

Giving rural retail shops access to products that improve their customers' lives.
"We deliver the goods"

## BUSINESS PLAN

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## Executive Summary

## PROBLEM: Gap Between Essential Technology Suppliers and Retail Demand

Many organizations design solar lanterns, water filters, and other life-improving essential
technologies for homes in developing countries. However, these products rarely benefit end users at scale because the rural last mile lacks effective distribution, marketing, and service.

Meanwhile, $90 \%$ of the \$260B annual retail spending in India takes place in 14M small, low-margin, family-run retail shops. Retail shops don't sell essential technologies because they don't know about them, where to find them, or how to service them. Essmart offers a solution. Essmart delivers the goods.


SOLUTION: Essmart Bridges the Distribution Gap
Essmart is an essential technology distributor with an embedded retail presence.
We fill the distribution gap by sourcing high-quality existing technologies and distributing to Essmart sections rural retail shops. Shop owners stock our catalogue and demonstration products, place order biweekly, and pick-up products at our centralized warehouse or have them delivered to their shops.
Essmart offers rural retail shops differentiation, increased revenues, and inventory management skills. Our partners fill the knowledge and service gaps by providing marketing materials and training rural technicians.


Essmart bridges the distribution gap to local retail shops.

## MARKET AND COMPETITIVE ADVANTAGE: Delivering Technologies at Scale

India's rising median disposable income and strong transportation infrastructure make it an ideal first market. India has over 14M local retail shops that reach 192 million households, which each spends $\$ 700$ to $\$ 1,350$ on retail per year. Essmart targets villages around smaller cities to distribute essential technologies. We are building out our presence in Tamil Nadu.
Current distribution options rely on donor funding, focus on a single sector, require investment in training door-to-door salesmen, and are not scalable or sustainable. In comparison, Essmart is:

1. Scalable: We leverage the existing rural retail shop network.
2. An aggregator: We lower customer acquisition costs and appeal to more customers.
3. Connected: We maintain connections with US and global innovators to keep a step ahead for new product innovations.

## FINANCIALS: Maximizing Revenue and Minimizing Working Capital Requirements

Essmart generates revenue through:

1. Markups on products sold to retailers, which are purchased in bulk.
2. Last-mile delivery to rural retail shops.
3. Selling rural market data, including consumer preferences and technology failure reports, to manufacturers.

We maximize margins by using mobile phone technologies to lower distribution costs and by partnering with local organizations for marketing and servicing. To minimize cash tied up in inventory and accounts receivable, Essmart fills pre-orders from retailers who pay on delivery, penalizes retailers who do not pick up/receive products on time, buys on trade credit from suppliers, and implements inventory buy back contracts.

## Pro Forma Financial Metrics:

| (\$000s) | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Revenue | 28 | 1,353 | 9,074 | 29,902 | 69,449 |
| EBIDTA | $(57)$ | $(244)$ | $(610)$ | 1,040 | 5,067 |

MANAGEMENT TEAM: Putting Research and Engineering Experience into Action


Prashanth Venkataramana (Cambridge I India-based): Engineering and logistics, sales, and marketing in India.

Robert Weiss (Princeton / HKS): Energy technology distribution in China, TimorLeste and Cameroon.

Jaya Movva (Tufts Fletcher): Financial services in Dubai, development work in Tanzania and Haiti.


Jackie Stenson (Co-Founder, Harvard / Cambridge): Essential tech engineer \& dissemination in 11 African countries.

Taylor Matthews (Yale / MIT SIoan): Investment banking, management consulting, and venture capital.

Ben Younkman (Tufts Fletcher):
Community development and documentaries in South America.

Jen Zhu (Harvard): Social enterprise research and US-based marketing and social media.

## TRACTION: Past Progress and Future Expansion Strategy

After founding in October 2011, Essmart surveyed over 200 retailers in southern India. We chose two stores in Pollachi, Tamil Nadu to participate in Phase One of our proof-of-concept. Two retail shops sold 17 Essmart products in one week. For this pilot phase, Essmart was supported by the MIT Lemelson Foundation, MIT Public Service Center, MIT International Development Initiative, MIT D-Lab, and MIT Department of Urban Studies and Planning. In Spring 2012, Essmart is running Phase Two of our proof-of-concept as part of the Harvard President's Challenge, and won the Audience Choice Award at Harvard's 2012 Social Enterprise Conference.
In Summer 2012, Essmart will begin year one of operations, with the goal of establishing distribution channels to 65 rural shops by year end. In year two, Essmart will expand its geographic presence, continue to penetrate the customer base, and expand its catalogue.

## Company Overview: Essmart

## Problem: Disconnect between Essential Technology Manufacturers and Rural Retail Shops

The technology manufacturer d.light, based in Delhi, Northern India, designs high quality solar lights that cost on average US\$15 and are sold to low-income customers in rural, off-grid areas. d.light's exclusive use of door-to-door salesmen has failed to achieve their desired market penetration and social impact. As most of their human and financial resources are invested in product design and manufacturing instead of distribution, it is difficult for d.light to independently overcome the fragmented distribution lines that snake across the nation. Similar to d.light, there are hundreds of organizations that make essential life-improving technologies but struggle to ratchet up their scale and grow their customer base.

Meanwhile, 1,500 miles away in Pollachi, Tamil Nadu, Southern India, Javed owns a 400 square meter shop on a main road with 10 other local retail shops. His shelves are crammed full with Coke bottles, toiletries and other consumable goods. Javed's store gives him a yearly profit of US $\$ 2,500$, and every week he spends minimum US $\$ 5$ and nearly a full day traveling to Coimbatore to restock his shelves. His customers are local farming households that spend US $\$ 1,000$ on retail per year. Javed is looking for ways to distinguish his business from local competition and increase his income. There are 14 million shop owners like Javed in India, and for $90 \%$ of India's population, these local retail shops are their lifeline to consumer products.

There is a gap between d.light and Javed- a rift between the suppliers of essential technologies and local retail shops that could sell their products. Javed does not know about these essential technologies, where to find them, or how to service them. Essmart offers a solution. Essmart delivers the goods.


Figure 1: The gaps between suppliers and local retail shops.

## Solution: Essmart Bridges the Technology Gap with Innovations in Distribution

Essmart is an essential technology distributor with an embedded retail presence in India's rural shops, beginning in Pollachi, Tamil Nadu. Our model focuses on the distribution gap by combining process innovations in sourcing high-quality technologies and distributing to rural areas. We reach end users through the extensive retail shop network that services local communities.

We work with partners to help fill the marketing and servicing gaps, but this is only in support of our core focus on distribution. See Partnerships that Offer Additional Customer Value Propositions for more information on how these partnerships support Essmart's retail shops.


Figure 2: Where Essmart fills in the gaps.

## The Current State of Distribution

Currently, manufacturers directly sell essential technologies into rural areas by hiring couriers to move products from factories to warehouses to door-to-door salesmen. They have found it difficult to scale beyond a single geographical area. As a result, end users have a very small selection of essential technologies to choose from, markets are quickly saturated, and door-todoor salesmen struggle with achieving scaled distribution.

## Essmart's Diverse Product Catalogue

Essmart offers a diverse array of products to customers through a catalogue. In the initial stages of development, our catalogue will focus on 5 to 10 high-quality products with a proven demand (see Appendix 1 for the catalogue first draft). As we grow, our catalogue will adapt and expand in response to local needs to include up to 100 products (see Appendix 2 for future products to be included in our expanded catalogue). In the future, we aim to provide a pipeline to rural markets for new innovative essential technologies, including those developed at programs like MIT's D-Lab and other innovation centers around the world.

## How Essmart Delivers the Goods

Essmart uses field agents to establish relationships with rural stores that carry our products, leveraging an existing network and trusted buying relationship. Essmart incentivizes shop owners to stock our catalogue and demonstration products through opportunities to differentiate themselves, higher profit margins, and skills training. For more information on Essmart's value proposition, see Customer Value Proposition.

Within stores that are typically smaller than 500 square feet, shop owners keep a catalogue and demonstration products in an Essmart-branded section. End users can flip through Essmart's catalogue and try out demonstration products. When an end user wants to purchase an Essmart technology, she notifies the shop owner. The shop owner then places the order with Essmart via mobile phone. This "virtual inventory" is appropriate for rural shop owners who can spare little room in their shops.

Essmart then purchases products in bulk from suppliers, who ship the products to our centralized storage facility in the town nearest to the rural retailers. Shop owners can pick up products at this facility, since they already travel to the city to procure other goods. Alternatively, we can transport the products to rural stores via truck or motorbike.

Since essential technologies are relatively more expensive than other products, the buying process takes more time. Thus, end users are willing to wait a week for their products. Additionally, this process minimizes Essmart's inventory and risk.

We are partnering with Logistimo, an MIT alumnus-founded company that develops mobile phone-based logistics software for small retail outlets in India. Logistimo's software will assist with placing orders, inventory management and tracking, reducing the overall transaction costs of rural distribution. The software works on any Java-enabled phone, which consists of over $95 \%$ of the phones in India. Essmart is exploring the potential of an exclusive contract with Logistimo for rural retail shops.


Figure 3: Logistimo's software allows retail shop owners to manage inventory and place and track orders.

## Step by Step: How Essmart Works



Source: Essmart carefully selects high-quality essential technologies to include in its catalogue. These are selected through the team's expert knowledge and a metrics system developed by MIT D-Lab's technology evaluation program.

Demonstrate: Essmart partners with technology manufacturers to recieve marketing materials and sales agent training. Essmart's sales agents then visit communities' commercial areas to demonstrate products to end users and retail store owners.

Market through a Catalogue: Essmart sales agents forge relationships with local shop owners to establish Essmart-branded sections and provide local marketing materials, including our catalogue and demo products.

Collect Orders from Retailers: Essmart collects product orders from shop owners through a mobile phone application or in person to Essmart's agents.

Purchase from Suppliers: Every purchasing period, Essmart aggregates orders from retailers and purchases essential technologies in bulk from suppliers at discounts of up to $20 \%$. Suppliers cover the delivery costs to Essmart's warehouse, which is located in the city nearest to its shop owners.

Deliver: Essential technologies arrive at the nearest city warehouse and are moved to the rural shops. Shop owners can also pick up products at Essmart's warehouse. Products must be paid for in full on delivery, although we will explore other options to facilitate cash payments.

Sales to End Users: Local shops are responsible for getting technologies to their customers and taking care of payments, whether with cash or credit.

Service: We partner with the Sri Siddhanta Foundation, an India-based NGO, to offer after-sales servicing via SSF's trained rural technicians, which will operate both at our warehouse and at the community level.

Data: Feedback on essential technologies is gathered via SMS surveys and through the service and demonstration centers. This information is invaluable for suppliers, who generally do not receive long-term customer feedback.

Essmart's model is circular and iterative. Data is collected at every step of the process, and this data feeds back into the model so that we can continuously improve our solution.


Figure 4: Essmart's step-by-step solution is a circular process.

## Value Proposition

## Customer Value Proposition

Essmart offers our customers, rural retail shop owners, to following opportunities:

1. Differentiation: By providing shop owners with access to new products, shop owners can differentiate themselves from local competition. Essmart's demo products will stand out, and drive traffic to the shop. This increases the sales of Essmart's products as well as other products in the shop.
2. Inventory management skills: Logistimo's software allows shop owners to better manage their business, which nearly half of the shop owners surveyed in January 2012 indicated as a desirable skill (see Customer Analysis and Surveys: Getting to Know Rural Retail Shops).
3. Increased revenues: With higher margins and better inventory efficiency, local retail owners can increase their net revenues by 30 percent per year in 5 years (see Error! Reference source not found.).

We are also exploring options to further incentivize our customers through an Essmart "Golden Store" Program. This status would be awarded to customers who pay in full on delivery for a certain number of orders, which motivates shop owners to minimize their credit and thus Essmart's risk. Benefits of the program would include free Essmart products for use in their shops, such as solar lanterns that enable them to keep their shop open longer, and access to Logistimo's software for managing non-Essmart inventory. These benefits are both appealing to shop owners and they help Essmart maintain a presence as the front of our stores.

## Partnerships that Offer Additional Customer Value Propositions

Essmart is partnering with organizations to support the marketing and servicing of our product catalogue, which are two additional gaps that retail shop owners face.


Marketing: Essmart is partnering with technology manufacturers to receive marketing materials and training for each product in our catalogue. Our field agents use this knowledge and materials to better demonstrate our catalogue to retail shop owners.


Service: When products fail in rural areas, there are currently few qualified technicians to fix them and ensure that people benefit from their purchases in the long term. End users often bring low-quality, faulty products back to the rural retail shop it was purchased from. The shop owner must deal with returns and refunds. According to our January 2012 surveys, shop owners expressed interest in products with servicing offerings, which will take the burden of returns off of them.
Essmart is partnering with the Sri Siddhanta Foundation (SSF), an India-based NGO, to facilitate warranties that come with some of the products and to offer after-sales service for those lacking warranties. SSF's core competency is in training and employing rural youth, and they will train community-based technicians to assist with servicing and repairs.

## Supplier Value Proposition

Essmart offers our suppliers, essential technology manufacturers, the following opportunities:

1. Increased access to rural markets, including market exposure and the opportunity to scale to over 18,000 communities in 5 years (see Financial Plan and Appendices 3 to 5).
2. Information on valued customer preference data and technology failure analyses, which Essmart compiles by keeping track of inventory, sales, and servicing logs.

## Social Value Proposition

## Essmart's mission is to make life-improving essential technologies available in

 underserved communities at scale so that low-income end users can benefit. We do this by leveraging the existing local retail shop network.By increasing the availability of essential technologies, we enable people to improve their lives and increase their health and productivity. Each technology in our catalogue offers a different social value proposition. For example:

- Solar lamps generate significant cost savings for households that may spend 5 to $30 \%$ of their monthly income on kerosene oil. These families will also have greater access to light for late-night studying and income-generating activities. For a typical farmer, this form of clean energy can pay for itself in as little as six months.
- Water filters enable users to purify their water and reduce their chances of getting waterborne illnesses. This lowers costs of medical treatments.
- Agricultural tools allow farmers to increase their productivity and outputs, and therefore their incomes.

As a company, Essmart's social value proposition is to aggregate these technologies, focusing on developing an effective business model that will enable their dissemination at scale. We vet our technology suppliers to ensure that they develop products with a viable social value. Thus, we enable all of our suppliers achieve their respective social missions.

## Industry, Marketplace, \& Competitor/Collaborator Analysis

## Market Analysis: Huge Potential at the Bottom of the Pyramid

India has an estimated 14 million mom-and-pop retail shops that reach the farthest-flung, rural interior. These local retail shops stock a limited selection of mostly fast moving consumer goods and maintain tight community relationships. They are essentially the portal of commerce for this market segment, as they are the only places where $90 \%$ of India's 1.2 billion citizens - about 192 million households - purchase all of their goods. According to a report by Corporate Catalyst India, retail is one of India's fastest growing sectors, with an annual growth rate of about $46 \%$. Unorganized retail, which primarily consists of local retail shops, is the largest source of employment after agriculture and has deep penetration into rural India. They generate more than 10\% of India's GDP.
The National Council of Applied Economic Research, India splits rural retail shops' customers into two segments (see Figure 5): Aspirer (annual income of US\$2,000 to US\$4,000; typically small shop keepers, farmers, and low-skilled workers in industry and services) and Deprived (annual income of less than US\$2,000; typically low-skilled to unskilled workers, seasonal or part-time employees). According to Indicus Analytics, rural households spend about $8 \%$ of their income on fuel and light and 3\% of their income on durables. Essmart distributes technologies that are designed for these households and fall into these categories. With prices between $\$ 10$ and $\$ 30$, Essmart's technologies fit comfortably within rural households' current budgets.
Essmart's total addressable market size within India is 14 million local retail stores that serve 192 million households. To start off, we are targeting the southern Indian state of Tamil Nadu. In Tamil Nadu, there are 1.3 million local retail stores that serve 18 million households.


* Real per annum

Source: The Great Indian Middle class; NCAER; MGI India Consumer Demand Model
Figure 5: India's Consumer Pyramid

## Customer Analysis and Surveys: Getting to Know Rural Retail Shops

Essmart conducted over 200 surveys in Karnataka and Tamil Nadu, India to better profile our customer, the rural retail shop owner. Surveys were also used to refine our catalogue by gauging interest in a wide selection of essential technologies, including solar lights, cookstoves, and water filters, among others.

After two days of surveying rural shop owners, over 40 have expressed interest in either selling our products (particularly solar lanterns) or carrying Essmart's catalogue in their stores. Summary results from these surveys are given in Table 1.

Table 1: General findings from surveys in Karnataka and Tamil Nadu, January 2012.
General Findings: Northern Karnataka and Southern Tamil Nadu

| Villages surveyed: | Tamil Nadu: Kinathukadava, Udumalpet, Samathur, Anamalai, <br> Meenakshipuram, Thamaraikulam, Kovilpalayam, Govundapuram, <br> Ganapathipalayam, and Odayanulam. <br> Karnataka: Benakanal, Mallapur, Anegundi, Sanapur and Gangawati. |
| :--- | :--- |
| Technology preference <br> findings: | Over 40 shop owners expressed interest in carrying our products or catalogue, <br> especially solar lanterns. <br> Demonstrations and good branding are essential for customer buy-in. |
|  | Retailers prefer to purchase products over US\$10 from a central Essmart <br> showroom. This has motivated our decision to have a nearest-city service and <br> demonstration center. |
| Distribution findings: | Retailers in villages generally purchased their products from bigger retail stores <br> in urban centers 3 to 20 times a month. <br> Shakti Retail, a Hindustan Unilever distributor, only had a presence in one |
| village, demonstrating that the other rural villages still need to be tapped. |  |

## Customer Acquisition

Essmart's plan to sell our technologies to local retail shops will guide our marketing strategy. We envision a two-pronged approached: 1) Use a direct sales force to bring local retail shops onto our platform and 2) create demand and word-of-mouth advertising for our products with marketing demonstrations, catalogues, and in-store advertising.

Our direct sales force will initially be a staff of three per facility. Their initial role will be customer acquisition of retail shops in the surrounding area. As maximum penetration is approached, their role will gradually switch to helping shopkeepers sell products and taking orders. We expect the sales cycle to be $\sim 1$ month from initial contact to stocking of products for willing retailors.

Once a retail shop has signed up to carry the Essmart catalogue, we will then put on product demonstrations in association with our partner suppliers in order to generate awareness and interest in our products. From there, the primary marketing will be done through in-store demo products and storefront advertising.

For retailers that meet certain requirements (e.g., pay cash up front), we will reward them with entry into our "Golden Store" program. Retailers in this program will be offered free products for in-store use, enhanced access to Logistimo software, and trainings on how to improve the key skills they have expressed interest in.


## Competitive Analysis and Advantage: Essential Technology Retailing through Local Rural Shops

Most competitors in rural distribution push fast moving consumer goods (FMCGs), focus on a specific technology sector, and/or use door-to-door village level entrepreneurs (VLEs) for distribution. Unlike Essmart, none of these is a scalable or holistic option for making essential technologies available in rural communities.

Table 2: Essmart's competitor analysis.

| Competitor | Description and Examples | Essmart's Advantage |
| :--- | :--- | :--- |
| FMCG <br> distributors | Distribute fast moving goods such as small soap <br> packets or toilet paper. | FMCG distributors will not invest in <br> marketing and servicing required to <br> make essential technologies |
| successful. |  |  |


| Door-to-door <br> multi-sector <br> distributors | Small technology aggregators that depend on <br> door-to-door salesmen for selling their products. <br> Project Dharma | Door-to-door distributors are not easily <br> scalable, as the salesmen have a <br> limited ability to sell products across a <br> number of regions. |
| :--- | :--- | :--- | :--- |

Compared to these competitors, Essmart has multiple competitive advantages.

1. Essmart is scalable. We leverage an existing network of small business owners who already have tight connections with rural communities.
2. Essmart is specialized. Our expertise is in rural distribution in the developing work, and we focus all our time and resources on this part of the supply chain.
3. Essmart aggregates many existing essential technologies. This lowers the cost of customer acquisition, appeals to a wider customer base, utilizes scope to minimize saturation, and gives end users a choice of brands for different product types.
4. Essmart has internal knowledge about essential technologies. This gives us the ability to manage our risks by selecting high-quality products.
5. Essmart has connections with technology designers in the US and in other countries. This gives us access to innovative products before other distributors know about them.

## Collaborative Analysis: Creating Partnerships to Create Ecosystems for Essential Technology Dissemination

Because there are so many dimensions to the problem of disseminating essential technologies to rural areas, Essmart must create partnerships with like-minded organizations. We have either established partnerships or are in discussions with the following organizations, but are still open to working with other organizations and individuals within India or elsewhere.

Technology Exchange Lab (TEL): TEL is a nonprofit organization based in Cambridge, Massachusetts that provides an online platform where the global community can share and discuss innovative, locally implemented solutions to problems of poverty and sustainability. It is an international network of inventors, engineers, aid workers, entrepreneurs, environmentalists, micro-financiers, and community leaders. Essmart is working with TEL to make its online database of essential
technologies more user-friendly and appropriate for Essmart's needs. We have also begun discussions about joint Essmart-TEL technology demonstrations in rural areas.

Logistimo: Logistimo is a Bangalore-based company founded by an MIT alumnus that addresses the problems of poor supply chain performance in emerging markets. The company produces a mobile phone-based management service that improves logistical performance while reducing costs for retailers, distributors, wholesalers, and manufacturers. The software works on basic Java-enabled phones, which consist of over 95\% of the mobile phone handset market in India. Essmart is contracting Logistimo's logistics software and newly-developed distribution software.

Sri Siddhanta Foundation (SSF): SSF is a Chennai-based nonprofit organization that focuses on village development. Its recent initiative, Gramothan, includes chapters in Bangalore, Delhi, Calcutta, and Mumbai. Gramothan Resource Centers are located throughout India, in the states of Tamil Nadu, Jharkhand, Maharashtra, Orissa, West Bengal, and Uttar Pradesh. Contacts within SSF are presently very interested in bringing essential technologies to villages, which is why SSF serves as a potential collaborator. Essmart would work with SSF to run product demonstrations and to train youngsters that would work in the service and demonstration centers.

## Traction: Past Progress and Traction

## Building a Model and a Team




Thefletcher School
We begin building a strong team and advisory network of students and faculty members from MIT, Harvard, and Tufts.
kopernik

Cogistimo
D-Lab tel
We continue researching rural essential technology dissemination models by talking with people who are trying distrubtion. We also begin talking with suppliers and partners and draft a catalogue.
Proof of Concept in Pollachi, Tamil Nadu, India


After conducting $\mathbf{2 0 0}$ surveys in southern India, we choose two stores in Pollachi, Tamil Nadu to participate in a business model proof of concept. These stores are given demonstration products and an Essmart-appointed contact person. We conduct demonstrations, and all of Essmart's 17 demonstration products sell within one week through the retail shops. Both shop owners express interest in ordering more products as soon as possible.

## Continue Pilot and Launch Full Time

We will continue working with the two shop owners to obtain more feedback and test a rural distribution model. We will monitor sales, product demand, and the effectiveness of this virtual inventory model throughout the spring.

In Summer 2012, we will establish our Pollachi warehouse and begin year one of operations, with the goal of creating distribution channels to 50 rural shops. We will focus on distribution and work with a limited catalogue of proven technologies (see Appendix 1). In year two of operations, we will scale our customer base, adapt and expand our catalogue according to local needs, and develop after-sales service training programs.

## Our Support

Financial support for our January 2012 trip to India came from:

- MIT Lemelson Foundation
- MIT Public Service Center
- MIT Intl Development Initiative
- MIT D-Lab
- MIT IDEAS Global Challenge
- MIT DUSP

In February 2012, we pitched in front of a 1000+ person audience at Harvard's Social Enterprise Conference and won the Audience Choice Award.

## The Team: We Deliver the Goods

## Core Team



Diana Jue (co-founder) is a Master's student in international development at MIT, where she also obtained her bachelor's degrees in economics and urban studies. She focuses on technology dissemination and has traveled extensively in southern India. Diana works on business model development and operations management and will move to India in summer 2012.


Jackie Stenson (co-founder) studied engineering at Harvard and Engineering for Sustainable Development at the University of Cambridge. Jackie has extensive experience both designing essential technologies and studying dissemination models for low-income communities in 11 African countires. Jackie works on business model development and technology sourcing.


Taylor Matthews is an MBA student at the MIT Sloan School of Management. He focuses on the intersection of technology and finance and how both can be applied in the developing world. With a background in investment banking, management consulting, and venture finance, Taylor focuses on the financial aspects of the business and provides input into the overall business model.

Ben Younkman studies International Business at the Tufts Fletcher, focusing on social enterprises in emerging markets. He is experienced with community development, documentary work, and logistics from nearly seven years working in Latin America, the Caribbean and China. Ben focuses on Essmart's distribution logistics and produces media content and marketing materials.


Prashanth Venkataramana has a background in engineering and studied Engineering for Sustainable Development at the University of Cambridge. He is from Pollachi, Tamil Nadu, India, lives in Chennai, and works in sales and marketing in the glass industry. Prashanth works on technology evaluation, building local connections, and creating customer value propositions.

Rob Weiss is a Masters student at the Harvard Kennedy School. His studied clean tech policy and economics, focusing on the deployment of renewable energy in China. Rob has also worked in Cameroon and Timor-Leste, the latter spent assessing the impact of a solar lantern distribution project in off-grid villages. Rob focuses on supplier relations and business strategy.

## Advisors

Joost Bonsen (MIT) is a Lecturer of Development Entrepreneurship in the MIT Media Lab. Bonsen is an innovation ecologist focusing on global transformations, and is co-founder of the Howtoons Project which distributes educational cartoons.
Partha Ghosh (Tufts University) is a management consultant, policy advisor, and professor with an extensive record of solving strategic, operational, and complex organizational issues in technology-based industries. Ghosh holds degrees from IIT Kharagpur (India), MIT, and HBS.
Michael Norman (SoChange) is the Founder and CEO of SoChange, a social enterprise that enables citizens to improve their communities and their environment by rewarding good business through their purchases. Michael received his MBA and MCP from MIT.

## Financial Plan

## Revenue: How Essmart Makes Money

Essmarts expects three revenue streams, with the latter two developing after our distribution infrastructure is in place. They are the following:

1. Sales of essential technologies: Products are purchased from manufacturers at a bulk discounts. Essmart sells to retailer shop owners at 20\% mark up, who then sell to end users at 20\% mark up. In our January 2012 pilot, shop owners received an 8\% margin and were satisfied with this amount, so we assume a $20 \%$ mark up to be more than sufficient. For a product that retails to end users at US\$15, Essmart keeps US\$2 to cover costs and generate profits. See Figure 6 for a detailed cost breakdown.
2. Last-mile transportation for products: Currently, many shop owners travel to the nearest city to pick up most of their goods, and they have expressed an interest in purchasing more expensive goods from urban centers. Shop owners can therefore pick up essential technology orders from Essmart's nearest city warehouse, or we can provide delivery to their rural shop for a small fee.
3. Sales of rural market data to manufacturers and other interested organizations: Essmart will sell rural market data, including consumer preferences and technology failure reports, to manufacturers. This valuable information is currently not available, and our diverse technology catalogue and tracing of sales allows us to collect this data.
Essmart maximizes revenues by using mobile phone technologies to lower the cost of distribution and by partnering with nonprofit organizations for marketing and after-sales service. Eventually, our scalable model will be replicated in multiple regions of India and Africa, where Essmart's team members have prior experience.

Cost breakdown for single product (US\$)


Figure 6: Cost breakdown for each product, based on an average product price of US\$15 and a 30\% supplier discount.

## Financial Projections

See Appendices 3 to 5 for Essmart's income statement, balance sheet, and cash flows for years one to five. Based on this model, we break even in year four (2015). It should be noted that our financial model currently only includes our first revenue stream, revenue from product sales. Once the additional revenue streams are added to the model, we expect to break even at a sooner date.

Table 3: Essmart's breakeven analysis.
Number of Products Sold
Free Cash Flow


## Cost Controls

Essmart plans to aggressively collect data on all of our costs to minimize leakage. Diana Jue the COO will be primarily responsible for monitoring this data and acting on it to prevent budget overruns. In the event of serious budget overruns, the leadership team will discuss financial options available and potential solutions.

## Capital Considerations

Essmart will need to raise between $\$ 1 \mathrm{M}$ and $\$ 5 \mathrm{M}$ to reach scale quickly, depending on assumptions. The primary drivers of equity required are product penetration, retailers covered, and DSO, DPO, and Inventory days. Efficiency is absolutely essential for our business. After three years, the company should be self-sustaining.

## Key Assumptions

Table 4: Essmart's key assumptions, based on both market research and local knowledge from Essmart's India-based teammate, Prashanth.

| Category | Assumptions |
| :---: | :---: |
| Demographic | - Each facility serves a 500 village region <br> - Each village has 200 families <br> - Retail shop owners are currently earning US\$2,500 annually (according to January 2012 surveys the National Council of Applied Economic Research, India) |
| Growth | - Essmart will open new facilities every quarter at an increasing rate <br> - Retailer coverage per facility grows from $5 \%$ to $80 \%$ over five years <br> - Percent of families buying one product every three months increases from $10 \%$ to $50 \%$ over five years |
| Product | - ARPU is US $\$ 14.40$ with expected inflation of $7 \%$ per year <br> - Both Wholesaler and Retailer Markups are 20\% <br> - Wholesale markup is Essmart's only revenue stream |
| Balance sheet | - Days Sales Outstanding for Retailers is 15 <br> - Inventory Turnover Days is 15 <br> - Days Payables Outstanding to Suppliers is 30 <br> - Two capital raises are made to maintain a strong working cash position <br> - PP\&E primarily includes computers, furniture, and warehouse shelving |
| Expense | - All operating staff are paid competitive salaries with expected compensation increases of $10 \%$ per year; Non-operating roles increase at $5 \%$ per year <br> - Each facility has one manager, two salespeople, one marketing person, and a warehouse staff that increases with products handled per year <br> - Accounting and IT staff grow with facilities opened <br> - Rent, IT, Phone, and Advertising \& Marketing grow at $10 \%$ per year |

## Appendix 1: Income Statement, Years 1-5

| ESSMART Income Statement (in US\$000s) | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue | 28 | 1,353 | 9,074 | 29,902 | 69,449 |
| COGS | 23 | 1,128 | 7,561 | 24,918 | 57,874 |
| Gross Margin | 5 | 226 | 1,512 | 4,984 | 11,575 |
| Gross Margin \% | 17\% | 17\% | 17\% | 17\% | 17\% |
|  |  |  |  |  |  |
| Operating Expenses |  |  |  |  |  |
| SG\&A |  |  |  |  |  |
| Compensation | 48 | 298 | 1,597 | 2,776 | 4,339 |
| Rent | 2 | 24 | 75 | 170 | 319 |
| Office/Warehouse Expenses | 2 | 34 | 109 | 251 | 474 |
| Advertising and Marketing | 6 | 99 | 313 | 709 | 1,329 |
| Total SG\&A | 58 | 454 | 2,094 | 3,906 | 6,461 |
| Other Operating Expenses | 3 | 15 | 28 | 38 | 47 |
| Total Operating Expenses | 61 | 469 | 2,122 | 3,944 | 6,508 |
|  |  |  |  |  |  |
| EBITDA | (57) | (244) | (610) | 1,040 | 5,067 |
| EBITDA Margin \% | -205\% | -18\% | -7\% | 3\% | 7\% |
|  |  |  |  |  |  |
| Depreciation | 0 | 4 | 10 | 20 | 34 |
| Operating Income | (57) | (247) | (620) | 1,020 | 5,033 |
| Operating Margin \% | -207\% | -18\% | -7\% | 3\% | 7\% |
|  |  |  |  |  |  |
| Interest Expense/(Income) | 0 | 0 | 0 | 0 | 0 |
| Pretax Income | (57) | (247) | (620) | 1,020 | 5,033 |
|  |  |  |  |  |  |
| Taxes | 0 | 0 | 0 | 82 | 1,610 |
| Net Income | (57) | (247) | (620) | 938 | 3,422 |
| Net Income Margin \% | -207\% | -18\% | -7\% | 3\% | 5\% |

## Appendix 2: Balance Sheet, Years 1-5

| ESSMART Balance Sheet(in US\$000s) | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| Assets |  |  |  |  |  |
| Cash | (51) | 1,157 | 2,451 | 3,144 | 6,206 |
| Accounts receivable | 4 | 149 | 700 | 1,921 | 3,991 |
| Inventory | 3 | 124 | 584 | 1,601 | 3,326 |
| Prepaid Expenses | 1 | 4 | 11 | 22 | 0 |
| Total Current Assets | (43) | 1,434 | 3,746 | 6,688 | 13,522 |
|  |  |  |  |  |  |
| Net PP\&E | 7 | 35 | 82 | 144 | 227 |
| Total Assets | (36) | 1,469 | 3,828 | 6,832 | 13,749 |
|  |  |  |  |  |  |
| Liabilities and Equity |  |  |  |  |  |
| Liabilities |  |  |  |  |  |
| Accounts payable | 7 | 248 | 1,167 | 3,201 | 6,651 |
| Accrued expenses | 0 | 0 | 0 | 0 | 0 |
| Wages Payable | 4 | 16 | 75 | 108 | 153 |
| Taxes Payable | 0 | 0 | 0 | 0 | 0 |
| Notes Payable | 0 | 0 | 0 | 0 | 0 |
| Total Current Liabilities | 11 | 264 | 1,243 | 3,309 | 6,804 |
|  |  |  |  |  |  |
| Long-term debt | 0 | 0 | 0 | 0 | 0 |
| Total Liabilities | 11 | 264 | 1,243 | 3,309 | 6,804 |
|  |  |  |  |  |  |
| Equity |  |  |  |  |  |
| Common Stock | 10 | 10 | 10 | 10 | 10 |
| Preferred Series A | 0 | 1,500 | 1,500 | 1,500 | 1,500 |
| Preferred Series B | 0 | 0 | 2,000 | 2,000 | 2,000 |
| Retained Earnings | (57) | (304) | (925) | 13 | 3,436 |
| Total Equity | (47) | 1,206 | 2,585 | 3,523 | 6,946 |
|  |  |  |  |  |  |
| Total Liabilities + Equity | (36) | 1,469 | 3,828 | 6,832 | 13,749 |

## Appendix 3: Cash Flows, Years 1-5

| ESSMART Cash Flows (in US\$000s) | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Net Income | (57) | (247) | (620) | 938 | 3,422 |
| Cash Flows from Operations |  |  |  |  |  |
| Change in Working Capital |  |  |  |  |  |
| Accounts Receivable | (4) | (145) | (552) | $(1,220)$ | $(2,070)$ |
| Inventory | (3) | (121) | (460) | $(1,017)$ | $(1,725)$ |
| Prepaid Expenses | (1) | (3) | (7) | (11) | 22 |
| Accounts Payable | 7 | 241 | 920 | 2,034 | 3,450 |
| Accrued Expenses | 0 | 0 | 0 | 0 | 0 |
| Wages Payable | 4 | 12 | 59 | 32 | 45 |
| Taxes Payable | 0 | 0 | 0 | 0 | 0 |
| Net Change in Working Capital | 3 | (16) | (39) | (182) | (278) |
| Depreciation | 0 | 4 | 10 | 20 | 34 |
| Amortization | 0 | 0 | 0 | 0 | 0 |
| Total Cash Flows from Operations | 3 | (12) | (29) | (162) | (244) |
|  |  |  |  |  |  |
| Cash Flows from Investing |  |  |  |  |  |
| Investment in PP\&E | (7) | (32) | (57) | (82) | (117) |
| Total Cash Flows from Investing | (7) | (32) | (57) | (82) | (117) |
|  |  |  |  |  |  |
| Cash Flows from Financing |  |  |  |  |  |
| Credit Facility | 0 | 0 | 0 | 0 | 0 |
| Long-Term Debt | 0 | 0 | 0 | 0 | 0 |
| Common Stock | 10 | 0 | 0 | 0 | 0 |
| Preferred Series A | 0 | 1,500 | 0 | 0 | 0 |
| Preferred Series B | 0 | 0 | 2,000 | 0 | 0 |
| Total Cash Flows from |  |  |  |  |  |
| Financing | 10 | 1,500 | 2,000 | 0 | 0 |
|  |  |  |  |  |  |
| Net Change in Cash | (51) | 1,209 | 1,293 | 694 | 3,062 |

## Appendix 4: Gantt Chart for Progress and Plans



