

How does the new come into the world?


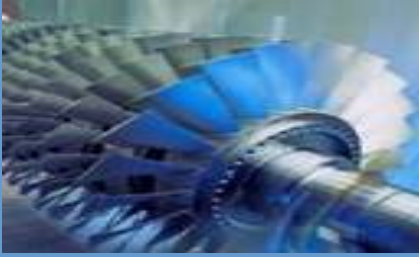


Strategic thoughts on innovation

Zhejiang University, November 25th, 2008

Dr. Roland Busch, Siemens AG

Siemens at a glance: FY 2008 Key figures**Siemens innovation strategy: Our culture of innovation****Siemens innovation methodology: How to look ahead****Examples of Siemens innovations**

Siemens is active in three Sectors

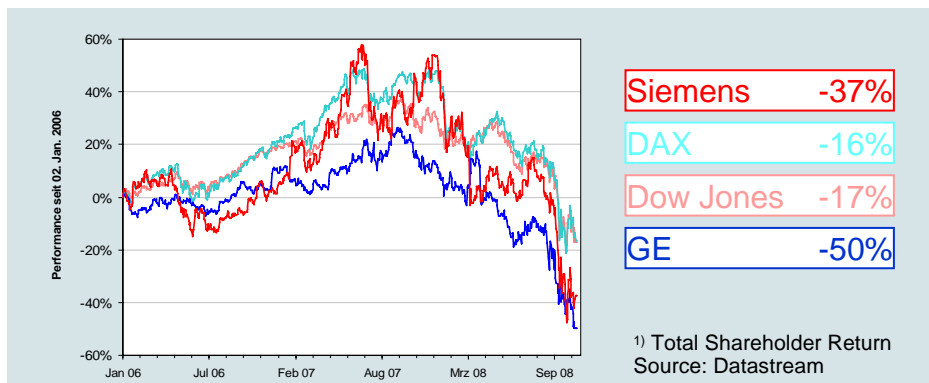
Industry	Energy	Healthcare	Cross-Sector activities
			
Automation and Drives	Power Generation	Medical Solutions	IT Solutions and Services
Industrial Solutions and Services	Power Transmission and Distribution		Siemens Financial Services
Siemens Building Technologies			
Transportation Systems			
OSRAM			

External sales of Sectors excluding Other Operations (as of September 30, 2008)

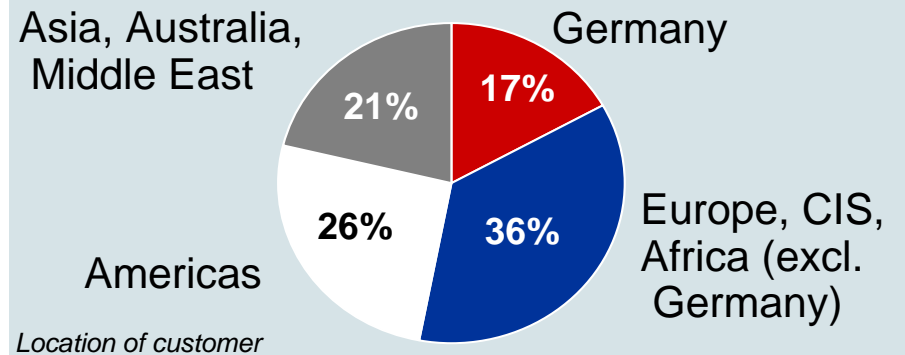


We are committed to profit and growth

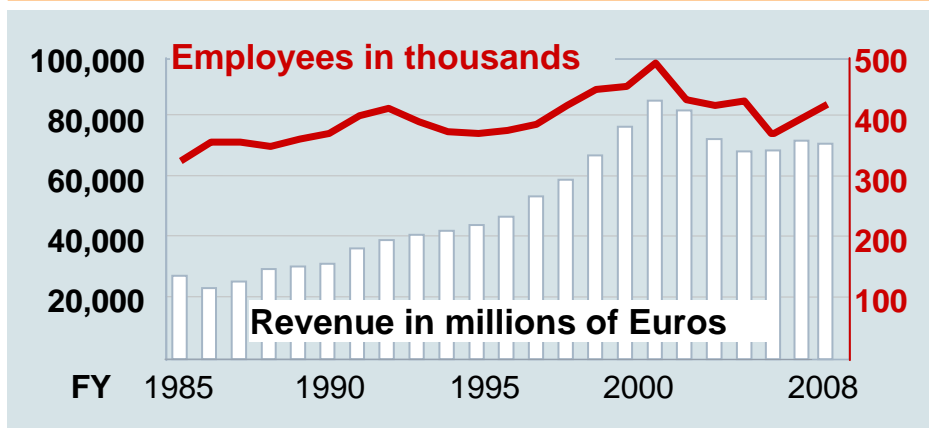
Stock performance¹⁾



Revenue by Region



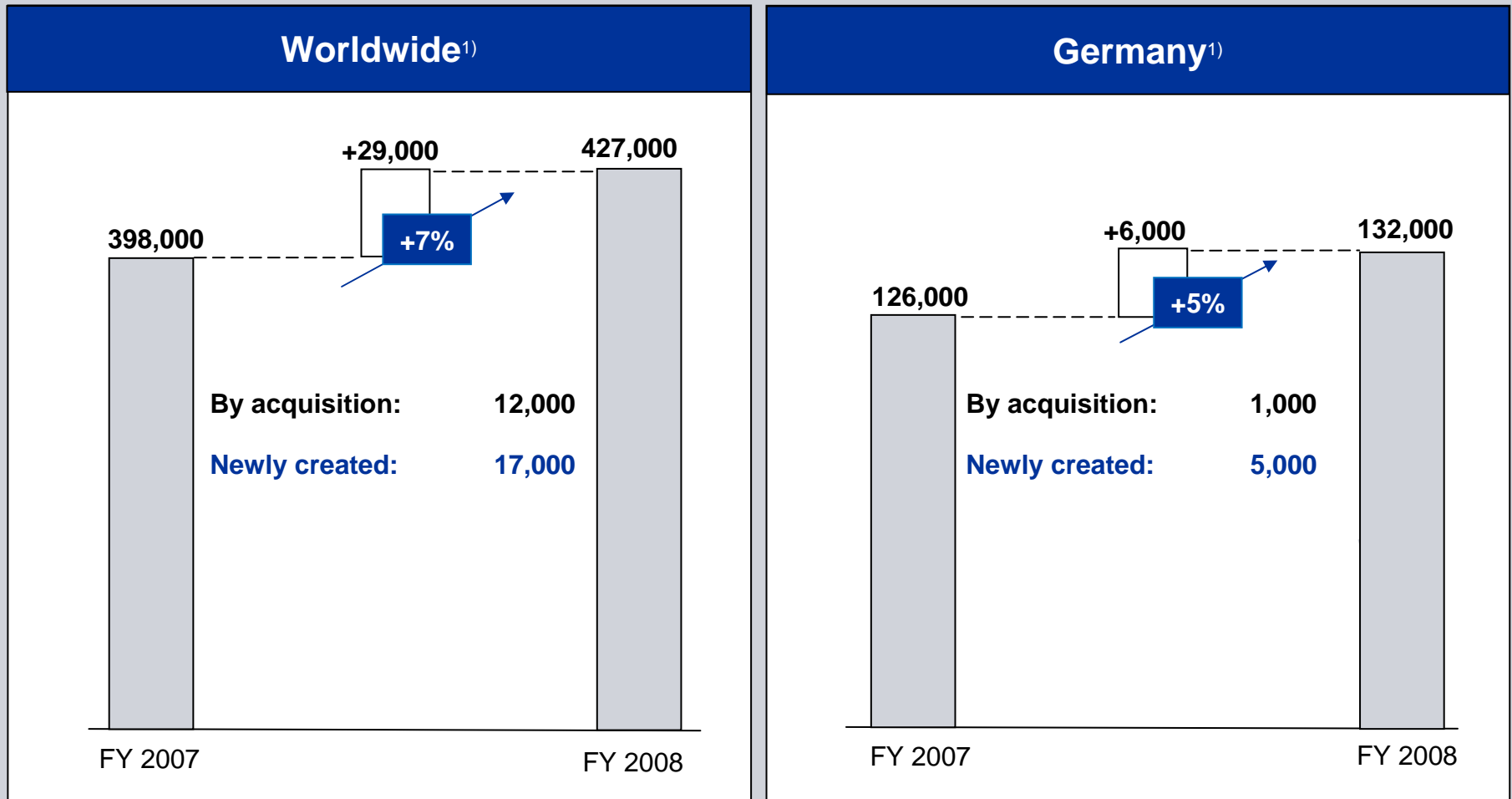
Revenue and employees



Key figures

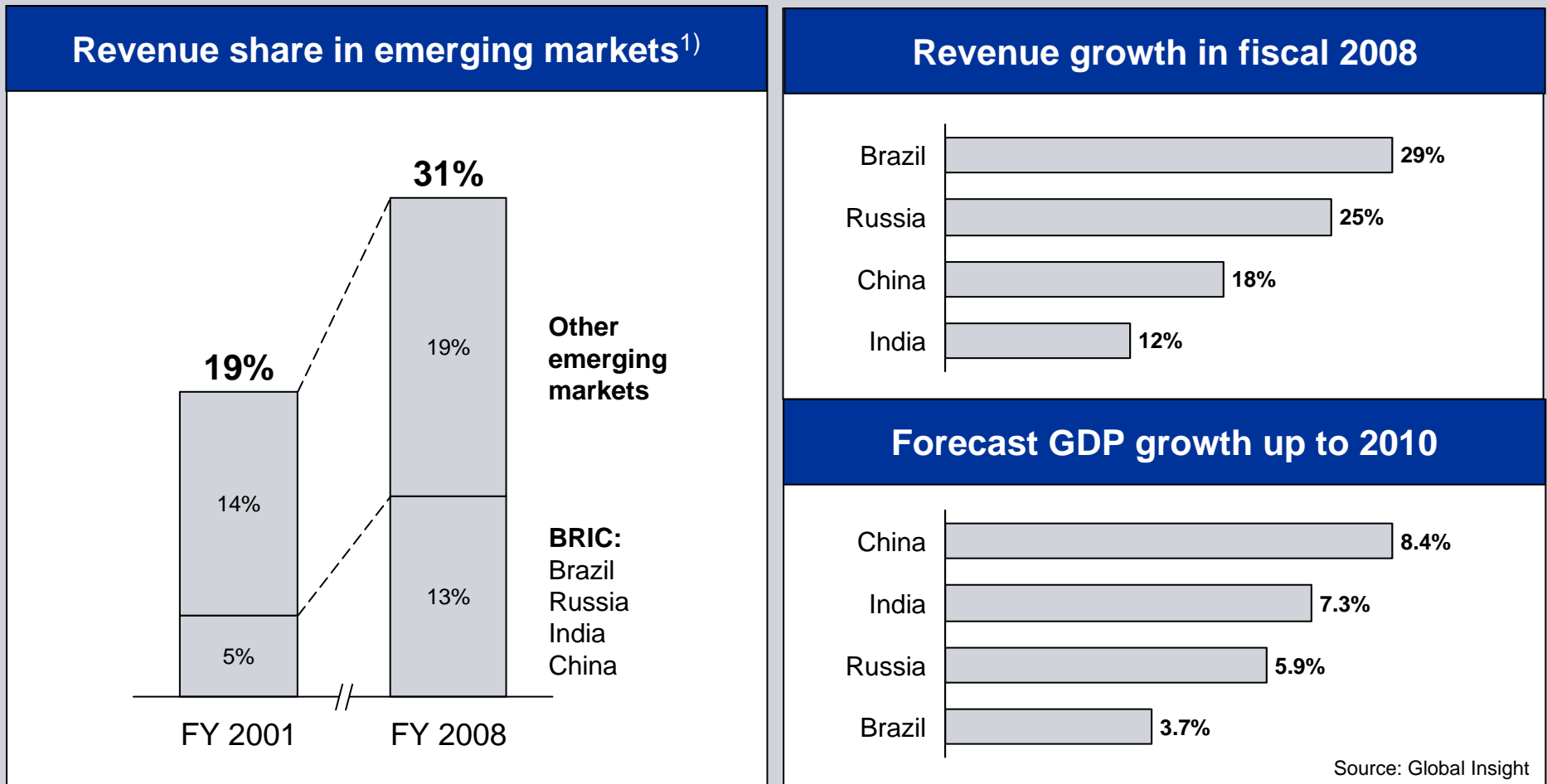
(in millions of Euros; continuing operations)	FY 2008	FY 2007
Revenue	77,327	72,448
New orders	93,495	83,916
Income	1,859	3,909
Free cash flow	5,739	6,755
Employees	427.000	398,000

Siemens created 17,000 new jobs worldwide



1) In continuing operations.

Strong growth in emerging countries



1) Emerging markets include APAC (without Japan and Australia), Middle East, Africa, America (without USA and Canada), Eastern Europe (including Russia und Turkey).

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Examples of Siemens innovations

Answers to the world's toughest questions since 1847

Our roots



*For the last 160 years,
Siemens has been
answering the toughest
questions with technological
innovation*

A history of constant innovation

1847 – 1881

1882 – 1927

1928 – 1967

1967 – 2007

- First **pointer telegraph**
- First **electrical generator** to power industry, house-holds and society
- First **electric tram**
- First **electric street lighting**
- **Subway** in Budapest: **First** one in **Europe**
- Development of the **first light bulb**
- First **light signal** in Berlin



- Development of the Telefunken **TV screen**
- First mass-production of **electron microscope**
- Implantation of the first **cardiac pace-maker**



- Introduction of **Siretom tomograph**
- **Maglev train Transrapid** in Shanghai
- **Full body MR tomography**
- **Most efficient** combined cycle turbine



Siemens' innovations have changed the world



Industry



From the first electronic controls – to fully automated factories



Energy



From the invention of the dynamo – to the world's most efficient gas turbines



Healthcare



From the first views inside the body – to full-body 3D scans

What is innovation ?

Definition according to Wikipedia



The classic definitions of **innovation** include: ...

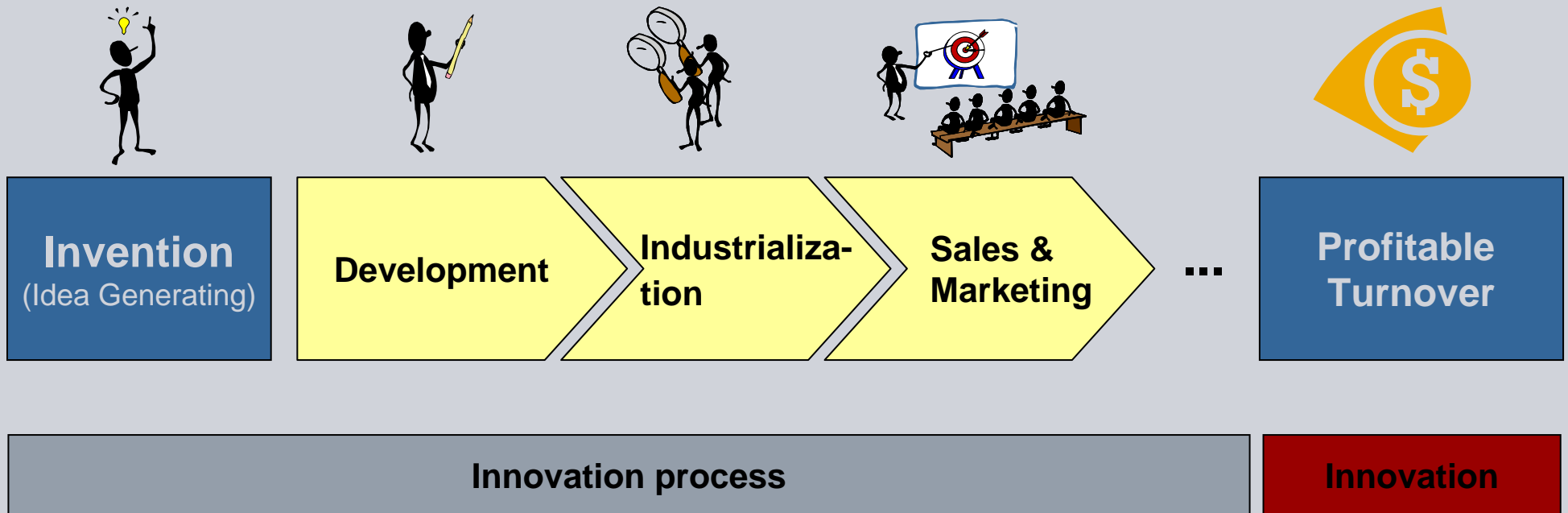
... something new - must be substantially different, not an insignificant change. In economics the **change must increase value, customer value**, or producer value. Innovations are intended to make someone better off, and the succession of **many innovations grows the whole economy**.

Our understanding of innovation

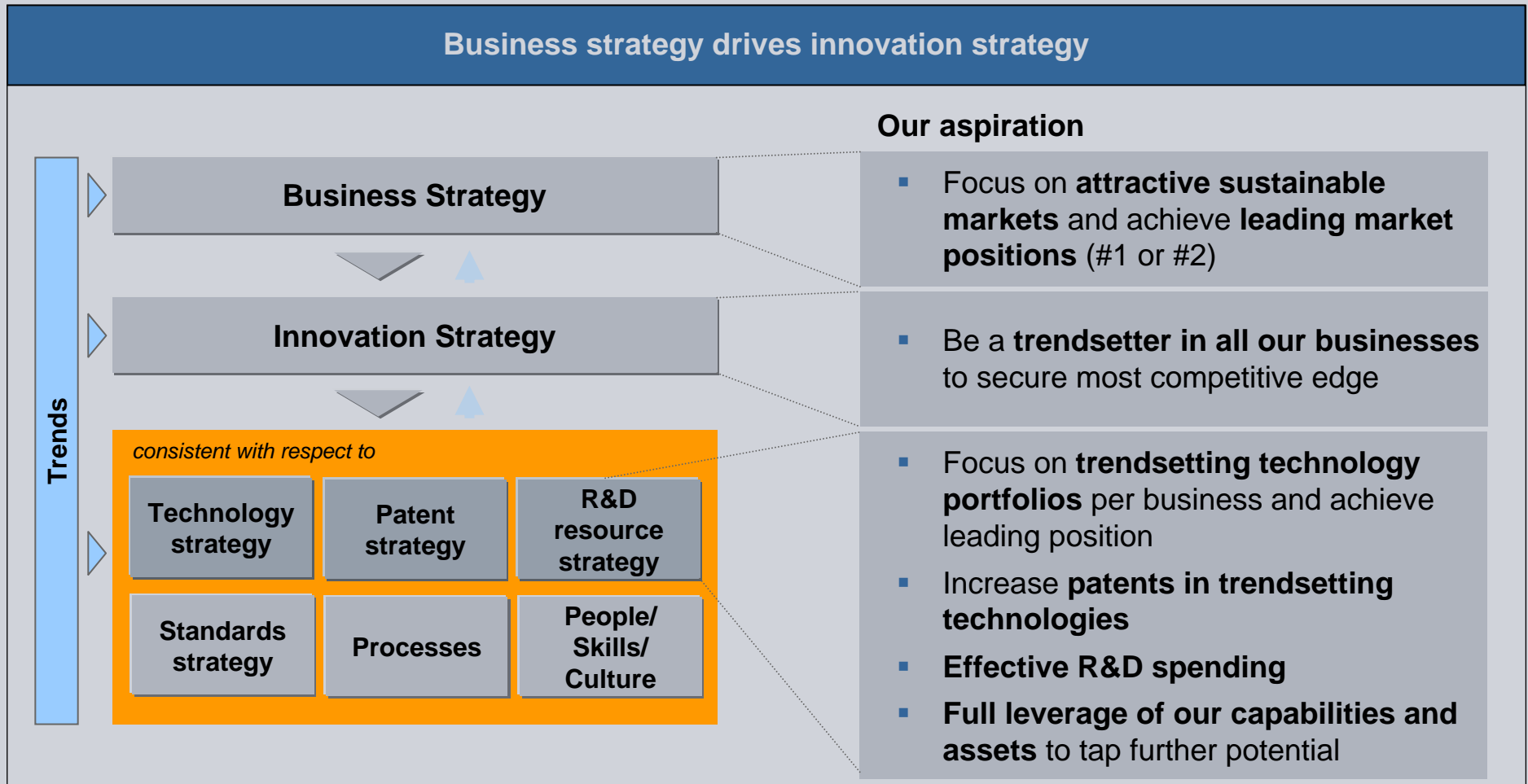
Innovation is transforming knowledge into money by finding the right solutions to the most pressing questions of the day.

SIEMENS

From invention to innovation

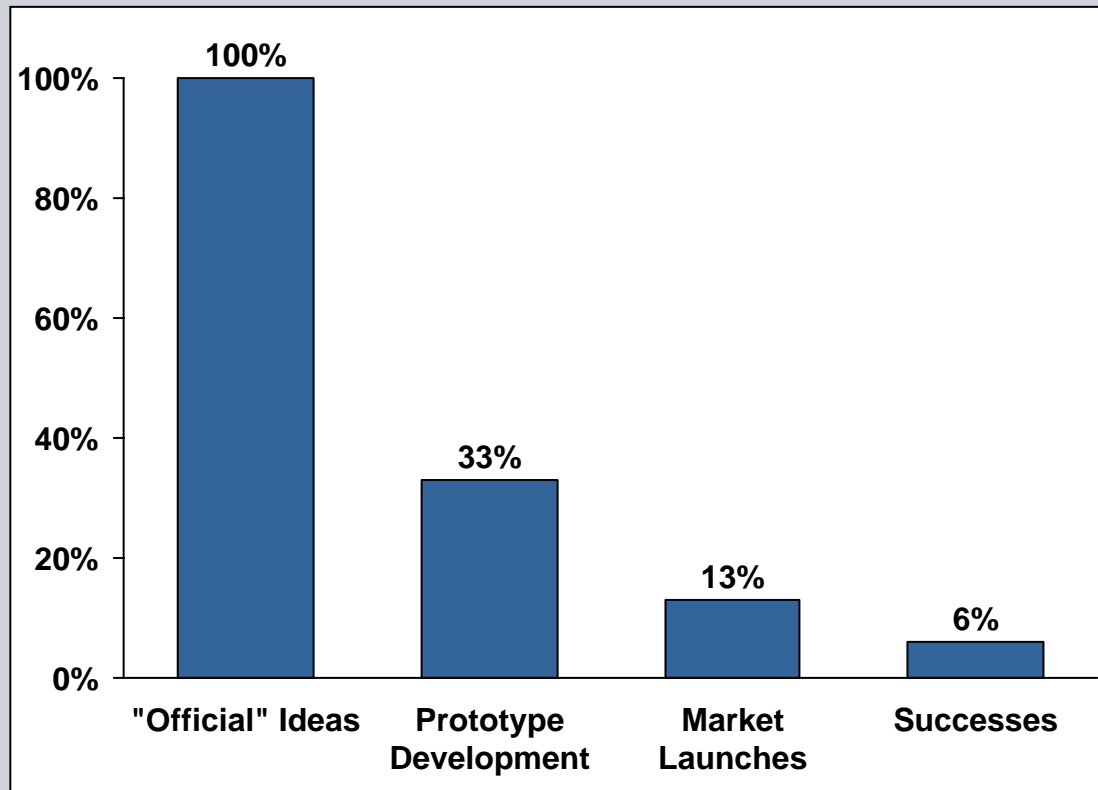


Innovation strategy „trendsetter“ as basis for leadership businesses worldwide



Innovative companies are courageous companies

High flop rates: "Official" Ideas vs. Successes



- You need a lot of ideas to arrive at one successful innovation
- To create those many ideas you need a company culture which rewards also the failures!

Source: Institut für angewandte Innovationsforschung e.v. (2007): Press Release January 9th, 2007

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Innovation is our lifeblood backed by our global R&D efforts

Strong R&D investments

- €3.4 bn R&D investment (= 4.7% of Sales)
- **Intentionally higher R&D investment** compared to our top competitors
- 32,500 R&D employees worldwide
- 17,500 software engineers

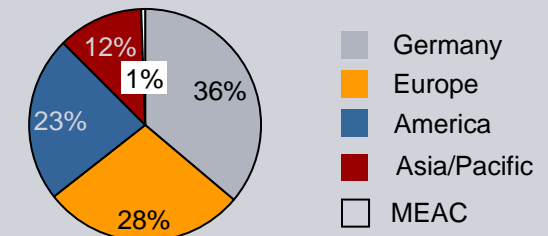
Strong invention culture

- More than 8,000 inventions, more than 50,000 active patents
- Our **“best and brightest” minds** generate **38 inventions** and **23 patent applications** worldwide **every workday**
- Among **Top2 patent position** in Germany¹ and **Top3** in Europe²
- Annual income from license fees at high 2-digit mill. EUR level

1) 1. Bosch
2) 1. Philips, 2. Samsung

Global R&D footprint

- **150 R&D locations in over 30 countries** around the world



Regional distribution of R&D employees

- **A cornerstone for innovations:** the Corporate Technology global research network with **2000 employees in 12 locations**

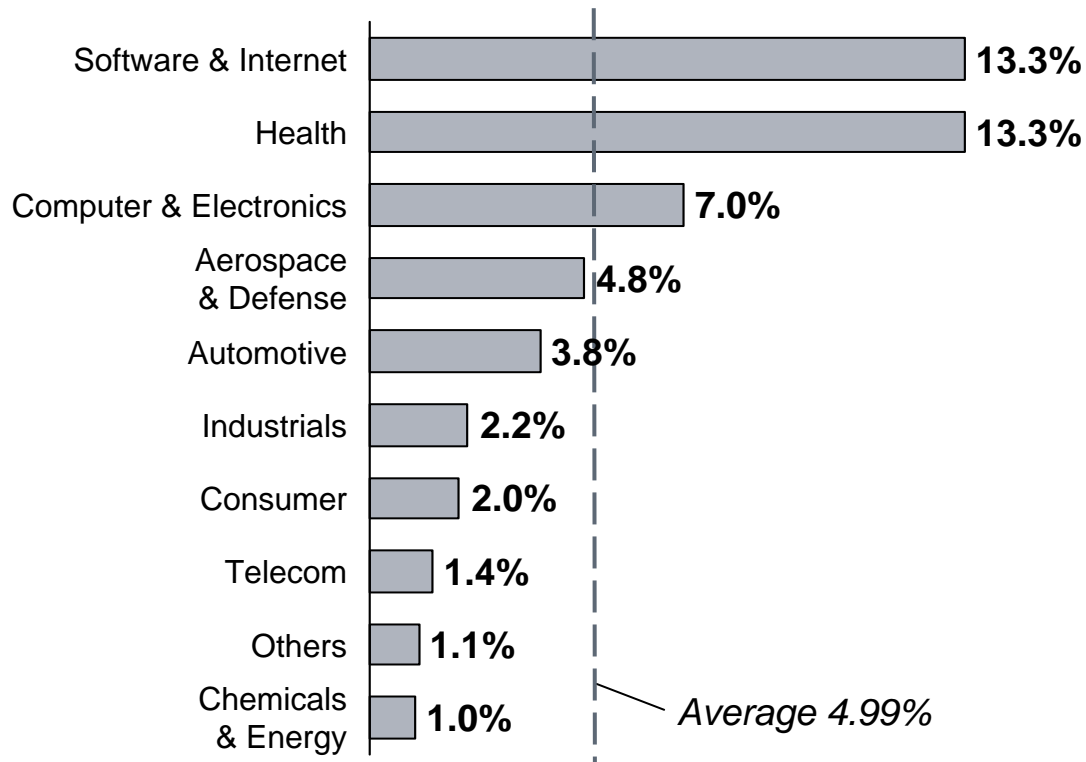


Note: all figures from 2007

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Top 10 in terms of R&D expenditure

R&D expenditure by industry ¹⁾,
in Percent of sales



World's top ten companies in terms of
R&D expenditure ²⁾

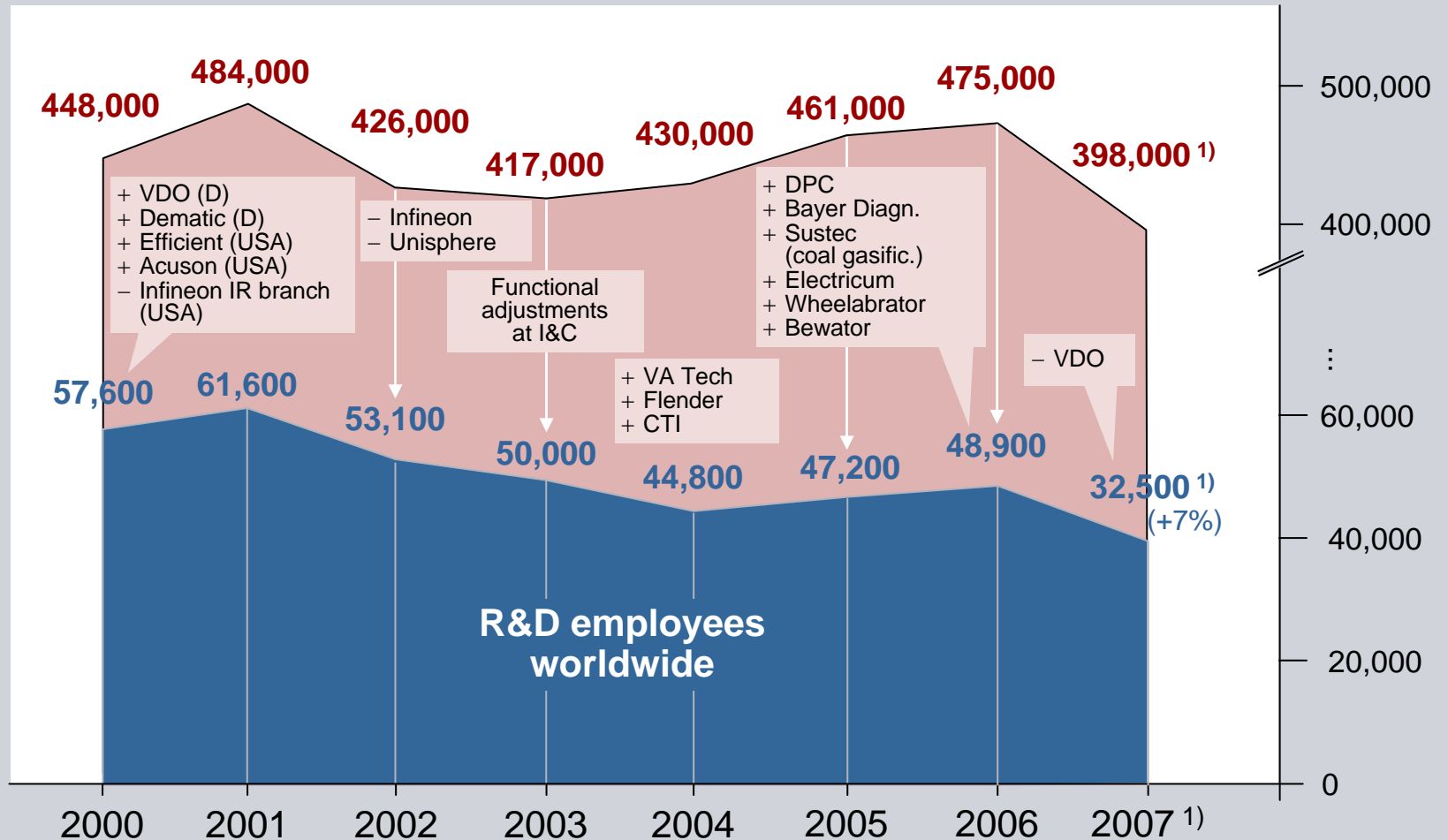
Rank	Company	R&D expenditure in billions of USD	R&D as a percentage of sales
1.	Toyota	7,691	3.7%
2.	Pfizer	7,599	15.7%
3.	Ford	7,200	4.5%
4.	Johnson & Johnson	7,125	13.4%
5.	DaimlerChrysler	6,678	3.5%
6.	General Motors	6,600	3.2%
7.	Microsoft	6,584	14.9%
8.	GlaxoSmithKline	6,351	14.9%
9.	Siemens	6,294	5.8%
10.	IBM	6,107	6.7%

1) BAH industry sectors based on Bloomberg's industry designations

2) Booz Allen Hamilton: „The Customer Connection: The Global Innovation 1000“, 2007

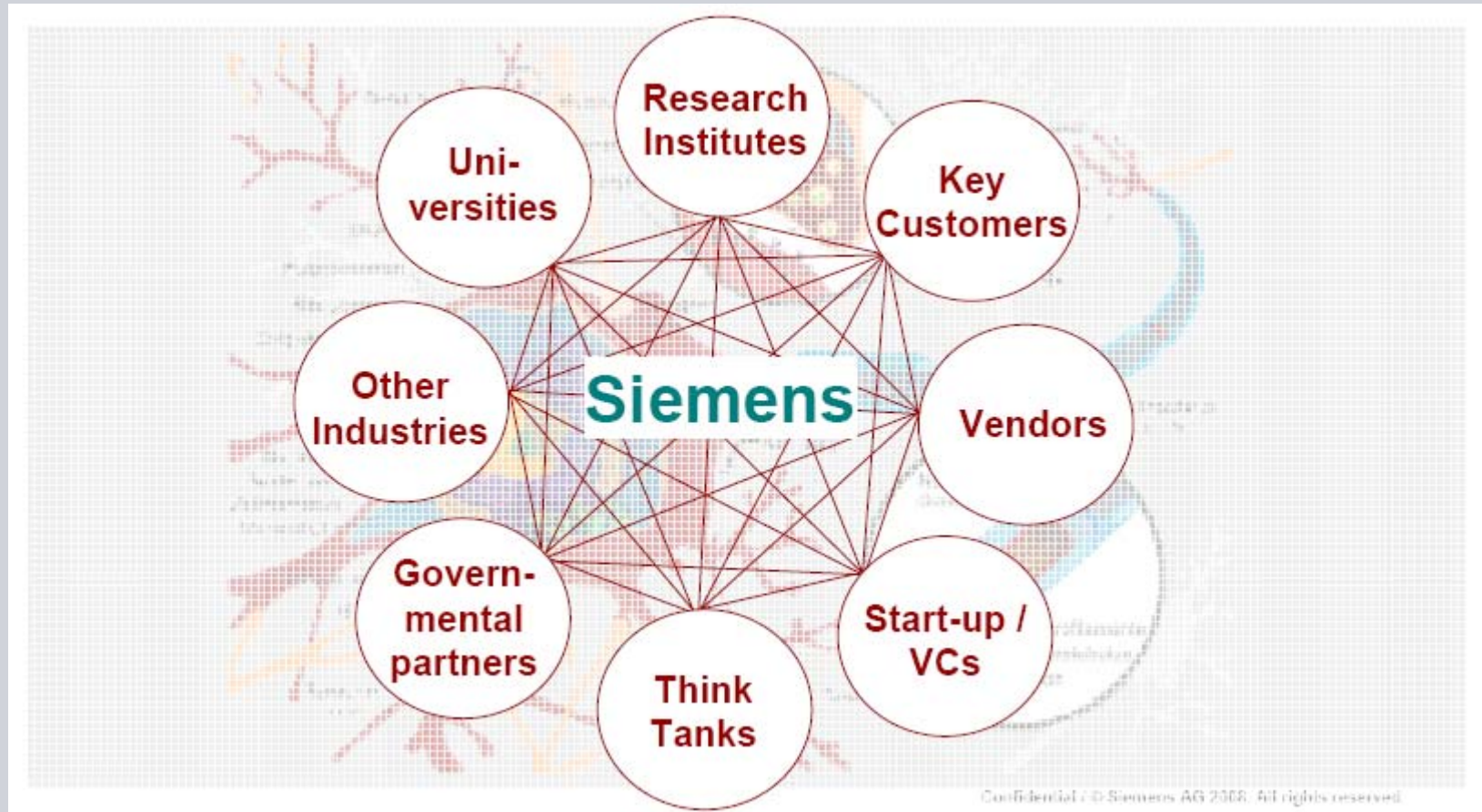
Ratio of Employees to Researchers constant

Siemens employees worldwide

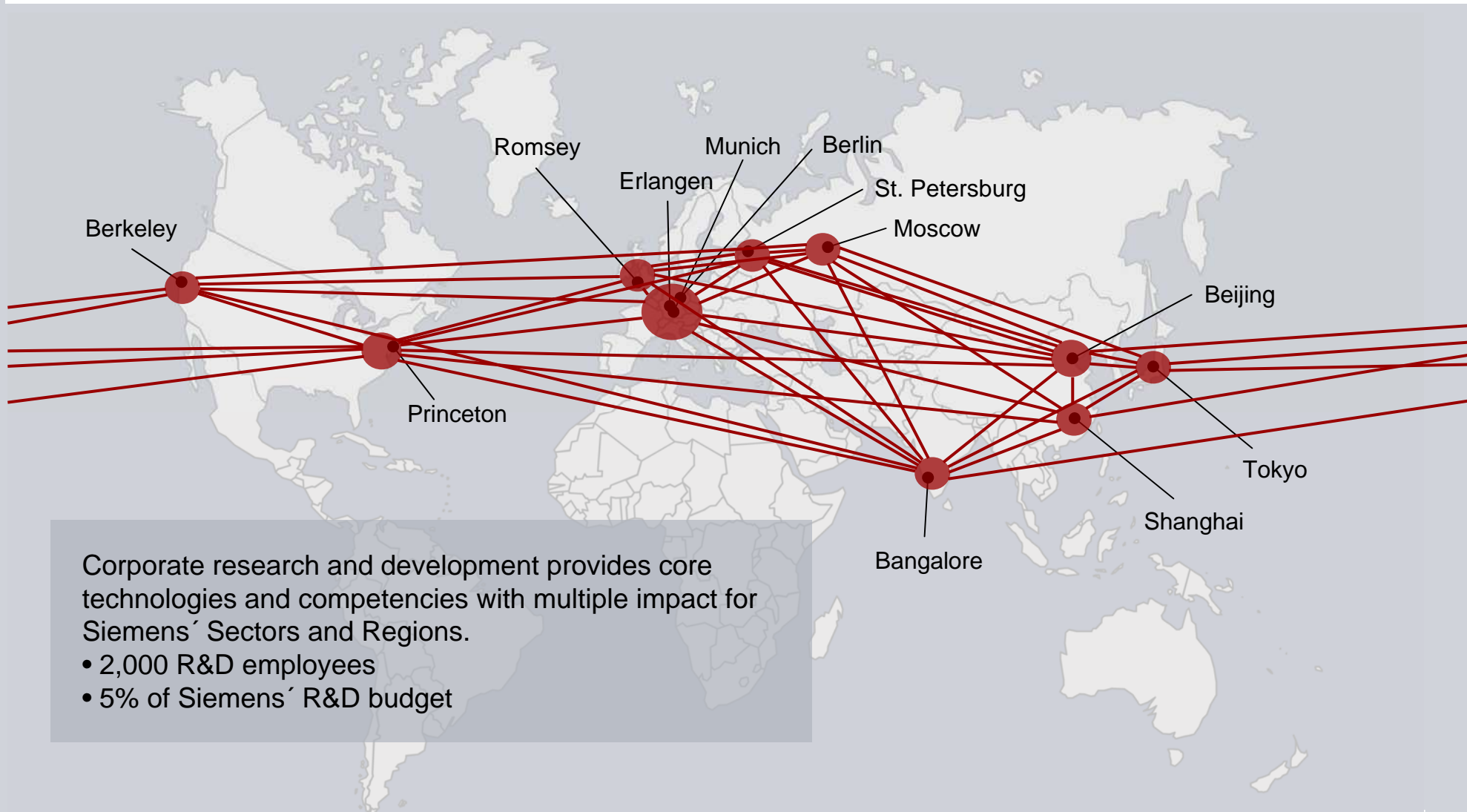


1) Continued operations

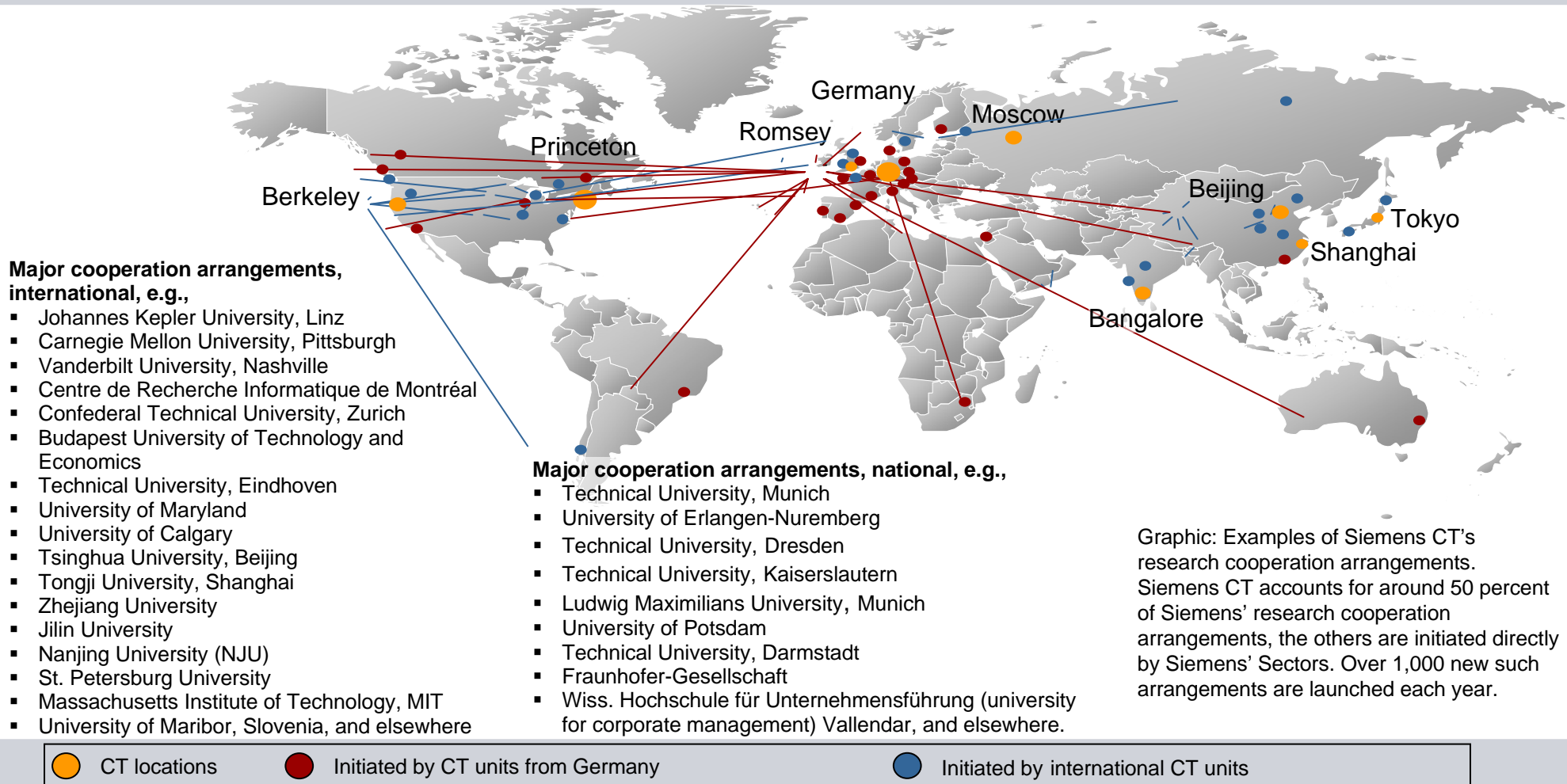
Networks are the breeding grounds for innovation!



A cornerstone for innovations: The Corporate Technology (CT) global research network



Cooperation with leading research institutions



Graphic: Examples of Siemens CT's research cooperation arrangements. Siemens CT accounts for around 50 percent of Siemens' research cooperation arrangements, the others are initiated directly by Siemens' Sectors. Over 1,000 new such arrangements are launched each year.

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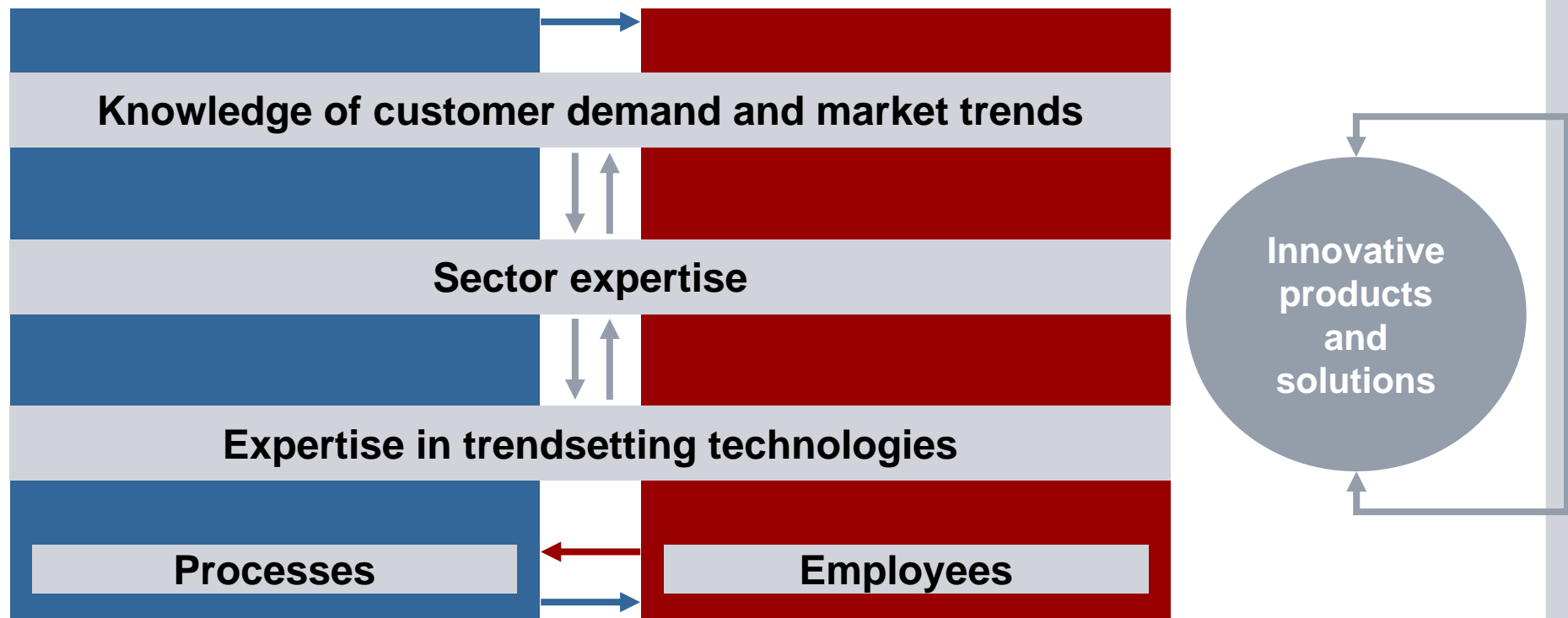
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Siemens innovation methodology: How to look ahead

Examples of Siemens innovations

Key role of Siemens' Innovation Framework

There is a strong correlation between the five success factors of Siemens' Innovation Framework

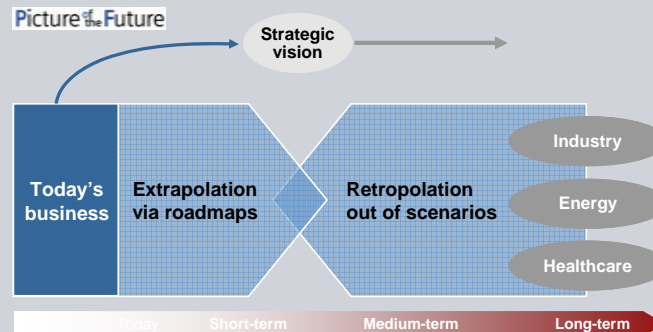


Pictures of the Future methodology provides comprehensive future scenarios for our businesses

Input

- **Global and regional trends** (Mega trends, Industry trends)
- **External interviews** with experts (companies, universities) in Regions
- **Other external sources** like conferences, studies
- **Siemens sources** like Energy & Environmental Care Project
- **Sector / Division and CT internal sources**

Pictures of the Future



Discussions and analysis **focused on**

- **Trends and markets**
- **Scenarios**
- **Business Impacts**
- **Business Opportunities**
- **Technologies**

Updated regularly depending on dynamics of business cycles and request by the business owner

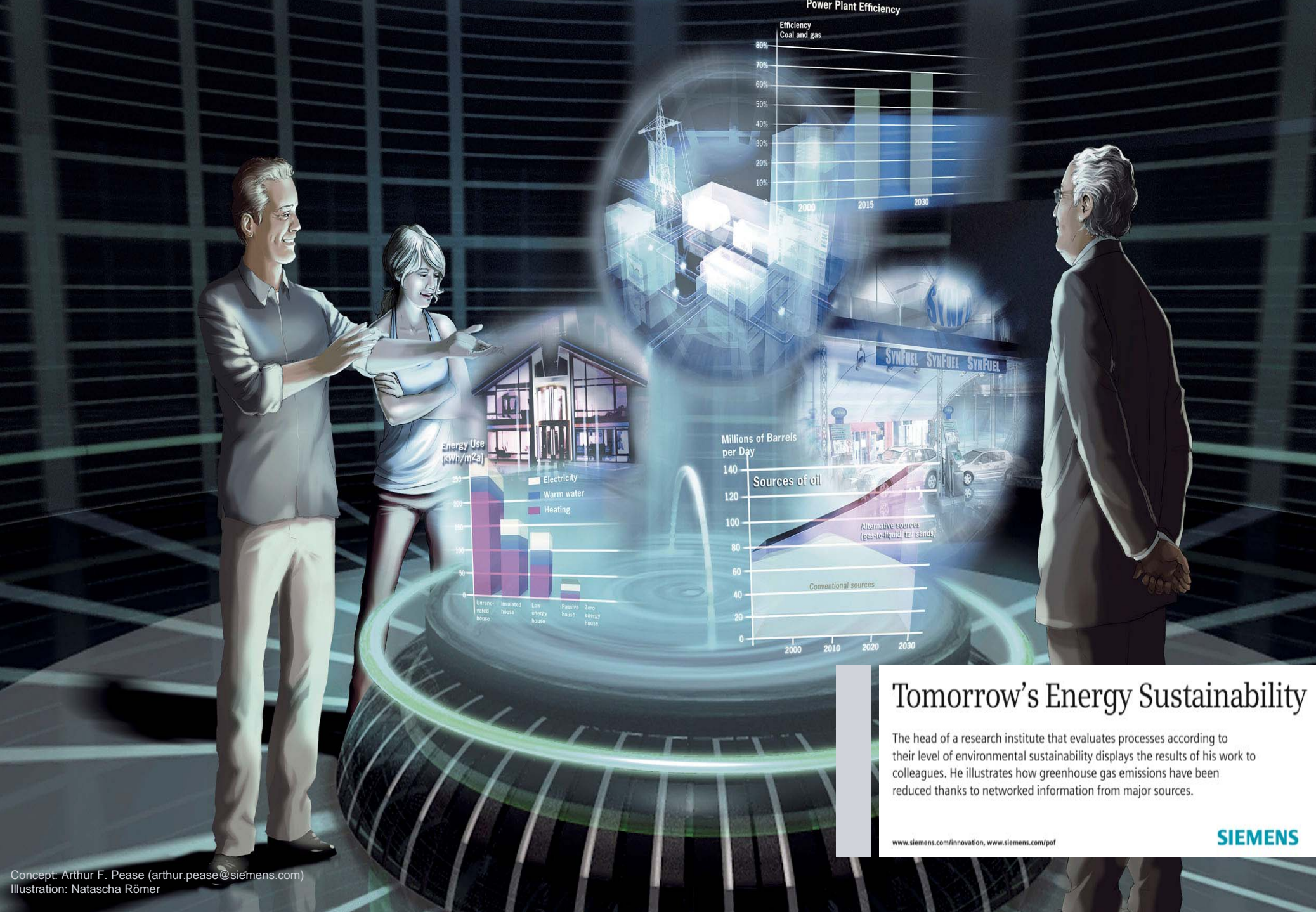
Output

For the Sector / Division

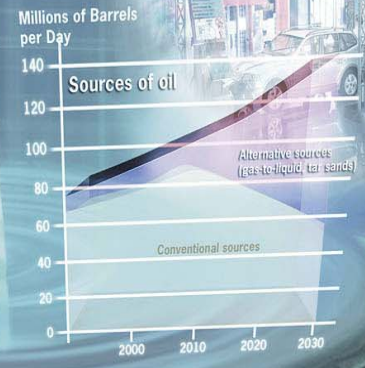
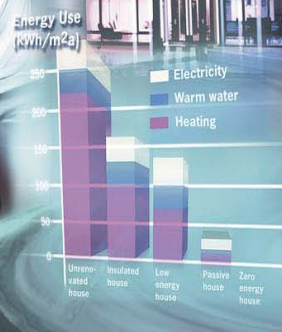
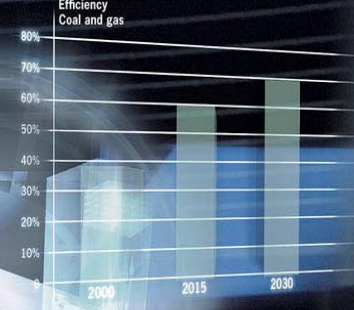
- **Comprehensive future scenario**
- **Strategic options for action**
- Ideas for **new business opportunities**
- **Input for long-term innovation strategy** and mid / longterm **roadmap**
- **Communication basis** for our innovation strength **to major stakeholders, e.g., to extend customer relation**

For Corporate Technology

- Identification of **cross-divisional technologies** and
- **joint technology projects**



Power Plant Efficiency



Tomorrow's Energy Sustainability

The head of a research institute that evaluates processes according to their level of environmental sustainability displays the results of his work to colleagues. He illustrates how greenhouse gas emissions have been reduced thanks to networked information from major sources.

www.siemens.com/innovation, www.siemens.com/pof



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Siemens answers the world's toughest questions

Energy

Facts that prompt questions

- More than 40% increase in worldwide energy demand in the coming 25 years
- Emerging countries account for two-thirds of the increase in the world's primary energy consumption
- Energy diversity will not change fundamentally in the next 10 years
- Increase of CO₂ emissions risk to global climate

Siemens answers

- Market leader for offshore wind energy facilities
- Manufacturer of the world's largest, most efficient gas turbine
- Leading provider of HVDC
- „Performance Contracting“ offers a complete portfolio for energy efficient solutions in buildings



Siemens answers the world's toughest questions

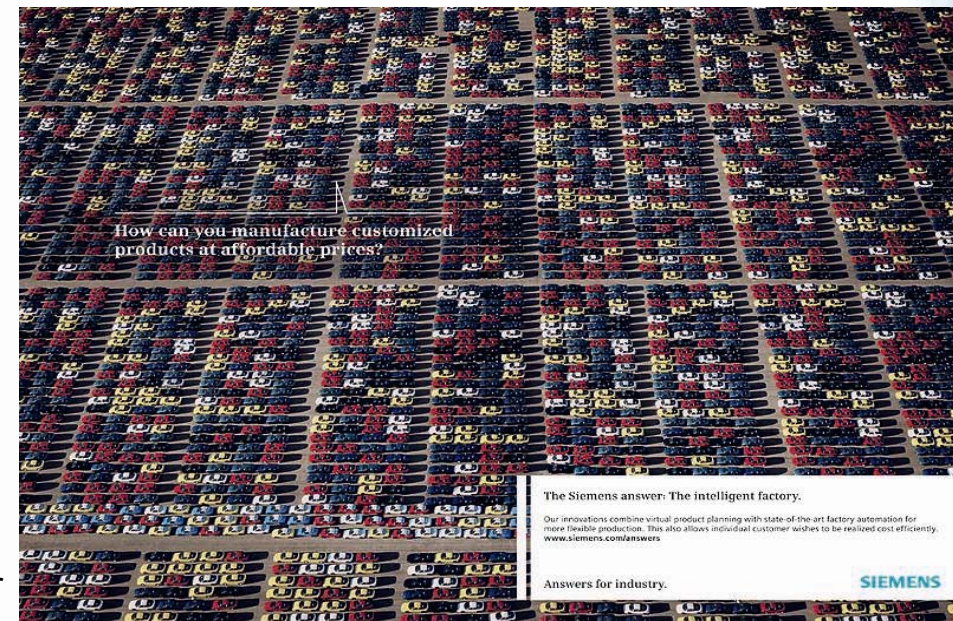
Industry

Facts that prompt questions

- More than one billion people without drinking water
- Increasing world population requires efficient production and supply of food and goods
- BRIC countries continuously increase their share of global GDP
- Growing public demand for security

Siemens answers

- Leading developer of systems for the intelligent factory
- Entire portfolio for mobility systems (complete mobility)
- No. 1 provider of products and solutions for the entire range of water treatment
- Efficient security solutions



Siemens answers the world's toughest questions

Healthcare

Facts that prompt questions

- Percentage of 80+ generation to grow globally
- Healthcare costs in industrialized nations account for more than 10% of GDP
- Number of people requiring daily care will rise to 165 million by 2020 in India and China alone

Siemens answers

- Siemens enables early detection of disease by combining state of the art laboratory diagnostics (in-vitro) and imaging technologies (in-vivo)
- The company is the world leader for IT solutions in healthcare



Don't get lost in the future...

**„However beautiful the strategy,
you should occasionally look at the
results.“**



Sir Winston Churchill

- Former Prime Minister UK -