small revenue streams that are earned with the products. Overall, new hubs and building own organizational structures require very high investments, e.g. about €4 million for the first few five years for ten new hubs. These are assets with long pay-back periods and that

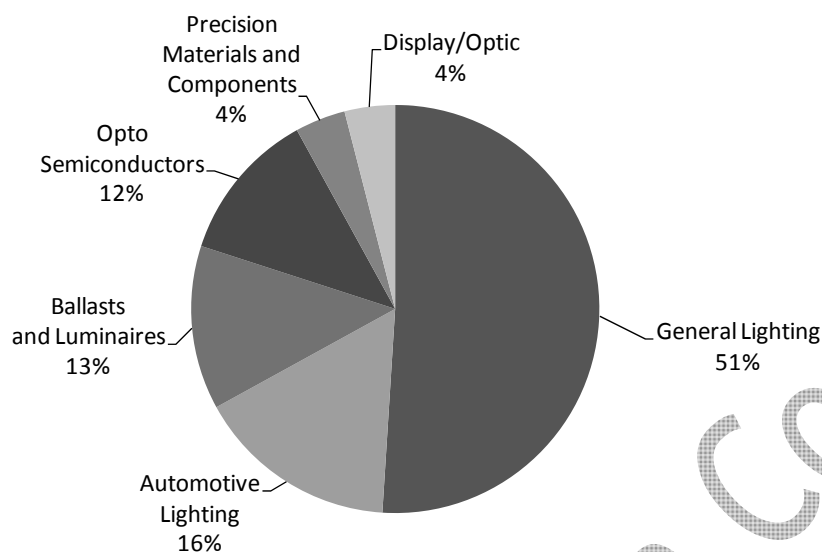
require more standardization of products and processes. Secondly, these assets are also urgently needed for other projects within OSRAM (especially during the financial crisis), which promise higher financial returns. However, expanding the project and building more O-Hubs, would tremendously boost the project's social profit, as well as all the other positive side effects, which were already recorded during the pilot project.

Suggested Questions for Class Discussions

1. What do you think is the predominant logic of MNCs as it relates to BOP? Is it reasonable nowadays-why yes or why not?
2. Why are social businesses gaining importance for MNCs to access the BOP? Which of these reasons apply to OSRAM?
3. What do you think are the "best practices" of managing such a project other companies could learn from? Is there something OSRAM could improve in the future?
4. Should OSRAM continue the project? Why yes why not? In which form?

Exhibits

Exhibit 1: Worldwide sales by products in 2008



Source: Annual Review, 2008. Available at www.osram.com.

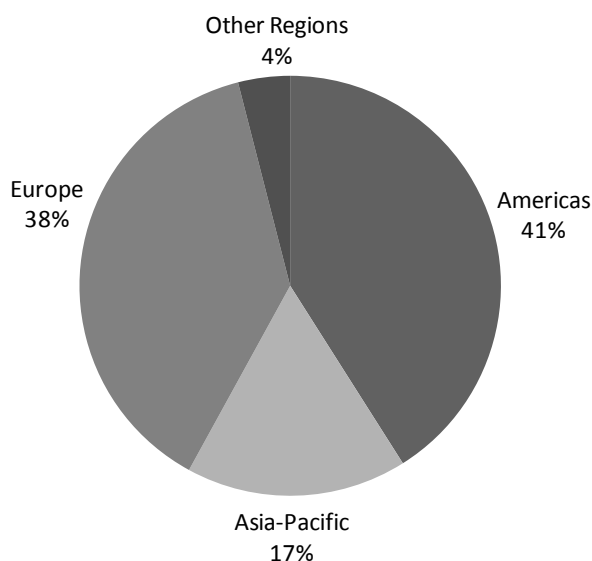
Exhibit 2: Five Year Overview²⁰

	2005	2006	2007	2008	2009
Sales (in millions of EUR)	4,300	4,563	4,690	4,624	4,036
Change from previous year/ adjusted for currency effects	+1%	+6%	+3%	-1%	-13%
Capital expenditure (in millions of EUR)	286	296	284	386	182
Group profit (in millions of EUR)	465	481	492	401	89
Employees (on 9/30; excluding trainees)	38,383	40,307	41,222	43,556	39,396

Source: Annual Review, 2009. Available at www.osram.com.

²⁰Assessment based on US GAAP until fiscal year 2007, change to IFRS starting with fiscal year 2008.

Exhibit 3: Worldwide sales by markets in 2008



Source: Annual Review 2008. Available at www.osram.com.

Exhibit 4: Other successful social businesses

The idea of social businesses is relatively new and has developed since the technology boom in the 1990s. Nowadays, it has emerged to a trendy expression, which can be heard everywhere and suddenly new journals, competitions and courses at universities are addressing that issue.

The unchallenged role model of social businesses is the Grameen Bank, which lends micro credits to the poor. It already works in 37,000 out of a total of 68,000 villages in Bangladesh and its credits amount to \$2 billion²¹. The founder, Muhammad Yunus, who received a Nobel Peace Prize for his work, founded further organizations, such as Grameen Cybernet, Grameen Shakti and Grameen Phone. They all started as not-for-profit organizations, but were quickly converted into social businesses not only addressing social and environmental issues but also being financially independent²².

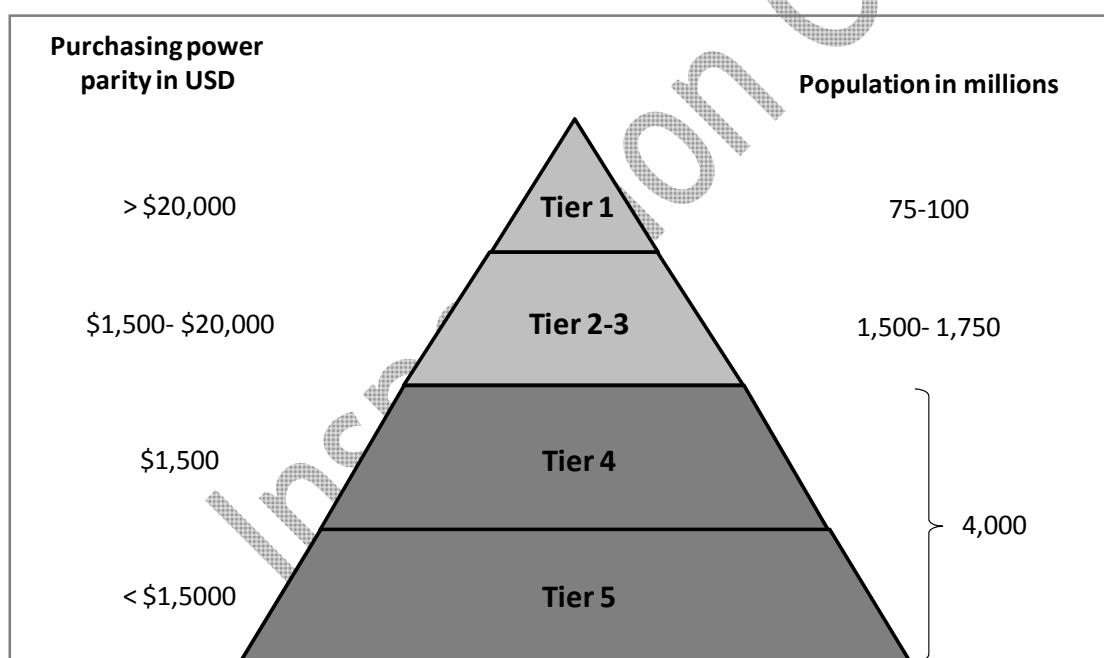
A second example is BSH Bosch und Siemens Hausgeräte GmbH, a worldwide operating company for household appliances. It saw the need for safe, environmental friendly and more effective stoves in Indonesia, where many people cook with kerosene stoves that do not only produce excessive CO₂ emissions but are extremely dangerous too. Therefore, BSH founded a social business, which developed a Plant Oil Stove that is innocuous, more effective and only has a tenth of the CO₂ emissions of a high quality kerosene stove. From the very beginning, it was very innovative in order to assure sustainability and to make profits and to reinvest them into organic growth. By 2012, BSH is going to complete the standardization process and to expand its business concept to other developing countries.

²¹ See Yunus, 1998.

²² See Yunus, 1998.

A final example initiating a successful social business is Allianz Deutschland AG, one of the leading insurance companies in the world. After the Tsunami in the end of 2004, Allianz only faced small financial burdens due to destructions even though it was the century's worst natural catastrophe with incredible damages. Since Allianz is one of the largest insurance companies in the world, a huge financial loss should have actually occurred. This revealed a need for structural change, because people, who needed protection most, namely the poorest of the poor, were not insured²³. As a solution Allianz found a social business offering affordable micro insurances, which are adjusted to the locals' major risks. Thus, for example, it has life and accident insurances, costing a premium of €1.5 and paying for accidental deaths or flood damages a maximum of €380 and €75 respectively- a fortune and a lifesaving measure for people living at or below the poverty line²⁴. After its fourth year, the social business counted about 3.5 million customers and expects a further future growth²⁵.

Exhibit 5: The economic pyramid

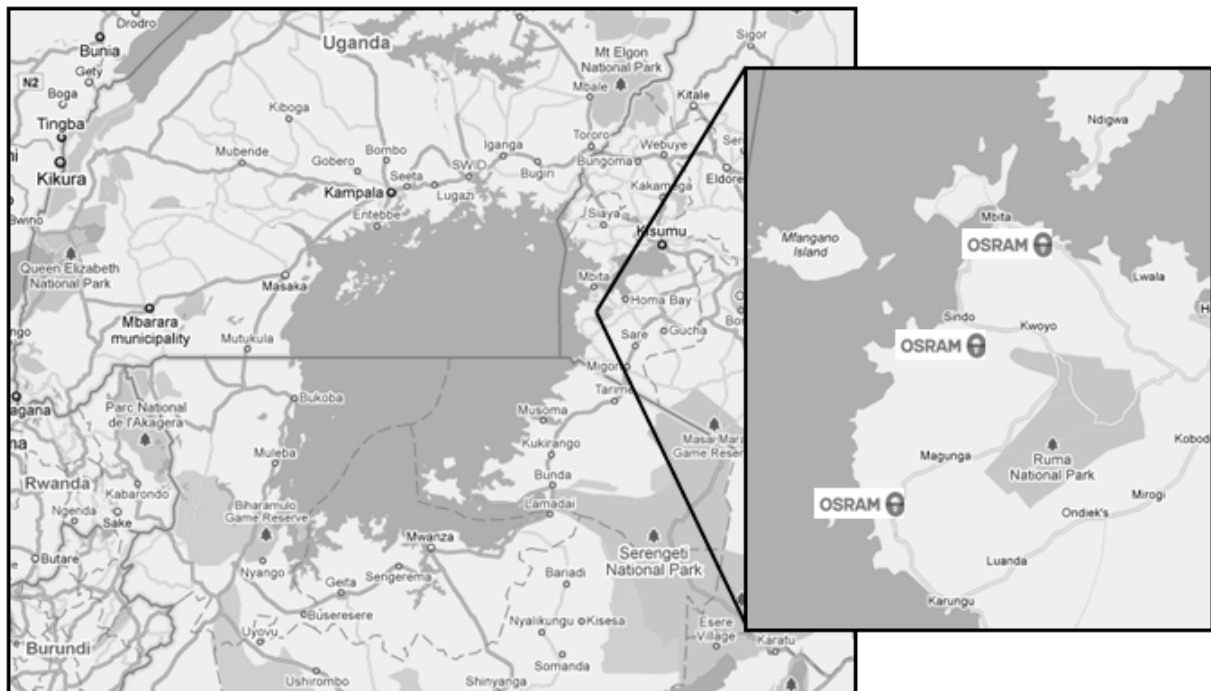


Source: Prahalad and Hart, 2008.

²³ See Jarke, 2008.

²⁴ See Jarke, 2008.

²⁵ See Anthony, 2009.

Exhibit 6: The first three O-Hubs around Lake Victoria

Source: Google Maps, 2010.

Exhibit 7: Fishermen using OSRAM products for night fishing**Exhibit 8: The O-Hub with solar panels and water tanks**

Exhibit 9: The O-Hub's O-Box and O-Lantern charging station

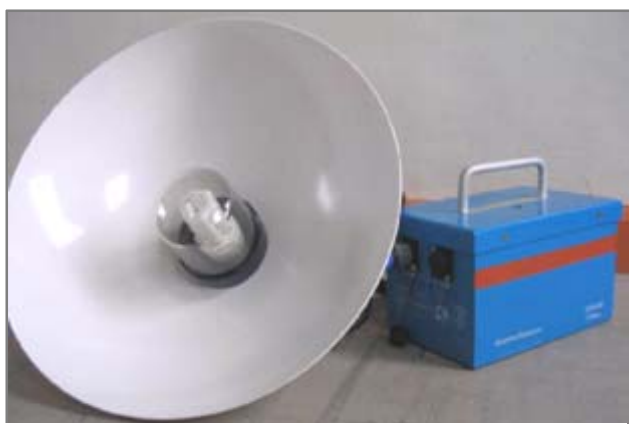


Exhibit 10: Initial investment of an O-Hub

Initial Investment per Hub	K€
Land, Construction and Installation (incl. Labour)	36
Power and Tech. Parts	76
Phone Charging Station/ Water Treatment System	18
Lighting Products	65
DtC (Design to Cost)	-3
TOTAL	192

Exhibit 11: O-Box and O-Lamp

The O-Box, a 4.5 kilogram heavy metal box, contains a rechargeable battery made out of plumb²⁶. Together with the O-Lamp, an energy saving lamp, these two parts represent the core product of the off-grid project. The O-Lamp is dimmable and has a 6W and a 11W-output level, which can spend light up to 18 hours²⁷. Especially with the higher output level, the lamp gives enough light and is the perfect solution for fishermen, small restaurants, hotels and shops. In addition, two plugs on each side of the O-Box allow customers not only to use it for illumination, but also to supply other electrical devices such as fridges, mobile phones, TVs, radios or a second O-Lamp with energy. Adapted to the local customs and



needs, OSRAM developed the O-Box to be water and dust resistant, as well as easy to use. Thus, it is now perfectly suitable for night fishing and working in other rough conditions, and fishermen as well as housewives quickly understand how to handle it.

Every O-Hub has an inventory of about 1000 O-Boxes, which cost about €80 and need about three hours to be recharged²⁸. The safety deposit for leasing this

Source: Source: Mair, 2009, p. 79.

²⁶ See Dewald, 2009.

²⁷ See Mair, 2009.

²⁸ See Mair, 2009 and Rybak, 2008.

combination is 1000 KES and customers have the possibility of financing this amount via a micro credit. Exchanging an empty storage battery with a full storage battery costs 75 KES resulting in an average price per hour of 4.2 KES for a dimmed light and 7.5 KES for the full light²⁹.

Exhibit 12: The O-Lantern



The O-Lantern is the second illumination product in OSRAM's product portfolio. Instead of being plugged to the O-Box, the O-Lantern has an integrated rechargeable battery. Thus, the lantern can be brought back to the O-Hub and can be replaced by a charged one if the battery is empty. In comparison to the O-Lamp, the O-Lantern is rather intended for small households and small shops. With a 7W compact fluorescent lamp, the O-Lantern shines about eight hours and with a low energy LED light source it works considerably longer still spending enough light to read a book³⁰.

The safety deposit for the O-Lantern amounts to 500 KES and here again, people have the opportunity to finance this amount with a micro credit. For exchanging an empty lantern with a charged one, customers have to pay 50 KES, resulting in an average lighting price of 6.25 KES per hour³¹.

Source: Mair, 2009, p. 80.

Exhibit 13: The mobile phone charging station

At the moment, mobile phones are the latest trend in Africa because they are the only medium that is able to connect rural villages having no ground line. Thus, they recorded a double digit growth rate in Kenya and other African countries in the last few years helping the local economy to grow³².



When NOKIA, the market leader with a 70 percent market share in the mobile phones sector in Kenya, heard about OSRAM's social business, it approached the company and proposed a deal. As it does not sell its products in Kenya itself, but through independent distributors, NOKIA has no possibility to establish own infrastructures or to get to know the market at all. To improve its situation and to understand its customers and their needs, NOKIA suggested establishing an "Official NOKIA Recharge Station" in the O-Hub. As a consequence, it pays a share of the marketing expenses for the O-Hub on one hand, while it receives information about

Source: Mair, 2009, p. 84.

²⁹ See Mair, 2009.

³⁰ See Gregor, 2008.

³¹ See Mair, 2009.

³² See Gregor, 2008.

the Kenyan market and OSRAM's experience on the other hand.

The idea for the charging station is that people bring their empty mobile phones to the O-Hub and get it recharged for 15 KES. Concurrently, the hub can charge 48 mobile phones³³. The alternative for local people possessing a mobile phone and having no access to the electricity grid is going to other mobile phone charging stations that use small diesel generators. This, however, is more expensive and of lower quality.

Exhibit 14: Purified Water



In 2009, about 2.4 billion people, 50 percent of the world population, did not have reasonable sanitation and out of them, about 1.1 billion used unimproved water sources. This number is forecasted to rise to 2.3 billion by 2015, Africa accounting for a third. Unclean water is the reason for many child deaths and therefore the reduction of the number of people suffering from the effects is one of the Millennium

Development Goals³⁴.

OSRAM identified the short supply of safe drinking water in Kenya very quickly and found that this was a further challenge it could easily address with its solar technology. It therefore developed a water purification station that produces 3000 liters of clean and safe drinking water per day³⁵. Sterilized by OSRAM Puritec UVC lamps instead of chemicals, the water keeps its usual taste and does not adapt a chemical flavor.

The rain water from the panels and the roof is collected in three tanks with a capacity of 6000 liters per tank. OSRAM filters the water in several steps in order to eliminate the viruses and bacteria. The received drinking water is then stored in another tank being illuminated by a UVC- lamp so that the growth of microorganisms is prevented and clean water can be pumped into the sales room, where it is sold for 2 KES per liter³⁶.

³³ See Mair, 2009.

³⁴ See UN, 2000.

³⁵ See Gregor, 2008.

³⁶ See Mair, 2009.

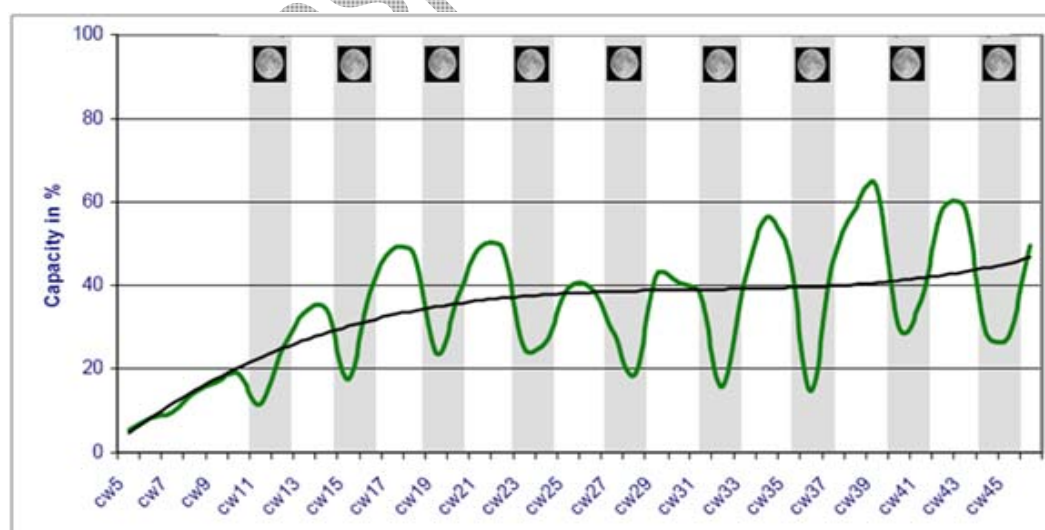
Exhibit 15: Local workers constructing the O-Hub under guidance of OSRAM experts



Exhibit 16: OSRAM's Financial Calculation per O-Hub for the First Five Years

One Hub view in K€					
Year	1	2	3	4	5
Initial Investment	192	0	0	0	0
Sales	119	174	191	206	219
Profit/ EBIT (hub)	-11%	9%	14%	15%	19%

Exhibit 17: Average capacity utilization for the lighting devices



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