Leica Geosystems AG
Leica Geosystems – when it has to be right

Leica Geosystems is an industry leader and pioneer for solutions that measure our world. The company provides equipment to help professionals handle and understand geographical information.

The experts that build bridges, roads, airplanes or maps rely on Leica Geosystems' products and solutions. They are using them to capture, analyze, model and present spatial data – including in 3D. Leica Geosystems' products and solutions are trusted for their dependability and ability to increase productivity – and have been for over 200 years.

There are many current examples of the Company’s solutions in action:

- Leica Geosystems’ equipment and specifically-designed software solutions were used in the planning and construction of the world’s highest bridge in the south of France and now monitor the bridge's movement and material stresses.

- Engineers are relying on Leica Geosystems’ laser trackers and photogrammetry for quality control during the construction of NASA’s space station, the Airbus A380 and Renault’s F1 racing car.

- Leica Geosystems' GPS technology, photogrammetry, total stations (TPS) and machine guidance systems made a vital contribution to ensure Hong Kong’s Chek Lap Kok airport was completed in record time.
Solutions and applications for a broad range of businesses
The products and solutions of Leica Geosystems are used in:

• **Surveying, engineering and construction**
  In civil and structural engineering, and in public and private infrastructure projects. The instruments include terrestrial and satellite-supported land survey systems, such as theodolites, total stations, and GPS-based surveying solutions as well as automated machine automation solutions for construction projects.

• **Asset and facilities management**
  Banks, insurance companies oil and mining companies use aerial cameras, total stations and GPS surveying systems, hand-held laser meters (the Leica DISTO™), as well as imaging software from Leica Geosystems. This helps them to document assets and administer geographically-referenced land, building and supply networks.

• **Aerospace, automotive and general industry**
  Portable coordinate measuring machines, such as the Leica Laser Tracker, and image processing systems are used for tooling, assembly and quality control. Components can be measured to within a hundredth of a millimeter. Construction drafts and models can be evaluated in real time.

• **Mining and exploration**
  Today’s mining professionals use fully-integrated solutions from Leica Geosystems to automate open-pit mining, monitor deformation and generally increase productivity. Products include GPS, TPS and laser-leveling-based turnkey solutions comprising hard- and software, as well as services.

• **Agriculture and forestry**
  Leica Geosystems’ airborne sensors and software help map and manage agricultural land, forests and land reserves.

• **Mapping**
  Everyone needs to know where they are in the world, and how to move around it. Leica Geosystems’ solutions are involved in creating all kinds of maps, including in 3D. Constantly improving the way maps are produced and used, they help people find out where they are and how best to reach a specific destination.
• **Urban planning and cadastral**
  Leica Geosystems’ survey and positioning solutions are highly efficient and
economical aids in generating legally-valid land and property registers. Satellite
and land-based data gathering and evaluation systems open the door to
cartography of all kinds.

• **Disaster management**
  Leica Geosystems’ sensors and instruments monitor geodynamic and
construction processes and can help limit the scope of cataclysmic events, for
example flooding.

**The technologies and competencies to get it right**
Leica Geosystems’ mission is to be the world’s leading provider of innovative
solutions for capturing, modeling, analyzing and visualizing spatial data. Strategic
acquisitions and continuous product development have created a comprehensive
technology and product portfolio that gives the company a unique position among
the global market leaders.

Core technologies, used in numerous products and solutions are EDM
(Electronic Distance Measurement), GPS technology, 3D laser
scanning and related and point cloud generation and analysis.

Far-reaching software expertise, and extensive research and
development are key to future product development and market
share growth. The Heerbrugg R&D center handles research for
all divisions, but Leica Geosystems also conducts research and
development in the United States, Singapore and Australia.
The multidisciplinary and multinational team includes mathe-
maticians, astronomers and physicists. A core team of experts
fosters and supervises cross-divisional developments.

All Leica Geosystems’ efforts aim at one single goal: to create value
for its customers and all other stakeholders. The deep understanding
of customer workflows results in a product portfolio, a services
offering and comprehensive solution packages that are unique to
the market.
The industry pioneer – where innovation has a tradition
Leica Geosystems is synonymous with Swiss precision, quality and reliability – as well as considerable innovative power.

Leica Geosystems’ corporate culture is defined by innovation and a constant focus on increasing customer productivity. Making a contribution to this are some of the world’s most highly-qualified specialists and multidisciplinary R&D engineers. The company cultivates a long-standing relationship with the Swiss Federal Institute of Technology as well as research centers around the world. In 2003, investments in R&D amounted to some ten percent of sales.

The company holds more than 1,000 patents and has a full product pipeline. The number of innovations is at an all-time high. Fifty percent of the revenue of the current year was generated by products less than a year old.

Leica Geosystems has repeatedly revolutionized the science and technology of geographic information. The company has always been at the forefront of technological developments and time after time has successfully sought ways of overcoming obstacles: whether it was improving the optical quality of the instruments to increase surveying effectiveness, enhancing the manufacturing accuracy of devices to increase precision, or devising ways of handling large quantities of data effectively.

In the 1980s, the use of lasers made its way into the industry. In the 1990s it was GPS. More recently, laser scanning and digital imagery were introduced to the surveying and mapping markets by Leica Geosystems. The latest developments include the move to the third dimension and the digitization of geographic information.

Leica Geosystems has defined the cutting edge of measurement technology for decades.

From the world’s first portable opto-mechanical theodolite in 1921 and the first aerial photography camera in 1925; to the first infrared-based distancer in 1969; the first GPS for surveying in 1984; the first industrial laser tracker in 1991; the world’s first hand held laser distance meter, named DISTO, in 1993; the first universal GPS/TPS surveying system and the world’s first mobile coordinate measurement technology system – the T-Probe and T-Scan – in 2004; and in 2005, the world’s first total measurement station with integrated GPS, the SmartStation.

The 2004 National Geospatial Intelligence Agency’s Innovations in Geospatial Intelligence BAA Award, and Frost & Sullivan’s 2004 Industrial Automation Product Innovation of the Year Award, are just two of the many innovation prizes garnered over the years.

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Leica Geosystems
The Digital Revolution
Today's laser scanners capture and present accurate as-built information for processing on a PC in an instant. Projects are completed faster, the output is more precise. Deferring calculations to a later date is simple and unproblematic. 3D-computer models are created in virtual reality including all complexities of 'the real thing'. They are comprehensively tested in simulations, before anyone reaches for a tool. Computer modeling creates a virtual world that allows for at-will movement within the model and expansive testing and simulation.

Simulations of how well a building will blend into its environment, how an aircraft will perform in flight, how a new city underpass will affect traffic or how fauna and flora will develop over time – are, to name only a few examples, easier than ever before.

Point-cloud-generation, aerial photographs, simulations and similar applications in the digital realm represent terabytes of data. Leica Geosystems is changing to meet its customers' needs as more and more clients demand all-inclusive hardware, software and services solutions.

Today, some 80 percent of the turnover comes from equipment sales. In the next few years it is estimated that software and related services will account for up to 35 percent of sales. The company is moving in that direction even now with, for instance,

- Cyclone, the point-cloud process and data management software,
- the Leica Photogrammetry Suite for geospatial imaging and
- the GPS network controller SpiderNET.

Software needed to process large amounts of data is created in cooperation with data storage and database specialists, for example Oracle.
Facts and figures
Listed at SWX, the Swiss stock exchange, Leica Geosystems AG is headquartered in Heerbrugg, Switzerland, and has a market capitalization of approximately CHF 800 million. There is a broad shareholder structure in the US, Europe and Switzerland. The company is engaged globally, with over 100,000 customers in more than 120 countries. The workforce, dispersed over 23 countries, totals 2,400. Mr. Hans Hess, CEO since 1996, joined Leica Geosystems in 1989 and today heads a management team with members from five different countries.

In 1997, three separate, autonomous companies were formed out of the former company Leica:

- German-stock-exchange-listed Leica Camera AG, headquartered in Solms, Germany;
- microscope makers Leica Microsystems AG, headquartered in Wetzlar, Germany;
- Leica Geosystems AG, headquartered in Heerbrugg, Switzerland.

The roots of Leica Geosystems as a leading provider of surveying and mapping products go back almost 200 years to two Swiss companies: Kern in Aarau founded 1819 and Wild in Heerbrugg founded 1921.

Following a leveraged buyout in 1998, Leica Geosystems went public in 2000. Including recent acquisitions and partial ownerships, Leica Geosystems now consists of five primary divisions.

Leica Geosystems is international and Swiss at the same time. Around 900 employees, some 40 percent of the total workforce, are employed in Switzerland. Its headquarters are in Switzerland, as well as the R&D center. At the Heerbrugg facilities, more than 80 apprentices are trained annually in mechanical and electronic engineering, IT, construction and business.
A sustainable outlook for the future
Leica Geosystems is on a sustained and sound revenue and profitability growth course. With annual sales of CHF 689 million in FY04, Leica Geosystems is committed to achieving profitable, organic growth in excess of ten percent annually. Initiatives include the launch of new products, entrance into new markets, expansion of the software and service businesses and an aggressive penetration of the US, Asian, and Pacific region markets. The company is committed to continuously increase its productivity and competitiveness.

The markets and market segments in which Leica Geosystems is active, are attractive, global and growing. The company is market leader in Europe, where half of its revenue is generated. Thirty percent come from the United States. The Asian region and the rapidly-growing market of the Pacific region account for 20 percent of the total turnover.

The company is also distinguished by a high sense of corporate responsibility. In 2003, the Sustainable Investment Research International Group (SiRi) bestowed the highest rating possible on Leica Geosystems. The company is also rated, among others, by the ETHOS Fund, the Inrate & INFRAS and Bank Sarasin & Cie AG – in all cases with above-average ratings.

As a solutions provider, Leica Geosystems maintains partnerships with many companies renowned for high quality products in their areas of expertise. This includes database solutions, CAD applications and geographical information systems (GIS). Among the partners are Autodesk, Bentley, Intergraph, ESRI and Oracle.

Commitment to sustainable business practices, together with the dependability and innovation so typical of the company, are the dimensions that justify the customers’ trust in products and solutions from Leica Geosystems – also in the future.
Fact Sheet

Company
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Corporation
Leica Geosystems consists of the divisions
- Surveying & Engineering
- GIS & Mapping
- Metrology
- Consumer Products
- High Definition Surveying

Established
1819

Headquarters
Heerbrugg, Switzerland

Offices
offices in 23 countries

Corporate Management Team
Hans Hess, CEO & Executive Director of the Board
Christian Leu, CFO & Corporate Vice President
Aad van Vliet, Chief Human Resources Officer
Clement Woon, President Division Surveying & Engineering
Walter Mittelholzer, President Division Metrology
Erwin Frei, President Division High Definition Surveying
Robert Morris, President Division GIS & Mapping
Klaus Brammertz, President Division Consumer Products

Revenue

Employees
2'461

Core Competencies
Capture and measure the natural and man-made world, model and edit spatial information, and visualize this information in all-dimensional computer models and maps. The end result is high precision data.

Industries
Cadastral, Civil, Structural and Plant Engineering, Monitoring, Mining & Exploration, Asset & Facility Management, Navigation, Land Management, Aerospace, Automotive, General Industrie

Partners
Several hundred partners in over 120 countries