

Fact sheet Optelec Holding B.V.



Mission Statement

"Improving the quality of life of visually impaired and dyslexic people - reaching out with simple and effective solutions"

The statistics

In our world today there are estimated 124 million people with Low Vision and 37 million Blind, comprising a total of more than 161 million people with some degree of visual impairment.

Visual impairment has an enormous personal, social and economic cost, limiting the education and life choices of otherwise healthy people, and placing a significant weight on family, community, and social and health services.

According to Prevent Blindness America, twice as many people will be blind in 2030 as there is today (Prevent Blindness America, 1998-2000). The following projections are based on estimates of self-reported vision impairment from The Lighthouse National Survey on Vision Loss (The Lighthouse Inc., 1995) and applied to U.S. Census population projections:

- 17% of persons age 45 and older report some form of vision impairment, representing 16.5 million persons. By the year 2010, when all baby boomers are age 45 and older, this number will increase to 20 million;
- 9% of persons age 45 and older report severe vision impairment, representing 8.7 million persons. By the year 2010, when all baby boomers are age 45 and older, this number will increase to 10.7 million;
- About 7.3 million, or 21% of persons age 65 and over, report some form of vision impairment. As baby boomers age, this number will reach 8.3 million in the year 2010; 11.3 million in 2020; and in 2030, 14.8 million persons age 65 and older will report some form of vision loss;
- About 3.8 million or 11% of persons age 65 and over, report severe vision impairment. As baby boomers age, this number will reach 4.3 million in the year 2010; 5.9 million in 2020; and in 2030, 7.7 million persons age 65 and older will report a severe vision impairment.

In Europe and other regions similar statistics are expected. Even when remedial solutions are fully exhausted, most of these people can function independently and fully utilize their capacities when provided with proper schooling, vision rehabilitation and the use of (electronic) aids.

Optelec

Based in Barendrecht, the Netherlands, Optelec is the leading distributor, designer and manufacturer of life-changing assistive technologies for people who are visually impaired and dyslexic with a multi-tier distribution in more than 60 countries. The company's flagship, the ClearView Plus line, magnifies text and photos to over 50 times, bringing life back into focus for those living with Low Vision by incorporating product intelligence with a sleek modular design. The Alva series of Braille terminals provide Braille users with complete control of their laptop or desktop computer from a selection of Braille displays which excel in ingenuity, durability, and affordability. The user-friendly, wireless EasyLink Braille series guarantees portable cellular phone and PDA access for active participation within the mainstream global information community. Sales offices have been established in the United States, Canada, United Kingdom, Germany, Belgium, and the Netherlands and the company supports a strong distribution network throughout North America, Europe, Asia and the Middle East. Supported by American Associations of Optomologists, Optometrists and Occupational Therapists, Optelec has launched the first ever information and referral hub for the visually impaired: www.lowvision.com.

History

In 1975 Mr F.J. Tieman developed the first video magnifier in his optician store in Oostvoorne, the Netherlands. This first unit was for a customer who could no longer read using her spectacles. After this initial success Tieman launched a first series of the Tieman video magnifiers. Demand grew exponentially, resulting in the establishment of a new factory in Barendrecht which is now the headquarters of the Optelec Group.

In the mid eighties Tieman obtained the first patent on refreshable Braille cell technology, and established itself as the market's major Braille cell supplier. The first generation of complete Braille displays were launched in 1988 at the World Blind Union Exhibition in Madrid.

At the beginning of the nineties the first international step was taken and Tieman GmbH was founded in Schwalmstadt, Germany. From that date on the company grew rapidly. In 1997 Optelec USA, the leading North American manufacturer of video magnifiers and Optelec Canada were acquired, becoming a globalized force within the industry.

In May 2005 Tieman globally changed its name to Optelec. At the same time Optelec introduced several new products such as EasyLink, which provide the Blind with wireless access to mainstream notebook PDA or cell-phone technology and the sleek looking ClearView⁺ system, a unique modular product with vastly superior image and contrast. The slogan *'from one button simplicity to endless possibilities'* indicates the flexibility and ease of use of this innovative product range. At the same year Optelec acquired the business of the ALVA Satellite Braille displays, its main competitor in the Netherlands.

Also Lighthouse Professional Products (offering a complete line of products for Eye Care Professionals such as magnifiers), was acquired to complete Optelec's product portfolio to serve customers that experience the widest range of visual impairments.

Recently the company announced new held-hold devices for the dyslexic, making written information instant accessible, giving them equal opportunity to develop their skills.

Outlook

The need for solutions for visually impaired will grow substantially. With aging populations visually impaired people expect to continue functioning autonomously through the assistance of electronic aids. Two factors will enable high growth in demand for aids:

1. With industry initiatives to align delivery systems for Vision Rehabilitation Services worldwide, the awareness for electronic tools for Low Vision will increasingly grow through improving referrals from Ophthalmologists to Low Vision specialists and growing install bases. In addition, the trend in the Far East suggests that elderly also need to function independently, as cultural patterns changes. The blind community requires the same benefits as the “sighted” from the electronic evolution and data communication. Awareness is growing of the huge number of people who cannot read because of dyslexic and other disorders. Optelec’s access technology narrows the gap between dated assistive technologies and mainstream solutions substantially. As many people are dependent on electronic data, it is of paramount importance that they will be provided with these access tools in a timely and responsible manner.
2. With the introduction of a ‘profitable’ Low Vision rehab model for eye care professionals and the launch of a “one stop shop” e-commerce site, such as www.shoplowvision.com, for professionals and consumers for all optical, electronical and daily-living aids for the visually-impaired. Optelec expects with these initiatives that many more distribution outlets will be formed by professionals who will service the patients in line with the ‘model delivery system’ (as agreed by the associations). This in turn will serve the 80% of the visually-impaired people who are currently unaware of available rehabilitation services.

Recent acquisitions

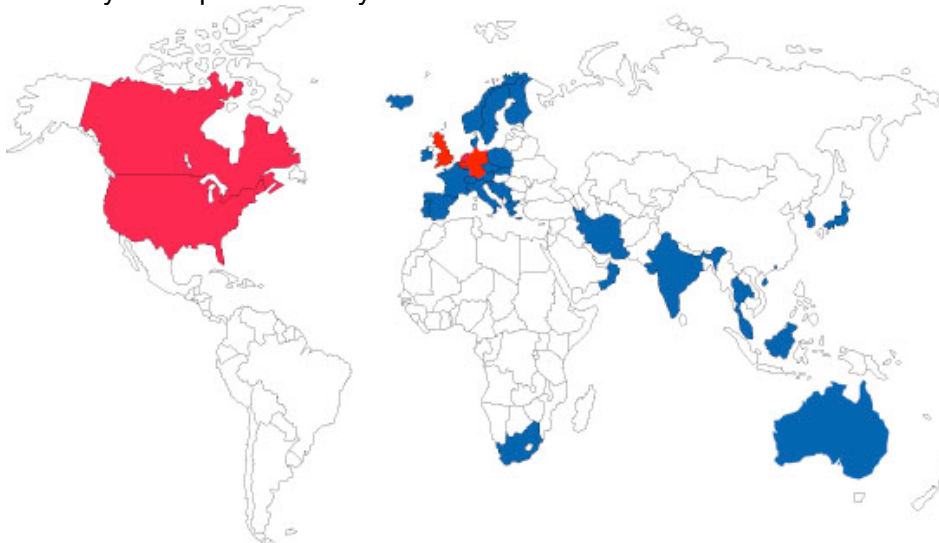
April 2005: Telesensory UK

June 2005: Lighthouse Professional Products Division, USA

September 2005: assets Alva B.V., the Netherlands

Geographical spread

Optelec’s market reach is worldwide in more than 60 countries with substantial funding or private ability to acquire these systems.



The red marked countries are represented by Optelec’s own subsidiaries; the blue marked countries are represented by our dealers.

Strategy

Focus on rapid growth to reach market leadership in each market served

Optelec currently holds overall market leadership in Low Vision, Blindness and Dyslexic products worldwide, but strives to align with local associations to work the rehabilitation market more effectively. Also focus is given to the growing senior market coping with decreasing vision.

Through investments in innovative product technology, together with continued investments into new distribution concepts and local sales organizations, Optelec plans to grow rapidly to such market position.

Organization and culture

Optelec operates with a business model to enable local entrepreneurial spirits in its subsidiaries. Regarding Optelec's business model and operating environment it is our goal to maintain a leading position as supplier of electronic aids for visually impaired and dyslexic people.

To become the leading player in each country served, Optelec itself must strive for excellence throughout its organization with highly qualified people that are stimulated to do an exemplary job. To achieve this Optelec strives for the following conditions:

a) Inspiring Business Model: decisions close to the market

To focus attention to our customers and to seize opportunities in the market as they arise, our business model favors decision making central to the customer's unmet needs. Frontline data-driven ownership is key to inspire our people to meet our challenging objectives. The total Optelec organization needs to be inspired by the demands of the market and our competitive position. This, together with a stimulating operating environment (explained later) provides the space in which our key people must feel encouraged to make the right decisions, to be maximally challenged, and to take responsibility for durable profit growth.

b) Stimulate entrepreneurial spirit

To better react to local market developments it is important to cultivate/stimulate local entrepreneurial spirits with durable profit growth and ROI as main driver. Our local actions should be in concert with our total Optelec objectives. This can be made possible with clear operating guidelines which set the boundaries for the local autonomy. This will maximally stimulate the local efforts, will avoid (costly) duplications, and safeguards the global Optelec image. It also favors a tight financial control to protect the interests of our shareholders. We have set these boundaries together with our local offices, and work with practical but stringent group procedures.

c) Lean central support

This all supported by a centrally lean corporate "Holding" organization with core competences on Sales & Product Management Support, Product Innovation, Managed Outsourced Operations, and Finance to realize quality growth with quality products, competitively positioned, which meet the local "look and feel" specifications. These key functions are concentrated now in Barendrecht, the Netherlands.

d) Open and cross-fertilizing culture

Also key to become continuously better and more profitable is to learn from each other and agree on general action planning. We need to stimulate an open company with a "benchmarking" culture, with good exchange of ideas and good practices. Each Managing Director is free to take these ideas to his/her own operation. Managing Directors can also challenge the "Holding" on meeting deliverables. For this purpose we organize Group Management Meetings three times a year.

Products and markets

The products of Optelec are divided in Low Vision and Blindness products.

Low Vision:

Compact⁺
Traveller⁺
ClearView⁺
ClearNote⁺

Blindness:

EasyLink
EasyLink 12
Braille Voyager 44
Braille Voyager 70

ALVA 544 Satellite Traveller
ALVA Satellite 570 Pro
ALVA Satellite 584 Pro
ALVA BC640
ALVA BC640 FP

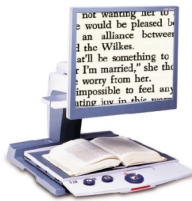
Own products also include the entire range of handheld magnifiers. In addition Optelec works closely together with other companies for branded or trading products. The market for Low Vision and Blindness differs per country. In the near future Optelec is introducing electronic tools also for the Dyslexia market. There are three types of markets i.e. private market, funding market and educational market. Distribution is multi-prone: through own offices, eye care specialists, agents, dealers, through agencies, insurance companies, veteran administration, retirement cooperations, and direct thru web portals.

Research and development

Optelec's R&D department places high value on proprietary technology. The R&D mission statement is to apply latest mainstream technologies into new solutions for people who are visually-impaired and dyslexic. More and more cooperation with mainstream technology leaders is established to better serve the visually impaired and the dyslexic people. We see that for each stage of Low Vision to Blindness, a person needs a toolbox of different solutions to function independently. Optelec strives for many product solutions for the student, the employee or the elderly with reading or hobby needs. Strategic / technology partners are used for complete product solutions.

Outsourced production

While maintaining complete product data control, Optelec outsources its production to key suppliers / partners, who can operate in the best quality, cost and flexible environment. These products are distributed through three main distribution centers Optelec B.V. in Rotterdam, Optelec Inc. in Vista, California, and thru Taoyuan in Taiwan.



Social influences/circumstances

• Old-age diseases and aging

Old age-related diseases like macular degeneration (AMD) and diabetes mellitus are the major contributing causes of visual impairment in the industrial nations. It also turned out that much more people with a visual and hearing impairment were hospitalized for rehabilitation following hip fracture. As the percentage of aging is increasing in these nations, the old age-related diseases will also increase significantly. Optical devices will therefore become more and more important to help persons who are visual impaired to remain active and involved in their communities.

• Social isolation

– Role of direct environment

If people with vision loss experience depression this is likely to have a major impact on their families and friends, in particular on their partners. They tend to be less open to rehabilitation thus prolonging the time it takes them to adjust to their vision loss.

However, it is also the families, children, friends and partners who must recognize the symptoms of vision loss and who must convince the visually impaired person to undertake action to look for help. Even if there cannot be much done medically, there are often effective solutions with the help of electronic aids.

– **Affective disorders**

Vision loss is not only associated with functional problems but also with affective disorders including lower morale, depression, social isolation, reduced self-esteem, diminished emotional security and low levels of social interaction. Studies on the issue of depression and visual impairment indicate that depression is a common emotional reaction to visual loss. Depression can have significant impact on functional ability, rehabilitation experiences and general quality of life. RNIB research into the situation of older visually-impaired people shows that functional limitations caused by visual impairment, and in particular mobility problems, lead to isolation. Isolation may therefore be a contributing factor to the increased tendency for depression. A number of surveys have found that vision loss is one of the disabilities most feared by the general population. Simple electronic tools can often already help these people to stay in touch and continue to enjoy their lives.

– **Inactivity**

Due to depression visually impaired people are not motivated to undertake a given task e.g. go out for visiting people, go shopping, etc. They stay isolated in their homes which results in inactivity. In some situations inactivity can result in physical problems, such as hip fracture, osteoporosis and arthritis. Video magnifiers can stimulate these people to enjoy activities and stay healthy.

– **Treatment and visual aids**

Adaptive technology can be conceptualized as a resource used by older adults to minimize the disabling effects of health conditions and maintain competence in everyday life. The contribution of optical devices shows a positive change in functional disability and depression among older adults with age-related vision impairments. Therefore, it has been proved through studies that the use of optical devices gives a decline in functional disability and depressive symptoms over time.

Summary

We at Optelec want to make a difference in changing the lives of visually-impaired and dyslexic people. Also the company wants to play an increasing role in the aging populations coping with vision. Developing different optical and electronic tools for different needs and situations and distribute them so that they become ready available in many more places. When medical solutions are fully exhausted, there is usually still many solutions for the people effected, to remain active, to continue to enjoy one's life. Also persons who are dyslexic are in need for tools to overcome their handicap. After the "remedial" teaching phase many people can only live and learn up to their potential with electronic solutions.

We are also proud to set an example and employ many visually-impaired people, in fact in excess of 10% of our total workforce, who with the help of our access technology can successfully employ their talents, intelligence, creativity, and managerial skills in many different functions in our organizations.

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Annexe A

Visual handicaps

- **Eye conditions**

Macula Degeneration (MD)

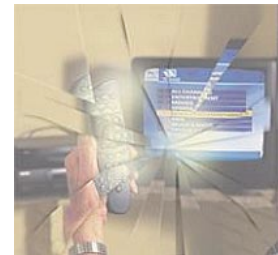


Macular Degeneration accounts for around half of all registerable visually-impaired people in the world. It is particularly common among people over 60 years (60-70% of the people). Of all elderly people between 60-75 years approximately 20% have symptoms of MD; over 75 years this percentage increases to 37%.

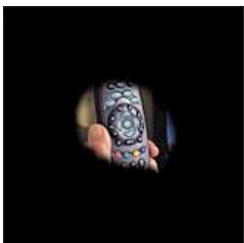
The macula is at the centre of the retina and is used for detailed activities such as reading and recognizing faces, and is used to detect colors. Age-related MD usually involves both eyes, although they may not be affected at the same time. With the 'dry' form there is a gradual failure of the photo-sensitive cells of the retina. Sometimes there is a rapid fluid or blood leakage in the macular area which eventually causes 'disciform' degeneration - this is called 'wet' degeneration. In general, magnification and high levels of contrast will assist in reading and other near vision tasks.

Cataracts

Having cataracts is like driving a car with a dirty windscreen - if the sun is behind you, your view is reasonably good, but if the sun is in front of you, your view can be seriously impaired. A cataract is an opacity of the crystalline lens. Cataracts can form at any age, but most often develop as people get older. In younger people they can be present at birth or result from injury, certain drugs, radiation or conditions such as diabetes. The opacification of the lens may occur in different ways, so that the light rays which reach the retina may be split, causing multiple images. Age-related cataracts are often yellow or brown causing loss of sensitivity to blue. The usual treatment is to remove the lens surgically and replace it with a plastic lens. Because there is no accommodation, spectacles are always needed for some purposes.



Retinitis Pigmentosa



'Tunnel vision' can be associated with a late stage of Glaucoma or some forms of Retinitis Pigmentosa. With Glaucoma, the pressure inside the eye is raised; this damages the fragile head of the optic nerve where it enters the eye, causing classic loss of nerve fibres. Retinitis Pigmentosa covers a group of hereditary disorders which affect the retina; one effect is problems in low illumination and very slow light adaptation, and often problems in reading displays at the red end of the visible spectrum. With 'tunnel vision', it is often possible to read small print but not large print.

Diabetic Retinopathy

Depending on the age, around 2 per cent of the population is affected by diabetes where the human body cannot cope with sugar and other carbohydrates in the diet. Diabetic retinopathy is the leading cause of Low Vision and Blindness in developed countries. The probability of a visual impairment is greatly increased if there is poor control of the diabetes. In diabetic retinopathy, the fine network of fragile blood vessels in the retina may leak or become blocked causing local loss of function. One of the side effects of diabetes is poor circulation often resulting in poor tactual sensitivity which means that few diabetics can read Braille.

