

SUSTAINABLE

Building
foundations
for
society's
future



Holcim foundation
for sustainable construction



Sustainable construction – an obligation

Sustainability requires that the present generation meets its needs without limiting the opportunities of future generations. For an approach to enable long-term viability, it must integrate economic, environmental and social impacts – the three elements of the triple bottom line.

The construction industry can contribute greatly to global sustainability because everything that is built shapes the way people live today and in the future. The EU estimates that buildings account for up to 40% of primary energy consumption. Handling building design and management, material selection, and also energy and resource consumption in a sustainable manner would be a significant step toward ecologically, economically and socially responsible development.

Aspiring to achieve sustainability by integrating elements of the surrounding eco-system: “Low-impact greenfield university campus” in the Mekong Delta in Vietnam by Kazuhiro Kojima makes perfect use of local climatic features (Global Silver Award 2009).



Committed to sustainability worldwide

As a leading global provider of building materials, Holcim Ltd shares responsibility for the future of our planet and society. That is why Holcim produces building materials as sustainably as possible in around 70 countries in which it is present. For many years, the Group has been committed to the sustainable application of its products and has been confirmed as a member of the Dow Jones Sustainability World Index in 2009/2010 in the building materials industry. Holcim has been included in both the Dow Jones Sustainability World Index and the Dow Jones STOXX Sustainability Index for seven years.

To promote sustainable construction even more decisively, Holcim established the Holcim Foundation for Sustainable Construction in 2003. The Foundation is supported by Holcim, but remains independent of its commercial interests.

Innovative technology applied to reduce energy consumption and CO₂ emissions is a key element of the sustainable construction approach: the “Autonomous alpine shelter” in close proximity to the iconic Matterhorn in the Swiss Alps is the impressive result of a team of students at the ETH Zurich, led by Andrea Deplazes (Europe Bronze Award 2008).



Creating awareness, promoting excellence

The Holcim Foundation aims to build awareness of the importance of sustainable construction among professionals and the public. It seeks to globally interlink knowledge and to promote a mindset that views sustainability not only in terms of immense technical challenges, but that also incorporates architectural excellence and leads to a higher quality of life.

Partnerships

To pursue its goals, the Foundation collaborates closely with some of the most renowned technical universities: Swiss Federal Institute of Technology (ETH Zurich), Switzerland; Massachusetts Institute of Technology (MIT), Cambridge, USA; Tongji University (TJU), Shanghai, China; Universidad Iberoamericana (UIA), Mexico City, Mexico; Ecole Supérieure d'Architecture de Casablanca (EAC), Morocco; Universidade de São Paulo (USP), Brazil; and University of the Witwatersrand (Wits), Johannesburg, South Africa.

Generating sustainable urban development by improving transport infrastructure in the poorest communities: "Urban integration of an informal area" in Medellín, Colombia, led by Gustavo Restepo, connects the informal and formal parts of the city (Latin America Gold Award 2008).

Office building
in Costa Rica



Research center
in Switzerland



Second Holcim Award



re-inventing construction



Community center
in South Africa



Clothing factory
in Sri Lanka



Three focuses of activity

Together with its partner universities, the Holcim Foundation advances the academic discussion of sustainable construction by issuing technical publications and holding international conferences, the Holcim Forum (page 13). The Foundation presents Holcim Awards on regional and global levels; these competitions are open to everyone involved in construction (page 15). Through Holcim Grants, the Foundation helps finance sustainable construction projects and supports research in sustainable construction (page 19).

Network of stakeholder groups

Around the globe, the Holcim Foundation participates in many events and exhibitions for sustainable construction – particularly in cooperation with architectural associations or Holcim Group companies. Through its activities, the Foundation has developed a close-knit global network of stakeholder groups, and it has grown to assume the role of information hub. This function can be seen for example in the Foundation's extensive website, which includes an events calendar where third parties can publicize events pertaining to sustainable construction.

An effective tool to encourage the exchange of ideas and transfer of innovation: a monographic series showcases world-class projects, and summaries on Holcim Awards winners as well as Holcim Forums are also published.



“Target issues”: Assessing sustainability

Sustainability is one of the world’s most talked about but least understood words. To make the criteria of sustainable construction concise and transparent, the Holcim Foundation and its renowned partner universities have defined five so-called “target issues”. They consider sustainability from a holistic perspective:

Progress – Innovation and transferability

The project must demonstrate innovation at the forefront of sustainable construction. Breakthroughs and trend-setting approaches, irrespective of scale, must be transferable to a range of other applications.

People – Ethical standards and social equity

The project must adhere to the highest ethical standards and support social equity at all stages of construction, from planning and building processes to long-term impact on the fabric of that community. The project has to provide an advanced response in terms of ethical and social responsibility.

Planet – Environmental quality and resource efficiency

The project must exhibit a sensible use and management of natural resources throughout its

The “target issues” serve as the basis for the adjudication process of the Holcim Awards competitions and also illustrate the strength of diverse approaches to sustainable construction: demonstrated at the IUCN Conservation Centre in Gland, Switzerland, including the Holcim Think Tank on top of the new building.



life cycle, including operation and maintenance. Long-term environmental concerns, whether pertaining to flows of material or energy, should be an integral part of the built structure.

Prosperity – Economic performance and compatibility

The project must prove to be economically feasible and innovative as far as the deployment of financial resources is concerned. Funding must promote an economy of means and be compatible with the demands and constraints encountered throughout the construction's life span.

Proficiency – Contextual and aesthetic impact

The project must convey a high standard of architectural quality in the way it addresses cultural and physical factors. With space and form of utmost significance, the construction must have a lasting aesthetic impact on its surrounding environment.

Measuring up to the “target issues” for sustainable construction (from top): “Contextual government quarter development” by Péter Janesch in Budapest, Hungary (Europe Gold Award 2008); “Lighthouse tower with low-carbon footprint” by Shaun Killa in Dubai, UAE (Africa Middle East Bronze Award 2008); “Self-contained day labor station” led by Liz Ogbu in San Francisco, USA (Global “Innovation” prize 2009); “Low-energy university media-theque” by Angelo Bucci in Rio de Janeiro, Brazil (Latin America Silver Award 2008); and “Living with Lakes Center for freshwater restoration and research” led by John Gunn in Sudbury, Canada (North America Bronze Award 2008).

A middle-aged man with short grey hair, glasses, and a goatee is speaking at a podium. He is wearing a white button-down shirt and a dark blazer. His right hand is raised in a gesture, and his left hand is on his hip. The podium is light-colored wood with a white panel on the left side. The background is dark.

m
able construction



Holcimforum

for sustainable construction

Professional exchange

In cooperation with its partner universities, the Holcim Foundation organizes symposiums on sustainable construction, known as the Holcim Forum. These technical conferences offer architects, engineers, building professionals and experts from all generations and geographic locations an interdisciplinary academic platform for exchanging ideas and information.

International and interdisciplinary dialog

The 1st Holcim Forum was held in Zurich in 2004 on the subject of “Basic Needs”. It investigated the rudiments of every modern society – housing, water, education, infrastructure, and access to goods and services. In 2007 experts from 41 countries met in Shanghai for the 2nd Holcim Forum, “Urban_Trans_Formation”, dedicated to the reshaping of cities.

The 3rd International Holcim Forum was held in Mexico City in 2010 and focused on “Re-inventing Construction”. The symposium attracted some 270 participants from all continents to examine how approaches to the design, fabrication and use of built structures can be aligned with the principles of sustainable development.

Thom Mayne, 2005 Pritzker Prize for Architecture Laureate, at the Holcim Forum 2010, hosted by Universidad Iberoamericana in Mexico City.





Holcim awards

for sustainable construction

Recognition of forward-looking projects

The Holcim Awards is an international competition that recognizes innovative projects and future-oriented concepts on regional and global levels. The competition is designed to encourage architects, planners, engineers and project owners to go beyond conventional notions of sustainable construction in their work and to harmonize ecological, social and economic concerns. Projects and concepts in the fields of architecture, landscape architecture, urban design, civil engineering, mechanical engineering and related fields are eligible for entry in the competition.

A two-stage global competition

Each competition cycle spans three years, from announcement to completion. A total of two million US dollars in prize money is awarded in each cycle. The competition is handled in two stages. In the first stage the best projects and concepts are sought in the five world regions: Europe, North America, Latin America, Africa Middle East and Asia Pacific.

The 15 projects that receive Holcim Awards Gold, Silver or Bronze in these five regions are then qualified for the competition for the Global Holcim Awards Gold, Silver and Bronze. All projects and “Next Generation” visions that win an Award or prize in the five regional competitions

The Holcim Awards trophy symbolizes “balance” and the objectives of sustainable construction. Pictured: Co-winner of the first Global Gold Award, Christoph Ingenhoven, for “Main Station Stuttgart”, Germany, in 2006.





are automatically qualified for the global Holcim “Innovation” competition awarding one to three additional prizes.

International Holcim Awards juries

Independent juries first evaluate the entries in the regions and then a global jury assesses the finalists’ entries at global level. The juries, supported by the partner universities, comprise highly regarded members of science, business and society.

Promoting innovative ideas

In the 2nd Holcim Awards competition 2008/2009, 4,774 projects were submitted (50 % more than in the first cycle). The projects were located in 121 countries; authors came from 90 countries. A total of 52 projects from 27 countries received Holcim Awards, Acknowledgement or “Next Generation” prizes. The Global Holcim Awards and “Innovation” prize winners 2009 were honored at hand-over events in Beijing, Fez, Ho Chi Minh City and San Francisco.

The 3rd International Holcim Awards competition cycle is open for entries until March 23, 2011 at www.holcimawards.org.

Achieving a tangible change: the multi-sited project by Aziza Chaouni and Takako Tajima “River remediation and urban development scheme” revitalizes the UNESCO World Heritage-listed medina of Fez, Morocco, through the recovery of the river, creating public spaces, and renovating traditional buildings (Global Gold Award 2009).

Poster_Compensation

Student

WORLD MAP - INDUSTRIAL DISTRIBUTION



Poster_Compensation

Student



Holcimforum



Partner and associated universities of the Holcim Foundation



re-inventing construction



Holcimgrants

for sustainable construction

Supporting new ideas

The Holcim Foundation promotes and accelerates sustainable construction with seed funding for sustainable construction projects and research. These contributions allow a broad range of interesting and important new ideas, regardless of origin, to be realized and to be followed by an audience of professionals. Projects nominated for seed funding are assessed according to the five “target issues”. Grants are always provided with co-funding together with a Holcim Group company which then supports and monitors the ongoing project.

Encouraging the next generation

The Holcim Foundation recognizes the importance of engaging with the next generation to promote innovative approaches to sustainable construction in diverse ways. Post-graduate students compete in a poster competition at the Holcim Forum, providing an opportunity for dialog and networking with some of the world’s leading practitioners, in addition to bringing the visions of young professionals to the symposium.

The 3rd International Holcim Awards competition 2010/2011 features a “Next Generation” category for concepts and visions created within university programs at final-year bachelor level or above (including masters and PhD).

Stimulating discussions on, and prizes for approaches to sustainable construction by students from seven of the world’s leading technical universities at the 3rd International Holcim Forum 2010 in Mexico City.

Advisory Board

The Advisory Board of the Holcim Foundation ensures that the activities of the Foundation remain in line with current interpretations of sustainable construction. Members of the Advisory Board are:

Rolf Soiron (Chairman), Chairman of Holcim, Switzerland

Yolanda Kakabadse, President of WWF International, Chair of the Advisory Board of Fundación Futuro Latinoamericano, Ecuador

Amory Lovins, Chairman and Chief Scientist of the Rocky Mountain Institute, USA

Enrique Norten, Principal and Founder of TEN Arquitectos, Mexico/USA

Klaus Töpfer, former United Nations Undersecretary-General and Executive Director of the United Nations Environment Programme (UNEP), Germany

Simon Upton, Director of the OECD Environment Directorate, New Zealand/France

Muhammad Yunus, Founder of Grameen Bank, and 2006 Nobel Peace Prize Laureate, Bangladesh

Hans-Rudolf Schalcher

Alexander Biner

Klaus Töpfer

Enrique Norten

Yolanda Kakabadse

Roland Walker



Amory Lovins

Marc Angéllil

Muhammad Yunus

Markus Akermann

Simon Upton

Rolf Soiron



Management Board

The Management Board of the Holcim Foundation determines its strategy and initiatives, provides guidance, and appoints experts who support the Foundation's activities. Members of the Management Board are:

Markus Akermann (Chairman), CEO of Holcim, Switzerland

Roland Walker (Delegate), Head Corporate Communications of Holcim, Switzerland

Marc Angélil, Dean of Architecture, ETH Zurich, Switzerland

Alexander Biner, Partner of MS Management Service, Switzerland

Hans-Rudolf Schalcher, Professor em. of Planning and Management in Construction, ETH Zurich, Switzerland

HOLCIM AWARDS
OPEN FOR ENTRIES
July 1, 2010 until March 23, 2011
www.holcimawards.org

Holcim Foundation
for Sustainable Construction
Hagenholzstrasse 85
8050 Zurich, Switzerland
Phone +41 58 858 82 92
info@holcimfoundation.org
www.holcimfoundation.org