

Wacker Chemie AG

**WACKER**

Sustainability Report  
2007/2008





...// About this Report

**Wacker Chemie AG's sustainability report explains how the Group balances economic aspects with environmental and social responsibility. In 1989, WACKER was among the first companies to report on its environmental performance. We were also among the first to enhance our environmental report with social and health information, creating our first sustainability report in 2002.**

The present report, which builds on WACKER's 2003 – 2006 sustainability report (published in March 2007), is available in English and German. The topic of sustainability is gaining importance. That's why we have shortened the reporting period from four to two years and included new subjects. The facts and figures in this report relate to 2007 and 2008. Unless otherwise specified, our statements apply to all business divisions and sites around the world, as well as to every subsidiary in which WACKER is the majority shareholder. The information on our Group structure and financial position was taken from WACKER's 2007 and 2008 annual reports. To be as up to date as possible, we have included an "Outlook" section with current issues as of 2009 (editorial deadline: June 30, 2009).

This report offers an honest and comprehensive account of sustainability at WACKER for the benefit of our customers, business partners, suppliers, shareholders, analysts, non-governmental organizations and the authorities, as well as our employees and neighbors at our various sites. We established the main contents through ongoing dialog with our stakeholders and a survey carried out in winter 2008. This international stakeholder survey asked some 30 respondents which sustainability topics are most relevant and how well WACKER handles them.

Our reporting is based on criteria recommended by *future* and the IÖW (the German Institute for Ecological Economy Research) as well as the international Global Reporting Initiative (GRI) G3 guidelines. An index at the back of the report refers to the pages that contain information on the individual GRI indicators. The extent to which we have applied the GRI Reporting Framework in this report is indicated by a self-declared level, based on our own assessment. We achieved Application Level B.

Our website provides further information on the topics discussed in this report. The web links are marked at the end of each text with [  ]. Information and downloads on WACKER's sustainability efforts (marked with [  ]) are also available at [www.wacker.com/sustainability](http://www.wacker.com/sustainability).

Our next sustainability report is scheduled for 2011.

...// Cover photo

Christine Wormeck  
Chemical lab technician  
at Analytical Services  
Burghausen

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**WACKER at a Glance**

		2008	2007	2006
<b>Results/Return</b>				
Sales	€ million	4,298.1	3,781.3	3,336.9
EBITDA	€ million	1,055.2	1,001.5	786.3
EBIT	€ million	647.9	649.6	456.3
Net income	€ million	438.3	422.2	311.3
Earnings per share	€	8.84	8.49	6.46
ROCE	%	25.7	25.3	17.9
<b>Balance Sheet/Cash Flow</b>				
Total assets	€ million	4,625.1	3,918.1	3,258.2
Equity	€ million	2,082.8	1,865.6	1,585.8
Equity ratio	%	45.0	47.6	48.7
Capital expenditures (including financial assets)	€ million	916.3	699.3	525.3
Depreciation (including financial assets)	€ million	407.3	351.9	330.0
Net cash flow	€ million	21.7	643.7	184.7
<b>Research and Development</b>				
Research and development expenses	€ million	163.2	152.5	152.3
<b>Employees</b>				
Personnel expenses	€ million	1,086.0	1,014.9	962.4
Employees (December 31)	Number	15,922	15,044	14,668

The chemical industry is second only to the electronics sector in inspiring other industries to create new products and production processes, and thereby makes a vital contribution to global progress and sustainable development. For WACKER, sustainability means striking a balance between economic, environmental and social factors in everything we do. Around the world, we have been acting on this principle for years.

This report shows how WACKER implements and manages sustainability, bringing its many aspects to life every day – in our production processes, product developments and interactions with employees and society.

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# Introduction

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## Dear Reader,

2007 and 2008 were the most successful years in Wacker Chemie AG's history. We forged ahead with strong sales and earnings growth. Achieving financial goals is not our only measure of success, though. How we achieve them is also very important.

Our vision is to make an indispensable long-term contribution to global progress and sustainable development. In fact, sustainability has been part of WACKER's production and business processes for many years now. In our eyes, it is the basis of our long-term business success. We balance economic, environmental and social factors in everything we do. And we hold especially firmly to this principle in times of financial crisis and economic downturn.

Companies are not purely the driving force of the economy – they are also corporate citizens. In fact, with 27 production sites and some 16,000 employees around the world, we see ourselves as a global citizen, too. WACKER has been committed to the chemical industry's worldwide Responsible Care® initiative from the outset and supports its international implementation. Moreover, we have joined the UN's Global Compact initiative. We embrace the Global Compact's ten principles centered around respecting human rights, promoting social and environmental standards, and fighting corruption. In 2008, we asked our suppliers to support this voluntary commitment, too, and it is now an integral part of our supplier management system.

We appointed a Group coordinator for Responsible Care® in 2008 to intensify our focus on sustainability. The coordinator not only supports and advises WACKER's business divisions and corporate departments in their sustainability efforts, but also ensures that our supply-chain partners likewise comply with recognized health and safety standards and adopt a responsible environmental approach.

We focus our R&D on finding solutions that meet customer needs and key social responsibilities. One of society's greatest challenges is to cover rising energy demand while protecting the climate. We confront this issue in our manufacturing processes and product development activities. Integrated production is one of WACKER's major strengths. It encompasses the materials that we combine, process and recycle in our integrated systems, as well as our energy use – for example we recycle waste heat from production processes. In 2007, we initiated our POWER PLUS project in Burghausen and Nünchritz (Germany) to reduce specific energy consumption at both sites. We have examined all energy-intensive facilities there and developed energy-saving measures.

We are attaching more and more importance to products that significantly contribute to energy efficiency and climate protection. WACKER is one of the largest producers of hyper-pure polycrystalline silicon for solar cells. Each metric ton of polysilicon used in solar modules prevents the emission of some 6,000 tons of CO<sub>2</sub>.

VINNAPAS® polymer powders play a part in solving today's challenges, too. VINNAPAS® helps insulate buildings against heat and cold – reducing energy costs by as much as 60%.



As for workplace safety, we are doing everything in our power to prevent accidents and to reduce our low accident figures even further. In 2007, we launched the *Fresh Impetus for Work Safety* initiative in Germany and are now implementing it in stages groupwide.

Another challenge is demographic change, which we have studied closely since 2006. We have pinpointed ten strategic goals to maintain our long-term innovative and competitive strength.

We have also made progress on the social commitment front. In 2008, WACKER and the Technical University of Munich opened an Institute of Silicon Chemistry. The institute promotes interdisciplinary research into macromolecular organosilicon compounds. Beside education and science, we are particularly active in community projects for children and young people. Since 2007, WACKER has been supporting a German charity, *Die Arche*, which helps children from socially disadvantaged families in several German cities.

Looking back on 2007 and 2008 in terms of sustainable management, we can say that we've achieved a lot. It would be presumptuous to say that we are perfect and have the right solution for everything. But we are doing our utmost to find suitable answers – with dedication and conviction.

Sincerely yours,

A handwritten signature in black ink, reading "R. Staudigl". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Dr. Rudolf Staudigl  
President & CEO  
Wacker Chemie AG

## 2006

**April 10**

Wacker Chemie AG's **IPO**: access to capital markets enables us to make better use of growth opportunities. Examples include production-capacity expansion in China, the new polysilicon facilities in Germany and capacity increases for 300 mm wafers.

**June 28**

**Expansion of polysilicon production** at WACKER Burghausen to meet the solar industry's accelerating global demand for hyperpure polycrystalline silicon for solar cells.

**July 14**

WACKER's Siltronic subsidiary and Samsung Electronics join forces to construct a **300 mm wafer fab** in Singapore – a 50:50 joint venture between a semiconductor producer and a wafer manufacturer. Investments in this project total \$1 billion.

**September 8**

Groundbreaking: in Zhangjiagang (China), WACKER and Dow Corning start to build the world's **largest siloxane production plant** to date. They will construct a joint pyrogenic silica production plant on the same site, too. WACKER and Dow Corning will also develop and operate separate manufacturing facilities for downstream silicone products. Investments in the joint-venture projects will exceed \$600 million over the coming years.

**December 21**

WACKER endows an **Institute of Silicon Chemistry** within the Faculty of Chemistry at the Technical University of Munich (TUM). The institute is under the direction of the Chair of Macromolecular Chemistry, which carries the WACKER name. In total, the company has earmarked €6 million for the institute.

2006

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



April 10



September 8



December 21



## 2007

**January 19**

**Opening of a technical center** in Singapore for our Southeast Asian customers. It serves as a regional competence center for applications in the construction, textile and pulp & paper sectors.

**February 8**

WACKER commissions manufacturing plants for silicone products in China, aiming to **further extend** its lead in China's booming silicones market.

**April 18**

WACKER opens a construction-chemicals technical center in Beijing. With **lab facilities to develop and test** polymeric binders, the center offers customers optimum local support for new product developments and promotes internationally recognized quality standards in the construction industry.

**June 5**

WACKER builds a new production plant for dispersible polymer powders in China and a **new spray dryer** in Nanjing, increasing its Chinese capacities by a further 30,000 metric tons per year. As a result, Asia-Pacific customers can enjoy reliable delivery and consistently high product quality over the long term.

**July 26**

The **WACKER Silicone Award goes to** the exceptional scientist Prof. Yitzhak Apeloig for his pioneering theoretical and experimental work in organosilicon chemistry.

**November 7**

WACKER expands its **biologics production** in Jena (Germany) to promote further growth and strengthen its position in this market.

2007



February 8



April 18



November 7

## 2008

### February 1

WACKER finalizes the acquisition of its polymer joint ventures. As the **world's leading supplier of dispersible polymer powders** for construction applications, WACKER expects the transaction to benefit its global polymers business on several strategic fronts.

### June 19

Siltronic and Samsung jointly start to **produce 300 mm wafers** in Singapore. The new complex is among the world's largest and most modern 300 mm wafer facilities. By 2010, the joint venture aims to reach a monthly capacity of 300,000 wafers and to employ 800 staff. The overall investment in this project is about \$1 billion.

### July 3

WACKER and the TUM open the Institute of Silicon Chemistry, part of the **WACKER Chair of Macromolecular Chemistry**, at the research center in Garching (near Munich). The lab offers ideal working conditions for interdisciplinary research into macromolecular organosilicon compounds.

### October 11

WACKER opens a **training and competence center for construction chemicals** in Moscow. This international facility offers the ideal platform for sector-specific networking between customers, sales partners and WACKER experts. The Group is also expanding its Moscow technical center, which promotes the transfer of expertise to local customers and business partners.

### November 14

WACKER and Dow Corning start **raw material production at the largest integrated silicone site** in China. The two companies are jointly investing some \$1.2 billion in expanding pyrogenic-silica and siloxane production. Not only is it China's biggest facility of this kind, but it is also one of the world's largest and most advanced integrated silicone production sites.

## 2008

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



February 1



July 3



October 11

# WACKER

...// Innovator

Dr. Markus Busold  
Senior manager, Business Development &  
Innovation Management  
WACKER FINE CHEMICALS



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# 01

### Group Structure and Operations

WACKER is a globally active company with over 3,500 products serving more than 3,500 customers in over 100 countries. Our portfolio includes highly-developed specialty chemicals. Found in countless everyday items and ranging from hairsprays to solar cells, these products are used, for example, as starting materials for non-naturally occurring actives. They also permit new production processes or make existing ones more environmentally sound and cost-effective. Moreover WACKER products are often additives that, even in trace amounts, impart novel or improved properties to well-known materials.

Most of these products are based on inorganic starting materials. Silicon-based and ethylene-related products comprise 80% and 20%, respectively, of WACKER sales. Our customers include the consumer goods, food, pharmaceutical, textile, solar, electrical/electronic and basic chemical material sectors, as well as medical technology, biotechnology and mechanical engineering. As a producer of silicones and polymers, WACKER is particularly well represented in the automotive and construction sectors. Additionally, we are a key supplier of silicon wafers to the semiconductor industry.

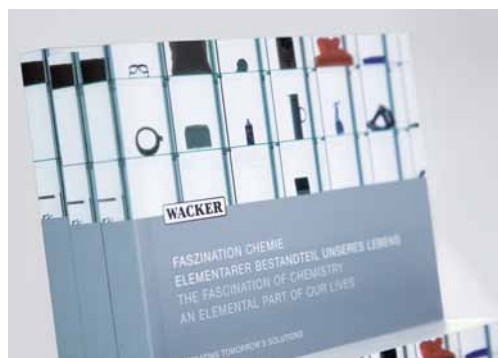
At WACKER, global is normal. Many WACKER customers have a worldwide footing. We ensure customer proximity by operating on all five continents and consistently expanding our presence in growth regions. Our network of over 100 subsidiaries and sales offices is tailored to our customers' needs and logistics. This dense network is enhanced by our 17 technical centers across the globe. In fiscal 2008, WACKER opened a further center in Moscow.

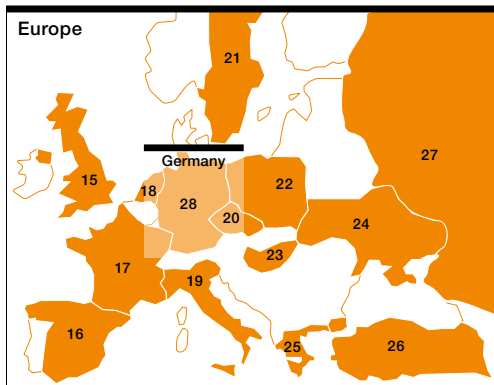
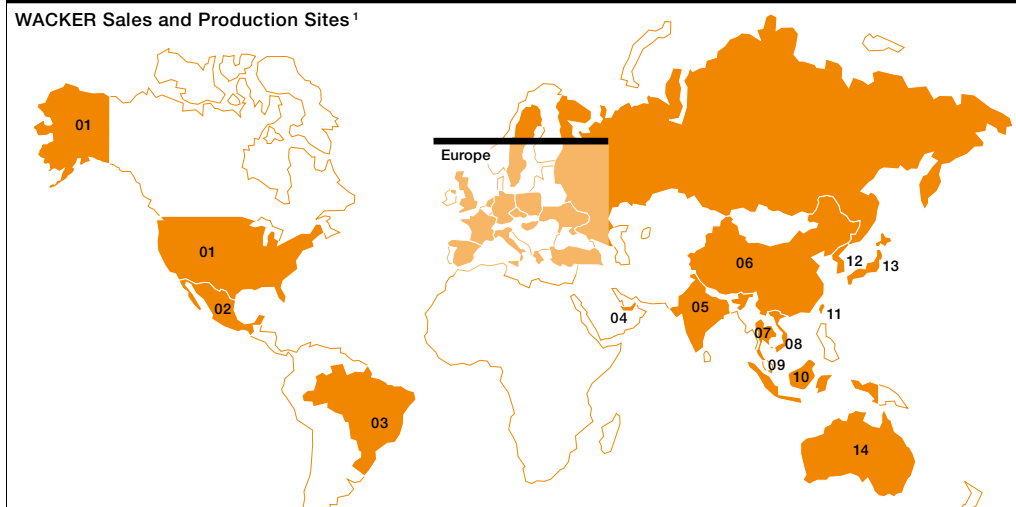
Our production structure is just as globally oriented as our sales and service network. With a total of 27 production sites in Europe (9), the Americas (9) and Asia (9), we have a presence in all key regions.

WACKER has five business divisions offering a broad range of innovative and highly-developed products and services. The WACKER Group has a matrix organization with clearly defined business responsibilities. The five divisions have global responsibility for their own products, production facilities, markets, customers and business results. Regional organizations are responsible for all business in their region or country. Aside from the divisions, the Group has corporate departments that primarily provide groupwide services, though some are also involved in production-related functions.

## 01

WACKER products are found in countless everyday items. And, thanks to employees like Dr. Markus Busold, there are more products and applications every year. Dr. Busold taps into new technologies and tests our products' applicability in other sectors.



**WACKER Sales and Production Sites<sup>1</sup>****The Americas****01 USA**

Adrian, Michigan  
Allentown, Pennsylvania  
Calvert City, Kentucky  
Chino, California  
Duncan, South Carolina  
Eddyville, Iowa  
North Canton, Ohio  
Portland, Oregon

**02 Mexico**

Mexico City

**03 Brazil**

Jandira, São Paulo

**Asia/Australia****04 United Arab Emirates**

Dubai

**05 India**

Bangalore  
Kolkata, West Bengal  
Mumbai  
New Delhi

**06 China**

Beijing  
Guangzhou  
Hong Kong  
Nanjing  
Shanghai  
Shunde  
Wuxi  
Zhangjiagang

**07 Thailand**

Bangkok

**08 Vietnam**

Ho Chi Minh City

**09 Singapore**

Singapore

**10 Indonesia**

Jakarta

**11 Taiwan**

Hsinchu  
Taipei

**12 South Korea**

Seoul  
Suwon  
Ulsan

**13 Japan**

Akeno  
Hiikari  
Osaka  
Tokyo

**14 Australia**

Mulgrave, Victoria

**Europe****15 Great Britain**

Chertsey

**16 Spain**

Barcelona

**17 France**

Lyon

**18 Netherlands**

Krommenie

**19 Italy**

Milan

**20 Czech Republic**

Plzeň  
Prague

**21 Sweden**

Solna

**22 Poland**

Warsaw

**23 Hungary**

Budapest

**24 Ukraine**

Kiev

**25 Greece**

Athens

**26 Turkey**

Istanbul

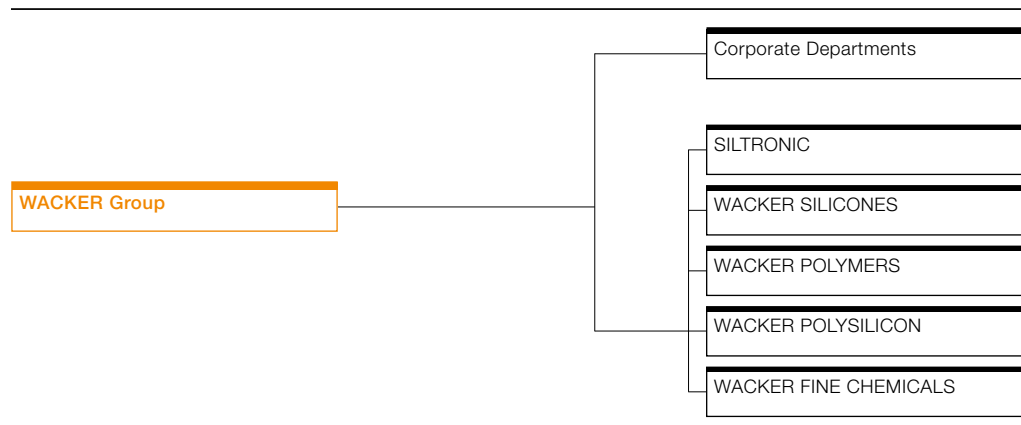
**27 Russia**

Moscow

**28 Germany**

A Burghausen  
B Freiberg, Saxony  
C Jena  
D Kempten  
E Cologne  
F Munich  
G Nünchritz  
H Stetten  
I Stuttgart

<sup>1</sup> Only majority-owned subsidiaries

**Wacker Chemie AG's Structure****Management and Supervision**

In compliance with the German Stock Corporation Act (AktG), Wacker Chemie AG has a dual management system, comprising the Executive Board – in charge of running the company – and the Supervisory Board – which oversees the Executive Board. Wacker Chemie AG's Executive Board consists of four members. Assisted by WACKER's corporate departments, the Executive Board coordinates strategies, resources, and the Group's infrastructure and organization. Wacker Chemie AG is the parent company, responsible for corporate strategy and overall management, resource allocation, funding, and communicating with WACKER's major target groups, especially the capital market and shareholders.

A new CEO took charge in 2008. Former CEO Dr. Peter-Alexander Wacker left WACKER's Executive Board on May 8, 2008. Following the Annual Shareholders' Meeting that same day, the reconstituted Supervisory Board appointed him as the company's new Supervisory Board chairman. His successor as CEO is Dr. Rudolf Staudigl, who has been a member of WACKER's Executive Board since 1995. Likewise effective May 8, 2008, Dr. Wilhelm Sittenthaler joined WACKER's Executive Board. Dr. Joachim Rauhut and Auguste Willems remain as the other two Executive Board members. The Executive Board's new composition made it necessary to reallocate the responsibilities of individual board members.

Dr. Peter-Alexander Wacker is Wacker Chemie AG's new Supervisory Board chairman. He succeeds Dr. Karl Heinz Weiss, who was a Supervisory Board member for 37 years. WACKER's Supervisory Board comprises 16 members, of whom eight are employee representatives.

**Legal Structure of the WACKER Group**

In November 2005, WACKER became a stock corporation (AG) under German law, headquartered in Munich. Wacker Chemie AG holds a direct or indirect stake in 64 companies belonging to the WACKER Group. The consolidated financial statements cover 57 fully consolidated companies. A further seven companies accounted for using the equity method are included.

### Key Products, Services and Business Processes

WACKER's Siltronic division produces silicon wafers for leading semiconductor manufacturers. These wafers form the fundamental basis for virtually all semiconductor products. Silicon wafers are used to make discrete semiconductor components (e.g. transistors and rectifiers) and microchips (e.g. microprocessors and memory chips).

The WACKER SILICONES division offers customers our broadest product range with over 3,000 products. These span from silicone-based fluids, emulsions, resins, elastomers, sealants and silanes through to pyrogenic silica. We manufacture specialty products individually tailored to meet customers' needs, as well as standard products primarily used as starting materials in the production of silicones.

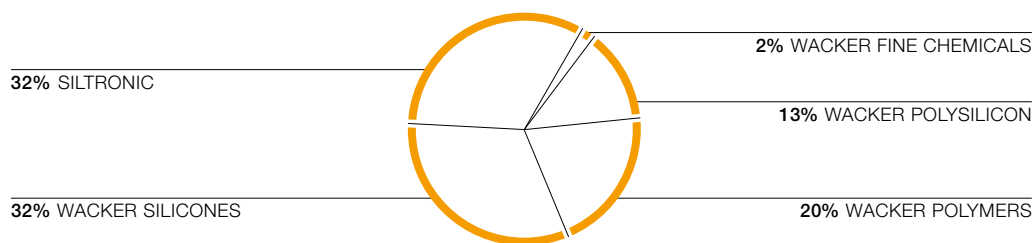
The WACKER POLYMERS division focuses on manufacturing state-of-the-art binders and polymer additives such as dispersible polymer powders and dispersions. These are used in diverse industrial applications or as base chemicals in the automotive, construction-chemical, paper and adhesive sectors, as well as in the production of coatings and printing inks. The construction industry is the main customer for polymer binders – used as an additive in tile adhesives, exterior insulation and finish systems (EIFS), dry-mix mortars and self-leveling flooring compounds.

For over 50 years, the WACKER POLYSILICON division has been producing hyperpure polysilicon for the semiconductor and electronics industries at its site in Burghausen, Germany. In recent years, it has increasingly supplied the solar industry, too. High demand for its polysilicon has helped make WACKER POLYSILICON the Group's fastest-growing division. Much of this polysilicon is sent to external customers. Internally, we supply Siltronic with polysilicon to make semiconductor wafers. Another internal customer is our Siltronic Samsung Wafer joint venture.

The WACKER FINE CHEMICALS division supplies customized biotech and catalog products. These include pharmaceutical proteins, cyclodextrins and cysteine, as well as organic intermediates and acetylacetone. This division focuses on customer-specific solutions for growth areas including pharmaceutical actives, cosmetics and food additives.

#### External Sales by Customer Location

€ million	2008	2007	2006
Germany	948.6	723.5	657.6
Europe (excluding Germany)	1,008.2	1,034.7	960.8
Americas	852.9	642.6	659.2
Asia	1,362.8	1,267.1	961.4
Other regions	125.6	113.4	97.9
<b>Group</b>	<b>4,298.1</b>	<b>3,781.3</b>	3,336.9

**Divisional Shares in External Sales 2008****Corporate Governance**

Wacker Chemie AG attaches great importance to the rules of proper Corporate Governance. With a few exceptions, we comply with the recommendations contained in Germany's Corporate Governance Code. The exceptions are listed in the declaration of conformity issued on December 11, 2008 by the Executive Board and Supervisory Board in accordance with Section 161 of the German Stock Corporation Act (AktG).



[www.wacker.com/  
corporate-governance](http://www.wacker.com/corporate-governance)

**Shareholder Structure**

Wacker Chemie AG's largest shareholder is still Dr. Alexander Wacker Familiengesellschaft mbH, Munich. It holds over 50% of the voting shares in Wacker Chemie AG (2007: over 50%).

In 2008, Blue Elephant Holding GmbH (Pöcking, Germany) once again did not have any voting-share changes to report, which means it still holds over 10% (2007: over 10%) of Wacker Chemie AG.

Artisan Partners Limited Partnership, Milwaukee (Wisconsin, USA) owns over 5% of the voting shares in Wacker Chemie AG (2007: over 5%).



# Sustainability Management

...// Sustainability expert

Dr. Klaus Blum  
Vice president of Chemical Services and  
Group coordinator for Responsible Care®  
Burghausen



02

### Corporate Policy

WACKER is a globally active company that manufactures and sells chemical products, and engages in intensive scientific research. A leader in its core businesses – semiconductors, polysilicon, polymers, fine chemicals and silicones – WACKER forges ahead with innovative chemistry and new technologies, supplying solutions that are market-oriented, energy-saving and environmentally compatible.

Our strengths lie in our leading-edge technologies and products, and above all in our highly trained and strongly motivated employees, whose health and well-being are vital factors for both their commitment and performance. They are aware of the concerns and needs of the communities and environments in which our company operates. They are results-oriented and responsible. Their decisive role in ensuring that we reach our objectives is the basis for the company's ongoing success.

We use our Integrated Management System (IMS) for quality, health, safety and environmental protection as a means of achieving continuous improvements in our performance and all our activities. Product and service quality has a very high priority. Our strong focus on enhancing quality and customer satisfaction is essential for our success.

Health, safety and environmental protection must be guaranteed at all times. We are fully committed to sustainable development, a principle that is an integral part of our business thinking and practices. We attach equal weight to economic, environmental and social concerns.

### Business Principles

WACKER plays an active role in the worldwide Responsible Care® initiative and strictly adheres, as a matter of course, to legal regulations and our own supplementary policy rules. These commitments form the basis of our business principles:

- All our employees share the responsibility for quality, health, safety and environmental protection, as well as for ongoing improvements in these areas. This is achieved by regularly setting targets and ensuring that they are met.
- Worldwide, we supply only superior products that can be distributed, used and disposed of safely and in an environmentally compatible way.
- We continually expand our knowledge about our existing and new products, adjusting our health, safety and environmental protection measures to incorporate any new insights.
- We guarantee the safe handling of products and residues in our manufacturing processes. We minimize resource consumption, emissions and waste.
- Generally speaking, it is the responsibility of employees to look after their health. We can help them meet this goal by introducing measures and programs that promote, maintain and restore health.

## 02

The chemical industry's business and production processes are complex. It takes farsighted managers like Dr. Klaus Blum to design them in a sustainable manner. As Group coordinator for Responsible Care®, he supports our business divisions and corporate departments in their sustainability efforts.





- We work to persuade our business associates to adopt our standards for quality, health, safety and environmental protection. We insist that all subcontractors working at WACKER locations adhere to our regulations.
- Safety is a top priority at all our sites. We continually enhance workplace and plant safety, as well as health protection. We take proactive measures to eliminate potential risks and maintain an effective emergency response system.
- We create and promote a climate of mutual trust through ongoing open dialog with our employees, customers and suppliers, as well as with our neighbors, the authorities and the general public.
- We observe legal regulations. The relevant procedures to be followed and the way we set and implement our own supplementary standards are described in our Integrated Management System for quality, health, safety and environmental protection. This system is based on standards with worldwide validity and takes customer needs fully into account.
- Basic and advanced training is an important tool for fostering our employees' awareness of the importance of observing WACKER's business principles.

Our commitments and business principles are an expression of what we value. Our corporate vision is to:

- Be a preferred partner to our customers,
- Create a pleasant working environment for our employees, and
- Meet our responsibilities to society.

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### Voluntary Commitments

#### Responsible Care®

The Responsible Care® initiative was launched in 1985 by the chemical industry in Canada. Its aim was to secure continuous improvements to health, safety and environmental performance on a voluntary basis – independent of legal requirements. As time passed, more and more chemical companies and associations from around the world joined the initiative. Since its 1991 launch in Germany, some 800 companies have signed up nationwide. At WACKER, we committed ourselves right from the start.

We attach equal importance to economic and social goals. This explains our strong focus on environmental protection, plant process safety (for both employees and neighbors), work safety, and product safety (for customers and end users).

In 2006, the ICCA (International Council of Chemical Associations) launched its new Responsible Care® Global Charter at a UN-led international chemicals conference in Dubai. WACKER was one of the first companies in Germany to sign this revised voluntary commitment. The charter expands upon the Responsible Care® principles initially formulated in the mid-1980s. It takes account of the new challenges facing both the chemical sector and



Our commitment to the Responsible Care® initiative extends to China. Dr. Peter von Zumbusch, managing director of WACKER Greater China, signed the declaration of membership in May 2008.

the global community – e.g. the widespread call for sustainable economic development, the safety aspects of using chemicals, and the need for greater industry transparency.

In May 2008, our WACKER Greater China subsidiary officially joined China's Responsible Care® program. Along with other international chemical companies active in China (members of the Association of International Chemical Manufacturers), we agreed to continuously improve our safety, health and environmental performance and to engage in open dialog with the general public.

### Global Compact

The Global Compact was the idea of former UN Secretary-General Kofi Annan. It is a world-wide contract between private industry, institutions and other groups in society. Participating members join forces around the world to master the challenges of globalization. They commit themselves to promoting human rights, labor standards, environmental protection and anti-corruption measures. Since its launch in 2000, the Global Compact has become the world's largest initiative for sustainable development – with over 4,700 companies involved and participants from over 130 countries.

In April 2006, WACKER's Executive Board sent a letter to the UN Secretary-General confirming that we would join the Global Compact. Member companies commit themselves to implementing the Global Compact's ten principles, which are derived from the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, and the Rio Declaration on Environment and Development.

### Human Rights

- › Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights within their sphere of influence, and
- › Principle 2: make sure they are not complicit in human rights abuses.

### Labor Standards

- › Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining,
- › Principle 4: the elimination of all forms of forced and compulsory labor,
- › Principle 5: the effective abolition of child labor, and
- › Principle 6: the elimination of discrimination in respect of employment and occupation.

### Environmental Protection

- › Principle 7: Businesses should support a precautionary approach to environmental challenges,
- › Principle 8: undertake initiatives to promote greater environmental responsibility, and
- › Principle 9: encourage the development and diffusion of environmentally friendly technologies.

### Anti-Corruption

- › Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.



[www.responsible-care.de](http://www.responsible-care.de)  
[www.responsiblecare.org](http://www.responsiblecare.org)



VCI Responsible Care® guidelines;  
 WACKER Greater China's signed  
 declaration of membership:  
 Responsible Care® Beijing Manifesto



[www.unglobalcompact.org](http://www.unglobalcompact.org)



Wacker Chemie AG's progress  
 report for 2009

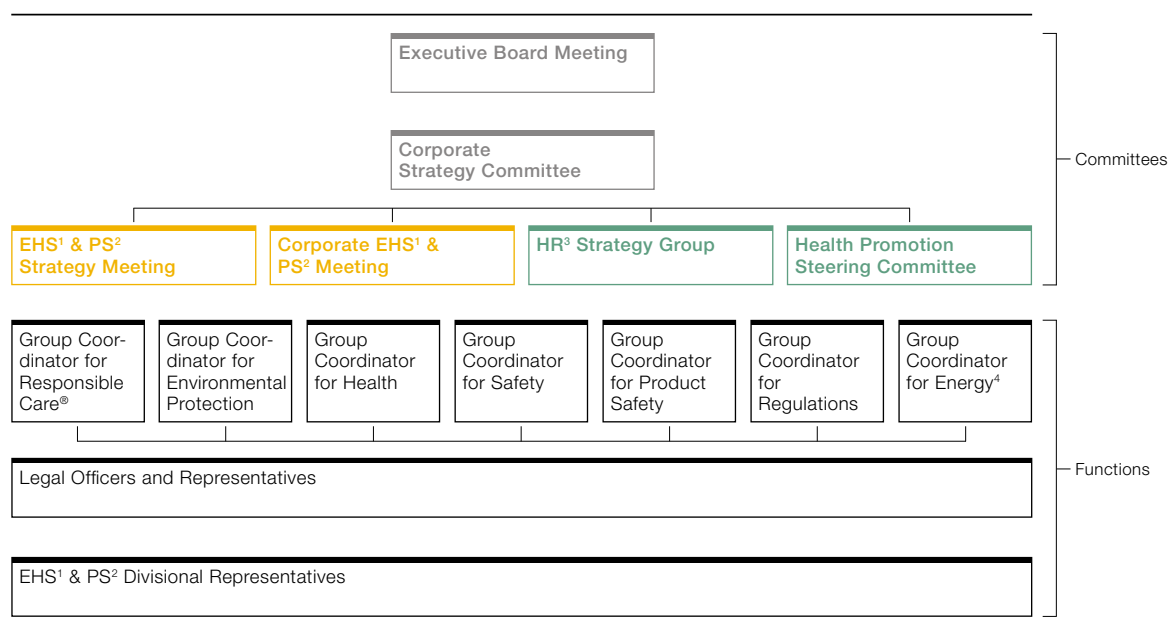
Every WACKER employee undertakes to observe societal and ethical standards, respect the law and assume responsibility for the environment as stated in our Code of Conduct. These commitments have always been fundamental to WACKER's entrepreneurial approach.

## Organization

### Management Structures for Sustainability

Wacker Chemie AG's four-member Executive Board oversees the Group's strategies, resources, infrastructure and organizational structure. President and CEO Dr. Rudolf Staudigl heads the Board. The other members are Dr. Joachim Rauhut, Dr. Wilhelm Sittenthaler and Auguste Willems. An Executive Board Meeting is WACKER's highest decision-making authority. Below the Executive Board, there are various committees whose membership spans several organizational sectors and legal entities. These committees ensure that corporate strategies are implemented groupwide.

#### Coordinating Sustainability at WACKER



<sup>1</sup> Environment, Health, Safety. <sup>2</sup> Product Safety. <sup>3</sup> Human Resources. <sup>4</sup> Domestic Group only.

The Corporate Strategy Committee (KUS), for example, deliberates on strategically important processes, potential market or competitor developments, and key special topics not directly related to daily operations. The committee comprises the entire Executive Board, business-division presidents and corporate-department heads.

The main committees for environment, health, safety and product safety are the EHS & PS Strategy Meeting (convenes annually) and the Corporate EHS & PS Meeting, each led by the Executive Board member responsible for Site Management. Personnel policies are dealt with monthly by the HR Strategy Group while employee health is addressed once a year by the Health Promotion Steering Committee – both are chaired by WACKER's personnel director.

### Personnel Responsibility

In 2008, we appointed a Group coordinator for Responsible Care® to intensify our focus on sustainability. The coordinator not only supports and advises our business divisions and corporate departments in their sustainability efforts, but also helps to ensure that our supply-chain partners comply with recognized health and safety standards and adopt a responsible environmental approach.

We also reorganized our EHS & PS structure in 2008. Now, WACKER's coordinators for environment, health, safety and product safety define our standards in safety-related goals and processes. These standards are to be followed by every corporate sector and site worldwide. Group coordinators report directly to the Executive Board member in charge of Site Management. Alongside Group coordinators, WACKER has legally mandated officers who are in charge of such areas as hazardous substances or disabled staff.

### Management Systems

At WACKER, we control our operational processes with the help of an integrated management system. The IMS regulates workflows and responsibilities, taking equal account of productivity, quality, environment, health and safety. It is based on legal provisions as well as national and international standards. WACKER's voluntary commitments regarding the Responsible Care® and Global Compact initiatives exceed legislative requirements. Certified management systems form the backbone of WACKER's IMS. These fulfill the requirements defined by the ISO 9001 (quality) and 14001 (environmental protection) standards, and partly fulfill the requirements set out by OHRIS/OHSAS (plant and work safety), ISO/TS 16949 (quality) and HACCP (food hygiene).



Certificates

In 2007, Siltronic's Japanese subsidiary certified its safety management system according to OHSAS 18001 and recertified its environmental management system to ISO 14001. That means that all Siltronic AG sites have been certified to both these internationally recognized standards. During the reporting period, WACKER Greater China developed and certified an IMS that complies with ISO 9001 and 14001 for the following divisions operating in the region: WACKER SILICONES, WACKER POLYMERS, WACKER POLYSILICON and WACKER FINE CHEMICALS. The Wuxi facility in China attained additional certification of HACCP (food hygiene) compliance.

To document its management-related processes, WACKER introduced customized software ("N5") in 2007. As a result, we could convert our different documentation systems for our business divisions and corporate departments into a single process map. Building on this, WACKER now aims to certify its quality and environmental management systems groupwide.

### Controlling Instruments

About half the approximately 360 WACKER IMS regulations govern processes for plant, work-place and product safety, environmental protection, and occupational health and safety.

All our processes are designed to give customers complete satisfaction, fulfill our social responsibilities, and ensure WACKER's competitiveness via sustainable and efficient business practices. The way in which these goals are achieved can vary from site to site. At Siltronic's Portland site (Oregon, USA), for example, a very effective *Quality and Value Improvement System* uses a wide range of control mechanisms – such as balanced scorecards, and special instruments for developing, prioritizing and tracking action plans. So that employees can view action plans and success rates at any time, the site makes this information available both in a database and on a bulletin board.

### **Wacker Operating System**

To remain globally competitive, companies must not only market new and better products, but also minimize their process costs. In 2004, WACKER launched a groupwide program – the Wacker Operating System (WOS) – to improve productivity across our entire supply chain, from raw-materials procurement, through production and maintenance, to packaging, storage and shipment.

This program's first stage – from 2005 through 2007 – focused on specific operating costs. WACKER managed to cut them by as much as 20% during this period. In fact, the productivity gain was even higher when adjusted for negative factors (e.g. the strong increase in energy and raw-material prices over those three years). Since 2008, the Wacker Operating System has included the costs of raw materials, packaging and freight in its productivity analyses. WOS results are regularly reported to the Executive Board.

As part of WOS, an energy-efficiency project was launched in 2007. Called POWER PLUS, it aimed to lower specific energy consumption by 10% (compared to the 2006 level) by the end of 2009 at both Burghausen and Nünchritz (Germany). In 2007, these two sites accounted for over three quarters of WACKER's energy consumption.

The systematic search for potential savings involves first determining a facility's energy relevance, also taking into account secondary energy sources (e.g. compressed air, refrigerants, industrial gases and cooling water). The next step, using questionnaires and checklists, is to draw up a detailed analysis of the plant's energy flows. WACKER specialists rate the improvement measures they identify according to technical aspects. In the economic evaluation, they consider the entire site – including measures that, though economically disadvantageous for individual operations, are beneficial for the site as a whole. Idea Management runs campaigns in support of the POWER PLUS project.



#### **Improved Production Process Reduces Chlorine Losses**

WACKER is a leading producer of pyrogenic silica (HDK®), used as a thickener, filler or flow enhancer. Hydrogen chloride, a by-product of HDK® production, is recycled within the plant and used by other on-site facilities as a feedstock. Another of the by-products is chlorine. Our productivity program, known as the Wacker Operating System (WOS), enabled us to reduce chlorine losses by 33% between 2003 and 2008. As a result, the environment benefited from much lower chloride levels in the wastewater.

### Idea Management

Companies profit from their employees' ideas and improvement suggestions, especially in highly competitive markets. Our Idea Management program reported a record number of suggestions and calculable benefits in 2008 – its 80th anniversary year. In all, 5,808 suggestions were submitted, up over 30% (2007: 4,440). Total benefits in 2008 amounted to €14.7 million (2007: €8.5m).

#### Idea Management

		2008	2007	2006
Number of improvement suggestions		5,808	4,440	3,816
Total benefits	€ million	14.7	8.5	3.8
Participation rate <sup>1</sup>	%	28	24	24

<sup>1</sup> Submitters per 100 employees.

This rapid uptrend not only stemmed from a motivation campaign, but also from two key changes introduced in 2007 – first, WACKER made it easier for employees to submit suggestions over the intranet and, second, we started examining ideas to see whether they could be applied to other areas (multiple usage).

2008's participation rate of 28% (submitters per 100 employees) still leaves room for improvement (2007: 24%). To maximize the benefits from ideas, WACKER has interlinked the Employee Suggestion Scheme, the Wacker Operating System (WOS) and Innovation Management.

### Anti-Corruption/Anti-Trust Laws

The social, ethical and business principles embraced at WACKER are summarized in our Code of Conduct. All WACKER employees worldwide are obligated to behave accordingly. There are separate and/or supplemental guidelines for individual Group companies (e.g. Siltronic AG's Code of Ethics) and corporate sites (e.g. WACKER Greater China's Employee Handbook). Group companies in the USA have their own compliance programs tailored specifically to US law.



WACKER Code of Conduct,  
Siltronic Code of Ethics

At WACKER, we do not tolerate violations of our Code of Conduct or of any pertinent legislation. Any employee who has questions about appropriate behavior at work can receive counsel and assistance from supervisors, specialist units (e.g. legal department) and employee representatives. Compliance officers are available as trusted third parties in Europe, Asia and the USA.

Our compliance program is designed to prevent misconduct, minimize the repercussions of misconduct, and – in accordance with the UN's Global Compact – identify any cases of corruption or other legal infringements. To promote compliance, we use diverse organizational methods, such as the separation of responsibility and our dual-control policy. In the first case, we ensure that payment-triggering processes, for example, are not in one person's hands (the purchasing unit is quite distinct from the ordering unit). In the latter case, dual control ensures that every critical transaction is checked by a second person.

Corporate Auditing inspects units for risk exposure. Its auditors look most frequently at those processes and areas with a high exposure to corruption or to legal noncompliance (including anti-trust and tax infringements). In the case of capital-intensive engineering activities (e.g. project engineering and maintenance), WACKER employs specially trained industrial forepersons as auditors.



For several years, European-based employees with direct customer/competitor contact have received online training about European anti-trust law. WACKER's anti-trust program is compulsory for employees in Marketing and Sales. Employees in the USA receive anti-trust training that has been tailored to the market there. In addition to online training (which participants must regularly complete), employees have the opportunity to attend courses on the subject during divisional and regional meetings and international sales conferences. Since 2009, we have been applying our anti-trust training program worldwide.

WACKER's corporate culture is characterized by mutual respect and trust. However, inappropriate behavior on the part of individual employees can never be completely eliminated. In these cases, we rely on our internal risk assessments. The disclosure of road-salt price-fixing agreements between 1998 and 2007 shows that our control mechanisms work. WACKER voluntarily reported the incident, cooperated with the authorities and, as the principal witness, remained immune from anti-trust penalties.

### **Customer and Supplier Management**

At WACKER, our goal is to provide products and services that create advantages for our customers, whose satisfaction determines our economic success. To steadily enhance their satisfaction, we are in constant dialog with them, as well as with our suppliers and logistics providers.

We manage customer relations with the help of our customer information and control system (KISS), which supports Sales, for example, with correspondence and with complaints evaluation/processing. Every complaint is entered into KISS and systematically tracked until our final reply has been sent to the customer. Initially, the customer should receive word from us within 48 hours.

WACKER holds regular customer surveys to gain feedback about product and service quality. In 2007, we surveyed chemical-segment customers. Around three-quarters of the 1,800 customers and distributors involved were either satisfied or completely satisfied with our products and services. In our customers' eyes, WACKER employees provide a strong competitive advantage due to their outstanding expertise and highly collaborative approach. The customer-survey data were analyzed all the way down to individual business teams and regions – resulting in concrete improvement measures. Our WACKER POLYSILICON and Siltronic divisions conduct customer surveys every year. For many years now, these surveys have also confirmed that WACKER has an excellent reputation among customers.



At WACKER, we regularly ask our customers for feedback about product and service quality. For many years now, these surveys have confirmed that the company has an excellent reputation among customers.

We also maintain close partnerships with suppliers and logistics providers. First, we use our complaints management system to improve processes at short notice. Second, we include our key suppliers' performance levels in an annual evaluation. Third, we conduct audits as part of supplier management. We are also careful that our suppliers are certified to ISO 9001 (quality) and ISO 14001 (environmental protection), and are committed to the Responsible Care® initiative.

In 2007, we began to review new suppliers in China according to a comprehensive catalog of criteria and, in 2008, Siltronic set up a supplier risk management system to sustainably secure supplies and services. Suppliers are assessed according to such criteria as quality, delivery reliability and solvency, and then classified by risk. If the risk to criteria fulfillment is acute, countermeasures are promptly taken.

In 2008, we informed all our suppliers that they should comply with, and uphold, the Global Compact principles. We perform random supplier audits to ensure compliance and have included these principles in our general terms of procurement. Our annual events for suppliers and shippers provide an important communication platform, where we honor our best suppliers and shippers.

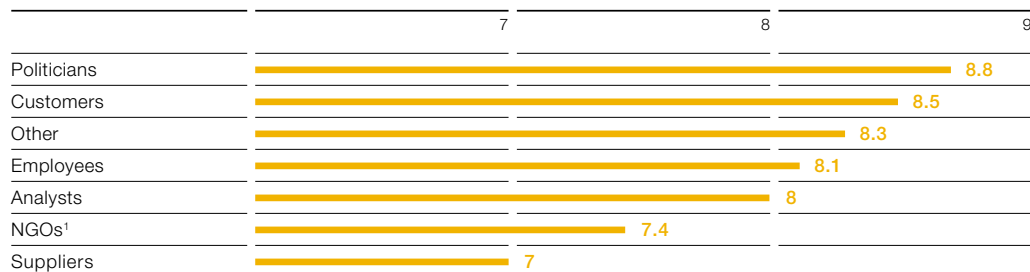
#### **Dialog with Stakeholders**

Companies do not operate in an isolated vacuum. Since entrepreneurial action needs widespread consent and support, regular and open dialog with all stakeholders is one of our business principles. We believe that dialog offers us a major opportunity to prepare for new challenges promptly, avoid risks and realize our full potential.

WACKER is in constant communication with a wide range of stakeholder groups throughout the world: employees, customers, suppliers, analysts, investors, journalists, scientists, neighbors, politicians, and representatives from various associations, public authorities and non-governmental organizations. We conduct this dialog through many outreach activities – by WACKER's top executives, managers, sites and departments. The focus is always on face-to-face discussions, i.e. on direct contact. What's more, we communicate with stakeholders through publications (annual report, press releases, employee newspaper, etc.), special events (open-house days, supplier days, investor roadshows, etc.), tradeshow, committee work and lectures.

In 2008, we asked stakeholders for their opinions about WACKER's sustainability efforts. Using phone and face-to-face interviews, a consultancy surveyed around 30 representatives of stakeholder groups, asking how they judged our sustainability performance and where they saw room for improvement. The survey evaluation gave WACKER a very high sustainability rating both on the part of our employees and external stakeholders. Furthermore, our reputation is especially strong among customers and the political community.

### Wacker Chemie AG's Sustainability Performance



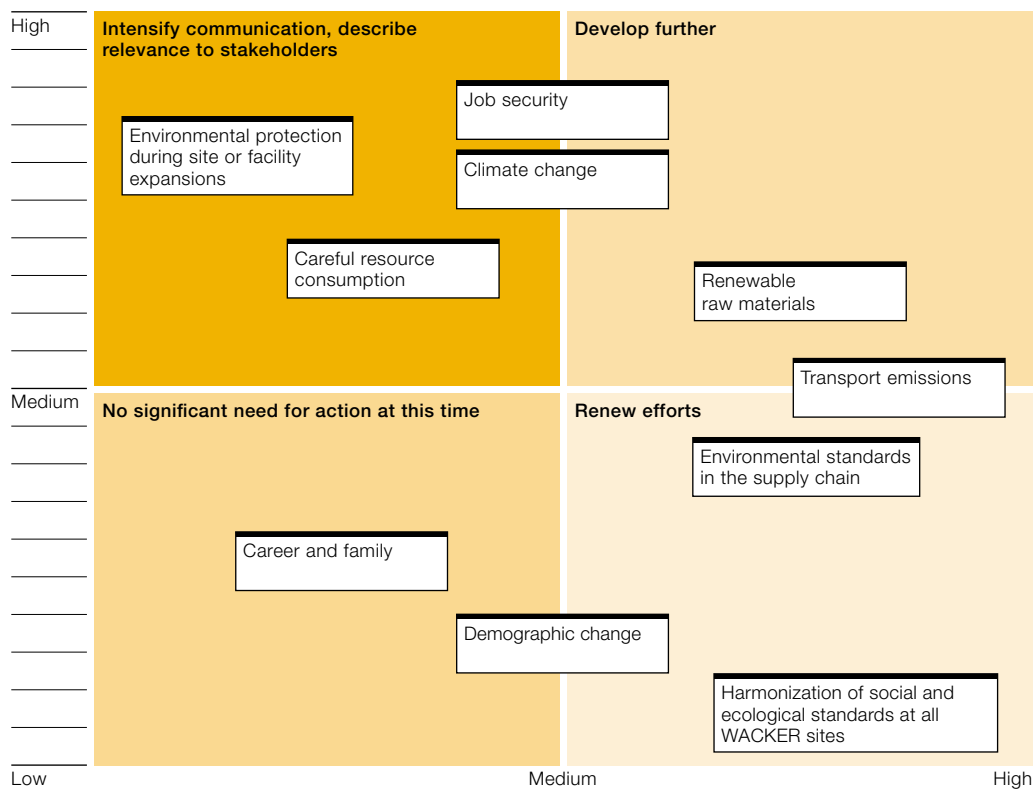
Average rating: 8.15 on a scale of 1 (poor) to 10 (excellent).

<sup>1</sup> Non-governmental organizations.

Our stakeholder groups gave WACKER a “good to excellent” rating for the following areas: job security, climate change, environmental protection during site/facility expansions, careful resource consumption, and renewable raw materials. They pinpointed the following as tomorrow’s challenges: demographic change, environmental standards in the supply chain, and the harmonization of social and ecological standards at all corporate locations. WACKER intends to continue improving stakeholder communications and to gain a more systematic focus through structured surveys.

### Action Matrix

WACKER Commitment  
Rated by Stakeholders



Importance of Each Sphere of Activity for Stakeholders

### Awards and Prizes

WACKER has offered customers top-quality products and services for many years. Customer satisfaction is the cornerstone of our success and is reflected in the customer awards we have received.

#### Quality Awards 2008

Award	Recipient	Sponsor
Supplier Excellence Award 2007	Siltronic AG	Analog Devices
Supplier of the Year Award 2007	Siltronic Corp.	Fairchild Semiconductor
Supplier Award 2007	Siltronic Japan Corp.	Fujitsu
Best Innovation Award	WACKER SILICONES	Hindustan Unilever
Supplier Excellence Award 2007	Siltronic Corp.	Lam Research
Jean-Pierre Noblanc Award for Excellence	Siltronic AG	Medea plus Aixtrons
Best Material Supplier	Siltronic AG	Renesas
World Class Supplier 2007 Spotlight Award	Siltronic Corp.	Spansion
Supplier Excellence Award 2007	Siltronic AG	Texas Instruments
Annual QCDS 1st Place Wafer Supplier Award	Siltronic Corp.	TSMC WaferTech
Supplier Outstanding Award	Siltronic AG	UMC

#### Quality Awards 2007

Award	Recipient	Sponsor
Supplier Excellence Award 2006	Siltronic Corp.	Analog Devices
Quality Supplier of the Year	WACKER POLYMERS	Carestream Health
Supplier Recognition 2006	Siltronic Corp.	Fairchild Semiconductor
Metrology Award	Siltronic Corp.	Intel
Supplier of the Year Award 2006	WACKER SILICONES	Kimberly-Clark
Supplier Performance Award 2006/2007	WACKER POLYMERS	Saint-Gobain Weber
SAP Industry Leadership Award	Corporate IT dept.	SAP
Partner in Quality	WACKER SILICONES	SC Johnson
World Class Supplier 2006 Spotlight Award	Siltronic Corp.	Spansion

#### Texas Instruments: Siltronic Is an Excellent Supplier

Texas Instruments conferred its *Supplier Excellence Award 2007* on our Siltronic division. The high-tech US company uses this accolade to acknowledge the crucial role its best suppliers play in its own success. Selection criteria included cost efficiency, environmental protection, technology, response times, reliability of supply, and quality. Texas Instruments bestows this award on just 15 of its over 14,000 suppliers. This is Siltronic's third time in the winner's circle, having been presented with the *Supplier Excellence Award* in 1992 and 1994.





# Environmental Protection

...// Climate activist

Wolfgang Semmler  
Head of Environment & Safety  
Nünchritz

A photograph of two men in blue industrial work suits and yellow hard hats standing on a metal walkway with blue railings at a chemical plant. Large white pipes and industrial structures are visible in the background. The number '03' is overlaid in large yellow font at the bottom left.

# 03

Environmental protection, just like safety and health protection, is a core component of all processes at WACKER. The focus is not so much on remedial measures but on prevention – evaluation begins as early as the product-development and plant-planning stages. In accordance with the core ideas of the Responsible Care® initiative, our environmental-protection measures often go beyond what is legally required. We continuously work on conserving resources and further decoupling energy consumption and waste generation from production volume.

#### Environmental Protection Costs

€ million	2008	2007	2006
Operating costs	111	103	97
Investments	27	24	19

Our sites regularly inform the public about our environmental protection activities. This includes, for example, the annual community meetings at our Nünchritz site and the Burghausen site's yearly environmental reports.



Burghausen's  
environmental reports  
for 2007 and 2008  
(only in German)

#### Environmental Protection in Production

##### Environmental Performance Assessment

In 2004, WACKER developed a system to simplify the assessment of our sites' environmental performance. A site's total emissions are converted into environmental units, which take both the absolute emissions and so-called weighting factors into consideration. The weighting factors take account of four criteria: environmental impact, safety of treatment/disposal, public acceptance, and requirements imposed by environmental legislation and corporate policy. Carbon dioxide (CO<sub>2</sub>) emissions, for example, have a high weighting due to both their public significance and international climate-protection agreements.

Our German sites in Burghausen, Nünchritz and Freiberg, together with our Portland site (Oregon, USA), account for 96% of WACKER's environmental units. Despite increased production volumes, we were able to keep our environmental units stable throughout the period under review.

## 03

Environmental protection is a core component of all processes at WACKER. To protect the climate and conserve resources, environmental experts like Wolfgang Semmler strive to close material loops and find uses for process heat.



**Environmental Units**

	2008	2007	2006
Environmental units	70,666	70,482	68,220
Gross production volume in metric tons	7,639,000	6,876,000	6,930,000
Environmental units per 1,000 metric tons of gross production	9.25	10.25	9.84

**Integrated Production**

WACKER's integrated production system, primarily based on silicon and ethylene as starting materials, is one of our greatest strengths. In our integrated processes, we optimize the number of materials used, and combine, process and recycle them. Normally, by-products are immediately processed further and used in other production areas. Take, for example, our integrated silicon production system. Although it comprises just four starting materials – silicon, methanol, hydrogen and salt (sodium chloride) – it enables us to manufacture over 3,000 silicone products, as well as pyrogenic silica and polysilicon. And in our integrated ethylene production system, we use ethylene to generate organic intermediates, which we then turn into polymer dispersions and dispersible polymer powders.

A focal point of our integrated production is to minimize hydrogen chloride consumption. Hydrogen chloride is an essential auxiliary in the manufacture of chlorine-containing intermediates. Its production requires a lot of energy and is therefore expensive. In our integrated material loop, hydrogen chloride is recovered as a by-product when the chlorine-containing intermediates are converted to chlorine-free end products (e.g. hyperpure silicon or pyrogenic silica). The hydrogen chloride is returned to the production loop and reused. This closed material loop reduces emissions and, due to lower raw-material consumption, transportation.

Zhangjiagang in China has joined Burghausen and Nünchritz as our third integrated production site. In Zhangjiagang, WACKER and Dow Corning Corporation commissioned a production facility for pyrogenic silica and siloxanes in November 2008. By the end of 2010, it is set to reach an annual capacity of 200,000 metric tons. The new plant uses state-of-the-art environmental technology and is run in accordance with strict international safety, health and environmental-protection standards.

**Energy**

The chemical industry is among the most energy-intensive sectors. In Germany alone, it uses around 20% of all the power consumed by industry. Thus, efficient use of energy plays a key role in keeping companies competitive in the world market, while contributing to climate protection.

In 2008, higher global production volumes increased WACKER's electricity consumption to 2.4 TWh (2007: 2.1 TWh; 1 TWh = 1 million MWh). Due to production increases and full consolidation of sites acquired from Air Products, heat consumption also rose to 2.8 TWh groupwide (2007: 2.5 TWh).

At WACKER's Burghausen and Nünchritz sites, steam and electricity are produced in co-generation systems – combined heat and power (CHP) plants with 80% fuel efficiency (twice as high as that of conventional oil, gas or coal-fired power plants). In Burghausen, we also use hydro power to generate electricity. Together, the two CHP plants and the hydro-power plant generated 1.4 TWh electricity in 2008. This means that, at WACKER, we produce just under 60% of our total electricity needs ourselves.



Many chemical reactions generate heat, which can be used in other production processes. In Burghausen and Nünchritz, we have been implementing integrated heat recovery systems for years and are continually improving them. In this way, we can reduce the amount of primary energy (normally natural gas) that our power plants use. This results in lower emissions of carbon dioxide, a greenhouse gas.

To manufacture one metric ton of product, our Nünchritz site now requires 60% less electricity and 80% less process steam from its CHP plant than ten years ago, when WACKER took over the site. The Nünchritz power plant has converted fully from heavy fuel oil to more climate-friendly natural gas. The following overview describes the key heat utilization measures during the reporting period:

#### **Nünchritz Site:**

- Since 2007, the incinerator's waste heat has been used to generate process steam. Savings: 11,000 tons of CO<sub>2</sub> emissions/year.
- When we expanded the methylchlorosilane distillation facility in 2007, we hooked up pairs of columns to form a heat-recovery system. Savings: 28,000 tons of CO<sub>2</sub> emissions/year.
- Thanks to a new integrated heat-recovery system in the basic silicone production process, the starting material – chloromethane – can be evaporated without the use of primary energy. Savings: 5,000 tons of CO<sub>2</sub> emissions/year.

#### **Burghausen Site:**

In 2007 and 2008, the waste heat from several high-temperature processes was made available for use in upstream production plants. This reduces the site's carbon dioxide emissions by some 120,000 tons per year – at 40%, a bigger reduction than the one achieved in 2006.

Many of the heat-utilization measures came from the POWER PLUS project. WACKER initiated this project in 2007 to increase the energy efficiency of our plants. The aim is to reduce the specific (referenced to production output) energy consumption at Burghausen and Nünchritz by 10% by the end of 2009 (based on 2006). The two sites consume around 80% of the energy needed groupwide. The project receives input from Idea Management's Employee Suggestion Scheme.

By the end of 2008, WACKER energy experts had inspected a total of 36 plants. 150 measures were drawn up and are being implemented stepwise. Once all the measures are in place, the Burghausen site will be saving some 178,600 MWh of electricity (a 14.3% saving) and 525,000 tons of steam (a 22.8% saving) per year. For Nünchritz, the potential savings through POWER PLUS measures add up to 18,100 MWh of electricity (a 18% saving) and 325,000 tons of steam (a 50% saving) per year.

We are also working on boosting energy efficiency at our sites outside Germany. Siltronic's Portland site (Oregon, USA) equipped its cooling-water supply with higher-performance cooling pump units and a heat-recovery system. As a result, power consumption was cut by 3 million KWh and natural gas demand by around 15% per year.



## Energy

	2008	2007	2006
TWh			
Electricity consumption	2.4	2.1	1.9
Heat consumption	2.8	2.5	2.5
<b>Primary energy<sup>1</sup></b>			
Natural gas	5.4		
Heat (supplied by third parties) <sup>2</sup>	0.2		
Fuel oil	0.01		

<sup>1</sup> WACKER has been reporting detailed primary energy figures since 2008.

<sup>2</sup> Steam, district heating.

## Air

In 2008, the second European emissions trading period began. WACKER participates in trading with its Burghausen and Nünchritz CHP plants. The two plants account for 82% of the Group's total carbon dioxide emissions. The necessary emissions certificates were allotted to us free of charge for the 2008 – 2012 period.

In 2008, WACKER emitted some 976,000 metric tons of CO<sub>2</sub> groupwide – 6% more than in 2007. This is due to higher, production-related energy demand.

## Emissions to Air

t	2008	2007	2006
CO <sub>2</sub> carbon dioxide	976,041	922,978	941,572
<b>Air Pollutants</b>			
NO <sub>x</sub> nitrogen oxides	997	846	804
NMVOC non-methane volatile organic compounds	501	687	560
CH <sub>4</sub> methane	19	20	10
N <sub>2</sub> O nitrous oxide <sup>1</sup>	23	–	–
CO carbon monoxide	121	119	165
SF <sub>6</sub> sulfur hexafluoride	–	–	–
HFC hydrofluorocarbons	4	9	1
PFC perfluorocarbons	–	–	–
Dust	42	37	39
Particulate matter	23	27	23

<sup>1</sup> Nitrous oxide emissions from the company's own power plants were first included in 2008, as per the European Pollutant Release and Transfer Register (E-PRTR).

Carbon dioxide accounts for 98.7% of WACKER's greenhouse-gas emissions (expressed as CO<sub>2</sub> equivalents). The remaining 1.3% comprises nitrous oxide, fluorocarbons and other greenhouse gases. In 2008, WACKER emitted some 989,000 tons of greenhouse gases groupwide (2007: 936,000 tons).

**Greenhouse-Gas Emissions**

t CO <sub>2</sub> e <sup>1</sup>	2008	2007	2006
CO <sub>2</sub> carbon dioxide	975,931	922,978	941,572
N <sub>2</sub> O nitrous oxide	6,970	32	37
CH <sub>4</sub> methane	487	427	200
HFC hydrofluorocarbons	5,165	12,098	1,050
PFC perfluorocarbons	577	–	–
SF <sub>6</sub> sulfur hexafluoride	18	–	–

<sup>1</sup> t CO<sub>2</sub>e = metric tons of CO<sub>2</sub> equivalents, as per Greenhouse Gas Protocol Scope 1 (direct emissions excluding indirect emissions from consumption of purchased energy).

Climate protection is not only influenced by production, but also by the traffic load caused by employees. We encourage our employees to leave their cars at home. At our largest site, Burghausen, we provide commuter buses for shift workers. Siltronic's Portland site (Oregon, USA) uses diverse measures to encourage its employees to be environmentally conscious in their travel behavior, e.g. subsidized tickets for local public transport.

During the reporting period, we replaced all the cars in our vehicle pools at our German sites with the fuel-efficient Passat TDI Bluemotion. For commercial vehicles such as fork-lift trucks, we are testing alternative fuels (e.g. natural gas and electric drives).

**Water**

Water is an extremely precious resource – not only as drinking water, but also as a raw material, solvent and coolant in many technical and chemical processes. At WACKER, we use water sparingly and always purify our wastewater as effectively as possible.

During the period under review, the Burghausen site's demand for cooling water increased due to production expansions. The water treatment plant had to be updated. Through technical improvements and by using the cooling water twice, an additional 4,750 m<sup>3</sup> of cooling water could be saved per hour. It was thus unnecessary to further expand the water-treatment plant. At our US site in Calvert City (Kentucky), we improved our production process – increasing product yields, conserving raw materials and reducing sludge volumes to a quarter.

The Nünchritz site developed an additional procedure for wastewater treatment via ozonation. The site is now better equipped to deal with substances that are poorly biodegradable. Thus, despite increased production, the wastewater load – measured as chemical oxygen demand (COD) – could be kept low.

The integration of sites acquired from Air Products resulted in significantly increased COD values across the Group in 2008.

**Water Consumption/Emissions to Water**

		2008	2007	2006
Water consumption	m <sup>3</sup>	241,286,375	244,173,260	228,283,219
Cooling water volume	m <sup>3</sup>	252,310,068	225,391,086	208,111,808
Wastewater volume <sup>1</sup>	m <sup>3</sup>	22,074,455	20,875,385	20,878,196
COD (chemical oxygen demand)	t	4,782	2,162	1,993
AOX (adsorbable organic halides)	t	7	6	5
Heavy metals	t	2	2	2
Nitrogen	t	461	484	475
Phosphorus	t	9	10	12

<sup>1</sup> Excluding cooling water.

**Soil and Groundwater**

Like many other longstanding chemical companies, WACKER has some soil contamination on its premises. In the pioneering days of chemical production, nobody was aware of the dangers posed by certain chemicals or that some substances could persist in the ground for extended periods without undergoing degradation.

To remediate this legacy contamination, WACKER has been extracting air from the Burghausen site's soil since 1989. This predominantly removes highly volatile halogenated hydrocarbons from the soil, which are then incinerated to render them harmless. To date, 1,873 metric tons of chlorinated hydrocarbons (CHCs) have been removed in this way. As soil treatment progresses, the amount of contaminant removed decreases, as is to be expected. In 2008, only 35 tons were removed, despite the continuous increase in the efficiency of the systems involved.

Since 2003, a groundwater stripping plant has been treating an area of localized groundwater contamination east of the Burghausen site. By the end of 2008, 20 tons of CHCs had been removed. Pollutant concentrations have been reduced to one-fifth of their original levels. In order to reduce the discharge of hexachlorobutadiene (HCBd) into the tailrace, we are continuing groundwater treatment at the site's contaminated areas. The already very low HCBd concentrations are falling further. Currently, 59 kg of the pollutant is being removed per year.

At Portland (Oregon, USA), Siltronic has developed a method of biodegrading trichloroethylene residues in groundwater by means of microorganisms. The site's environmental protection experts are currently working on scaling-up the process.



The Elbe river and our Nünchritz site (Saxony). Water is an extremely precious resource. We use it sparingly and purify our wastewater as effectively as possible.

Waste

In integrated production, we minimize waste by feeding by-products back into the production loop. Furthermore, WACKER endeavors to avoid waste throughout the product's entire life cycle.

In 2008, WACKER developed a method for recycling pyrogenic silica at its Nünchritz site. Previously, the silica accumulated as dust at the residue incinerator and was landfilled. Thanks to the new method, some 1,000 metric tons can be recycled annually and used as a building material additive.

Siltronic promotes fully reusable packaging. Today, some 20% of Burghausen's and Singapore's 300 mm wafers are shipped in reusable containers. This is to increase to 30% by the end of 2010. Silicon wafers of other sizes still have to be shipped in disposable packaging. Here, we have replaced the protective inner packaging layer of foamed plastic with cardboard.

WACKER is also reducing our packaging material by converting from smaller to larger containers. Short distances to service providers and avoidance of empty space in the containers help to minimize waste. We are also implementing similar programs at sites in Japan and the USA.

The integration of sites acquired from Air Products resulted in a significant groupwide increase in waste in 2008.

Waste			
t	2008	2007	2006
Disposed of	87,293	43,100	42,250
Recycled	74,327	74,676	73,774
Hazardous	108,458	70,027	75,263
Non-hazardous	53,161	47,538	41,049

Environmental Award for Cysteine Production Process

WACKER was awarded the Federation of German Industries (BDI) 2008 Environmental Prize for its biotech process for the production of cysteine. The amino acid is used, for example, as an expectorant, in the manufacture of flavorings, and in the baked goods industry. Previously, it was mainly produced via extraction from hair, feathers and pig bristles using concentrated hydrochloric acid. WACKER researchers developed a process in which bacteria produce the amino acid. This results in 96% less acid being used. And even the production waste can be recycled in an ecological way: the culture medium and wash liquids can serve as fertilizers. Dr. Gerhard Schmid (president of WACKER FINE CHEMICALS) and Dr. Christoph Winterhalter (director of the Ingredients business team, left) holding the award.



**Environmental Awards 2008**

Award	Recipient	Sponsor
BDI Environmental Prize 2008	WACKER FINE CHEMICALS	Federation of German Industries (BDI)
Wildlife at Work <sup>SM</sup> Certificate	Wacker Chemical Corp.	The Wildlife Habitat Council
Gold Award, Environment, Health & Safety	WACKER POLYMERS, Ulsan	Korean Ministry of Labor
Michigan Business Pollution Prevention Partnership Award	Wacker Chemical Corp.	Michigan Business Pollution Prevention Partnership
Hynix Green Program Certificate	Siltronic AG	Hynix
Excellence Award 2007	Siltronic Corp.	Portland Environmental Services

**Environmental Awards 2007**

Award	Recipient	Sponsor
Certificate of Green Partner	Siltronic Corp. Japan	Sony
National Environmental Performance Track Large Company Award 2007	Siltronic Corp.	US Environmental Protection Agency
Sustainability Focus Award	Siltronic Corp.	Oregon Economic & Community Development Department
Sustainability Reporting, Ranking 2007, 6th place	Wacker Chemie AG	<i>future e.V.</i> (trade association) and the IÖW (the German Institute for Ecological Economy Research)
Pollution Control Award	Siltronic Corp.	City of Portland, Oregon
Facility of the Year Award	Siltronic Corp.	Portland Environmental Services
Facility of the Year	Siltronic Corp.	Environmental Protection Magazine

**Nature Conservation and Biodiversity**

During site expansions, WACKER investigates the effects on nature and biodiversity and, in consultation with the authorities, takes compensatory measures. An example is the 2007/2008 polysilicon production expansion phase in Burghausen. Through afforestation, we are fully compensating for the wooded area that was used. Supplementary payments to the Bavarian state forestry department help improve the region's forest structure. Furthermore, in a wooded part of Burghausen, certain trees were identified as habitats for bats and woodpeckers and have been placed under protection.

The Burghausen site's premises border a European *Natura 2000* nature reserve area along the Salzach river. To check whether the operation of our facilities has any effects on this reserve, we commissioned an external expert and monitored the immissions with a voluntary immissions registry. All results to date have shown that the WACKER site does not adversely affect the reserve.

A group of employees at our Adrian site (Michigan, USA) has set up nesting boxes for various species of bird and maintains a nature trail. The site premises also host wildflower and butterfly gardens. For its dedication, the WACKER team was once again awarded the *Wildlife at Work* certificate by the US Wildlife Habitat Council in 2008.

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### Logistics and Transport

Just as WACKER has grown significantly over recent years, so have our production operations, e.g. at our largest site in Burghausen. Good logistics connections for the site are necessary, not least to keep the impact on the general public as low as possible.

Even today, we transport most of the freight containers leaving WACKER's German sites to ports in the north via rail. In Burghausen, we transport almost 100% of such container shipments by rail. Over 10,000 freight containers a year no longer travel to ports by road. Over shorter distances, however, truck transport is still more cost-effective and thus indispensable. WACKER supports the planning of a new public handling terminal for intermodal freight transport in Burghausen. The logistics hub's aim is to transfer freight transport from road to rail where possible. The regional planning procedure was completed in 2008; the earliest date for commissioning the handling terminal is 2011.

To supply customers even faster and more reliably worldwide, we expanded Burghausen's Container and Logistics Center in 2007/2008. The expansion was rounded out when Loxxess opened a new central external warehouse near our Burghausen site. This allowed WACKER to close ten smaller storage sites in the region. Besides improving logistics processes, this measure reduces traveling distances. Traffic and related emissions were reduced.

# Product Safety and Product Stewardship

...// Purity expert

Iris Frische  
Technical assistant at  
Biologics Manufacturing  
Wacker Biotech GmbH



04

## Product Safety

### Product Information

WACKER ensures that all our products, if used correctly, pose no risk to health or the environment. We continually update our product information and constantly revise our risk assessments to take account of new findings.

Only some 40% of WACKER products require material safety data sheets by law. Nevertheless, we provide data sheets for all our products to ensure they are used safely. In total, WACKER supplies over 40,000 material safety data sheets in up to 30 languages.

In the period under review, WACKER recorded and assessed all the nanomaterials that we produce or use. Most of these materials are classified as nanostructured, i.e. materials whose internal structures are nanoscale (between 1 and 100 nanometers), but whose external dimensions are greater than the nano range. WACKER's principal nanostructured products include pyrogenic silica (HDK®) – a powder used as a thickener, filler or flow enhancer. The physicochemical properties of the HDK® product group have been examined in detail and extensive toxicological, eco-toxicological and epidemiological data exists.

In 2008, WACKER partnered with the Technical University of Dresden on developing new methods to measure workplace nanoparticle concentrations and sizes. Starting in 2009, the new analytical techniques will be used for the first time in silica production at WACKER's Nünchritz site (Germany).

### REACH and GHS

EU-wide REACH legislation took effect in June 2007. It governs the registration, evaluation, authorization and restriction of chemicals within member states. REACH imposes new requirements on manufacturers, importers and users of chemical products. On the European market, all substances used or imported in annual quantities exceeding one metric ton must be registered and classified according to their properties over the next few years. The scope of evaluation work is determined by the quantity of material in circulation and the expected risks. Potentially high-risk substances are subject to regulatory approval.

We have been preparing for REACH requirements since the EU Commission issued its white paper on chemicals policy in 2001. REACH demands more information about the properties of chemical products, which, in turn, will lead to an increase in legally stipulated animal testing. WACKER makes every effort to avoid animal testing, limiting it to those tests required by the ECHA (European Chemicals Agency). We use recognized alternative methods such as in-vitro tests, and classify substances with the same modes of action into groups for testing.

# 04

Our products are safe for people and the environment and meet stringent quality standards. Employees like Iris Frische make sure of that. She helps to purify active solutions for pharmaceuticals and takes samples for quality control.





In accordance with REACH deadlines, phase-in substances were preregistered in the second half of 2008. This chiefly included substances listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) and substances that were manufactured at least once in the 15 years before REACH came into force, but were never placed on the market. We preregistered over 7,000 substances with the ECHA and so met the deadline for completing the first step of REACH implementation.

We also submitted the first batch of registration dossiers. This key REACH task will occupy us beyond the end of the final transition period in June 2018.

Published in late 2008, the European regulation on the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) took effect at the start of 2009. With it, the EU Commission has introduced the new United Nations system of classifying and labeling chemicals to Europe.

For WACKER, this system switchover means that every product must be checked, reclassified and, where appropriate, relabeled. Within just a few years, we must reclassify tens of thousands of substances and mixtures, change all material safety data sheets and redesign hazardous substance labels to take account of new hazard symbols. Every substance in the EU must be reclassified by the end of 2010; the same goes for all mixtures by mid-2015.

GHS is the United Nations' initiative for globally harmonizing the classification and labeling of chemicals. It is up to individual countries to decide whether to adopt the system, and, if so, when and how to go about it. This initially results in considerable bureaucratic and financial outlay for the chemical industry. WACKER began to implement the criteria of Japan's GHS in 2007. To comply with New Zealand's GHS requirements, we adapted material safety data sheets for this country in 2008. South Korea originally planned to introduce GHS in mid-2008, but postponed it by several years at short notice.

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## Product Stewardship

### Research and Development

We focus our R&D on finding solutions to customer needs and responding to major social concerns such as the impending depletion of fossil fuels, climate and demographic changes, ever-scarcer raw materials, as well as environmental protection. WACKER pursues a twin-track R&D strategy – decentralized (at divisional level) and centralized for the whole Group. WACKER's business divisions concentrate their research on:

- Semiconductor technology (silicon wafers for semiconductor chips)
- Silicone chemistry (silicone products, e.g. for the construction, automotive, electrical/electronic, textiles, cosmetics and medical sectors)



The material safety data sheets – which we provide for all our products – contain information on the safe handling of WACKER products.

- › Polymer chemistry (dispersible polymer powders and polymer binders used e.g. in the construction and automotive industries)
- › Biotechnology (fine chemicals and pharmaceutical intermediates)
- › Hyperpure polycrystalline silicon (raw materials for the semiconductor and solar industries)

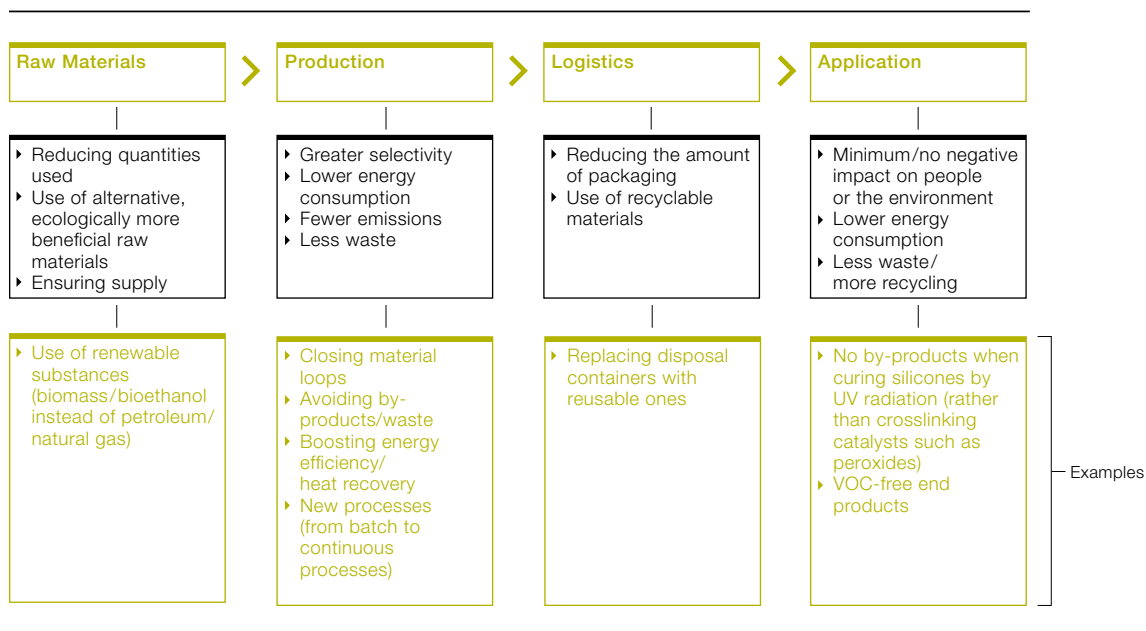
WACKER scientists are working on around 150 research projects based on 40 technology platforms – frequently in collaboration with customers, universities and scientific bodies. Our R&D activities are supported by 17 WACKER technical centers worldwide. They liaise between sales offices and local production sites. At these centers, WACKER specialists customize products to regional requirements, taking account of, for example, climate, national standards and local raw materials.

Our centralized corporate R&D facility is the “Consortium für elektrochemische Industrie.” Its over 200 employees conduct research and lab work in five areas: catalysis and processes, functional materials, polymers, organic synthesis, and biotechnology. Research projects are identified groupwide by systematic monitoring and evaluation of technical and scientific developments.

### Research along the Supply Chain

WACKER takes environmental, health and safety criteria into account at every stage of the product life cycle – starting with the raw materials. We try to minimize raw-materials consumption, while selecting materials that offer maximum ecological benefit. For instance, we make cyclodextrins from renewable substances (cornstarch). Cyclodextrins are ring-shaped sugar molecules that trap sensitive substances (such as fragrances and actives) within their cavities. The trapped substances are protected against such environmental influences as heat, air and light, and are released precisely where they are needed.

#### Sustainable Research along the Supply Chain



At WACKER, we make every effort to constantly optimize our processes – their efficiency, environmental aspects, energy consumption and costs. We improve the catalysts used in most of our processes in order to increase selectivity. As a result, we consume less energy, boost product yields and avoid by-products and waste. In 2008, WACKER received the Federation of German Industries' Environmental Prize for our eco-friendly production of cysteine (an amino acid) from sugar.

### Research into Emerging Fields

WACKER conducts research into emerging fields, such as white biotechnology, energy and photovoltaics.

White biotechnology employs microorganisms to produce raw materials, fine chemicals and active ingredients. Based on renewable substances, it is carbon neutral and often does not depend on petroleum. White biotechnology thus plays a key role in protecting the climate and conserving resources.

Biotechnology is an innovation driver in medicine and today's life sciences. Due to demographic change, these research fields are constantly gaining in importance. Biotech advances make it possible to maintain high-quality and cost-effective medical supplies. Biotech processes are vital to the production of new active ingredients. One such process is WACKER's ESETEC® secretion system, which uses a modified bacterial strain to produce pharmaceutical proteins with unprecedented purity and in previously unachievable quantities.

In collaboration with MorphoSys AG, we use ESETEC® to produce a novel class of antibody fragments as actives for therapeutic and diagnostic use. MorphoSys and WACKER continued to intensify their cooperation in 2008. The ESETEC® technique has also succeeded in producing Anticalins® – proteins that act like antibodies. These Anticalins® are being developed by Munich-based Pieris AG for use in cancer treatment.

Today, organic feedstocks are mainly derived from petroleum. Finite oil supplies and rising oil prices make it necessary to look for alternative raw materials. WACKER's Consortium für elektrochemische Industrie has started to focus on ways of producing ethylene and acetic acid economically from renewable resources (bioethanol and biomass). In this field, WACKER collaborates closely with partners at universities and research institutes. Germany's Federal Ministry of Education and Research supports such projects as part of its *BioIndustrie 2021* program. Ethylene and acetic acid are precursors of vinyl acetate. This liquid is of strategic importance for WACKER, as it is processed by our WACKER POLYMERS division to make dispersible polymer powders and polymeric binders.

Energy will gain in importance in the years to come. That is why we are working to further develop two trailblazing technologies for converting and storing energy: fuel cells and lithium-ion batteries. Future electric cars would not be possible without these two technologies.

We are strengthening our technology leadership as a producer of solar-grade polysilicon. Our aim is not only to improve our silicon deposition process, but to enhance WACKER's unique, closed production loop – which ranges from silicon metal through hyperpure solar and electronics-grade silicon, to silanes, silicones and pyrogenic silica.

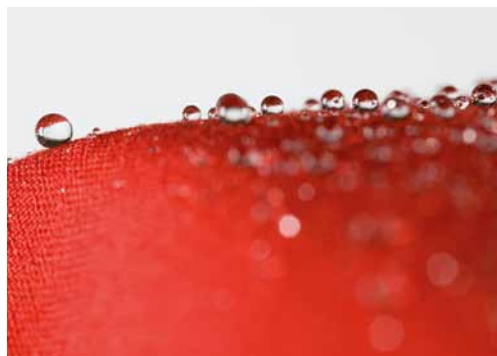
### Sustainable Products

WACKER products are intended for the manufacturing industry rather than for end users. Our products are intermediates in our customers' production processes, where they are given further added value. Our customers want us to produce these intermediates in a sustainable way. Plus, they expect their products to pose no risks to health or the environment. WACKER's principle is to provide high-quality products that can be transported, used and disposed of safely and with minimum environmental impact. Here are a few examples from the period under review:

- UV-active silicones for potting and encapsulation: ever more electronic components, such as microprocessors, are being produced for the automotive, power-electronics and sensor sectors. Components are sealed to protect them against heat, contamination and moisture. Until now, the elastomers used for sealing electronics had to be cured for an hour in an oven at 150 °C. We have partnered with our customers to develop a new, UV-active silicone elastomer, SEMICOSIL® UV. It cures by UV radiation at room temperature in just five minutes. This saves energy and greatly reduces cycle times. As a result, throughput can rise tenfold.
- Aqueous silicone emulsions for textile impregnation: outdoor and work apparel is often given a water-repellent finish. Wearing and washing such clothing impairs the finish's efficacy, so it has to be re-applied regularly. However, aerosol impregnation sprays usually contain organic solvents. Water-based laundry impregnation agents – which are better for the environment – have so far largely been inferior to solvent-based systems. WACKER has developed an aqueous silicone microemulsion, WACKER® HC 303, which can be used to efficiently impregnate textiles at low temperatures in a washing machine. Unlike conventional water-based agents, clothing can be washed and impregnated in a single machine cycle. Clothes no longer require post-treatment by ironing or in the dryer. This saves consumers time, energy and money.
- Solar-grade polysilicon: climate protection and the depletion of fossil fuels are putting the spotlight on renewable resources. At the moment, photovoltaics accounts for just 0.1% of the world's energy consumption. All the same, the demand for technology to convert the sun's energy into electricity has been rising for years. Our WACKER POLYSILICON division provides the key starting material for solar modules, namely hyperpure polycrystalline silicon. Each metric ton of polysilicon used in solar modules prevents the emission of some 6,000 tons of carbon dioxide.

In the reporting period, WACKER expanded polysilicon production facilities at our Burghausen site. Capacity rose to 11,900 tons in 2008 – up 40% from 2007's 8,100 tons. WACKER's expanded facilities, too, are now a part of our integrated material loop. The planned expansion program at our Nünchritz site is set to see our total annual polysilicon production capacity exceed 35,000 tons by the end of 2011.

With our WACKER® HC 303 silicone microemulsion, textiles can be impregnated efficiently at low temperatures in a washing machine – without energy-intensive post-treatment in the dryer.



Technological advances in silicon-wafer manufacture and solar-module design have increased solar-cell efficiency. Experts predict that grid parity will have been achieved in many parts of the world by 2015: solar power will cost just as much as grid power and its generation will be increasingly unaffected by the political framework. Additionally, the technological progress of recent years has greatly reduced energy payback times. In Germany, it takes about two years for a photovoltaic cell to fully recoup the energy expended on its production. In California, it only takes about a year.

- Binders for exterior insulation and finish systems (EIFS): the sustainable use of energy resources means saving energy, too. By supplying VINNAPAS® polymer powders, our WACKER POLYMERS division helps lower end-user heating costs, while cutting greenhouse-gas emissions. In hot regions, climate change makes it necessary to insulate against heat.

Heating or air-conditioning accounts for half of a building's energy demand. A house that is inadequately insulated loses a large part of its energy via the exterior walls and roof. EIFS can reduce heating energy losses by 60% and cut the energy lost by air-conditioners by as much as 72%.

VINNAPAS® polymer powders added to the mortar ensure that the EIFS layers bond together firmly. The insulation systems are therefore much more stable, durable and weather-resistant. They permit the use of insulation boards comprising different materials, including renewable substances, such as cork and wood-wool. VINNAPAS® polymer powders can be used to make construction chemicals that meet the strict EMICODE® emissions standards set by Germany's GEV (Association for the Control of Emissions in Products for Flooring Installation).

There is enormous potential for using EIFS to sustainably reduce greenhouse-gas emissions. According to the German Energy Agency (dena), only a third of all German homes are adequately insulated. Giving a building effective insulation based on EIFS could save 80 million metric tons of carbon dioxide emissions a year – that's 10% of Germany's total emissions.



Polycrystalline silicon is the key raw material for solar cells, which transform sunlight directly into electricity. In this way, the sun's energy is converted into an environmentally-compatible and economical power source.

- Saving energy with silicone resin emulsion paints (SREP): some buildings, such as historic and half-timbered houses, cannot be insulated with EIFS. In such cases, a coat of SREP is one of the few ways to improve the building's energy balance. WACKER SILICONES is a leading manufacturer of silicone resin emulsions for SREP.

A coat of high-quality SREP can cut the heat lost by a facade by as much as 40% (published in a 2007 study by the Fraunhofer Institute of Building Physics). Silicone resins protect masonry against moisture. Damp walls lose heat faster. A SREP coating reduces heat consumption by an average of 4.6%. What's more, SREPs improve the indoor climate by transmitting water vapor.



[www.srep.com](http://www.srep.com)

### **Training Facilities and Technical Centers for Construction-Sector Customers**

To pass on 50 years of product-development experience, WACKER founded the VINNAPAS® ACADEMY in 2007 in Burghausen. Named after our key polymer binder, the academy provides training tailored to construction-sector distributors and customers. A further academy was opened in Beijing in 2007 and another academy opened its doors in Moscow in 2008. The various academies complement the service portfolio offered by our technical centers, which develop and test product formulations for each region's construction industry. VINNAPAS® ACADEMIES will be extending their services to include information on silicone-based construction chemicals. In the future, our training facilities will be known as WACKER ACADEMIES.

Founded in 2003, the Moscow technical center was expanded in 2008 and fitted with new testing equipment and a second EIFS test wall. Different climatic conditions can be simulated on this wall. Aging and weathering processes are accelerated and the materials' stability and effectiveness tested. The Beijing technical center was launched in April 2007. It boasts state-of-the-art lab facilities and a weathering test wall, too.

### **Initiatives for Energy-Efficient Construction in China**

Despite China's unprecedented construction boom in recent years, many of its buildings still do not meet international energy-efficiency standards. The heating and cooling of buildings consumes a third of all China's energy. This high energy consumption and the resulting air pollution have alerted the Chinese government.

WACKER is committed to initiatives that publicize the benefits of energy-efficient building techniques to China's municipal authorities and construction industry. For example, under the auspices of the German Chamber of Commerce in Beijing, WACKER partnered with other European companies in 2007 to establish the ETICS (External Thermal Insulation Composite System) Quality Alliance. The purpose of the alliance is to draw attention to exterior insulation and finish systems and establish internationally recognized quality standards for energy-efficient construction. To this end, ETICS is collaborating with Chinese authorities, trade associations and inspectorates in organizing seminars and user workshops. Additionally, since 2007, WACKER has been involved in an initiative run by the German Energy Agency (dena) and the Chinese Ministry of Construction. This initiative, too, aims to promote energy-saving building practices appropriate to the local climate. At the core of the project are seminars held in six major Chinese cities in different climate zones.



# Workplace, Plant and Transport Safety

...// Safety specialist

Dieter Keller  
Site Security  
Burghausen



05

Workplace, plant and transport safety have always been a top priority at WACKER. They form the basis for uninterrupted production. Systematic work safety at WACKER includes the regular evaluation of hazards and work-area monitoring.

## Prevention

### Risk Management

We conduct extensive safety and risk analyses of plants from the design stage through to commissioning to ensure their safety. Analyses follow a two-stage system. First, our experts model what could happen (e.g. an explosion or a chemical spill) at any particular plant, clarifying the potential causes and developing preventive measures. Second, we examine especially critical plants for potential error sources, evaluating the resultant risks according to the following criteria: impact, the likelihood of someone being in the danger zone, estimated probability of occurrence and the potential for a timely emergency response. Having classed the risks, we then determine the quality of the protective measures needed.

### Safety Courses and Employee Motivation

In matters of safety, WACKER attaches great importance to basic and advanced employee training. We regularly hold seminars on plant safety, explosion protection and work safety. Interactive learning programs on the intranet not only help us train new employees but also give existing employees the chance to continuously train themselves. Each tuition unit includes a test. Courses range from general safety instructions for office and lab staff, through pipe-work safety, to specialized training for forklift drivers.

In 2007, we launched *Fresh Impetus for Work Safety*, a global initiative to minimize accidents. During the reporting period, we trained executives in Germany on work safety, and sensitized employees to this issue with the help of poster campaigns, videos, interactive plays and articles in employee media. The aim was to reduce our already low accident figures. Groupwide, there were 3.8 workplace accidents with missed workdays in 2007 (4.1 in 2006) and 3.7 in 2008 per one million hours worked. In comparison, the German chemical industry's insurance association (BG Chemie) quotes 9.1 accidents per one million hours worked in 2008. We recorded no fatal work-related accidents in 2007/2008.

# 05

We observe strict safety standards when transporting our products. We only load hazardous-goods vehicles that comply with legal requirements. For this, we need employees with an eye for detail like Dieter Keller.



### Work-Related Accidents

	2008	2007	2006
Frequency: accidents per 1 million hours worked <sup>1</sup>	3.7	3.8	4.1
Fatal accidents	–	–	1

<sup>1</sup> Comprises accidents involving missed workdays.

### Safety in Action

High safety awareness is reflected in low accident figures. At WACKER, facilities with no reportable accidents for long periods receive special recognition. In some cases, they are also honored by institutions outside the company. In 2008, Siltronic Japan Corporation received Labor Standards Inspection Office recognition for its exemplary safety management – it had not had an injurious accident to report for over five years (seven million work hours).

Japan's Ibaraki Prefecture honored the safety record of Wacker Asahikasei Silicone in Akeno. This joint venture's Responsible Care® committee contributed significantly to the Akeno plant's high safety standards. The committee consolidates safety activities. It also analyzes hazardous situations so that precautions can be taken early on.

The State of Kentucky (USA) recognized WACKER employee Edwin McIntyre for his life-long service to workplace safety. The last time this Calvert City safety expert had an accident to report was back in 1989.

### Safety Awards 2008

Award	Recipient	Sponsor
1st Prize for Occupational Safety	Wacker Asahikasei Silicone, Akeno	Ibaraki Prefecture, Japan
Gold Award, Environment, Health & Safety	WACKER POLYMERS, Ulsan	Korean Ministry of Labor
4th Annual Outstanding Individual in Occupational Safety and Health	WACKER employee Edwin McIntyre	State of Kentucky (USA), Kentucky Safety and Health Network, Inc.
Encouragement Award	Siltronic Japan Corp., Hikari	Yamaguchi Labor Bureau



### Safety Record: 27 Years without an Accident

Burghausen's Warehouse and Distribution Center had quite an achievement to celebrate in fall 2008: 10,000 days (27 years) without a reportable accident. This feat was especially impressive because the daily routine of Wolfgang Huber (operations manager) and his 25-member team is anything but peaceful. Each month, they load up to 700 trucks and 130 containers. Ten forklift trucks are continuously in service. Given the high traffic flows and the hazardous goods involved, employees here are very careful about complying with the extensive safety standards.

### Severe Storm Early Warning System (SAFE)

In 2008, groundwork on a research project called SAFE began in Burghausen. As a sensor-activated early warning system, SAFE takes account of the increased intensity and frequency of storms due to climate change. It forecasts severe storms earlier so that emergency-response measures can be initiated. WACKER Burghausen is the sole industrial site participating in this project, which is sponsored by Germany's Ministry of Research. The aim is to close large data gaps in local weather coverage by interlinking new environmental sensors with existing weather stations and warning systems. The sensor network's data are to be coupled with multi-regional data (e.g. from satellites) and used in a new forecast model to create geographically and temporally precise weather predictions. Subsequently, it is a question of quickly warning those affected, for example via text-messaging or email. At Burghausen, the research focus is on automated control systems for industrial plants and facility management.

### Transport Safety

When working with logistics providers, WACKER ensures that hazardous-goods vehicles are always checked prior to loading. Vehicles not complying with legal requirements are not loaded and faults are systematically recorded and tracked. These records form the basis for agreements on improvement measures. The success of this approach is reflected in the declining fault rate: less than 3% of checks (tendency falling) justify a complaint. Generally, WACKER audits hazardous-goods shippers every two years. Aside from the mandatory monitoring of hazardous-goods shipments, WACKER also tracks the transport of non-hazardous goods.

#### Transport Accidents

Number of Accidents	2008 <sup>1</sup>
Road	11
Rail	4
Sea	2
Barge	–
Air	–

<sup>1</sup>In 2008, the criteria for collecting and evaluating transport accident data were newly defined. Therefore, no comparative data exist for 2006 and 2007.

WACKER's safety standards are often above the minimum required for hazardous-goods transportation. For example, we ship chlorosilanes to customers not by truck but by rail, and in containers of the highest safety classification.

To evaluate shippers, WACKER uses the Safety and Quality Assessment System (SQAS) of the European Chemical Industry Council (CEFIC). The system's goal is to have independent experts assess logistics providers according to uniform chemical-industry criteria, e.g. vehicle equipment, accident response measures and employee training levels. The results are available to all SQAS service group members, who then agree on improvement measures with the logistics providers.

During the period under review, we recorded 17 transport accidents. This figure includes any accidents involving the distribution of our intermediates and products if we ordered the transport. It also includes incidents that did not adversely impact people or the environment, e.g. the recovery of a truck stuck on an impassable road. Such incidents are also listed in shipper evaluations.



### Incident Management

At WACKER, prevention strategies/measures form the basis of safety management. However, not all incidents can be prevented. With CLICS (the Closed Loop Incident Communication System), every incident relevant to safety, health and the environment is recorded promptly and groupwide. We require employees to document all incidents and near-misses on a special form and send it to a central email address. These reports are then evaluated and measures taken. Importantly, the information is also sent to corporate units with a similar hazard potential, so that other sites can benefit from any insights gained.

Every WACKER site has its emergency-response plan for regulating cooperation between internal and external emergency teams and the authorities. Once a year, our plant firefighters take part in a large-scale drill with the fire and rescue services of neighboring communities. The handling of this simulated emergency is subsequently analyzed to identify and eliminate any weak points.

### TUIS: Accident Assistance

Since 1982, the German chemical sector's Transport-Accident Information and Emergency-Response System (TUIS) has provided assistance in the event of chemical accidents. WACKER has participated in this network since the very beginning. Today, TUIS comprises some 130 member companies. Public services (such as fire departments, police and disaster control centers) can get advice per telephone and request experts and specialized equipment. TUIS is part of the German chemical industry's contribution to the Responsible Care® initiative.

WACKER's TUIS experts are available globally for accidents involving our products. In the period under review, our experts appraised transport routes in China according to TUIS principles. They examined traffic routing through residential districts to identify emergency-response potential.

#### WACKER Firefighters' Activities for TUIS

	2008	2007
<b>Stage 1</b> Expert advice by phone	36	29
<b>Stage 2</b> Expert advice at accident scene	3	2
<b>Stage 3</b> Technical assistance at accident scene	5	6
<b>Total</b>	43	35



#### WACKER Firefighters Deployed for TUIS

In August 2008, a tank truck crashed on a highway near Burghausen. For unknown reasons, the truck veered onto the shoulder and overturned on a bicycle path. Highly flammable vinyl acetate started to leak from its hatch. WACKER's plant fire department was alerted by TUIS (Transport-Accident Information and Emergency-Response System). At the scene, our firefighters contained the fluid and made preparations to pump it into a replacement tank truck – grounding the tanks and specialized fittings to prevent ignition. The risk of fire and pollution had been averted. Public fire services rarely handle such operations, as they lack the experience, specialized training and necessary equipment. In these cases, TUIS firefighters offer vital help.

## Accidents and Incidents

### Safety and Environmentally-Relevant Incidents

Accidents and environmentally-relevant incidents can never be completely ruled out whatever efforts are made. At WACKER, we make sure we learn from such events to prevent their recurrence.

#### Groupwide Safety and Environmentally-Relevant Incidents in 2008

Site	Incident
Burghausen, Germany	Escape and ignition of silane due to a leaky flange connection to a silane heater. An employee extinguished the small fire immediately. The plant's firefighters contained the released silane.
Burghausen, Germany	Escape of hydrogen chloride gas due to inadvertent opening of a pressurized reactor. The facility was immediately shut down. One person was hospitalized.
Burghausen, Germany	Escape of hydrogen chloride gas due to a leaky rubber lining. The plant's firefighters contained the released gas.
Burghausen, Germany	Escape of silane due to a leaky flange connection. The silane reacted with humidity to form hydrogen chloride. The plant's firefighters doused the gas cloud with water cannons. One employee was sent to the hospital for further examination.
Burghausen, Germany	Sludge overflow in sewage plant due to heavy rain and other causes (including unusual sludge sedimentation). The monitored threshold values for suspended solids (SS), adsorbable organic halides (AOX), chemical oxygen demand (COD), biological oxygen demand (BOD) and phosphorus were temporarily exceeded. The authorities tolerated the higher values until the cause could be eliminated. The sludge overflow did not impair water quality.

#### Groupwide Safety and Environmentally-Relevant Incidents in 2007

Site	Incident
Burghausen, Germany	Escape of hydrogen chloride gas due to failure of a ball cock. The plant's firefighters doused the gas cloud with water cannons.
Burghausen, Germany	Escape of hydrogen chloride gas during cleaning. The plant's firefighters doused the gas cloud with water cannons.
Burghausen, Germany	Escape of hydrogen chloride gas due to a defective seal. The plant's firefighters doused the gas cloud with water cannons.



# Employees

...// Knowledge bearer

Leonhard Gollwitzer, technical manager and a masonry protection expert at WACKER for almost 40 years, instructs Nadine Abt, market analyst WACKER SILICONES

A photograph of two people, an older man and a younger woman, standing on stone steps outside a building with a large window. The man, Leonhard Gollwitzer, is wearing a dark blue suit jacket over a light blue shirt and dark trousers. He is gesturing with his hands as if explaining something. The woman, Nadine Abt, is wearing a grey jacket over a white shirt and dark trousers. She is holding a black folder or tablet. The background shows a stone wall and a large window with a grid pattern. The overall scene suggests a professional interaction or training session.

06



WACKER's headcount rose in 2007 and 2008. The Group had 15,044 employees world-wide on December 31, 2007, and 15,922 a year later. The increase is primarily due to polysilicon-production expansion at Burghausen, strategic growth projects in China and the integration of employees from former partner company Air Products Polymers (APP). Most employees (roughly three quarters) are based in Germany, the remainder abroad.

#### Employees

	2008	2007	2006
WACKER Group	15,922	15,044	14,668
Germany	12,110	11,624	11,340
International (excluding Germany)	3,812	3,420	3,328
Percentage outside Germany	23.9	22.7	22.7
New hires, groupwide	1,324	677	818
Percentage of new hires, groupwide	8.3	4.5	5.6

#### Personnel Development

WACKER's economic success chiefly depends on its dedicated employees. The Group creates the right conditions for every employee to develop their abilities to the full. Our training and advancement programs help employees with each qualification and career step – from trainee up to top manager.

#### Vocational Training

WACKER has always given a high priority to vocational courses, offering training in specific disciplines at our German sites in Burghausen, Nünchritz, Freiberg and Munich.

Burghausen's vocational training center (BBiW) is the mainstay of WACKER's training program. Established by WACKER in 1969, the BBiW is a public foundation under private law. It offers not only initial/advanced training and retraining to young people, but also courses for experienced staff. Additionally, as part of its overall mission to educate, it trains the employees of some 30 partner companies.

BBiW courses cover 15 vocations. The main focus is on the scientific and technical jobs typically encountered in the chemical, electrical and metalworking sectors. In 2008, 193 young people started training at WACKER or the BBiW – in 2007, there had been 195. Overall, trainee numbers rose from 616 in 2007 to 643 in 2008 – with 559 in scientific and technical disciplines and 84 in business administration. After graduating, they have a good chance of being hired. In the period under review, WACKER offered jobs to all suitable trainees who wished to remain at the company. Following their traineeships, 173 young people joined the Domestic Group in 2007 and 154 in 2008.

## 06

People are getting older. Consequently, demographic change affects the age-pattern of our staff, too. That's why we encourage vocational training and job flexibility across all age groups. Experienced employees like Leonhard Gollwitzer safeguard our expertise by passing their knowledge on to younger colleagues such as Nadine Abt.



The high-quality of training at the BBiW is evidenced by all the awards won in competitions. The BBiW is also noted for its state-of-the-art equipment. For example, an innovative simulation system was introduced in 2008. It enables trainees to learn about controlling and improving plant processes under realistic conditions. The system precisely models the stages of an actual distillation process at WACKER. As a commercial system was not available, the BBiW and WACKER simulation specialists teamed up to start their own project.

#### Trainees

	2008	2007	2006
Number of new trainees	193	195	184
Total number of trainees	643	615	610
Thereof hired by WACKER on completion of training	154	173	168
Total number of employees in retraining	3	6	6
Trainees/retrainees as a percentage of total Domestic Group employees	5.0	5.0	5.1

#### Advanced Training

WACKER offers advanced training to all employees, helping them according to their strengths and career paths. After all, we need skilled workers if WACKER is to remain innovative and competitive. Clearly, lifelong learning and job flexibility are becoming increasingly important for us, not least because we need to adjust to the longer duration of working life.

Annual performance reviews afford employees and supervisors the chance to agree on development measures. This applies to all employees, from standard-payscale right up to top management. In 2007 and 2008, 21,800 places at seminars, advanced training courses and conferences were filled. Additionally, our e-learning courses were performed 126,500 times.

WACKER's training program covers technical, managerial, social and personal skills. Participation in some seminars is mandatory for certain jobs. Plant employees promoted to certified industrial foreperson must attend seminars, for example, on work safety. Additionally, lab heads, plant managers/engineers and other managerial staff must attend seminars customized to their own job profiles. The training program on offer includes numerous voluntary courses, ranging from a seminar on *Coping with a Flood of Emails* to one on *Ergonomics and PC Workstations*. Wherever appropriate, online courses supplement classroom-based training.



#### Award-Winning Welding

Who is Germany's most skillful welder? The German Association of Welding and Related Techniques provided the answer at its national *Young Welders* competition. Over 1,000 young people took part in the 2007 contest. Johann Stamberger – a WACKER industrial-mechanic trainee at the time – won the final, where 47 district and regional champions competed. The event was held in a technology center at Stade (near Hamburg), where the 20-year-old got 97 out of a possible 100 points, making him the highest-scoring finalist. "The competition set really tough standards," explained the victor afterward. Stamberger's success stemmed from the welding skills he had acquired at Burghausen's vocational training center – the perfect place to prepare for this kind of contest.

WACKER invested €6.2 million in personnel development and advanced training in 2007 and €7.2 million in 2008.

#### Advanced Training<sup>1</sup>

Number of Training Hours per Employee	2008	2007	2006
Standard-payscale employees	11.6	12.0	12.0
Above-standard-payscale employees <sup>2</sup>	22.7	24.5	23.0

<sup>1</sup> Excludes production-specific training. Includes internal and external seminars and advance-training courses. Figures apply to the Domestic Group.

<sup>2</sup> Third-level management (FK 3) and executive personnel (OFK).

#### Managerial Staff

Our personnel-development activities focus not only on offering an extensive training program to all employees, but also on identifying and promoting young management potential. To obtain top potential, WACKER implements a uniform process that encompasses all leadership levels. Responsibility for the process is held by the Executive Personnel (OFK) and Human Resources departments and the managers of the units directly affected.

We have specific executive-development programs for each of our three target groups: employees on the standard and above-standard paycales, and executive personnel (OFKs).

Participation in development programs is determined by groupwide successor planning, annual performance reviews and employee interests. Thus, standard-payscale employees with an aptitude for shift leader or certified industrial foreperson are eligible for Potential Analysis Workshops. Above-standard-payscale employees with an outstanding track record are invited, for example, to take part in a Management Development Center, which singles out and promotes their strengths.

University graduates can join WACKER's 18-month General Management Trainee Program (GTP). This has an excellent reputation, as shown by the high number of well-qualified graduates who wish to enroll. Six new GTP trainees joined WACKER in 2007 and five in 2008. After an orientation phase lasting three to six months, the trainees work on various projects that often involve periods spent abroad. Siltronic has its own management trainee program. In the reporting period, seven Siltronic management trainees received training in R&D and technology.

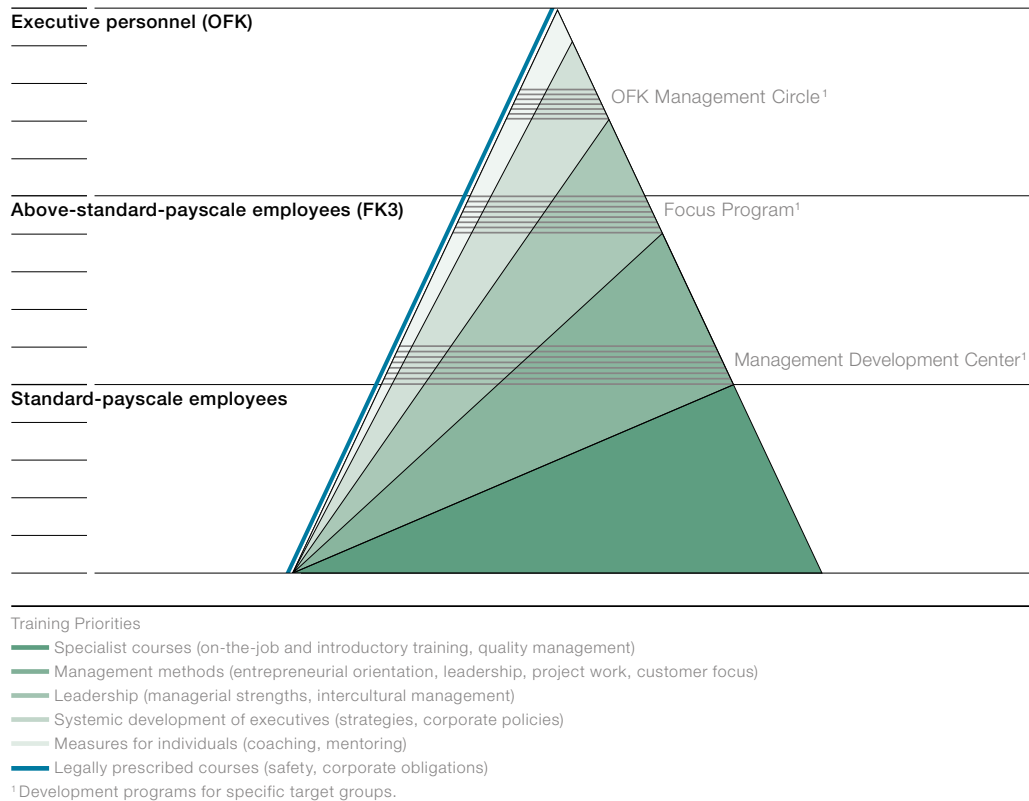
Two executive-development programs are available to WACKER employees who have been recommended for them: the Focus Program for above-standard-payscale employees with executive potential, and the OFK Management Circle for recently appointed executives. The programs each last a year and deal with self-development and management skills. During the period under review, 28 potential young managers attended the Focus Program. Thirteen new executives completed the OFK Management Circle.

In 2007, WACKER introduced a program for experienced executives: *OFK General Management Compact*. It comprises modules in strategy, leadership and change management. Participants brush up their knowledge and analyze their own experiences. During the reporting period, 28 executives attended this program.

For several years, WACKER has been involved in Cross Mentoring Munich, a program to support women with management potential and to qualify them for leadership positions. The aim is to gradually increase the number of women in top management. The program involves an experienced manager acting as mentor to a female employee (mentee) at another company. The mentee thus gains valuable insights into the culture and workings of another company. Three young female WACKER employees with management potential attended the program in 2007 and another three in 2008. WACKER's OFK executives act as mentors to other companies' mentees.

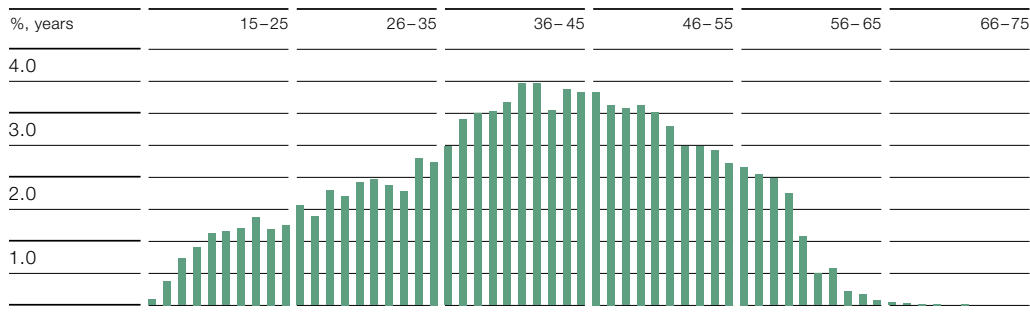
All WACKER's managerial staff, whatever their level, receive feedback on their management style when they hold annual performance reviews with their employees.

#### Executive Development



#### Demographic Change

WACKER has been addressing demographic change intensively since 2006. The average age of (permanent) employees was 42.2 on the 2008 reporting date. In-house studies have shown that the number of employees over 50 in Germany will double between 2006 and 2017 – from 22 to 44%.

**Average Age**

At a time of demographic change, it is becoming increasingly important for WACKER to acquire and retain highly qualified employees. We have therefore formulated ten strategic goals to accommodate an aging workforce. We intend to:

1. Systematically promote health.
2. Create corporate value by appreciating all age groups; introduce sweeping changes in our approach to aging; and involve managers and employees.
3. Encourage and demand vocational training and job flexibility across all age groups.
4. Secure expertise for the future, and transfer knowledge in a systematic and binding manner.
5. Develop instruments to manage and regulate the transition to retirement.
6. Orientate compensation to levels of performance and expertise.
7. Maintain and enhance WACKER's attractiveness for employees.
8. Intensify advertising and recruitment efforts aimed at professions critical to WACKER's success.
9. Pursue forward-looking strategies for in-house vocational training.
10. Foster scientific and technological interest early on as a committed "corporate citizen."

To achieve these goals, we have introduced measures to enhance job flexibility – ranging from employee health programs through to basic and advanced training. Here are a few examples from the period under review:

- E-Recruitment project: in general, job seekers can submit their application forms via the WACKER website. We have developed a new system that covers the entire recruitment and employment process – from the in-house job request to hiring and relocating. We have also switched over to an online application service for trainees. Young applicants prefer this online approach, and it also simplifies the whole process for us. Now, applicants can simply use their profiles to apply for a second or third training position, as well. WACKER's E-Recruitment platform offers new functions for selectively contacting registered candidates (Talent Relationship Management) or searching for specific qualifications from among a pool of candidates.



- Implementing Germany's Collective Agreement on Working-Life Duration and Demography: this agreement was concluded in April 2008 by the chemical employer association and IG BCE industrial union. By adhering to a so-called "chemical-industry formula on demographic change," companies – including WACKER – committed to establishing work processes that take age and health into consideration. Additional features include: training courses during an employee's entire working life, (private) pension provision, and various tools to ensure smooth transitions between training, work and retirement. Starting in 2010, another aspect will be a "demographic fund." Employers will pay €300 into it annually per standard-payscale employee. This "demographic sum" rises in line with the percentage increase agreed for the standard payscale in the preceding year. The sum must be spent appropriately on, for example, long-term working-time accounts, semi-retirement, standard pension plans, partial pensions and the German chemical industry's "BUZ" disability insurance.
- New personnel-marketing approaches: WACKER is blazing a trail here with a project to inform aspiring engineers about career opportunities at WACKER. Called "PIng," the project focuses on intensifying our contacts with universities – for example, by holding project-planning courses on campus, arranging site tours for students, and offering them diverse opportunities for internships and for preparing degree theses. 2008 saw the launch of an annual summer course for process/chemical engineering students. The course provides insights into an engineer's duties and typical work routine at WACKER.

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## Life and Career

### Equal Opportunities

As a global company, WACKER operates in international markets and multicultural environments. Holding each employee's skills and dedication in high regard, we see diversity as an enrichment. We oppose unequal treatment or disparagement on account of gender, race, ethnicity, religion, ideology, disability, sexual orientation or age. These principles are valid across the WACKER Group and, as part of our corporate culture, are embodied in our Code of Conduct.

In 2007, we required all employees at our German sites – from the Executive Board down to standard-payscale employees – to familiarize themselves with Germany's General Equal Treatment Act (AGG) by completing an e-learning course.

Special arrangements are in place to help and promote WACKER employees who are disabled or suffer from long-term occupational disabilities. In 2008, the Domestic Group's annual average of disabled employees was 733 (2007: 690). Accounting for 6.3% of WACKER's workforce (2007: 6.1%), this figure was well above the legally prescribed German rate of 5%. Even so, we had to pay a low compensatory levy, as not every subsidiary achieved the 5% target. Over a third of WACKER's disabled employees were aged between 55 and 59.

Representatives of WACKER's disabled employees play a key role in finding suitable positions for anyone with a long-term occupational disability. WACKER also supports severely disabled people who cannot find work on the general job market, e.g. via collaborative ventures with workshops for the disabled. Our Burghausen site, for instance, sources key products – such as mounting plates and angle bars – from the charitable Ruperti workshops in nearby Altötting.

**Disabled Employees**

	2008	2007	2006
Mandatory workplaces (annual average)	628	608	549
Actual workplaces (annual average)	733	690	648
Actual workplaces (annual average) as a percentage	116.7	113.5	118.0
Disabled employees as a percentage of total employees, Domestic Group	6.3	6.1	5.9
Compensatory levy	€ thousand	6	4
		5	

Equal treatment applies to both men and women at WACKER. It goes without saying that we offer equal opportunities to all employees, regardless of their gender. This approach applies to compensation, too. The amount earned reflects each job's specific demands and responsibilities. WACKER is trying to increase the number of female executives. The Cross Mentoring program serves this purpose. To interest girls in such vocations as electronics specialist or industrial mechanic, we take part in the Girls' Day event held throughout Germany.

**Equal Opportunities**

	2008	2007	2006
<b>WACKER employees</b>	15,922	15,044	14,668
Thereof female	3,506	3,319	3,213
Percentage of WACKER female employees	22.0	22.1	21.9
<b>Domestic Group employees</b>	12,110	11,624	11,340
Thereof non-German	1,637	1,632	1,650
Percentage of non-German Domestic Group employees	13.5	14.0	14.6
<b>Third-level management WACKER employees (FK3)</b>	2,690	2,466	2,483
Thereof female	504	444	481
Percentage of WACKER female FK3 employees	18.7	18.0	19.4
<b>WACKER executive personnel (OFK)</b>	204	187	192
Thereof female	13	8	10
Percentage of WACKER female OFK employees	6.4	4.3	5.2

**Girls' Day: Technology Is a Girl Thing!**

Industrial mechanic or electronics specialist – aren't they usually a male preserve? That's a common assumption, even among young people. Girls' Day 2008 was an opportunity for 126 girls from Burghausen and the surrounding area to set the record straight. At Burghausen's vocational training center (BBiW), they got the chance to learn about such jobs as chemical technician, electronics specialist and industrial mechanic. Female trainees showed the girls around processing plants, and explained how to operate a plant simulator. In the metalworking unit, the girls were able to put their own skills to the test. Yet again, it was demonstrated that women are just as good at "typically male" jobs as men. BBiW Director Josef Schlehaider was delighted by the schoolgirls' interest: "The event enables us to broaden their ideas about possible careers. We would be extremely pleased to soon see some of them return as BBiW trainees." This was the seventh time that WACKER had participated in Germany's nationwide Girls' Day.



### Work/Life Balance

WACKER does a lot to help employees successfully integrate their careers and private lives. Our modern work-time systems are extremely flexible and offer considerable individual leeway. We have a wide range of flexi-time models, including a self-regulated system based on trust. Wherever possible, we offer both full-time and part-time jobs, even for shift workers in continuously operating plants. WACKER also enables individual employees to work from home (an option that may be combined with part-time work), and authorizes unpaid leave for urgent private business.

#### Part-Time Employees

	2008	2007	2006
<b>Part-time employees, Domestic Group</b>	<b>790</b>	<b>755</b>	749
Female	632	602	610
Male	158	153	139
Percentage of part-time employees, Domestic Group	6.5	6.5	6.6
<b>Semi-retired employees</b>	<b>892</b>	<b>911</b>	841
Thereof in non-active phase of semi-retirement	359	456	513

Another key aspect of WACKER's HR policy focuses on balancing family life with work. The varied range of work-time models reflects the circumstances specific to men and women at particular stages in their lives. In 2008, WACKER was one of the first companies to sign a joint declaration on Germany's *Family as a Success Factor* business network – which has its origins in an initiative launched by the Federal Ministry of Family Affairs and the German Chamber of Industry and Commerce. Acting as a platform for companies and associations, the network is committed to a family-oriented management approach. In the declaration, WACKER is committed to heeding the needs of employees with family obligations and to offering suitable support – with childcare, for example, and the return to work after parental leave.

At many of its locations, WACKER promotes childcare services for its employees. Kindergarten and after-school care facilities are available in the Wöhler-Kinderhaus, located very close to the Burghausen site. WACKER puts its Munich-based employees in contact with local preschool facilities. These employees can also use, free of charge, the services of pme Familienservice GmbH, which arranges childcare and vacation programs for school kids. In 2008, WACKER's Siltronic subsidiary signed a collaborative agreement with a local Freiberg day-care center, which offers Siltronic a fixed number of preschool places and, if required, extended opening times.

Since 2007, WACKER employees based at any German site receive free advice about nursing care and specific illnesses. Employees can contact pme Familienservice GmbH not only if they fall ill or need long-term nursing care, but also if they want advice about arranging care for a close relative.

### Compensation and Social Benefits

At WACKER, employees participate in the company's ups and downs. That is why fixed basic salaries (including vacation and Christmas pay) are supplemented by variable compensation – a voluntary bonus to employees on both the standard and above-standard payscales. It consists of a profit-sharing sum and a personal-performance component. Domestic employees at WACKER's chemical divisions received a profit-sharing payment equal to 10.05% of their annual salary in 2007; in 2008, the figure was 12.5%.

Alongside compensation, other important aspects include social and fringe benefits. Based on what competitors offer and on local market conditions, these benefits include subsidized company restaurants, supplementary sick pay, and attractive company cars.

WACKER company pensions are a key component of employee compensation. They are available at nearly every site around the world, though individual pension plans comply with country-specific legislation.

In Germany, WACKER offers employees an attractive company pension plan via the Wacker Chemie VVaG pension fund, established in 1928. The fund has some 15,800 members and provides pension payments to some 6,900 retirees. The average monthly pension was €619 in 2007 and €632 in 2008. WACKER matches employees' annual pension contributions. Additionally, employees have the opportunity to enlist in a private plan that minimizes their tax burden while saving for retirement.

The WACKER pension fund, with €1.2 billion on its balance sheet, is one of Germany's largest company pension funds. Thanks to its prudent risk-management policy (based on a broad and diversified investment strategy), the fund achieves healthy returns even during economic downturns. The market-value return was 3.3% in 2007. The ratio of hidden reserves was 14.1%, well above that achieved by other chemical-industry funds. In the wake of the financial crisis, this ratio fell to 5% in 2008. This still represented a healthy basis, which helped the pension fund to pass all the stress tests required by Germany's financial supervisory authority (BaFin).

With company pensions supplementing their state pensions, WACKER employees can maintain their accustomed living standards on retirement.

#### Company Pensions<sup>1</sup>

		2008	2007	2006
Average monthly company pension	€	632	619	610
Expenses for pensions and pension-related benefits	€ thousand	44,800	42,200	40,300

<sup>1</sup> Domestic Group

WACKER helps to ensure a minimum amount of social security even in countries without state-run health and old-age pension insurance. Worldwide, it's vital that the compensation and social benefits we offer are fair and competitive. At the very least, they correspond to local legislation or industrial codes of practice and, in many cases, they surpass the local minimum. In this way, lower-paid employees can cover their own and their families' living costs. For example, staff at our Adrian site (Michigan, USA) generally receive a higher wage than the state's legal minimum of \$7.25. Plus, WACKER offers a health insurance plan to all Adrian employees working 20 or more hours a week.

With its exemplary social benefits and performance-oriented compensation, WACKER remains an attractive company for current and future employees. This explains our high level of employee loyalty – 2008's fluctuation rate was 2.9% groupwide, and in Germany just 0.9%. On average, employees remained at the company for 16.8 years.

**Fluctuation Rate**

%	2008	2007	2006
WACKER Group	2.9	2.8	2.6
Germany	0.9	0.9	0.8
International (excluding Germany)	9.3	9.1	8.5

WACKER is one of the best employers in the German chemical industry, as shown in an annual survey by Germany's Association of Chemical-Industry Executives (VAA). Targeting 2,000 management employees from 24 chemical companies, the survey ranked WACKER second in 2007 and third in 2008. It assessed corporate strategies, culture and working conditions.

In China, our WACKER Greater China subsidiary was voted "Top Employer 2008" in Greater Shanghai, where local companies had been rated on their leadership style, personnel-development programs, company goals and strategies.

### Employee Representation

Industrial union membership has always been high among WACKER employees, especially at German sites. WACKER employment contracts treat staff based in Germany – regardless of their union membership – as if they were subject to the German chemical industry's collective agreement. WACKER employees at non-German sites, can, in general, also organize themselves as a union. At our major production site in Adrian (Michigan, USA), for instance, some 27% of the employees are unionized. In cases where non-German sites are without (legally mandated or voluntary) employee representatives, HR staff members are the contacts for employee interests.

### Health Protection

#### Health Management

Nowadays, a company must do more for its employees than merely ensure that their health is not impaired at work. Demographic change has made it necessary to help them remain healthy and productive for a longer working life. WACKER has signed the Luxembourg Declaration on Workplace Health Promotion in the EU. In doing so, we have undertaken to prioritize health and encourage employees to care more about their health. At the Domestic Group, employees can go for an extensive medical checkup every three years.

WACKER has taken key steps to standardize and improve its groupwide health-management system. In 2008, we adopted an occupational health and safety regulation, requiring every subsidiary worldwide to integrate specific minimum standards and activities into their occupational health and safety setup. The regulation defined 13 measures in total, ranging from workplace risk assessment, medical checkups and crisis management, to health promotion, addiction prevention and pandemic-preparedness plans. We will be reviewing the success of these measures in internal audits over the next few years. In 2008, our new medical center at Zhangjiagang (China) underwent an internal audit.

In 2008, Health Services at Burghausen set up an occupational psychology unit to record and assess workplace stress and devise strategies to enable employees to cope with increasing workloads.

The high quality of WACKER's occupational health management system has been underscored by a comparison with other companies – a 2007 study by the German Europresse-dienst news agency ranked WACKER 4th out of 150.

Employee Information and Health Programs

WACKER sensitizes employees to health risks. The Domestic Group regularly organizes health campaigns on various topics. In 2008, for example, it ran campaigns devoted to skin protection, colon-cancer screening, and high blood pressure. Additionally, it offers physical exercise classes.

At WACKER, addiction prevention is important. In general, alcohol is forbidden at work and there are courses to help smokers kick their habit. All managers are obligated to attend addiction-prevention courses to enable them to recognize whether employees are at risk or already addicted, and to offer assistance. Since 2008, managers have also had courses on identifying and handling employees suffering from psychological stress.

Sickness Rate<sup>1</sup>

%	2008	2007	2006
	4.1	3.9	3.8

<sup>1</sup> Days lost through illness / target working time in days x 100; Domestic Group only.

Pandemic-Preparedness Plan

WACKER has maintained a pandemic-preparedness plan since 2005 to minimize health risks and business disruption in the event of a crisis. The plan defines how and when a central crisis management team should coordinate all emergency-response measures worldwide. It includes regulations and documented procedures on how to deal with employees who have fallen ill or been exposed, as well as guidelines on business trips to affected regions, and rules concerning site-specific access checks. WACKER has a supply of influenza drugs and special equipment (such as face masks, gloves and disinfectants) to hand out to employees in the event of a pandemic.

Robot Relieves the Strain on Employees' Backs

Our employees' health can be impacted by market changes. Take, for example, Burghausen and the huge rise in demand experienced there for our repackaged Elektroflux and welding-powder products. The change meant that 15-kg bags had to be manually packed into boxes. After inspecting the workplace, Health Services and the operations managers responsible introduced a technical innovation. A robot now lifts and packs the heavy bags. "Generally speaking, more and more people have back-aches," says Dr. Wolfgang Großwieser, deputy Health Services head. "Our employees are no exception. The robot helps us prevent chronic back problems at that facility."





...// Beacon of hope

Monique Rauchhaus  
Childcare worker  
Die Arche charity, Munich

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07



WACKER's economic success depends on the general public's trust in our actions. Consequently, we take our social responsibilities seriously, especially to communities near our sites. WACKER strongly supports scientific and technical education at kindergartens, schools and universities. We also actively promote social projects for children and young people. Our charitable foundation, the WACKER relief fund (WACKER HILFSFONDS), supports victims of natural disasters and helps rebuild devastated areas. At WACKER, we see sustainable partnerships as the best way of meeting our social commitments. That is why we primarily invest in long-term projects.

Furthermore, we make a substantial contribution to society through tax payments. In 2008, WACKER paid €200.3 million in regular taxes to tax authorities worldwide (2007: €192.8m; 2006: €103.5m). On top of that, our employees also pay taxes and social security contributions.

#### WACKER's Donations and Sponsoring

€ thousand	2008	2007	2006
Donations	1,033	952	7,097
Sponsoring	1,090	648	476
<b>Total</b>	<b>2,123</b>	<b>1,600</b>	<b>7,573</b>

In 2006, the company's charitable investments totaled some €7.1 million, including €6 million for the WACKER Chair at the Technical University of Munich. In both 2007 and 2008, we donated about €1 million annually, with roughly half going to our SV Wacker Burghausen sports club to promote popular sports. The rest was donated to foundations, associations and charitable organizations. As for sponsorship activities, our focus is not only on education and science, but also on SV Wacker Burghausen's professional soccer team. Sponsorship spending amounted to some €650,000 in 2007 and €1.1 million in 2008.

## 07

WACKER is interested in sustained partnerships. That equally applies to our social involvement. We have been supporting a German charity called *Die Arche* for years – so that people like Monique Rauchhaus can give children a chance.



## Neighbors

Companies are not just the engines of the economy – they are also corporate citizens. The basis of corporate citizenship is maintaining a good relationship with immediate neighbors. As a chemical manufacturer, we make sure that we openly communicate what happens behind our factory gates. Every WACKER location around the world is obliged to provide constructive, candid responses to questions from local communities. We respond quickly and clearly. WACKER's environmental reports and other brochures are full of information about our sites. On top of this, we welcome the public into our plants for open house days and other events, such as Burghausen's environment information day and Nünchritz's annual neighborhood dialogs. We maintain local hotlines and have central contact persons ready to deal with questions and other matters.

In 2008, Wacker Chemical Corporation invited employees, their families and local residents to its Adrian site (Michigan, USA). 1,100 visitors came to tour the plant's manufacturing facilities, distribution center and technical center.

In fall 2008, WACKER started building a new polysilicon plant in Nünchritz (Germany). The project is expected to cost €800 million and will create some 450 jobs. WACKER informed local residents about the construction work early on. Practical discussions covered noise pollution, potential vibration damage to houses, the clearing of some birch woodland, and the community's afforestation plans. WACKER handled the compensatory measures quickly and straightforwardly. For example, WACKER is having 32 acres (13 hectares) in Leckwitz and Nünchritz landscaped to make up for the cleared woodland. The company has also had additional trees planted as a screen for local residents.

At WACKER's salt mine in Stetten (Germany), we built a new access route – the Clara tunnel – in 2008, opening the mine to road vehicles. Now, trucks can transport backfill directly into the mine. Costing €6 million, the new tunnel is important for safeguarding jobs – the site has about 60 employees. Some of Stetten's residents expressed misgivings about backfilling mineral waste, fearing that the mine's open-air bunker transfer would cause dust pollution. Even though precautions at the mine met all technical/health considerations and even exceeded legal requirements, WACKER introduced extra measures to ease the minds of local residents. For example, we stopped reloading material above ground completely. Another step was to continue taking dust measurements outside the mine in 2009 (originally a temporary measure) and to set up supplementary measurement points. WACKER also commissioned TÜV Süd – a technical inspection body – to review the earlier appraisals of an independent expert.



Burghausen's  
environmental reports  
for 2007 and 2008  
(only in German)



### Outstanding Commitment

WACKER personalities actively help society. Such dedication was again honored in 2007 and 2008. Dr. Peter-Alexander Wacker (WACKER's Supervisory Board chairman and former president and CEO; right) was named an honorary citizen of Burghausen and was awarded the Bavarian Medal of Honor and Singapore's Public Service Star. The latter honors international personalities for their outstanding contributions to the country's industrial, scientific, research and technological development. WACKER has been operating in Singapore for many years and maintains a technical center and production facilities there. In 2008, Jean-Lionel Gros (former head of our WACKER Greater China subsidiary) received the Magnolia Award for his commitment to Shanghai's economic and social development.

WACKER directly and indirectly supports local communities, both as employer and customer. In 2008, our Nünchritz plant in Saxony, for example, sourced 26.5% of its deliveries and services from companies based in this east German state, with a further 12% coming from companies in other parts of east Germany. The total value of these deliveries and services exceeded €130 million.

Another example is Burghausen, WACKER's largest site and part of Bavaria's Chemical Triangle. A supply-chain study by Munich's Ludwig-Maximilian University revealed that a single job in the Triangle secures almost two other jobs elsewhere in Germany.



Study by Munich's Ludwig-Maximilian University (only in German)

### Schools

The chemical industry's task is to provide solutions that help the global community develop sustainably. To continue doing this, we will need committed scientists and engineers in the future. That's why WACKER looks for ways to awaken children's enthusiasm for science and technology.

WACKER helps develop progressive teaching methods and modern school management systems. In fact, we are a founding member of the Bavarian Educational Pact. This is a long-term commitment by businesses (currently 130 companies) and the Bavarian state to cooperate on educational issues. Over the last few years, the business community has helped Bavaria's Ministry of Education and Cultural Affairs launch a variety of school projects (e.g. *Modus F*, *Kompass*, *Profil 21*, and *GribS*). The focus is always on improving the quality of schools and lessons. Measures range from making experimental work an integral part of elementary science teaching and expanding vocational course programs, to creating new teaching methods for training self-reliance and team-building skills.

In 1992, we developed our first experiment kit for schools. Thanks to input from chemists and educationalists, we have been able to enhance and expand the experiments and accompanying brochure several times since then. In 2007, WACKER issued a new version in German and English. On request, we supply it for free to universities, high schools and vocational colleges around the world. It provides teachers and students with over 30 chemical experiments, ranging from silicone fluids and defoamers to sealants, adhesives and cyclodextrins. With these industrially relevant experiments, WACKER is making a major contribution to science teaching. We have produced 2,300 of the new kits.

With our WACKER experiment kit for schools, we aim to generate enthusiasm for science among children and teenagers. Franziska Moll, trainee teacher attending university in Munich, helps us make the experiments more attractive for high-school students.





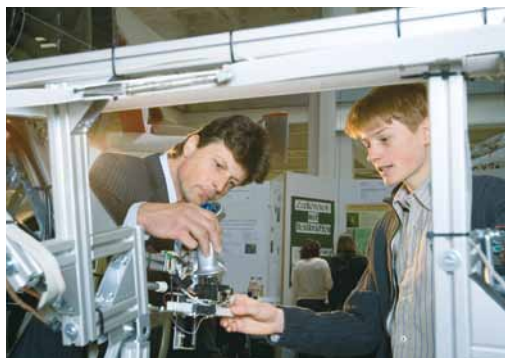
WACKER supports *Science Lab*, a private-sector educational initiative that awakens children's interest in science and technology at an early age. At all our German locations, we finance one-day *Science Lab* seminars for elementary-school and kindergarten teachers. We also donate research kits that help seminar participants cover topics such as biology, chemistry, physics, astronomy and the earth sciences in a kid-friendly way. Our Burghausen, Munich, Freiberg, Nünchritz and Stetten sites supported several local kindergartens and an elementary school in this way between 2006 and 2008.

Since 1998, WACKER has supported Germany's *Young Scientists* competition, which promotes young people's interest in science. Every two years (incl. 2008), we organize and sponsor the Bavarian state-wide competition. WACKER has also supported Dresden's regional competition since 2007.

All WACKER sites help high-school students prepare for a profession. At career days and student workshops, WACKER staff and trainers cover chemical-sector jobs, practical project management, and presentation skills. In the period under review, we organized workshops at Burghausen's Aventinus high school, using the slogan "Vision 2020 – Students Thinking Outside the Box." Working in teams, the students spent a week coming up with innovative product ideas and learning how to present them professionally. WACKER employees help schools develop by offering their services as guest speakers on teacher training seminars and as appraisers.

In Michigan (USA), Wacker Chemical Corporation supports the *Essential2Lenawee* project – a multi-company initiative to encourage high-school graduates to pursue a career in the chemical industry. The project initiators provide Lenawee County schools with an interactive DVD and a science game.

In the reporting period, our employees at WACKER Greater China supported an elementary school in an impoverished mountain region. Their efforts helped build a 2,000-book library there. Additionally, they donated two computers and stationery supplies. The school children come from nearby villages and their parents, mostly simple hill farmers, cannot afford to buy school materials.



Scientists talking shop: Dr. Fridolin Stary (senior vice president of WACKER's Corporate R&D; left) talking to a budding researcher during the *Young Scientists* competition. WACKER has supported this Germany-wide competition since 1998.

## Universities

WACKER maintains regular contact with universities around the globe. Our specialists are frequently invited to hold talks at universities and institutes, while academics often visit our sites. Furthermore, graduates can come to WACKER to do their final theses or work as interns and temporary employees.

In 2008, WACKER launched a summer course in Burghausen for process/chemical engineering graduates. The course's aim was to provide insights into an engineer's tasks at a chemical company. For several years, WACKER has worked with selected universities to hold project-planning courses for biochemical and chemical engineering students nearing graduation. In 2008, we organized a course with Dortmund university, asking participants to design a dimethyldichlorosilane production plant. These courses give graduates the chance to apply what they have learned at university. At the same time, they forge closer ties between WACKER and academia, increasing our company's exposure to students and enabling us to get to know potential recruits at work.

In July 2008, WACKER and the Technical University of Munich (TUM) opened an Institute of Silicon Chemistry in Garching (near Munich). The institute is part of the WACKER Chair of Macromolecular Chemistry at the TUM. WACKER has endowed the Chair and Institute of Silicon Chemistry with €6 million, securing the entire financing for at least six years. Equipped with state-of-the-art lab facilities, the 500-m<sup>2</sup> institute offers ideal conditions for interdisciplinary research into macromolecular organosilicon compounds. More specifically, the institute's research will concentrate on organofunctional silicon compounds and silicons. Funding primarily targets projects at the crossroads between physics, biotechnology and the material sciences.

By pioneering this collaboration, WACKER and the TUM are helping to boost Germany's attractiveness as a research location. WACKER also supports about 50 doctoral candidates with these funds.

In 2007, we presented the WACKER Silicone Award for the twelfth time. It stands alongside the Kipping Award as silicon chemistry's most important international accolade. The €10,000 prize went to Prof. Yitzhak Apeloig, president of the Technion - Israel Institute of Technology in Haifa. The award was in recognition of Prof. Apeloig's pioneering theoretical and experimental work in organosilicon chemistry.

In 2007, Prof. Yitzhak Apeloig (center), president of the Technion - Israel Institute of Technology in Haifa, received the renowned WACKER Silicone Award from Dr. Peter-Alexander Wacker (left), Wacker Chemie AG's former president and CEO and current Supervisory Board chairman, and Dr. Christoph von Plöth, president of WACKER SILICONES.





### Politics and Non-Governmental Organizations

In our dealings with interest groups, we always act in a spirit of transparency and trust. The same applies to discussions with politicians and NGO representatives. At our sites, we regularly hold talks and tours, and offer expertise when required. WACKER does not have its own political representatives.

Our experts are active in diverse working groups and committees set up by the CEFIC (European Chemical Industry Council), the ACC (American Chemistry Council) and Germany's VCI (chemical industry association). The topics we deal with here range from plant/work-place safety, environmental protection and product safety through to nanotechnology and white biotechnology.

In 2007, companies in the Bavarian Chemical Triangle (including WACKER) founded ChemDelta Bavaria, an initiative to enhance the region's competitiveness, in harmony with its inhabitants and environment. The Bavarian Chemical Triangle lies between Trostberg, Aschau and Burghausen and is a key chemical/petrochemical industrial area. WACKER's largest site, Burghausen, is a cornerstone of this triangle. ChemDelta Bavaria companies employ some 25,000 people and secure a further 50,000 jobs in southeastern Bavaria. To safeguard and increase regional employment levels, ChemDelta is calling for infrastructure improvements, including the expansion of the railroad network and the A 94 Munich – Passau autobahn.

### Children

Aside from education and science, WACKER is also very active in social projects for children and young people. Since 2007, we have supported a German charity, *Die Arche*. It mainly helps five- to twelve-year-olds from socially disadvantaged families in several German cities. In 2007 and 2008, WACKER donated €100,000 per year to support and expand this charity's work in Munich. Here, *Die Arche* helps 80 to 100 children daily with warm meals, homework assistance and extracurricular activities, as well as advice and counseling. Thanks to WACKER's donations, the Munich branch has been able to enhance its youth projects by expanding its premises and hiring a new social worker.



WACKER doesn't just support *Die Arche* (a German children's charity) financially – a group of WACKER employees renovated the premises of the charity's Munich branch in their spare time.

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### Disaster Aid

Following December 2004's devastating tsunami, we set up the WACKER relief fund. Its board of directors and board of trustees work on an honorary basis, supplying unbureaucratic and long-term assistance to the victims of natural disasters. WACKER has always made a point of matching its employees' donations.

In the Sri Lankan community of Kosgoda, WACKER's relief fund and another German organization (the Augsburgischer Malteser Hilfswerk) jointly built a school block, where teaching began in 2006. As well as supporting construction work, our relief fund supplied extra financing in 2007 and 2008 to cover school uniforms, teaching materials and six teachers' salaries. As a result, we funded the education of 75 children in 2007 and 55 in 2008 (from grade two through to grade five). The classrooms we financed are part of an educational complex in a large UNESCO residential project. Since sustainable aid is one of our key objectives, we intend to continue sponsoring the Kosgoda school in the years to come.

Another Sri Lankan project we support is at Pilane, where the *Little Smile* charity is having a vocational center built. 2007 saw the completion of the center's first building. Named after WACKER's relief fund, this main building houses classrooms and administrative offices, as well as areas to display and sell trainees' handicraft and art work. In 2008, work started on constructing workshops and a hostel for trainees and trainers.

In May 2008, news of an earthquake in China's southwestern Sichuan province shocked the world. WACKER donated €50,000 to the WACKER relief fund as emergency aid and then matched the sum given by employees. In total, donations for the earthquake victims exceeded €100,000. The relief fund and our WACKER Greater China subsidiary decided to use the money to fully rebuild a 240-student Sichuan school. To be renamed "Fujia Village WACKER Primary School," it should be ready in time for the 2009/2010 school year.

# Outlook and Goals

...// Intercultural specialist

Dan Ma  
Process Support  
Technical Procurement & Logistics



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# 08

The present sustainability report relates to 2007 and 2008. In this section, we report on current issues from 2009 onward.

## Outlook

### Sustainability Management

In 2009, WACKER reviewed its sustainability-management structures and processes, adapting them to the company's continuing globalization. In the future, Corporate Development will be responsible for groupwide coordination of WACKER's sustainability initiatives (including Responsible Care® and the Global Compact).

Under German law, export-control and hazardous-materials officers must be appointed. In 2009, we made them Group coordinators. They define WACKER standards in the form of goals and processes, which must be implemented by all corporate sectors and sites worldwide. The Group coordinators for export control and hazardous materials report to the CFO, who also holds the position of Group export officer.

WACKER coordinates our operational processes with the help of an integrated management system. To obtain independent third-party confirmation that our Group uniformly meets minimum quality and environmental-protection standards, we are aiming for Group certification to ISO 9001 (quality) and ISO 14001 (environmental protection) by 2011, instead of the former individual certifications. Additionally, we intend to introduce a work and plant safety management system for all sites and have it certified to the internationally recognized OHSAS (Occupational Health and Safety Assessment Series) system in the next few years.

Improving productivity will remain a key topic at WACKER in the future. In 2009, we opened an academy as part of our Wacker Operating System (WOS) productivity program. The WOS ACADEMY trains employees in productivity methods, promotes exchange of knowledge between project teams and assists in change processes.

### Environmental Protection and Logistics

In 2007, we introduced our POWER PLUS energy-conservation project at Burghausen and Nünchritz (Germany) – our two sites with the highest energy consumption. The goal is to reduce specific energy consumption by 10% by the end of 2009.

At the Nünchritz site, preparations for a clean-up of contaminated groundwater started in 2009. We have already performed preliminary groundwater-remediation tests and will carry out pilot tests on groundwater runoff to check to what extent pollutants can be degraded with the help of bacteria. The groundwater contamination due to organic solvent residues predates WACKER's takeover of this production site.

## 08

We set ourselves goals – both for our business and for our sustainability efforts. Employees like Dan Ma ensure that existing processes and applications are implemented worldwide. Understanding different cultures is a key success factor.



Prompted by the planned public handling terminal for intermodal freight transport, we are designing a new freight gate at the northern part of the Burghausen site. The gate will improve traffic flow and eliminate the nuisance of heavy goods traffic to residents. It will be ready at the same time as the terminal.

Expansion of the A 94 Munich to Passau autobahn – eagerly anticipated by the companies in Bavaria's Chemical Triangle – is progressing well. In spring 2009, work started on the section between Forstinning and Pastetten (distance: 6 km), scheduled for completion by late 2011. In August 2009, work began on the 4.3-km Ampfing to Heldenstein section, due to be finished by the end of 2012.

The only stretches left to complete the autobahn between Munich and the Bavarian Chemical Triangle run from Pastetten to Dorfen (17.4 km) and Dorfen to Heldenstein (14.9 km). Both projects are awaiting planning approval.

The Bavarian Chemical Triangle's second major infrastructure project, the electrification of the rail route to Munich and its expansion to two tracks, is making progress, too. Summer 2008 saw work start on the Ampfing to Mühldorf section, due to open in 2010. The bottleneck is the section between Mühldorf and Tüßling, where three rail lines meet; around 1% of German freight traffic passes over these tracks. Planning must start immediately if the 2014/2015 deadline envisaged by German Rail is to be met.

#### **Workplace, Plant and Transport Safety**

After its 2007 launch across our German sites, we expanded our *Fresh Impetus for Work Safety* initiative in 2009 to include sites outside Germany. Our aim is to further reduce our already low accident frequency (number of workplace accidents with missed workdays per one million hours worked) from 3.8 in 2007 to 1.9 by the end of 2011.

#### **Employees**

In 2009, we started to analyze age patterns at our non-German sites, as part of our demography project. We will use the results to derive necessary measures, just as we did at our German sites.

Age-pattern investigations in Germany prompted us to expand our existing employee-integration management policy from 2009 onward. We want to help employees who have been unable to work for a long time to return to their jobs and offer those with permanent health restrictions positions that are optimally suited to their abilities.

In another program, we are developing measures to continue attracting promising young people. WACKER is also setting up a talent pool for professions critical to success, such as engineering.

After many years of growth with sales and earnings records, WACKER is facing a period of widespread economic uncertainty. Not immune to the significant global economic downturn, we have implemented a series of measures to limit its impact on our company. We decided to cut budgets, for example, and introduced short-time work. In 2009, we also temporarily shut down production plants in both Germany and abroad, and lowered employee numbers.

In 2009, management and employee representatives also agreed on other measures to lower personnel expenses, including a cut in variable salary components. In the case of the Executive Board and upper management, regular compensation has been reduced, too.

### **Society**

In times of economic crisis, we make a special effort to fulfill our responsibility to society and stand by our long-term partnerships. Take, for example, *Die Arche* – a German charity. WACKER again donated €100,000 to the charity in 2009. *Die Arche* aims to use this money to further its work with young people.

As a result of demographic analyses, we have set ourselves ten strategic goals for continuing to attract and retain qualified employees. Our efforts include generating enthusiasm for science among children and teenagers. We want to enhance our experiment kit for schools over the coming years. In a pilot project with Munich's Ludwig-Maximilian University, we are developing student-friendly instructions for high-school experiments alongside hand-outs for teachers.



## Goals

We want to measure our actions, for our own benefit and that of the general public. That is why we set ourselves specific goals and report on whether and to what extent we have reached them. Our goals are derived from WACKER's corporate strategy. We adapt our goals to the requirements of markets, political circumstances and the general public.

### Goals 2003 – 2006

#### Production

Goal	Location	Deadline	Implementation Status
Continue to increase productivity over the entire supply chain. We use the Wacker Operating System (WOS) program to implement and monitor these measures.	Groupwide	Ongoing	The goal was achieved. The first cycle of the WOS program, from 2005 – 2007, focused on specific operating costs. During this period, WACKER was able to cut operating costs by as much as 20%. The costs of raw materials, packaging and freight have been included in productivity improvements since 2008.

#### Product Safety

Goal	Location	Deadline	Implementation Status
Preregistration by the due date of all WACKER chemicals affected by REACH legislation	Groupwide	–	The goal was achieved. In accordance with REACH deadlines, phase-in substances were preregistered in 2008. This chiefly included substances listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) and substances that were manufactured at least once in the 15 years before REACH came into force, but were never placed on the market. We preregistered over 7,000 substances with the European Chemicals Agency (ECHA) and so met the deadline for completing the first step of REACH implementation.

## Environmental Protection

Goal	Location	Deadline	Implementation Status
Reduce leachate from our landfill sites by 30%	Burghausen, Germany	2008	The goal was achieved. Leachate from our landfill sites has been reduced by around 45% (from 31,698 m³ in 2006 to 17,497 m³ in 2008).
Reduce specific energy consumption by 10% (relative to the target figure for 2006) by means of energy-saving programs, energy audits and increased energy efficiency	Burghausen, Germany	2009	Intermediate result: the Burghausen site's specific energy consumption was reduced by around 5% between 2006 and the end of 2008.
Continue soil-air extraction	Burghausen, Germany	Ongoing	To remediate legacy contamination, WACKER has been extracting air from the Burghausen site's soil since 1989. This predominantly involves extracting highly volatile halogenated hydrocarbons from the soil and incinerating them to render them harmless. This measure was continued as planned. By the end of 2008, 1,873 metric tons of chlorinated hydrocarbons (CHCs) had been removed.
Save 1,000 metric tons of hydrogen chloride and 1,100 tons of sodium hydroxide by establishing closed material loops in a base chemicals factory.	Burghausen, Germany	2008	The goal was surpassed. 1,700 tons of hydrogen chloride and 1,800 tons of sodium hydroxide were saved per year at full capacity.

## Sustainability Management

Goal	Location	Deadline	Implementation Status
Certification of Wacker Metroark Chemicals to ISO 9001	Kolkata	2007	The goal was achieved. The certificate was awarded in December 2007.

## Workplace Safety

Goal	Location	Deadline	Implementation Status
Significantly reduce accident frequency (relative to the 2005 figure of 4.3)	Groupwide	2008	The goal was achieved: groupwide, there were 3.7 workplace accidents with missed workdays per 1 million hours worked in 2008. The accident frequency thus fell by 14% compared to 2005.
Markedly improve the reportable accident rate per thousand employees (relative to the 2005 figure of 1.7)	Groupwide	2008	The reportable accident rate per thousand employees in 2008 was 1.7 and thus the same as in 2005. In 2007, we launched <i>Fresh Impetus for Work Safety</i> , a global initiative to minimize accidents. By means of training courses and motivation campaigns, the initiative (spread out over several years) aims to raise employees' awareness of safe workplace behavior and further lower the already low accident figures. In comparison, the German chemical industry's insurance association (BG Chemie) quoted a reportable accident rate per thousand employees of 14.69 for the industry in 2008.

## Corporate Citizenship

Goal	Location	Deadline	Implementation Status
Promote schoolchildren's knowledge of chemistry and the environment: revise the content of the WACKER experiment kit for schools – "Learning by Doing – School Experiments with WACKER Silicones"	Groupwide	2008	The goal was achieved. In early 2008, WACKER unveiled its revised kit to the public. The 2,300 kits for universities, high schools and vocational colleges have all been snatched up.

## Health Protection

Goal	Location	Deadline	Implementation Status
Prevention of drug and alcohol abuse – train all newly appointed WACKER executives in the early recognition of such problems in employees. Offer refresher courses every five years to all executives who have already attended a seminar.	Domestic Group	Ongoing	Training courses for executive personnel were held at all German sites. The target of having over 90% of our executives trained was reached. The refresher courses took off as planned and are being held on a regular basis. The program is ongoing.
Establish uniform health protection processes	Groupwide	Ongoing	The goal was achieved. WACKER's health protection processes have been modeled in the Group's process map (software). Moreover, WACKER adopted a new groupwide regulation in 2008. It specifies the health-protection framework for WACKER sites worldwide and regulates the reporting and information system. It also introduced uniform health objectives and basic standards groupwide.

## Employees

Goal	Location	Deadline	Implementation Status
Initial age-pattern analyses for WACKER's demography project	Groupwide	2006	The goal was partially achieved. WACKER has been analyzing the Domestic Group's age pattern on an annual basis since 2006. Since 2009, the analyses have been extended to sites outside Germany.
Use the initial age-pattern analyses to derive recruitment, training and retirement strategies	Groupwide	From 2007	The goal was achieved. WACKER has been addressing demographic change intensively since 2006. We have specified ten goals to maintain our long-term innovative and competitive strength. Our measures, which we are implementing stepwise, range from health programs to training courses, tailored to the various stages of our employees' careers. The aim is career flexibility. We want to remain attractive to current and future employees via our exemplary social benefits and performance-oriented compensation.
Alternately repeat the age-pattern analyses and review the derived strategies	Groupwide	2010, then every three to five years	WACKER has been analyzing the Domestic Group's age pattern on an annual basis since 2006. Since 2009, the analyses have been extended to sites outside Germany.
Combine all existing corporate policies in a single document	Groupwide	2008	The goal was partially achieved: a draft has been drawn up and will be discussed with the departments in charge in 2009 and then approved by the Executive Board.

## New Goals

### Environmental Protection

At WACKER, environmental protection begins as early as the product-development and plant-planning stages. Our aim is to minimize emissions. Our environmental-protection measures often go beyond what is legally required. WACKER does not set any groupwide goals for reducing emissions, but the individual sites and business divisions set annual targets. These relate directly to the emissions of the individual sites and the requirements of the neighborhood and environment.

Goals	Corporate Entity	Deadline
Reduce specific energy consumption by 10% (referenced to 2006)	Burghausen and Nünchritz	2009
Certify key production subsidiaries as national companies with low environmental impact (by the Environmental Protection Bureau, China): Wacker Chemicals (Zhangjiagang) Co., Ltd. Wacker Chemicals Fumed Silica (Zhangjiagang) Co., Ltd. Wacker Polymer Systems (Nanjing) Co., Ltd.	WACKER Greater China	2010
Increase the amount of reusable containers used as shipping packaging for 300 mm wafers from 20 to 30% (relative to 2008 figure)	Siltronic sites in Burghausen and Singapore	2010
Expand annual polysilicon capacity to 35,000 metric tons. Used in photovoltaic modules, this amount of silicon can prevent around 200 million tons of carbon dioxide over the lifespan of the modules (up to 30 years).	Groupwide	2011

### Workplace Safety

Goals	Corporate Entity	Deadline
Reduce accident frequency (number of accidents with missed workdays per one million hours worked) from 3.8 (in 2007) to 1.9	Groupwide	2011
Certify all WACKER sites to the internationally recognized OHSAS work safety management system	Groupwide	2011

### Employees

Goals	Corporate Entity	Deadline
Demography: expand age-pattern analyses and determine the need for action at our sites outside Germany	Sites outside Germany	2010
Set up a program for attracting promising young people ("Talent Relationship Management") and a pool of talent for functions critical to success	Domestic Group	2010
Implement groupwide standards on occupational health and safety (13 areas of activity); checked through audits	US and Asian sites	USA: 2009 Asia: 2010

## Product Safety and Product Stewardship

Goals	Corporate Entity	Deadline
Evaluate substance safety and register substances > 1,000 metric tons a year as part of REACH efforts	Groupwide	2010
Implement the European regulation on the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)	Groupwide	2010

## Sustainability Management

Goals	Corporate Entity	Deadline
Certify the Group to ISO 9001 (quality) and ISO 14001 (environment); Group certification <sup>1</sup>	Groupwide	2011
Employee Suggestion Scheme: reach a total benefit from suggestions of at least €10 million per year	Domestic Group	From 2009 to 2011
Employee Suggestion Scheme: increase the participation rate (number of submitters per 100 employees) from 28 to 50% (referenced to 2008)	Domestic Group	By 2011


































<sup>1</sup> Includes all business divisions (key production sites) and corporate departments.






























## Further Information

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<b>4.</b>	<b>Governance, Commitments and Engagement</b>		
	<b>Governance</b>		
4.1	Governance structure	■■■	12
4.2	Independence of the Supervisory Board chairman	■■■	12
4.3	Governance body and/or independent members of management	■■■	12
4.4	Mechanisms for shareholders and employees to provide recommendations to the Executive Board or Supervisory Board	■■■	12, AR 39/40
4.5	Linkage between Executive Board compensation and company performance	■■■	AR 202-204
4.6	Mechanisms in place for the governance bodies to ensure avoidance of conflicts of interest	■■■	22/23
4.7	Expertise of the governance bodies in sustainability issues	■■■	19/20
4.8	Mission statements, company values and codes of conduct	■■■	16-19, 22
4.9	Procedures of the Executive Board and Supervisory Board for overseeing sustainability performance	■■■	19, 72
4.10	Processes for evaluating the performance of the Executive Board	■■■	AR 202-204
	<b>Commitments to External Initiatives</b>		
4.11	Implementation of the precautionary principle	■■■	16-18
4.12	Support of external initiatives	■■■	17/18, 38
4.13	Principal memberships in industry and business associations	■■■	17/18, 48/49, 66/67, 69

		Degree of Compliance	Page No.
	<b>Stakeholder Engagement</b>		
4.14	Stakeholder groups engaged by the organization		24/25
4.15	Selection of stakeholders		24/25
4.16	Approaches to stakeholder dialog (type/frequency)		24/25
4.17	Statements on key concerns raised by stakeholders		24/25
<b>5.</b>	<b>Performance Indicators</b>		
	<b>Economic</b>		
	Management approach		10, 19/20
	<i>Aspect: Business Performance</i>		
EC1	Direct economic value generated and distributed		Front cover, 64
EC2	Financial implications of climate change		29, 39, 41
EC3	Company's defined benefit plan obligations		59/60
EC4	Financial assistance from government		41, 48
	<i>Aspect: Market Presence</i>		
EC6	Spending on local suppliers		66
EC7	Senior management hired from the local community	N/A	
	<i>Aspect: Indirect Economic Impacts</i>		
EC8	Infrastructure investments and services provided for public benefit		64, 69/70
	<b>Environmental</b>		
	Management approach		19/20, 28
	<i>Aspect: Materials</i>		
EN1	Materials used by weight/volume		29
EN2	Percentage of materials used that are recycled input materials		34
	<i>Aspect: Energy</i>		
EN3	Direct energy consumption by primary energy sources		31
EN4	Indirect energy consumption by primary energy sources		31
EN5	Energy savings		29/30
EN6	Energy-efficient products and services		41-44
	<i>Aspect: Water</i>		
EN8	Total water withdrawal by source		33
	<i>Aspect: Biodiversity</i>		
EN11	Use of land in protected areas		35/36
EN12	Significant impacts of activities in protected areas		35/36, 40/41
EN14	Strategies on protecting biodiversity		35/36
	<i>Aspect: Emissions, Wastewater and Waste</i>		
EN16	Direct and indirect greenhouse gas emissions		31
EN17	Other relevant greenhouse gas emissions (e.g. caused by business trips)		32
EN18	Reduction of greenhouse gases		30
EN19	Emissions of ozone-depleting substances by weight		32
EN20	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions by weight		31
EN21	Wastewater discharge		33
EN22	Waste by type and disposal method		34
EN23	Releases of hazardous substances by number and volume		50
	<i>Aspect: Products and Services</i>		
EN26	Initiatives to mitigate environmental impacts of products and services		40, 42-44
EN27	Percentage of products whose packaging is reused		34
	<i>Aspect: Compliance</i>		
EN28	Fines/sanctions for non-compliance with environmental regulations		None

		Degree of Compliance	Page No.
	<b>Social Performance</b>		
	<b>Labor Practices</b>		
	Management approach		19/20, 46, 56, 61/62
	<b>Aspect: Employment</b>		
LA1	Breakdown of workforce by employment type and region		52, 59
LA2	Workforce fluctuation by age group, gender and region		61
	<b>Aspect: Labor/Management Relations</b>		
LA4	Percentage of employees covered by collective bargaining agreements		61
LA5	Minimum notice period(s) regarding significant operational changes		61
	<b>Aspect: Occupational Health and Safety</b>		
LA7	Injuries, absentee rates and work-related fatalities		47, 62
LA8	Risk control and programs with respect to serious diseases		46, 62
	<b>Aspect: Training and Education</b>		
LA10	Training hours by employee category		54
LA11	Skills management and lifelong learning		52-57
LA12	Performance and career development reviews		53/54
	<b>Aspect: Diversity and Equal Opportunities</b>		
LA13	Composition of senior management and employee structure (e.g. age/ gender/culture)		56-58
LA14	Compensation by gender and employee category		58
	<b>Human Rights</b>		
	Management approach		18-20, 24
	<b>Aspect: Business Practices</b>		
HR1	Investment decisions that include human rights clauses or screening		
HR2	Percentage of suppliers that have undergone screening on human rights and action taken		24
	<b>Aspect: Non-Discrimination</b>		
HR4	Incidents of discrimination and action taken		18/19, 57
	<b>Aspect: Freedom of Association and Collective Bargaining</b>		
HR5	Businesses that may be at significant risk		18, 61
	<b>Aspect: Child Labor</b>		
HR6	Businesses with significant risk and action taken		18, 24
	<b>Aspect: Forced Labor</b>		
HR7	Businesses with significant risk and action taken		18, 24
	<b>Society</b>		
	Management approach		19/20, 64
	<b>Aspect: Community</b>		
SO1	Policy to manage impacts on local communities		64/65
	<b>Aspect: Corruption</b>		
SO2	Percentage and number of business areas analyzed		22/23
SO3	Percentage of employees trained in corruption prevention		23
SO4	Action taken in response to incidents of corruption		23
	<b>Aspect: Public Policy</b>		
SO5	Public policy positions and participation in public policy development and lobbying		69
	<b>Aspect: Anti-Competitive Behavior</b>		
SO7	Legal actions for anti-competitive behavior		23
	<b>Aspect: Legal Compliance</b>		
SO8	Fines/sanctions for non-compliance with regulations		None

		Degree of Compliance	Page No.
	<b>Product Stewardship</b>		
	Management approach	■	19/20, 38-40
	<i>Aspect: Customer Safety and Health</i>		
PR1	Product life cycle stages for which health and safety impacts are assessed	■	38-40
	<i>Aspect: Products and Services</i>		
PR3	Principles/measures related to product information and labeling	■	38
PR5	Customer satisfaction	■	23/24
	<i>Aspect: Advertising</i>		
PR6	Programs for compliance with laws and voluntary codes related to advertising	N/A	
	<i>Aspect: Legal Compliance</i>		
PR9	Significant fines for non-compliance with laws and regulations concerning the use of products and services	■	None

■ This indicator is fully complied with.

■ This indicator is partially complied with.

□ This indicator is currently not complied with.


N/A not applicable

AR = Annual Report 2008

Additional indicators are printed in grey.

Every single core indicator is presented. Gaps in numeration need to be attributed to the fact that only relevant additional indicators are presented in the index.

#### GRI Application Level

	C	C+ <sup>1</sup>	B	B+ <sup>1</sup>	A	A+ <sup>1</sup>
Self Declared						
Third Party Checked						
GRI Checked						

<sup>1</sup> +: Report Externally Assured.

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## B

**Biotechnology...//** Biotech processes use living cells or enzymes to transform and produce substances. Depending on the application, a distinction is made between red, green and white biotechnology. Red biotechnology: medicinal-pharmaceutical applications. Green biotechnology: agricultural applications. White biotechnology: biotech-based products and industrial processes, e.g. in the chemical, textile and food industries.

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## C

**Cysteine...//** Cysteine is a sulfur-containing amino acid. It belongs to the non-essential amino acids because it can be formed in the body. It is used, for example, as an additive in food and cough mixtures. Cysteine and its derivatives are a business field at WACKER FINE CHEMICALS.

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## C

**Carbon dioxide (CO<sub>2</sub>)...//** This gas naturally constitutes 0.04% of air. Carbon dioxide is generated during the combustion of coal, natural gas and other organic substances. As a greenhouse gas in the atmosphere it contributes to global warming. Since the start of industrialization (circa 1850), its concentration in air has risen from approx. 300 to 385 ppm (parts per million). This value is increasing by around 2 ppm every year.

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### Chemical oxygen demand (COD)...//

COD is a measure of wastewater contamination. This parameter defines the amount of oxygen necessary to fully oxidize all organic material in wastewater.

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## D

### Dispersible polymer powders...//

Created by drying dispersions in spray or disc dryers. VINNAPAS® polymer powders from WACKER are recommended as binders in the construction industry, e.g. for tile adhesives, self-leveling compounds and repair mortars. The powders improve adhesion, cohesion, flexibility and flexural strength, as well as water-retention and processing properties.

**Distillation...//** Distillation is used to separate the components of liquid mixtures. The process is based on differences in the liquids' boiling points.

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## G

### Greenhouse Gas (GHG) Protocol...//

The GHG Protocol is an internationally recognized instrument for quantifying and controlling greenhouse gas emissions. The standards outlined in the GHG Protocol have been jointly developed by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI) since 1998. The GHG Protocol specifies how an organization should calculate

its greenhouse-gas emissions and how emission-reducing programs should be conducted.

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## H

**Hydrogen chloride (HCl)...//** The chemical industry uses HCl to generate valuable intermediates from organic and inorganic raw materials. The colorless gas dissolves in water to form hydrochloric acid.

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## S

**Silica...//** Collective term for compounds with the general formula SiO<sub>2</sub>·nH<sub>2</sub>O. Synthetic silicas are obtained from sand. Based on their method of production, a distinction is made between precipitated silicas and pyrogenic silicas (such as WACKER HDK®). Pyrogenic silica is generated by flame hydrolysis and has an almost pore-free surface. Pyrogenic silica is used as reinforcing filler for rubber compounds and sealants, matting of paints, and toothpaste additives.

**Silicon...//** After oxygen, the most common element on the planet. In nature, silicon occurs without exception in the form of compounds, chiefly silicon dioxide and silicates. Silicon is obtained through energy-intensive reaction of quartz sand with carbon and is the most important raw material in the electronics industry.

**Silicone...//** General term used to describe compounds of organic molecules and silicon. According to their areas of application, silicones can be classified as fluids, resins or rubber grades. Silicones are characterized by a myriad of outstanding properties. Typical areas of application include construction, the electrical and electronics industries, shipping and transportation, textiles and paper coatings.



**Chlorosilane...//** A compound of silicon, chlorine and hydrogen. In the semiconductor industry, mainly trichlorosilane is used to make polysilicon and for the epitaxial deposition of silicon.

**Combined heat and power plant...//** Combined heat and power (CHP) plants generate both electricity and useful heat. With this system, the input energy (e.g. fuel oil or natural gas) can be used much more efficiently than in conventional systems with separate facilities. Thanks to this conservation of primary energy, CHP plants emit significantly less carbon dioxide than conventional power plants.

**Cyclodextrins...//** Cyclodextrins belong to a family of cyclic oligosaccharides (i.e. ring-shaped sugar molecules). Cyclodextrins are able to encapsulate fragrances or release active ingredients at a controlled rate. WACKER FINE CHEMICALS produces and markets cyclodextrins.

## E

**Ethylene...//** Ethylene is a colorless, highly reactive gas and a key chemical-industry raw material.

**Exterior insulation and finish systems (EIFS)...//** Systems for thermally insulating buildings and thus for increasing energy efficiency. EIFS are made up of a combination of materials: adhesive mortar, insulation board, base coat, glass fiber mesh and finish coat. VINNAPAS® polymer powders from WACKER ensure that the insulation material bonds firmly to

the mortar and finish coat. As a result, the insulating system offers greater durability and much more resistance to weathering and wear.

## O

**Ozonation...//** Wastewater treatment method to oxidatively degrade pollutants with the help of ozone (O<sub>3</sub>), a highly reactive oxygen compound.

## P

**Polysilicon...//** Hyperpure polycrystalline silicon from WACKER POLYSILICON is used for manufacturing wafers for the electronics and solar industries. To produce it, metallurgical-grade silicon is converted into liquid trichlorosilane, highly distilled and deposited in hyperpure form at 1,000 °C.

**Primary energy...//** Primary energy is obtained from naturally occurring sources such as coal, gas or wind. Secondary energy, in contrast, is derived from primary energy via a transformation process (which often involves energy losses); examples include electricity, heat and hydrogen.

**Silicon wafer...//** A silicon wafer is a circular disc with a thickness of between approximately 200 and 800 µm, and is used by the semiconductor industry for the manufacture of semiconductor devices, i.e. integrated circuits and discrete components.

**Siloxane...//** Systematic name given to compounds comprising silicon atoms linked together via oxygen atoms and with the remaining valences occupied with hydrogen or organic groups. Siloxanes are the building blocks for the polymers (polysiloxane and polyorganosiloxane) that form silicones.

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