

# Siemens Stiftung Annual Report 2011



# Siemens Stiftung **Annual Report 2011**

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# 1

## For the public good



Dear friends and partners of the Siemens Stiftung,

“Personal achievements ... should be recognized only by the benefit they bring to others. It is by providing this public benefit that they become a service.” Werner von Siemens wrote these words in a letter to an unknown recipient in 1872. His message was heard – and it defines the vision that guides both Siemens and the Siemens Stiftung to this very day. The objective then, as now, was to encourage people to seek their own answers to the great questions of the day.

The Siemens Stiftung starts from this core idea as it strives to empower people to shape their own destiny and take a hands-on approach to overcoming obstacles. The central theme of “Encourage. empowering people” emphasizes personal initiative and responsibility. The foundation’s projects at home in Germany and internationally throughout Europe, Latin America, and sub-Saharan Africa support the development of basic services and promote education and culture.

The mission of the Siemens Stiftung is to identify promising, sustainable models of social entrepreneurship dedicated to the public good and work with local partners to further their development. The Siemens Stiftung believes very strongly in this mission to promote social entrepreneurs. The aim of entrepreneurship here is to empower people to create their own economic livelihood and thereby improve the living conditions of themselves and their communities.

In this way, the Siemens Stiftung seeks to open up opportunities for social and economic inclusion. Pooling the

experience and knowledge won in Latin America and Africa can yield further insights, a collaborative approach the foundation also encourages and supports. Training and education – those are key underlying themes of all projects.

Far-reaching and sustainable change requires the cooperation of many parties. The Siemens Stiftung sees itself as a bridge-builder, putting forward model projects and plans of actions that initiate and expand the dialog among the business, government, and scientific communities in order to strengthen social sustainability and the processes that transform societies. Our foundation’s initiatives provide the impetus and serve as examples for strengthening social structures collectively and building networks that can sustain and multiply the projects.

During the past fiscal year, the Board of Trustees fulfilled its mandate under the law and as set forth in the foundation charter. The Board of Trustees was briefed during its meetings by the Board of Directors on the progress of the foundation’s work, strategic planning, and the results of ongoing projects. The Board of Trustees accepted the proposals of the Board of Directors following thorough consultation and planning.

Trust is the foundation of any long-term cooperation. Transparency and communication on equal terms among all partners are hallmarks of how the Siemens Stiftung operates. The foundation’s network is continually expanding, its project partnerships are gaining momentum, and the results from the early years show that the foundation

is well positioned to continue these trends into the year ahead.

The Board of Trustees thanks the Board of Directors and all Siemens Stiftung employees for their unwavering commitment and motivation.

On behalf of the Board of Trustees,

**Peter Löscher**

President of the Siemens Stiftung Board of Trustees  
Chief Executive Officer of Siemens AG

Munich, February 28, 2012

## 2

# Weathering the storm with stability and sustainability



**Dr. Stephan Heimbach**

Chief Executive Officer,  
Siemens Stiftung

Head of Corporate Communications and  
Government Affairs, Siemens AG



**Ulrike Susanne Wahl**

Managing Director

Assistant CEO,  
Siemens Stiftung



**Georg Bernwieser**

Chief Financial Officer,  
Siemens Stiftung

Head of Corporate Finance Reporting 61,  
Shareholder Controlling, Siemens AG

Dear friends and partners of the Siemens Stiftung,

The long-term viability of our society depends on people who confront global challenges with courage, creativity, and a sense of responsibility to formulate clear answers. We must work together – not only to alleviate the symptoms but above all to fight the sources of poverty, unequal opportunities, and dwindling resources. The Siemens Stiftung is committed to making a real contribution through all its efforts.

The dominant activities in 2010/2011, the third fiscal year of the Siemens Stiftung, were the establishment of network-based partnerships, a renewed and reinvigorated commitment to social entrepreneurship, and educational initiatives in sub-Saharan Africa, Latin America, and Europe, including here in Germany. The value of this strategic and organizational focus in the past year by the Board of Directors and employees is evident.

The interdisciplinary projects of the Siemens Stiftung are based on the themes of stability, personal initiative, and independence. The fusion of charitable and entrepreneurial thinking, which generates promising synergies with traditional developmental partnerships, makes particular sense to us as a corporate foundation. That's why the Siemens Stiftung has made it its mission to identify models of social entrepreneurship for the public good and work with partners to develop and scale them. The primary goal here is to maximize the community impact – that is, improve the overall quality of life and the social structures. This

in turn requires working hand in hand with the local population with the support of experienced partners to find long-term solutions to social problems.

The Siemens Stiftung conducted an in-depth dialog with business leaders, government officials, and the scientific community to encourage the exchange of model projects, never losing sight of the path from ideas to actions. The projects bring together local governments and NGOs as well as scientists, public institutions, and businesses.

For people to act on their own behalf, they must have a modern education. Science education acts as a lever for the future viability and social development of communities and societies the world over. An essential element of this is a basic understanding of science and technology inspired by the principle of learning through discovery. The Siemens Stiftung provides educators with instructions and materials for real-world, comprehensive science instruction while supporting and encouraging children to think creatively and independently about solutions. The Siemens Stiftung is breaking new ground in language instruction to help children from immigrant communities attain equal opportunities and become stakeholders in their own education.

Harmonious communities are a product of culture. The Siemens Stiftung is committed to supporting strong, vibrant cultural landscapes as engines of social development. Central to this objective is the impact of art in society, the

reflection of cultural identities, and support for forms of dialog and an aesthetic education. In the past year, the foundation once again joined its partners to initiate projects and platforms for international dialog and cultural exchanges, especially in the countries of Africa and Latin America.

We thank the Board of Trustees for its invariably constructive and productive support and advice, and we extend the same deep gratitude to the Siemens Stiftung employees for their dedication, without which we would not be able to fulfill the mandate of this foundation.

Munich, February 28, 2012

### 3

## ENCOURAGE. empowering people. Siemens Stiftung operations

ENCOURAGE. empowering people – this guiding principle encapsulates the commitment of the Siemens Stiftung: empowering people to actively confront the challenges in their societies, with an emphasis on promoting **personal responsibility and self-determination**.

In keeping with the strategic orientation formulated in fiscal year 2009/2010, the activities of the Siemens Stiftung are focused on the themes of **serving basic needs and social entrepreneurship, promoting education, and strengthening culture**. The foundation takes an integrated approach and stands for responsible, impact-oriented, and innovative projects concentrated in the target regions of **Africa, Latin America, Germany, and Europe**. This concept was reinforced and further refined in fiscal year 2011.

The objective in the field of “Basic Needs and Social Entrepreneurship” is to improve quality of life and social structures. As a corporate foundation dedicated to the ideals of Werner von Siemens, the Siemens Stiftung views the use of technology in concert with social entrepreneurship as an especially viable approach for advancing economic and social integration.

A core concept underlying the work of the Siemens Stiftung is to avoid viewing the individual areas of activity and target regions as distinct entities in favor of an integrated, interdisciplinary approach. Networking across the various areas of activity enables an intercultural exchange of ideas and unleashes positive synergies.

The Siemens Stiftung regards education as a primary lever of development and is dedicated to the effort of achieving an inclusive educational mandate. Through its projects, the foundation promotes scientific and technical literacy, communication skills, and cultural awareness along the entire educational chain to help nurture a society of stakeholders. Training and the strengthening of technical skills are key elements in the spectrum of projects.

The Siemens Stiftung feels that strengthening active, vibrant cultural landscapes is a key component complementing developmental efforts in the areas of basic needs and education. Projects not only aim to improve qualifications and teach skills but are guided by concepts that actively shape society.

A dialog among equals with the various players makes it possible to align the projects with actual needs and solidify their long-term presence. Strong local involvement and support is crucial to achieving this. That’s why the Siemens Stiftung emphasizes cooperation with local partners who complement or enhance its own portfolio.

Surveys and analyses conducted in collaboration with highly regarded academic institutions play a valuable role in the evaluation and selection of projects for the Siemens Stiftung. The impact of a project is continuously tracked and evaluated as it unfolds, not only after it is complete. This makes it possible to learn and constantly improve.

The projects are assigned to a particular category here in the annual report, but in keeping with the integrated approach of the Siemens Stiftung, projects of one category invariably contain elements of other categories as well. A final report is provided for some projects that have been phased out as the focus of the portfolio has been refined.





KIKUS language class in the *Regenbogenland* day care center in Dachau, Germany

*Fruqueña* project, which trains young people to work as agricultural engineers and assist in rural development, Colombia



PANORAMA SUR workshop, a networking opportunity for the next generation of Latin American artists, Argentina







## 3.1

### **Basic Needs & Social Entrepreneurship. Sustainable solutions to the social problems of providing basic services: an entrepreneurial approach**

The main focus of the projects in the area of basic needs and social entrepreneurship is on improving quality of life and social structures. The goal is to reduce existential deficits in basic services, primarily in the target regions of sub-Saharan Africa and Latin America and establish basic infrastructure and services, and in so doing enable a life of human dignity. The emphasis is on supporting and strengthening local and financially viable personal initiatives. Education and vocational training play a critical role here.

The Siemens Stiftung is endowed by a grant from the technology enterprise Siemens AG, so its projects always incorporate a technological approach to overcoming social problems. This includes access to clean water and energy, for example, and the environmentally friendly use of resources. The aim is transferable, easily adaptable, and scalable models that make it possible to realize lasting improvements to the quality of life in various regions.

Socially entrepreneurial initiatives and approaches are very important. The Siemens Stiftung commits to projects that facilitate and strengthen social and economic integration over the long term. The people share direct responsibility and are encouraged to create living structures that sustain themselves after an initial support phase. The aim is to engage in fair partnerships that help socially vulnerable populations and to develop more projects that improve the quality of life and social structures based on local needs and conditions. The ultimate goal is to generate income and stabilize underdeveloped regions.

Beyond the specific projects, the Siemens Stiftung also supports networks that promote interregional knowledge-sharing to help adapt proven approaches to local conditions. This effort has given rise to a strong network whose members help one another with challenges and initiate partnerships with one another.



Women fetching water in the Afar region, Ethiopia

The barren region in northeastern Ethiopia inhabited by the Afar people is characterized by high temperatures and extreme aridity, so many of the wells and watering holes do not have enough water for the people and their livestock. This carries an inherent risk of conflict, because access to drinking water is critical to the survival of the population.

The aim therefore is to provide the seminomadic people with improved access to this vital resource by constructing wells and water basins. A water and sanitation infrastructure adapted to regional conditions is intended to improve living conditions over the long term and trigger further health, education, and agricultural developments, including grassroots initiatives. The local population is actively involved throughout all phases of the project.

Much has been achieved since the project launch in November 2008: five wells and one water basin in the Dulecha and Argoba Special districts are nearly complete or already in operation. The municipal water service in the town of Ganchenie has been reactivated thanks to new generators and pumps. Mobile SkyHydrant water filtration systems guarantee the quality of the drinking water in various locations. And in Dulecha and Ganchenie, latrines and refuse pits provide basic sanitation services for the population. Local water committees elected by the community are responsible for maintaining and repairing the infrastructure and distributing the water. Workshops and "mini media clubs" in the schools have made people more aware of how they can avoid conflicts and practice preventive healthcare.

Such activities have improved the situation of some 11,000 people to date. More than 1,000 animals from Afar now have access to water even during droughts, and their survival improves the conditions of their owners.

## Water and sanitation infrastructure

The Siemens Stiftung is committed to helping improve access to clean drinking water. Some 884 million people around the world still do not have enough clean water to meet their day-to-day needs. More than one third of the world population, 2.6 billion people, have to get by without toilets or wastewater disposal.

Hardest hit are the poorest and most underdeveloped regions of sub-Saharan Africa, where more than 40 percent of the population must subsist without clean drinking water. Shortages are often much higher regionally and locally. This is where the Siemens Stiftung and its projects come in. The Siemens Stiftung has joined forces with the UNESCO Foundation and its partner, the international initiative HOPE'87 (Hundreds of Original Projects for Employment), to improve access to clean drinking water in the Afar region of Ethiopia.

## Water and sanitation infrastructure

Since November 2008

Drinking water provided to 11,000 people and 1,000 animals

# Water for Ethiopia

There are districts in Ethiopia, lacking such basic infrastructure as water and sanitary facilities, in which a dignified human existence is scarcely possible. The Siemens Stiftung wants to do its part by partnering with others in projects to build wells, install water filters, and construct sanitary facilities. Our report highlights the foundation's work in the Awash Valley and the town of Ganchenie.



Children fetching water in Huggub, Ethiopia

## A well for the shepherds of Eddeli

The people from the highlands avoid the Awash lowlands in northeastern Ethiopia because of the unbearable heat and the risk of malaria. Only the Afar shepherds live here. Their existence depends on the Awash river, which collects the rainfall from the highlands and channels it into the flat Awash valley, where it grows weaker and weaker on its long path through the semidesert.

Many of the Afar suffer from gastrointestinal infections from worms and other parasites borne by contaminated water, because they get their water from the same places their animals drink: watering holes and the banks of the Awash. Children are especially vulnerable, as frequent bouts of diarrhea greatly weaken their immune system. Ardea Muhammed from the village of Eddeli lost three daughters in infancy. She, like many, used to walk two hours to gather water in containers from the riverbank.

Those times are gone now that the Siemens Stiftung has helped build a well in Eddeli. The Professional Alliance for Development in Ethiopia (PADET), the local partner organization, conducted a hydrological study, dug a shaft 22 meters deep to reach groundwater, then installed a hand pump. In this remote region without infrastructure or logistical support, all the materials had to be brought in from the highlands in all-wheel-drive vehicles, a laborious four-hour journey on dirt and gravel roads.

Women and girls from 60 families in the area now bring their water canisters to the well. "Now we no longer have to get up before sunrise to walk to the river," says Ardea Muhammed. "We can use the time we save to do our housework and take care of the children."

### Filters for the desert school

A few kilometers from Eddeli is the Huggub Primary School, in the middle of this arid environment. Children come from an hour or more away, depending on where the shepherd families have built their temporary structures of branches, animal skins, and tarps.

The students take turns each day bringing their canisters to a nearby well to fetch water. The water is filtered using SkyHydrant filtration systems so that it is fit for drinking. The Siemens Stiftung provided the filtration device, which has proven very valuable in many water projects already. The SkyHydrant's plastic tube is filled with thousands of fluoropolymer fibers that are as thin as a human hair and effectively filter out not only suspended solids but also bacteria and viruses. The availability of drinking water has greatly stabilized school attendance, according to the principal: "The children are no longer sick so much."

### Urban drought

On a terrace above the Awash valley lies the village of Ganchenie. Several dozen women have gathered in the shade of an acacia. "Allah, send us water!" one woman calls out. "Amen, amen!" the others murmur in unison. "So that our seeds will grow and our livestock will survive!" – "Amen, amen!" – "So that our children will not suffer!"

It is early March 2011, and the secondary rainy season is now several weeks late. "Our primary rainy season last July didn't come, so we've already lost one harvest," explains farmer Semsem Hassan after the prayers. It is very obvious that the warming climate is changing the periodic weather patterns in Ethiopia. The normal rainfall that occurs throughout the year comes late or not at all, and this has aggravated the biggest problem: water is always a rare commodity in the town of Ganchenie. Six years ago, residents had an 88-meter-deep well drilled three kilometers from the town with the help of state funds, but the groundwater reservoir does not have enough water for the growing community. "The well was designed to serve a population of 800," explains Yussuf Mensur, director of the water district. "But Ganchenie has already grown to 3,500."

So water at the pumps is rationed, with 40,000 liters distributed each day. This comes to only 11.5 liters per person – theoretically, for this water must be shared with the large number of livestock. The United Nations estimates that a person needs at least 25 liters of water daily for drinking, cooking, and hygiene. The average daily per capita use in Germany is 130 liters.

A year ago, when the pump was broken, the city was without any water at all. Those with camels traveled the five kilometers to the Ganchenie River, a tributary of the Awash, to fill their canisters with river water. In the city, 25 liters of water sold for five birr (€0.33), a third of the typical local daily wages. Many fathers in the very poor families had to spend nearly their entire income on water. The city had no water supply for two months until the aid organization PADET, with support from the Siemens Stiftung, HOPE'87, and the UNESCO Foundation, installed a new pump.

### Bringing sanitary facilities to Ganchenie

At the edge of Ganchenie, Fatuma Kebede lives with her two children in a shabby hut. The neighborhood is so poor that it doesn't even have latrines. The houses are built up to the edge of a cliff. "We used to come here to take care of our needs," says the diminutive woman, pointing to the rock incline that is visible from everywhere. There is nothing more than a few isolated agaves, but they offer almost no privacy.

Only halting progress has been made to improve sanitary conditions in poor countries around the world. Politicians would rather have their pictures taken in front of new wells than next to latrines. Nonprofit organizations also have an easier time mobilizing donations for other causes. But Fatuma Kebede no longer needs to climb down the cliffside at the edge of town. The Siemens Stiftung, HOPE'87, and the UNESCO Foundation joined forces with local partner PADET to build a simple row of latrines with four cabins for which 20 families have keys: a pilot project that, it is hoped, other neighborhoods in Ganchenie will emulate. Water and wastewater infrastructure are two sides of the same coin, after all: they are essential to human health, a key prerequisite for schooling and vocational training, and are the foundation for a self-sustaining community.

By Bernd Hauser







Transporting water in Kilimambogo, Kenya

## Drinking water kiosks

In Kenya, the Siemens Stiftung has joined the international environmental foundation Global Nature Fund in constructing local water kiosks to help people obtain fresh drinking water and strengthen local entrepreneurship.

In keeping with the guiding principle of “ENCOURAGE. empowering people,” the water kiosks are conceived as social enterprises. An inherent element of the project is that the communities become personally responsible, active stakeholders and take over possession of the kiosks. A small fee for the drinking water helps offset the ongoing costs. A water committee elected by the local community is responsible for maintenance and development decisions. The kiosk is overseen by a manager with technical and financial training.

Every project includes health and hygiene training to raise awareness of the problem and prevent illness wherever possible. Since the kiosks are linked to existing community structures such as marketplaces, schools, or hospitals, they often help shorten what were otherwise long trips to obtain potable water. Even though the long-term goal must still be to connect every household to the water grid, water kiosks are an important step on that path.

So far, two water kiosks are operating in the rural regions of Kilimambogo and Maragua northeast of Nairobi, providing more than 3,000 people with long-term access to clean water. The Kenyan company PureFlow is responsible for local implementation and consultation.

The first water kiosk began operation in the summer of 2010 in the Watoto Wenye Nguvu orphanage, serving the children who live there and the residents of the surrounding villages. Other small businesses have sprouted up around the kiosk, such as a bicycle courier service that delivers water to customers in remote areas. In addition, several households in the area formed a small water network that is supplied by the station. The water kiosk even inspired some villagers to test new filters at the household level.

The kiosk in Maragua was inaugurated in February 2011 and provides water to the community and its healthcare center. A decline in waterborne illnesses such as diarrhea and worm infections has been observed since the hospital was brought online. Here, too, the involvement of the community from the project’s initial phase was of critical importance. Though it takes time to have the community vote on decisions, the kiosk still managed to sell 1,500 liters of water in the first two days after it opened.

The Siemens Stiftung plans to follow up on this two-kiosk pilot project by constructing four additional kiosks in Kenya’s Thika region. An evaluation of community training sessions, construction specifications, the use of technology, and local management at the pilot project will provide valuable insight for the next kiosks. The long-term goal is to develop a model for water kiosks that can be easily replicated and expanded.

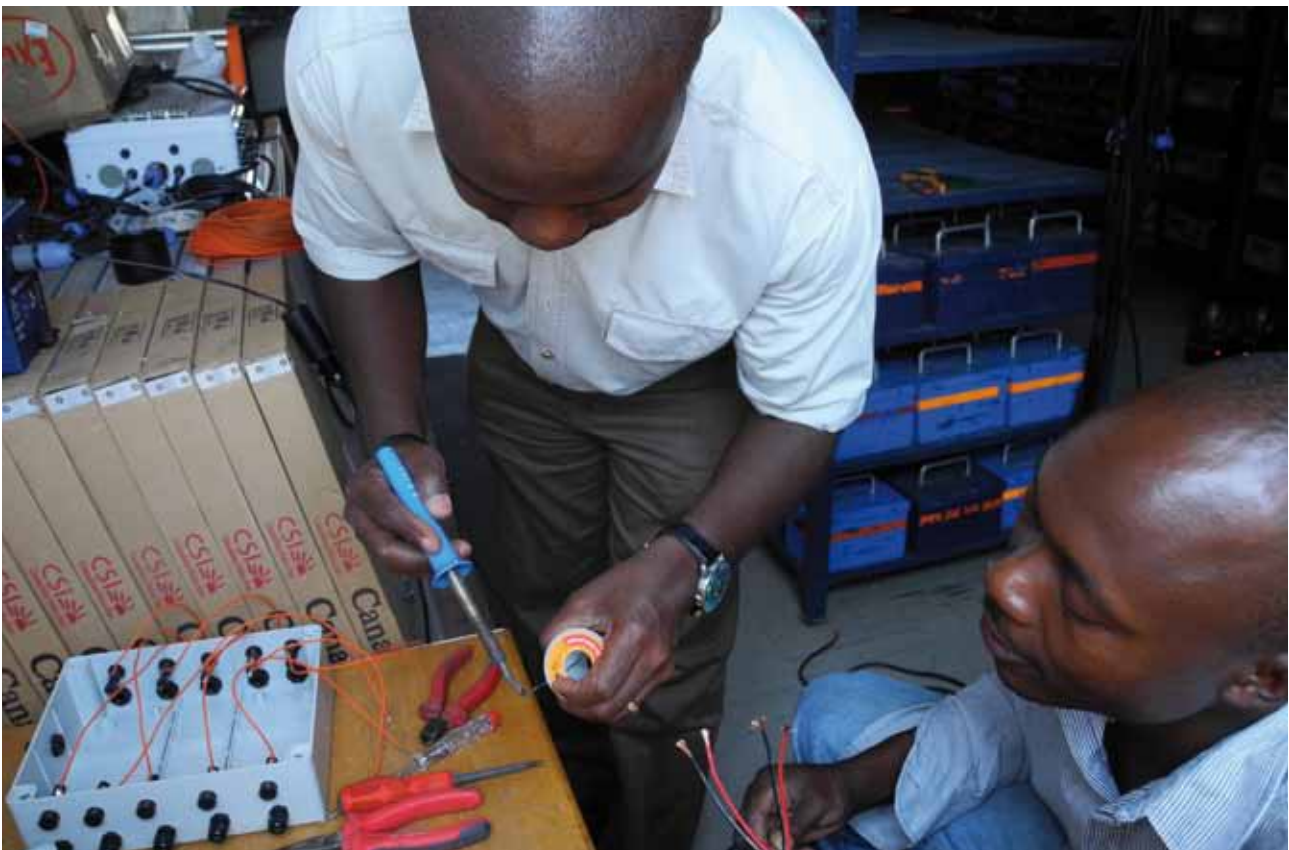
## WE!Hubs

The Water Energy Hub project (WE!Hub) in Kenya takes an approach similar to that of the water kiosks. The aim here is to generate self-sustaining social enterprises that address social problems and act as levers for further developments. The WE!Hub provides people in remote African communities with an environmentally sustainable energy and water supply with fair, locally controlled access. It also opens up training and entrepreneurial opportunities. With its combined energy and water infrastructure, the WE!Hub is the very ideal of the integrated approach of the Siemens Stiftung.

The WE!Hubs employ solar technology, so they work “off the grid” – technically independent from an electrical grid. They feature electrical charging stations for items such as mobile phones and lights, which can also be borrowed there for a small fee. Customers can even obtain clean drinking water thanks to a water disinfection system set up in the WE!Hub. The number of services should expand in the future to include access to computers and the Internet, for example, or eco-friendly cookers. Advanced workshops on entrepreneurship, environmental awareness, and hygiene are in the planning.

The WE!Hub is a joint project of the Siemens Stiftung, the Global Nature Fund (GNF), OSRAM AG, and Thames Electricals Ltd., with additional sponsorship from the European Commission. GNF is coordinating the project. The company OSRAM, which has successfully implemented three pilot kiosks in the Lake Victoria region together with GNF, continues to act as the technology partner in the joint project, providing advice on technical and conceptual questions. Beyond the core mission, the Siemens Stiftung is also implementing social projects to strengthen the local community. The Kenyan company Thames Electricals founded the social enterprise Light for Life, which is also based in Kenya. Light for Life operates the WE!Hubs, conducts local training workshops, and offers a platform for additional projects in the region. The first phase involves the construction of five WE!Hubs in Kenya. The three existing stations are being renovated and expanded.

The project partners hope that the WE!Hub project, which is still in its infancy but harbors great potential, will promote the use of renewable energies in Africa and give people access to modern technologies. The project is also intended to improve the economic, social, ecological, and sanitary infrastructure of the local population, as well as their educational opportunities. The medium-term goal is for the project to become financially self-sufficient. Over the long term, the experience gained in the WE!Hubs project in Kenya should benefit other projects and regions.



Technicians in the WE!Hub in the Lake Victoria region of Kenya



Young agricultural specialists: technology and social awareness as levers of development in rural Colombia

## Fruqueña

In Latin America, the local conditions for launching projects aimed at improving the quality of life are altogether different than in Africa. The subcontinent is experiencing an economic boom with above-average growth rates, but at the same time, the divide between rich and poor is not getting any smaller. The rural population in particular often misses out on the benefits of industrialization or makes only halting progress. For this reason, the Siemens Stiftung has chosen to direct special attention to sustainable development in rural Latin America, especially education, which spurs development along the entire value chain.

The *Fruqueña* project of the Fundación El Cinco seeks to improve the income of small farmers in the department of Antioquia, Colombia, and to create self-sustaining organizations and strengthen social structures in families and villages. Fruqueña supports sustainable rural production among small farmers and helps stem the tide of people fleeing the poverty and violence that has plagued the countryside. The project currently extends to 600 small farmers and their families in 13 communities that have suffered for decades under the armed conflict in Colombia and the presence of guerillas and paramilitary groups. Many families have felt firsthand the devastation of forced migration.

*Fruqueña*, cofinanced by public and private partners, promotes the formation of cooperatives specializing in fruit farming. Members of the cooperatives work together to establish and optimize the value chain extending from production to market to help the products penetrate domestic and foreign markets. Key components of the

project include technical training focused on the young generation of farmers, knowledge transfer, community work, and promoting open dialog. The training programs focus on educational skills, technical expertise, hands-on experience, business skills, and entrepreneurial spirit. Self-reliance is a critical aspect. It is the young generation that is instrumental to ensuring peace and development in their region.

The Siemens Stiftung is providing support for 67 young people from 13 districts taking part in a nationally certified training program to become agricultural engineers and social workers. The intent is to offer graduates the opportunity to become independent entrepreneurs and consulting multipliers. That's why the project includes a post-training phase for the establishment of a self-sufficient social enterprise aimed at ensuring consulting services throughout the region and beyond. The students gain hands-on experience working directly on *Fruqueña's* project management team.

### Fruqueña

Reaches 600 small farmers and their families

Currently training 67 young people from 13 communities, regional program starting in Antioquia department

## Sierra Productiva

Sierra Productiva is another developmental project that works with rural populations. The Siemens Stiftung has partnered with Peru's *Instituto para una Alternativa Agraria* (IAA) to help indigenous populations in the mountain province of Canas (Cusco region) and the coastal province of Pisco (Ica region) achieve sustainable development.

The IAA (based in Cusco) began developing models in 1994 for the effective development of rural areas to help transition underdeveloped regions from subsistence to profitability. This effort led to the integrated approach of Sierra Productiva, which encompasses 18 simple technological innovations that are implemented in collaboration with small farmers. Each step improves agricultural productivity. The Siemens Stiftung's role in the project is primarily in the areas of water and energy infrastructure development. This means supporting the local population in irrigation, optimizing cooking facilities (smoke ventilation), obtaining clean drinking water, and installing biogenerators. A solar water heater and solar-powered kitchen are in development. The Siemens Stiftung is also supporting vocational training programs to spur self-sufficiency. The aim is to help the poorest rural areas not only ensure their own sustenance but develop revenue sources and entrepreneurship.

Another important point alongside social and economic development is the environmentally friendly use of resources. Involving the families in the development of the model from early on is critical to the success of the project. This starts by formulating a common vision and goal, which is then gradually developed with the involvement of the entire family.

Personal achievement and shared responsibility are core elements of community-based projects. An important part of this is sharing knowledge and learning from one another. That's why the *Yachachiq* (Quechua for "those who know") play a key role in implementing the model. The resource of water is of critical importance. It is essential that drinking water be made available, stored, and used efficiently.

This project makes a valuable local contribution to achieving the Millennium Development Goals of the United Nations: planting and production techniques are optimized, sustenance is ensured, the health situation is improved, and the level of education is raised. A culture's lost knowledge is revived and combined with new insights. The long-term goal is to establish "eco-districts." Basic programs of this type are the prerequisite to further structural approaches for integrated development.



Sierra Productiva: from subsistence to profitability in Peru

### Canas province (Cusco region)

120 families from 11 communities have eco-toilets, a solar kitchen, improved cooking opportunities, solar heating, and bioconverters.

Families from two communities have water that is purified using SkyHydrants provided by the Siemens Stiftung. Families from nine communities have cleaner water thanks to the SODIS system.

### Pisco province (Ica region)

1,000 blueberry plants cultivated and in production on the land of 35 families

15 hydroponic green fodder modules installed and in production

150 drip irrigation modules installed and in production on the land of 150 families

36 marketplace events held in three districts, two per month, within half a year

## Eco-vecindarios

As the world population grows and urbanization increases, the problem of waste management presents an enormous challenge in both Africa and Latin America. The volume of waste is constantly growing, especially in the cities, but the infrastructure to deal with it is often simply lacking. Environmental awareness is starting to grow, but one continues to find organic, recyclable, and toxic waste in open dumps and landfills. Despite massive levels of contaminants and unhygienic conditions, many poor people depend on these landfills. They live in and from the trash, eking out a meager income by collecting garbage.

The Siemens Stiftung is committed to addressing the acute problem of garbage and the typically inhumane working conditions of the garbage collectors in the metropolises of Latin America and Africa. Since 2009, the Siemens Stiftung has actively partnered with Swisscontact, the developmental organization of the Swiss business sector, and the Swiss Agency for Development and Cooperation (DEZA) in a project to improve waste management in four big cities in Bolivia through better garbage collection and professional recycling.

Private collection systems for recyclable and compostable waste (plastics/PET, paper, glass, metal, e-waste, hazardous

waste, and organic materials) are being introduced at the neighborhood level in La Paz, El Alto, Santa Cruz, and Cochabamba in coordination with city administrators. Useful materials are recycled, income is generated, the burden on the environment is lessened, and the volume of waste in Bolivia's four largest cities is reduced. The participating urban districts act as so-called "eco-neighborhoods" (*eco-vecindarios*) and are directly responsible for their collection and separation system.

One goal of the project is to reduce the volume of left-over garbage going to the urban landfills by about 20 percent. So far, pilot regions have achieved reductions of up to 50 percent. Composting the organic waste (up to 60 percent of the garbage by volume) saved approximately 1,800 metric tons of CO<sub>2</sub> equivalents in the first half of 2011. The humus that results can be used by the cities themselves or sold. Appropriate procedures for processing organic and electronic waste were developed in fiscal year 2010/2011 in collaboration with local universities and adapted to local conditions. Four scientific studies on recycling processes were conducted.

The project trains "informal" garbage collectors for long-term employment. Professional recycling processes, protective clothing, information, and training improve their working conditions, and proper handling of garbage



Separating garbage in Cochabamba, Bolivia



Eco-vecindarios, garbage collector in Santa Cruz, Bolivia

lessens the risks to their health. The organized, market-oriented sale of recyclables makes it possible for garbage collectors to secure a long-term income above the legal minimum wage and achieve a higher social status. Some 200 people are already working as official collectors of recyclables in 139 eco-neighborhoods, 9 eco-districts, and 15 eco-markets. The percentage of women increased from 40 percent in 2010 to 50 percent.

Support is also provided for small businesses in the recycling sector. Professional training and consultation have already helped launch 49 small businesses, 18 of them collection centers for recyclables. The other 31 consist of 7 associations of garbage collectors, 6 centers for organic waste, 4 e-waste centers, and 14 recycling companies.

The various “eco-neighborhoods” are responsible for conducting their own awareness campaigns and introducing

collection systems for recyclables. The *eco-vecindarios* serve as local gathering points to mobilize the population, managing the general organization of the collection systems, conducting targeted campaigns for hazardous waste (such as batteries and e-waste), and raising awareness at the neighborhood level. The number of additional households reached through awareness campaigns and workshops in the first half of 2011 came to 57,400 (about 258,000 people). This followed some 75,000 households (375,000 people) in 2010 and 40,000 households (200,000 people) in 2009. The local population was educated about the proper disposal of garbage and its economic potential through flyers, newspaper inserts, and various public events.

The project has since developed a momentum of its own, so many of the activities are now run and developed independently by the project partners. The very positive results and strong public response also led cities to make waste management a key topic of local politics.

Two municipal recycling ordinances have been developed and adopted into law with consultation from the project team. Knowledge transfer – technical and administrative consulting for public institutions and agencies – is growing in importance. The Department of Waste in the Ministry of Water and the Environment is also working more closely and aligning its approach with that of the project. Meanwhile, the positive response has also led to a strong demand for support from more rural regions.

Awareness campaign	2009	2010	First half of 2011
Households	40,000	75,000	57,400
Persons	200,000	375,000	258,000
200 official garbage collectors, 139 eco-neighborhoods, 9 eco-districts, 15 eco-markets Percentage of women: 40% (2010), 50% (2011)			



Surveying households in Francistown, Botswana

The results show that when it comes to waste management, programs that incorporate social entrepreneurship are especially promising. For this reason, we are also making the studies available to other organizations, foundations, and relevant target groups that are active in this specialized field of development cooperation. The studies will also be used in scientific and academic circles in both Germany and Africa.

These research findings are the springboard for other scientific case studies initiated by the Siemens Stiftung to study how civil society can help establish basic services (energy, water, environment, waste management, health-care) in sub-Saharan Africa. A case study entitled "Micro-Enterprises and Community Linkages" led by the Department of Management of the University of Botswana, for example, is examining the impact that microenterprises have on the social and economic development of their communities. The aim is to gain insight on the potential of microenterprises to alleviate poverty over the long term. The case study will be complete in the coming fiscal year. Also at the University of Botswana, a doctoral student is studying the effects of increased urbanization on the social and economic living conditions of the population in the sample mid-sized city of Palapye.

## Case studies in garbage

Establishing a functioning waste management system is among the greatest challenges facing the African continent, especially in the rapidly growing metropolises. Compared to much-studied topics such as water and food, however, there have only been a few reliable surveys in this field. For this reason, the Siemens Stiftung commissioned two scientific case studies to analyze the current overall situation of waste management in Botswana and Zambia.

The waste management case study in Botswana was conducted by academic partners at Friedrich-Alexander University of Erlangen-Nuremberg and the University of Botswana. The research team was composed of nine students in the master's program for Cultural Geography working together with five students from Botswana. In neighboring Zambia, four Bayreuth University students in the Development Studies in Geography bachelor program studied the general state of garbage and evaluated existing solutions that combined waste management with job creation.

## Taka Taka



Garbage collectors in Nairobi, Kenya

The Siemens Stiftung is already involved in one project in Kenya aimed specifically at improving local waste management, working in the Kangemi slum alongside the Nairobi-based social enterprise TakaTaka Solutions and the Stuttgart-based AT Association for the Promotion of Socially and Environmentally Appropriate Technology to implement a solution that is also feasible for other cities and countries in sub-Saharan Africa.

The social enterprise business model of TakaTaka Solutions ("taka taka" is the Swahili phrase for waste) brings local youth groups from the slums to collect and separate garbage, sell recyclables, and convert organic waste into valuable compost for the agricultural industry. The youths, most of whom are unemployed, are given the opportunity to earn their own living. TakaTaka Solutions provides them with the training they need. The environmental and health benefits also have a very positive impact on the living conditions of local residents.

In this way, the project helps improve waste management in Kenya, where the lack of planning and financial resources in the public sector often has catastrophic effects. In the capital Nairobi, for example, only about one-third of the 1,900 metric tons of waste that accumulates each day is disposed of according to any semblance of health and environmental norms. Some 2.5 million people in this city of 3.5 million cannot currently afford any kind of organized waste disposal. They burn their garbage or dump it illegally in the city, often suffering health consequences as a result. Yet more than 90 percent of waste could be recycled or composted in a way that would help the environment and generate income.

The efforts of the Siemens Stiftung are focused primarily on specialized training programs for the youth groups that are actively involved, awareness programs for the population, and marketing campaigns for general support of the project. The Siemens Stiftung is also already developing, testing, and deploying containers adapted to local social and cultural norms for separating garbage directly at the household level.

## Community Impact Development Group

### Community impact as defined by the CIDG in 2012

Social enterprises achieve a desired community impact by enabling communities to express their hopes and needs so they can then develop sustainable, self-supported solutions and mobilize the necessary resources. This gives a community "ownership," improving the social structures and preconditions for a dignified existence. "Ownership" is the essential prerequisite for ensuring and above all developing the long-term impact. The social enterprise initiates and supports this development together with the communities, irrespective of how "ownership" is institutionalized in a given case.

The concept of self-sufficiency is crucial to all the projects of the Siemens Stiftung focusing on basic needs and social entrepreneurship. Socially entrepreneurial approaches play an important role here, since they are especially suited to meeting local needs and circumstances. But the Siemens Stiftung not only initiates and participates in social enterprises, it also seeks to inspire and bring together potential social entrepreneurs. That's why beyond its specific projects, the Siemens Stiftung also supports networks that promote the sharing of social entrepreneurship expertise among different regions to help adapt proven approaches to local conditions. It was with this in mind that the Siemens Stiftung partnered with Ashoka, one of the largest international organizations supporting social entrepreneurs, to found the Community Impact Development Group (CIDG).

"Technology for Human Needs" – this is the theme of CIDG, a network currently consisting of 16 social entrepreneurs from Latin America, Africa, Asia, and Europe. The social entrepreneurs in this network use simple technologies to develop products and services that improve the quality of life in their communities. The network offers them the opportunity to share their experiences and to apply and develop new insights within their own business models.



CIDG members meeting in Munich, Germany

CIDG seeks to lend support to leading social entrepreneurs, who in turn use technological products and services to benefit local communities in sub-Saharan Africa and Latin America. To achieve this goal, the program works at three levels:

Participants work together to develop and optimize the business plans and define concrete steps toward making the social enterprises financially sustainable;

This encourages participants to share their knowledge and work together to define methods to advance the development of local communities;

Potential multipliers, investors, and partners are also brought in to mobilize external resources and expand the reach of the social projects.

An annual three-day conference gives CIDG members the opportunity to network in person.

Two conferences were held in Munich in fiscal year 2010/2011: members first met in October 2010, and a second meeting was held in September 2011.

The first conference was devoted to the topics of "defining social business and social entrepreneurship" and "refining business plans." The goals in September 2011 were to reach a common understanding of community impact (that is, the impact of a given business model on the local community) and share experiences with various methods of measuring the effectiveness of community impact.

Another important element of the conferences comes at the end, when social investors are brought in. The aim of the Siemens Stiftung here is to provide social entrepreneurs with a network of potential investors and technology partners. CIDG also helps its members leverage synergies among themselves wherever possible.

The Siemens Stiftung will continue its partnership with Ashoka and CIDG in the new fiscal year and expand its efforts to promote social entrepreneurship by partnering with the Federal Ministry for Economic Cooperation and Development (BMZ). The Siemens Stiftung joins BMZ in announcing the "G-20 Challenge on Innovation" and will report on these activities in the 2012 annual report.

# "We need to work together"

How social entrepreneurs learn from one another in the Community Impact Development Group (CIDG), an initiative of the Siemens Stiftung and Ashoka: in conversation with Albina Ruiz Rios (Peru), Greg Van Kirk (Guatemala), and Sameh Seif Ghali (Egypt) during the second CIDG workshop in September 2011 in Munich.

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## A brief portrait of the interviewees



### Peru

When Albina Ruiz Rios left her family's *chacra* 25 years ago to come to the bustling capital Lima, everywhere she went she encountered people rummaging through garbage in search of recyclables. So she founded the organization *Ciudad Saludable* (Healthy City), which turns garbage collectors into small entrepreneurs. With support from municipal authorities, they form communities, obtain microloans, and purchase small cargo-carrying tricycles. Initiatives like *Ciudad Saludable* can be found in many Latin American cities. Small entrepreneurs now collect garbage in 200 Latin American cities and number nearly 12,000 in Peru alone.



### Guatemala

Eleven years ago, Greg Van Kirk quit his job as an investment banker in New York and moved to Guatemala, where he established the MicroConsignment Model to generate income opportunities. The initiative trains people, mostly women, who supply remote villages with critical goods such as water filters, efficient wood-burning stoves, and reading glasses. Since then, the trade in eyeglasses alone has helped more than 250 women earn some US\$90,000, and the project is constantly developing.



### Egypt

Sameh Seif Ghali studied organic agriculture in the Netherlands and has spent the past 15 years working to improve the sanitary conditions in his home country. In southern Egypt in particular, the groundwater is contaminated and many children suffer from intestinal diseases. Sameh Seif Ghali developed a simple but effective wastewater system with a small-scale water treatment plant that has now been successfully deployed in 10 villages with 3,500 homes and 50,000 residents.



Albina Ruiz Rios, Sameh Seif Ghali, and Greg Van Kirk in conversation during the CIDG conference in Munich, Germany

*You all work on very different projects. Now you're sitting here together around the table exchanging your stories. What is the benefit of that?*

Greg Van Kirk: At our very first workshop in the fall of 2010, Albina and Sameh said they thought my MicroConsignment Model could also work in Peru and Egypt.

Albina Ruiz Rios: Yes, the problems are very similar, after all. We just need to adapt the solutions to the particular situation.

Greg Van Kirk: Many women who sell goods through our organization in Guatemala are now actually sending their children away to college! But the garbage is piling up in their neighborhoods, so we could learn something from Albina's garbage collection initiative.

*How does one start such a project?*

Albina Ruiz Rios: You need to start with the people producing the garbage, convince the slum dwellers to separate their

garbage and pay for its removal. That was not a tough sell in Lima: the piles of garbage outside people's doors were making them sick, and the children always had diarrhea. I discovered that each family had to spend at least six US dollars a month for medications. The garbage fee, on the other hand, is just over one dollar a month – the price of a bottle of beer. I asked them, "Do you want to have a clean neighborhood and save money at the same time?" The answer was obvious.

*How did you reach out to the slum dwellers?*

Albina Ruiz Rios: I talked to the schoolteachers. They explained it to the children, who in turn told their parents. Then we called neighborhood meetings, and finally we went door to door. I had volunteers helping me: students, schoolchildren, social workers. We put together a small brochure showing how to separate the garbage. We even convinced the city governments to join the effort.

*Did everything go smoothly from the beginning?*

Albina Ruiz Rios: No, of course not. We began by forming an association of 800 garbage collectors. But it was hard to stay in touch with everyone and get them all to agree on things. So we formed small enterprises that brought together the garbage collectors. That was a start. Now the cities coordinate and fund the garbage collection and the citizens pay for the service.

Greg Van Kirk: Albina told us this story at our first meeting in Munich in 2010. My spontaneous response was, "We need to work together if we're going to change the world!"

*Changing the world: that's an ambitious undertaking.*

Albina Ruiz Rios: But that's what this is about. Our garbage collectors have become proud entrepreneurs! They drive through the city with small trucks and collect cardboard today, plastic tomorrow, aluminum the next day. They have a guaranteed income, and the Ministry of Health ensures that they all get tetanus and hepatitis shots. But many of them don't have a stove that works, or water filters, or reading glasses. And many women are unemployed.

*So you thought that you could also do what Greg Van Kirk is doing in Guatemala?*

Albina Ruiz Rios: I wanted to know how his project works, so I went to Guatemala in April 2011 to see "his ladies" in action. It was so persuasive that I am now sending him some of my team members. When they return, we'll implement his ideas in Peru.

*How did you begin with your project, Greg?*

Greg Van Kirk: I wanted to do something with microlending. And because I knew that millions of people were still forced to prepare their meals over open fires in smoke- and soot-filled rooms, I got together with a stove builder to design a cheap but effective stove. I lent him the money for the first six stoves, and once they were sold, we split the earnings, which I then immediately reinvested.

*Sounds simple ...*

Greg Van Kirk: ... and it works. So I applied the same model to reading glasses, water filtration systems, solar cells, even peanut butter – whatever people in remote regions wanted and needed.

*And now you want to solve the garbage problem?*

Greg Van Kirk: Yes. My team and I went to Peru in 2011. Everyone is very excited to launch Albina's project. We can apply it to Guatemala almost one to one. We're starting now!

*Are the experiences from Peru and Guatemala also useful for Egypt, Sameh Seif Ghali?*

Sameh Seif Ghali: Building sanitary facilities is just the beginning. Our biggest problem is energy, because electricity is practically unobtainable. And the alternative technologies that I'm familiar with are too expensive for Egypt. Greg wants to help advise me with the financing. He also knows something about solar energy. We planned to meet in January 2011, but then the uprising began in Cairo and I wasn't able to visit him.

Greg Van Kirk: So now we're going to Egypt. We want to find out whether our initiatives can be applied to North Africa.

Sameh Seif Ghali: And Albina is coming in 2012. I'll show her an area three hours by car south of Cairo where a garbage specialist is sorely needed. Since the uprising, the problem has been that the contracts have been renegotiated. The company that collects the garbage now all of a sudden wants a lot more money.

Albina Ruiz Rios: Let's set a date now! Skype and e-mail are not enough. We need to discuss the problems locally. Then we'll get somewhere.

**Interviewed by Uschi Entenmann**



Youth Changemaker City project group in Potsdam, Germany

## Youth Changemaker City

Another partnership with Ashoka has set out to inspire young people in Germany and elsewhere to think like social entrepreneurs. The Siemens Stiftung is providing organizational and financial support to the Ashoka youth initiative through the Youth Changemaker City project (YCMC). YCMC brings together youth organizations and dedicated young people. Together they create a more positive climate for good causes that they themselves select.

The project presents young people with options for applying themselves with their ideas for the community, for a worthwhile objective in their immediate environment, or for the common good. The youths learn skills so they can work independently to develop and successfully implement solutions to a problem they've identified. They work with experts to define processes and the factors involved, identify specific problems in their environments, develop appropriate solutions, and plan how the project will be implemented. They also learn the skills to think and act like social entrepreneurs in their own hands-on projects and to take responsibility for their own personal and financial resources.

In the past fiscal year, Youth Changemaker City activities were held in four cities in Germany (Potsdam, Frankfurt am Main, Wuppertal, and Solingen) and two cities in Spain (Bilbao, Barcelona).



Professors Meschach Akziakpono and Roberto Gutierrez in conversation in Berlin, Germany



IRENE | SEE workshop in Berlin, Germany



Professor Roberto Gutierrez in Berlin, Germany

## International Research Network on Social and Economic Empowerment (IRENE | SEE)

Like CIDG, the network concept is also at the center of the International Research Network on Social and Economic Empowerment (IRENE | SEE), founded by the Siemens Stiftung. With coordination from Zeppelin Universität in Friedrichshafen, scientists at five universities (Zeppelin Universität, Friedrichshafen, Germany; Adama University, Adama, Ethiopia; Universidad de los Andes, Bogotá, Colombia; EGADE Business School, Monterrey, Mexico; Stellenbosch University, Cape Town, South Africa) are studying the applicability, benefit, limits, and long-term effects of social-economic empowerment.

Social-economic empowerment is understood here as the process of empowering people socially and economically through professional support. A renewed emphasis is placed on what is called “entrepreneurial solutions to social problems,” an approach hailed for some years now as a new beacon of hope, especially given the strong criticisms directed at traditional developmental work. Researchers identify differences, ambivalences, and comparable structures among and within certain problem areas, individual societies, countries, and regions. The aim is to develop projects that better reflect the specific conditions in each locality, yield more fitting and culturally appropriate solutions, and thus endure over the long term.

Six doctoral students in Ethiopia, Germany, Colombia, Mexico, and South Africa are taking part in a postgraduate program, using economics, political science, and urban studies to examine specific local examples, their applicability and scaling, the potential need for subsidies and regulations, and the sustainability of social-economic empowerment in various industries, sectors, and countries. The empirical analyses obtained in each location will be shared through the network with interested public parties, academics, and relevant institutions.

The inaugural event, held August 25–27, 2011, in the Magnus-Haus on Berlin’s Museum Island, brought together for the first time all IRENE | SEE candidates, the participating professors, coordinators, and the Siemens Stiftung to define the organizational and substantive framework of the research network. Conference highlights included the presentations by the doctoral candidates, their critical discussion, and the creation of a common project framework.

## Disaster prevention

In addition to the aforementioned projects in the area of basic needs and social entrepreneurship, the Siemens Stiftung also supported a disaster prevention project of the German Red Cross in the Central Luzon province of the Philippines in the past fiscal year. The project is successfully under way, and no follow-up project is currently planned. In the coming fiscal year, the Siemens Stiftung will focus on its own long-term development projects emphasizing social entrepreneurship and basic services.

The Philippines is one of the most disaster-prone countries on earth. Typhoons, flooding, and landslides are especially prevalent in the country's northern islands. The Siemens Stiftung helped prepare the local population for potential natural disasters by working closely with local communities to develop emergency plans and rehearse disaster

response procedures. Volunteers were also recruited to serve as assistants and multipliers.

Schools served as an important hub: a total of 150 teachers completed courses in risk management and first aid, and 50 schools received teaching materials and information handouts on topics relating to the environment, climate, and health as well as first aid packages. Extracurricular events, simulations, and leadership training seminars were also held for students. This established an ongoing relationship between the target schools and the German Red Cross, which is critical for long-term disaster control.



First aid training in Benguet, Philippines

## 3.2

### Education.

## Strengthening education to create opportunities and promote social progress

The long-term viability of our society depends on young people who confront global challenges with courage, creativity, and a sense of responsibility. An interdisciplinary education – one that encompasses scientific understanding, communication skills, and cultural awareness – is best suited to equip the coming generation to succeed in tomorrow's world.

The work of the Siemens Stiftung helps advance this goal and extend its mandate to include early childhood education. The foundation offers teachers contemporary, real-world teaching methods and materials adapted to regional needs to support them in fulfilling their educational mission: to empower children to reinforce and expand their knowledge.

Early language education opens the door to becoming an active member of society. Cultural awareness arises when you understand and can reflect on your own culture and the cultures of others. Children develop creative solutions through independent experimentation. The aim is to sustain a curiosity for scientific phenomena from preschool through primary and secondary school.

The Siemens Stiftung has therefore initiated various projects in the fields of math, science, and technology to support children, students, and teachers with long-term educational opportunities. In secondary schools, the focus is on finding sustainable solutions for socially relevant issues in support of deep-rooted structural change. All the projects have an integrated, international focus, are replicable, and make use of contemporary teaching and learning methods. Here, too, the Siemens Stiftung is focused on the regions of Africa, Latin America, and Germany. Dynamic projects in South Africa and Chile were a special focus in this fiscal year.

The Siemens Stiftung's commitment to education does not end with secondary school graduation, however. Technical and vocational training and business skills are very important elements at the core of our mandate.



## KIKUS

Language and language comprehension are the very foundation of all education. The doors of educational opportunity open only to those who can read and express themselves.

It has been common knowledge since at least the first PISA study in 2000 that children from immigrant families have an especially hard time in the German educational system. These problems stem from deficits in learning and using the German language.

Language deficits are observed not only in about one-third to one-half of preschool children from immigrant families but also in one of 10 children who grow up with German as their native language. Unless these children receive effective intervention, their language deficits will quickly develop into wider-ranging learning deficits and lost opportunities on the job market – something a shrinking society with a shortage of young professionals cannot afford. Given the demographic trends in Germany, we can expect to notice a shortage of qualified professionals nationwide by 2020.

To counteract this trend, the Siemens Stiftung is attacking the root of the problem – language barriers in early childhood – by supporting the KIKUS language method developed by the nonprofit Center for Multilingualism in Early Childhood (zkm). KIKUS takes a playful approach to helping children from immigrant backgrounds learn German.

The KIKUS method gives equal emphasis to the children's native language, and this is important, because multilingualism is actually regarded as a significant opportunity by linguistic experts. Living in a household where more than one language is spoken facilitates integration and promotes intercultural skills. What makes KIKUS special is how it involves the parents and their native tongue, gives careful consideration to the feelings of the kids and parents on this topic, and takes a systematic and long-term approach to promoting language development. This puts KIKUS at the vanguard, because sooner or later, a multilingual upbringing will be the educational norm in most countries.

The Siemens Stiftung is helping zkm expand and spread KIKUS through various joint projects. In the past school year, the Siemens Stiftung organized and (co-)financed seven training seminars in Germany for educational experts, who can then work independently teaching KIKUS children's classes in their schools. Support is also provided for KIKUS children's classes with a hands-on training component for up to 10 children in day care centers. In July 2011, the partnership between the Siemens Stiftung and zkm was extended for another three years.

Starting in the past fiscal year, the KIKUS language method has also been applied in South Africa, which has great



KIKUS class at a primary school in Moosburg, Germany

linguistic diversity. The primary target group is children from socially vulnerable families, most of whom grow up speaking an African native language. English-language skills have a tremendous impact on the kids' performance when they enter primary school. The Siemens Stiftung teamed up with the German international school in Cape Town to offer basic seminars in KIKUS German and KIKUS English in September 2011 that brought together educators from local institutions and nonprofit organizations.

The Siemens Stiftung evaluates the effectiveness of the language method. A September 2010 survey questioned 224 people who had taken part in basic seminars between 2008 and 2010. One key finding of the survey was that KIKUS greatly increased the willingness of the children to speak. The classes also had a positive impact on the social behavior of the children and greatly reduced the frequency of errors in their spoken language.

The "START mentors for KIKUS children" project began with an opening workshop in October 2011. The Siemens Stiftung



established a mentoring program together with zkm and the START foundation, which awards scholarships to motivated schoolchildren from immigrant backgrounds. START scholarship recipients grades 10 and up spend one year visiting preschools or day care centers and mentoring KIKUS children with their (language) development.

The KIKUS advanced training seminar in March 2011 in Düsseldorf financed by the Siemens Stiftung already provided participating educators with an overview of the program. The aim is to get as many day care facilities as possible to implement the project.

The mentors visit their mentees in the day care centers regularly for one school year and receive ongoing support.



#### Outreach at a glance

##### Overview of fiscal year 2010/2011

Children who have benefited	~ 2,600
Teachers who have benefited	~ 150

##### Overview since the program began

Children who have benefited	~ 6,700
Teachers who have benefited	~ 450



Students experimenting with Experimento | 10+ in Munich, Germany

## Experimento

The Siemens Stiftung focuses primarily on the fields of science and technology. The foundation developed “Experimento” during the past fiscal year to help children learn about science and technology from preschool through secondary school. Experimento is an international concept for teachers and educators that puts the principle of learning through discovery into practice throughout the educational chain.

Children are given the opportunity to explore natural phenomena independently through experimentation and grasp technical and scientific interrelationships. The three modules Experimento | 4+ (for ages four to seven), Experimento | 8+ (eight to 12), Experimento | 10+ (10 to 18) build upon one another for a progressive expansion of knowledge. Experimento deals with the subjects of health, energy, and the environment, reflecting global challenges such as the greenhouse effect, renewable energies, and the search for sources of drinking water. To assist students with weak language skills or who are being taught in a second language to get more out of science education, Experimento features additional materials such as worksheets to improve language skills and facilitate better comprehension of the STEM fields (science, technology, engineering, and mathematics).

Besides instructions and materials for the experiments, the core of Experimento is the applied training program for teachers. This allows education experts to immediately apply the didactic approach of learning through discovery to their daily instruction using the experiment kits. Experimento helps educators motivate children to learn STEM topics and empowers the kids to build and continuously expand their own knowledge. The aim is to unleash and support the children’s love of experimentation and free, independent study.

In developing Experimento, the Siemens Stiftung benefits from its years of international experience with similar projects. Another key element to assuring that Experimento gains acceptance and spreads is the partnership with recognized local educational partners who know the challenges in their countries and the requirements of the local educational system. Specialists have carefully adapted the teaching materials to the target groups, and educational experts have tested them in multi-phase evaluation processes. Pilot projects in selected institutions in Africa, Latin America, and Germany ensure that the materials will be further adapted to regional school systems and different educational standards.

# Explaining the world with a package of drinking straws

**Experimento from the Siemens Stiftung follows the principle of learning through discovery – throughout the educational chain. An initial pilot phase in Chile is showing promising results.**

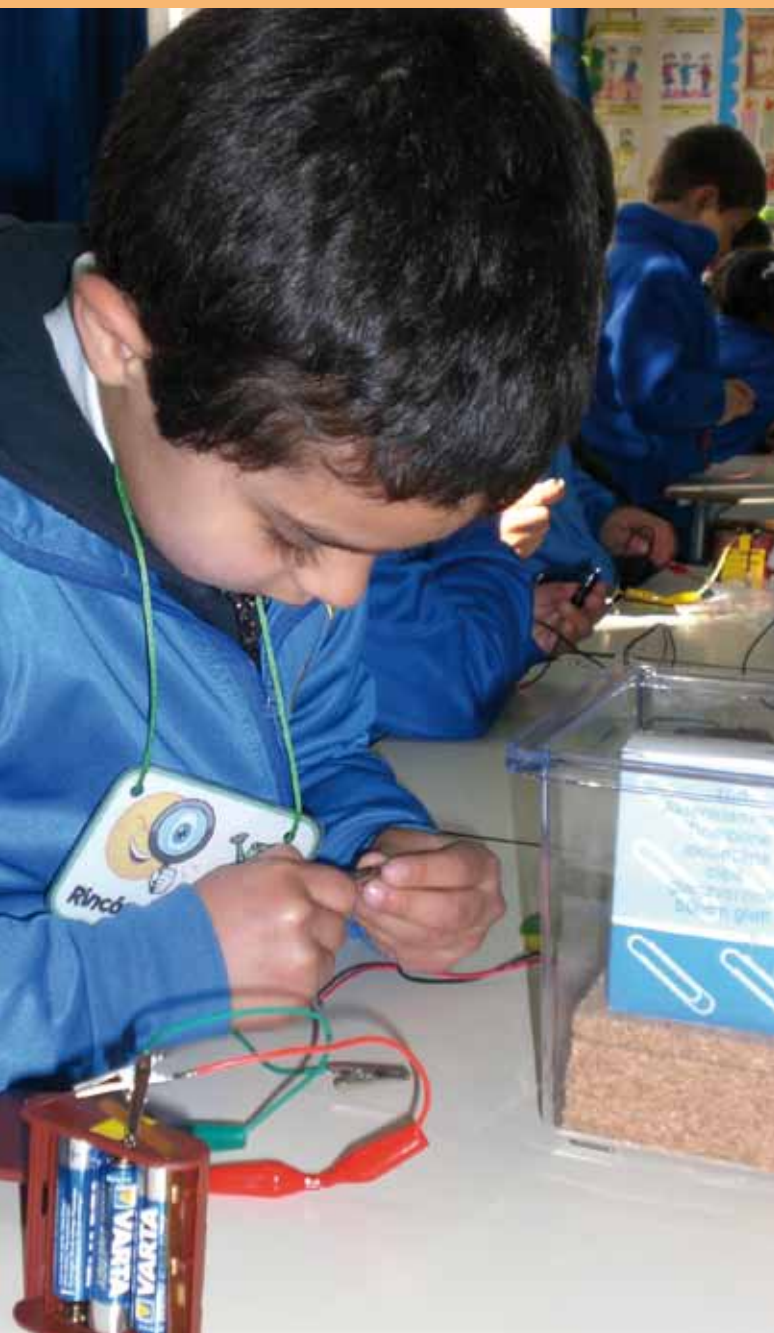
A roll of foil, a package of drinking straws, a box of salt, some scissors, a small jar of cooking oil, dish soap, and a package of sugar cubes. What on earth is one supposed to do with all that? Well, these are just the more common items that can be used to explain the world – at least from a scientific perspective. They come in a big plastic box so heavy that one person can just manage to carry it. The other items in this experiment kit for 10- to 18-year-olds give a clearer indication of the purpose: concrete teaching materials for the so-called STEM fields (science, technology, engineering, and mathematics). These include test tubes and potentiometers, protective eyewear and solar motors, connector cables, digital thermometers, an electrolysis cell, and so on.

What might seem like a hodgepodge of technical gadgetry to the uninitiated is actually the manifestation of an educational concept developed over many years. Nothing is here by chance, and every detail – however small – serves a very specific purpose. Experimento – as this Siemens Stiftung project for learning through discovery is called – is not simply a box for hands-on experiments that could be sent to schools, preschools, or other educational institutions. The objective is actually to profoundly change how science is taught, emphasizes Maria Schumm-Tschauder, who is responsible for the design and coordination of the Experimento project: moving away from teacher-centered frontal instruction in favor of independent experimentation on the part of the students.

The idea behind the project is “to create a uniform approach across the entire educational chain,” from preschool through secondary school. The Siemens Stiftung, supported by a team of renowned scientists and educators, studied various international curricula and put together three experiment kits for the age groups of four- to seven-year-olds (4+), eight- to 12-year-olds (8+), and 10- to 18-year-olds (10+) on the topics of energy, the environment, and health. A variety of age-appropriate experiments makes it possible for children to discover, explain, and study their environment in an up-close, entertaining manner simply by tinkering. How can dirty water be cleaned? How can you get energy from sunlight? What are the benefits of separating garbage? These are some of the questions Experimento raises – questions that often directly affect the people in Africa and Latin America, where Experimento has already begun in a pilot phase.

But putting together the experiments, instructions, and materials is just the beginning. To make the didactic methodology of Experimento a fixture in the curriculum, the Siemens Stiftung organizes a dialog with local teachers, training workshops, and evaluations. And it trains so-called multipliers, such as employees at German schools abroad, who in turn teach workshops of their own to bring the ideas of the project back into their local educational institutions. The foundation also works with educational ministries and universities to help bring about lasting improvements to teacher training and win over as many potential partners as possible for their long-term project.

The Tiny Tots Science Corner, an educational initiative devoted to early-childhood science education, was recruited to help develop and implement Experimento | 4+, which is currently in the pilot phase. The Wilhelm von Humboldt German Teacher Training Institute (LBI) in Santiago de Chile serves as another multiplier for advanced training.



A student at the Arturo Matte Larraín school experimenting with electrical currents, Chile



Students from the Jorge Alessandri Rodríguez school in Santiago de Chile conducting experiments on water purification and the environment, Chile

An initial training program for Chilean teachers associated with the Chilean school network *Sociedad de Instrucción Primaria* (SIP), *Red de Colegios*, was held in Berlin. Angela Clerc, who heads the team developing Experimento | 4+, responded by traveling to Santiago de Chile. Clerc talks about underdeveloped neighborhoods in the Chilean capital that often have more than 40 children per classroom, about schools and universities occupied during the local teacher strikes, but also about schools in the Teodoro Schmidt community in the southern province of Araucanía, where most of the children are Mapuche, Chile's largest indigenous ethnicity. One teacher typically instructs students of all different age groups together in a single classroom. The students, many of whom come from difficult social and family circumstances, often must travel miles to get to classrooms that in the winter have only minimal heating from an old cast-iron furnace. Despite the seemingly adverse conditions, Clerc reports that the response to the experiment kits has been consistently positive. After only one week of hands-on work with the kits, some teachers had already adapted their own worksheets. Moreover, the initial spontaneous feedback from the local German schools, the schools from the Teodoro Schmidt community, and the SIP schools was that Experimento | 4+ meets the curricular needs.

A systematic evaluation of the experiment kits is scheduled for fiscal year 2011/2012. Once the results from this initial pilot phase have been evaluated, a decision will be made on the extent to which greater flexibility is needed in the content of the kits and where there is potential for improvement in accurately matching the various modules to local needs. So the project directors will have a lot of work waiting for them, especially given the ambitious goals set by the Siemens Stiftung. These goals include establishing centers of excellence in locations such as Cape Town and Johannesburg to further expand the Experimento network. And the long-term goal is to produce the experiment kits in the countries in which they're used. After all, the kits themselves are ultimately just a means to an end. The key is to "give the students enough time and space for independent experimentation." What matters is stimulating the curiosity of the children and teachers for learning through discovery – and Experimento has undoubtedly succeeded on that front.

By Alexander Müller

## Development and pilot phase

The experiment kit for the youngest age group, Experimento | 4+, is now ready to use. The development phase is complete and the kits are assembled. The concept and teaching materials were developed in collaboration with the educational partner Tiny Tots Science Corner.

Experimento | 10+ is also ready for use with 54 experiments on health, energy, and the environment for students in the 10 to 18 age group. Four pairs of authors, each consisting of one educator and one educational specialist from the field of physics or chemistry/biology, developed the experiments and teacher training materials. After the inaugural event in October 2010, the authors began trying out the experiments. An experimentation weekend conducted with the authors in June 2011 completed the development phase. The modules for children with special language needs are still being refined.

The Tiny Tots Science Corner has been developing and implementing the remaining module, Experimento | 8+, since the fall of 2011. Building on the experience obtained during the development of the first two modules, the third module will now close the gap for children in the age group of eight to 12. A first prototype for Experimento | 8+ is expected for the fall of 2012.

Experimento was first introduced in February 2011 at didacta, Europe's largest education trade fair. The green light for the international education project finally came in July 2011 with a training workshop in Berlin for educators associated with Chile's school network SIP (*Sociedad de Instrucción Primaria*). SIP, *Red de Colegios* is acknowledged for its expertise in Chile because of its long track record in the field of education. The workshop implemented the concept of Experimento | 4+ for children in the age group of four to seven years old. The aim is to allow evaluations and adjustments to national requirements and integration into the school system and curriculum from an early phase.

The SIP team of educators acted as multipliers, bringing the concept and the experiment kits to Chile and training more primary school educational experts from SIP as well as teachers from local public schools in the Teodoro Schmidt community (Araucanía province). Most of the latter institutions are *escuelas unidocentes*, which means that one teacher teaches all age groups together at the same time in one room. So the pilot project there is implemented across all age groups – from four- to 11-year-olds. The children at these schools come primarily from socially disadvantaged Mapuche families. The Siemens Stiftung's project is thus focused on public education initiatives in underdeveloped regions.

In August 2011, several workshops were conducted at the Wilhelm von Humboldt German Teacher Training Institute (LBI) in Santiago de Chile to introduce educators from German international schools and their local public partner schools

in Chile to Experimento | 4+. The emphasis here is on transferring knowledge from well-equipped private schools to underequipped public schools.

The plan for the medium term is to develop LBI into an Experimento center of excellence. Pairing up one German school with one local public school in Chile is designed to promote the transfer of knowledge to the public schools. The long-term goal is to make Experimento a fixed part of teacher training at LBI. Negotiations are under way about a possible partnership with the Siemens Fundación in Colombia to spread Experimento further throughout South America. The emphasis here is on transferring knowledge from well-equipped private schools to underequipped public schools.



Preschool kids experimenting with Experimento | 4+ in Munich, Germany

Experimento will begin its pilot phase in a few African countries in fiscal year 2011/2012. In November 2011, teacher training workshops for Experimento | 4+ and Experimento 10+ were held for teachers from the German foreign schools and their partner schools in Nairobi (Kenya) and Addis Ababa (Ethiopia). In February 2012, the nearly six-month pilot phase began at the German schools in Johannesburg and Cape Town, South Africa. The invited participants included not only teachers from the German schools but also teachers from five local high schools and three primary schools. The participating teachers evaluate the experiment kits and all the workshop sessions.

# An idea with a ripple effect

In July 2011, Chilean educators from the SIP school network came to Berlin for a training workshop. As part of the Experimento project, they visited educational institutions and got to know the new Siemens Stiftung experiment kits. Since then, the experiments have been used regularly at four schools in Santiago de Chile. SIP director Maria José Castro Rojas and teacher Marcela Alegría report from Chile.

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## “Individual experiences are possible”

During our training program in Berlin, I was impressed by the resources available to day care centers and primary schools in Germany. In Chile, we seldom have money for this. That’s why I’m so pleased that I can now use the Experimento kit at my school in Santiago. My primary school students work with the kits once a week for about 90 minutes. One challenge is our large class sizes of 35 to 45 kids. The question facing us is, how can we ensure that each child has the opportunity to develop his or her talent? So we beef up our personnel: an English teacher and two preschool teachers help out when we’re using the kits.

“Electrical current” is the children’s favorite. When they use the batteries to light up the bulbs and make the tiny motors move, they are applying the “trial and error” methodology and discovering a world unknown to them. The experiment illustrating soil erosion is also very popular. We spread the soil and add “rain” from a watering can and “wind” from a hairdryer to demonstrate how topsoil is lost if agricultural practices are not adapted.

We separate the classes into groups of about six children each. That way, all the students have the opportunity to play with part of the kit and experience the experiments for themselves. Individual experiences are possible when we work in these small groups. That’s the great advantage: the children really have the opportunity to think about what they are doing.

Those who graduate from high school in Chile are typically going into law or medicine. There is little appreciation in our society of the importance of well-trained technicians, so these academic paths don’t receive targeted attention. Girls rarely choose such careers – something else we would like to change. That’s why it’s so important to awaken children’s interest in science and experimentation from an early age.

**Marcela Alegría**, teacher at the Arturo Toro Amor school in Santiago de Chile

## “The students learn from one another”

Our SIP foundation (*Sociedad de Instrucción Primaria*) operates 17 schools in Chile. Sixty to seventy percent of our students come from poverty. Sometimes, the entire family lives in a single room. Frequently, only one parent is around – usually the mother. She supports the family working as a saleslady or through other jobs that pay little and do not include any social security benefits. The children are on their own from an early age. One consequence is that they develop only a limited vocabulary. That’s why from the very beginning, we work very hard on language skills, because language is the foundation. Science classes have traditionally come up short.

But many years ago, we developed a strategy designed to bolster science instruction. The Siemens Stiftung Experimento project is a natural fit for this approach. Our strategy is to bring children into contact with these subjects as early as possible, at the age of five or six.

What struck me during our visit to Germany was the emphasis placed on encouraging children to be creative. After talking with the German educators, we also felt emboldened in our idea to have children learn more from one another in the future. Even though it is not easy in our large groups, we work hard to convince the teachers that their job is to moderate the learning process, not dictate it from the front of the room. Experimento makes this possible.

The school year in Chile ends in mid-December. In the new year, we plan to draw our first official conclusions from working with Experimento. Our evaluation will compare the knowledge of classes with and without the kits. But the success is already evident in one example: some experiments, such as the “electrical current” experiment, can be easily reproduced and are already being used in some of our other schools. The idea is already having a ripple effect.

**Maria José Castro Rojas**, director of the SIP school network

Interview: Selina Byfield



Chilean educators from the SIP school network during the training workshop in Berlin, Germany

## Media portal

The media portal, which was launched in May 2009, offers a broad spectrum of diverse teaching materials that is constantly growing. Some 3,000 materials on topics such as hearing, energy, communication technology, water, and light are available for free download. The media also address cultural, ecological, and social aspects. All are available in German, more than 1,000 are available in English, and some 250 in Spanish.

The lesson planning and presentation materials offer valuable information on the latest technologies, current developments, and trends while teaching basic science. The media, created in collaboration with the educational partner Lokando, are based on the educational curriculum and can be used directly in the classroom. Teachers in primary and secondary schools are the primary target group, but university lecturers, vocational instructors, teaching students, and educational volunteers are also welcome to avail themselves of the materials. In the future, the Siemens Stiftung media portal will also include the experimentation instructions for Experimento and many other supplemental materials, such as the modules for teaching science to nonnative speakers.

The Siemens Stiftung media portal relies on the latest Web technologies for state-of-the-art research and distribution of instructional materials. The portal contains individual media such as interactive charts, animations, films, audio files, and information sheets plus media packages with a common theme. A new addition is the content packages for interactive whiteboards, which include exercises, videos, and worksheets to facilitate media-supported STEM instruction using whiteboards, video projectors, or tablet computers. The content packages were honored with the Comenius Seal 2011 from the *Gesellschaft für Pädagogik und Information* (GPI) for exemplary information- and communication-based educational media. New additions in fiscal year 2010/2011 also included media for the touring exhibition "Computer Worlds" and on the topics of "Art and contemporary



Teaching with whiteboard media from the media portal in Munich, Germany

media culture in schools" and "Lighting technology." Six experimentation videos have also been made available in English, German, and Spanish.

Following a simple registration process, teachers can search for and download the materials they need. The rights to the media are licensed for free use in lessons. The user interface has been available in English and German, and in the past fiscal year, a Spanish version was also added. The interface also features options for providing feedback so that users can share their suggestions, requests, and ideas for new teaching materials. A quarterly newsletter is also published.

In addition to the existing partnerships with the *Institut für Film und Bild in Wissenschaft und Unterricht* (FWU), the *Thüringer Institut für Lehrerfortbildung, Lehrplanentwicklung und Medien* (ThILLM), the *Niedersächsischer Bildungsserver*, and the Tyrol Educational Institute, new metadata-sharing partnerships were launched in fiscal year 2011 with the *Landesmedienzentrum Baden-Württemberg* and the *LVR-Zentrum für Medien und Bildung*.

	2010/2011	2009/2010	2008/2009
Registered users	8,267	5,650	2,659
Media downloads	> 761,000	> 529,000	> 180,000
Available media	2,809	2,290	1,500



Winners of the 2011 student competition: Carina Tetzlaff and Katharina Vollheyde from the Christian-von-Dohm-Gymnasium in Goslar, Germany

## Student competition

The student competition initiated by the Siemens Stiftung sends the message that it pays to think about science and technology issues. The chief objective of the competition is to encourage students to confront society's challenges and harness science and technology in the search for solutions. The competition targets higher-level secondary school students with the potential to earn a degree in science and technology. Winners receive prize money earmarked for higher education and are offered tutoring when they begin their studies.

Some 2,300 contestants in the last five rounds of the competition have grappled with topics such as urbanization, climate change, water, energy efficiency, and environmental conservation. The students are called upon to formulate a specific research question relating to the yearly theme of the competition and to answer the question in a scientific essay of at least 10 pages. The three partner universities RWTH Aachen, TU Berlin, and TU Munich evaluate the project submissions.

Five individuals or teams are invited to each of three semi-final rounds in Aachen, Berlin, and Munich. Nine individuals or teams then advance to compete in the finals in Munich. Winners receive monetary prizes totaling some 100,000 euros. The departments of the winners' teachers are also honored.

The competition is open to students in grades 10 and up at schools in Germany and, since 2011, in Austria and German-speaking Switzerland as well as at German schools elsewhere in Europe. The theme of last year's competition, "Using resources intelligently – working today to conserve for tomorrow," attracted a total of 116 submissions from Germany, Austria, Switzerland, Spain, and Turkey.

Seven teams and individuals from Germany and one team each from Austria and Spain qualified for the final round in Munich, April 2–4, 2011. Carina Tetzlaff and Katharina Vollheyde from Christian-von-Dohm-Gymnasium in Goslar earned top honors there and prize money of 20,000 euros for their project entitled "Study of a fiber-reinforced material made of polylactic acid and stinging nettles." The jurors awarded second prize and 15,000 euros to Claudia Fischer, Victor Brosius, and Nina Naser from Theodor-Heuss-Gymnasium in Ludwigshafen for their project entitled "Camelina in the tank?" Third-place honors and prize money of 10,000 euros went to Andreas Bartl, Sabrina Schönbberger, and Michael Schobesberger from HTL für Lebensmitteltechnologie in Wels (Austria) for their project "Producing bioethanol with immobilized yeast cells and immobilized yeast enzymes."

Simon Kollross from the Benedikt-Sattler-Gymnasium in Bad Kötzing received a special prize for extraordinary achievements and 10,000 euros for his project "Changes to the Upper Bavarian forest through the use of wood as an energy source."

The Siemens Stiftung also supports university orientation events and provides the students with long-term networking opportunities through an alumni network and alumni camps. The Siemens Stiftung first organized an alumni camp in September 2010 in Bad Tölz, bringing together 28 former contestants for an exciting and informative weekend in the Alpine foothills. The second alumni camp was held in September 2011 near Fulda. The program included professional rhetoric and presentation training. An employee of Siemens Corporate Technology in Erlangen offered an inside look into the work of a development

engineer and also gave the alumni good advice about internships, university studies, and scholarships. This achieved one of the goals of the alumni camp: to enable conversations and contacts.

In 2011, the Siemens Stiftung student competition joined Germany's National Consortium of Student Competitions, an organization that promotes the use of educational contests to develop and reward talent. The theme of the 2012 student competition is "Climate of excellence."

### Project results in numbers

Competitions/themes	Year	Applicants	Submissions
"Auf H <sub>2</sub> Ochthouren forschen!" (water) <sup>1</sup>	2008/2009	409	103
"Energy geniuses of the future – ideas for improved efficiency" (energy efficiency)	2009/2010	412	103
"Using resources intelligently – working today to conserve for tomorrow" (resource conservation)	2010/2011	408 D: 340 A, CH, DAS <sup>2</sup> : 68	116 D: 99 A, CH, DAS: 17

<sup>1</sup> The Siemens Stiftung took over responsibility for the competition on January 1, 2009.

<sup>2</sup> DAS = Deutsche Auslandsschulen in Europa (German schools abroad)



Group photo of the winners of the 2011 student competition in Munich, Germany



## Tiny Tots Science Corner



Children discovering the world of numbers in the Teltower Damm preschool in Berlin, Germany

The Tiny Tots Science Corner aims to secure a permanent role for science, math, and technology in the daily routine of all preschools and primary schools.

The Tiny Tots Science Corner is a public-private partnership – the first of its kind – bringing together sponsors from the worlds of business, science, and government under the auspices of Federal Minister for Education Dr. Annette Schavan. The Siemens Stiftung initiated the Tiny Tots Science Corner in partnership with the Helmholtz Association and the Dietmar Hopp Stiftung.

The foundation provides preschool and primary school children the opportunity to explore questions and phenomena from the realm of science and technology in a playful environment. Educational experts receive ideas and materials and the support of regular workshops within local networks.

The project now encompasses 19,213 preschools in 206 local networks in Germany and has reached over a million children between the ages of two and six years.



Schoolchildren building models with the KiTec kit, Germany

## Wissensfabrik

The Siemens Stiftung is a member of *Wissensfabrik – Unternehmen für Deutschland*, a nonprofit association of over 90 companies and corporate foundations dedicated to preparing Germany for the future and equipping the younger generation for the challenges of the information age. Wissensfabrik is engaged in numerous educational projects throughout Germany.

The Siemens Stiftung is involved through the association in “NaWi – How Does It Work?” and “KiTec – Children Discover Technology,” programs for children six to 10 years of age that aim to awaken children’s curiosity for scientific and technological phenomena.

Science and technology have not received their proper due in primary school curricula. Often, there is a lack of well-conceived programs and the corresponding capacities in the classroom. The result is that many children never have the opportunity to develop a positive, emotional relationship to science and technology. NaWi and KiTec want to do something to reverse this.

These programs provide activity-based instruction with experimental and constructive-practical elements to help teachers awaken children’s interest in science and technology. They also boost children’s language development and team skills. Schools interested in the programs can apply. Once they have completed a training program through the Senior Expert Service, they will receive an experiment kit.

The NaWi experiment kit is designed to help primary school students discover the world of science. A total of 46 experiments on the subjects of air, water, and food introduce up to 30 children per kit to scientific phenomena. The Institute for Chemistry Education at Johann Wolfgang Goethe University in Frankfurt am Main developed the experiment kit and adapted it to meet the curricular requirements of all the German federal states.



## MINT-EC

Siemens Stiftung is a member of the Association of Math and Science Excellence Centers in Schools, known as MINT-EC, which is dedicated to inspiring young people to pursue careers in science and technology.

The MINT-EC network promotes math, science, technology, and computer science instruction, reaching some 137,000 students and 12,000 teachers at 146 secondary schools in Germany and a German school in Turkey. The math and science excellence centers serve as beacons in the educational landscape. Numerous training seminars, competitions, and events are offered together with partners to ensure school development and support interschool exchanges.

The Siemens Stiftung is involved in scholastic events and project fairs that nurture talent and highlight career perspectives in science, technology, engineering, and mathematics. Every two years, the Siemens Stiftung Award also honors outstanding MINT-EC schools that have demonstrated effective educational concepts in the realm of science and technology.

For the Siemens Stiftung Award in 2010, the panel of experts nominated 10 schools to receive prize money totaling 36,000 euros. The panel looked at contemporary programs and methods inside and outside the classroom and the prevailing conditions in place at the school during the 2009/2010 school year. The award focused on three core ideas: "Paving New Educational Paths," "Structuring and Networking," and "Communicate and Cooperate." The awards ceremony took place in Berlin on December 3, 2010.



Schoolchildren experimenting with the NaWi kit, Germany

KiTec, on the other hand, focuses primarily on technical construction, giving primary school children the opportunity to work in teams on challenges relating to mechanical, automotive, and electrical engineering. The KiTec classroom kits were developed by the *Transferzentrum für Neurowissenschaften und Lernen* (ZNL) in Ulm in collaboration with the Department of Technology and Education.

Both projects are continually expanding to more and more locations. In the past fiscal year, 195 NaWi kits and 66 KiTec kits were donated, along with the corresponding training workshops.

### Figures for KiTec, NaWi, and Siemens partner school program, fiscal year 2010/2011 (October 2010–September 2011)

	KiTec	NaWi
Instructors working for the Siemens Stiftung	10	14
Number of kits donated	66	195
Number of workshops held, teachers (per school: 2)	132	390
Number of teachers reached (5 per workshop)	660	1,950
Number of students reached (25 per class)	1,650	4,875

## Siemens partner school program

The Siemens Stiftung has overseen the partner school program on behalf of Siemens AG since 2010. The partner school program aims to prepare students for careers in technology, mathematics, and science.

The company gains the opportunity to reach out and establish a relationship with the young generation, while the schools gain useful information on career prospects and insights into a global enterprise. Both parties demonstrate – to the public as well – that young people have a desire to prepare for the information age of tomorrow.

The conference of principals of the Siemens partner schools, whose theme was “Educational Deficits – Educational Opportunities,” was held May 20–22, 2011. It attracted a

large number of attendees and was the central event in fiscal year 2010/2011. Some 80 principals, 13 Siemens coordinators, and 5 speakers gathered in the Global Leadership Center of Siemens AG in Feldafing for the fourth time to rethink and modernize the focus of the Siemens partner school program.

The two-day program included keynote addresses by education expert Sabine Czerny, psychoanalyst Dr. Jürgen Körner, and Secretary-General of the Conference of Education Ministers Dr. Erich Thies, as well as numerous workshops and presentations on current curricular and leadership concepts. Attendees also had the opportunity to learn about the diverse projects of the partner school program and talk with one another about the current developments and challenges facing schools each day.

## Siemens partner school program

	Germany 2011	International 2010
Siemens coordinators	33	20
Participant workshops	125	32
Events held*	750	192
Number of teachers reached**	8,125	2,080
Number of students reached**	112,500	28,800

\* Estimate: 6 events per school per year

\*\* Basis: 65 teachers and 900 students per year



Children experimenting with the “Forscherkiste” in the St. Matthias preschool in Munich, Germany

## Forscherkiste / Discovery Box

The Siemens Stiftung donated the *Forscherkiste* (researcher kit), developed by the nonprofit Science-Lab, through the end of fiscal year 2010/2011 with the aim of actively encouraging a natural curiosity for science and technology among even the youngest children. The *Forscherkiste* gives children from three to six the opportunity to take a closer look at natural and scientific interactions and phenomena. The kit includes everything kids need to perform 45 experiments.

The kit’s contents make it possible for teachers to conduct scientific experiments without any additional materials. The interdisciplinary approach of the *Forscherkiste* transcends the STEM studies to incorporate movement, songs, and games. Embedded in the kits is an integrated educational concept: each kit includes a coupon for a one-day workshop to train teachers in the optimal use of the kit.

In fiscal year 2010/2011, the Siemens Stiftung donated 153 *Forscherkiste* kits. Since the foundation was established, a total of 554 kits have now been donated to preschools throughout Germany. The campaign to donate Discovery Boxes, the international counterpart to the *Forscherkiste*, began in fiscal year 2009/2010 and was completed in the past fiscal year. The Siemens Regional Companies served as ambassadors for the Siemens Stiftung in this project, distributing a total of 900 kits in Slovenia, Romania, Hungary, Bulgaria, and Croatia.

Both the *Forscherkiste* and Discovery Box programs were discontinued as stand-alone projects in the past fiscal year, but the experience they yielded will be incorporated into the new, integrated concept of Experimento.

## KISS

A comprehensive education includes an understanding of art and aesthetics. “KISS – Kultur in Schule und Studium” (Culture in Schools and Universities) is the name of a joint initiative of the BDK Association for Arts Education and the Siemens Stiftung to promote the teaching of modern art and media culture in schools. From 2008 to 2011, students of arts education received scholarships to work together with artists to develop innovative teaching units and implement them in selected schools.

An exhibit in Kunsthau Dresden from July 7 to October 2, 2011, featuring works by artists involved in the KISS project provided an opportunity to experience contemporary art up close. A learning center in the exhibit hall offered background information on the arts education projects and highlighted connections between art and the strategies of activity- and project-based learning. Kunsthau Dresden and the Technical University Dresden also hosted a conference on the theme “Modern Art and Media Culture in Schools” from September 30 to October 1, 2011. The conference focused on the question of the value of art and modern media culture in schools. The some 100 attendees were primarily teachers from Dresden, Saxony, and neighboring states; arts education teachers; participating artists and KISS scholarship recipients; the KISS management team; and students from the Dresden KISS projects. The project series “KISS – Culture in Schools and Universities” was ended in this fiscal year.

## Milestones



View of the Milestones exhibit in Munich, Germany

The Siemens AG “Milestones” exhibit, whose management the Siemens Stiftung took over in October 2009, closed its doors on March 1, 2011, as a result of renovation work at the Siemens corporate headquarters. The exhibit featured innovations with which Siemens shaped our technological civilization for over 160 years and offered insights into the world of electronics and electrical engineering. It also presented solutions to the challenges of the future such as demographic change, urbanization, climate change, and globalization. From the pointer telegraph to the electric dynamo to the most cutting-edge smart grids, digital factories, and models of the fastest and lowest-radiation computer tomographs, the exhibit presented ground-breaking technological innovations of yesterday, today, and tomorrow that were introduced by Siemens.

As soon as the renovations are complete, currently expected in late 2015, the exhibit will reopen under the auspices of Siemens AG. It will be housed in a new space at Wittelsbacherplatz in Munich, where it will be accessible to a wide public, those interested in the history of Siemens, and above all students and technophiles.



Building a motor as part of ForumAcademy in Munich, Germany

## ForumAcademy

ForumAcademy was designed for teachers of all school types and students in grades 6 and up. The objective was to offer teachers good continuing education options and to prepare young people for the future.

In the past fiscal year, a total of 118 continuing education events were held with 3,200 participants on subjects including media literacy, project management, and technology for kids. The events took place in Munich and Osnabrück. In the 10 years that ForumAcademy existed, a total of 54,542 teachers and students benefited from 1,780 targeted continuing education events.

ForumAcademy was discontinued as part of the strategic realignment of activities and the move to Munich-Schwabing on April 1, 2011.



### 3.3

## Culture.

# Promoting culture and creating points of reference to examine the present

The cultural projects of the Siemens Stiftung are an effort to support vibrant, self-assured cultural environments as societies develop. The foundation seeks not only to improve qualifications and the acquisition of skills but also to create new cultures of learning and opportunities for dialog and to promote a cultural mind-set, independent thinking, creativity, and personal initiative.

The Siemens Stiftung projects aim to emphasize the value of culture to society. Culture is not seen isolated from its social context but always in the perspective of an examination of the present. The aim is to support an aesthetic understanding and develop a tradition of taking unfamiliar perspectives as a means of reflecting on and critically questioning cultural identities.

The Siemens Stiftung addresses this need by initiating platforms for international networking and knowledge transfer with a focus on sub-Saharan Africa and Latin America. Numerous local and international partners are involved in setting up and implementing the platforms, which are designed to be sustainable: once the projects are established and internationalized, they are run independently by the local participants.

The Siemens Stiftung regards human coexistence as a cultural achievement. Ultimately, the foundation's projects also help foster a diverse cultural landscape that is perceived as enriching, creating value, and inspiring, especially in underdeveloped regions. Only those who understand their own cultural background can approach other cultures, open themselves to new and unfamiliar cultures, and make a valuable contribution to intercultural communication.



Impressions from the conference in Johannesburg, South Africa

### Music information center in sub-Saharan Africa

The knowledge to shape the future is based on information, which in turn forms the basis of any dialog. The Siemens Stiftung and its partners take this as a starting point with the objective of providing access to African music to those who are interested. For the oft-lamented lack of inner-African communication is also felt in areas that are vital for shaping the processes of civil society. Music is an important element of cultural encounters and exchanges.

The joint initiative of the Siemens Stiftung and Goethe Institute establishes an online platform offering basic information about musical activities on the continent. The platform will offer access to important composers and interpreters as well as insights into the musical landscapes of Africa. The platform also serves as a guide for musicians and music lovers interested in information on institutions, associations, training and continuing education, archives, media and music portals, subsidies and legal matters, and events.

The focus is on current trends in sub-Saharan African music, with a clear delineation of the diverse national traditions of each country. This requires extensive, professional, specialized research. Local specialists are in charge of selecting the subject matter and carrying out the research. One particular challenge is the great diversity of trends and technologies that must be understood for unimpeded use of the media available in Africa.

The Siemens Stiftung and Goethe Institute launched this project in sub-Saharan Africa with a conference in Johannesburg from August 24 to 27, 2011. The conference, in which many personalities from the African music scene took part, provided a forum for discussing and clarifying interests, refining the project focus, and defining further practical steps to be taken. The inner-African dialog and access to reliable information were points of special significance to the attendees from many African countries. A consensus was reached to work with local partners in developing a reliable and sustainable communication structure transcending genres and national borders to present African music on a world stage. The idea is also to facilitate related initiatives in Germany and throughout Europe.

## Young Soloists

The Siemens Stiftung supports the cultural scene among Germany's youth through the Young Soloists series of concerts. Working in collaboration with the Conservatory of Music and Theater in Munich, the foundation presented several concerts of music from the 20th and 21st centuries during the past fiscal year. In a total of six concerts held from December 2010 to May 2011, top conservatory students challenged open-minded audiences with contemporary music. Each concert in the past season featured the world premiere of a new work by a young composer from the classes of Professors Jan Müller-Wieland, Enjott Schneider, or Pascal Dusapin. Pre-concert discussions with the composers and interpreters offered listeners information on the background and source of inspiration of each piece and an illuminating look into the work of musicians.



Young Soloists logo

Young Soloists 2010/2011	
Concerts	6
Musicians	18
Total works performed	20
World premieres	6
Attendees per concert	120

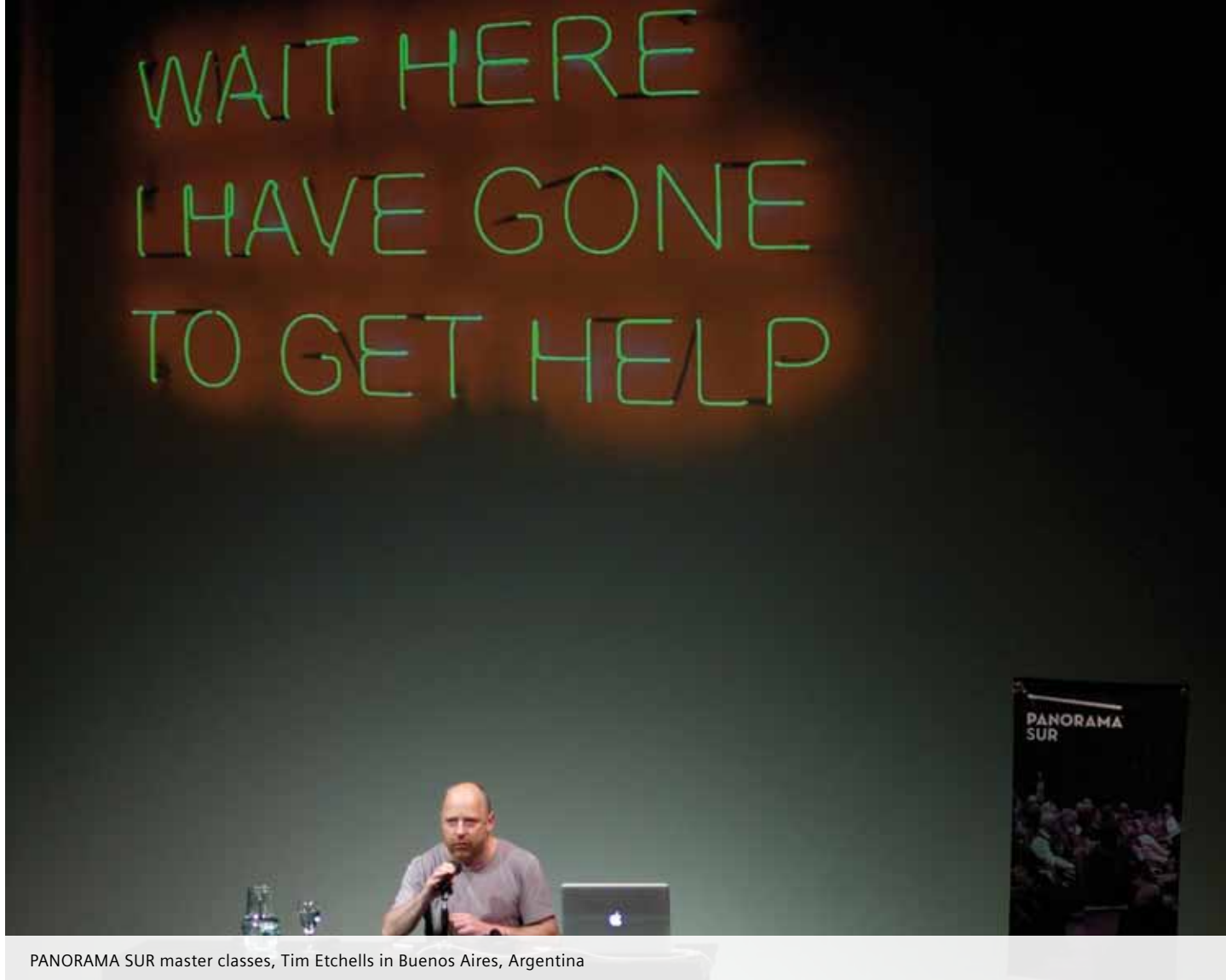
## contempo primo

The Siemens Stiftung sought to strengthen the regional cultural scene and promote an intercultural dialog between Asia and Europe when it initiated a training program for contemporary ensemble performance in China. The program ended in May with the founding of the first ensemble for contemporary music – ConTempo Beijing.

The Central Conservatory of Music in Beijing and the Siemens Stiftung had launched a training program for contemporary ensemble performance under the name contempo primo in Beijing in the spring of 2010. Gifted musicians living in China had the opportunity to audition for the training program for contemporary ensemble performance. Under the leadership of the internationally renowned Ensemble Modern from Frankfurt am Main, the 50 chosen instrumentalists rehearsed a full-length program of music from the 20th and 21st centuries. One unique aspect was the use of both traditional Chinese instruments and Western orchestral instruments in one ensemble. An extended period of study with Ensemble Modern in Frankfurt also made it possible to train a Chinese orchestra manager.

Director Kasper de Roo conducted the inaugural concert of ConTempo Beijing in Beijing Concert Hall on May 14, 2011. The program included works by Varèse, Haas, and Hindemith plus a new work by Chinese composer Guo Wenjing commissioned by the Siemens Stiftung. Another work, a Siemens Stiftung commission by Chinese-based composer Jia Guoping for traditional Chinese instruments, was also presented in the inaugural concert. The musicians' first appearance outside of the contempo primo training program was a master class at Central Conservatory of Music (Beijing International Composition Workshop) in July 2011. Numerous international festivals have already invited ConTempo Beijing as part of the Year of Chinese Culture 2012. A concert at the Schleswig-Holstein Festival is planned for August 2012.

ConTempo Beijing	
Master classes	4
Participants	95
Works studied	52
Studio concerts	4
Attendees of public concert	1,000



PANORAMA SUR master classes, Tim Etchells in Buenos Aires, Argentina

## PANORAMA SUR

The annual international working platform PANORAMA SUR aims to deepen the collaboration among Latin American artists, with their structurally diverse art scenes, and nurture a partnership of equals with the international theater scene. With this mission, PANORAMA SUR seeks a dialog on artistic practices and their place in society – and creates an environment for this dialog that is unique in Latin America.

The effort to establish this platform began in 2010 with the pilot project “Escena Sur” initiated and organized jointly by the Siemens Stiftung and Asociación para el Teatro Latinoamericano/THE. The program and partner network were expanded in the second year. The meeting in Buenos

Aires from July 18 to August 12, 2011, brought together theatrical directors from Europe, Latin America, and the Middle East to discuss the languages and forms of theater.

Two guest appearances provided PANORAMA SUR with an international forum to present new aesthetics and representational forms, including Rabih Mroué’s lecture performance “Make Me Stop Smoking” and half comedy sketch, half radio drama “Void Story” by the British ensemble Forced Entertainment. The author seminar brought together young playwrights from Argentina, Chile, Colombia, Mexico, Peru, Spain, and Uruguay with local theater directors to develop original works and attend daily performances of varying topics and genres at diverse and even unusual venues.

	Escena Sur (2010)	PANORAMA SUR (2011)
Total participants	823	1,730
<i>Breakdown:</i>		
Participants in author seminar / workshops	23	120
Audience for performances	No information available	803
Audience for master classes	800	1,950

# Rethinking your own assumptions

Buenos Aires has over 200 performance venues, and the current season offers some 400 stage performances. But up to now, there has been almost no across-the-board, interdisciplinary collaboration. The Siemens Stiftung and Asociación para el Teatro Latinoamericano responded by joining forces to initiate and organize the PANORAMA SUR academy project, dedicated to establishing a long-term network for sharing knowledge and experience within the Latin American theatrical landscape and injecting new ideas into the Buenos Aires theatrical scene. Theatrical directors from Europe, Latin America, and the Middle East met in the Argentine capital for four weeks to work on new theatrical forms and languages.

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Erik Leyton, playwright from Bogotá, Colombia:

*What made you decide to take part in the author seminar?*

I had long had the feeling that I was getting too comfortable in my work. I had reached the point where I could write texts that always worked well but had ceased to truly inspire me. It seemed paramount that I find new inspiration, ask myself different questions, and get to know different theatrical forms. I also wanted to learn more about the theatrical scene in Buenos Aires. I was here a few years ago and was already impressed at the time by the vitality and diversity of the city's theatrical scene. I was very interested in learning more about its production methods and protagonists.

*Did your participation in the author seminar help you with your work?*

Talking and sharing experiences with the other playwrights was simply fantastic and really quite helpful. Such a moment in which you can stop what you're doing and really reflect does not normally present itself in day-to-day life. The fact that we were such a tremendously diverse group was particularly enriching. Talking with colleagues from the various countries, with their diverse backgrounds and their different understandings of theater, threw me into a healthy state of crisis regarding my own productions.

*How would you rate your overall experience with PANORAMA SUR?*

The many different plays that we saw, the experience of how theater can spontaneously manifest itself in various and even unconventional spaces – all of that was very important and new to me. The theoretical discussions with

different forms of representation from personalities such as Antonio Araujo and Rabi Mroué were simply fantastic. What I experienced here is an entirely new mirror for my own creative process. There were many situations in which you had to ask where you were and what your relationship to the others was.

*What impressions will you take away with you?*

I was surprised to see that theater in Buenos Aires is such a natural part of public life. In Bogotá, there is simply no audience. Theater there is still a very small and elite scene, with few directors and few productions.

Here they have managed to make theater as universal as buying milk, voting in an election, or riding the subway. In no other country have I seen mothers bringing their children to a play at eleven o'clock in the morning. A relationship to theater is established at an early age. That is an entirely different concept of the audience than what we have in Colombia, for example.

Seeing this unleashed serious doubt in me about my role as a playwright in making theater popular. That is a topic that we still do not give enough attention to in Bogotá and that I would like to have discussed in more detail.



Gerardo García, actor, director, and playwright from Lima, Peru:

*What made you decide to take part in the author seminar?*

I was here in Buenos Aires two years ago and went to a different play each night. What I saw fascinated me greatly. Theater in Buenos Aires is much more diverse than in Lima. There has been a bit more experimentation and interdisciplinary collaboration recently, but not like here. What I experienced completely changed my perspective, and that's why I did not hesitate for a moment to sign up for the seminar.

*What is the theatrical scene in Lima like?*

There used to be a good many theatrical troupes in Lima, but most of them eventually dissolved. This scene is slowly returning. For about eight years now, we've seen growing audiences who are curious and interested in theater. So we don't necessarily have more venues, but we are seeing greater interest and a large new crop of theater students.

*What was your experience with PANORAMA SUR?*

I especially liked the *desmontajes* (deconstructions) during the seminar in which we first watched certain plays by Rafael Spregelburd, Daniel Veronese, Romina Paula, and Alejandro Tantanian, then invited the four playwrights to join the seminar one at a time to "deconstruct" their work with thus: talk about its creation, structure, staging, and dramatic text. It was great to be able to experience the wholly unique voice and working method of the various playwrights firsthand.

*What were your impressions?*

I already loved the work of Romina Paula – ever since I was in Argentina for the first time and saw her play *Algo de ruido hace* ("It makes some noise"). That was also the first play that I staged professionally in Lima, an open-air performance in a courtyard between several apartment buildings. The neighbors provided the noise referred to in the title. Otherwise, it was a very traditional adaptation that of course required some changes: there is a whole

series of local expressions for which we sought parallels in Peruvian reality and history, which translates the original intent. Given this, I was of course particularly excited to learn something concrete about how she works with intertextuality, for example, or how she deals with light and space or approaches her work with the cast. I also really enjoyed delving into the plays by Rafael Spregelburd. Even though his work often deals more with local themes, it really touched me at a personal level. I'm even planning to stage his play *Lúcido* (Lucid) in Lima soon.

*What inspirations will you take with you for your work?*

I think what Daniel Veronese said is very important: that the point is not what I want to say, what I build into the work from the start, but rather to trust my own voice in shaping the creative process more freely and let things happen. Then it may happen that what I end up with is something entirely different than what I originally wanted to say. But it will still bear my imprint. That's something I've often seen here in Buenos Aires: the theatrical work is much freer, but the artists try to remain true to their individual language. So I will also go away with the desire to develop a clearer vision of what I want to say and how I want to use the text to say it. And I want to experiment more in the future. I've taken more of a traditional approach up to now, but now I also want to go in new directions and try out different styles. Overall, what I experienced here was very enriching, both personally and professionally.



Betina Bracciale, playwright from Buenos Aires, Argentina:

*How did you come to theater?*

I pursued media studies in college and then worked as a journalist. Then I signed up for a workshop with Alejandro Tantanian, and for the past five years, I've been writing my own plays.

*What was your experience with PANORAMA SUR?*

I really liked the structure of the academy. The various activities continually examined how art deals with the present. Many of the discussions and conferences and even some of the plays that we saw were centered around this axis of experience. Dealing with topics like the border between reality and fiction and between performance and the political understanding of theater, experiencing other theatrical formats, and entering spaces not traditionally associated with theater – all of this raised a lot of questions that I am still pondering.

*What pieces did you find especially thought-provoking?*

The works of Rabi Mroué, for example, raised a good deal of questions. In his lecture performances, he speaks of the civil war and the “disappeared” in Lebanon. Naturally, we Argentines can relate to that on many levels. During the seminar we had a lot of discussions in which we repeatedly touched upon the role of theater in relation to certain topics or sociopolitical realities.

*What was your experience working with the other authors?*

It was a real privilege to take part in the seminar. This diversity of voices and perspectives, experiencing the relationship of each individual to the text and to theater, being able to throw your own work in this pool and work on it together with 15 colleagues from worlds with an entirely different set of parameters – that is an experience that any author can benefit from.

*What will you take with you for your future work?*

Questions, above all. And doubts – doubts that I wholeheartedly embrace: from very general stylistic questions or questions about the choice of topics to questions about representation. The effect of this great uncertainty is that you begin to rethink your own positions, and that helps your own productions advance. Where exactly, I don't yet know. Time will tell.

*What do you hope to gain from an intercultural exchange like PANORAMA SUR?*

PANORAMA SUR has expanded my cultural universe. This exchange made it possible for me to get to know a group of very talented, enthusiastic, and engaged colleagues from throughout Latin America and Spain.

All the individuals brought their own specific poetry – but also their cinema, literature, theater, personal anecdotes, and the very attributes of their various countries, some of which I knew and some of which I didn't.

The seminars and presentations taught me about authors and directors – from Argentina and elsewhere – that I had never heard of before, about theater scenes that are set up completely differently than ours, and about the themes and aesthetic models that prevail there. This is very valuable, especially because Latin America has had very few international networking platforms of this type. Some colleagues are already planning joint projects for next year. Ideally this kind of thing keeps growing so that we get to know each other better and better.

**Interview: Anne Phillips-Krug**

## POWERS OF SPEECH



Mpumelelo Paul Grootboom: *Rhetorical* in Johannesburg, South Africa

The public speech, a cornerstone of democracy and thus a necessary precondition for social development, is at the center of the POWERS OF SPEECH project, which brings to life new theatrical works in the Siemens Stiftung's focus regions and elsewhere. POWERS OF SPEECH, which defines itself as a platform for international networking and knowledge transfer, highlights the formal and substantial powers on which a speech is based: powers that can lead a community to war or peace, to "good" or "evil." Through an initiative of the Siemens Stiftung and the Kaaithheater in Brussels, playwrights and directors from South Africa, Colombia, Great Britain, and Croatia are invited to explore their relationship to the public speech and its place in their own cultural and political context. Productions were created in Johannesburg, Bogotá, Brussels, Sheffield, and Zagreb in collaboration with cultural institutions in four countries.

Epoch-making speeches are defined by the change they bring about, their ability to present social challenges in a different light. In every country, culture, and political system, the speech is and has been a driving force behind the politics of nations and communities.

When Barack Obama's speechwriter Jon Favreau said in an interview that he had to write different versions of a

speech, depending on whether Obama won or lost the presidential election, the idea arose to use this second version of a speech as a model for artistic projects: For which events that could happen in the near future but may never happen do we need to prepare ourselves rhetorically?

How would history have unfolded if noteworthy speeches had been different? POWERS OF SPEECH harnesses the imaginative potential of theater to reexamine the art of speechmaking amid the conflicting tensions of politics, art, and society.

The European premieres of the new works took place from November 25 to December 10, 2011, at the "Spoken World" festival in the Kaaithheater in Brussels, accompanied by a complete program highlighting the power of the spoken word. Performances, speeches, debates, and installations covered the spectrum from African American slam poetry and speeches without words to presentations written by playwrights and performed live by Belgian ministers. A new generation of up-and-coming speakers from throughout Brussels drafted their own versions of the "I have a dream" speech. The productions then went on tour, which included their German premiere at PACT Zollverein in Essen.

## SCHAUPLÄTZE

The SCHAUPLÄTZE project takes an entirely different approach to supporting culture and creating points of reference to examine the present. The coproduction series, a joint initiative of the Siemens Stiftung and the International Summer Festival in Hamburg featuring performances in three countries, looks at the hidden paradoxes in culturally significant locations. SCHAUPLÄTZE focuses on noteworthy artists whose work makes an important contribution to socially relevant topics.

The three-part performance series began in July 2011 with the world premiere of *enfant* by French artist Boris Charmatz at the Festival d'Avignon. The German premiere took place on August 23 and 24, 2011, at the International Summer Festival in Hamburg.

*Enfant* takes the close relationship between children and adults, man and machine, power and powerlessness and turns it on its head. Charmatz, one of the most innovative choreographers today, chooses an original approach, combining his interest in social interactions with his fascination for machinery to create a diffuse point of friction between human and mechanical bodies and between childishly naive exuberance and the calculatingly manipulative behavior of adults.

One inspiration for the work was a collection of letters published by the NGO *Réseau Education Sans Frontières* (RESF) containing appeals to public officials by ordinary citizens and directing our empathy to the situation of children whose parents face deportation.

The series will continue in 2012 with performances in Argentina and Germany.

Boris Charmatz's *enfant* in Avignon, France



## Luftpost

The international literary series *Luftpost* (Airmail) turned to the focus regions of the Siemens Stiftung to highlight authors whose novels and stories paint a literary picture of the social, cultural, and political situation in their countries. The aim was to gather foreign perspectives in a shrinking world and unleash the seismographic qualities of art to spur a dialog between cultures and an examination of the “culturally exotic.”

The third author reading of the series, featuring London-based artist and writer Samson Kambalu, focused on life in Malawi, one of the poorest countries on earth. *Jive Talker*, Kambalu’s autobiographical novel combining tragedy and comedy in a tale both heart-warming and bizarre, portrays an Africa that is almost unknown in the West but reached a wide audience thanks to the *Luftpost* series.



Samson Kambalu at a reading in the international literary series *Luftpost* in Munich, Germany



*Walk (Square)* performance by Melanie Manchot for the opening of the WUNDER exhibition in the Deichtorhallen in Hamburg, Germany

## WUNDER: art, science, and religion from the 4<sup>th</sup> century to the present

The surprise we feel when faced with what is unknown, wondrous, or new is often the beginning of social change, creative inspiration, and technological progress. WUNDER, a joint project of the Hamburg Deichtorhallen museum and the Siemens Stiftung, offers a meaningful contribution to aesthetic education and intercultural communication examining miracles in art, science, and religion from the 4<sup>th</sup> century to the present. WUNDER was an exhibition about the boundaries of Western rationality. Centered around works of modern art, the interdisciplinary exhibition examines the things that stand out in our world: from unexplained healings, unbelievable natural phenomena, and the wondrously exotic to unexpected technological innovations, artistic ideas, and pure coincidences.

WUNDER was curated by the Prauth group of curators in Berlin and was exhibited in Hamburg’s Deichtorhallen from September 23, 2011, to February 5, 2012. While the exhibition was on display, an accompanying program featured numerous events, a themed film series, activities, and interventions in Hamburg. A comprehensive catalog on the exhibition has been published and features some 200 illustrations and essays by renowned authors.

# WUNDER: the exhibition



Photo by Andreas Gursky: Formula One pit stop (2007)

It's an impressive scene: several dozen people in red and white overalls surround two barely discernible automobiles in a frenzy of activity, while countless others look down on them from a gallery. It's obviously a "Formula One pit stop" – which is the title of two-by-five-meter photograph by Andreas Gursky, the first work of art that visitors to the WUNDER exhibition see. But what does a Formula One race have to do with miracles?

Possibly quite a bit. Because in the West, miracles of technology serve a purpose similar to that of religious miracles: as extreme events that reinforce a common worldview and build communities. That's why the shimmering nature of the miracle is a very apt motif for a trenchant representation of the complex interrelationships of religion, art, science, and technology in the West based on the latest research.

In a way, WUNDER brings the medium of the exhibition back to its roots, given how the "cabinets of curiosities" of the 16<sup>th</sup> and 17<sup>th</sup> centuries represent the earliest museums. The word "wonder" was shorthand for everything that was unknown, that seemed to transcend Western rationality. The things collected in these "cabinets of curiosities" – objects from faraway countries, mysteries from our own world, masterly crafted works of art – attracted the curiosity and interest of laymen and researchers alike. This characteristic of museums has remained unchanged to this day: a place for marveling and aesthetic edification on the one hand, a venue for knowledge and information on the other.

This is also the theme of the installation by Terence Koh, billed as the "new Warhol." His "cabinet of curiosities" takes the principle to its aesthetic extreme: not only are the objects enclosed in glass cabinets, they've also all been dunked in white paint – a beautiful look, but quite far removed from the originals. That's the crux: as soon

as something is in a museum, it's no longer the same thing it was. Its foreignness is degraded to a curiosity, and any potential for a more in-depth examination is lost.

The exhibition as a whole plays on this ambivalence. WUNDER wants to help visitors rediscover wonder and surprise – which also means conveying knowledge and a greater responsibility for the art and science that our culture produces. The exhibition is an experience in the best sense of the word. Visitors can move about freely in the enormous hall and surrender completely to their tendencies and instincts. The themes and exhibits are so interwoven with the specially developed architecture that they constantly offer new perspectives and open up new interrelationships. WUNDER uses everyday objects of religion, science, and technology to give visitors essential information about the phenomenon of a miracle as such. These facts and contents offer inroads to access the complex and sometimes unapproachable artworks.

Whether you perceive something as a miracle to begin with depends in part on your perspective, expectations, and prior knowledge. Only a diverse exhibition has the power to reach people of entirely different backgrounds (age, culture, education), thereby creating a place of enlightened dialog. WUNDER firmly advocates the conviction that knowledge and education are core values that underlie the development of both the individual personality and social cohesion. A successful exhibition motivates and activates visitors to examine a subject for themselves without falsifying the facts or making the subject into a matter for experts alone. WUNDER reaches out equally to young families and well-versed scholars alike – and offers specific points of access for all.

But what actually is a miracle? The short answer: something that radically exceeds what can be realistically expected. Miracles of this sort are found not only in religion but in

medicine, when a patient is miraculously cured, or in industry and research, when unexpected and unpredictable innovations provide fresh momentum and inspire new technological wonders. This sense of the miraculous even permeates marketing formulas – think of Miracle Whip or the Wonder Bra.

The significance of a miracle is usually grasped only when viewing it as a primarily social phenomenon – where the “authenticity” of the miracle is less important than the sensation it creates. So it may be that the famous “Miracle of Bern” – the original trophy of which can be admired in the exhibition – was not a miracle at all, simply the happy by-product of the stadium green, the Adidas cleats, or perhaps a chain of coincidences. But Germany’s World Cup victory of 1954 is aptly named, because only nine years

after defeat in the Second World War, the Germans had a reason to be proud again. The psychological significance of that can hardly be overstated.

The Catholic Church has always understood this aspect of miracles, as evidenced in the multi-channel film installation “O Maria Hilf” by artist duo Helmut and Johanna Kndl, who traveled around the world to film the sites of pilgrimages devoted to the Virgin Mary. At first glance, the uninitiated may shake their heads at the bizarre rituals on display, but the strength of the work is that on closer observation, the strange power that emanates from these can be felt: solidarity, community, purpose. It would be presumptuous to simply dismiss it all with the argument that the underlying occurrence – the apparition – is not genuine. To Christians, miracles are like booster shots for their faith and have a certain role to play.

What does all of that have to do with Formula One? In the photograph by Gursky, the highest-paid photographer working today, everything is unreal to a certain extent and yet hyperreal in a way no actual photo could ever be. The extreme exaggeration (the photo is actually a heavily edited digital collage) of a typical racecar scene summarizes both the glorification of technology and the simultaneous desire for utmost efficiency and meaninglessness. The question that inevitably comes to mind is: What is technology’s promise, and what makes it so fascinating? And obviously, this question is directed not only at those who race Formula One, it confronts Western culture as a whole.

Just as religious miracles convince doubting believers to believe in the right god and stay on the true path, technological wonders serve to affirm the Western tradition of shaping the future through science and technology. To a certain extent, we’re all under the spell of these assumptions – if for no other reason than the lack of any persuasive alternative today. The exhibition in the Deichtorhallen is an attempt to share this unique path of the West with as many people as possible – and to serve as a bridge for a dialog with cultures that may have a very different perspective.

Daniel Tyradellis



Still from a work by H & J Kndl on apparitions of the Virgin Mary



Terence Koh's installation "cabinet of curiosities"



Thomas Schütte: "Vater Staat" (2011)

## Before the Law

What do people need to lead a life of human dignity? That is one of the central questions posed by the Siemens Stiftung. The exhibition "Before the Law – Postwar Sculpture and Spaces of Contemporary Art" unites figurative sculptures from the 1950s as a part of European history with expansive works by contemporary artists that explore the universal problem of law in relation to the protection of human dignity. It symbolizes the value of culture in society, using art to reflect the basic conditions of human existence. Franz Kafka's parable "Before the Law" (1915) provided the original concept and metaphor for the exhibition, a joint project of Museum Ludwig and the Siemens Stiftung.

The exhibition – curated by Kasper König and Thomas D. Trummer and on display in Cologne's Museum Ludwig from December 17, 2011, to April 22, 2012 – spans an arc over the last 60 years to discern the potential of art. The figurative sculptures of the 1950s form the argumentative core of the exhibition, which also includes works by such renowned artists as Carl Andre, Alberto Giacometti, Bruce Nauman, and Thomas Schütte. The representative pieces look back to reflect the zeitgeist of the postwar era and, on a more general level, the aftershocks generated by any war. They convey a sense of the horrors people experienced and the speechlessness this brings with it.

Through the historical context, the exhibition seeks to provide a keener sense of the humanist potential of contemporary art. In times when auctions generate record prices and tastes change quickly, there is a need to study art that insists on a serious examination of what humanity means.

A comprehensive catalog of the exhibition has been published. The exhibition was accompanied by discussions in Berlin, Cologne, and Munich examining the core question of human dignity and its relationship with the construct of law.

## Displaced Fractures

How fragile is mankind's existence, how threatened is our survival? These questions, which underlie many of the Siemens Stiftung's projects, are more pertinent than ever in the face of global crises, natural disasters, famine, and widespread poverty. Art has always possessed a sensorium for the fragile, delicate, and vulnerable attributes of mankind. The Displaced Fractures exhibition examines mankind's fractures – not those in our human bodies but those in our bodies of representative architecture. The works highlight both the structures of architecture and the traces of the personal.

The Migros Museum for Contemporary Art joined the Siemens Stiftung to co-sponsor this project. The exhibition, curated by Heike Munder and Thomas D. Trummer, was on display from December 11, 2010, to February 20, 2011, in the new galleries of Hubertus Exhibitions in Zurich-Albisrieden. A comprehensive catalog of the exhibition has been published.

## AR – Artistic Research

AR – Artistic Research, a joint project of the Program in Art, Culture, and Technology (ACT) at the Massachusetts Institute of Technology (MIT) and the Siemens Stiftung, was given over entirely to how culture is shared and skills are acquired. AR examined artistic methods of research where art, science, and technology meet. Its mission was to serve as a forum for experimentation, a laboratory that combined the fine arts and new technologies to bring about interdisciplinary exchanges and mutual inspiration.

Artists from Argentina, Germany, Hungary, Lithuania, and the United States examined scientific subjects such as astronomical material research or environmental water quality projects and shared their ideas with scientists. AR spanned the 2010/2011 academic year and encompassed various formats, including presentations and lectures as well as exhibitions in the newly opened Media Lab Complex at MIT, such as a collection of photographs and videos by Hungarian artist Attila Csörgö that were on display until February 2011.

# 4

## Our activities in 2010/2011 Siemens Stiftung project overview

### Basic Needs & Social Entrepreneurship

Project	Description	Countries	Partners
Community Impact Development Group (CIDG)	The Siemens Stiftung has partnered with Ashoka to establish the Community Impact Development Group (CIDG). Under the banner of "technology for human needs," the network brings together social entrepreneurs from Asia, sub-Saharan Africa, and Latin America, who apply simple technologies to develop products and services that improve living conditions in their home countries. CIDG offers them the opportunity to share their experiences and to apply and develop new insights within their own enterprises.	Worldwide, Germany	Ashoka
Disaster relief	A disaster prevention project was conducted in the Central Luzon province of the Philippines in cooperation with the German Red Cross. Numerous training and continuing education activities helped ensure sustainable disaster protection. The project is complete.	Philippines	German Red Cross
Eco-vecindarios	This project, in cooperation with Swisscontact, helps improve waste management in four big cities in Bolivia, lessen the environmental impact, and generate jobs and income for garbage collectors. Workshops provide a forum for sharing knowledge and raising awareness in the population for environmental, waste management, and health issues.	Bolivia	Swiss Foundation for Technical Cooperation (Swisscontact), Swiss Agency for Development and Cooperation (DEZA), Fundare Foundation for Recycling
Fruqueña	The aim of the <i>Fruqueña</i> project, a collaboration with El Cinco, is to assist local development in Colombia and usher in long-term social and economic change. A technical school and self-sustaining consultancy is established to train young specialists in how to optimize production technologies and strengthen the fabric of rural communities through increased revenues.	Colombia	Fundación Cinco, public and private partners

G-20 Challenge on Inclusive Business Innovation	The aim of the challenge, conducted by the International Finance Corporation (IFC) on behalf of the G-20, is to identify and support innovative, widely effective, scalable, replicable private business models that help solve social problems in developing and emerging nations. The Siemens Stiftung helped initiate three follow-up workshops in which the winners of the G-20 Challenge joined experts and representatives from the private sector, nonprofits, development organizations, and government agencies to share information and evaluate the program.	Worldwide, Germany	Federal Ministry for Economic Cooperation and Development (BMZ) in Bonn/Berlin, Society for International Cooperation (GIZ), Eschborn International Finance Corporation (IFC) in Washington, United Arab Emirates (co-sponsor)
International Research Network on Social and Economic Empowerment (IRENE   SEE)	The research network examines the applicability, benefit, limits, and long-term impact of social and economic empowerment in selected Latin American and African countries. The research is based on the resources available locally. Zeppelin Universität in Friedrichshafen is partnering with universities in Africa and Latin America to develop a list of topics and research.	Germany, Ethiopia, Colombia, Mexico, South Africa	Zeppelin Universität, Friedrichshafen; Adama University, Adama; Universidad de los Andes, Bogotá; EGADE Business School, Monterrey; Stellenbosch University, Cape Town
Sierra Productiva	The aim of this project, a collaboration with the Institute for Alternative Agriculture (IAA), is to improve the living conditions of Peruvian farmers by empowering them with the knowledge they need to protect their health and improve their nutrition. Optimizing production technologies and utilizing renewable energies simplifies work processes, while the sale of products generates income.	Peru	Institute for Alternative Agriculture (IAA), local communities, Synergy
TakaTaka Solutions	The Siemens Stiftung has joined the social enterprise TakaTaka Solutions and the AT Association in developing and implementing a training and awareness-raising module that makes a fundamental contribution to solving the problem of waste in African cities and generates jobs.	Kenya	TakaTaka Solutions; AT Association for the Promotion of Adapted, Socially, and Environmentally Responsible Technologies
Water kiosks in Kenya	The Siemens Stiftung is helping to build local water kiosks in rural Kenya to support local efforts to provide drinking water and strengthen local entrepreneurship.	Kenya	Global Nature Fund, PureFlow, SkyJuice Foundation
Water projects in Ethiopia	The Siemens Stiftung is helping to develop a water and sanitation system for the rural population of northeastern Ethiopia. The aim is to provide the seminomadic Afar people with improved access to this vital resource by constructing wells and water basins.	Ethiopia	UNESCO Foundation, HOPE'87, PADET

Waste management case studies	Scientific case studies provide meaningful and reliable information on which decisions can be based. These studies illustrate the specific situation in selected countries as it relates to basic services and social entrepreneurship. The first phase consists of two case studies on waste management in Botswana and Zambia.	Botswana, Zambia	University of Erlangen-Nuremberg, University of Botswana, University of Bayreuth
WE!Hubs in Kenya	The Water-Energy Hub (WE!Hub) uses solar technology to supply remote regions of Kenya with water and energy. It also provides employment and training opportunities and promotes local entrepreneurship.	Kenya	Global Nature Fund, OSRAM AG, Thames Electricals Ltd., Light for Life
Youth Changemaker City (YCMC)	The Siemens Stiftung supports Youth Changemaker City (YCMC), a project of the Ashoka Youth Initiative. YCMC brings together youth organizations and dedicated young people to develop their own projects, learning how to behave like social entrepreneurs and take responsibility for their own resources.	Germany	Ashoka

## Education

Project	Description	Countries	Partners
Discovery Box	The Discovery Box was developed in collaboration with Science-Lab as a global counterpart to the <i>Forscherkiste</i> . It offers children ages three to six experimentation materials to discover the interrelationships and phenomena of science and nature in a playful environment. This project is complete.	Worldwide	Science-Lab
Experimento	The Siemens Stiftung has developed Experimento, an international concept for teachers and educators that puts into practice the principle of learning through discovery. Experimento provides the basic materials for independent, hands-on experimentation through three progressive experiment kits that focus on the topics of energy, the environment, and health and serve the age groups of 4–7 (Experimento   4+), 8–12 (Experimento   8+), and 10–18 (Experimento   10+). The experiments teach children to explore natural phenomena on their own and grasp technical-scientific interrelationships. Besides instructions and materials for the experiments, the core of Experimento is the applied training program for teachers. This allows them to immediately apply the didactic approach of learning through discovery to their daily instruction using the experiment kits. The Siemens Stiftung is working with qualified partners to build local networks that train educational specialists to serve as multipliers, who pass their newly acquired knowledge on to local teachers.	Worldwide	Pilot phase in Chile: Chilean school network SIP ( <i>Sociedad de Instrucción Primaria</i> ), Wilhelm von Humboldt German Teacher Training Institute (LBI)  Pilot phase in Africa: German international schools in Johannesburg and Cape Town
Forscherkiste	The <i>Forscherkiste</i> (researcher kit), developed by Science-Lab, gave children from three to six the opportunity to take a closer look at the interrelationships and phenomena of science and nature in a playful environment. This project is complete.	Germany	Science-Lab e.V.
ForumAcademy	The Siemens Stiftung ForumAcademy offered continuing education opportunities to students grades 6 and up and teachers on the topics of project management, media literacy, and technology. The seminars were intended to complement and supplement the activities of the state and local educational institutions. This project is complete.	Germany	

KIKUS – Children in Cultures and Languages	The Siemens Stiftung provides support for children of various backgrounds starting at age three to help them learn the German language, as language is the critical foundation for the best possible educational opportunities and integration into society. The Siemens Stiftung has joined with the nonprofit Center for Multilingualism in Early Childhood (zkm) to spread its KIKUS language method throughout Germany.	Germany	Center for Multilingualism in Children
KISS	The joint initiative with the BDK Association for Arts Education dedicated itself to promoting the teaching of modern art and media culture in schools and to teacher training. Each year, scholarships are awarded to projects developed by students of art education. This project is complete.	Germany	BDK Association for Arts Education
KiTec – Children Discover Technology	The experiment kits help primary school kids develop technical skills by having them work in teams to solve various tasks relating to mechanical, automotive, and electrical engineering.	Germany	Wissensfabrik, Transferzentrum für Neurowissenschaften und Lernen in Ulm, Department of Technology and Education
Media portal	The Siemens Stiftung media portal offers a broad spectrum of online teaching materials on scientific and technical subjects for free download in English, German, and Spanish.	Worldwide	LOKANDO AG
Milestones	This exhibition offered an overview of the evolution of Siemens as a company and perspectives on future social challenges facing humanity to keep our planet livable over the long term. This project is complete.	Germany	
MINT-EC	The MINT-EC network promotes math, science, technology, and computer science instruction through its Excellence Centers, currently at some 147 secondary schools in Germany and a German school in Turkey.	Germany, Turkey	Association of Math and Science Excellence Centers in Schools
NaWi – How Does It Work?	NaWi helps primary school children acquire scientific knowledge through experimentation and learn how to work with the contents on their own.	Germany	Wissensfabrik, Institute for Chemistry Education at Johann Wolfgang Goethe University in Frankfurt am Main
Siemens partner school program	Siemens AG offers interested schools a long-term partnership through the Siemens partner school program. The Siemens Stiftung coordinates the program on behalf of Siemens AG (economic operation).	Germany	Siemens AG

Student competition	The student competition is aimed at higher-level students in Germany, Austria, Switzerland, and at German schools elsewhere in Europe who are interested and enthusiastic about science and technology.	Germany, Austria, Switzerland, and German schools elsewhere in Europe	RWTH Aachen, TU Berlin, TU Munich
Tiny Tots Science Corner	The Tiny Tots Science Corner provides preschoolers the opportunity to playfully explore exciting questions and phenomena from the realm of science and technology. Various programs and activities support the work of preschool and day care teachers in awakening children's early interest in science and technology.	Germany	Helmholtz Association of German Research Centers, McKinsey & Company, Dietmar Hopp Stiftung GmbH

## Culture

Project	Description	Countries	Partners
AR – Artistic Research	In a joint project with the Program in Art, Culture, and Technology at MIT, research methods were developed at the interface of art, science, and technology. The project's mission was to serve as a field for experimentation, a laboratory that combined the fine arts and new technologies. This project is complete.	United States	Program in Art, Culture, and Technology at MIT
contempo primo	The training program for contemporary ensemble performance, initiated by the Central Conservatory of Music in Beijing and the Siemens Stiftung, fused Asian and European musical traditions for the first time. The program concluded with the formation of the ConTempo Beijing ensemble.	China	Central Conservatory of Music, Beijing
Luftpost	The series of readings turned to the focus regions of the Siemens Stiftung to highlight authors whose novels and stories paint a literary picture of the social, cultural, and political situation in their countries. This project is complete.	Germany	Instituto Cervantes, Munich
Music Information Center of Sub-Saharan Africa	The Siemens Stiftung and the Goethe Institute in sub-Saharan Africa convened a conference in Johannesburg in August 2011 to launch a multi-year project aimed at establishing an online platform for information on African music.	Africa	Goethe Institute in sub-Saharan Africa

PANORAMA SUR	The International Academy for Performing Arts offers a forum in which young artists and cultural figures from Latin America can reflect on artistic practices and their roots in society and experiment with new procedures. The project also promotes exchanges among the various theater scenes.	Latin America/ Argentina	Asociación para el Teatro Latinoamericano/THE, British Council, Centro Cultural de España en Buenos Aires (CCEBA), Fundación Centro de Estudios Brasileiros (FUNCEB), Goethe Institute Buenos Aires, INAE de Dirección Nacional de Cultura Uruguay, IUNA Departamento de Artes del Movimiento, Lebanese embassy in Argentina, Malba (Museo de Arte Latinoamericano de Buenos Aires) – Fundación Costantini, TEMPO Festival, Siemens Fundación Argentina
POWERS OF SPEECH	The performance series on political speech, a joint initiative of the Siemens Stiftung and Kaaithheater Brussels, brings together works of four theater artists from Europe, Colombia, and South Africa to reflect on the formal and substantive forces behind speech.	Belgium, Germany, South Africa, Colombia	Kaaithheater Brussels, Market Theatre Johannesburg, Goethe-Institut Johannesburg, Festival Iberoamericano de Teatro de Bogotá, Festival Internacional de Teatro Santiago a Mil, PACT Zollverein, MSU – Museum of Contemporary Art Zagreb
SCHAUPLÄTZE	The Siemens Stiftung has teamed up with Internationales Sommerfestival Hamburg in this series of co-productions in three countries examining the hidden cultural paradoxes of culturally significant places.	Belgium, Germany, France, Switzerland	Internationales Sommerfestival Hamburg with Musée la danse / Centre chorégraphique national de Rennes et de Bretagne and Festival d'Avignon
WUNDER. Art, science, and religion from the 4 <sup>th</sup> century to the present	WUNDER was a show about the boundaries of Western rationality. Centered around works of modern art, the interdisciplinary exhibition examined the things that stand out in our world: from unexplained healings, unbelievable natural phenomena, and the wondrously exotic to unexpected technological innovations, artistic ideas, and pure coincidences. This project is complete.	Germany	Deichtorhallen Hamburg
Young Soloists	The concert series featured young musicians showcasing their interpretations of the music of our time. Outstanding talents from the Conservatory of Music and Theater in Munich performed selected works of the 20 <sup>th</sup> and 21 <sup>st</sup> centuries.	Germany	Conservatory of Music and Theater in Munich

## Global Alliance of Siemens Foundations

Siemens currently has six corporate foundations based around the world in Argentina, Brazil, Colombia, France, Germany, and the United States. The Global Alliance of Siemens Foundations was founded in 2010 to facilitate close coordination of strategies and programs toward more efficient project implementation. The Alliance is based on the principles of good corporate governance and the values of Siemens, and its members are dedicated to the common goal of empowering people to shape their own lives and contribute to social development. The foundations seek to harness synergies in their educational, social, and cultural initiatives at both the local and international level for an integrated project approach.

The following introduces the members of the Global Alliance of Siemens Foundations and their key projects in fiscal year 2010/2011.

### Argentina

The *Fundación Siemens* in Argentina was founded as a non-profit foundation in Buenos Aires in 2009. It works to further the country's long-term development through projects in the areas of education & social welfare and art & culture.

#### Knowledge in action: the LOGO! school competition

The Fundación Siemens in Argentina and the Siemens Industry Sector have worked together in recent years to organize school competitions as an effective means of stimulating the interest of schoolchildren in science and technology. The LOGO! student competition, focused on students at Argentina's technical schools, encourages students to implement simple automation projects using the Siemens LOGO! logic module. A key aspect of the competition's challenge was to utilize energy-saving opportunities in the proposed projects.

In 2011, more than 100 students responded to the call to develop innovative projects. Semifinal rounds were held in two regions of the country: Buenos Aires and Rosario. The finalists from each region presented their solutions for evaluation before a jury at a science trade fair. The jury chose the Colegio Salesiano San José as the winner in the final round for the "Genas" project, which used turbines to convert hydrokinetic energy into electrical energy. All contestants received gifts in recognition of their efforts and were invited to participate in further activities of Fundación Siemens in Argentina.



Manos Verdes project, Argentina

#### Green Hands

The Fundación Siemens in Argentina joined the NGO Green Hands in signing a pledge of sustainability in support of local environmental programs. This project raises awareness in schools of the importance of environmental protection and the benefits of recycling trash. A key concept is encouraging the students to be creative in doing their part and showing them what a difference they themselves can make using the 3R principle (reduce, reuse, recycle).

The project was launched in the first 10 schools in 2010. Plans call for extending the system to more schools and recruiting the early participants to become advocates of the project in their home regions.

#### Discovery Box – learning through discovery

The Fundación Siemens is dedicated to strengthening education in Argentina in the interests of promoting social, economic, and cultural development. The foundation partners with government agencies and educational institutions to promote science-oriented learning through discovery with the Discovery Box. Donations of the Discovery

Box are coupled with a workshop to train teachers in the subject of learning through discovery. The Discovery Box contains the materials needed to conduct experiments in the fields of energy, electricity, health, and the environment. Also included are manuals with instructions for conducting the experiments and educational concepts. Some 1,200 teachers at 500 schools in Argentina received Discovery Box training in fiscal year 2010/2011.

## BRAZIL

The *Fundação Peter von Siemens* was established as a nonprofit organization in São Paulo in 1986. In 2004, the foundation was awarded the status of a “Civil Society Organization of Public Interest.” The work of the foundation focuses on the areas of education & social welfare and art & culture.

### Emotional Intelligence

Since 1997, the Fundação Peter von Siemens in Brazil has funded the Emotional Intelligence project at public primary schools. The quality of the education at public primary schools in Brazil is typically inferior to that of private schools, and teachers often have to deal with many social problems. The project provides training courses aimed at showing teachers how to properly recognize and deal with the emotions of primary school students. The teachers learn how to develop a sense for the emotional problems of their students and create breathing room in their classes to give children the opportunity to deal with their emotions. Direct support is also provided to children identified as having behavioral or learning difficulties or whose reading or writing skills require special attention. The project empowers children to recognize their own needs and master their interpersonal and emotional interactions. This in turn directly improves the quality of life of the students, their families, and their teachers and helps the students participate once more in the life of the community. The project shows an effective approach for change in society as a whole.

The project began at two community schools and has since benefited more than 3,400 students, parents, and teachers. The initiative was spread to two additional public primary schools in 2007 and then to two more in 2011. In fiscal year 2010/2011, the initiative benefited more than 17,785 students, parents, and teachers.



Vocational training in Tenjo, Colombia

## Colombia

The *Fundación Siemens* in Colombia was founded as a nonprofit foundation in Bogotá in 2006. The foundation’s projects promote long-term social development in Colombia.

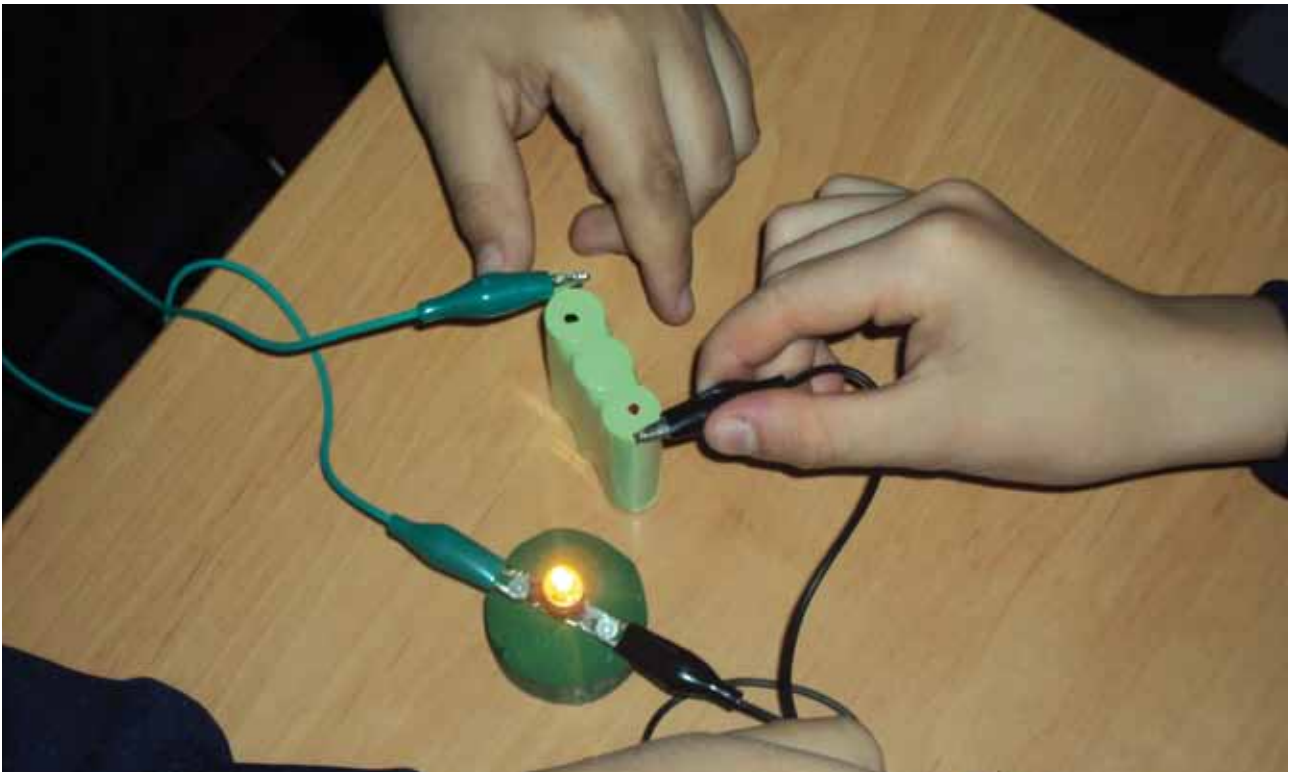
### The educational model in Tenjo

Tenjo, one of 1,098 municipalities in Colombia, is growing. Its proximity to the Colombian capital of Bogotá has brought new industrialization opportunities to a local economy once dominated by ranching and agriculture. As this development progressed, however, the lack of qualified personnel for the manufacturing industry became evident, since the traditional educational system did not provide vocational training targeted to the industrial production sector. The Fundación Siemens proposed establishing a technical training center in Tenjo, which opened on November 30, 2011, with funding from the national institute of professional training SENA, Siemens, regional members of the ASOCCIDENTE industry association, and Dell Colombia Inc. The center offers training in the categories of energy, electricity, and electronics; automation, information, and communication technology; and metallurgy and metalworking. It also offers opportunities for establishing integrated administrative and logistics programs. The center will benefit over 11,000 people, giving them the opportunity to begin successful careers in the more than 140 industrial enterprises in the western corridor of the high plateau of Sabana de Bogotá.

### Experience with the Discovery Box in Colombia

The Fundación Siemens is committed to strengthening the Colombian educational system, especially in the fields of science and technology. The Fundación Siemens in Colombia works closely with government agencies and educational institutions to promote learning through discovery with the Discovery Box, helping to improve the quality of education with a focus on science.

Since 2008, for example, the Fundación Siemens has funded a scientific educational model at the public schools in Tenjos based on the Discovery Box and the methodology of research-based learning. The students now have the option to spend the last two years of secondary school at the aforementioned technical training center in Tenjo to earn a recognized professional certification with an emphasis on technical subjects.



Children experimenting with the Discovery Box, Colombia

In Medellin, Colombia's second-largest city, the Fundación Siemens formed an alliance in 2007 with the city's office of education and UNIANDES university to train 200 science teachers for grades 3, 4, and 5 in the methodology of learning through discovery so they can use the Discovery Box in their classrooms.

Some 1,400 teachers from throughout Colombia have already taken part in the workshops, benefiting 120,000 primary and secondary school students. The educational initiatives of the Fundación Siemens are already established in over 400 different educational institutions, three museums and interactive science parks, and five universities.

## France

The *Fondation Siemens* in France was founded in 2002 and is headquartered in St. Denis, near Paris. The foundation is dedicated to creating greater social solidarity by fighting the marginalization of the disadvantaged, promoting their integration, and improving their living conditions through health and housing programs.

### Very special partnership with Samusocial

One of the pillars of the foundation, going back to when the *Fondation d'entreprise Siemens France* was established in 2002, has been the partnership with Samusocial.

The aid organization Samusocial, founded in 1993 by the doctor Xavier Emmanuelli, serves the needy, often homeless population living on the margins of society through several residences, women's refuges, and a counseling



Presenting donations to the humanitarian aid organization Samusocial at the "Nuit de la Belle Etoile" in Paris, France

hotline. The Fondation Siemens in France has supported Samusocial in various ways – for example, by providing household appliances and a patrol car to Samusocial International in the city of Cayenne.

The Fondation Siemens inaugurated the charity event "Nuit de la Belle Etoile" in November 2006 to help sensitize more people to the fight against social marginalization. Six annual "Nuit de la Belle Etoile" events have generated more than a million euros in donations to help society's most vulnerable. At the sixth event, in December 2011, some 300 high-level corporate representatives and celebrities joined forces to take a stand against social marginalization and collect funds for Samusocial.

## United States

The Siemens Foundation USA was founded in 1998 and is based in New York state. The foundation is committed to promoting innovative ideas and projects in the fields of research and education. It supports educational initiatives in the fields of science, technology, engineering, and mathematics for teachers and schoolchildren in the United States.



Winner of the Siemens Competition, United States

### The 13<sup>th</sup> Siemens Competition in Math, Science & Technology

Students nationwide have taken part in the Siemens Competition in Math, Science & Technology over the past 13 years. The contest gives students the opportunity to present their independently developed research projects to a prestigious jury that includes experts from leading US universities.

In 2011, a total of 1,971 project ideas were submitted by 2,437 students from 45 states, and 96 students were selected to advance to the regional finals held at six universities around the country. Twenty students from 11 states took part in the national finals in early December 2011 at George Washington University in Washington, D.C. The winners were announced at a press conference in Washington, D.C. in December 2011.



Winners of the "We Can Change the World" Challenge, Costa Rica

### "We Can Change the World" – middle school winners prepare for adventure in Costa Rica

The Middle School winners of the Siemens "We Can Change the World" Challenge developed innovative projects to find solutions to the most pressing environmental challenges in their areas. The four-member "6000 n 60" team won first prize for its campaign to collect 6,000 batteries in just 60 days from local residents in Kapaa, Hawaii, where there was no program in place to recycle used batteries. The team advocated for better battery recycling opportunities nationwide in a campaign that included pre- and post-surveys and involved the entire community through school bulletins, public events, posters, public service announcements, presentations to local organizations, community kickoff events, a Facebook page, and guest speakers.

The second-place team "Alpha Eliminators" determined that their home state of Iowa had the highest percentage of households in the United States exceeding the levels of radon recommended by the US Environmental Protection Agency. The team tested over 70 homes for radon and set out to survey the level of public awareness about the harmful impact of radon gas. They found that most people knew only very little about radon, and their campaign led to much greater awareness of the problem.

The Siemens Foundation and Discovery Education rewarded the creativity and resourcefulness of the two winning teams with a scouting trip to Costa Rica. Costa Rica's landscapes provided the backdrop for the children to learn more about protecting rainforests and preserving natural resources. The travelers had the unique opportunity to expand their horizon beyond their own home city.

# 6

## The Siemens Stiftung team

### Siemens Stiftung executive bodies

#### Board of Trustees



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**Georg Fürst Starhemberg**  
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Österreich

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#### Board of Directors



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Director of Corporate Communications  
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**Ulrike Wahl**  
Munich  
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Assistant CEO



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Munich  
Chief Financial Officer,  
Head of Corporate Finance Reporting 61,  
Shareholder Controlling, Siemens AG

### Siemens Stiftung employees

#### Director



**Ulrike Wahl**  
Managing Director,  
Strategy & Program Management



**Dr. Barbara Filtzinger**  
Strategy & Program Management

## Team



Sabine Baumeister



Dr. Ute Böhme



Werner Busch



Angela Clerc



Jens Cording



Volker Fischer



Ursula Gentili



Joachim Gerstmeier



Dr. Beate Hentschel



Gerhard Hütter



Christine Koptisch



Christa Mühlbauer



Rebecca Ottmann



Maria Schumm-Tschauder



Carola Schwank



Thomas Trummer



Julia Wachsmann



Christine Weyrich

## Communication



Julia Rüter  
Director/  
Press Speaker



Anja Funke



Kerstin Marchetti



Sabine Sailer



Karolin Timm-Wachter

## Administration/controlling



Robert Balthasar  
Director



Karin Hagen



Isabella  
Schneckeburger



Margit Wiest

In the period under review, the Siemens Stiftung had an average of 32 employees (not including interns and students). Christine Niewöhner and Heike Ochmann are on maternity leave. In addition, Dr. Franz Hebestreit, Hermann-Josef Moufang, and Michael Roßnagl were employed at the Siemens Stiftung until March 2011. All human resources administrative activities were outsourced to WTS Wirtschaftstreuhand Steuerberatungsgesellschaft mbH, Rosenheimer Str. 33 in 83064 Raubling.

In 2011, the Siemens Stiftung moved to new offices at Kaiserstraße 16 in Munich.



Impressions from the inaugural gala on September 29, 2011, in Munich, Germany

# 7

## Financial report

### Expenses for the foundation's mandate

The previous classification of projects into the three categories of Education & Welfare, Society & Technology, and Art & Culture was abandoned as part of the strategic realignment and replaced in the past fiscal year by the newly defined focuses of Basic Needs & Social Entrepreneurship, Education, and Culture.

Total expenses of €4,385 thousand (previous year: €1,008 thousand) are reported for "Basic Needs & Social Entrepreneurship" projects. The "Basic Needs & Social Entrepreneurship" projects focus on funding and strengthening local and financially viable initiatives. The emphasis is on improving the quality of life and social structures. Themes include access to clean water and energy and the environmentally friendly use of resources.

Total expenses of €4,539 thousand (previous year: €6,425 thousand) were reported for "Education" projects. The educational projects offer teachers contemporary, real-world instruction methods and materials and help them fulfill their educational mission. The projects emphasize language instruction, science, and technology. Total expenses of €1,798 thousand (previous year: €2,935 thousand) are reported for "Culture" projects. Here, the foundation joins with its partners to initiate cultural projects and platforms for an international dialog and cultural knowledge-sharing, especially in the countries of Africa and Latin America. Central to this objective is the impact of art in society, the reflection of cultural identities, and support for forms of dialog and an aesthetic education.

In addition, €1,328 thousand (previous year: €1,582 thousand) was spent on communication.

### Other operating expenses

#### Administrative costs

This item includes expenses used solely for the administration of the foundation and not directly attributable to its individual mandates. The administrative costs include interest expenses from the discounting of provisions in the amount of €137 thousand.

#### Expenses from business activities

The expenses from business activities stem primarily from costs of €150 thousand (previous year: €111 thousand) incurred through the service agreement with Siemens AG. Total expenses include personnel costs of €3,133 thousand (previous year: €3,428 thousand). The workforce comprised 32 persons (previous year: 33) on average during the fiscal year.

Balance sheet as of September 30, 2011

9/30/2011

9/30/2010

Assets	€	€
<b>A. Fixed assets</b>		
I. Intangible assets		
1. Concessions, industrial and similar rights and assets and licenses in such rights and assets	58,125.00	104,050.00
2. Prepayments on intangible assets	-	-
II. Tangible assets		
1. Other plant, factory and office equipment	579,974.00	322,037.00
III. Financial assets		
1. Long-term investments	389,999,930.90	389,999,930.90
2. Pension reinsurance	-	1,619,963.54
	<b>390,638,029.90</b>	<b>392,045,981.44</b>
<b>B. Current assets</b>		
I. Inventories		
1. Prepayments and inventories	88,995.75	109,771.61
II. Accounts receivable and other assets		
1. Trade receivables	162,441.63	176,890.21
2. Other assets	17,498,922.36	15,061,202.38
III. Cash at banks	3,748,719.50	1,711,088.27
	<b>21,499,079.24</b>	<b>17,058,952.47</b>
<b>C. Prepayments and deferred charges</b>	<b>3,974.67</b>	<b>904.40</b>
<b>Total</b>	<b>412,141,083.81</b>	<b>409,105,838.31</b>

Balance sheet as of September 30, 2011		9/30/2011	9/30/2010
Equity and liabilities		€	€
<b>A. Equity</b>			
I.	Basic assets	300,000,000.00	300,000,000.00
II.	Other assets	90,000,000.00	90,000,000.00
III.	Free reserves (section 58 (7a) AO)	6,000,000.00	3,000,000.00
IV.	Retained profits brought forward	12,577,681.86	11,051,480.68
		<b>408,577,681.86</b>	<b>404,051,480.68</b>
<b>B. Accruals</b>			
1.	Accruals for pensions and similar obligations	222,232.85	1,886,003.00
2.	Tax accruals	-	1,422.00
3.	Other accruals	841,985.00	977,774.00
		<b>1,064,217.85</b>	<b>2,865,199.00</b>
<b>C. Liabilities</b>			
1.	Liabilities to banks	-	2.43
2.	Trade payables (including €2,397 thousand with a remaining term of up to one year)	2,397,306.02	2,180,680.27
3.	Other liabilities (including €73 thousand from taxes)	101,878.08	8,475.93
		<b>2,499,184.10</b>	<b>2,189,158.63</b>
<b>Total</b>		<b>412,141,083.81</b>	<b>409,105,838.31</b>

#### Statement of financial position

The Siemens Stiftung was established by Siemens AG under the foundation charter of September 22, 2008, and recognized as a public foundation under private law having legal capacity. The foundation performs charitable work and is operationally active, meaning that it primarily funds its own projects and initiatives. The foundation's

mandate is set forth in the Articles of Incorporation from September 22, 2008. Siemens AG transferred the endowment (€300,000 thousand) and other assets (€90 thousand) in 2008. This makes the Siemens Stiftung one of Germany's largest corporate foundations.

**Income and expense statement for 2010/2011**
**9/30/2011**
**9/30/2010**

Income	€	€
1. Asset management income	17,483,891.91	15,182,127.35
2. Income from donations	122,001.00	890,000.00
3. Income from business activities	150,907.05	118,960.22
4. Other operating income	206,976.33	76,586.14
5. Extraordinary income	109,008.80	-
	<b>18,072,785.09</b>	<b>16,267,673.71</b>

Expenses	€	€
6. Asset management expenses	5,435.18	5,705.47
7. Expenses for the foundation's mandate		
Basic Needs & Social Entrepreneurship	4,384,533.18	1,008,038.72
Education	4,539,044.74	6,424,453.61
Culture	1,797,597.72	2,935,227.91
Communication	1,328,296.68	1,582,029.51
	<b>12,049,472.32</b>	<b>11,949,749.75</b>
8. Other operating expenses		
Administrative costs	1,341,973.77	1,175,218.50
Expenses from business activities	149,702.64	111,056.80
	<b>1,491,676.41</b>	<b>1,286,275.30</b>
	<b>13,546,583.91</b>	<b>13,241,730.52</b>

9. Annual net income	<b>4,526,201.18</b>	<b>3,025,943.19</b>
10. Retained profits brought forward from previous year	11,051,480.68	9,525,537.49
11. Transfer to free reserves (section 58 (7a) AO)	3,000,000.00	1,500,000.00
12. Retained profits brought forward	<b>12,577,681.86</b>	<b>11,051,480.68</b>

**Income/expense statement**

The income and expense statement for fiscal year 2010/2011 shows income from asset management of €17,484 thousand (previous year: €15,182 thousand), income from donations of €122 thousand (previous year: €890 thousand) and income from business activities of €151 thousand (previous year: €119 thousand). Other operating income of €207 thousand (previous year: €77 thousand) consists primarily of income from the reversal of provisions as well as redemptions and credits. The extraordinary income (€109 thousand) stems largely from the valuation of pension provisions and associated fund assets as a result of the changeover to Germany's Accounting Law Modernization Act (BilMoG).

There were also operating expenses for the foundation's mandate of €4,385 thousand (previous year: €1,008 thousand) for the "Basic Needs and Social Entrepreneurship" programs, €4,539 thousand (previous year: €6,424 thousand) for "Education," and €1,798 (previous year: €2,935 thousand) for "Culture." A total of €1,328 thousand (previous year: €1,582 thousand) was spent on communication. A total of €3,000 thousand (previous year: €1,500 thousand) was moved into free reserves in accordance with section 58 (7a) of the German Tax Code (AO). Administrative expenses of €1,342 thousand (previous year: €1,175 thousand) were incurred. Expenses for business activities came to €150 thousand (previous year: €111 thousand).

**Certification**

Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft has reviewed the annual financial statements and management report of the Siemens Stiftung dated 30 September 2011 in accordance with the principles of the German Commercial Code (HGB) and Article 16 of the Bavarian Foundation Act (BayStG) in compliance with the German auditing standards defined by the Institute of Auditors (IdW) and issued its unqualified audit certificate.

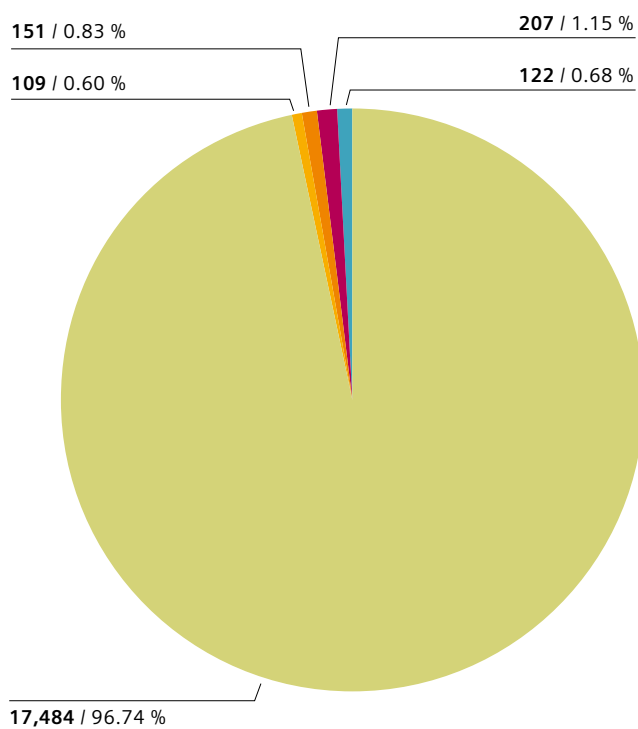
Source of funds / use of funds	2010/2011		2009/2010	
Source of funds	€	in %	€	in %
Asset management income	17,483,891.91	96.74	15,182,127.35	93.33
Income from donations	122,001.00	0.68	890,000.00	5.47
Income from business activities	150,907.05	0.83	118,960.22	0.73
Other operating income	206,976.33	1.15	76,586.14	0.47
Extraordinary income	109,008.80	0.60	-	-
<b>Total</b>	<b>18,072,785.09</b>		<b>16,267,673.71</b>	

Use of funds	€	in %	€	in %
Asset management expenses	5,435.18	0.04	5,705.47	0.04
Basic Needs & Social Entrepreneurship	4,384,533.18	32.37	1,008,038.72	7.61
Education	4,539,044.74	33.51	6,424,453.61	48.52
Culture	1,797,597.72	13.27	2,935,227.91	22.17
Communication	1,328,296.68	9.81	1,582,029.51	11.95
Administrative costs	1,341,973.77	9.91	1,175,218.50	8.88
Expenses from business activities	149,702.64	1.11	111,056.80	0.84
<b>Total</b>	<b>13,546,583.91</b>		<b>13,241,730.52</b>	

<b>Annual net income</b>	<b>4,526,201.18</b>	<b>3,025,943.19</b>
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### Source of funds

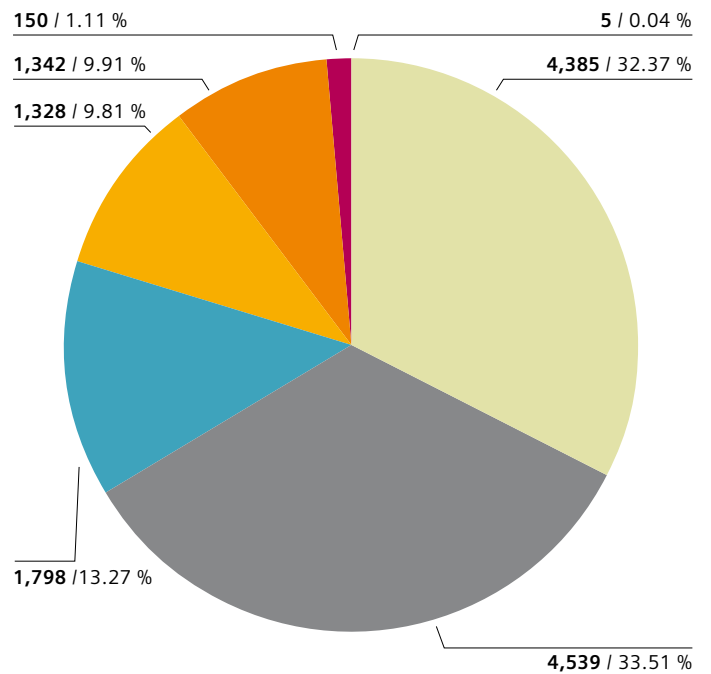
(in € thousands and %)



- Asset management income
- Income from donations
- Income from business activities
- Other operating income
- Extraordinary income

### Use of funds

(in € thousands and %)



- Asset management expenses
- Basic Needs & Social Entrepreneurship
- Education
- Culture
- Communication
- Administrative costs
- Expenses from business activities

# 8

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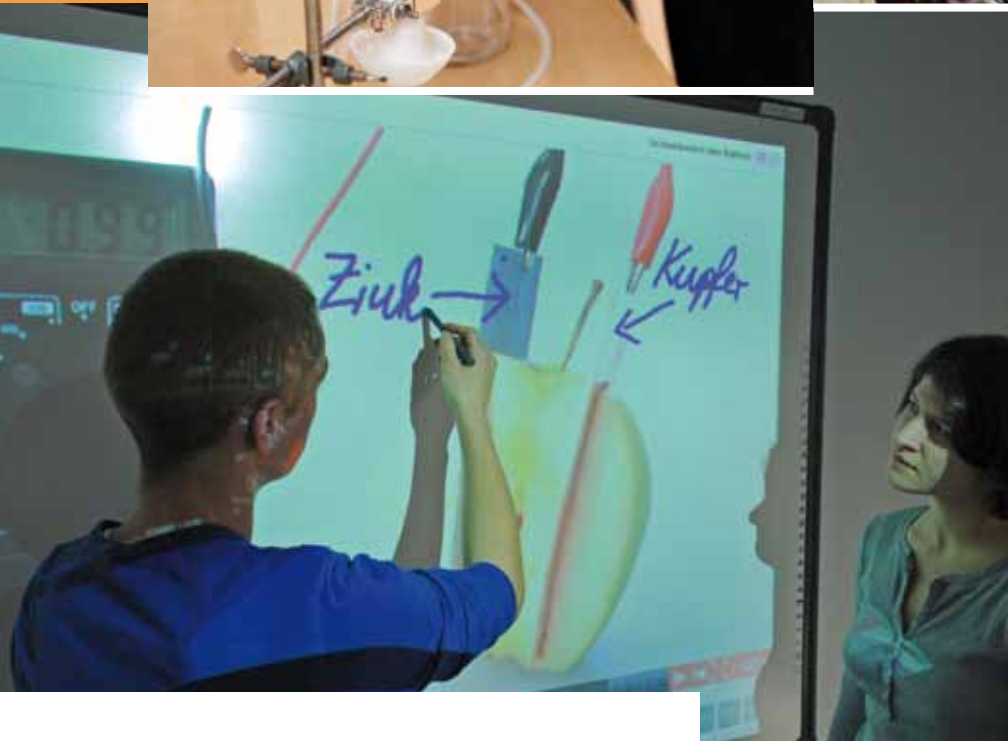
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