

Overview – Holcim Foundation for Sustainable Construction

Building a sustainable future

“Sustainability” is one of the world’s most talked about but least understood words. Its meaning is often clouded by differing interpretations and by a tendency for many organizations to treat the subject superficially. For most companies, countries and individuals who do take the subject seriously the concept of sustainability embraces not only preservation of the environment but also critical development-related issues such as the efficient use of resources, continual social progress, stable economic growth, and addressing poverty.

In the world of construction, buildings have the capacity to make a major contribution to a more sustainable future for our planet. The OECD, for instance, estimates that buildings in developed countries account for more than forty percent of energy consumption. Add to this the fact that for the first time in human history over half of the world’s population now lives in urban environments and it’s clear that sustainable buildings have become vital cornerstones for securing long-term environmental, economic and social viability.

The pace of change means we don’t have the luxury of time. With the world’s urban population swelling by around one million people every week, there is an urgent need to come up with clever ideas that optimize the sustainable performance of the buildings that we live and work in.

Understanding sustainable construction

Sustainable construction aims to meet present day needs for housing, working environments and infrastructure without compromising the ability of future generations to meet their own needs in times to come. Specifically, it involves issues such as the design and management of buildings, materials performance and energy and resource consumption – all within the larger scope of urban development and management.

Making a difference

The Holcim Foundation for Sustainable Construction was created in 2003 to raise awareness of the important role that architecture, engineering, urban planning and construction have in achieving a more sustainable future – and to globally encourage critical interdisciplinary and long-range perspectives.

With this in mind, the Holcim Foundation’s primary objective is to select and support a range of initiatives that extend beyond technical solutions to creating sustainable construction outcomes which embrace architectural excellence and enhanced quality of life.

Wide-ranging interest spans national, regional and global projects in both developing and industrialized nations. The Holcim Foundation has already made useful progress toward uniting diverse global expertise and increasing awareness of the critical role of the built environment in sustainability. It has achieved this by identifying and promoting best practice and also fresh solutions. The construction projects, visions, and research inspire architects, engineers, planners, developers and contractors to adopt sustainable approaches within their building projects.

The Holcim Foundation feels privileged to be associated with an array of ground-breaking projects and initiatives, and be in a position to share the valuable knowledge and insights that arise from them.

www.holcimfoundation.org

“Target issues” for sustainable construction

The Holcim Foundation is committed to the “triple bottom line” concept, which asserts that long-term and sustainable progress requires the balanced achievement of economic development, environmental performance and social advancement. Based on this concept and to make sustainable construction easier to understand, evaluate and apply, the Holcim Foundation and its renowned partner universities have identified a set of five “target issues” for sustainable construction, which serve as a basis for the Holcim Awards and for other activities of the Holcim Foundation.

Innovation and transferability – “Progress”

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.

Ethical standards and social equity – “People”

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.

Environmental quality and resource efficiency – “Planet”

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

Economic performance and compatibility – “Prosperity”

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.

Contextual and aesthetic impact – “Proficiency”

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.

All “target issues” are explained in more detail on the Holcim Foundation website, including practical application of sustainable construction with reference to exemplary buildings from different regions of the world.

www.holcimfoundation.org/targetissues

Holcim Foundation initiatives

To stimulate a sustainable future, the Holcim Foundation undertakes a range of carefully targeted activities which include the Holcim Awards and the Holcim Forum, as well as Holcim Grants seed funding for research projects.

Holcim Awards for Sustainable Construction

The Holcim Awards competitions recognize and bring to a far wider audience a range of ground-breaking projects that have immediate application, as well as “blue sky” concepts that point the way to the future. The worldwide competitions are designed to focus the minds of architects, planners, engineers and project owners on creating innovative construction solutions that truly champion sustainability. Any contribution to sustainable construction is recognized – irrespective of scale.

The Holcim Awards seek projects and concepts that demonstrate an ability to stretch conventional notions about sustainable building and balance environmental, social and economic performance – while also exemplifying architectural excellence and a high degree of transferability. The competitions celebrate innovative, future-oriented and tangible sustainable construction projects from around the globe and provide prize money of USD 2 million in total per three-year competition cycle. Submissions are entered online and in English at: www.holcimawards.org.

There are two categories within the competitions. The **Holcim Awards (main) category** is open to participants for projects at an advanced stage of design with a high probability of execution. Projects from the following disciplines are eligible: building and civil engineering works; landscape, urban design and infrastructure; materials, products and construction technologies. – The **Holcim Awards “Next Generation”** category is open to student projects created within university programs at final year bachelor level or above (including masters and PhD).

The Holcim Awards competitions are conducted in partnership with some of the world’s leading technical universities. The Swiss Federal Institute of Technology (ETH Zurich) leads the global Technical Competence Center (TCC) of the Holcim Foundation. Other partner universities which host the independent competition juries are: Massachusetts Institute of Technology (MIT) in Cambridge, USA; Universidad Iberoamericana (UIA) in Mexico City, Mexico; Ecole Supérieure d’Architecture de Casablanca (EAC), Morocco and Indian Institute of Technology (IIT Bombay) in Mumbai, India; Tongji University (TJU) in Shanghai, China, the Universidade de São Paulo (USP), Brazil and the University of the Witwatersrand (Wits) in Johannesburg, South Africa, are associated universities of the Holcim Foundation.

3rd International Holcim Awards

The submission period for the 3rd International Holcim Awards ended March 23, 2011 and attracted entries for construction projects and visions to be pursued in 146 countries on all continents. Winners of the first phase of the competitions will be announced at Holcim Awards ceremonies in five regions of the world in the forth quarter in 2011: Milan, Washington DC, Buenos Aires, Casablanca and Singapore.

Previous Holcim Awards competitions

The 2nd Holcim Awards competitions attracted almost 5,000 submissions. The international nature of sustainable construction is underlined by the geographic spread of entries: projects and concepts for construction in 121 countries were entered by authors from 90 countries. The entries were evaluated by independent juries, leading to Awards ceremonies 2008 in Madrid, Montreal, Mexico City, Marrakech and New Delhi.

The three Awards winners from each of the five geographical regions then submitted a more comprehensive project overview for evaluation by a global jury – the winners of the Global Holcim Awards Gold, Silver, Bronze, and “Innovation” prize for projects in Morocco, Vietnam, China and the USA were announced in 2009.

In the first two cycles of the Regional Holcim Awards competition 2005/06 and 2008/09, a total of 30 main prizes (gold, silver, bronze) have been awarded to projects in 21 countries: Argentina, Brazil,

Canada, China, Colombia, Germany, Hungary, India, Italy, Japan, Morocco, Philippines, Slovenia, South Africa, Spain, Switzerland, Uganda, United Arab Emirates, United States, Venezuela, and Vietnam.

Details about all Holcim Awards winners are available on the Holcim Awards website. The book *Second Holcim Awards* [ISBN 3-7266-0084-1] published by the Holcim Foundation presents the 52 prize-winning projects of the second competition cycle and represents a global snapshot of contemporary approaches to sustainable construction. A similar publication commemorating the winning projects from the first cycle is also available: *Holcim Awards 2005/2006* [ISBN 879-3-7266-0076-1].

www.holcimawards.org

Holcim Forum for Sustainable Construction

The Holcim Forum is a series of symposiums on the topic of sustainable construction conducted by the Foundation. The event is an academic platform for architects, engineers, construction professionals and specialists of all generations to exchange information on creating a sustainable built environment and thus advancing sustainable development. The Holcim Forum supports sustainable construction in the scientific field, among experts in the construction sector, business and society, and promotes interdisciplinary dialogue, bring forward new ideas, and examine potential solutions.

3rd International Holcim Forum

Under the theme of *Re-inventing Construction* some 270 international experts from 39 countries shared their experiences at the 3rd International Holcim Forum which took place in Mexico City in April 2010. In addition to keynote speeches and panel discussions by world-renowned experts, the Forum featured four workshops on the topics of: Reduce CO₂ – With technology to zero emissions; Mine the city – With logistics to circular metabolisms; Stimulate stakeholders – With incentives to implementation; and Manage complexity – With integral solutions to an economy of means. A summary of the event has been published as a special edition of *Foundations* [ISBN 978-3-7266-0090-7], the magazine of the Holcim Foundation. The academic book *Re-inventing Construction (2010)* was published by Ruby Press (www.ruby-press.com), Berlin. [ISBN 978-3-9813436-2-5].

Previous Holcim Forums

The theme of the 2nd Holcim Forum in 2007 in Shanghai was *Urban_Trans_Formation*. The inaugural Holcim Forum took place in Zurich in 2004 under the theme of *Basic Needs*.

Publications from each Forum *Urban_Trans_Formation (2007)* [ISBN 978-3-7266-0080-8] and *First Forum (2004)* [3-7266-00698], published by the Holcim Foundation, capture insights and recommendations from each symposium. *Urban Transformation: Inspired by the Forum 2007*, a 400 page collection of essays and visions of emerging urban conditions was written by more than 50 distinguished architects, urban planner, politicians, and artists from around the globe. The book was published in 2008 by Ruby Press (www.ruby-press.com), Berlin. [ISBN 987-3-00-024878-8].

www.holcimforum.org

Holcim Grants for Sustainable Construction

The Holcim Foundation promotes and accelerates sustainable construction with seed funding for research projects. These contributions allow 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 provided with co-funding together with a Holcim Group company which then supports and monitors the ongoing project.

www.holcimgrants.org

Holcim Projects

The Holcim Projects website reports on the progress of sustainable construction projects associated with the Holcim Foundation. The updates explain how projects have evolved from inspired ideas into tangible flagships of sustainable construction within the scope of:

- Holcim Awards winners: innovative, future-oriented and tangible sustainable construction projects and visions
- Projects featured at previous Holcim Forums: seminars or symposiums on the topic of sustainable construction at the professional/academic level
- Holcim Grants recipients: projects provided with appropriate financial support to enable the realization of outstanding construction projects and research, particularly for the benefit of disadvantaged communities

The project updates also report on actual performance in comparison to that which was projected, and the extent to which further innovation or adaptation has taken place.

www.holcimprojects.org

Knowledge sharing for sustainable construction

Publications

The Holcim Foundation uses exhibitions, lectures, publications and its website to encourage the exchange of ideas and transfer of innovation. Many of the publications, images and posters can be downloaded from the Foundation’s website.

www.holcimfoundation.org/publications

Events Calendar

The Holcim Foundation website features an events calendar of forthcoming conferences and events associated with sustainable construction of both academic and international scope. The events calendar aims to publicize forthcoming events and further promote networking and advances in sustainability of the built environment.

www.holcimfoundation.org/events

Project search

A project search tool on the Holcim Awards webpage allows visitors to quickly find their projects of interest. More than 100 project summaries on all previous Holcim Awards prize-winners can be searched by country, year or keyword. A list of the most frequent sustainable construction terms leads to thematically related projects.

www.holcimawards.org/projectsearch

Social Media

Friends of the Holcim Foundation and participants in the Holcim Awards can follow the current activities by subscribing to the respective social media channels.

www.holcimawards.org/facebook

www.holcimawards.org/twitter

www.holcimawards.org/youtube

Advisory Board

The Advisory Board of the Holcim Foundation ensures that the activities of the Holcim Foundation are aligned with current interpretations of sustainable construction and inspires the Holcim Foundation's activities by framing the architectural, scientific, cultural, and policy concerns that should be integrated into its initiatives. Members of the Advisory Board:

- Rolf Soiron (Chairman), Chairman, Holcim, Switzerland
- Yolanda Kakabadse, President of WWF International and Chair of the Advisory Board of Fundación Futuro Latinoamericano, Ecuador
- Amory Lovins, Chairman and Chief Scientist, Rocky Mountain Institute, USA
- Enrique Norten, Principal and Founder, TEN Arquitectos, Mexico/USA
- Klaus Töpfer, former United Nations Undersecretary General and Executive Director, United Nations Environment Programme (UNEP), Germany
- Simon Upton, Director of the OECD Environment Directorate, New Zealand/France
- Muhammad Yunus, Founder, Grameen Bank, Nobel Peace Prize Laureate 2006, Bangladesh

www.holcimfoundation.org/advisory

Management Board

The Management Board of the Holcim Foundation defines and approves the strategy and initiatives of the Holcim Foundation. The Board is responsible for managing the Holcim Foundation and appointing individuals to support its activities. Members of the Management Board:

- Markus Akermann (Chairman), CEO Holcim, Switzerland
- Roland Walker (Delegate), Head of Corporate Communications, Holcim, Switzerland
- Alexander Biner, Partner, MS Management Services, Switzerland
- Harry Gugger, Professor of Architecture, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
- Hans-Rudolf Schalcher, Prof. em. of Planning and Management in Construction, ETH Zurich, Switzerland

www.holcimfoundation.org/management

Technical Competence Center

The Holcim Foundation for Sustainable Construction works closely with some of the world's leading technical universities who have committed themselves to act as partners of the Holcim Foundation. The global Technical Competence Center (TCC) provides academic and technical support by developing, supporting, and implementing the Holcim Foundation's initiatives on the scientific/technical level.

- Hans-Rudolf Schalcher, Prof. em. of Planning and Management in Construction, ETH Zurich, Switzerland
- Brigitte Cuperus, Doctoral Studies Administrator (D-BAUG) at ETH Zurich, and Project Manager of the TCC, Switzerland
- Harry Gugger, Professor of Architecture, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
- Hansjürg Leibundgut, Professor for Building Technology, ETH Zurich, Switzerland
- Andrew Scott, Associate Professor of Architecture, Department of Architecture, MIT, USA
- Holger Wallbaum, Assistant Professor for Sustainable Construction, ETH Zurich, Switzerland
- Zhiqiang Wu, Dean of the College of Architecture and Planning, Tongji University, China

www.holcimfoundation.org/tcc

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Find us also on:

Twitter: www.holcimawards.org/twitter

Facebook: www.holcimawards.org/facebook

Youtube: www.holcimawards.org/youtube



Holcim Foundation origins

The origins of Holcim Ltd go back to Holderbank, a small village in Switzerland, which gave the company its name in 1912. Within little more than a decade after its inception, the company had expanded into Europe, the Middle East, Northern and South Africa. Expansion then followed in North and Latin America, Asia Pacific, Central, and Eastern Europe.

The company changed its name to Holcim Ltd in 2001 and is today one of the world's leading suppliers of cement and aggregates (crushed stone, gravel and sand) as well as downstream activities such as ready-mixed concrete and asphalt, including services. Its production and sales of cement, aggregates, and ready-mixed concrete remain a local and regional based business, aiming to balance the use of local resources with locally determined economic, social, and environmental responsibilities. The Group holds majority and minority interests in around 70 countries on all continents.

From the beginning, Holcim Ltd adopted a global perspective by aiming to build a business with a sustainable future. Its environmental principles, for instance, commit Holcim Ltd to the promotion of eco-efficiency, the conservation of non-renewable natural resources, and the recycling of secondary materials. Holcim Ltd is dedicated to this sustainable construction pathway, cooperating with other interested parties and stakeholders.

Holcim Ltd joined the World Business Council for Sustainable Development (WBCSD) in 1999, a coalition of 175 international companies united by a shared commitment to sustainable development. Together with two industry peers, Holcim Ltd initiated the WBCSD's member-led Cement Sustainability Initiative (CSI) in 2000 in order to help the cement industry to address the challenges of sustainable development. The Group has been confirmed as a member of the Dow Jones Sustainability World Index in 2010/2011 in the building materials industry. Holcim has been included in both the DJSI World Index and the Dow Jones STOXX Sustainability Index for eight years.

Holcim Ltd is faced every day with decisions about financial performance, resource use, emissions, health and safety, and local community engagement. Holcim publishes a "Sustainable Development Report", providing stakeholders with in-depth information and the conceptual framework to carefully manage the challenges of balancing sustainable responses to the technological, environmental, socioeconomic and cultural issues.

Holcim Ltd took this commitment to a new level by launching the Holcim Foundation for Sustainable Construction in 2003. The Holcim Foundation reinforces public awareness of the significant role in society that architecture, engineering, and construction have towards achieving a more sound and sustainable future. The Holcim Foundation is supported by Holcim Ltd but is independent of its commercial interests. In today's context of rapidly rising populations, mass migration, pressure on land resources, and Third World urbanization, radically different approaches are demanded of the construction industry to ensure that generations to come can live in a truly sustainable environment.

www.holcim.com