



DAVID UPTON
CHRISTINE ELLIS
SARAH LUCAS
AMY YAMNER

Akshaya Patra: Feeding India's Schoolchildren

"The big thing to worry about now is scalability. How to run such a huge operation on a consistent basis with worries about quality and consistency of food... We've gone from 60,000 to over 500,000 children. Now we want to get to one million. How do we do that?"

--Raj Kondur (MBA '97), Akshaya Patra Board of Trustees, and CEO, Nirvana Business Solutions

Bangalore, India: CC Das, Program Director of the Akshaya Patra Foundation, felt the heat and humidity from the kitchen. At 6:00 a.m., the kitchen was bustling. Workers from poor local neighborhoods transferred hot cooked rice from industrial-size boilers to individual delivery containers, while other employees stirred spices into large vats of simmering mixed vegetables and broth. Trucks waited outside, ready to load the proper quantities of food for their daily routes.

With only an hour of cooking remaining, everything was going according to plan. CC Das breathed in the warm and fragrant aromas and was reminded that, while six years ago this operation was just an idea, the kitchen now fed 145,000 schoolchildren each day. He mulled over how Akshaya Patra could continue to construct new kitchens and grow in other regions.

Baran Village, India: Over 1,000 miles away, in the rural Baran district of Rajasthan, Trilok Gautham, Executive Supervisor of the Baran program, had just arrived at his first stop of the day. He stood in the simple room that served as a kitchen for a village school. Every morning four brightly-clad women prepared food for the school children, providing most of the children with the only meal they would have that day. The team alternated duties, sharing the chores of rolling dough into flat bread, tending the fire, and chopping vegetables for the *daal* (lentils).

Gautham had seven more schools to inspect that day, part of his routine to ensure cleanliness, hygiene, food safety, and quality for each of the 79 schools he covered. Less than a year ago, no food was served during the school day and children often went hungry. Today, 15,000 children in Baran would have a hot meal. On his dusty 40-minute bicycle ride to the nearest village, Gautham thought about the challenges of providing services to additional villages.

There was no doubt in either of their minds that things were going well for Akshaya Patra. But what were the implications of their current success? In one week the Board of Trustees would gather to discuss options for growth. No one questioned the need to expand services to feed more children. The question was, "How?"

Professor David Upton and Christine Ellis, Sarah Lucas, and Amy Yamner (MBA's 2006) prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

Copyright © 2007 President and Fellows of Harvard College. To order copies or request permission to reproduce materials, call 1-800-545-7685, write Harvard Business School Publishing, Boston, MA 02163, or go to <http://www.hbsp.harvard.edu>. No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of Harvard Business School.

India Overview

Bordering the Arabian Sea and the Bay of Bengal, the Republic of India had a land mass of 3.2 million square kilometers, about one-third the size of the United States, and a population of approximately 1.1 billion, over three times as many people as the U.S.¹

For many years, India had been a colony of the British Empire. Nonviolent resistance to colonialism under the leadership of Mahatma Gandhi brought independence in 1947.² Since gaining independence, a succession of Indian governments worked to spur economic growth. Recent annual GDP growth of about 6.5 percent helped the country reduce by half the proportion of people living on less than a dollar a day. Nevertheless, 80 percent of India's population lived in rural areas, and poverty was concentrated largely in the regions which were often the most challenging to serve.³ According to a United Nations report, there remained many social needs to address in India, especially in the areas of health, primary education, and gender equality.⁴

India faced multiple challenges in the education of its poor. The overall adult literacy rate was 61 percent in 2004. A gender disparity in literacy was prevalent, with male literacy rates at around 73 percent and female rates at 47 percent.⁵

According to USAID, India had the world's largest concentration of desperately poor people. More than 300 million Indians lived in abject poverty, a number which exceeded the impoverished population in Africa and Latin America combined. Even with a range of other food assistance programs in place throughout the nation, India's efforts to feed the poor often did not reach the most vulnerable sections of the population.⁶

History of midday meal programs in India⁷

Midday meal programs (school lunch) emerged to address the multiple challenges of poverty, hunger, and access to education. Prior to receiving midday meals, many impoverished children performed poorly in school due to short attention spans associated with extreme hunger. Other children either did not enroll in school, or dropped out at a young age choosing to seek work during the school day to earn money to feed themselves and their families.

Although 50 percent of India's children were malnourished, the provision of midday meals was sporadic and in many places non-existent. Responding to pressure from the Indian people, the Supreme Court of India passed an order on November 28, 2001, which mandated: "Cooked midday meal is to be provided in all the government and government-aided primary schools in all the states."

¹ <http://www.cia.gov/cia/publications/factbook/geos/in.html>

² CIA World Fact Book

³ <http://www.worldbank.org.in/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/INDIAEXTN/0,,menuPK:295591~pagePK:141132~piPK:141121~theSitePK:295584,00.html>

⁴ Mid-term appraisal of the Tenth Five Year Plan – Annexure 2.2.1 Table on "Progress in achieving the MDGs"

⁵ http://www.uis.unesco.org/profiles/EN/EDU/countryProfile_en.aspx?code=3560

⁶ http://www.wfp.org/country_brief/indexcountry.asp?country=356#, PDF document

⁷ The data in this section was derived from <http://www.righttofoodindia.org/data/wsfmdm.pdf> unless otherwise stated.

Inconsistent food quality, occasional food poisoning, poor hygiene, and operational concerns were among the complications to the provision of government-sponsored midday meals. The meals were prepared by teachers, who cooked the same meal every day: *ghoogri*, gruel made of boiled wheat. Children reported that they grew tired of eating the same food daily, they did not like the taste, and it often made them feel sick. In 2004, a fire accidentally started by a teacher cooking the midday meal killed 90 children in Tamil Nadu, an event which underscored the safety issues inherent in meals prepared in makeshift kitchens based on school sites.⁸

By January 2004, nearly 50 million children received midday meals provided either by the government or by NGOs working in partnership with the government. However, given the scope of hunger in India and the difficulties faced by the government programs, the task of feeding school children was still a significant challenge.

Akshaya Patra

In 2000, The Akshaya Patra Foundation (TAPF) was founded to address the dual challenges of hunger and education in India.⁹ The organization provided nutrition-rich midday meals to extremely underprivileged children in India with the aim of increasing school enrollment, reducing drop-out rates, and improving academic performance. The Akshaya Patra program had a simple vision: "No child in India should be deprived of education because of hunger." Because of India's enormous population, this vision was difficult to realize.

Expansion of operations

Akshaya Patra began feeding 1,500 students in five schools in Bangalore. It was one of the first organizations in the region to provide freshly cooked, hot and nutritious, balanced meals, and within six months of starting the program, it had requests from 3,000 schools. Akshaya Patra soon scaled up services to feed 30,000 children. When the Foundation's growth caught the attention of local government officials, the organization began receiving government financial support. By April 2003, it was feeding 43,000 children in Bangalore daily.

Akshaya Patra recognized the need for midday meal programs in other parts of the country and expanded the program to other areas. In August 2003, it opened a kitchen in Vrindavan, in northern India. In July 2004, in partnership with Mrs. Sudha Murty, the chairperson of Infosys Foundation, it began a midday meal program in Hubli-Dharwad. By November 2004, Akshaya Patra had also commenced a pilot program in 25 schools feeding 5,200 children in Jaipur, Rajasthan.

As the urban operations grew, Akshaya Patra recognized that in order to reach the majority of India's most undernourished children, it also needed to serve the rural districts. In August 2005, Akshaya Patra began services in the region of Baran, located in east Rajasthan, in response to the number of starvation deaths in the area. Because very few midday meal programs operated in rural districts, the Baran program was an experiment. Neither the government nor Akshaya Patra was able to serve these communities adequately on its own, but as partners, their mutual goal was achievable.

⁸ <http://washingtontimes.com/upi-breaking/20040719-111147-6417r.htm>

⁹ The founders desired a name for the organization that reflected their aspirations to provide unlimited food to underprivileged schoolchildren. They chose to use the Sanskrit term "Akshaya Patra," meaning "abundant and inexhaustible."

With rapid growth in both urban and rural areas, TAPF had expanded to each day feed 567,622 children (equivalent to more than half the population of Boston) in 2,000 schools in ten locations in India by March 2007 (**Exhibits 1 and 2**).

Management and funding

Despite growing in scale, TAPF's seven founders maintained the original Board of Trustees consisting of three volunteers and four senior executives (**Exhibit 3**). The Board provided strategic advice and worked on performance improvement. Although headquartered in Bangalore, it made operational decisions based on reports received from the managers at each location.

Akshaya Patra was funded through a combination of government subsidies and private donations. The organization received:

- 2.6 kilograms of rice or wheat per child for students in class 1 to 7 + excise duty exemption from the central government of India
- Rs 1.31 for students in class 1 to 7 – state government of Karnataka
- Rs 1 for students in class 1 to 5 – state government of Uttar Pradesh
- Rs 1.50 for students in class 1 to 5 + sales & road tax exemption – state government of Rajasthan
- Rs 1.65 for students in class 1 to 5 + sales tax exemption – state government of Orissa

In addition, the government also gave 100 percent Income Tax Exemption for donations made to the Akshaya Patra program under section 35 AC/80GGA (bb) of the Indian tax code.

The remainder of the funding came from corporate and individual donor contributions. By March 2007, there were over 16,000 private donors.

While funding was coordinated out of the headquarters in Bangalore, the organization hoped to widen the footprint of its fundraising base. As it expanded to additional cities throughout India, Akshaya Patra's aim was that each location becomes self-sustaining. In addition, Akshaya Patra initiated fund-raising efforts in the U.S., with a particular focus on Indian-American donors.

Maintaining cost efficiencies

When Akshaya Patra first began serving the rural areas, it cost 10 rupees per day to feed each child. Comparatively, the cost was six rupees with the centralized, urban model, which included raw materials, labor, distribution, and administrative overhead. Increased transportation costs associated with the lack of road infrastructure and the dispersed locations of schools made the decentralized model less cost-effective than the centralized model. Additionally, Akshaya Patra was unable to achieve economies of scale through vendor relationships and administration.

Site selection

Schools were selected based on demonstrated need and physical location. With a centralized model of food preparation and delivery in the urban areas, schools that were close to each other allowed more efficient delivery of meals. It also improved transportation times when delivering food. In the rural areas, few schools were located nearby one another. Distance and location prohibited delivery from a central location, and thus were not primary factors in rural school selection.

Constant learning and improvement

Since its early development occurred largely through trial-and-error, a culture of constant improvement and learning was adopted throughout the organization and affected everything from kitchen design to delivery of service. Although the menu was standardized early on, much experimentation went into the recipe creation. Finding the appropriate spiciness to suit all tastes was one example of Akshaya Patra's use of trial-and-error.

At each school, a distribution supervisor was responsible for handling school complaints. Akshaya Patra received one to two complaints per week, often related to the time of delivery, insufficient quantity of food, the taste of the food, or the quality of the rice. The distribution supervisors determined if the problem lay with the school or with the organization and worked to find a solution.

Distribution supervisors provided feedback from schools and helped to implement necessary changes (See **Exhibit 4** for the School Inspection Report). At one school, for example, a teacher noticed that students were not eating the vegetables. Upon investigation, Akshaya Patra learned that the vegetables were too big for the children to chew comfortably and recalibrated the vegetable cutting machine to ensure smaller-sized pieces. The teacher subsequently reported increased vegetable consumption. Similarly, several schools complained that the curd tasted sour. Aware that they had taken great care to ensure that the time of transportation and vehicles would not allow spoilage to occur, Akshaya Patra approached the curd supplier and determined it was the quality of the curds that was leaving a bad taste. A new supplier remedied the problem.

Worker initiatives likewise led to improvements in kitchen design and operations. When workers complained that the Jaipur kitchen was hot, the organization found a solution. Supervisor Rajindar Sharma explained, "Because of the weather, everyone felt very hot. The whole kitchen became like an oven. At first, we panicked. What could we do? Then we decided to introduce coolers. It is better now." Similarly, a worker noted that if the vessels for the *chapatis* (similar to wheat tortillas) were lined, the *chapatis* would not get as dry by the time they reached the schools. His idea to line each vessel with paper succeeded in keeping the *chapatis* moist.

Dual-Pronged Distribution Strategy

Akshaya Patra first provided food to schoolchildren through a centralized kitchen in Bangalore, a bustling urban center. Using a hub-and-spoke model, they cooked mass quantities of food and distributed smaller amounts to individual schools in the surrounding slum and village areas.

As Akshaya Patra expanded services to the rural districts, a centralized model proved inefficient. Because of the dispersed geography of the villages in the rural districts, Akshaya Patra designed a decentralized model in which they built small kitchens to serve the local school children in each village. Through this two-pronged distribution strategy, Akshaya Patra was able to design services to fit the contrasting needs of the urban and rural regions.

Centralized Model: Operations in Bangalore

The Bangalore kitchen was designed by a team of expert engineers, and many modifications to the original design were made as the organization grew in scope and scale. The Bangalore kitchen was initially intended to feed 1,500 students. By 2007, the kitchen was feeding 145,000 children daily. As Akshaya Patra increased the number of children fed, it increased the capacity of the kitchen. According to the operations manager, Bangalore was an "evolved kitchen" which had exceeded its

expectations for growth. Changes to the kitchen were made on an as-needed basis. The organization repeatedly stressed the importance of process, design, and high quality of food. They determined that the organization must have replicable, hygienic kitchens that would be productive and process-oriented.

Supply chain

The daily meals included rice, lentils, vegetables, spices, and curds (yogurt). In the urban areas, vegetables were procured from local markets through an ongoing relationship with third-party vendors. With nutritional balance always in mind, menus varied to incorporate whatever was plentiful at the markets, and thus less expensive. In the Bangalore kitchen, for example, curds were sourced from two different suppliers, with 3,500–4,000 tons of curd received and distributed daily. The Bangalore storage room was able to store up to three days worth of fresh food and substantially more dry goods such as rice and lentils.

Challenges with the supply chain

In many locations, Akshaya Patra received rice as a subsidy from the central government, which it reported was of poor quality. Rice from the Food Corporation of India (FCI) was sold by farmers to the FCI through a middleman. Since price was set by weight, the middlemen often added foreign objects to increase tonnage, including stones, nails and metal. Akshaya Patra believed that within the supply chain, these objects were added to the product in order to maximize profit and called this practice a “very open secret.” Akshaya Patra thoroughly cleaned the government rice by using a de-stoning machine to separate the rice from other non-food products (see **Exhibit 5**) and often found that 20% of each bag of rice was unusable.¹⁰ In the past, Akshaya Patra had avoided poor quality rice by exchanging the government-issued rice for that which was available in the market and of higher quality, paying cash for the difference in price. However, new regulations prevented them from continuing this practice.

Around-the-clock operations

Operations in the Bangalore kitchen began at 10:00 p.m. Sunday evening and continued through Friday evening. The night shift, or the pre-cooking shift, began with the sorting of all ingredients, from vegetables to spices, into the necessary quantities. The number of meals to be cooked was determined daily by the food requirements sheet, which noted any necessary changes in quantity the schools may require compared to the previous day (See **Exhibit 6**.) Though the workers were largely uneducated, the comprehensive standardization and training resulted in efficient and accurate operations.

Preparation and cooking

Akshaya Patra cooked the traditional food of each region, being sensitive to the needs of the local palate. From the southern Indian Bangalore kitchen, students were served a customary hot meal of rice, *sambhar* (a south Indian native soup with lentils, vegetables and spices, sprouts, *ghee* (clarified butter), and curds.

¹⁰ Akshaya Patra reported that people had come to the organization to collect the stones that had been removed from the rice. The Foundation did not give these stones back as it worried that they would perpetuate the cycle.

At 2:30 a.m., steam generator boilers were turned on.¹¹ A system of hoses allowed the entire kitchen to be sanitized with hot water and steam; freshly cut vegetables and rice went into boilers; spices were mixed, and sauces were made. For the next six hours, the kitchen was alive with motion preparing 145,000 meals for the day.

Every day, 95 batches of rice were cooked. Starting at 2:45 a.m., nine 100 kg-capacity and four 50 kg-capacity steam-powered rice boilers took 20 minutes to cook 100 kilograms of rice. The entire operation was designed to ensure minimal human contact with the rice, and thus minimal chance for contamination.

The *sambhar* contained a mix of vegetables, typically including carrots, potatoes, tomatoes, cabbage, beans, or eggplant. Variety ensured quality as well as economy, while also offering children different tastes each day. The *sambhar* took two hours to cook in 1,200-liter containers, enough to feed 6,000 students from each vessel.

The entire cooking and packing process was completed by 7:15 a.m., and by 10:00 a.m. the kitchen was fully cleaned with preparations for the next day already underway.

Delivery

The packing supervisor determined the amount of food to go to each school based on figures calculated the evening before. Every morning starting at 2:45 am, twenty-two customized vehicles delivered prepared meals to 145,000 children in 486 schools.¹² Each vehicle had a driver, two loading/unloading workers, and a security guard. The security guard held the key to the food storage unit of the truck and ensured that the correct amount of food reached each school. He received a signature from the designated person at the school site and verified quantities needed for the next day. Meanwhile, the food was unloaded and brought to the appropriate area of the school where it was served to the students by teachers or other school personnel. The truck completed its delivery route, and on its way back to the Bangalore kitchen stopped at each school to collect the empty vessels.

Each security guard had a mobile phone, which connected him with the central kitchen and was useful when unexpected situations arose. Emergencies included a school that needed additional food, a vehicle break-down, or a traffic delay. If there was a significant amount of food remaining after all of the school deliveries had been made, the security guard would contact the head office for permission to stop in the slum areas to distribute the excess.¹³ Each day, the amount of time it took to move from one school to the next was tracked, and deviations were documented. TAPF also carefully monitored the fuel consumption of each vehicle.

¹¹ This actual start time could vary by as much as 30-45 minutes in either direction, depending on the quantity to be cooked as well as the type of rice.

¹² Akshaya Patra owned and maintained 17 vehicles and hired the additional 5. The cost of a vehicle was approximately 1,400,000 rupees (45 rupees = \$1US). Vehicles were designed to keep food warm and to be dust free. Akshaya Patra had recently moved to a model in which corporations sponsored vehicles.

¹³ Reports were created to make sure that extra food was not prepared. It was not, however, always possible for schools to predict the number of absentees because of the possibility of widespread absences due to festivals, holidays, field trips or other events. Akshaya Patra reported that this happened almost daily at one or two schools. To cope, they considered hiring an additional vehicle which could go out and meet the vehicle, take the extra food, and do the delivery to the slums while the original vehicle continued its route.

Replicating the model

Recognizing the need for midday meal programs in other regions, Akshaya Patra expanded services to northern India. The original Bangalore kitchen was located in southern India, where the diet was primarily rice-based. In contrast, the local diet in the northern region was predominantly wheat-based. Akshaya Patra devised a new menu, with the daily meal consisting typically of *rotis* or *chapatis*, *daal*, or curry and vegetable rice/sweet porridge. TAPF also made additional adaptations to the model depending on the needs of the region. In Jaipur for example, where large-scale unemployment among women was a concern, the kitchen chose to hire 90 women from local villages and only automate some of their operations. (See **Exhibits 7** and **8** for more details about the Jaipur kitchen.)

Incorporation of Automation

Akshaya Patra utilized automation and mechanization as much as possible. For example, after the vegetables for the *sambhar* were sorted and cleaned, they moved from the holding vessels to an automatic cutting machine. Imported from Germany, and equipped with a motor comparable to that of a BMW, the machine was able to cut 40 kilograms of potatoes in 60 seconds and could vary both the shape and the size depending on need.

According to Ganesh Thapa, assistant supervisor and one of the kitchen workers, “Initially we had more work because it was all manual cooking. Then automation came to the kitchen. Compared to the early days, it is a relief to have mechanized cooking.”

A new kitchen at Hubli went a step further. Opened in May 2006, it had the capacity to serve 200,000 children. In order to increase cost-efficiency and decrease the labor needed, this multi-story kitchen was designed using basic concepts of gravity flow.¹⁴ Vegetables were cleaned, sorted, and cut on the top floor, and dropped through holes in the floor into the cooking vessels below. From the cooking vessels, rice and vegetables moved through funnels into large containers. This system required less overall labor and ensured that health and safety standards were easier to maintain.

Decentralized Operations

Akshaya Patra began its efforts to feed rural schoolchildren in the state of Rajasthan, the largest state in India in terms of land area, but among the least densely populated. There was little infrastructure of any kind, including electricity and water, and villages in Baran were often not connected by any roads. Degraded forests covered nearly half of the land and numerous small rivers made transportation and communication very difficult. Akshaya Patra chose to work with the least developed and only remaining primitive tribe in Baran. The dispersed geography of Baran meant that Akshaya Patra needed to design a wholly different operations strategy: one based on small, decentralized kitchens. It helped the villages set up kitchens at or near the local school and provided basic infrastructure to start the kitchens. Construction of the stove, storage area, and washing area was done under the organization’s guidance. By January 2007, the decentralized operations in Baran served 79 villages, feeding 15,000 children per day.

¹⁴ Capacity utilization increased 40%.

Human resource issues

Self-help groups of four to six village women were formed to be employed as cooks for the midday meals. Most of these women had no education or work experience, so the organization provided basic training in cooking, nutrition, and hygiene. Other training included maintaining accounts, inventory, and requisition slips, and often teaching the women to count. Many of the women had not learned the days of the week, so Akshaya Patra taught them to do different activities on different days, simultaneously providing meal variety. Many village cooks were able to tour the nearest Akshaya Patra kitchen to gain a better understanding of the work at hand.

Each village kitchen had one head cook who was responsible for purchasing vegetables, firewood, and supervising the daily operations; she earned 50 rupees for three hours per day, while the other women earned 1,000 rupees per month. In contrast, many of the people in the village earned only 8 rupees per day and worked long hours. The head cook position was rotated on a monthly basis so that each woman had a chance to be responsible.

The central office in Baran was responsible for the bimonthly procurement of nonperishable food items, the distribution of key items, as well as the supervision of all village operations. A cluster supervisor was responsible for supervision of the rural kitchens' cooking, distribution, quality control, and hygiene, and oversaw eight to ten villages. (See **Exhibit 9** for the organizational chart of the Baran Operations.)

Overcoming challenges

When Akshaya Patra first entered the district of Baran it faced many challenges, among them the task of educating the workers in hygiene. In all of its facilities, Akshaya Patra emphasized strong hygienic standards, but village hygiene standards were very different from those in the urban areas. Due to inadequate water supplies, villagers would bathe approximately every 6 to 7 days. Akshaya Patra told the cooks that they needed to bathe daily in order to maintain hygiene appropriate for food service. However, the women did not understand this request, thus they did not adhere to it. Akshaya Patra therefore constructed a communication that was more relevant to the village people. They pointed out that the first bite of the food should be blessed and offered to God. Thus, the women took their own initiative to wash in order to bless the food.

Akshaya Patra also faced difficulties in the transportation of goods. For example, when it rained, delivery trucks could get stuck in mud and ruts for up to three days. Because of the lack of electricity and refrigeration, spoilage of vegetables was a problem. Although the head cook went to the weekly *haat* (market) to procure vegetables, the organization needed to educate women to buy carrots, potatoes, and other vegetables with longer shelf-lives. (See **Exhibit 10** for photos of the Baran operations.)

Extension of Services

Akshaya Patra realized that they had built a large production and distribution network with uses beyond midday meals. The trustees chose to use this infrastructure to provide holistic services to underprivileged groups, including medical, educational and adult services.

Distribution of medical services

Doctors found that more than 85% of children fed by Akshaya Patra suffered from worm infestations as a result of unhygienic living conditions. In addition, they were deficient in vitamins,

particularly Vitamin A. In 2002, Akshaya Patra began a medical intervention program, which administered de-worming medicine and micronutrient capsules with folic acid, iron and Vitamin A. Medical assistance required additional expertise, so Akshaya Patra collaborated with the Divakars Service Trust in Bangalore and Durlabji Hospital in Jaipur. They also proposed partnerships with dental college hospitals to include preventative dental care and worked with an eye-care institution to test children for eye-related ailments and provide free ophthalmologic care.

Inclusion of infants and expectant or nursing mothers

Akshaya Patra realized that children of all ages were in need of nutritious meals. They thus began to serve infants, as well as expectant and nursing mothers, in centers near the schools which participated in the program. In Bangalore, Akshaya Patra served over 3,000 expectant and nursing mothers in partnership with the city municipal corporation. Similarly, in Jaipur, Akshaya Patra served 64 pre-school centers, providing unlimited meals to approximately 100 people in each location.

Feeding adult laborers

In Jaipur, many low-skilled village workers migrated to the city for the week, sleeping on the street, and returning home on the weekends to provide wages for their families. They paid up to 30 rupees a day for a small meal. Earning only about 150 rupees per day, it was very difficult to save money and break the cycle of poverty. In 2005, Akshaya Patra began an extension service in Jaipur to provide meals to rickshaw drivers and other low-skilled laborers. For five rupees, the laborers received unlimited food at four set locations from 7:00–8:00 p.m. every evening. As of March 2006, Akshaya Patra served approximately 700 laborers per day and planned to increase to 2,000.

Leveraging corporations and other NGOs

To extend its reach even further, Akshaya Patra worked to leverage relationships with other NGOs and potential corporate sponsors to train them in starting or expanding midday meal programs on their own. For example, Akshaya Patra worked with Havell's, a midsize electrical and industrial component manufacturer, to begin a school feeding program from a factory kitchen at Alwar, not very far from New Delhi. In 2006, Havell's fed approximately 10,000 children daily, with the ambitious goal of expanding to 30,000.

Measuring Success

Akshaya Patra measured success in the number of children fed. Additional performance metrics included an increase in school enrollment and attendance, and improvement of academic performance and student health.

Number of children fed

Six years after establishment, as of December 31st 2006, Akshaya Patra was feeding 522,000 underprivileged children in over 2,000 schools. (See **Exhibit 11** for details.)

Health and school performance

An impact study done in one of the rural areas served by Akshaya Patra, which was conducted by the M.S. Ramaiah Medical College, revealed that the number of children below the optimal nutrition level was reduced from 60% to almost 0%. Anemia was reduced from 40% to less than 5%. Skin

infections decreased from 80% to almost 0%. In addition, children developed better resistance to diseases, and they showed significant improvements in height and weight. When Akshaya Patra first began the program in rural Baran, children gained ½ kilo (1.1 lbs) of weight per month. In contrast, during a ten day winter break in the villages, when the program was not in operation, the average child dropped ½ kilo in weight.

In a study the Akshaya Patra program conducted by the Department of Education, Government of Karnataka, 99.6% of students felt that they could pay better attention, and 93.8% of teachers reported overall academic improvement.

In Bangalore, the headmaster of a school that served 560 students reported that 25% of students were totally dependent on Akshaya Patra midday meals. Since Akshaya Patra began providing food, he claimed that attendance was more consistent, drop-outs and long absences decreased, concentration improved, as did height and weight, and students were more mischievous because they were more energetic.

Moving Forward

Akshaya Patra aimed to reach one million children daily by 2010. The Chairman of the organization, however, felt confident that they would reach this goal by 2008. He commented, "Performance should always exceed promises." He identified three significant limitations to growth: perfecting and setting up operations, training a dedicated workforce, and funding.

Human capital posed particular challenges. In 2006, kitchen management in all eight locations was overseen by religious volunteers, which meant that less than 2% of Akshaya Patra's expenses were from operations, administration, and marketing, compared to more than 20% at comparable NGOs. However, questions remained as to whether the dependency on volunteers was a limitation to growth.

Operational Models for Growth

The Board of Trustees considered the possible courses of action. With a centralized model feeding urban children, and a decentralized model feeding rural children, the dual-pronged strategy presented a variety of challenges to overcome.

Centralized distribution model

The centralized kitchen model had the benefits of scale and the best promise for being able to feed the largest number of children for the lowest cost. Akshaya Patra achieved much success through the centralized model, and had recently invested in a new centralized state-of-the-art kitchen in Hubli. However, they still faced many challenges, including distribution issues, maintaining continual improvement, and creating a flexible standardized model while also allowing for local customization of labor needs and food preferences. Worker retention was low in some cities as workers trained in their kitchens were often recruited to work in high-end hotels where they would receive a better wage. In addition, as plans for construction of new kitchens developed, they needed a replicable model while also allowing room for improvement. Akshaya Patra also considered future capacity needs and wondered if they should build each kitchen for the current capacity allotted, or with room for increased capacity, on the assumption of additional funding in the future.

Decentralized distribution model

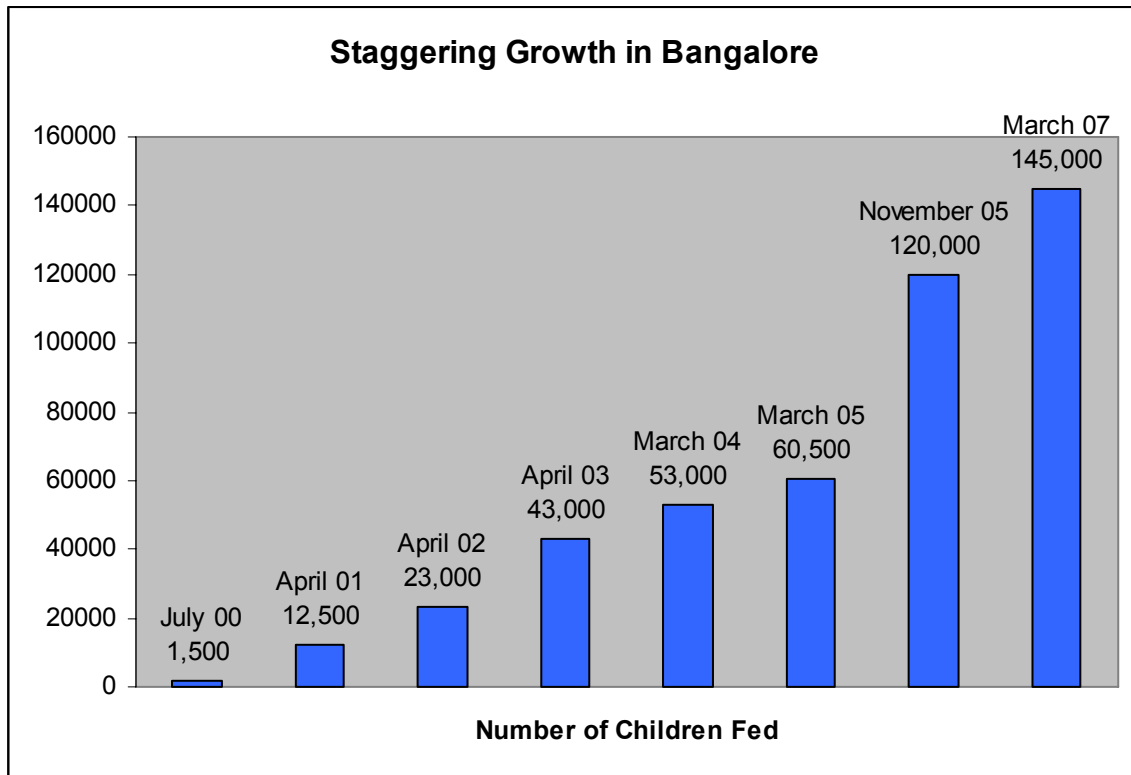
The rural areas were best targeted through the decentralized model, but Akshaya Patra questioned whether they could achieve the necessary scale to make a difference in these areas. Employee recruitment, particularly of trusted supervisors who would not fall prey to the corruption schemes that were so prevalent in India, was a further limiting factor. Furthermore, localized training of village women was extremely labor intensive. The trustees considered expanding to a training-based model, where Akshaya Patra would host 50–100 rural women in a central training location for a 15-day intensive instruction course in proper food preparation, hygiene, and accounting.¹⁵ This option had the benefits of being able to reach more people, but did not solve the problems of quality assurance, corruption, and theft.

Preparing for the Trustee Meeting: What to do Next?

As the Trustees prepared for their meeting, they contemplated how best to balance these challenges. With millions of children still hungry and out of school in India, the need for programs like Akshaya Patra was great. The Trustees of the organization were committed to finding ways to serve more children every day, both urban and rural. The possibilities seemed endless, but funding was not, and they knew it was time to make some decisions.

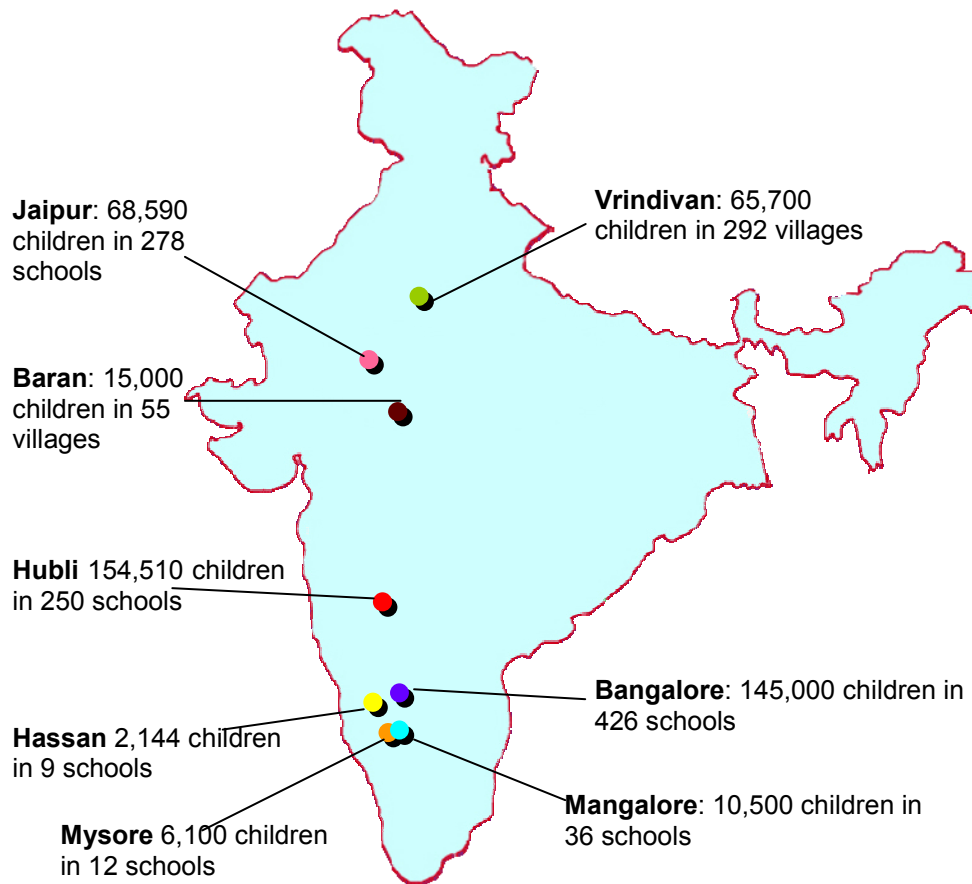
¹⁵ As part of this program, the government and other NGOs would also send women to Akshaya Patra to be trained.

Exhibit 1 Organizational Growth



Source: The Akshaya Patra Foundation

Exhibit 2 Scope of Service



Source: The Akshaya Patra Foundation

Exhibit 3 Board of Directors and Trustees

Board of Trustees
Chairman
Madhu Pandit Dasa
Vice Chairman
Chanchalapati Dasa
Program Director
Chitranga Chaitanya Dasa
Trustees
<p>T. V. Mohandas Pai Chief Financial Officer & Board Member Infosys Technologies Ltd., Bangalore</p> <p>Abhay Jain Entrepreneur, Bangalore</p> <p>Ramdas Kamath Vice President, Finance & Administration Infosys Technologies Ltd., Bangalore</p> <p>Raj Kondur Chairman & CEO Nirvana Business Solutions, Bangalore</p>

Source: The Akshaya Patra Foundation

Board of Advisors**Justice Rajendra Babu**

Former Chief Justice of India

Smt. Sudha Murthy

Chairperson,
Infosys Foundation, Bangalore

Sri Rakesh Mittal

Managing Director, Bharti Televenture Limited, New Delhi

Sri. B. Swarup

Member, Settlement Commission, New Delhi

Sri K. Jothiramalingam, I.A.S.

Commissioner, Bangalore Mahanagara Palika, Bangalore

Dr. Devi Shetty

Cardiologist, Narayana Hrudayalaya, Bangalore

Sri Narsim Shenoy

Director, Volvo, Bangalore

Sri Vijay Bhaskar, I.A.S.

Principal Secretary, Primary Education, Govt of Karnataka.

Sri. V. Balakrishnan

Sr. Vice President & Co. Secretary Infosys Technologies Ltd, Bangalore

Sri Ravi Uppal

Vice Chairman & Managing Director ABB Limited, Bangalore

Smt. Shukla Bose

Founder & CEO, Parikrma Humanity Foundation, Bangalore

Sri Ramesh Ramanathan

Campaign Co-ordinator, Janaagraha, Bangalore

Source: The Akshaya Patra Foundation

Exhibit 4 School Inspection Report**S C H O O L I N S P E C T I O N R E P O R T**

School Name _____ And Address _____ Date: / /

School seal _____

That day's Total Attendance _____

School Phone no / PP no _____

HM/Teacher's signature _____ Residence Phone no: _____

School timings _____ To _____

Lunch hour's _____ To _____ Visited Timings _____ To _____

Qty distribution Rice _____
Sambar _____ Supplied Qty Sufficient /Excess /Less

Curds _____

When Excess what they do _____

Where vessels are kept before _____ & After Distribution _____

What time they Receive _____ & what time they Return _____

Any Inconvenience they face _____

Distribution done by Student/Teacher's/Both

Do students take food to home Yes/No if yes what do they take Rice _____ Sambar _____ or Curds _____
how do they take _____ Inform to teacher they should not allow such practice.

Distribution Staff behavior with the teacher's _____

If Any changes in Authorized teacher's prepare new authorization letter

Any outsiders taking a food Yes/No If Yes inform to teacher such practice should not repeat in future.

No of KMS from Temple _____

Maximum Qty of

Rice _____ Sambar _____ & Curds _____ Required

Teacher's Opinion, Complaints and Suggestion about the Food and Akshaya Patra Program.

Students Opinion about the Quantity & Quality of the Food.

1) _____

2) _____

3) _____

School neighbor's opinion.

1) _____

2) _____

3) _____

Source: The Akshaya Patra Foundation

Exhibit 6 Food Requirement Sheet

AKSHAYA PATRA FOUNDATION - MID DAY MEALS																												
FOOD REQUIREMENTS			DATE:												ROUTE:AKKIPET								SECURITY NAME:					
SL. NO	SCHOOL NAME	STRENGTH	SPL				RICE(CORP)				RICE(GOVT)				SAMBAR				C U R D				ISSUED VESSELS		RECEIVED VESSELS		BALANCE VESSELS	
			100%	75%	50%	25%	100%	75%	50%	25%	100%	75%	50%	25%	100%	75%	50%	25%	100%	75%	50%	25%	BIG	SMALL	BIG	SMALL	BIG	SMALL
1	CORPORATION NURSERY SCHOOL SUBRAMANYA NAGAR	80																										
2	CORPORATION NURSERY SCHOOL RAM MOHAN PURA	95																										
3	CORPORATION NURSERY SCHOOL DAYANANDANAGAR	96																										
4	GOVT LOWER PRIMARY SCHOOL SRIRAMPURA (SVATANTRA NAGAR)	78																										
5	CORPORATION NURSERY SCHOOL BASHYAM PARK	50																										
6	CORPORATION NURSERY SCHOOL JAKKARAYANKERE-SESHADRIPURAM	33																										
7	CORPORATION BOYS HIGH SCHOOL MAGADI ROAD	501																										
8	CORPORATION BOYS PRE-UNIVERSITY(N) MAGADI ROAD	489																										
9	CORPORATION NURSERY SCHOOL MAGADI ROAD	120																										
10	CORPORATION NURSERY SCHOOL PADARAYANA PURA	73																										
11	CORPORATION NURSERY SCHOOL JAGJEEVANRAM NAGAR	86																										
12	CORPORATION NURSERY SCHOOL ANJANAPPA GARDEN	65																										
13	CORPORATION NURSERY SCHOOL OLD PENSION MAHAL	50																										
14	CORPORATION NURSERY SCHOOL T.C.M.RAYAN ROAD	37																										
15	CORPORATION NURSERY SCHOOL BEREDAVARAGUDI	50																										
16	CORPORATION NURSERY SCHOOL AKKIPET	50																										
17	CORPORATION PRIMARY SCHOOL AKKIPET	22																										
18	CORP GIRLS HIGH SCHOOL COTTONPET	138																										
19	CORPORATION NURSERY SCHOOL MALLAPPA MARKET	50																										
20	CORPORATION NURSERY SCHOOL CUBBONPET	40																										
21	CORPORATION SCHOOL NURSERY BANNAPPAPARK	27																										
22	CORPORATION GIRLS HIGH SCHOOL BANNAPPAPARK	71																										
23	CORPORATION GIRLS PRE-UNIVERSITY(N) BANNAPPAPARK	91																										
24	MAHILA SEVA SANGHA SAMPANGIRAM NAGAR	100																										
25	ARYA VIDYA SHALA GANDHINAGAR	200																										
26	CORPORATION PUBLIC HIGH SCHOOL GANDHINAGAR	160																										
	TOTAL	2852																										
DISTRIBUTION SUPERVISOR												APK SECURITY																

Page 1

Source: The Akshaya Patra Foundation

Exhibit 7 The Jaipur Kitchen: An Additional Mission

Lack of employment in the region: The Jaipur kitchen made modifications to address the large scale unemployment among women in the region. The kitchen employed 95 women, most between the ages of 22 and 35. Without this job many of these women would not be otherwise employed. Many of the women took pride knowing that the food they prepared would help feed their own children in the government schools later that day.

In order to employ more people, the Jaipur kitchen used a combination of mechanized and manual processes in their *chapati* making. Three large *chapati* machines were each able to produce 2,000 *chapatis* per hour per machine. Separately, multiple teams of women worked to produce *chapatis* manually. Total output for manual operations was 8,000 per hour.

With their additional mission of creating good employment opportunities, they needed to focus on creating a positive work environment. Each workstation was given a name and the women competed in teams for which oven was able to make the most *chapatis* in an hour. Women moved between jobs depending on preference and often moved several times within the day (they grew tired of kneeling on the ground and rolling, or grew warm from the ovens). Wages started at 75 rupees a day and increased to 90 within three months. Women also received health insurance for their family and 12% of their wages were deposited to a "provident" fund where the money collected interest until accessed when they left the job.

Shasi Bansal, 25 years old, had been working in the kitchen for one year and had recently won the "Best Worker" award from the state. She had two children who were going to schools where Akshaya Patra food was served. Bansal took care of the female employees and served as a liaison between them and the male management. She reported that without this job she would be unemployed. "The other villagers are happy for me," she said. "They want jobs here too."

Source: Casewriters' Interviews

Exhibit 8 Women at Work in the Jaipur Kitchen



Source: Casewriter

Exhibit 9 Baran Organizational Chart



Source: Interview with Vikas Kumar, Field Manager

Exhibit 10 Photos from Baran



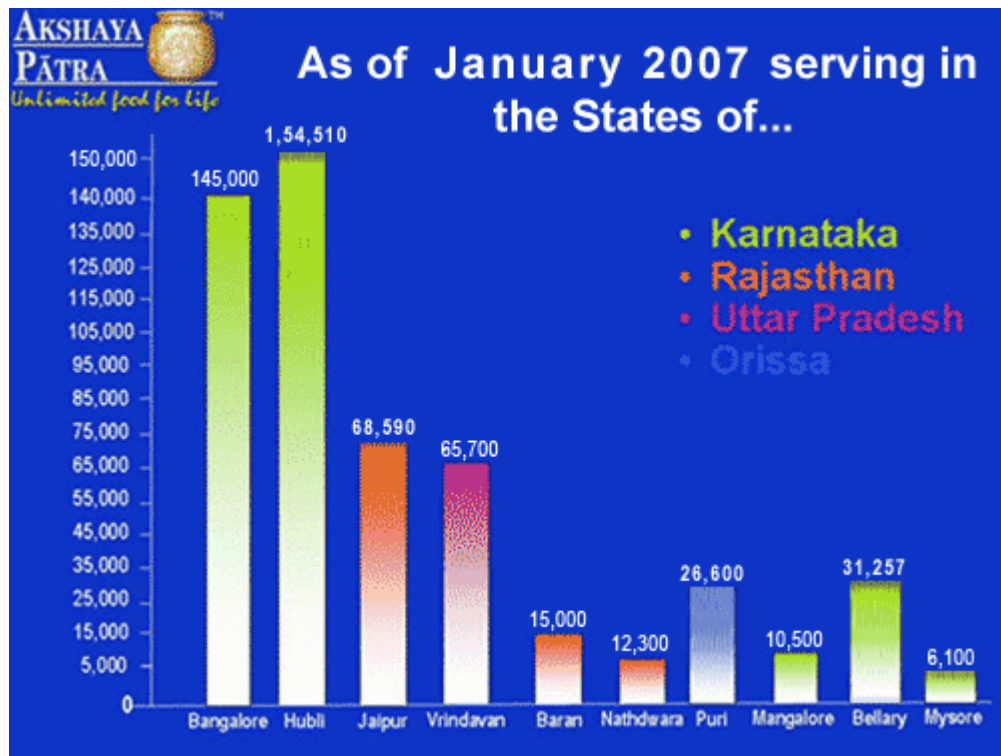
Women in the Baran district deliver food to the schools



Children in a village in Baran

Source: Casewriter

Exhibit 11 Number of Children Fed by TAPF



Source: The Akshaya Patra Foundation