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## **Aurolab: Excellence in Sight and Beyond**

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*“Making high quality ophthalmic products affordable and accessible to the vision impaired worldwide”*

-Mission statement, Aurolab

*“Our aim since founding has been to drive down prices of high end ophthalmic products. We want to serve the developing markets with high-end, high-quality and affordable products and we have become leaders in this space. Our challenge is to retain the leadership position as the market evolves”*

-Dr.P.Balakrishnan, Managing Director, Aurolab

R D Sriram, Director – Operations, Aurolab, went over the options before him as he sat in his office in Aurolab’s 70 acre Veerapanjan campus located in the South Indian temple city of Madurai. . He was reviewing the launch plan of green laser for diabetic retinopathy and wondering what would be the right distribution strategy for the product. The launch of the green laser would mark Aurolab’s entry into the medical equipment business in a major way. The options facing him were to either expand the direct sales force across the country or to utilize the existing dealer network which handled the sales and distribution of the other ophthalmic products being manufactured by the company. Aurolab’s go-to-market strategy had evolved into a dealer based network unlike other domestic manufacturers who relied mostly on direct sales. The end users for these products eye-care hospitals and individual medical practitioners across the country. However, with entry of hi-tech products in the Aurolab portfolio, this was the wake-up call needed for the company to review its channel strategy adopted thus far and take a decision on how it should proceed as it strives to retain market leadership.

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At a more strategic level, Aurolab also faced the challenge of developing this strategy into a source of competitive advantage as the Indian intra-ocular lens market became more commoditized. The company also wanted to retain its market leadership without compromising the values on which the firm was built. It also could not dilute the vision of Aravind Eye Care System (AECS), i.e., to make vision affordable to everyone. Moreover, the company wanted to be a differentiator by adopting newer technologies and newer products.

### **Evolution of Aurolab**

India has the largest number of blind with close to 15 million people out of the total global estimate of 37 million<sup>1</sup>. 75% of these are cases of avoidable blindness which are not treated due to shortage of optometrists and difficulty in accessing affordable eye care. It was this gap which inspired, Dr. Govindappa Venkataswamy, a visionary in the field of eye care, to start Aravind Eye Hospitals (AEH) in 1972. Aravind Eye Hospitals has served 2.4 million patients over the last 30 years and expanded to five hospitals in South India (**refer Exhibit 1 for list of AEH locations**).

While Aravind Eye Hospitals brought down the cost of operations through its unique business model that hinged on very high levels of productivity of its doctors (a typical doctor at Aravind performs over 2000 cataract surgeries a year against a national average of 200) as well as a focused factory approach to address primarily cataract, the high cost of equipment as well as consumables used remained a deterrent to providing cheap and quality eye care to the masses. It was for this reason that Aurolab was started in 1992 as part of Aravind Eye Care Systems (AECS) to start in-house manufacturing of quality but cost effective ophthalmological products, mainly Intra-ocular lens (IOL). Over the years, apart from catering to domestic requirements, Aurolab has established a strong international presence with exports to over 120 countries. Despite its growth, the company has strived to ensure that its products are reasonably priced so that it can reach a larger section of the society.

The pricing strategy of the firm was summarized in these words of Dr P. Balakrishanan, “*There is a strong desire to price our prices affordably, even though they can command very high prices in the market. This, I think, is the key difference between us and a private company.*”

### ***First Steps***

Aurolab was first started with the manufacture of IOLs for captive use by Aravind Eye Hospitals. IOL surgery is one of the most widely used methods for cataract surgery. Along with sutures, IOLs account for the highest share of the cost of cataract surgery (**refer Exhibit 2 for split up of costs of surgery in India and US**). Aurolab started with an in-house manufacturing capacity of 150 lenses per day based on technology imported from United States. While the unit was established to primarily cater to Aravind’s requirements, excess units were sold to other eye hospitals in the city. As a result of the excellent quality of the products and manufacturing innovation that resulted in low cost of production (an imported IOL was priced at over US dollars 200, which Aurolab drove down to less than 5 US dollars), the demand for the IOLs manufactured by Aurolab increased rapidly, necessitating expansion of capacity. Innovation in technology and a sustained focus on improvement in operational efficiency helped Aurolab drive down the costs to Rs 250 in 1992, compared to over Rs. 2500 for imported IOLs. Today IOLs are available for as low as Rs 60. The downward trend in prices of IOLs over the last few years is shown in **Exhibit 3**.

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### ***Going beyond the lens***

In the period between 1997 and 2005, Aurolab diversified into other ophthalmologic product lines such as pharmaceutical products in 1997 and suture needles in 1998. The production of suture needles was done using imported technology from Germany. Some of the products developed in the suture needle division were also used for hand surgery and cardio vascular procedures, resulting in identification of newer applications for the products.

In the pharmaceutical space, Aurolab focused on the manufacture of orphan drugs. Orphan drugs is a term given to those drugs which are no longer manufactured by other pharmaceutical companies since these drugs have either a low demand or low shelf life or both. These orphan drugs were expensive by nature and since they were essential for eye surgery, Aurolab saw this as a niche opportunity to produce the drugs at a lower cost affordable by the masses. In 2005, Aurolab started the production of two new product lines - microsurgical blades and instruments.

Thus, by focusing on reducing the costs of various consumables needed in ophthalmic surgery, Aurolab succeeded in achieving significant reduction in the overall cost of the surgery.

### ***Aurolab Today***

The company is divided into five divisions responsible for manufacturing each of the products – IOLs, pharmaceuticals, suture needles, surgical instruments and blades. In view of the expanding capacity, the company moved into a new world-class manufacturing facility spread over 110,000 sq. ft. built on a scenic 70-acre campus, on the outskirts of Madurai city<sup>2</sup> on September 30, 2007. The company has since then ceased to be a low cost player and has rather been concentrating on ensuring that quality products are produced at affordable costs. As Sriram put it,

*“Our aim is not to get into price wars. As a market leader and an ethical company, our aim is to change the rules of the game and ensure that the change is good for the society. For instance, the prices of IOLs dropped drastically in the market after Aurolab brought the concept to India. We would like to continue this strategy into the future.”*

Newer products released by the company significantly increased the portfolio offered, thereby allowing the company to reach out to a larger audience.

Each of the divisions of Aurolab and the products offered by them have been described below.

### ***Intra-Ocular Lens Division***

IOL implants for cataract treatment have become very popular of late. From a million surgeries per year performed in India in the early 90's, 2008 saw close to 4.8 million cataract surgeries of which 4 million used IOLs (**refer Exhibit 4**). It is estimated that annually there are close to 10 million cataract surgeries done worldwide with IOL implantation. The IOL product line is characterized by a large number of SKU's as it depends on the patient's eye power and the doctor's comfort in using a particular type of IOL.

From an initial per day production capacity of 150 lenses, the IOL division currently makes close to 7000 lenses daily across the entire range including the latest foldable hydrophobic lenses, a technology mastered by very few companies across the world. With close to about 15 – 20 base varieties ranging from -20 to +40 diopters and some private labels, there are about 1000+ SKUs that are manufactured by

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the division. There is no customization done for the end customer (patient), although the preference for the type of lens used is driven by the doctor. The shelf-life of the product itself varies between 30 months and 60 months. Overall, the division makes close to two million units of IOLs annually accounting for close to 55% of the overall revenues for the company. All the lenses manufactured by the company are CE certified, making Aurolab the first Indian company to receive this certification. The different type of IOLs available in market presently is shown in **Exhibit 5**.

### ***Suture Needle Division***

The Suture needle division manufactures a variety of surgical products. It includes different sizes of needles and sutures based on nylon, braided silk and polypropylene apart from micro sutures. There are close to 40 – 50 SKU's of products manufactured in the Suture Needles Division. The division accounts for 15% of the overall revenues. All suture products are US FDA certified and Aurolab sells about one million suture needles annually<sup>3</sup>.

### ***Pharmaceutical Division***

The division manufactures low demand, low shelf-life orphan drugs including a variety of eye drops, retinal products, surgical adjuncts, dyes and antiseptics with about 50 products and equal number of SKU's overall accounting for 25% of the revenues. Prior to Aurolab's entry into this business, these drugs were expensive since they were imported. The products are directly sold to hospitals and programs that are dedicated to eradication of blindness, and are not typically available over-the-counter.

### ***Blades Division***

Started in 2005, this division accounts for less than 5% of the total revenue. It manufactures four models of blades namely Slit/ Lancetip, Keratome, Crescent & Implant Knives.

### ***Instruments Division***

The division, started in 2005, has developed the bi-polar coagulators supplied to domestic and international markets. The division is also planning to launch the green laser in the future. The products are primarily targeted at niche markets consisting of hospitals. The value of goods sold ranged around INR 800,000 – 1,000,000, which are 50% lower than the price offered by competitors. The products manufactured by this division require post-sales service, unlike other products of the company.

Apart from these, the company also sells cataract surgery kits which are more popular internationally than in India. In India, the preference is to mix and match the surgical components based on the best price offered by the various suppliers (cherry-picking).

### ***Exports Market***

In the exports market, the company primarily targets the developing world for sale of IOLs, specifically concentrating on the International NGO's and large hospitals abroad. It enjoys a global market share of 7% with 80% of sales to non-profit organizations<sup>4</sup>. A snapshot of the countries where Aurolab products are currently sold is shown in **Exhibit 6**. Some of the organizations they export to include Seva Foundation, USA, Sight Savers UK and CBM, Germany. Due to large volumes, the prices charged to the NGOs are lower.

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### **Competitors**

India has close to ten Indian and foreign IOL manufacturers fighting for a share of the five million IOL market, making India the largest consumer of IOLs<sup>5</sup>. One of the key turning points for increase in competition was grant of government funds in early 1990's to conduct free cataract surgeries with IOLs. However, in 2005, the government of India made acquiring licenses mandatory for manufacture of IOLs to ensure that quality standards of products were met by producers<sup>6</sup>. This ensured that unorganized and other low-cost players in the market were not able to operate anymore.

There are primarily three large Indian players catering to approximately 80% of the domestic demand apart from exporting their products. The international players, which include highly diversified ophthalmic/pharmaceutical companies, like Bausch & Lomb, Abbott Medical Optics and Alcon sell close to one million units in India at prices 10 – 15 times more than the domestic products. The reason for international players continuing to make quality products and setting the industry direction is because of their heavy investment in R&D, which is typically as high as 1/6<sup>th</sup> of the total revenues. The type of IOLs manufactured by Aurolab and its competitors are shown in **Exhibit 7**.

While the Indian players apart from Aurolab prefer to approach the doctors and consumers directly through their direct sales and marketing network, international players reach the consumers through a dealer network. The products of some of the Indian players are available even in Tier-3 cities while the international companies target the metros and Tier-2 cities. The focus area for Indian companies is to keep the volumes high while ensuring that the prices remain low.

Patients typically associate higher priced products with better quality. There is also a propensity on the part of patients to pay a premium for imported products because of the perception that they are of higher quality. This has led to the practice of some players 'passing-off' local products as imported thereby charging a premium in violation of ethical norms. Some manufacturers make cosmetic changes such as packaging changes in order to sell the products in different forms to different customers. These 'pseudo-imports' act as a major challenge to Aurolab. Apart from Aurolab, other players are for-profit manufacturers and because of the diverse product-markets in which they operate, they are able to cross-subsidize the products in their portfolio.

### **Manufacturing & Supply Chain**

Aurolab has developed a state of the art manufacturing process. This coupled with efficient scheduling and operational planning ensures that products are available for timely delivery. Based on the committed delivery schedules of products, movement of different SKUs and feedback from previous transactions, Aurolab develops a plan for production. The classification is based on rapid moving, fast moving, slow moving and very slow moving categories.

The production plan ensures that rapid moving goods are not present in significant number in inventory while very slow moving categories may be inventoried. This is because the minimum batch size requirements are maintained to attain operational efficiencies. The minimum batch size for production of IOLs is 200 for fast moving SKUs, 100 for moderate moving SKUs and 25 – 50 for slow moving SKUs. Based on the downstream demand from the dealers, forecasting is done. Currently there is a nationwide ERP platform for sharing data between the head office and regional offices. Post production, the

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packaging and warehousing is done in a central location. Since IOLs can be stored in temperatures up to 40 degree Celsius, packaging per se is not highly specialized.

### **Marketing**

In the initial stages of Aurolab's operations, Aravind Eye Hospitals was the predominant buyer and only the excess production was sold to other hospitals or doctors. Aurolab was a cost center for Aravind rather than a revenue centre. As a result, the focus on marketing and selling was limited with a lot of attention being given to low cost production.

The sales growth was predominantly due to the demand from not-for-profit hospitals and NGOs who were interested in conducting free or low cost cataract surgeries. Even today, Aurolab has over 65% of its revenue from the not-for-profit sector while less than 35% of its revenue originates from the commercial sector. Even though Aurolab can command a premium based on their reputation as a manufacturer of consistently good quality IOLs, the products are priced higher to ensure that there are sufficient margins. The margins are such that there is sufficient cash for administrative expenses and investments in acquiring new technology. The focus has always been on volume and quality rather than on super normal profit margins.

Earlier, Aurolab did not carry out promotional schemes such as seminars or camps for doctors and their high ethical standards prevented them from distributing complimentary samples to doctors as is the industry norm. International and Indian competitors were however engaged in such promotional activities. Aurolab's own dealers were free to provide any discount within a prescribed range to increase their sales. In 2006, Aurolab hosted an online seminar for doctors to promote their products. Today, Aurolab also promotes its products to doctors directly through interactive sessions, videos and books. In future, the firm is planning to send an expert to study the surgical methods of different doctors which will enable them to identify common problems attributable to wrong usage of IOLs.

The marketing expenditure of the firm is only 5% to 10% of their revenue (**Exhibit 8**) which is amongst the lowest for the Indian IOL manufacturers. In addition, to the direct marketing expenses, Aurolab provides a dealer margin of 25 – 30%. Compared to Aurolab's marketing costs, one of the leaders in the Indian IOL market with a capacity to manufacture three million IOLs expended only 15 – 20% of their revenue on marketing.

In the beginning, Aurolab grew in popularity by leveraging the brand equity enjoyed by Aravind Eye Hospitals. Aurolab's domestic and international sales grew steadily mainly through word-of-mouth advertising among NGOs and doctors who had experienced satisfactory results using Aurolab's IOLs. The quality of the IOLs and the service being accorded to the doctors and the hospitals through their dealers are a significant reason for the current market's readiness to pay a premium for Aurolab IOLs.

### ***Marketing Structure***

Between 1992 and 2000, Aurolab had only one person responsible for administration and marketing. However, as the network of dealers grew and the area of operation became larger, the firm had to increase the number of marketing personnel. As it diversified into different product lines, it increased its marketing spend by appointing product managers for managing the sales of individual products.

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The marketing department of Aurolab consists of product managers responsible for products developed by their division while the sales personnel comprising of area development managers and marketing executives were responsible for revenue generation from a particular region. The sales personnel were also responsible for setting targets to their dealers. The organizational structure of the sales and marketing department is shown in **Exhibit 9**. At a regional level, the country has been divided into five different zones, each headed by an area manager, with 2 – 3 sales executives working under him. These area managers work with the dealers taking orders, make joint customer visits and provide any technical assistance to the dealers. Some of the smaller states have only marketing executives and no area managers.

In order to ensure good customer service, Aurolab has an efficient complaint registration system for registering and resolving complaints related to the products. The complaint registration department is responsible for registering the complaint and passing on the complaint to the concerned division. The Quality Assurance manager in each department has the responsibility of resolving the complaint. The complaint registration department closes the loop by ensuring that all the registered complaints are closed within agreed time limits.

### **Aurolab's Dealer Network**

In the early days of Aurolab's operations, due to the issues with stock handling, hospitals began approaching dealers to act as intermediaries. The function of the dealer was to maintain stocks which hospitals found tough to maintain by themselves. The dealer network also solved the problem of accounts receivables for Aurolab. For example, the dealers would pay Aurolab on 31<sup>st</sup> March, irrespective of their transactions with the hospitals, thereby ensuring continuous cash flows. The dealer network of Aurolab thus evolved in an adhoc manner with no planning or strategy driving the decisions to expand.

A typical dealer selection process would include a doctor recommending a dealer to Aurolab. Aurolab would then evaluate the dealer and if found satisfactory, he became a part of the network. In the 1990s, the dealers were mainly chosen by Mr. Doraiswamy, who was in-charge of marketing. The dealership was awarded based on an evaluation of the person (owner) rather than the firm's finances or reach. This was done to ensure that the dealer was ethical in his practices. The process ensured that, all the dealers were hard working, dedicated and contributed significantly to the substantial increase in sales of Aurolab products. The selection procedure adopted by Aurolab has also ensured that the firm had to replace just one dealer in the past fourteen years of operation

In choosing a dealer based channel for marketing of the products one of the points that Aurolab has had to take care of is the brand agnostic nature of the patients. When queried about the patients' involvement in the purchase of IOLs, the dealer in Bangalore reflected,

*“The end users of the IOLs are the patients who have very little experience and knowledge about the IOL brands available in the market. The doctors play an important role in shaping the perception of the patients (since they are entirely dependent on the doctor for advice). At the most, the doctors advise patients about the availability of the domestic and imported brands, who then make a decision based on their budget (since the imported brands are costlier). The doctors themselves decide on the IOL make based on the quality, promptness of delivery and service, payment terms and the prior experience of their*

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*peer group and themselves. In this equation, we (the dealers) play an important role in maintaining good relationship and in providing prompt service and convenient payment terms to the doctors”*

-Aurolab Channel Partner, Bangalore

The dealers had their own sales representatives who developed a healthy relationship with doctors through frequent visits by dealer personnel, offering promotional schemes, by providing excellent service and through just-in-time delivery. As most of the dealers acted as distributors with little value addition to the product itself, their investment required in specific infrastructure was limited. As per Aurolab estimates, a dealer would require a modest start-up capital of about INR one million and a small office with no requirement of specialized storage spaces for stocking inventory.

While the dealers managed customer relationships as well as obtained and serviced orders, they also enlisted the support of Aurolab and in some cases, Aravind Eye Hospitals to gain new customers. In some cases, doctors with Aravind Eye Hospitals visited conferences or seminars organized by the local dealers. Apart from increasing sales, this also helped increase the quality of eye care provided by the doctors. The strength of the dealer network can be gauged from the fact that a foreign player like Alcon chose Aurolab's dealer network to penetrate the market. The breakup of revenue for Aurolab from various sources for IOLs is shown in **Exhibit 10**.

A dealer typically gives 45 days of credit to a hospital or a clinic which extends to 60 days sometimes. Typically the deployment of resources by a dealer depends on the size of the area being covered and the number of ophthalmologists in that area. For a city such as Mumbai, there is just one super distributor and there are three sub-distributors working under the super distributor. **Exhibit 11** shows the spread of Aurolab's sales network across the country.

The dealers are not allowed to deal with competing products in the same price range. However, a dealer selling Aurolab IOLs can sell IOLs from Alcon, or other international manufacturers, as they target different customer segments. The incentive for the dealers used to vary from 5% to 10% based on the sales achieved. The incentive structure for the dealers was based on the year-end sales volume achieved by them and was over and above the operating margins.

With the introduction of the instruments division in 2005, Aurolab has also begun manufacturing and selling instruments which are high-end products and require customer education. Hence, there has been a renewed interest shown in developing a trained direct sales team which would interact with doctors to identify existing issues, gauge the doctors' impression of Aurolab and its products and enable it to plan ahead for the future. The dealers' incentive has been restricted to 7.5% in order to fund the development of this team. **Exhibit 12** shows the different modes by which a sale happens to an end customer today.

The dealer system constrained Aurolab's ability to compete on prices with competitors as the competitors could drop prices while the margins accorded to the dealer would prevent Aurolab from doing so. The other major problem during the 1990s concerned the supply of IOLs to the NGOs. Aurolab was supplying to the NGOs at a discounted price which was lesser than the price at which the lenses were provided to the dealers. However, the NGOs also approached the dealers to procure the IOLs and the dealers had to be compensated for the loss they suffered. Senior management at Aurolab reckoned that a direct sales team



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could bring Aurolab back into contact with NGOs. This touch was getting eroded due to the presence of the dealer network.

In the last few years, with rapid expansion manufacturing capacity and volume of sales, Aurolab found that it was not receiving sufficient market intelligence and was increasingly getting distanced from its customers. As the products became increasingly complex, doctors started demanding personal assistance and demonstrations of product usage. These demonstrations were done in co-ordination with local Aurolab sales personnel.

### **Challenges in India and in international markets**

Being a non-profit organization, Aurolab was focused more on the productivity aspect in a bid to drive down the costs while maintaining quality. Consequently, there was little emphasis on the sales revenues, in terms of target setting. Sale of IOLs was more of a derived factor with Aurolab leveraging its connection with Aravind Eye Care System to gain acceptance with the doctors. However, with the market for IOLs becoming more competitive, the pressure on Aurolab intensified to leverage its dealer network to gain access to more markets and also promote Aurolab products more aggressively in the existing markets.

It was estimated that dealers covered only about 20 to 25% of the ophthalmologists in the country. For example, the Karnataka dealer serviced the entire state through two offices – one in Bangalore and one in Davangere. Each office had two sales personnel and four delivery boys. The sales personnel used to make rounds of the doctors and hospitals in the area in order to generate business. There was also the issue of resource sharing since the sales personnel were common to the different brands of IOL that a dealer stocked. The dealer for Karnataka stocked AMO<sup>1</sup> and EyeCon make IOLs (both imported), in addition to Aurolab.

A dealer in trying to increase his margins was likely to focus more on the larger markets which were more conducive to premium lenses, while ignoring the tier 3 & tier 4 cities and rural markets. As a result, Aurolab's business motive of providing "*World class quality at affordable prices to help eradicate needless blindness*" would be compromised. Mr. R D Sriram, Director Operations reflected on the question facing him: "*How should Aurolab leverage its dealer network to reaffirm its competitive edge in an increasingly fragmented market?*"

The presence of dealers as an intermediary in the sale had prevented Aurolab from obtaining market intelligence and also in building rapport with the doctors. The contact with doctors was leveraged by competition in many cases to gain access to newer customers. The lack of market intelligence especially hampered Aurolab from making a fair assessment of the ground conditions. In addition, the challenge for Aurolab lay in transforming the dealer network into a legion of brand ambassadors.

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<sup>1</sup> Abbott Medical Optics (AMO), based in Santa Ana, California, is a global leader in ophthalmic care with global revenues of USD 1.2 billion in 2008

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Reflecting on the export markets of Aurolab, Mr. Vishnu Prasad, International Marketing Manager said, “Aurolab exports IOLs for large programs that are focused on elimination of needless blindness, such as those by INGOs (International NGOs) such as Seva Foundation, USA; Sight Savers International, UK; CBM, International, Germany; etc., as well as supplies directly to large hospitals overseas. Most of these supplies are to the developing world. Pricing to programs by INGOs are typically much lower, due to the large volumes. Under these programs, the IOLs are given every year to hospitals in the developing countries as a free donation by INGOs. When these hospitals need additional supplies, they typically approach Aurolab directly for their needs. Other hospitals in the country also started asking Aurolab for supplies. This resulted in dealers springing up in these countries. Typically there is one dealer per country. Presently, Aurolab has thirty dealers outside India.”

In the developed international markets, Aurolab is faced with the problem of recognition and credibility. Even though Aurolab had obtained CE approval in the year 2008, it was yet to make a direct sale in the European markets. In some cases, Aurolab has had to accommodate dealers even when a direct sale was made through the International NGOs. For example, the annual requirement of IOLs in Bangladesh is approximately 300,000. Of this total demand, Sight Savers procures 60,000 IOLs per year from Aurolab. A significant portion of the remaining IOLs for the country were sourced directly from Aurolab by various other organisations. Consequently, the margins of the Aurolab dealer in Bangladesh were impacted due to these large direct institutional purchases. In order to mitigate the problem, the dealer was given an incentive, even though the sale was handled directly by the head office and in spite of the low margins that are typically realized from sales to NGOs.

It was also not clear if the growth in the international market would come through direct sales or the dealer network. If the growth was going to be delivered by the dealer network, then an additional dilemma was regarding the selection of the right dealers who would partner with Aurolab in their international growth plans.

## **ERP Implementation – An attempt at removing information asymmetry**

Aurolab is contemplating to extend the ERP system to its dealers. This is intended to remove the lag in gaining market intelligence and to help in better stock keeping and efficient inventory control. Apart from in-house efficiency improvements, it is expected that the ERP system will synchronize Aurolab’s production planning and dispatch with the dealer’s shipments. It is also expected that Aurolab would be able to generate market data on fast moving items in different regions and identify individual demands from doctors and hospitals. The innovation in the IOL industry is expected to increase the number of SKUs and Aurolab expected that ERP would give it an edge over competition through successful management of production, inventory, dispatch and dealer requirements.

## **Way Forward**

Aurolab is close to launching the green laser retinopathy device from the instruments division. Considering the poor technical knowledge of dealers, there is a considerable amount of hesitation to let the device sales happen through the channel network as there may be issues associated with servicing and warranty. Also, since the device was extremely specific in its use, it may require using technically competent people to work with the customers during the installation and initial usage phase. This would

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require expansion of its technical personnel on the field to ensure that customer expectations are met. However, as the margins in this segment were higher, channel partners were interested in selling the device. Since the company believed in maintaining close relationship with its partners, Aurolab wanted to ensure that it did not adopt any strategy which would affect that relationship. For this reason, it was contemplating going ahead with direct sales and sharing a commission of about 3% - 5% on every sale with the local dealer.

Since Aurolab had not invested on basic R&D, there was a debate in the company as to whether Aurolab should start investing in R&D so as to be able to drive the technology better. However, investments in R&D would imply that the costs of the products sold to consumers would increase. Without investment in R&D, it was clear that Aurolab may not be able to maintain its leadership position.

Internally, there was debate on whether Aurolab had taken the right strategy with respect to channels and whether the naturally evolved solution should give way to a more focused approach through direct sales as done by other Indian companies. However, if the company decides to continue with the dealer network, what should Aurolab do to convert this network into an advantage over other players? Currently, Aurolab has one dealer for a specific region. With larger number of products coming in and the technology evolving, the challenge was to determine how the channel partners should be organized so as to minimize any conflict between them. Also, Aurolab was debating whether it should lay down any minimum technical qualification criteria for dealers of its products? In short, the issue was, 'What should Aurolab do with regard to its go-to-market strategy?'

**Exhibit 1 – Aravind Eye Hospitals**

**Aravind Eye Hospitals**

Examine over 1.7 million patients and operate on over 250,000 annually  
– World's largest provider of eye care services

**Coimbatore 1997**  
Beds - Paying: 176 - Free: 630

**Theni 1985**  
Beds - Paying: 40 - Free: 123

**Tirunelveli 1988**  
Beds - Paying: 150 - Free: 481

**Pondicherry 2003**  
Beds - Paying: 131 - Free: 600

**Madurai 1976**  
Beds - Paying: 285 - Free: 921

**Aravind Managed Eye Hospitals**

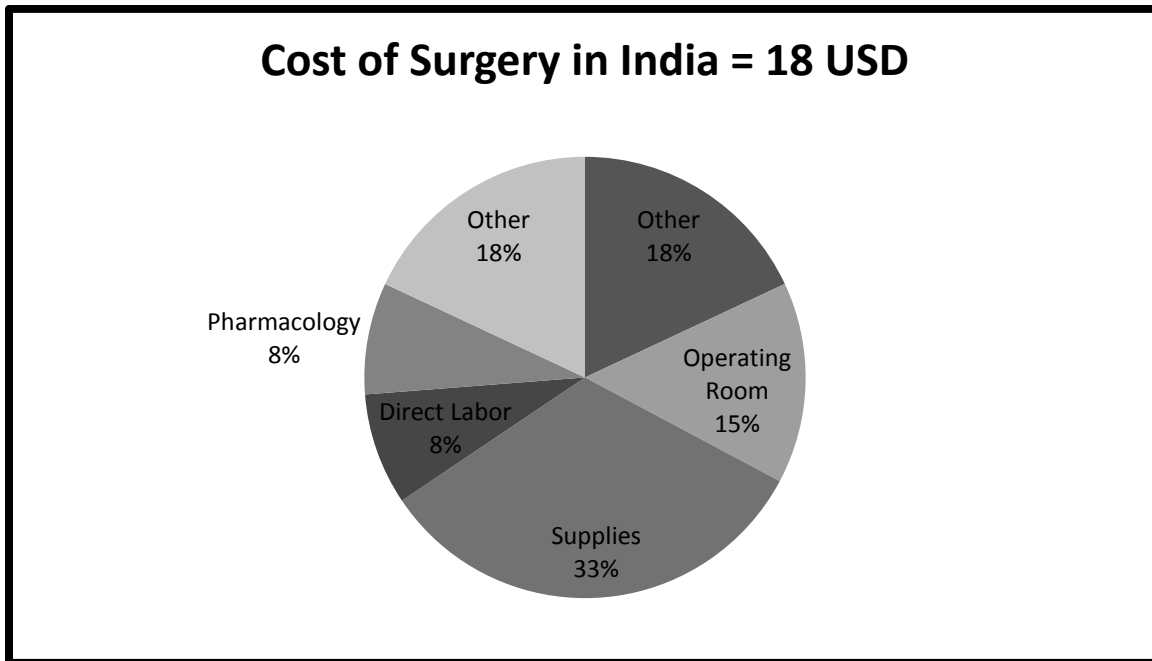
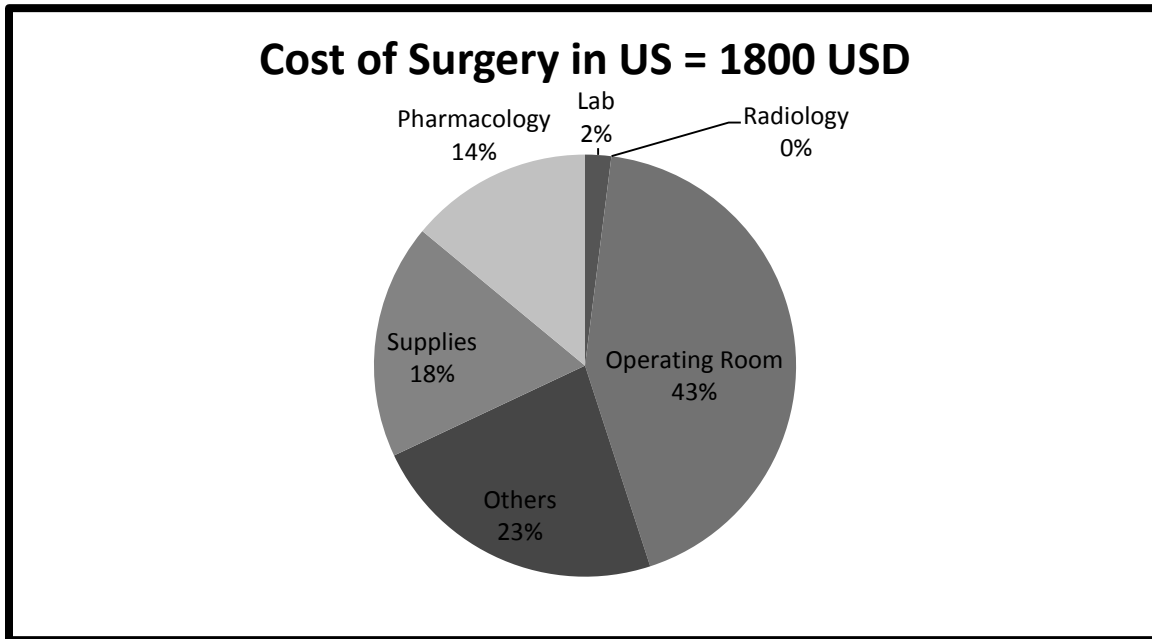
Management Contract Approach  
– managing hospitals in underserved areas in India and other developing countries

**INDIRA EYE HOSPITAL AND RESEARCH CENTRE  
GANDHI**  
In Collaboration with Aravind Eye Care System  
*Amethi, Uttar Pradesh 2005*

**Priyamvada Birla Aravind Eye Hospital**  
*Kolkata, West Bengal 2001*

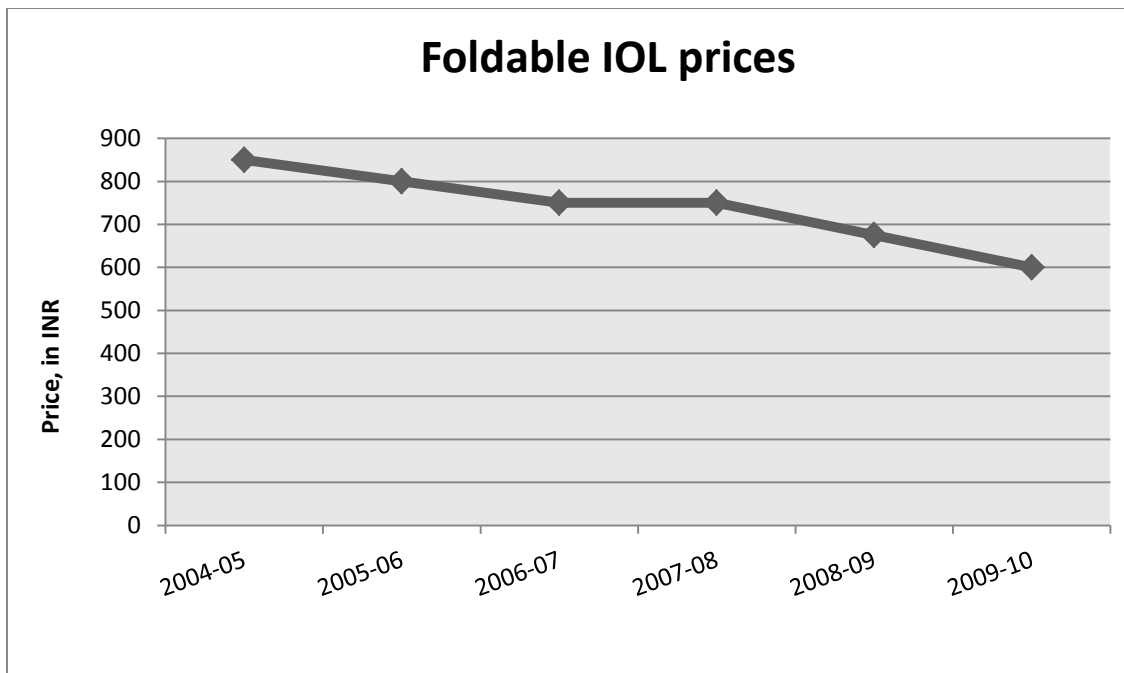
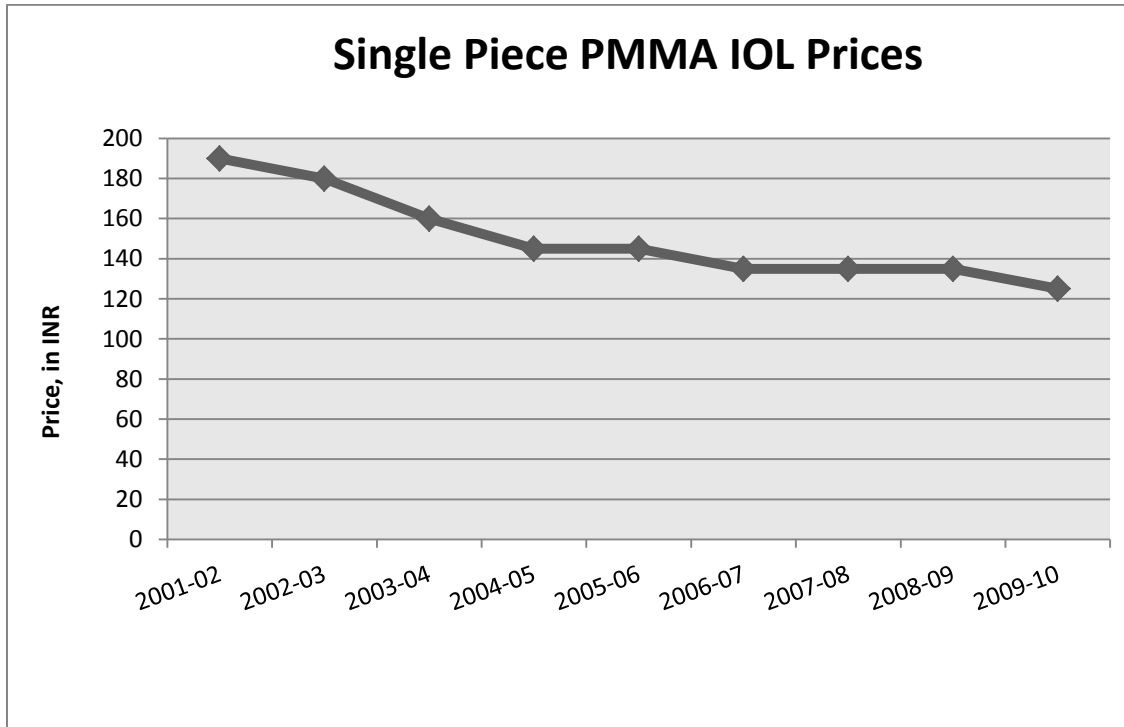
**Locations of Aravind<sup>7</sup>**

Exhibit 2 – Cost Split-up of Surgery



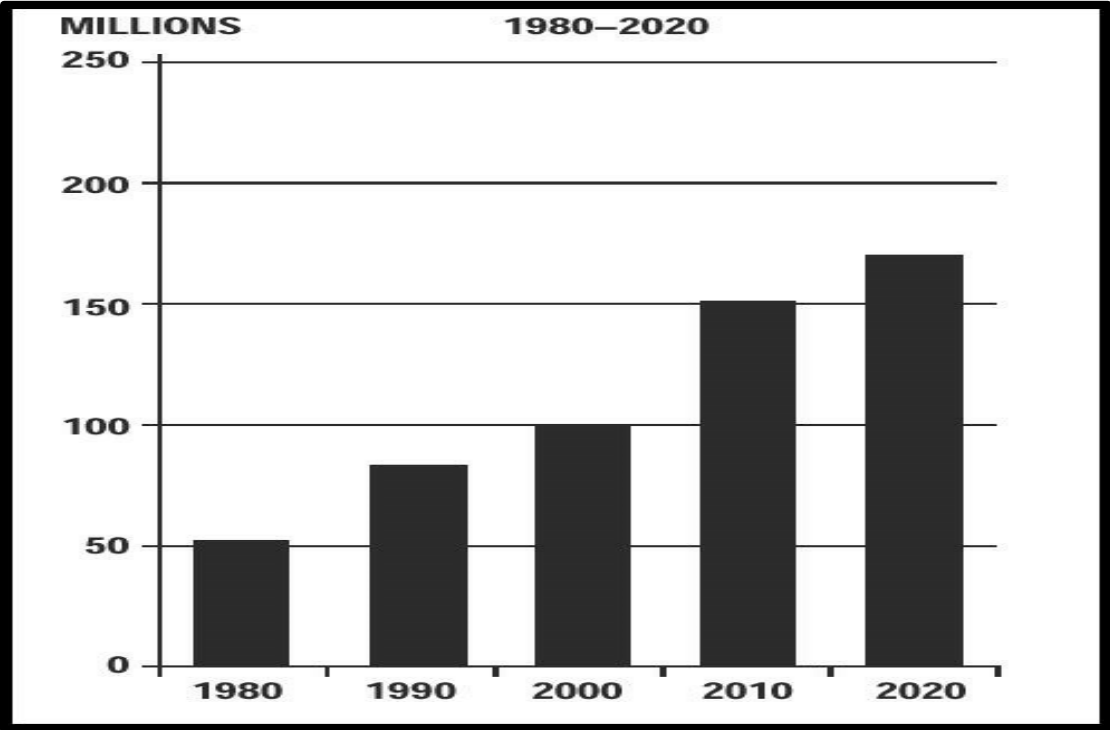
Cost Split of cataract surgery<sup>8</sup>

**Exhibit 3 – Aurolab’s prices of Intra-Ocular Lenses**



**Trend in Aurolab’s IOL prices**

Exhibit 4 – Growth in Cataract Surgeries worldwide



Growth in Number of Cataract Surgeries<sup>9</sup>

## **Exhibit 5 – Types of IOLs available**

### ***Three Piece PMMA IOLs:***

These are the first generation IOLs. They are non-flexible and hence cannot be folded for implantation through a smaller incision. These lenses are easy to implant. They are still preferred for complicated cases. These lenses are generally low-priced but more labour intensive to manufacture.

### ***Single Piece PMMA IOLs:***

In this case the whole lens (optics and haptics) are cut from the PMMA sheets. They are also non-flexible and hence cannot be folded for implantation through a smaller incision. These lenses are more commonly used in developing countries.

### ***Hydrophilic Foldable IOLs:***

These are foldable lenses. This material has to be hydrated (immersed in water until implanted in the eye), to retain its flexible property. It can be implanted through smaller incisions and hence it is commonly used in conjunction with specialized equipment called Phaco Emulsifier. Such a surgery is called Phaco Surgery. The material was first used for contact lenses and later found application for intraocular implantation. As this material is very flexible, now-a-days, it is used in Micro Phaco (sub-2mm incision surgeries).

### ***Hydrophobic Foldable IOLs:***

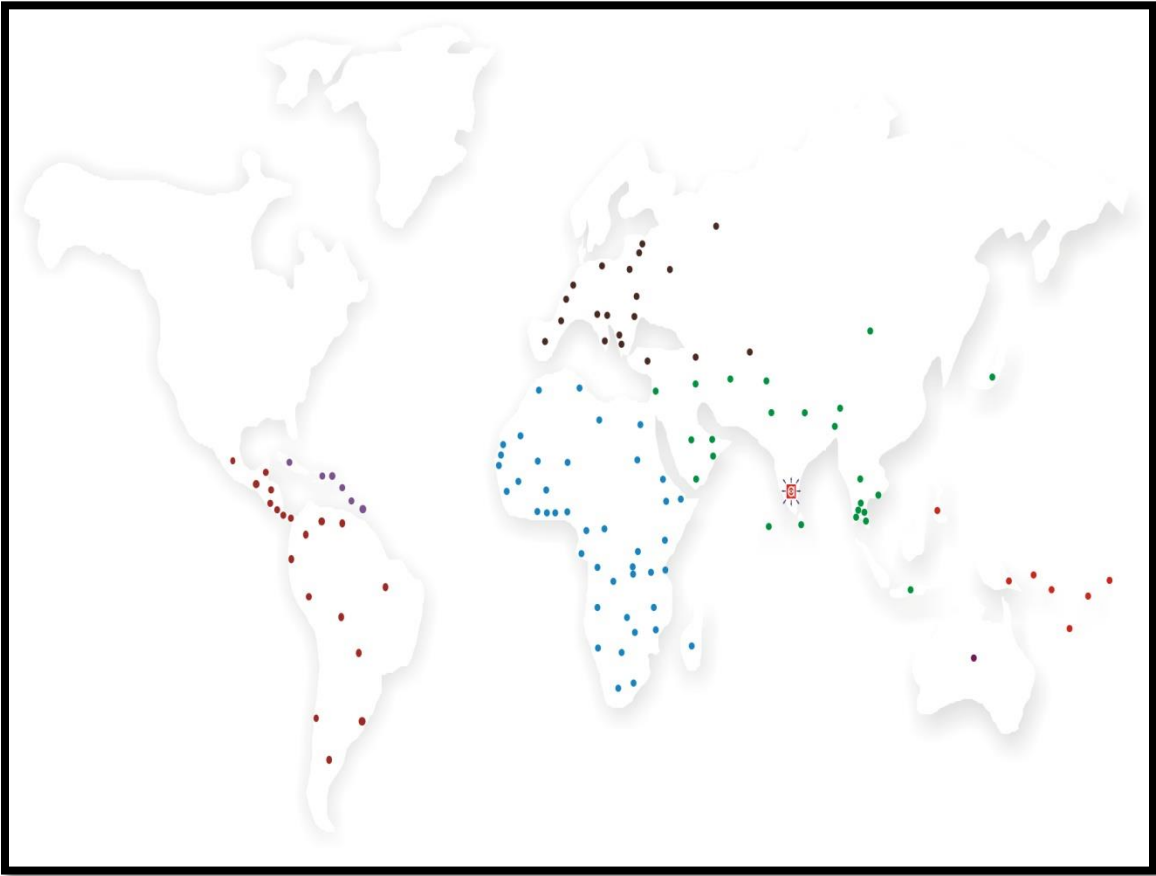
This is the first material designed specifically for IOL application. This material is not freely available and is difficult to manufacture. Only a few companies make these lenses worldwide. It is the most preferred material for IOLs worldwide. This material is flexible even at room temperature and doesn't need to be hydrated to retain its flexibility. This material was first introduced by Alcon, USA, a global IOL major.

### ***Silicon Foldable IOLs:***

This material is also foldable. It retains its foldable property in room temperature. However, this material does not enjoy the popularity of Hydrophilic and Hydrophobic IOLs. It was greatly popularized in the initial years by AMO, USA, another global IOL major. Exhibit-III provides the product mix of Aurolab's IOLs for the last three financial years.



**Exhibit 6 – Global Presence of Aurolab in terms of Reach of its Product**



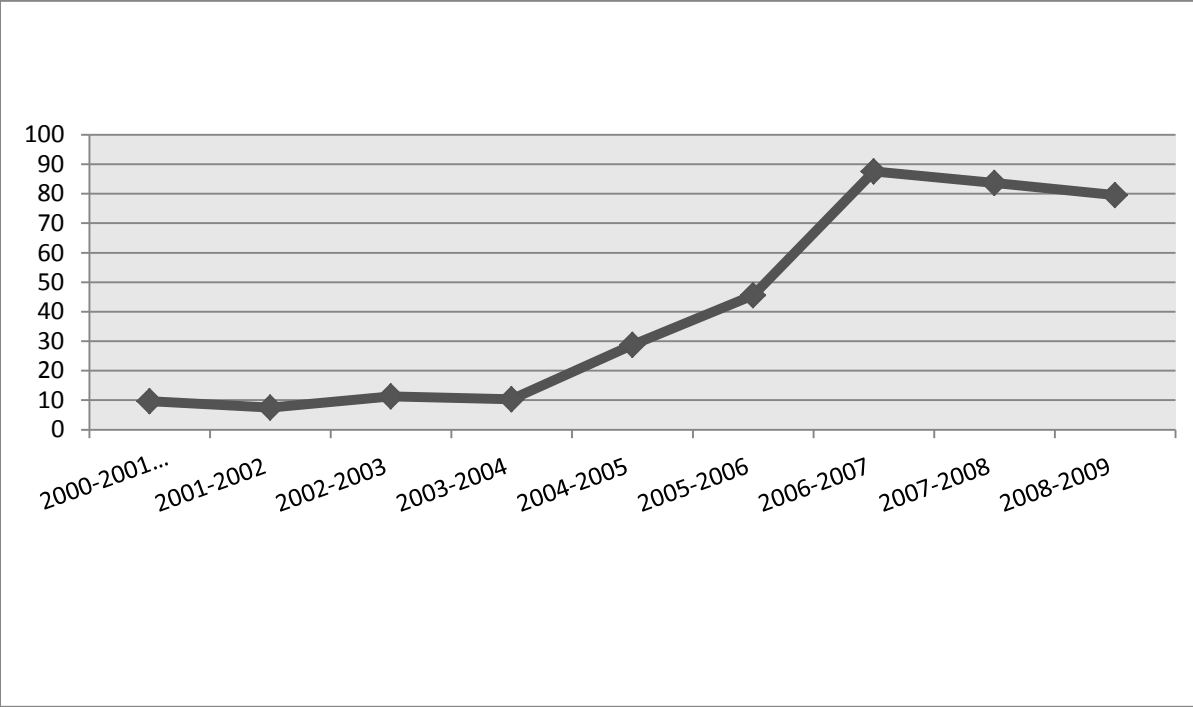
**International Presence of Aurolab**

**Exhibit 7 – Products Manufactured by Competitors**

- ✓ *Yes, the manufacturer sells that product category*  
 ✗ *No, the manufacturer does not sell that product category*

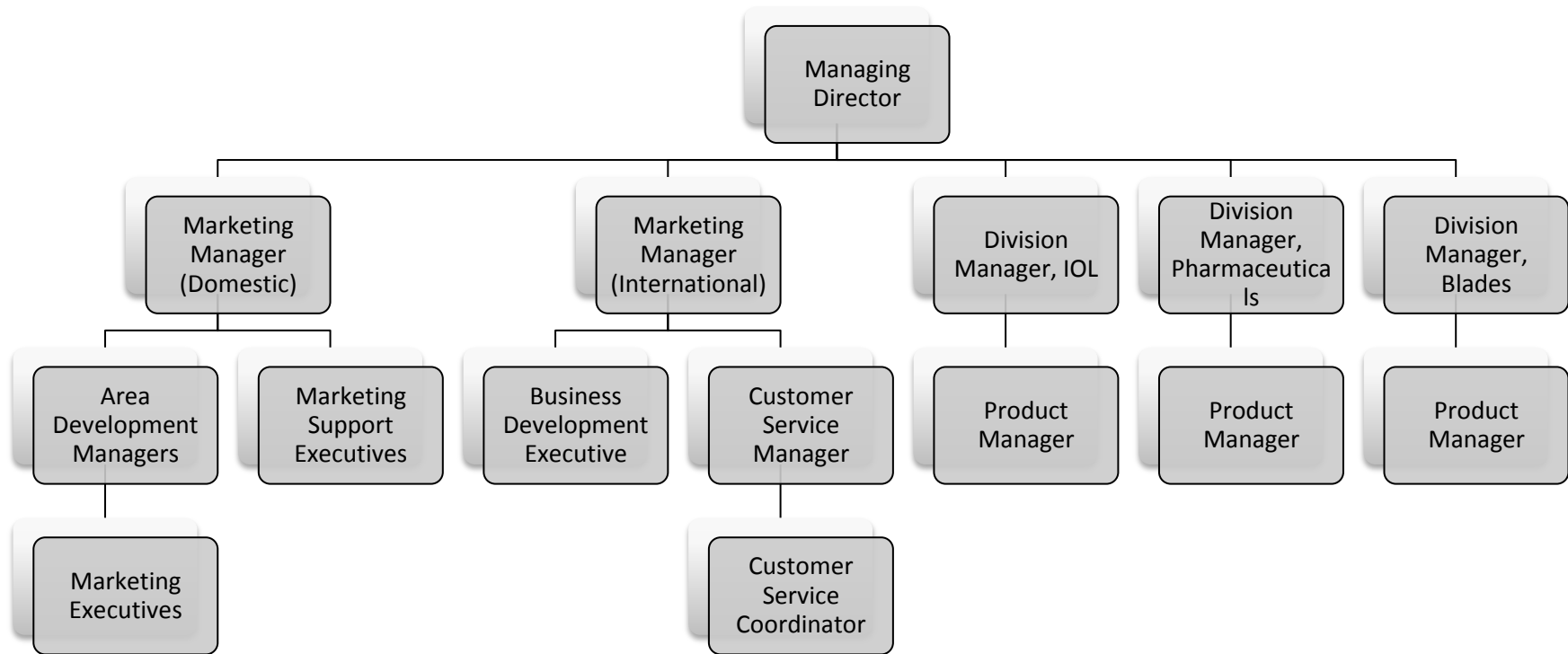
	Product category				
	IOL	Pharmaceuticals	Needle Sutures	Blades	Surgical Instruments
<b>Major Indian Manufacturer # 1</b>	✓	✓	✗	✓	Wide range of equipment
<b>Major Indian Manufacturer # 2</b>	✓	✓	✗	✓	All equipment relevant to IOL sales. Wider range than Aurolab
<b>Aurolab</b>	✓	✓	✓	✓	Only 1: Green Laser for Diabetic Retinopathy
<b>Alcon</b>	✓	✓	✓	✓	Selective high end range
<b>Bausch &amp; Lomb</b>	✓	✗	✗	✗	Wide range of equipment. High end
<b>Abbott Medical Optics</b>	✓	✗	✗	✗	Selective high end range. High end

**Exhibit 8 – Marketing Expenditure of Aurolab**



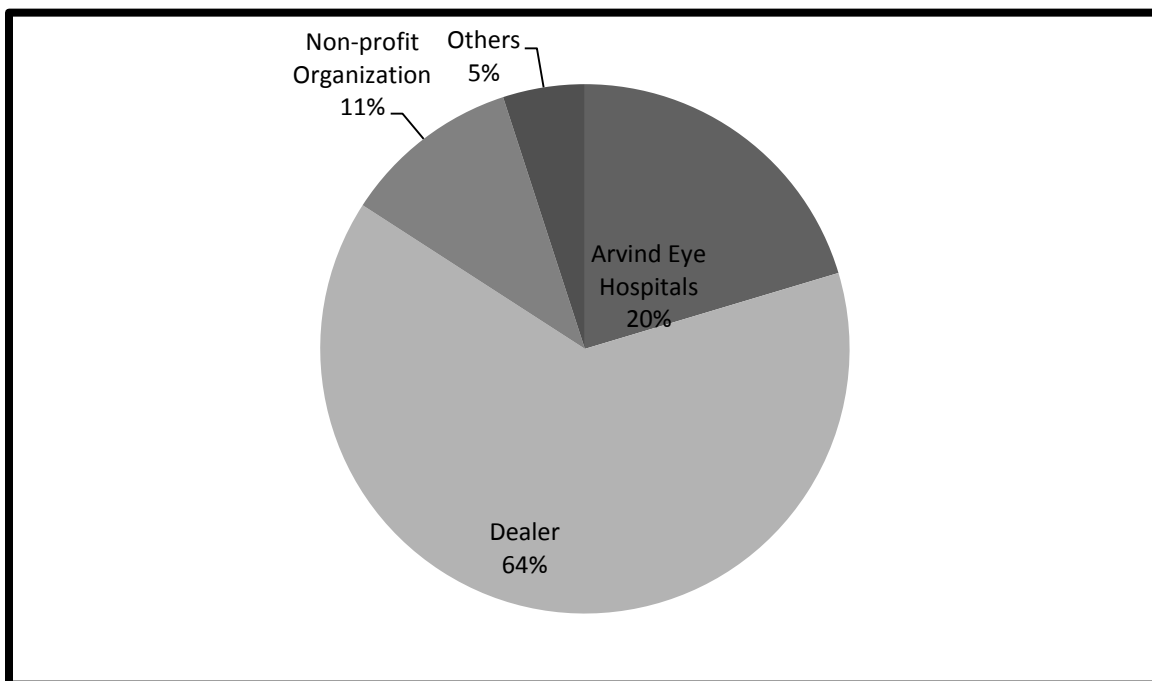
**Marketing Expenses of Aurolab**

**Exhibit 9 – Aurolab Organizational Structure (Marketing)**



**Aurolab Organization Structure (Marketing)**

**Exhibit 10 – Revenue Break-up from Domestic Market of Aurolab**

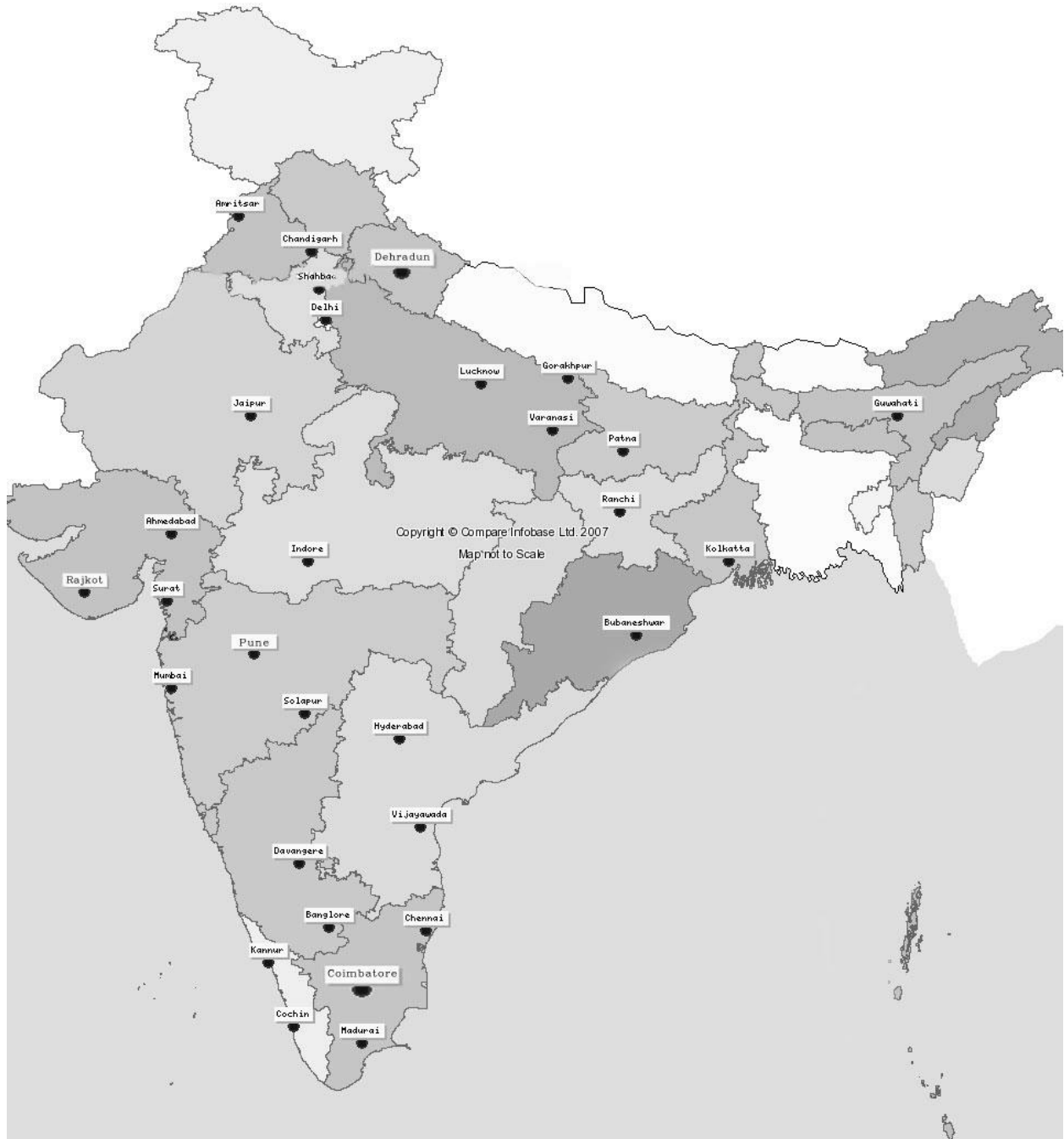


**Revenue Break-up of Aurolab**

**Revenue breakup from operations (customer category wise) – FY 2008**

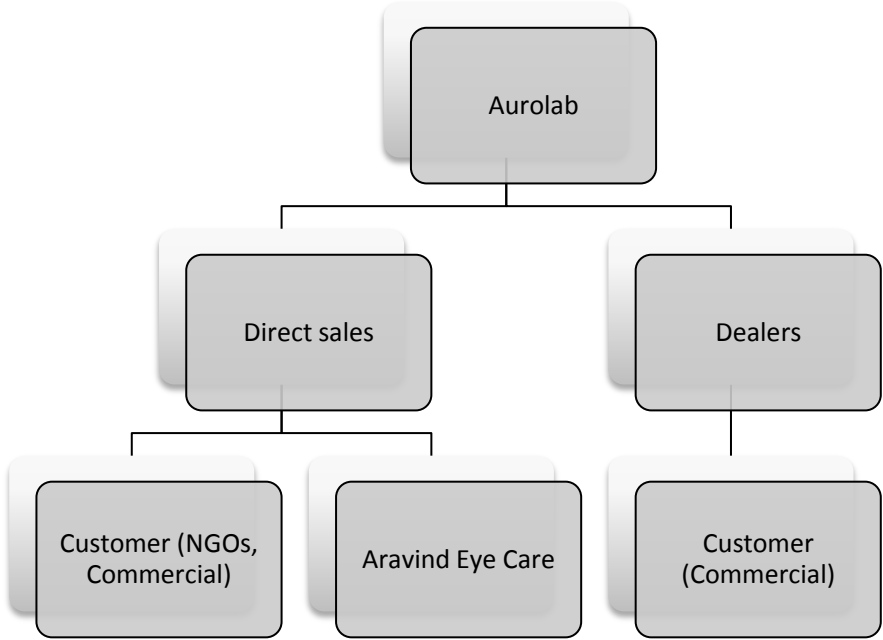
<b>Customer category</b>	<b>Revenue from sales in FY 2008 (INR in Lacs)</b>
<b>Aravind Eye Hospitals</b>	285
<b>Dealer</b>	892
<b>Non profit organizations</b>	152
<b>Others</b>	70

**Exhibit 11 – Geographic spread of Aurolab Products – India**



**Figure 1 - Domestic Spread of Aurolab**

**Exhibit 12 – Possible modes of Sale to Customers**



**Modes of sale to consumer**

## **References**

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<sup>1</sup> Referenced from <http://timesofindia.indiatimes.com/india/India-has-largest-blind-population/articleshow/2447603.cms> on November 5, 2009

<sup>2</sup> Referenced from <http://www.aravind.org/annualreport08/displayreport.aspx?qstring=Aurolab> on November 5, 2009

<sup>3</sup> Referenced from <http://www.globalenvision.org/library/10/943> on November 5, 2009

<sup>4</sup> Referenced from [http://www.fchampalimaud.org/images/uploads/Aravind\\_Eye\\_Care\\_System.pdf](http://www.fchampalimaud.org/images/uploads/Aravind_Eye_Care_System.pdf) on November 5, 2009

<sup>5</sup> Referenced from <http://www.osnsupersite.com/view.aspx?rid=28063> on November 5, 2009

<sup>6</sup> Part II-Section 3- Sub-section(i) Government of India Gazette notification, October 7, 2005

<sup>7</sup> Referenced from <http://www.aravind.org/hospitals/ourhospitals.asp> on November 9, 2009

<sup>8</sup> Referenced from Figure 2 p 33, Making Sight Affordable(Part I), Aurolab Pioneers Production of Low-Cost Technology for Cataract Surgery by Mahad Ibrahim, Aman Bhandari, Jaspal S Sandhu and P. Balakrishnan

<sup>9</sup> Referenced from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1705965/> on 9<sup>th</sup> November 2009