

Introduction of Philips

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1. Philips, a Global Company

Royal Philips Electronics is one of the world's biggest electronics companies and Europe's largest, with sales of US\$ 33.9 billion in 1998. It is a global leader in color television sets, lighting, electric shavers, color picture tubes for televisions and monitors, and one-chip TV products.

Its 233,700 employees in more than 60 countries are active in the areas of lighting, consumer electronics, domestic appliances, components, semiconductors, medical systems, business electronics, and IT services (Origin).

Philips is quoted on the NYSE, London, Frankfurt, Amsterdam and other stock exchanges.

2. Global Leader

Royal Philips Electronics is eighth on Fortune's list of global top 30 electronics corporations. We are active in about 80 businesses, varying from consumer electronics to domestic appliances, and from security systems to semiconductors.

We are a world leader in digital technologies for television and displays, wireless communications, speech recognition, video compression, storage and optical products as well as the underlying semiconductor technology that makes these breakthroughs possible.

We have world class solutions in lighting, medical systems (particularly scanning and other diagnostic systems) and personal and domestic appliances where our investments in design and new materials are critical to success.

Translated into figures, we produce over 2.4 billion incandescent lamps every year, and some 30 million picture tubes; and each day, our factories turn out more than 50 million integrated circuits.

Around 2.5 million heart procedures (scans and interventional procedures) on X-ray equipment are carried out each year using our technology.

One in seven television sets world-wide contains a Philips picture tube, and 60 percent of all telephones contain Philips products.

Thirty percent of offices around the world are lit by Philips Lighting, which also lights 65 percent of the world's top airports, 55 percent of soccer stadia, and 30 per cent of hospitals.

The strength of Philips' global operations is reflected in its (value-based) leadership position in many of the markets in which it is active.

	<u>World</u>	<u>Europe</u>
Lighting	1	1
Consumer Electronics (audio/video)	3	2
Shavers	1	1
Steam irons	2	2
Semiconductors	8	3
Color picture tubes	1	1
Laser optics	3	1
Monitors (in units)	2	1
Medical diagnostic imaging equipment	3	2
digital receivers	2	1
One-chip TV circuits	1	1
PC video cameras and observation systems	1	1
Corded/cordless phones (units)	4	1
LCD cells and modules	1	1

^{a)} The author selected the text from Philips web site.

3. Patents and Trademarks

Philips has some 60,000 patent and design rights and almost 30,000 trademark registrations worldwide.

Key patents are in such fields as optical recording (CD-Audio, CD-ROM, CD-R, CD-RW, DVD-Video, DVD-ROM), digital audio coding (MPEG-2 audio compression), digital video coding (MPEG video compression), and mobile telephony (GSM and CDMA).

Safeguarding the company's portfolio of patents and product design rights are its 130 patents and trademarks specialists. Located throughout Europe and in the United States, Japan and Singapore, they help exploit the results of Philips' world-wide R&D activities by licensing the generated patents.

They also pay close attention to the trademarks that support the company's commercial activities. Chief among these are Philips' housemarks - the Philips word-mark and the Philips shield emblem - which are among the most widely recognized trademarks world-wide.

4. A Century of Achievement

The foundations for what was to become one of the world's biggest electronics companies were laid in 1891 when Gerard Philips established a company in Eindhoven, the Netherlands, to 'manufacture incandescent lamps and other electrical products'.

The company initially concentrated on making carbon-filament lamps and by the turn of the century was one of the largest producers in Europe.

Developments in new lighting technologies fuelled a steady program of expansion, and, in 1914, it established a research laboratory to study physical and chemical phenomena, so as to further stimulate product innovation.

Marketing companies had already been established in the US and France before the First World War, and in Belgium in 1919, and the 1920s saw an explosion in their number.

It was at this time that Philips began to protect its innovations with patents, for areas taking in X-ray radiation and radio reception. This marked the beginning of the diversification of its product range. Having introduced a medical X-ray tube in 1918, Philips then became involved in the first experiments in television in 1925. It began producing radios in 1927 and had sold one million by 1932. One year later, it produced its 100-millionth radio valve, and also started production of medical X-ray equipment in the United States.

Philips' first electric shaver was launched in 1939, at which time the Company employed 45,000 people world-wide and had sales of 152 million guilders.

Science and technology underwent tremendous development in the 1940s and 1950s, with Philips Research inventing the rotary heads which led to the development of the Philishave electric shaver, and laying down the basis for later ground-breaking work on transistors and integrated circuits. In the 1960s, this resulted in important discoveries such as CCDs (charge-coupled devices) and LOCOS (local oxidation of silicon).

Philips also made major contributions in the development of the recording, transmission and reproduction of television pictures, its research work leading to the development of the Plumbicon TV camera tube and improved phosphors for better picture quality.

It introduced the Compact Audio Cassette in 1963 and produced its first integrated circuits in 1965.

The flow of exciting new products and ideas continued throughout the 1970s: research in lighting contributed to the new PL and SL energy-saving lamps; other key breakthroughs came in the processing, storage and transmission of images, sound and data where Philips Research made key breakthroughs, resulting in the inventions of the LaserVision optical disc, the Compact Disc and optical telecommunication systems.

Philips established PolyGram in 1972, and acquired Magnavox (1974) and Signetics (1975) in the United States. Acquisitions in the 1980s included the television business of GTE Sylvania (1981) and the lamps business of Westinghouse (1983). The Compact Disc was launched in 1983, while other landmarks were the production of Philips' 100-millionth TV set in 1984 and 300-millionth Philishave electric shaver in 1995.

The 1990s has been a decade of significant change for Philips. The company carried out a major restructuring program to return it to a healthy footing. And more recently it has been concentrating on its core activities. Today, Philips is at the leading edge of the digital revolution, introducing world-class products that are helping to improve people's lives as we enter the next millennium.

5. Parts of the Whole

Seven product divisions, many other competencies and participations make up Royal Philips Electronics.

Whether in homes, factories, offices, airports, or on the street, it's hard to imagine a place where Philips is absent. Some of the products made by its seven product divisions are tucked away inside, like integrated circuits or CD drives. Some of them are undergoing dramatic changes in their dimensions - think of the flat screen TV, which can hang on the wall. Five of the world's top ten PC manufacturers sell monitors produced by Philips.

What Philips wants is to make your life and work easier. With the Genie mobile phone, for example, you dial a number by just saying it aloud, while Philips' WebTV Internet terminal brings the excitement of cyberspace into the living room.

And on your travels around the world, whether passing by the Eiffel Tower in Paris, walking across London's Tower Bridge, or witnessing the beauty of the ancient Sphinx and pyramids of Giza, you don't have to wonder anymore who lights these famous landmarks.

News

Research Support Programs from Volkswagen Stiftung

The Volkswagen Foundation (Volkswagen Stiftung) is a non-profit-making foundation established under a treaty between the Governments of the Federal Republic of Germany and the State of Lower-Saxony after World War II. Presently, the Foundation's capital amounts to DM 3.5 billion. The objective of the foundation is to support science, the humanities and technology in research and university teaching, to foster collaboration between foreign and German scientists and academic exchange between cross-country institutions. In practice, it concentrates on funding initiatives that it develops itself: priority areas which are subject- and problem-oriented; programmes which aim at structural improvements, e.g. in the international cooperation or in German universities.

The priority areas relative to physics are:

1. The investigation of non-Linear, dynamic effects in production systems.
2. Photonics: Materials, Basic Physics/Chemistry, Components and Integration.
3. Physics, Chemistry and Biology with Single Molecules.

The programs which an academic group from Asian countries can apply are:

1. Program of partnerships: joint research projects in the natural, engineering and economic sciences with institutes in Africa, Asia and Latin America. The project of training Ph.D students cooperatively (e.g. one of the GCPD members Huang falls in this case) is also due to this program.
2. Symposia and summer schools. This program aims at intensifying the contact with foreign scholars. The venues should be in Germany.

Support may be given upon application to scientific institutions, but not to individuals. Applications from scientific institutions abroad must relate to a specific funding initiative and concern a mutually agreed cooperation with scientists in the Federal Republic of Germany. Conversely, applications submitted by German institutions may include expenses for foreign partners.

(Huang, Qing, Uni. Göttingen)