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Robert Bosch: Life and Work

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1. Family background and education

Robert Bosch was born on September 23, 1861, in Albeck near Ulm, in southern Germany, as the eleventh of twelve children. His parents belonged to the upper class of farmers in the region. His father, a freemason, was unusually well-educated for someone of his social status, and placed special importance on a good education for his children. From 1869 to 1876, Robert Bosch attended the *Realschule* (secondary-technical school) in Ulm, and then completed a three-year apprenticeship as a precision mechanic. It was during this apprenticeship that he was first introduced to electrical engineering, a discipline that was still in its infancy at the time, but which was to remain a constant source of fascination for him throughout his life.

Between 1879 and 1886, Bosch worked for a range of companies in Germany, the U.S. (Thomas Edison), and the UK (Siemens Brothers), where he was mostly involved in manufacturing electrical equipment. Bosch learned about bookkeeping from his older brother Karl, who owned a gas and water installation company in Cologne. During the winter semester of 1883/84, he also visited lectures at Stuttgart Polytechnic in order to overcome his “fear of technical terms.” Here, he acquired a theoretical understanding of electrical engineering.

2. The first years of the company

On November 15, 1886, Robert Bosch opened the “Workshop for Precision Mechanics and Electrical Engineering” in Stuttgart with one associate and one apprentice. He chose to start up in the state capital of Württemberg, in southwestern Germany, chiefly because of its proximity to Obertürkheim (now a part of Stuttgart), where his fiancée lived.

At the outset, Bosch’s two associates were tasked with constructing and installing all types of electrical equipment, including telephone systems and



remote electrical water-level indicators. However, the company's operating capital of 10,000 German marks, inherited from Bosch's father, was soon used up. Only a bank loan, for which his relatives stood surety, kept the workshop going. Robert Bosch invested most of his modest profits in new machinery.

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Between 1886 and 1900, the number of associates at the company had grown to nearly 40. Sales were secured by taking over the installation, maintenance, and repair of electrical equipment and facilities. The company benefited from the advent of electricity in Stuttgart brought about by the industrial age.

However, it was a different type of product that really sparked the company's transformation into an industrial corporation. In 1887, at the request of a customer, Bosch manufactured his first magneto ignition device, which was based on a product made by Deutz, an engine manufacturer in Cologne. Bosch significantly improved the design, and the resultant product helped him achieve initial economic success. The purpose of the magneto ignition device was to generate the electric spark needed to cause the air-fuel mixture in a stationary internal-combustion engine to explode.

In 1897, Bosch was the first to apply such a magneto ignition device to a vehicle engine. In developing a reliable ignition system, he solved one of the greatest technical problems faced by the automotive industry in its formative years. The innovation also represented the first chapter in the success story of Bosch as an automotive supplier. In 1901, Bosch was already in a position to open his first factory, employing 45 associates.

3. Becoming a group

Bosch began expanding into other European countries in 1898, initially setting up shop in the UK and then, in the years that followed, in other European countries including France, Austria, and Hungary. Bosch opened his first sales office in the U.S. in 1906 and his first factory there in 1912. By 1913, the company was present on every continent and generated some 88 percent of its sales outside Germany.

After the First World War, Bosch launched a whole range of innovations for automotive technology onto the market – the electric horn in 1921, the windshield wiper in 1926, and diesel injection and the pneumatic power brake system in 1927. In doing so, he firmly established his company's position as a leading automotive supplier.

As a reaction to the economic crises of the mid-1920's, which hit the automotive industry particularly hard in 1926, Robert Bosch instigated a comprehensive process of modernization and diversification in order to raise productivity and reduce dependency on the automotive industry. In only a few years, he succeeded in turning his company from a small automotive supplier into a modern and multinational electronics group.

In 1937, some five years before his death on March 12, 1942, Robert Bosch wrote his last will and testament. In his will, he stipulated that the dividend of



the company should be allocated to charitable causes. At the same time, he sketched the outlines of today's corporate constitution, which was drawn up by his successors in 1964.

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4. Robert Bosch, industrialist and perfectionist

One of the most famous quotes from Robert Bosch is the line, "I would rather lose money than trust". This sums up the entrepreneur's particularly strong customer focus as well as the standards he set for the quality of his products. The first two of the following three business policy principles of Robert Bosch were also formulated and published by the founder in the associate newspaper *Bosch-Zünder* in 1919:

"It has always been an unbearable thought to me that someone could inspect one of my products and find it inferior in any way. For that reason, I have constantly tried to deliver only products which withstand the closest scrutiny – products which prove themselves superior in every respect."

Apart from quality standards, Robert Bosch also had an exceptional ability to attract associates whom he could trust to handle responsibility. This is the way he put it:

"It has also been an established principle of mine to cultivate eager associates by letting each individual work independently as far as possible while at the same time delegating the responsibility that goes with the task."

Bosch also valued team players much more than mavericks: *"In a large [...] company, it is generally not the case that someone can say that they were solely responsible for a particular action. In such a company, cooperation is a must and each individual depends on the other."*

The associates in his company referred to him affectionately as "d'r Vadder" (the father), which reflected his role as a figure of respect. At the same time, however, he was feared within the company for his sudden fits of temper. And he maintained a physical presence at work: from time to time, he would pay surprise visits on associates, making no distinction between a company director and a technician.

5. Entrepreneurial and political responsibility

From the very beginning, Bosch was especially keen to promote training among his workforce, establishing an in-house apprenticeship department with an apprentices' workshop in 1913. In 1906, Robert Bosch became one of the first entrepreneurs in Germany to introduce the eight-hour working day. This increased the free time and the productivity of his associates, and at the same time created the necessary conditions for the introduction of two-shift operation.

The eight-hour working day was followed by social benefits for associates, including "Bosch-Hilfe," the retirement and surviving dependents' providence fund established in 1929. He donated several millions of German marks



earned from armaments contracts in the First World War to charitable causes – he did not want to profit from war. To celebrate the company's 50th anniversary in 1936, he donated a hospital – which opened in 1940 – to the City of Stuttgart.

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In the 1920's and 1930's, Robert Bosch was also politically active. An entrepreneur with liberal leanings, he sat on a number of economic committees. He devoted a great deal of energy and money to the cause of bringing about reconciliation between Germany and France. He hoped that this reconciliation would bring about lasting peace in Europe and lead to the creation of a European economic area without customs barriers. The National Socialist regime in Germany put an abrupt end to his hopes.

During the Second World War, the company accepted armaments contracts and employed forced laborers. However, Robert Bosch also supported resistance to Adolf Hitler. With his support, the company management protected people of Jewish descent, as well as others who were persecuted by the Nazi regime, from deportation to concentration camps. In recognition of these actions, Bosch's successor, Hans Walz, was granted the title of "Righteous Among the Nations" by the Yad Vashem Holocaust Martyrs' and Heroes' Remembrance Authority in 1970.

6. Robert Bosch, private person and family man

Robert Bosch was keenly interested in agriculture. As early as 1900, Bosch had considered purchasing the "Klein-Hohenheim" farm near Stuttgart in order to take up farming. His plans were thwarted by resistance from his wife. Nevertheless, in 1913, Bosch acquired an extensive moorland area south of Munich, which was known as the "Bosch Farm" after its owner.

Originally, Bosch had intended to cut peat here to combat the shortage of fuel in Germany, but he soon gave up this plan, choosing to farm the land instead. His aim was to wrest the maximum economic yield from the relatively infertile moorland soil. As grazing was only possible with great difficulty on the sensitive moorland soil, he built the biggest silage complex in Europe to store the fodder needed. Bosch often said that he saw agriculture as "a moral and vitally important obligation."

Bosch also took a great personal interest in healthcare, dedicating a great deal of energy to the issues of nutrition and homeopathy. It was no coincidence that the research, development, and application of homeopathy were key areas of work at the Robert Bosch Hospital that Bosch established in 1936.

Finally, Robert Bosch was a keen hunter. Even as a child, Bosch was allowed to accompany his father on hunting excursions. Later on, however, he abandoned hunting, only to be reintroduced to it by a business partner, who invited him to go hunting chamois in Austria's Lech Valley in 1900. Bosch viewed this passion as an expression of his love of nature. He hated nothing more than trigger-happy "Sunday hunters".



In 1887, one year after founding his company, Robert Bosch married his fiancée Anna Kayser (1864-1949). They had three children: two daughters named Paula and Margarete and a son, Robert, who died in 1921 from multiple sclerosis.

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After the death of his son, Bosch's marriage failed and the couple divorced in 1926. Robert Bosch married Margarete Wörz (1888-1979) in 1927 and had two children with her, Robert and Eva.