

**Siemens Stiftung
Annual Report
2012/2013**

www.siemens-stiftung.org

Editorial

Great social and technological ideas often find little acceptance and support in the beginning. The change that accompanies them is seen at first not as an opportunity but as a disruptive force. Many pioneers who have made significant improvements to our living conditions initially faced numerous hurdles along the way, including material shortages, cultural taboos, lacking legal frameworks and missing social structures.

Thanks to their courage and perseverance, we continue to benefit today from the positive changes their ideas have brought to our lives. Our quality of life in the future will also depend on whether we will be able to create the conditions for conceiving and implementing the necessary changes in all areas of society.

Founded by an international technology group, Siemens Stiftung is committed to supporting pioneers who seek to create positive correlations between technology and society with their ideas. Siemens Stiftung promotes social innovations that empower people to improve their living conditions on their own.

A key focus is always on education as a basis for any form of innovation and self-determined actions. Consistent with this belief, Siemens Stiftung also supports the legacy of one of the last century's most courageous and persevering pioneers of social change: Nelson Mandela. In January 2014, the Mandela School of Science and Technology opened in Mvezo, Mandela's birthplace. Four years earlier, in my previous role as CEO of Siemens AG, I had the opportunity to personally inform Nelson Mandela of our commitment to establish the school. In this school as in all others in the surrounding region, Siemens Stiftung provides training for science teachers through its international educational program *Experimento*, offered as part of the foundation's nearly three-year commitment at four Science Competence Centres in South Africa. I am particularly proud that we are able to give young South Africans in a difficult region the opportunity to improve their future prospects through education.

In the first year of their joint management of the foundation, Dr. Nathalie von Siemens and Rolf Huber have successfully merged activities and strategic partnerships



in focus regions to increase the effectiveness of the project work.

In addition, the management team has expanded the collaboration with the six local Siemens foundations within the *Global Alliance of Siemens Foundations* and their partners and filled it with life. On behalf of the Board of Trustees, I would like to express my sincere thanks to the members of the Board of Directors, Dr. Nathalie von Siemens, Rolf Huber, and Georg Bernwieser, as well as to Siemens Stiftung employees for their dedicated work.

The composition of the Board of Trustees has changed in recent months: Following her retirement from the Siemens Managing Board, Barbara Kux was replaced by Professor Dr. Hermann Requardt effective April 2013, and Peter Y. Solmssen, who resigned from the Siemens Managing Board on January 1, 2014, was succeeded by Dr. Stephan Heimbach. We would like to take this opportunity to thank Ms. Kux and Mr. Solmssen for their huge support and commitment during the formative years of the foundation and wish the new members of the Supervisory Board much success and the best of luck for the tasks ahead.

During the past fiscal year, the Board of Trustees fulfilled its mandate under the law and as set forth in the foundation chapter. 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 proposal of the Board of Directors following thorough consultation and planning.

Munich, February 13, 2014
Dr. h. c. Peter Löscher

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Siemens Stiftung operates in the fields of basic services, education, and culture. As a hands-on foundation, we aim to help people improve their living conditions together with our partners. The geographical focus of our work is on regions in Africa and Latin America as well as Germany and other European countries.

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We empower people to lead independent and dignified lives. Our aim is to overcome existential deficits and strengthen the necessary social structures.

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About us

Siemens Stiftung operates in the fields of basic services, education, and culture. We are a hands-on foundation: We develop our own projects and implement them with a view to the long term. Together with partners, we aim to help people improve their living conditions. By doing so, we try to empower functioning communities in which people can have a good life. The geographical focus of our work is on regions in Africa and Latin America as well as Germany and other European countries.

We take an entrepreneurial approach to achieve our goals. By that we mean promoting personal initiative and supporting creativity and innovation. Science and technology education play a key role in our work. Simple technical applications are often the most effective instrument to solve pressing problems, ranging from producing safe drinking water to generating electricity. In our educational projects, we promote a broad understanding of scientific and technical inter-relationships. In the field of culture, we encourage people to experience their own environment, creating opportunities for artists to actively help shape the development of their own societies and contribute to a successful coexistence.

In our work, we cooperate closely with research and educational institutions, business, government, civil society, and other local partners. These are partners with whom we share a common goal



Siemens Stiftung Board of Directors:
Dr. Nathalie von Siemens, Georg
Bernwieser, Rolf Huber (clockwise)



and the search for the best course of action. For us, operating internationally means working locally and encouraging collaboration across borders. This approach allows us to implement proven concepts in other regions that can benefit from them. We attach particular importance to choosing partners for whom integrity and transparency are paramount. The responsible management of our organization helps us achieve our goals as successfully as possible. We report on our non-profit work, intentions, and results with the highest degree of transparency. Wherever possible, we measure our contribution and disclose the effectiveness of our work along the value chain.

The foundation was established in 2008 by Siemens AG. It currently employs 30 people in Munich and Erlangen. Income from the foundation capital forms the financial basis of our work.



Excellent ideas: winners at the *empowering people. Award* ceremony in Nairobi – Gregor Schäpers, Martin Aufmuth, Dr. Moses Kizza Musaaazi, David Osborne, and Simon Peter Egadu (from left to right).



From fish farms and biogas backpacks to water boilers and one-dollar-glasses

The *empowering people. Award* ceremony was a key event for Siemens Stiftung in the past year. The ceremony in Nairobi, which honored the award's most creative inventors, spotlighted simple yet intelligent technical inventions that empower people to improve their daily lives.

A grand stage for innovative solutions

The *empowering people. Award* ceremony offered social entrepreneurs, government officials, scientists, and media representatives from numerous countries the opportunity to exchange views – and develop joint project ideas.

The moment of elation came in the afternoon before the winners were announced. During the »Spotlight on Solutions« session, the inventors had exactly three minutes to explain their technical solutions and the concrete benefits they offer. Standing prominently on the light-flooded stage, they presented their inventions, including a pair of eyeglasses that cost only one dollar with the promise to change the lives of millions of people with poor eyesight, a backpack that residents of remote villages can use to transport biogas for cooking or lighting, and fish farms that operate in old shipping containers – and all the other amazing solutions. »You could see how enthusiastic the inventors were about creating pioneering solutions and helping people,« says Carola Schwank, who is responsible at Siemens Stiftung for managing the *empowering people. Award*, which was presented for the first time in October 2013.

»The simple but ingenious ideas became really tangible and literally swept everyone off their feet.« The jury at the gala in Nairobi honored inventors whose products – thanks to their uncomplicated technology and affordable production – have the potential to change the lives of millions of people.

The innovative solutions should be not only honored but also made publicly available. The enormous interest in the inventors' competition shows how great the need is for such an initiative: The *empowering people. Award* attracted more than 800 entries from 90 countries – more than twice as many as Siemens Stiftung expected.

A team of experts from AT-Verband, the German association for an advanced socially and environmentally sound technology practice, read through all the applications, compared technical operations, examined feasibility, and assessed the concrete benefits. > PAGE 12



Life-changing: OneDollar-Glasses are affordable and can be made anywhere in the world.

»A tremendous intellectual resource«

The Community Impact Development Group (CIDG) brings together social entrepreneurs from around the world.



Anders Wilhelmson, founder of Peepoople

The meeting, which would give his social enterprise a new boost, happened nearly two years ago. »It was a stroke of luck that I met Haron,« recalls Anders Wilhelmson, a Swede, who founded Peepoople. His company has developed biodegradable bags that serve as hygienic toilets in slums. Haron Wachira, a social entrepreneur from Kenya, has meanwhile made Peepoople a success in his country. The two men met each other at a *Community Impact Development Group (CIDG)* workshop in Frankfurt.

»Social entrepreneurial business models offer huge potential for social, ecological, and economic change.«

Encounters like the one between Wilhelmson and Wachira are one of the major objectives of *CIDG*. The network, established by Siemens Stiftung together with Ashoka, brings together social entrepreneurs from around the world who improve living conditions in Africa and Latin America

with the help of innovative products and services. The focus is on technological solutions.

»Social entrepreneurial business models offer huge potential for social, ecological, and economic change,« says Siemens Stiftung project manager Sabine Baumeister. »But financial resources and networks are necessary to implement these models effectively.« The annual *CIDG* conferences, which are always held in different cities, fill this gap. At the conferences, social entrepreneurs have an opportunity to meet, discuss ideas, and exchange experiences. And sometimes they form partnerships.

Their most recent meeting was held in Nairobi in conjunction with the *empowering people. Award*. »It was an excellent opportunity for us to take conference participants to the slums where we could show them how our system functions,« says Wilhelmson. The issue of toilet usage and the disposal of excrement, he adds, is often taboo and, for that reason, not easy to present. But his approach is simple: People use the special plastic bags – Peepoos – to collect their excrement. Peepoos are biodegradable and also contain urea, a substance that breaks down faeces and neutralizes harmful microorganisms. Especially in densely populated slums, which lack basic sanitation services, Peepoos can prevent the spread of diseases and plagues. Notably, they also offer women safe hygiene conditions by allowing them to avoid potentially perilous excursions into the shrubbery during the night. In addition, manure is won through composting and used in agriculture. That is where Wilhelmson's partner comes into play. »Haron Wachira is an agricultural expert with his own social enterprise Akili Holdings,« says Wilhelmson. Wachira now shares his expertise in the Peepoople project in his current role as its interim manager in Kenya.

The first results of the partnership are impressive: 10,000 schoolchildren now use the sanitation bags every day. Together with Peepoople, Wachira reaches out to potential customers and politicians by explaining the system's benefits. An expansion in Uganda and Congo is also planned. »Two-thirds of our production still goes to disaster areas where Peepoos are used in refugee camps,« says Wilhelmson.

His long-term goal is to provide 150 million people daily with Peepoos, many of them in congested urban centers. *CIDG* is helping him. »We have telephone conferences with people from around the world who share their own experiences,« says Wilhelmson, who met many of them at the social entrepreneur forum. »This is a tremendous intellectual resource!«

Simple production:
Affordable sanitary pads
are made from papyrus
and paper waste.



Hygienic solution:
MakaPads are sterile
and biodegradable.



They produced a shortlist of 23 finalists from whom an international jury consisting of renowned figures from business,

»I can see my house and my neighbor's house!«

science, and development cooperation, selected the winners. The finalists were the focus of attention at the Award Ceremony in Nairobi, attended by 300 guests.

For two days, the city became a stage for exciting encounters, the exchange of ideas, and workshops, including those in which inventors presented their ideas to like-minded social entrepreneurs from various countries.

The first prize went to an idea selected for its compelling simplicity: the OneDollar-Glasses developed by Martin Aufmuth from Germany. The eyeglasses consist of a simple wireframe and plastic lenses. The inventor still remembers the first time a person ›

At the Nairobi workshop: Rolf Huber, Member of Siemens Stiftung Board of Directors



Time to talk: Haron Wachira and Gregor Schäpers in a professional exchange, which was the focus of the workshop.



in Africa used his glasses. »It was a 60-year-old man who put them on,« recalls Aufmuth. »His eyes beamed and he shouted: ›I can see my house and my neighbor's house!‹« Aufmuth's simple glasses are now being manufactured in Ethiopia, Bolivia, Burkina Faso, Rwanda, and Tanzania. Locals are trained to produce and adjust the glasses themselves with simple materials.

»More than 150 million people in the world need these glasses,« says Aufmuth whose idea now allows people with poor eyesight to go to school or find employment.

The second place prize went to a product based on a similarly brilliant idea: the sanitary MakaPads for women developed by Moses Musaaazi from Uganda. The pads are made from pulverized papyrus fibers, ›

Milestones

June 16, 2012

Launch of the *empowering people. Award* at the United Nations Conference on Sustainable Development in Rio de Janeiro.

January 31, 2013

At the submission deadline, 800 entries from 90 countries were received.

February to June 2013

A group of experts evaluates the submissions and selects the finalists.

July to August 2013

The international jury selects the three winners.

September 16, 2013

The finalists are announced, the *empowering people. Award* website goes online, and community voting begins.

October 20, 2013

Award ceremony in Nairobi, Kenya.

Since November 2013

Development of the *empowering people. Platform*.

which are dried in the sun and processed into thin inserts. Among other benefits, they help women pursue an education: previously, girls avoided school during their menstruation because traditional sanitary pads were either unaffordable or unavailable.

The third prize was won by David Osborne, a Scottish plumber, for a device he

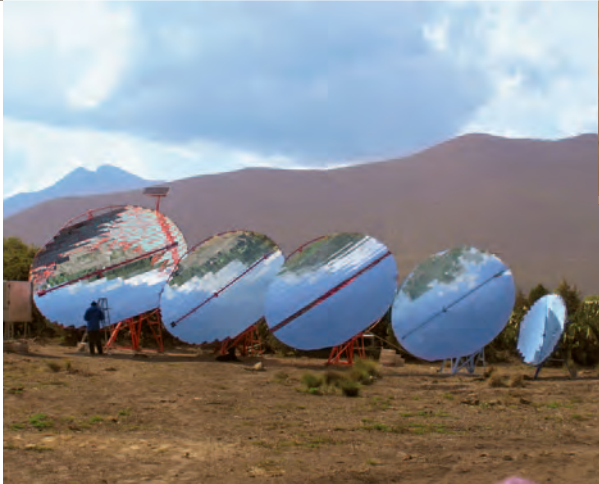
invented that uses the heat from an open cooking fire to boil drinking water. The device, which looks like a pan made of spiral tubes, is positioned between the open flame and pots. The water passing through the coils reaches temperatures high enough to kill 98 percent of waterborne bacteria. The device also reduces fuel costs. ›PAGE 16



The inventions in action: solving serious problems with simple solutions.



Clockwise: the Eliodomestico water distiller, the ReMotion Knee prosthesis, and the solar reflectors for generating heat and steam.



A balancing act: conflicting goals and strategies of social entrepreneurs

Social entrepreneurs want to do good – but how is that possible in a financially sustainable way? That is one of the questions the International Research Network on Social Economic Empowerment (IRENE I SEE) project aims to answer. The projects' researchers examine established approaches in social entrepreneurship and develop guiding principles for future projects. Researcher Aline Wachner reports.



Aline Wachner, doctoral candidate at Zeppelin University and IRENE I SEE scholar

The trip to Nairobi was a sort of reality check for me: Could the theoretical conclusions I had drawn in my doctoral thesis on social entrepreneurship help practitioners in their day-to-day work? I flew to Kenya to conduct a lecture at the *empowering people. Workshop* with this question in mind. The participants were the finalists of the *empowering people. Award* as well as social entrepreneurs from the *Community Impact Development Group*.

»Is it legitimate to earn profits even though the target group doesn't have much money?«

All of them were aware of the problems I am researching. To put it simply, it is about conflicting goals that are inherent in the nature of social entrepreneurship. For example: Do I have to start a non-profit organization to be active as a social entrepreneur, or can I also choose a for-profit company as a legal form? Is it legitimate to earn a profit even though the target group doesn't have much money?

Conflicting goals like these are the focus of my thesis, which reflects the topic based on a concrete example: health services for the poor. I analyzed the business models of for-profit and non-profit organizations in four specific countries: Kenya, South Africa, Mexico, and Colombia.

One organization in Kenya, for example, is building a franchising system for small clinics. As franchisees, nurses are able to start their own wards to treat poor patients who would otherwise have hardly any access to affordable medical treatment. The social enterprise opted for a non-profit legal form, particularly to gain access to donations from the United States. However, it can be difficult to deploy these funds for the establishment of a financially sustainable organization because the majority of donors don't support that. As a result, a for-profit subsidiary was founded last year to attract investors. The new hybrid organization makes it possible for the social enterprise to manage its social acceptance more strategically.

Of course, I was not able to reconcile the conflicting goals in social enterprises since they have deep societal roots. My intention was rather to show how it is possible to work around them. The reactions of the social entrepreneurs at the *empowering people. Workshop* in Nairobi showed me that my work had passed the reality check: In five groups, the participants discussed different types of conflicts in their particular business. I am glad that my academic work also has practical relevance: While I am responsible for theory as a scholar, I also want to help improve the effectiveness of social entrepreneurship. |

A milestone in the work of the International Research Network on Social Economic Empowerment (IRENE I SEE) was an international conference in March 2013 in Washington on »Locating Social Entrepreneurship in the Global South: Innovations in Development Aid,« hosted by Siemens Stiftung, Zeppelin University, and the Woodrow Wilson Center. More than 100 researchers, policy makers, and practitioners in the field of social entrepreneurship participated in the event. Its aim was to examine the role of social entrepreneurship in the implementation of development goals and the economic empowerment of people at the bottom of the income pyramid, and to advance the dialog about innovative, alternative solutions for the most pressing problems facing the world.

The Jury

Prof. Daniel Fletcher Professor of Bioengineering and Biophysics at University of California, Berkeley

Dr. Christoph W. Frei Secretary General World Energy Council (WEC)

Tanja Gönner Speaker of the Management Board Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Prof. Dr. Peter Gruss President of the Max Planck Society

Wolfgang Hafenmayer Managing Partner LGT Venture Philanthropy

Manuela Kasper-Claridge Head of Economics Department, Deutsche Welle-TV

Thomas Loster Chairman of the Munich Re Foundation

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Felix Oldenburg Europe Leader and Director Germany for Ashoka

Stephan Opitz General for Policy and Latin American Region within KfW Development Bank

Dr. Dorothea Ringe Head of Strategy and Finance at the Oxford Entrepreneurship Centre

Gerry Salole Chief Executive European Foundation Centre (EFC)

Mirjam Schöning Senior Researcher at the Skoll Center, Saïd Business School, Oxford University

Simon Trace CEO Practical Action

Prof. Dr. Dr. h. c. Georg Teutsch Scientific Managing Director Helmholtz Centre for Environmental Research (UFZ)

Prof. Dr. Dr. Klaus Töpfer Executive Director Institute for Advanced Sustainability Studies (IASS)

Jean-Luc Vincent Founding President of the International Exhibition of Inventions of Geneva

Dr. Gavin Lindsay Wall Director of the Rural Infrastructure and Agro-Industries Division (AGS) of the Food and Agriculture Organization of the United Nations

› The *empowering people. Award* does not end with the Award Ceremony. »Holding the competition was the first step,« says Schwank. »Now the task is to help winners implement their inventions, for instance, through media promotion and networking. Despite the huge attention given to the winning solutions, we don't forget the others who submitted ideas. Their many inventions have equally valuable potential to meet people's basic needs.« For that reason, Siemens Stiftung plans as a next step to launch a database that documents the best technical solutions and aids their implementation in development projects. At the same time, the platform is intended to help bring inventors, users, social entrepreneurs, and investors together to offer innovative solutions where they are most needed. Martin Aufmuth's OneDollarGlasses are already a huge success in Ethiopia, Bolivia, Burkina Faso, Rwanda, and Tanzania, and the product will soon be available in Malawi and Nicaragua. |

The award at a glance

All information about the finalists, award winners, and their projects as well as photos and videos of the Award Ceremony can be found online:
› www.empowering-people-award.siemens-stiftung.org

Project partners:

empowering people. Award: AT-Verband / Helmholtz Association / KfW Development Bank

CIDG: Ashoka

IRENE I SEE: Zeppelin Universität, Friedrichshafen / Adama Science & Technology University, Adama / EGADE Business School, Monterrey / University of Stellenbosch Business School, Cape Town / Universidad de los Andes, Bogotá

The Winners



1st place
OneDollarGlasses
Traveling optometrists produce affordable glasses consisting of a wireframe and plastic lenses that help millions of people attend school or work more effectively.
› www.onedollarglasses.org



2nd place
MakaPads
In a special production process, papyrus and paper waste are used to make low-cost, sterile sanitary pads that are also biodegradable.
› <http://t4tafrica.co/>



3rd place
Jompy Water Boiler
Using pipes arranged in a spiral, the device sits between an open flame and cooking pots to heat and purify water.
› www.jompy.co.uk



Community Prize
Solar Reflectors
Concave mirrors that automatically follow the sun use a concentrated beam of light to heat special ovens or create steam.
› www.trinsol.com



BioGas Backpack
The nonflammable backpack serves as a transport and storage device for biogas, allowing remote households to use gas lamps and stoves.
› <https://troz.uni-hohenheim.de>



ElectroChemical Arsenic Remediation
About 60 million people are exposed to water contaminated by arsenic. The special, cost-efficient process removes arsenic from drinking water.
› <http://gadgillab.berkeley.edu>



Eliodomestico
The clay device distills salty or dirty water by means of evaporation and condensation using the heat of the sun. It produces drinking water without filters or electricity.
› www.gabrielediamanti.com



Embrace Nest: The Embrace Infant Warmer
The carrying device keeps premature infants warm and, unlike traditional incubators, allows physical contact between mother and child.
› www.embraceglobal.org



The Fish Farm
The highly efficient fish farm, designed for use inside a shipping container, enables transportable production of up to four tons of fish per year.
› www.tbp-philippi.org.za



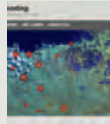
Leveraged Freedom Chair
The sturdy wheelchair is designed for quick and effortless movement on uneven ground. Its simple construction makes repairs easy.
› www.goGRIT.org



Mapeo de Napas con Georadar
Using electromagnetic waves, the system detects underground water tables, which can be used for efficient irrigation of fields.
› www.estudiogyd.com.ar



Mobile Charging Kiosk
The franchise-based loading station is designed to attach to a bicycle and equipped with plugs for various mobile phone models. It can be used without a power connection thanks to solar energy.
› www.a-r-e-d.com



OpenIR
Infrared satellite images can be used to better protect areas environmentally at risk. The program makes the tools for interpreting these images available to the public.
› <http://openir.media.mit.edu>



Peepoo
The bags are made from compostable plastic and serve as hygienic toilets in slums. Thanks to the added urea, faeces are broken down and micro-organisms are inactivated.
› www.peepoople.com



Permafunnel
The special funnel for water pumps ensures a continuous, even flow of water to avoid wastage.
› www.nilecat.org



ReMotion Knee
The polycentric prosthetic knee is made of plastic and therefore cheaper and lighter than traditional steel or titanium prosthetics.
› www.d-rev.org



River Ice
A refrigeration compressor to make ice is powered by a water turbine in a river. Ice is often desperately needed to store food and medicine.
› www.aprotec.com.co



ROTOR Swimming Power Plant
A floating tube is mounted above a simple turbine, which is turned by the current and capable of producing a stable power output of 100 watts.
› www.heinsdorff.de



Score Stove™ 2
A closed source flame for cooking reduces health risks from inhaled smoke and uses wood more efficiently. The low-smoke stove also produces electricity through an electro-acoustic effect.
› www.score.uk.com



SimGas GesiShamba
The modular biogas system made from recycled plastic converts organic waste into biogas, which can be used in gas stoves and lamps.
› www.simgas.nl



SMSGYAN
The system acts as a bridge between simple mobile phones and the Internet. A question sent to a service number via SMS is automatically analyzed online; the answer also comes back as a short text message.
› www.innoz.in



Solkiosk
The Solarkiosk serves as the storefront of a decentralized mini-solar power station. Customers in regions outside of the power grid can go there for energy-related products or services, such as charging batteries or mobile phones.
› www.solarkiosk.eu



SunSaluter
Solar cells follow the path of the sun – powered by a mechanism that senses the changing weight of water on either side while filtering the water at the same time.
› www.sunsaluter.com

Basic Needs and Social Entrepreneurship

Siemens Stiftung empowers people to lead independent and dignified lives. Our goal is to reduce existential care needs and strengthen necessary social structures.

Many people face permanent health risks because they lack access to safe drinking water, are barely able to sustain themselves, or live in an extremely dirty environment. Within the post-2015 Development Agenda of the United Nations, Siemens Stiftung focuses on projects in the areas of water, energy, and environment in Latin America and Africa.

Our approach is to identify innovative and proven solutions that we can implement ourselves or together with partners. We seek to adapt these solutions to regional conditions and implement them as broadly as possible.

To facilitate this knowledge transfer, we analyze the methods and impact of our concepts. We offer social entrepreneurs, application experts, and academic partners research and exchange opportunities as well as partnership platforms.

In developing countries, Siemens Stiftung focuses on the use of simple technical solutions that solve problems in basic services and empower people to improve conditions for their families and communities. In our projects, we combine technical innovation with training and social entrepreneurial solutions. The training programs equip people with skills they can use to shape their future and take responsibility. With entrepreneurial ideas, they can build self-supporting structures that allow them to permanently respond to social needs.

The experiences we have gained from our previous work encourage us to drive change through the triad of technology, training, and social entrepreneurship.

Drinking water without becoming sick

Small business owners in African villages now have the opportunity to operate modern water purification facilities that ensure a livelihood for their families and access to safe drinking water for their communities.

Safe Water Enterprises are a compact kiosk solution for water filtration implemented with various partners in East Africa. A short film describes the concept: www.siemens-stiftung.org/de/projects/safe-water-enterprises

The core of the drinking water facility is a man-sized filter consisting of hair-thin membrane fibers. The purification system, called SkyHydrant, produces safe drinking water from dirty rivers, lakes, and wells, removing bacteria, viruses, and solids. It also operates without electricity. Deployed worldwide, SkyHydrant is being used by Siemens Stiftung in East African and Latin American regions, which suffer from a chronic lack of access to safe drinking water.

»Several basic principles come to bear with the *Safe Water Enterprises* project,« says Christine Weyrich, responsible for the project at Siemens Stiftung. »We use modern technology and adapt it to the local requirements of Kenyan villages. For instance, we have developed prefabricated kiosk modules to offer a ready-to-use solution together with the filter. At the same time, we take an entrepreneurial approach to covering the long-term operating costs of a *Safe Water Enterprise* and ensuring income for the local kiosk manager.

The purified water is sold at an affordable price to residents. Operators can make a living from the revenue. In return, they are solely responsible for operating and maintaining the filter. *Safe Water Enterprises* are often run by committees selected by the community. To apply, villages must be located near a river, lake, well, or spring.

From there, water is pumped and routed to the filter, which is capable of purifying up to 1,000 liters per hour. Customers receive the water in disinfected containers to prevent it from being recontaminated during transport and storage. Kiosks are located in a central area to help shorten distances for fetching water. Ten liters of safe drinking water costs between two and five euro cents and varies according to location.

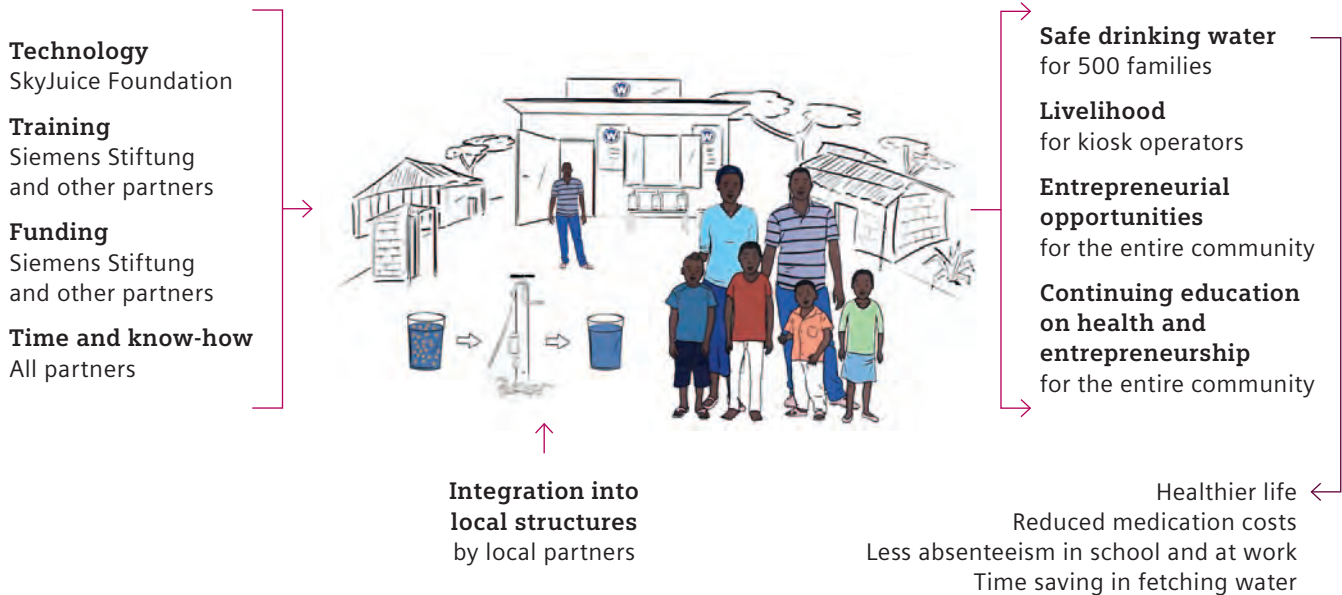
Safe Water Enterprises have a particularly sensitive focus: about 17 million Kenyans, largely in remote regions, have no access to safe drinking water. Those who drink water from rivers and creeks risk infection with dangerous diseases such as cholera and typhoid, which are prevalent. From diarrheal diseases alone, more than 2,000 children die every day. But non-fatal diseases have serious consequences as well, according to David Mureithi, a health-care activist in Kenya who works with the *Safe Water Enterprise* in Githembe.

»Frequently, children can't go to school and adults miss work because of illness,« he says. »And for families in these already poor communities, that means even less income.«

Siemens Stiftung pays particular attention to integrating *Safe Water Enterprises* in local structures. »The entire community must stand behind the idea if it is to function in the long term,« says project manager ›

Safe Water Enterprises at a glance:

Water kiosks use simple methods to help thousands of people in remote regions.



Weyrich. »Many discussions need to be held in advance.« Local authorities, village chiefs, and community committees must be timely integrated. Such careful preparation ensures that locations are secured long term, even if it slows expansion slightly. By the end of 2014, the network is slated to grow to 20 water kiosks. To meet that target, Siemens Stiftung seeks partner organizations with their own local structures and sufficient experience in operating in the communities, such as the SOS Children's Village, AMREF, and the Hunger Project.

Among the obstacles hindering the expansion of *Safe Water Enterprises* are insufficient marketing, a lack of education, and limited product variety, according to previous experiences. »We aim to tackle all these

issues, especially education, which will be a focus of our work,« says Weyrich. »Last year, we formed a partnership with the Kenyatta University and the Kenyan organization The Youth Banner to offer training and mentoring programs.« The programs are intended not only to strengthen *Safe Water Enterprises* but also to help other community residents realize their entrepreneurial ideas. Siemens Stiftung has successfully conducted similar training sessions in other projects such as the *Water-Energy Hub*. |

Project partners:

AMREF Flying Doctors / The Hunger Project /
Global Nature Fund / PureFlow Water Solutions /
SkyJuice Foundation / SOS Children's Village

A Safe Water Enterprise can supply water to about 500 families. Seven stations currently offer about 3,500 families access to safe drinking water, or more than 15,000 people in remote regions in Kenya. Twenty stations are planned by the end of 2014.



Motivating and inspiring: Young Kenyans discover new prospects as entrepreneurs.



»We're creating role models«

Wamuyu Mahinda trains and mentors young people to become entrepreneurs in The Youth Banner organization in Kenya. Since 2012, Siemens Stiftung has cooperated with The Youth Banner, a program that offers *entrepreneurship training* and mentorship for young Kenyans in rural regions and provides them with economic and social opportunities. For many school students in the country, this is often their only chance to get ahead, and when they successfully complete their training, they serve as a source of inspiration for entire villages to become more involved.

Wamuyu Mahinda (right picture) is the founder and head of The Youth Banner. The Kenyan organization, which is a partner of Siemens Stiftung, equips young people with necessary skills to run a business. The program focuses on basic business proficiency while also promoting personal capabilities. Mentors later walk alongside the graduates on their way to becoming entrepreneurs.

Ms. Mahinda, you have given up your position in the private sector to train and mentor young Kenyans on how to realize their own business ideas. Why?

I'm incredibly motivated each time I encounter graduates of our training program. In fact, I just met such a graduate, a young man named Jeremiah, who has meanwhile started his own fish business. He was quite proud to approach me on his silver motorcycle.

Wait a minute. Did you say he stuck his own hard-earned money into a motorcycle?

Yes, exactly. The motorcycle is an important tool for him. It allows him to serve customers in a much larger area than he could if he had to go by foot. At the same time, he serves as a role model for his immediate

surroundings: People see that he is doing well and want to emulate his success. In many parts of Kenya, parents are incredibly motivated to be able to provide their families with three meals a day. Others are proud when their children wear clean school uniforms or can afford a haircut.

Why do young people need special training before they start their own business?

The education system in Kenya provides no special training to prepare young people to be successful entrepreneurs. In our program, we're focused on young adults who have eight years of school behind them, some even 12 years. They have English and math skills, so these aren't a problem. But no one has taught them anything about bookkeeping, marketing, customer loyalty, »

and even the economic law of supply and demand. Nor have many of them ever worked on a computer. For us, it's important that young people who participate in our program acquire personal skills, believe in their ideas, think critically, and are focused on solutions.

So how does your training program operate?

First of all, we look for participants to join the program, about 100 each time. They are recommended to us by the Chiefs and local leaders who know everyone, or by other local organizations. The training takes place once a week for six months. We have two sessions every year. We have meanwhile established a mentoring program in which experienced businesspeople mentor the young people, often via the Internet because of the long distances.

And after the training, the young people start their own business?

Exactly. For instance, many graduates today sell fish near Lake Victoria, where we have a location. Others tend to open hairdresser shops, operate small hotels, become bookkeepers or sell soup. Their businesses target mostly local customers. But some are even successful internationally. One graduate, for instance, trades fish maw, produced from discarded fish bladders. He sells the product to distributors in Uganda, who convert it into fish oil for export to China.

What about the young people who don't participate in your program?

That's the bad part: They have hardly any other opportunities. Many young people in Kenya are unemployed: They just kill time. Many of them fall in with a bad crowd and become criminals. When we are able to accept them, they view this not only as training but also as an opportunity to finally do something, and that gives them hope. That's also why we have far more applicants for the program than we can accept. |

Project partners:
digital opportunity trust / The Youth Banner

New prospects for waste management

In many rapidly growing cities in developing countries, waste disposal is a major problem. Due to the lack of infrastructure, waste is often burned or stored illegally – with severe health consequences. Alternatives are being put to the test in Daniel Pfaffenholz' social enterprise *TakaTaka Solutions* in Nairobi's Kangemi and Kawangware slums.

**TWO
THIRDS**

of people in Nairobi lack environmentally-friendly waste disposal options.

35

employees roll up their sleeves at *TakaTaka*.



Right now, 50 percent of all waste collected in homes is recycled. With continuing training, this amount will rise further.

t₅₋₆

Five to six tons of organic waste is collected every day in homes and at the street market in Kangemi.



Up to 70 percent of the waste is potential compost.

150

students have been taught how to properly handle waste since 2012.



The *TakaTaka* team comes to elementary schools once a week to raise awareness.

t₁₀

10 tons natural fertilizer are produced from the collected waste every month in *TakaTaka*'s compost facilities.

Project partners:
AT Association / *TakaTaka Solutions*

Education

The future of our societies depends on young people who are able to meet local and global needs with courage and imagination. Knowledge of natural sciences and technical interrelationships is an important basis for them to be able to seize the opportunities of a technological world in a responsible way.

Science and technology education makes an important contribution to the social permeability of a society, creating various opportunities for young people regardless of their gender or origin. A prerequisite is for schools to impart the necessary knowledge with a high degree of quality and practical relevance.

Siemens Stiftung, together with partners, is involved in projects in all areas of society and in scientific studies and networks to promote science and technology education along the entire educational chain. Our geographical focus is on regions in Latin America and Africa as well as on Germany and other European countries.

The key to providing motivating lessons, we believe, is to offer teachers continuing educational opportunities. After all, they are the ones who arouse students' curiosity and spark their fascination for scientific interrelationships. That is the focus of Siemens Stiftung. Despite all the educational studies and recommendations for action, many schools still need to improve their quality of instruction and offer students greater practical experience.

Together with education experts, Siemens Stiftung has developed *Experimento*, a program that offers training and continuing education opportunities to preschool, elementary school, and secondary school educators. *Experimento* also supplies instructions and experimentation materials to help them provide quality science and technology education, particularly in disadvantaged regions.

When students conduct experiments together in groups, the collaborative research also improves their social skills. Experience from *Experimento* shows that aggressive behavior in students from schools in social flashpoints decreases through group experiments. Opportunities for students to observe scientific phenomena themselves and draw their own conclusions boost their judgment skills. The need to formulate the results of experiments also motivates them to hone their language skills. We are convinced that science and technology can be a driving force throughout a student's academic studies.



Under the microscope: Why is the light bulb glowing now?

Offers for better learning

The *Experimento* educational program is designed to make students interested in science and technology. The concept begins with training and continuing education for teachers. It is currently implemented in Latin America, Africa, and Europe, primarily Germany. A number of renowned institutions already participate in the program. From them, Siemens Stiftung learns about the various regional requirements and also integrates them as partners into the concept.

Elementary school teacher Cristina Navarrete is amazed. She has never experienced anything like it before: 80 colleagues are in her school's gym in the Chilean town of Villarrica, each of them holding a plastic cup in their hand. »We're playing telephone« is the name of the afternoon exercise. The group consists of pairs. While the one set of teachers holds cups to their ears, the other stands four meters away speaking into their cups, connected together by a nylon cord. Words flow from the other end. »Understood – it works!« says Navarrete, who plays the role of a student in the afternoon session.

»Children are always fascinated when they can conduct and experience experiments themselves.«

Pontificia Universidad Católica (PUC), one of Latin America's most prestigious universities, and Siemens Stiftung invited the teachers to participate in the continuing education seminar. The teachers had an opportunity to learn simple experiments that they can easily conduct in school and use to spark the students' interest in learning about science through discovery.

The acoustic experiment they conducted with the improvised telephones was followed by an optics experiment with a homemade pinhole camera.

Such playful teaching methods form the core of the *Experimento* educational program initiated by Siemens Stiftung, which is now implemented in many countries. »Science is often frontal instruction – that is, teachers say something and students just listen,« says Barbara Filtzinger, responsible for the working area education at Siemens Stiftung. »Students really become interested in a subject when they can test and experience interrelationships themselves.«

Exactly that is the focus of *Experimento*. The program consists of two elements: continuing education for teachers and materials for experiments. Educators are familiarized with the experiments and receive teaching tools to integrate them into their lessons. In that role, they function as multipliers, passing on new ideas to colleagues for lessons that motivate students. *Experimento* kits include all the necessary materials, such as batteries, cables, and small motors, as well as test tubes, funnels, and lamps. The kits and experiment instructions are available for various age groups. As such, they help students acquire knowledge they need for other fields of study step-by-step along the entire educational chain.

»It's very important for us to develop *Experimento* as a model that can be applied internationally,« says Filtzinger. ›

Underway with *Experimento*

Photographer Uli Reinhardt traced the tracks that the *Experimento* program has left behind in Chile. He was fascinated by the enthusiasm he observed in both the adults and the children conducting the experiments. The photos on these pages were taken during the photographer's Chilean trip through the Araucanía region in the south, the desert region of Antofagasta and Calama in the north, and the capital Santiago.

Continuing education for teachers is based on the multiplier effect: The educators who receive *Experimento* training pass on their knowledge to colleagues.

Experimento is already being used in numerous countries today – in Germany as well as in Africa and Latin America. The program's approach to provide teacher training and *Experimento* kits is the same everywhere, but is adapted to regional and national curricula. »For instance, all children love the experiments with electric circuits – the fascination with energy is the same in every country,« says Filtzinger.

Siemens Stiftung operates locally with experienced partners, many of them education ministries and educational institutions as well as universities that educate teachers.

The educators are trained at so-called Science Competence Centres, which Siemens Stiftung has established with local partners. The use of the *Experimento* kits has an impact not only on biology, chemis-

try, and physics instruction, but also on language development. »Without knowing the appropriate terminology, students can explain neither the experiments nor the re-

»All children love experiments with electric circuits – the fascination is the same in every country.«

sults. They practice speaking in precise terms« says Filtzinger. »Language skills are particularly important for children >SEITE 30

Successful integration:
Children can participate in
the experiments regardless
of their origin.



On site: Nathalie von Siemens,
Member of the Siemens Stiftung
Board of Directors, in the class-
room with *Experimento*.

»Experimento's playful principle offers invaluable aid«

in specialized training seminars focused on the Experimento concept, educators learn how to teach science in a child-friendly way. in addition to Fundación Chile, an important partner in this effort is Pontificia Universidad Católica. An interview with Cristián Cox Donoso, dean of the School of Education, which annually trains more than 1,500 students for the teaching profession.



Dr. Cristián Cox Donoso, dean of the School of Education at Pontificia Universidad Católica

Mr. Cox, the current PiSA study ranks Chile 51 in a comparison of 64 countries. Are you disappointed with this ranking considering that your university trains teachers?

You need to compare those results with those from the PISA study in 2000. Much has happened since we first took part in the study. The most recent findings show that Chile is among the countries to have developed the most over the past ten years.

t hat may be the case but middle- and upper-class parents still send their children to private schools. the only options for children from poor families are district and municipal schools whose teachers are often poorly trained and underpaid.

That's true, unfortunately, but it used to be even worse. During the Pinochet regime, teachers earned the equivalent of just 200 euros a month. That was just enough to survive. Under Pinochet, tuition-free studies were abolished, and education was privatized and decentralized. Our education budget is seven times higher today than at the end of the 1980s. Two-thirds of these dramatically improved public funds for education go to teachers' salaries.

And has that investment paid off?

Significant improvements have been made, for instance, in the enrollment ratio in preschools and universities. There are more scholarships. And the material conditions have improved dramatically – better schools and more books and computers. One example: while two hundred children had

to share a computer in 1995, that number is down to 13 today. Back then, school time was broken up into shifts: half of the children went to school in the morning, the other half in the afternoon. Today, Chile has only full-day schools for everyone. It took ten years to build and equip new schools. Now we need to improve the quality of instruction.

Chile apparently lacks enough qualified teachers. What is the basic problem?

Qualified teachers are key pillars of the knowledge society! They are crucial to a country's continued development. Only recently have our government officials seriously acknowledged this fact. Even though the Education Ministry has been providing considerable resources for the past 15 years, only now are these grants linked to nationwide conditions, and agreed targets have to be reached. Only those who offer high quality and show progress receive funding; otherwise, the tap is turned off.

How can you improve the quality of teaching at universities?

We are changing the previous study program that was defined by individual experts because it could hardly be applied in practice to schools. And that is exactly what we need for teacher training. In our degree programs, we offer 65 new courses that deal with the interaction between field of study and teaching skills. What distinguishes a qualified teacher is the ability to delve into a subject in the classroom and convey it skillfully.

What does that mean in practice?

Every semester, we send 400 students into schools in Santiago, where they must work together with a teacher in each school and an assistant professor from the university. It's a challenge to work harmoniously together as a trio. It's also a permanent challenge in teacher training to blend theoretical and practical knowledge.

Why? is the problem the students or the teachers?

It's also the professors because the world of academia struggles to engage with heart and soul in the school world. But universities need to; otherwise, they can't educate teachers. Here is where Siemens Stiftung comes into play. We need new concepts, ideas and tools. To that end, our professors are going abroad. We're in contact with centers ›

of excellence in Canada, the United States, and other industrialized countries. In this context, we view the partnership with Siemens Stiftung as a gift. This is especially true for natural sciences where not only we in Chile but also other Latin American countries are poorly positioned. *Experimento's* playful principle is an invaluable aid particularly in this area. It turns children into little scientists and helps teachers and students overcome the limitations of frontal instruction.

Why did you introduce Experimento in the small town of Villarrica in the south and not in the capital Santiago?

Villarrica is in a rural area where teachers are eager and enthusiastic about continuing education. Here in Santiago, teachers react rather skeptically to new methods. But it's only a matter of time before they will realize that new teaching approaches help both them and their students. The *Experimento* partnership with Siemens Stiftung that began in our regional campus in the south is now coming to Santiago – to one of the oldest educational faculties in the country. We would like to cooperate with more partners like

Siemens Stiftung in both teacher training and continuing education.

Were you initially skeptical about Experimento or convinced from the start?

Experimento aligned in every respect to the previous efforts of the Chilean government in the area of education. I knew it was the right approach – away from frontal instruction to more common experiences and discovery. That applies not only to the natural sciences but to all other courses as well.

Would you care to predict how Chile could rank in the PiSA study five years from now?

Five years are too short a time for big changes. I'm convinced that through the pressure on institutions and practitioners, we will improve not in leaps and bounds but steadily. Chilean society is aware that we need a quality education system. The government has responded by making demands and offering support – the exact mix is constantly discussed. |

Project partners:

South Africa: German International School Cape Town / German International School Johannesburg / eThekweni Community Foundation / KwaZulu Science Centre (Developing Young Minds) / Radmaste Centre (University of the Witwatersrand Johannesburg) / RedCap Foundation / University of the Western Cape / Walter Sisulu University

Argentina: Siemens Fundación and local educational partners

Chile: Deutsches Lehrerbildungs-Institut Wilhelm von Humboldt (LBI) / Efecto educativo / FCH Fundación Chile / Pontificia Universidad Católica de Chile (PUC) / SIP Red de Colegios

Colombia: Siemens Fundación and local educational partners

Peru: Instituto Apoyo

with different native languages. The experiments and ensuing discussions have an integrating effect, because everyone can contribute equally.«

Deficiencies in science education have rung alarm bells in numerous countries. Peru and Chile, for instance, landed at the bottom of the international PISA scholastic ranking. But change is on the way. Chile, for one, is introducing reforms to its teacher-training program. Pontificia Universidad Católica, which has a partnership with Siemens Stiftung, is involved in the changes. »We are modifying our basic courses with a view to combining knowledge in a given field with the skills required to teach it,« says Cristián Cox, dean of the School of Education. He is convinced that qualified teachers not only master their field of study but are also able to pass on their knowledge to others. Students, he says, need more practical experience. »And that is where Siemens Stiftung comes into play,« says Cox. »We need new concepts, ideas, and

tools. In this context, we view the partnership with Siemens Stiftung as a gift.«

»We are modifying our basic courses with a view to combining knowledge in a given field with the skills required to teach it.«

Elementary school teacher Navarrete has integrated the experiments she learned during her training directly into her lessons. She has been teaching for nine years at the Rayen Lafquen primary school near the city of Villarrica, located about 800 kilometers south of the capital Santiago. Together with ›

Experimento in numbers since 2011



1,800

teachers trained in about
200 schools



65,000

preschool and elementary school
teachers reached

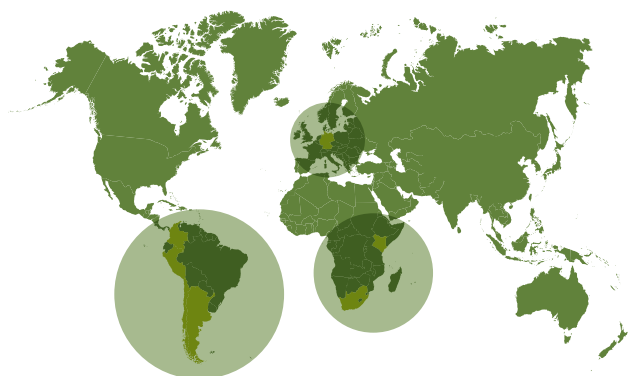
560

Experimento kits distributed



136

scientific-technical experiments



7 countries

Argentina, Chile, Germany, Kenya,
Colombia, Peru, South Africa

3 continents

Africa, Europe,
South America

4 languages

German, English,
Portuguese, Spanish

three colleagues, she teaches about 50 students from the tribe of Mapuche Indians.

The *Experimento* kit, like the heating stove, has meanwhile become a firm fixture in Navarrete's classroom. »We work with it every week,« she says, adding that students handle the materials carefully, and it is relatively easy to find parts that need to be replaced, such as filters, straws, and glass cups. Navarrete has already completed four continuing education seminars, all of which she has found exciting and inspiring. »I've experienced in the seminars what I perceive every week in the schoolchildren – namely, that experimenting is fun and leads to results,« she says. »This has also inspired

us to try and come up with something new, like the telephone experiment with the cups and cord. These materials weren't originally in the kit.«

Navarrete's top student is Domingo, 14 years old, the second youngest of 12 siblings, of whom one is in prison – »because of drugs,« she says. His parents own only a small lot with a wood house near a river. The family has enough money to survive but not enough for all the children to afford an education. Domingo already knows what he wants to become – an electrical mechanic. »Ever since we did the experiment with the electric circuit and the light bulb lit up, I know that's what I want to be,« he says. |

Project partners:

Germany: Albert Schweitzer Geschwister Scholl Gymnasium, Marl / Franz Liszt Mittelschule, Waldkraiburg / Gymnasium Haus Overbach, Jülich / Landgraf-Ludwigs-Gymnasium, Gießen / Max-Planck-Gymnasium, Trier / MINT-EC (Verein mathematisch-naturwissenschaftlicher Excellence-Center an Schulen e.V.) MNU (Deutscher Verein zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts e.V.) / Staatliches Schulamt Mühldorf



Sparking curiosity in technology

Little Scientists' House inspires children by bringing science and technology education into preschools, day care centers, and elementary schools.

Little Scientists' House, which includes Siemens Stiftung among its co-founders, is Germany's largest early-childhood education initiative, which is set to cover 80 percent of all day care centers in the country by 2015. The program continuously integrates the latest research developments into its educational materials and guidelines.

The main goal of the educational program when it launched in 2006 sounded ambitious: »Every day care center in Germany should become a *Little Scientists' House*.« To that end, the non-profit foundation *Little Scientists' House* supports educators by encouraging and guiding the inquisitive minds of preschool and elementary school-aged girls and boys. The project has since become the largest early childhood education initiative in Germany, now implemented in more than 27,000 preschools, day care centers, and elementary schools.

Siemens Stiftung is both a co-founder of the program and active partner in its strategic development through a seat on the Board of Trustees, among other commitments. The initiative recognizes that in a technologically-oriented society, the importance of science and technology education continues to grow. This is true for early childhood education as well. The

foundation *Little Scientists' House* sustainably anchors children's everyday encounter with science, mathematics, and technology in preschools, day care centers, and elementary schools. Their enthusiasm in scientific phenomena and technological issues is boosted in a playful manner, contributing at the same time to improved educational opportunities for girls and boys alike.

At the core of the initiative is continuous training for educators, supported by local networks in each region for interested parties. Preschools, day care centers, and elementary schools receive instruction materials from the *Little Scientists' House* aligned to the curricula of each state on subjects ranging from water, air, and energy to light, colors, and vision.

The foundation *Little Scientists' House* is a learning organization that continuously develops itself and its materials according ›

to the latest scientific and practical findings. In 2013, the basic educational materials were republished in the form of a brochure outlining the foundation's educational approach and a presentation of the research group's methods. The revisions included findings from the report on the goals of science education for children in preschool and elementary-school ages. The main topics of the training seminars in 2013 focused on teaching thermal properties through experiments that bubbled and glowed using power and electricity. New materials and brochures for teachers were dedicated to the annual main points of the training program. The phenomenon of time took center stage on the »Day of Little Researchers« in 2013 with the motto: »Are you coming along to discover time?« In parallel, the foundation made a nationwide plea to give children more time to explore and discover. The initiative »Germany collects time for little researchers« won commitments for more than 70,000 minutes with the help of educators, parents, and grandparents as well as government officials, business leaders, and social activists. And what about the initial goal of turning every German day care center into a *Little Scientists' House*? The educational initiative is on track to achieve it: By the end of 2015, nearly 80 percent of all day care centers in the country will be able to participate. The German federal government has agreed to support this goal in its 2013 coalition agreement. The government, along with Germany's scientific community and business leaders, aims to promote the *Little Scientists' House* and thus improve future opportunities for children in the country. |

Project partners:

Helmholtz Association / Dietmar Hopp Stiftung / Deutsche Telekom Stiftung / Auto-stadt Wolfsburg. Funded by the German Federal Ministry of Education and Research

A database for good teaching

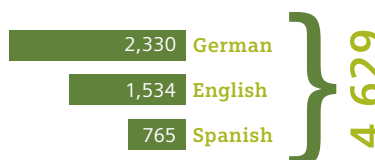
More than 68 percent of teachers in German schools use digital media. In its *Media Portal*, Siemens Stiftung provides quality-controlled digital content for teaching. Teachers can download content for free to offer exciting and real-life lessons. The key topics with numerous cross-curricular references are energy, environment, health, and water as well as communications, technology, and light.



17,625 users from more than 100 countries



5,918 new users in fiscal 2012/13 – an increase of 51 percent



4,629 digital media, including graphics, videos, experiment instructions, worksheets, and audio files



1,196,435 downloads since the portal's launch
242,832 downloads alone in fiscal 2012/13



9 partnerships with state media centers, content downloadable from education servers



Comenius Seal (2009), Erasmus EuroMedia Seal (2010), Comenius Seal for Interactive Panels (2011), MEDEA Award: »Highly Recommended« (2011), UN Decade project »Education for Sustainable Development« (2012), Comenius Seal for KIKUS digital (2012), Erasmus EuroMedia Seal for KIKUS digital (2013)

Project partners:

Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) / FWU Institut für Film und Bild in Wissenschaft und Unterricht / Landesmedienzentrum Baden-Württemberg (LMZ-BW) / Landesschulamt und Lehrkräfteakademie Hessen / LVR-Zentrum für Medien und Bildung / Niedersächsischer Bildungsserver (NiBiS) / Pädagogisches Landesinstitut (PL) Rheinland-Pfalz / Tiroler Bildungsinstitut – Medienzentrum des Landes Tirol / Thüringer Institut für Lehrerfortbildung, Lehrplanentwicklung und Medien (THILLM)

Knowledge-transfer as a foundation for successful learning

Siemens Stiftung supports studies on language acquisition, helps spread the *KIKUS* method for strengthening children's multilingualism, and is committed to the MINT Forum (mathematics, informatics, natural sciences and technology) for acquiring knowledge systematically.

Studies prove time and again that one of the main difficulties children experience in school is insufficient language skills. The PISA study showed that 18 percent of 15-year-olds in Germany lacked proper reading skills. That deficiency has wide-ranging consequences for other subjects as well. The problems often start at a very young age. Depending on the region, up to 30 percent of preschool children in Germany require language education. This is especially true of children who have an immigrant background and grow up speaking more than one language.

These children are the focus of the language education program *KIKUS* (Children in Cultures and Languages), developed by the Munich-based Center for Multilingualism in Early Childhood. In small groups, children learn vocabulary, grammar, and patterns of speech in a systematic but playful way; working with parents encourages the use of the child's first language. Siemens Stiftung is mainly involved in the training of educators to spread the language learning methods. In the 2012/13 fiscal year, 140 educators took part in the seminars. In preschools using *KIKUS*, children show an increased willingness to speak and are more self-confident, according to regular participant surveys conducted by Siemens Stiftung. Since 2013, the program has been spreading to South African preschools and schools as well. *KIKUS digital* also provides an interactive application that allows educators to teach the German and English language creatively and individually with the help of a computer or an interactive whiteboard.

In addition to *KIKUS*, several language learning methods are used in Germany, but a systematic means to measure impact is still lacking. For that reason, Siemens Stiftung aims to promote the scientific analysis of language instruction by supporting a three-year study by the research institution TransferZentrum für Neurowissenschaften und Lernen (ZNL) in Ulm. The goal is to examine the effectiveness of the *KIKUS* method for multilingual children. The study should also identify the key factors for bilingual or multilingual children to learn German successfully. Researchers at ZNL are analyzing the language skills of around 200 children aged three and four. »We hope, particularly through the relatively long period of investigation and the large number of subjects, to deliver reliable conclusions about the development

process of multilingual children,« says Barbara Filtzinger, who heads the education unit at Siemens Stiftung. In 2012, Siemens Stiftung and the Berlin Institute for Population and Development published the discussion paper »Dem Nachwuchs eine Sprache geben« (Giving Children a Language), which covers language instruction needs in Germany and makes recommendations for better teaching methods.

Language skills are a prerequisite for acquiring knowledge, including the sciences. But few researchers have attempted to systematically research the correlation between the two areas. One large study is currently exploring the effects of early childhood science education. Siemens Stiftung, together with the foundations *Little Scientists' House* and Baden-Württemberg Stiftung, supports a component part of this study in the field of language and quality interaction. The study examines if – and if so, how – speech is fostered during experiments in early childhood education, for example, in describing scientific phenomena and formulating approaches to a solution.

Siemens Stiftung also champions the systematic creation and transfer of knowledge in the field of science. From the beginning, the foundation has been an active member of the national MINT Forum, consisting of 24 institutions that work together to promote education in mathematics, informatics, natural sciences, and technology (MINT). »We are proud to be a part of an association that brings together dedicated representatives from civil society, business leaders, and the scientific community to develop systematic recommendations to improve MINT education,« said Nathalie von Siemens, spokeswoman of the Siemens Stiftung Board of Directors, in her opening address at the National MINT Summit in June 2013. |

Project partners:

KIKUS: Center for Multilingualism in Early Childhood, START-Stiftung **Evaluating language education:** TransferZentrum für Neurowissenschaften und Lernen (ZNL) **Discussion paper:** Berlin Institute for Population and Development **Language component study:** Little Scientists' House, Baden-Württemberg Stiftung



Spurring on tomorrow's scientists

In Siemens Stiftung's *Student Competition*, exceptionally talented young people are recognized for their achievements in the fields of natural science, mathematics, and technology. The winners also benefit from alumni networking events.

With the Alumni Camp, Siemens Stiftung promotes an exchange among former successful participants of the *Student Competition*. The alumni have met every year since 2010 in a different German city. Over the course of a weekend, they work in teams on practical issues related to school, university, or professional life, become better acquainted, and network with each other. Although many former participants are now university students, they continue to take part in the event every year.

Traditionally, members of the current class of entrants also attend the competition, such as Marion Kreins from Bad Münstereifel, who took first prize in the 2013 student competition »Urban, Rural, and Beyond – Planning the Future of Our Environment.« She won the prize for her work on biomass. During the cultivation of so-called high-energy plants used only for biofuels, ground and surface water is exposed to particularly high amounts of nitrogen. In a field trial, Marion Kreins tested various combinations of nitrification inhibitors to determine the most efficient ones. By using these alone, she was able to significantly reduce nitrate leaching and thus nitrogen pollution.

At the Alumni Camp in Münster, participants from previous years were tasked with

building a floatable boat. From the start, a fundamental aspect of their task was to create efficient project management and to implement it. For that, they developed project plans, conducted analyses, prepared presentations, and wrote final reports. The participants competed in five heterogeneous groups: high school and university students worked together, just as aspiring mechanical engineers teamed with future psychologists. »It's precisely this mix of people and aspirations that makes the camp so exciting,« says mechanical engineering student Franz Radke. »The hours we spent in the shop with wood shavings flying all around were the most fun. We came up with some really cool stuff in a relatively short period of time.« Five boats were constructed over the weekend, all meticulously planned and creatively designed. And no less impressive: All of them were launched and passed seaworthiness tests on Lake Aasee in Münster. |

Project partners:

the German technical universities Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen / Technische Universität (TU) Berlin / Technische Universität München (TUM)

Additional winners of the 2013 Student Competition:

The winner of the second prize, Jonas Engelhard from Hersbruck in Franconia, developed a measuring device that enables significant increases in the efficiency of sewage treatment plants. Third prize went to Moritz Gutsch from Lüdinghausen in Westphalia; he calculated how the number and profile of blades as well as the rotor diameter affected the efficiency of wind turbines. Nils Hellmann from Herxheim, the Palatinate, won a special prize for his home-made mobile phone charger that doesn't use any power in standby mode.

Culture

Societies worldwide face profound change, driven by political, economic, and social forces – and not least by technology. Today, technology enables the exchange of ideas and goods in an unprecedented scope and speed, creating huge opportunities but also formidable challenges.

One of the central questions arising from these transformation processes is about identities in a world shaped by globalization. Especially in these times of tremendous change, cultural work sharpens our perception of social trends as well as of traditions and developments, even across national borders.

In Latin American and African cultural scenes, Siemens Stiftung fosters the encounter with one's own environment. Together with local and international partners, we offer scope for artists to actively shape the development of their societies and contribute to successful social cohesion. It is paramount to us that cultural work be able to develop freely and not be understood as a means. Only then, artistic works can arise, that inspire us in a special way, motivate us and confront us with our present.



A portal for exchange and information

Music In Africa is poised to become a music portal for the entire continent. Comprehensive information about performers and composers, music history, and genres as well as cultural policies and cultural management will be available on the Internet platform beginning in 2014. A key focus is on training and continuing education opportunities for musicians and music agents. The platform will contribute to improving artistic collaboration on an international level and increasing global awareness of African music. Four perspectives on *Music In Africa*:

» The *Music In Africa* portal will transform the African music industry, especially in the way people access information and exchange views. I think the portal's greatest value will go beyond merely providing information to offering numerous interaction possibilities. No such portal exists on the African continent today. We're confident that *Music In Africa* will bring the African music scene more closely together.«

Edington Hatitye, Director, Music In Africa, Johannesburg, South Africa

» Musical education has been a huge problem in Africa for some time. Basic information on cultural heritage, music as a profession, and the music industry is compiled and available on the platform. Accessible via the Internet, the portal is a simple, inexpensive medium for users, ensuring broad coverage – and success.«

Seta Ramarason, saxophonist and instructor, Antananarivo, Madagascar

» *Music In Africa* will help strengthen African identity inside and outside national borders. Pan-Africanism has become a huge topic on the continent. I have accompanied the development of the platform from the very start and have the impression that it will be a very useful instrument. Musicians of all genres will benefit from the contacts they can make across the entire continent thanks to *Music In Africa*. The project is already creating lots of excitement and energy – I'm sure it will be a success!«

Jill Richards, pianist, Johannesburg, South Africa

» My dream for music and musicians in Africa is that everyone is finally able to enjoy the sound of the continent and that this sound, which can truly enrich our lives, receives global recognition. Music carries values, memories, and worldviews in its melodies, sounds, and words. That's why it needs to be shared and heard. *Music In Africa* is a practical project that aims to spread contemporary music across the African continent.«

Belisa Rodrigues, Business Development Manager, African Arts Institute, Cape Town, South Africa

Open the curtain: How art is reanchoring itself in society

Three academies in Latin America help network artists, curators, and authors from several countries. They not only generate new ideas and cooperative projects but also serve as a model for dialog across borders – this is new and exceptional for the region's artistic scene.

Project partners:

Panorama Sur:
a asociación para el Teatro Latinoamericano / THE / Goethe-Institut Buenos Aires / malba (museo de arte Latinoamericano de Buenos Aires) / Fundación Costantini / Iuna – Departamento de artes del movimiento / Complejo Teatral de Buenos Aires / MEC / InaE / Dirección nacional de Cultura Uruguay / TaCEC / Teatro argentino de La Plata / TEmPo Festival / Funceb / Centro Cultural de España en Buenos Aires (CCEBa) / Siemens Fundación argentina

movImEnTo Sur:
Consejo nacional de la Cultura y las artes de Chile / Goethe-Institut Chile / Parque Cultural de Valparaíso / Escenaborde

ExPerImEnTa Sur:
mapa Teatro / Goethe-Institut Bogotá / Centro de memoria Paz y reconciliación / universidad nacional de Colombia

The old floorboards are warped, the stairs are worn, and the plaster is peeling off the walls, yet Mapa Teatro is a thriving catalyst in the center of Bogotá, Colombia's capital. The imposing building from the 19th century has become a forum for artists, curators, and cultural communicators from the region who discussed the future of their art and worked on new, interdisciplinary formats over the course of a week.

»Theater needs to search for a new purpose here.«

»Some theater venues in the outskirts of Bogotá are not used for performances anymore. Actors and audiences are increasingly drifting toward other forms of entertainment,« says Joachim Gerstmeier, who heads the *EXPERIMENTA SUR* project. »Theater needs to search for a new purpose here.« The aim of *EXPERIMENTA SUR* is the development of interdisciplinary formats to reanchor this art in social life.

The project, launched at the Mapa Teatro meeting, is the latest in a series of academies initiated by Siemens Stiftung together with a number of partners in Latin America. The first was *PANORAMA SUR* in Argentina in 2010, followed by

MOVIMIENTO SUR in Chile. The academies are now held annually with the aim of bringing together cultural players from the entire region to collaborate and foster the development of their own ideas and new formats. The projects are based on the idea of summer academies, which are widespread in Europe and North America but lesser known in Latin America. At the events, participants spend a few days or even weeks to work, discuss, and explore together. In the process, they gain a new perspective on their common theme of anchoring art in society. When they return home, they have not only a solid network of contacts but also ideas that can serve as an inspiration for new projects.

The academies are tailored to the special requirements of each country. *PANORAMA SUR*, for example, deals with the writers' theater, which is a widespread concept in Argentina. Artists write a text, find actors, and stage the piece on their own. Most of the performers earn a living through a day job and pursue theater on the side. »That leads to a routine that often lacks enough time to think out of the box,« says Gerstmeier. »There is not enough room for criticism and reflection.«

Such freedom is exactly what *PANORAMA SUR* in Buenos Aires provides. Artists are able to talk to each other, work together on the development of plays, and address the recurring question of what ›



In discussion: Artists from Latin America in the *MOVIMIENTO SUR* and *PANORAMA SUR* projects



role they play in society as authors and theater professionals. The fact that Chileans, Bolivians, and Argentinians come together is part of the concept – and can be an eye-opener, according to Luciana Laguisquet, an author and academy participant. In her native country, she says, both classics and contemporary texts from around the world are performed, but anyone searching for new pieces from neighboring Latin American countries will come up empty-handed. »That is changing slowly,« she says, thanks largely to *PANORAMA SUR*.

MOVIMIENTO SUR in Chile has a different perspective: It focuses on contemporary dance, which has huge potential for development in the country. The aim of the theater academy, which takes place for three weeks in Valparaíso, is to open

contemporary dance to influences from other fields. The first academy took place in 2012, followed by another in 2013.

The academies in each country are conducted by a solid network of local and international partner organizations brought together by Siemens Stiftung. The success of the concept can be seen in its swift development; the number of participants and project partners continues to grow. As such, Siemens Stiftung has initiated a sustainable process. The projects, which have developed step by step, are now able to evolve further on their own. |

The number of participants and project partners continues to grow. The projects, which have developed step by step, are now able to evolve further on their own.

Transparency

Siemens Stiftung strives to inform the public about its commitment in a transparent manner. We do so by publishing an annual report and continuously updating our website. Transparency is a guiding factor in how we use materials, implement projects, and assess results.

As an international foundation with numerous projects on various continents, we attach particular importance to working with international and local partners for whom integrity and transparency are paramount. In so doing, we also aim to help drive social development toward transparency and greater efficiency.

We are open for feedback and encourage others to benefit from the knowledge gained through our work. We are also committed to supporting scientific research and strive to actively drive knowledge transfer in our areas of focus.

Through a systematic impact assessment, we aim to enable a continuous learning process, implement our projects in a result-oriented manner, and thus make the best use of resources.

Siemens Stiftung team in fiscal 2012/2013



Lower row from left to right: Sabine Sailer, Caroline Weimann, Karolin Timm-Wachter, Julia Wachsmann, Daniela Hopf, Georg Bernwieser (CFO), Dr. Nathalie von Siemens (Managing Director/Spokesperson), Rolf Huber (Managing Director), Christine Koptisch, Christine Weyrich, Joachim Gerstmeier, Gerhard Hütter, Dr. Beate Grotehans. *On the steps from left to right in ascending order:* Werner Busch, Julia Rüter, Carola Schwank, Jens Cording, Dr. Barbara Filtzinger, Christa Mühlbauer, Robert Balthasar, Rebecca Ottmann, Franziska von Einem, Maria Schumm-Tschauder, Karin Hagen, Dr. Ute Hebestreit-Böhme, Volker Fischer, Eva-Katharina Lang, Kerstin Marchetti, Margit Wiest, Sabine Baumeister, David Hoffmann, Anja Funke, Ursula Gentili, Angela Clerc

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Dr. h. c. Peter Löscher
President, Chief Executive
Officer, Siemens AG (through
July 31, 2013)



Gerd v. Brandenstein
Vice President, Member,
Supervisory Board, Siemens AG



Berthold Huber
First Chairman of IG Metall



Barbara Kux
Member, Managing Board,
Siemens AG (through April 15,
2013 Member, Board of Trustees)



Prof. Dr. Hermann Requardt
Member, Managing Board and
Sector CEO Healthcare, Siemens AG
(since April 16, 2013, Member,
Board of Trustees)



Peter Y. Solmssen
Member, Managing Board and
General Council, Siemens AG



H.S.H. Georg Fürst Starhemberg
Starhemberg'sche Familienstiftung

Financial report

Expenses

Expenses for the foundation's mandate

Total expenses of €3,068 thousand (previous year: €3,001 thousand) were reported in the »Basic Needs & Social Entrepreneurship« sector. The goal of these projects is to reduce existential deficits in basic services in developing and emerging countries and to strengthen social structures. The focus is on supporting local and financially independent initiatives with technical solutions, training, and networks.

Total expenses of €4,463 thousand (previous year: €4,425 thousand) were reported for »Education« projects. With its international education program, Siemens Stiftung helps modernize classroom materials and methods to enable qualified science and technology education for children, especially in disadvantaged regions. The projects focus on training and continuing education of teachers and educators.

Total expenses of €1,239 thousand (previous year: €1,403 thousand) were reported for »Culture« projects. With projects from this working area, Siemens Stiftung aims to provide space for cultural stakeholder perspectives and experimental fields for contemporary discussion. The meaning of culture for social cohesion, the reflection on individual self-image, and the effectiveness of cultural activities in society are at the heart of these initiatives.

In addition, €1,386 thousand (previous year: €1,332 thousand) was spent on communication and support of networks.

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. A balance of €48 thousand from the expenses of discounted pension and anniversary obligations (€157 thousand) and the gains from covering assets (€109 thousand) is included in administrative costs.

Expenses from business activities

In the previous year, expenses from business activities of €89 thousand were reported. In the fiscal year, no business activities were maintained.

Personnel costs

Total expenses include personnel costs of €3,051 thousand (previous year: €2,948 thousand); €2,655 thousand were spent on wages and salaries and €396 thousand on social contributions and expenditures for pensions and benefits. The workforce comprised 31 persons (previous year: 30) on average during the fiscal year.

| ASSETS as of September 30, 2013 | in € | 09/30/2013 | 09/30/2012 |
|--|-------------|-----------------------|-----------------------|
| A. Fixed assets | | | |
| I. Intangible assets | | | |
| Concessions, industrial and similar rights and assets and licenses in such rights and assets | | 264,489.00 | 85,520.26 |
| II. Tangible assets | | | |
| Other plant, factory and office equipment | | 432,163.00 | 490,267.00 |
| III. Financial assets | | | |
| Long-term investments | | 389,999,930.90 | 389,999,930.90 |
| | | 390,696,582.90 | 390,575,718.16 |
| B. Current assets | | | |
| I. Accounts receivable and other assets | | | |
| 1. Prepayments and inventories | | – | 62,623.71 |
| 2. Other assets (including €0 > 1 year) | | 14,040,190.72 | 15,522,439.74 |
| II. Cash at banks | | 14,147,894.06 | 10,279,677.88 |
| | | 28,188,084.78 | 25,864,741.33 |
| C. Prepayments and deferred charges | | 56,969.73 | 23,371.51 |
| D. Active difference resulting from asset offsetting | | 112,134.81 | – |
| | | 419,053,772.22 | 416,463,831.00 |

| EQUITY AND LIABILITIES as of September 30, 2013 | in € | 09/30/2013 | 09/30/2012 |
|---|-------------|-----------------------|-----------------------|
| A. Equity | | | |
| 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) | | 14,250,000.00 | 10,500,000.00 |
| IV. Retained profits brought forward | | 12,530,232.03 | 12,674,782.90 |
| | | 416,780,232.03 | 413,174,782.90 |
| B. Accruals | | | |
| 1. Accruals for pensions and similar obligations | | – | 303,100.89 |
| 2. Other accruals | | 1,144,204.99 | 803,024.00 |
| | | 1,144,204.99 | 1,106,124.89 |
| C. Liabilities | | | |
| 1. Trade payables (including €1,063 thousand with a remaining term of up to one year) | | 1,063,458.53 | 2,083,574.83 |
| 2. Other liabilities (including €0 from taxes) | | 65,876.67 | 99,348.38 |
| | | 1,129,335.20 | 2,182,923.21 |
| | | 419,053,772.22 | 416,463,831.00 |

Statement of financial position

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, which means it primarily funds its own projects and initiatives. The

foundation's mandate is set forth in the most recent version of its charter, dated December 12, 2012. Siemens AG transferred the endowment (€300,000 thousand) and other assets (€90 thousand) in 2008. This makes Siemens Stiftung one of Germany's largest corporate foundations.

| INCOME AND EXPENSE STATEMENT for 2012/2013 | in € | 09/30/2013 | 09/30/2012 |
|--|-------------|----------------------|----------------------|
| Income | | | |
| 1. Asset management income | | 14,045,037.89 | 15,509,309.40 |
| 2. Income from donations | | 623,811.00 | 18,000.00 |
| 3. Income from business activities | | – | 92,624.97 |
| 4. Other operating income | | 39,083.81 | 186,339.89 |
| | | 14,707,932.70 | 15,806,274.26 |
| Expenses | | | |
| 5. Asset management expenses | | 1,610.70 | 1,721.10 |
| 6. Expenses for the foundation's mandate | | | |
| Basic Needs & Social Entrepreneurship | | 3,068,119.46 | 3,000,751.50 |
| Education | | 4,462,713.70 | 4,425,150.05 |
| Culture | | 1,238,507.67 | 1,402,544.01 |
| Communication | | 1,386,120.23 | 1,331,606.33 |
| | | 10,155,461.06 | 10,160,051.89 |
| 7. Other operating expenses | | | |
| Administrative costs | | 945,411.81 | 958,561.56 |
| Expenses from business activities | | – | 88,838.67 |
| | | 945,411.81 | 1,047,400.23 |
| | | 11,102,483.57 | 11,209,173.22 |
| 8. Annual net income | | 3,605,449.13 | 4,597,101.04 |
| 9. Retained profits brought forward from previous year | | 12,674,782.90 | 12,577,681.86 |
| 10. Transfer to free reserves (section 58 (7a) AO) | | 3,750,000.00 | 4,500,000.00 |
| 11. Retained profits brought forward | | 12,530,232.03 | 12,674,782.90 |

Income/expense statement

The income and expense statement for fiscal year 2012/2013 shows income from asset management of €14,045 thousand (previous year: €15,509 thousand), income from donations of €624 thousand (previous year: €18 thousand). Other operating income of €39 thousand (previous year: €186 thousand) consists primarily of offsetting remuneration in kind, return commission, and vouchers as well as redemptions and credits.

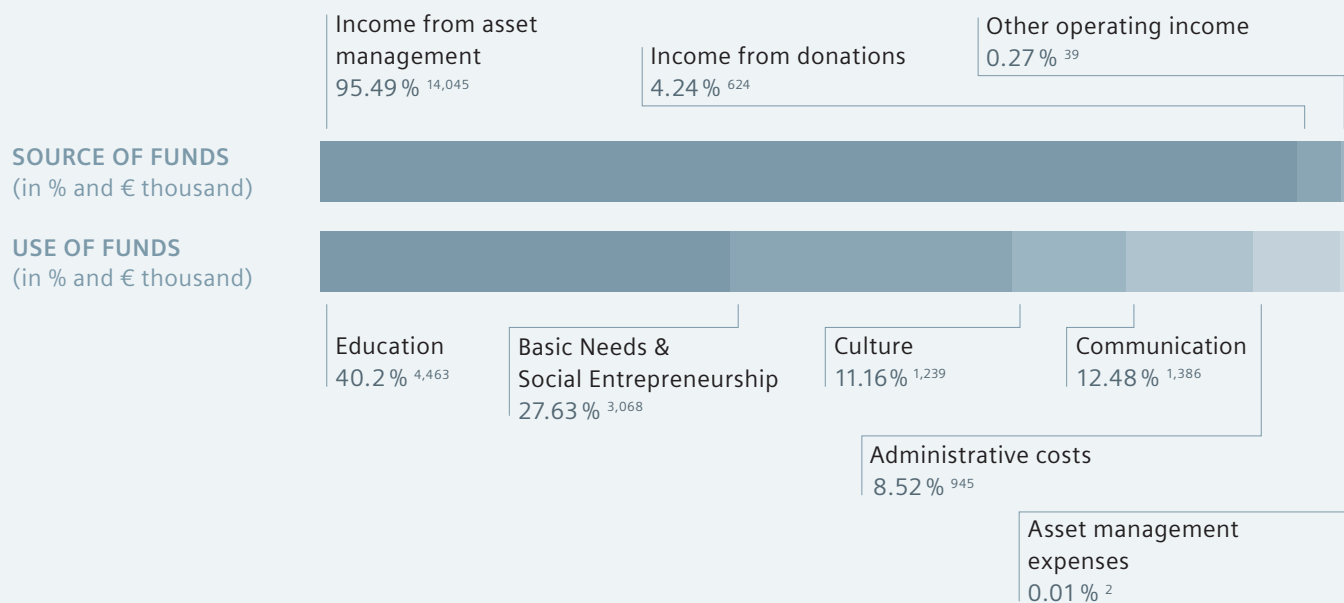
There were also operating expenses for the foundation's mandate of €3,068 thousand (previous year: €3,001 thousand) for the »Basic Needs and Social Entrepreneurship« programs, €4,463 thousand (previous year: €4,425 thousand) for »Education,« and €1,239 (previous year: €1,403 thousand) for »Culture.« A total of €1,386 thousand (previous year: €1,332 thousand) was spent on communication. Administrative expenses of €945 thousand (previous year: €959 thousand) were incurred. A total of €3,750 thousand (previous year: €4,500 thousand) was moved into free reserves in accordance with section 58 (7a) of the German Tax Code (AO).

Certification

Ernst & Young GmbH auditors reviewed the annual financial statements and management report of Siemens Stiftung dated September 30, 2013, 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 Public Auditors in Germany, Incorporated Association (IDW) and issued its unqualified audit certificate.

The effectiveness of the accounting-related internal control system was also evaluated as part of the review. The audit has not led to any reservations. The review of the preservation of the foundation assets and the compliant use of its returns for benefits meant for consumption in accordance with Article 16, Paragraph 3 of the BayStG also led to no reservations.

| SOURCE OF FUNDS / USE OF FUNDS for 2012/2013 | in € | 09/30/2013 | 09/30/2012 |
|--|------|----------------------|----------------------|
| Source of funds | | | |
| Asset management income | | 14,045,037.89 | 15,509,309.40 |
| Income from donations | | 623,811.00 | 18,000.00 |
| Income from business activities | | – | 92,624.97 |
| Other operating income | | 39,083.81 | 186,339.89 |
| Total | | 14,707,932.70 | 15,806,274.26 |
| Use of funds | | | |
| Asset management expenses | | 1,610.70 | 1,721.10 |
| Basic Needs & Social Entrepreneurship | | 3,068,119.46 | 3,000,751.50 |
| Education | | 4,462,713.70 | 4,425,150.05 |
| Culture | | 1,238,507.67 | 1,402,544.01 |
| Communication | | 1,386,120.23 | 1,331,606.33 |
| Administrative costs | | 945,411.81 | 958,561.56 |
| Expenses from business activities | | – | 88,838.67 |
| Total | | 11,102,483.57 | 11,209,173.22 |
| Annual net income | | 3,605,449.13 | 4,597,101.04 |



Siemens Stiftung projects at a glance

| Project | Description | Region / Country | Page |
|--|--|--|------|
| Community Impact Development Group (CIDG) International network for social enterprises | <i>CIDG</i> offers social enterprises the opportunity to share ideas, jointly develop cross-border concepts, and make contact with potential partners. | worldwide | 11 |
| empowering people. Award In search of simple technical solutions with great potential | The international competition identifies solutions to improve basic services and make them accessible to the general public. | worldwide | 8 |
| Entrepreneurship Training Opportunities through entrepreneurship | Practical training and mentoring programs promote the establishment and management of small enterprises. | Kenya | 22 |
| Ex pEr ImEn TA Sur International academy for performing arts | The international platform <i>EXPERIMENTA SUR</i> focuses on the development of interdisciplinary formats of cultural work. | Colombia | 38 |
| Experimento Real-world science instruction | Siemens Stiftung's international educational program <i>Experimento</i> targets teachers in preschools, elementary schools, and secondary schools. It promotes science and technology education based on the idea of learning through discovery. | Argentina, Chile, Germany, Kenya, Colombia, Peru, South Africa | 26 |
| International research network on Social Economic Empowerment (Ir En E I SEE) Scientific focus on social enterprises | The <i>International Research Network</i> examines the process of economic empowerment and makes practical recommendations. | Ethiopia, Germany, Kenya, Colombia, Mexico, South Africa | 15 |
| Language development KIKUS – Learning a language systematically and enjoying it | The <i>KIKUS</i> method helps children from the age of three learn a second language. | Germany, South Africa | 34 |
| Little Scientists' House Discovering the world with inquisitive minds | The non-profit <i>Little Scientists' House</i> helps educators provide qualified support to foster the inquisitive minds of boys and girls in preschools and elementary schools. | Germany | 32 |
| media portal Teaching materials for sciences and technology | The <i>Media Portal</i> offers a broad range of teaching materials on scientific and technical subjects online. | worldwide | 33 |
| mOVImIEn TO Sur International academy for performing arts | The international platform <i>MOVIMIENTO SUR</i> in Chile is dedicated to interrelationships between movement, art, and society. | Chile | 38 |

| Project | Description | Region/Country | Page |
|--|--|---|------|
| music In Africa Connecting Africa's music world online | The platform <i>musicinafrica.net</i> is a guide to the African music landscape. | Africa | 37 |
| pAn Or AmA Sur International academy for performing arts | The international theater platform <i>PANORAMA SUR</i> in Buenos Aires draws attention to Latin America's own potential. | Argentina | 38 |
| Safe Water Enterprises Sustainable water supply improves entire communities' quality of life | Water kiosks bring water to rural regions in Kenya and foster entrepreneurship. | Kenya | 20 |
| Student Competition Researching scientific solutions | The <i>Student Competition</i> focuses on issues of global significance and interest to young people. Project ideas on environmental and climate protection competed in this year's event. | Germany, Austria, Switzerland, and German international schools in Europe | 35 |
| TakaTaka Solutions Earning a living through waste management | <i>TakaTaka Solutions</i> improves life in the Kangemi slum with a socio-economic solution. | Kenya | 23 |

In addition to the projects presented in the annual report, Siemens Stiftung realized the following additional projects in fiscal 2012/13:

Alumbrando

Centrally located water filters supply an entire community in Peru with safe drinking water.

Changing places

The international art project transforms empty buildings in Buenos Aires into public stages, strengthening awareness for cultural identity issues.

Young Soloists

The concert series with students from Munich's University of Music and Performing Arts offers an exceptional forum for engaging with contemporary music.

Council for Cultural Education

Seven German foundations aim to increase the value and quality of cultural education in Germany.

Safe drinking water for Achocalla

The production of affordable water filters and a water kiosk enables economic sustainability in a mountain village in Bolivia.

Sierra productiva

The combination of traditional knowledge and technical innovation moves structurally weak regions in Peru from subsistence farming to profitable agriculture.

WE!Hubs

Stations for solar energy and safe drinking water improve the social and environmental infrastructure in rural and peri-urban areas in Kenya.

Wissensfabrik

More than 100 German companies and corporate foundations promote practical science and technology education in elementary schools and actively support founders of new businesses and young entrepreneurs.

More detailed information is available on our website: www.siemens-stiftung.org/en

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