

**SIEMENS**



# Siemens – Strategic & Policy Issues

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By  
Group 5



# Agenda

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- Siemens
- R&D
- Strategic Direction
- Policy Direction

The Siemens logo graphic, featuring a stylized 'S' composed of four colored quadrants (yellow, red, blue, and green) arranged in a cross pattern, with a black crosshair overlaid.

# Siemens History

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- **Beginnings and early development (1847-1865)**
- **Company Welfare Policy and International Projects (1865 – 1890)**
- **The Second Generation (1890 – 1918)**
- **A Period of Transition (1918 – 1933)**
- **The National Socialist War Economy (1933 – 1945)**
- **Post war Reconstruction and Emergence as a Global Player (1945 – 1966)**
- **United under a Single Roof (1966-1989)**
- **Stepping into the Third Millennium (1989-2003)**



# Siemens Principles

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- Customer
- Innovation
- Value
- People
- Responsibility



# Siemens Company Structure

Key businesses	Groups inside of the business	Products:
Information and Communications (I&C)	Communications	Telephone and Communication Systems
	Siemens Business Services	E-Business, Information management
Automation and Control	Automation and Drives (A&D)	AC/DC converters, AC/DC motors, engine software, components
	Industrial Solutions and Services (I&S)	Machine Vision, Process Analytics, Intelligent Sensor System IQ-Sense, weighing technology
	Logistics and Assembly Systems (L&A)	Conveyors, letter sorting systems, baggage handling systems, automated guided systems, logistics IT
	Siemens Building Technologies (SBT)	Building automation, climate control, electrical installation technology, security and fire safety



# Siemens Company Structure – Cont'd

Power	Power Generation (PG)	PG offers efficient, environmentally compatible power generation systems as well as solutions for industrial applications, including services for power plants and industrial power systems
	Power Transmission and Distribution (PTD)	PTD – a product and turnkey systems supplier, systems integrator and service provider – enables customers to transport electrical energy safely and efficiently from power plant to consumer
Transportation	Transportation Systems (rail systems)	Rail Automation, Electrification, mass transit vehicles, locomotives, trains, turnkey systems, cargo movers
	Siemens VDO Automotive (automotive systems)	Gasoline systems, diesel systems, electronics & drivetrain, air fuel modules, sensors, safety electronics, electric motor drives
Medical	Medical	innovative products, complete solutions and wide range of services for the healthcare community



# Siemens Company Structure – Cont'd

Lighting	Osram (subsidiary of Siemens)	lighting sources and related electronic control gears
Affiliates	Household appliances	from vacuum cleaners to washing machines and from coffee makers to dishwashers
	computers	Fujitsu Siemens' world-leading IT products – mobile computing products, PCs, workstations, Intel- and UNIX-based servers, mainframes and Enterprise storage solutions
	others	Cement, paper, metal, oil, gas, mining, pharmaceuticals, food, water, glass, etc.
Financing and Real Estate	Financial Services (SFS)	corporate financing and risk management
	Siemens Real Estate (SRE)	real estate development and utilization, portfolio management and services



# Research and Development

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- Overview
- Strategy and Vision
  - A Trendsetter of Innovation
  - Exploiting Synergies
  - Strategic patent management
  - Global networks
  - Navigation system for the future





# R&D Topics

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- Clean Energy
- Material Research
- New Light Sources
- Medical Imaging
- Robots and Agents
- Usability
- Factory of the Future
- Logistics

# Picture of the Future

## Information and Communication



# Picture of the Future

## Energy





# Picture of the Future

## Automation and Control



# Picture of the Future

## Transportation





# Picture of the Future

## Health



# Picture of the Future

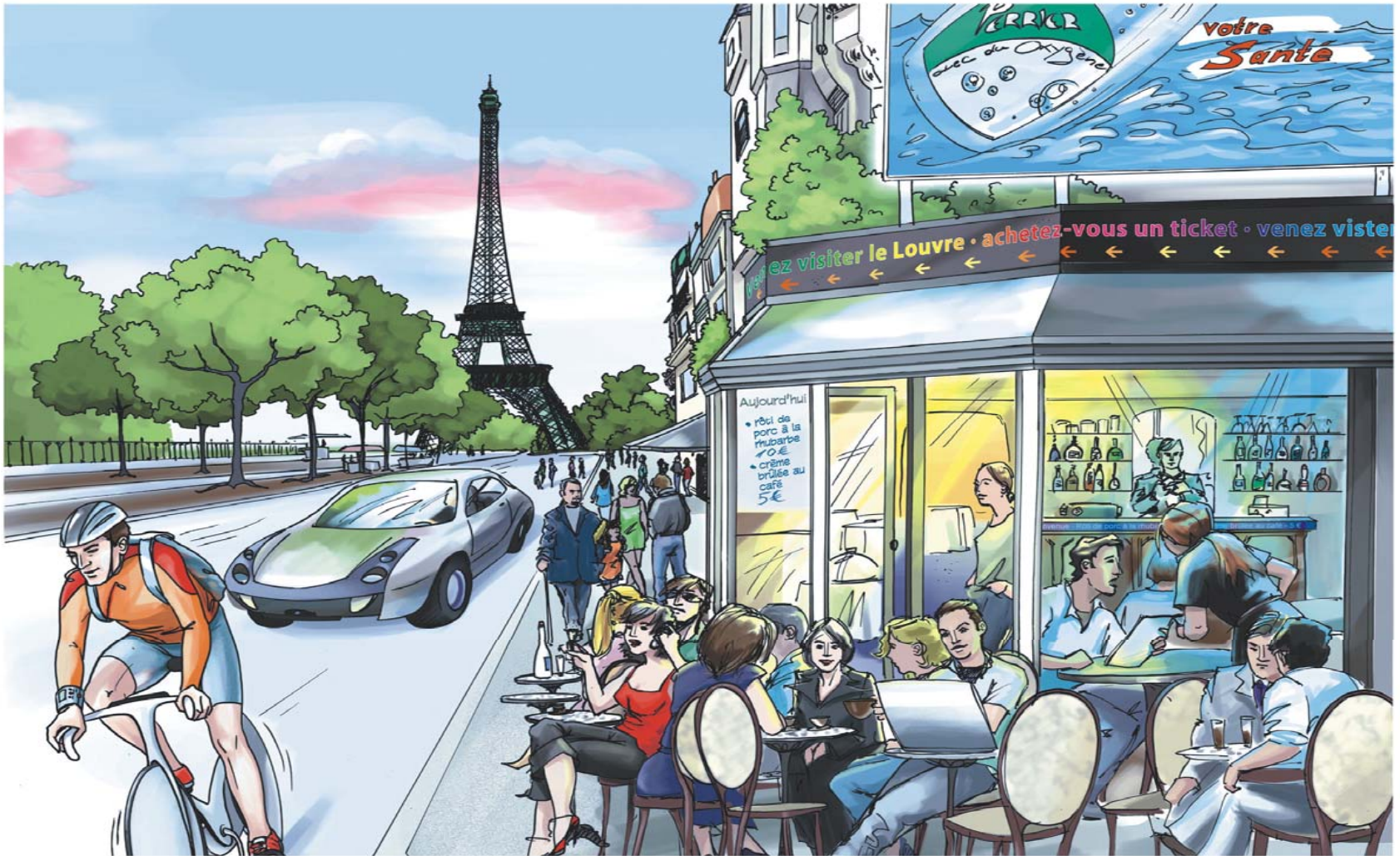
## Services





# Picture of the Future

## Impact of Materials







# Strategic Direction in R&D

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Goals of technology strategy in business planning:

- Maintenance of technical competence through:
  - **Incremental improvement of existing products**
  - **Next-generation improvements of products and processes**
- Expansion of markets through:
  - **Innovation of new products**
  - **Innovation of new processes**



# Strategic Direction in R&D

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- Siemens is among the leading R&D Company of the world
- Spent 5.1 billion euros in 2003 on innovations
- More than 50,000 employees involved in R&D
- Among the top ten patent holder company in the US. In Europe it is ranked number 2 while in Germany it is the company with largest patents.
- More than 45000 patents world wide.
- 7000 inventions in 2003

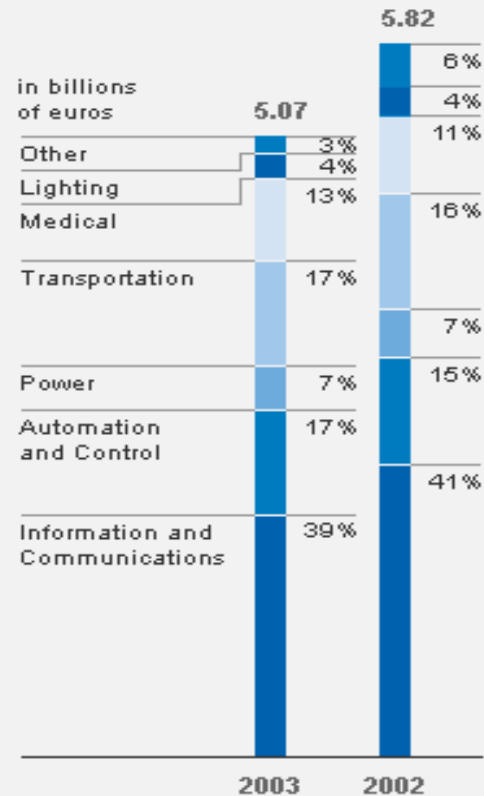


# Strategic Direction in R&D

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- Generate customer value by serving as a platform for innovative products, systems and services
- Siemens sets the pace in many sectors
- Siemens success factors:
  - **Systematic innovation planning**
  - **Leadership in key strategic technologies**
  - **Strong patent portfolio**
  - **Optimized innovation processes**

# Strategic Direction in R&D



Siemens investment in R&D for the years 2002 and 2003

# Strategic Direction in Production

## 1) Environmentally-Friendly Products:

- wind farms
- biomass power plants
- fuel cells



# Strategic Direction in Production

## 1) Environmentally-Friendly Products – Cont'd:

### Fuel cells

Hooking up a fuel cell power plant (left) to a micro-turbine boosts the electrical output to as much as 60 percent, and the residual thermal energy can be exploited to heat water. —————→



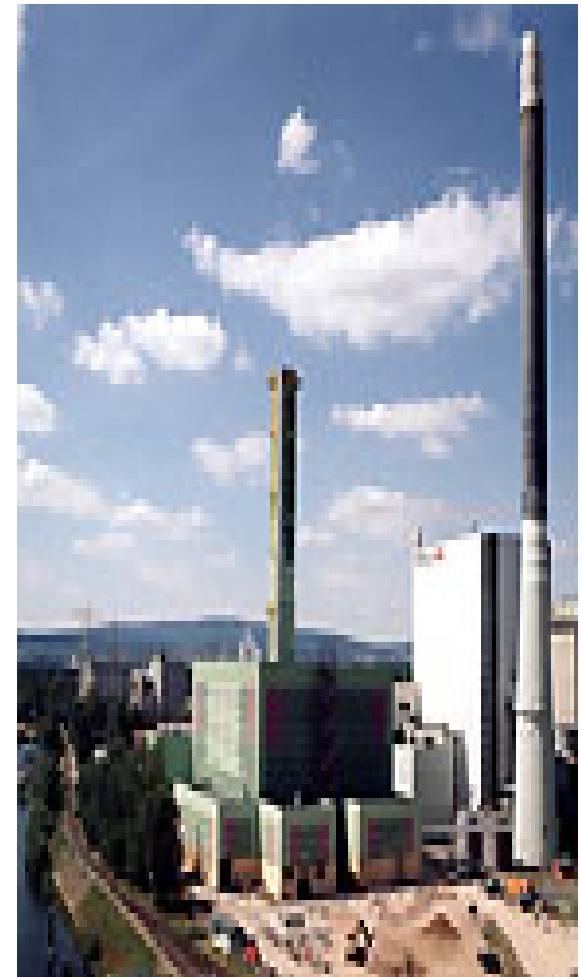
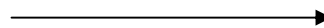
# Strategic Direction in Production

## 2) Energy-Saving Products

- efficient motor
- efficacy of lamps
- efficiency in energy production

The Mainz-Wiesbaden combined-cycle (GUD) power plant in Germany is one of the world's most efficient power-generating facilities.

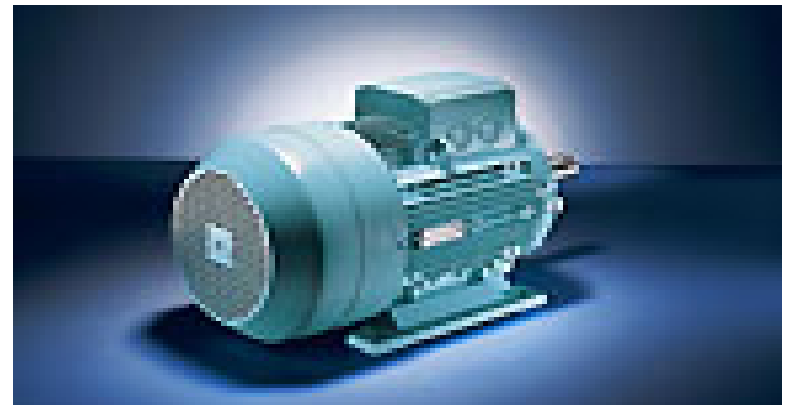
Efficiency = 58%



# Strategic Direction in Production

## 2) Energy-Saving Products - Cont'd

Energy saving motor →



**Superconductivity -  
technology of future**





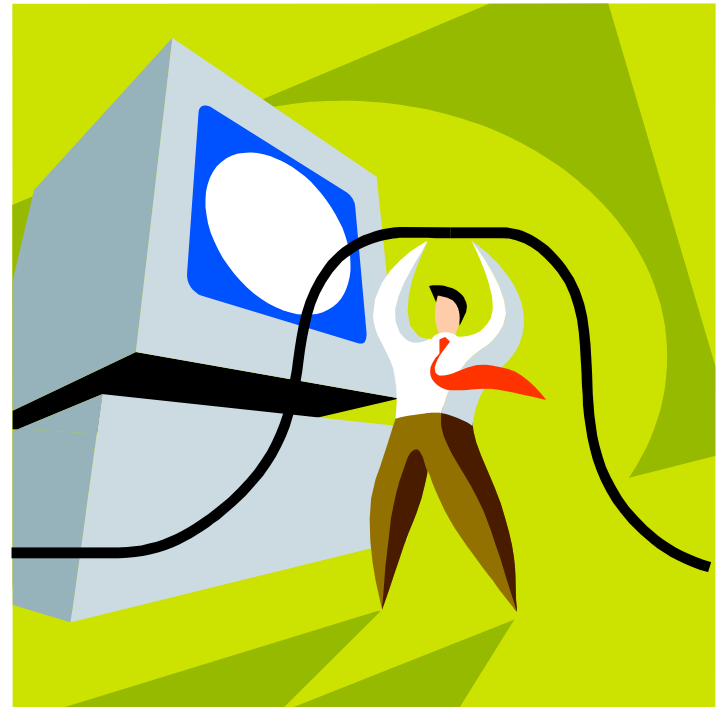


# Strategic Direction in Production

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## 3) Computer Assistance in Production

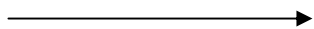
- Simulation
- Inspection
- Information Portal



# Strategic Direction in Production

## 4) Reuse & Recycle of Old Products

A technician refurbishes a Siplace pick-and-place machine.





# Strategic Direction in Business

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- Over the long term, all firms must change in order to survive, since neither competition, markets, nor technology is ever completely unchanging.
- When business diversification is based on technological and research capability, the likelihood of commercial success is high



# Strategic Direction in Business

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- Siemens is among the most diversified company in the world
  - **Health Care**
  - **Manufacturing**
  - **Service**
  - **Process and Basic Industries**
  - **Carrier**
  - **Transportation, Logistics, Infrastructure**



# Strategic Direction in Business

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- Because of large numbers of different businesses and relevant technologies, integrating technology strategy with business strategy in a diversified firm is complicated
- The success of Siemens, been so diverse, is really amazing and its possible only through better management



# Strategic Direction in Business

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- Presence in 190 countries
  - Direct marketing
  - Strategic alliances
  - Business partners

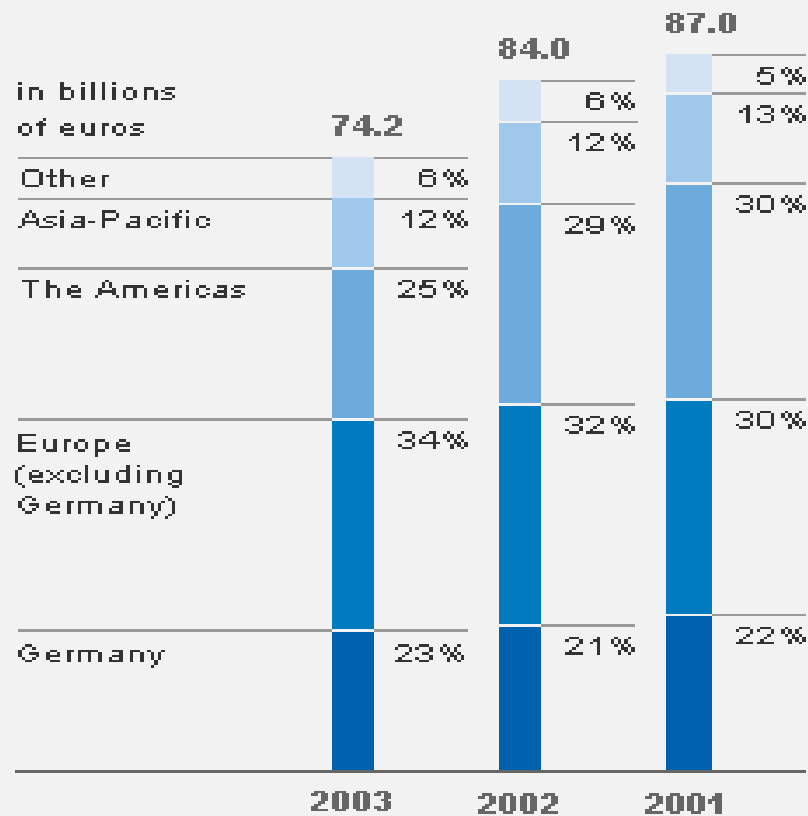


# Strategic Direction in Sales

<b>In millions of euros</b>	<b>2003</b>	<b>2002</b>
New orders	75,056	86,214
Sales	74,233	84,016
Net cash provided by operating activities	5,712	5,564
Net cash used in investing activities	(3,939)	(810)
Research and Development	5,067	5,819

**Annual report for the fiscal years 2003 and 2002**

# Strategic Direction in Sales







# Strategic Direction in Marketing

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- Transforming top notch technology into market performance
- Market driven approach
- Strategic marketing direction towards two major geographic areas, China and the U.S
- Flourishing in both the world's largest developed economy and the world's largest developing economy



# Strategic Direction in Marketing

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## ■ United States:

- 24% of revenues
- But lack brand identity in America
- Operating companies are brought under Siemens one umbrella

## ■ China:

- 4% of revenues (\$3 Billion)
- 1/4 of steam-powered electrical generation plants
- TD-SCDMA 3rd generation wireless telecom standard
- Maglev rail system



# Policy Direction

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- Political uncertainties affecting revenues
- Hunkering down to cut cost and boost cash flow while determining new ways to sell services and solutions to customers
- Work with the governments for the development new markets
- Environment friendly products