

www.cemex.com

YOUR HOUSING
SYSTEMS & SOLUTIONS
EXPERT





WE ARE CEMEX



WE ARE a leading provider of housing and high-scale infrastructure and a strong partner in the socio-economic development of emerging markets throughout the world. We aim to serve the needs of our customers and create value for our stakeholders by becoming the world's most efficient and innovative building solutions company.

OUR WORLD RANKINGS

#1
CONCRETE



1,900
ready-mix
concrete facilities

#3
AGGREGATES



476
aggregates quarries
[sand and gravel]

#4
CEMENT



57
cement plants



WE HAVE UNMATCHED EXPERTISE IN TAILOR-MADE SYSTEMS & SOLUTIONS FOR HOUSING PROJECTS

OUR EXPLOSIVE GROWTH IN HOUSING PROJECTS

	OPERATING COUNTRIES	HOUSING UNITS	SQUARE METERS
2010	3	1,572	69,997
2011	6	3,259	145,115
2012	9	2,942	131,000
2013*	19	8,140	366,300
CUMULATIVE		15,913	712,412

We are your **BEST PARTNER**
for your upcoming Housing Project

OUR CUSTOMERS

ALL RELEVANT PLAYERS IN THE VALUE CHAIN



ARCHITECTS
ENGINEERS
CONSTRUCTION COMPANIES
DEVELOPERS
GOVERNMENT AGENCIES
PROJECT MANAGERS
REAL ESTATE INVESTORS
SOCIAL HOUSING OFFICIALS



WE PROVIDE

HOUSING SYSTEMS & SOLUTIONS

WITH RELEVANT AND DISTINCTIVE

ATTRIBUTES



At our R&D centers in Mexico and Switzerland, we design and develop cutting-edge systems & solutions based on the thorough knowledge and application of concrete technology.

OUR SYSTEMS & SOLUTIONS ATTRIBUTES

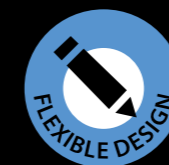
Easily
Adapted to
Construction
and Design
Requirements

Resilient
to
Natural
Disasters

High
Thermal
Mass &
Insulation

Less
Waste at
Construction
Site

Significantly
Reduces
Construction
Time





OUR FIRST-CLASS WALL SYSTEMS

CAST IN PLACE FORM WORKS

The Best for Mass Production & Speed

WIRED EPS PANELS [EXPANDED POLYSTYRENE SYSTEM]

High Flexibility to Accommodate Design

ICF [INSULATED CONCRETE FORM]

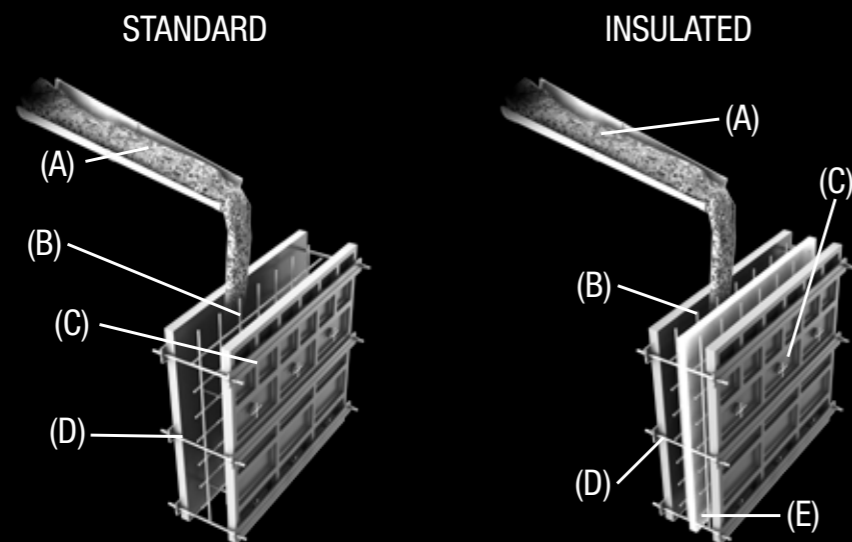
Perfect for High Performance Energy Efficiency

PRECAST SYSTEMS

Most Rational and Efficient Manufacturing Process

CAST IN PLACE FORMWORKS

Walls and decks casted in place with removable and predesigned formworks within concrete is poured continuously in one step producing a solid monolithic structure.



(A) Poured Concrete (B) Rebar (C) Formwork Panels (D) Connectors (E) Insulation Panel

BENEFITS⁽¹⁾:

35% Construction Time Reduction

40% Indirect & Financial Costs Reduction

12day/wage Reduction / Due to Savings in Labor Force

PARTICULARLY RECOMMENDED FOR:

- ✓ Mass Production of Horizontal and Vertical Housing
- ✓ Rapid Response for Natural Disaster Relief Programs

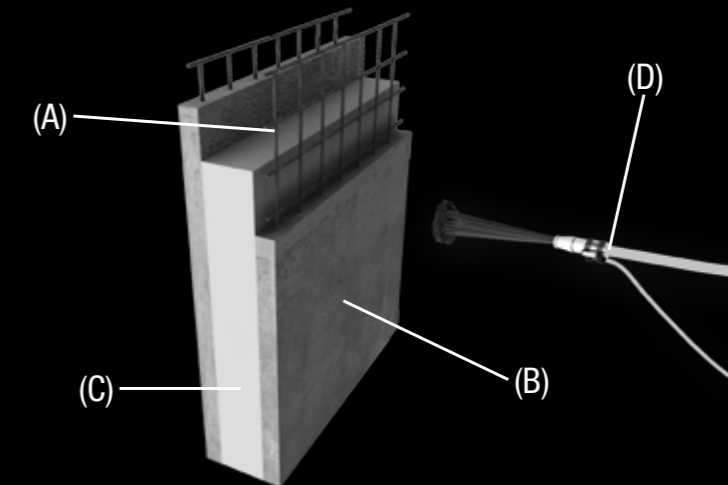
ATTRIBUTES:



⁽¹⁾ Analysis vs. Concrete Blocks in Mexico

WYRED EPS PANELS [EXPANDED POLYSTYRENE SYSTEM]

Prefabricated panel consisting of three dimensional steel wire mesh and a polystyrene insulation foam coated with shotcrete, providing a cost-efficient, sustainable building.



(A) Welded Wire Fabric (B) Field-Applied "Shotcrete" (C) Polystyrene Insulation Foam (D) Sprayed Concrete

BENEFITS⁽²⁾:

15% Lower Costs

42% Energy Savings**

29% Higher Acoustic Performance

8X Speed of Construction

PARTICULARLY RECOMMENDED FOR:

- ✓ Speed and Lightweight Construction
- ✓ Designs Demanding Structural Flexibility and Thermal Insulation

ATTRIBUTES:

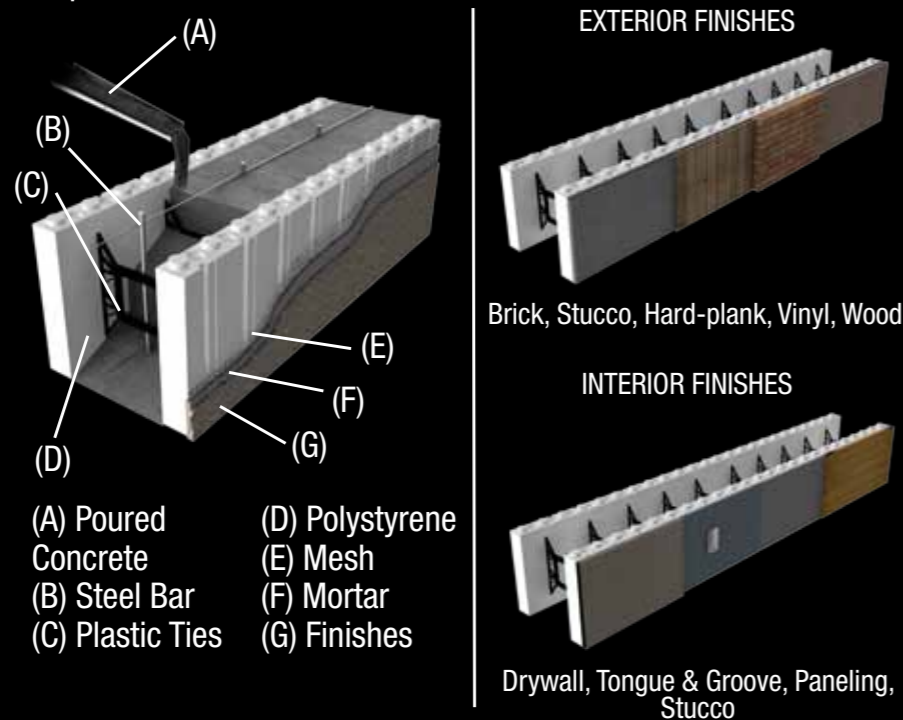


⁽²⁾ Analysis vs. Red Clay Bricks in Egypt

** R value: 2.22m k/w (100 mm EPS panel). R value as high as 8.33 m K/W can be achieved by increase the panels thickness

ICF [INSULATED CONCRETE FORM]

Concrete wall system casted with stay-in-place formwork made of insulating materials, that is quicker to build and offers higher levels of thermal insulation, allowing you to have an insulated wall in one step.



BENEFITS⁽³⁾:

- 33%** Energy efficiency**
- 27%** Material Cost Reduction
- 50%** decrease in capacity of HVAC equipment

PARTICULARLY RECOMMENDED FOR:

- ✓ Low-Rise Residential
- ✓ High Performance, Energy Efficient Buildings

ATTRIBUTES:

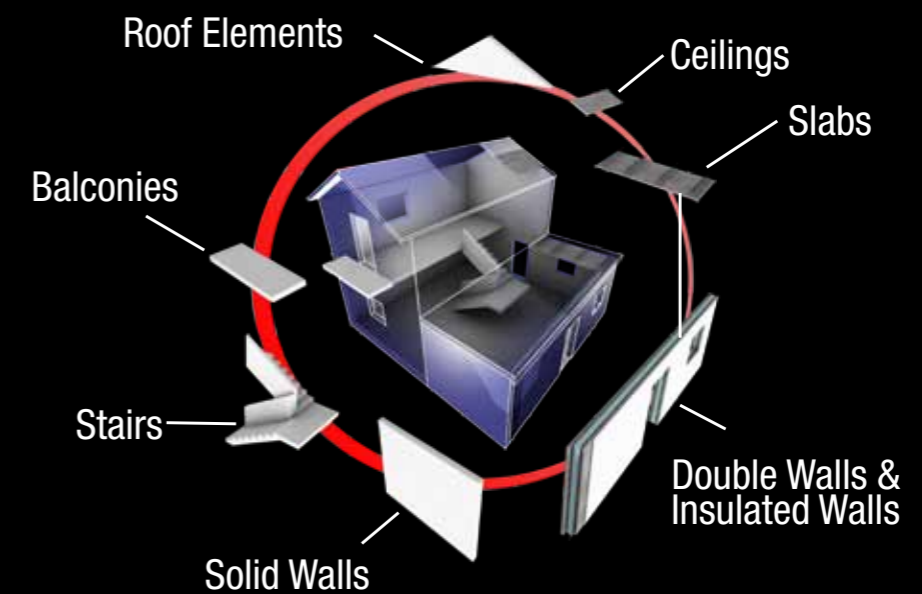


⁽³⁾ Analysis vs. Concrete Blocks in France

**R value 17 – 26 ft²·°F·h / (BTU·in)

PRECAST SYSTEMS

Walls and decks poured off site in a controlled and automated warehouse by then being transported to the job site and lifted into the place.



BENEFITS⁽⁴⁾:

- 70%** Formwork Reduction
- 90%** Scaffolding Reduction
- 30%** Waste Reduction

PARTICULARLY RECOMMENDED FOR:

- ✓ Just-In-Time Production & Constant Quality
- ✓ Mass Production & Standardized High-Rise Residential

ATTRIBUTES:



⁽⁴⁾ Analysis vs. Traditional Construction in Germany

*We integrate design,
products, and walling
systems into housing solutions
that are flexible & replicable*



OUR INTEGRATED HOUSING SOLUTIONS

INDUSTRIALIZED HOUSING

Fast, Efficient, and Large-Scale Housing Construction

DISASTER RELIEF HOUSING

*The Best Response for Reconstruction After
Natural Disasters*

ENERGY EFFICIENT HOUSING

*Most Competitive Solution for High Performance
Buildings*

AFFORDABLE HOUSING

The Lowest Possible Cost Without Giving Up Quality

VERTICAL HOUSING

*Fast and Efficient Construction for High-Rise
& Mid-Rise Residential*

CEMEX offers
a **warranty** as
supplier and contractor



Querétaro, MEXICO – 224 Houses



Toluca, MEXICO - 652 Houses



Colinas del Viento, DOMINICAN REPUBLIC – 124 Houses



INDUSTRIALIZED HOUSING

[MONOLITHIC CAST-IN-PLACE]

It's a CEMEX Solution that allows fast, efficient, and large-scale construction through the combination of innovative products and processes.

The key element is the use of formwork molds for walls and slabs, which guarantee the project's completion in an efficient way and the capability to move quicker to the sale stage.

ADVANTAGES:

- ✓ *Reduction in construction time by using special products and formwork in walls and slabs*
- ✓ *Less time to recover investment*
- ✓ *Savings in labor force; less people to perform the work*
- ✓ *Major improvement in quality: quality control of inputs, better supervision of processes, standardization of geometry*
- ✓ *Reduction of time in homes deliveries*
- ✓ *Savings on finishes and rework*
- ✓ *Savings in materials storage*

ATTRIBUTES:



Fast, Efficient,
and Large-Scale
Housing Construction

“Westfalentower” Dortmund, GERMANY – 33,000 sqm [Mixed-Use Development]

“La Serena” Regensburg, GERMANY – 430 Apartment Units

“Lighthouse” Düsseldorf, GERMANY – 10,000 sqm [Mixed-Use Development]



INDUSTRIALIZED HOUSING

[PRECAST]

CEMEX provides rational and efficient off-site manufacturing processes that ensure flexibility and adaptability for all construction requirements.

In precast construction, building elements are developed at special plants in an automated or semi-automated production process and then delivered for erection on-site.

Through this process, on-site quality concerns are reduced, enabling shorter construction times.

ADVANTAGES:

- ✓ *Just-in-time production*
- ✓ *Precise prefabrication with individual geometries*
- ✓ *Smooth surface finishes, ready for wallpaper and painting*
- ✓ *Fast building process in a constant high quality*
- ✓ *Pre-installations [e.g., tubing for electrical wiring, plug sockets, heat conducting pipes, and openings] reduce construction time*
- ✓ *Adaptability to almost all customer's specifications*
- ✓ *Less on-site supervision by main contractor*

ATTRIBUTES:





Oaxaca, MEXICO – 806 Houses



Port-au-Prince, HAITI – 156 Houses



Managua, NICARAGUA – 144 Houses



DISASTER RELIEF HOUSING

Cemex has an immediate response capacity to rebuild and enhance the number and quality of houses at natural disaster sites.

CEMEX's solution prioritizes the provision of decent, safe, and sanitary housing, with an emphasis on housing design and materials to reduce maintenance and insurance costs. The scope of intervention also includes site infrastructure construction. CEMEX's disaster relief housing designs are resistant to hurricanes, earthquakes, and tornadoes.

ADVANTAGES:

- ✓ *Exterior walls withstand high temperatures without igniting*
- ✓ *Housing able to withstand winds in excess of 200 miles per hour*
- ✓ *Passive cooling/heating strategies due to the location and alignment of doors and windows*
- ✓ *Greater discounts on insurance costs if risk mitigation is considered adequate for natural disasters*
- ✓ *Solid and insulated roof decks prepared for accept vertical expansions*

ATTRIBUTES:



CEMEX offers
a thermal envelope
evaluation service



Veracruz, MEXICO – Family House



Kotor, MONTENEGRO – Family House



Ljubuški, BOSNIA & HERZEGOVINA – Family House



ENERGY EFFICIENT HOUSING

CEMEX combines its special products and systems to construct high-performance buildings, which consume less energy and natural resources and achieve high green building certification standards.

Our construction solutions maintain thermal continuity, minimizing thermal bridging and uncontrolled infiltration. Specific design principles on detailing issues are included in our solutions to avoid surface condensation and mould growth at junctions.

ADVANTAGES:

- ✓ *Savings on energy consumption*
- ✓ *Energy efficient buildings diminish demands on central heating systems*
- ✓ *Simple service installation*
- ✓ *Less requirements for tools and equipment on site*
- ✓ *High design flexibility*
- ✓ *Variety of finishes*

ATTRIBUTES:





Villas del Higuamo, DOMINICAN REPUBLIC – 700 Houses



Villas del Lago, PANAMA – 400 Houses



La Campiña, COSTA RICA – 406 Houses



AFFORDABLE HOUSING

CEMEX has developed high quality housing, offered at the lowest possible cost.

CEMEX's Affordable Housing Solution takes advantage of the optimal use of materials and standardized production to minimize costs, reduce waste, and ensure housing quality.

Affordable Housing Solutions are offered in rural and urban areas, for housing developments, and to individual land users.

ADVANTAGES:

- ✓ *Standardized production reduces the costs of windows, doors, and finishing due to the lower deviations in measurement*
- ✓ *Job site activities are simplified through better quality control and reduced rework*
- ✓ *Durability and monolithic construction require minimum maintenance*
- ✓ *Standardized production reduces the number of people required to perform the work, creating labor force savings*

ATTRIBUTES:





Tonalá, MEXICO – 104 Apartment Units



Tabasco, MEXICO – 100 Apartment Units



San José, COSTA RICA - 72 Apartment Units



VERTICAL HOUSING

CEMEX has an integral solution for vertical housing, designed for quick construction. The construction system allows a wide variety of architectural designs, making it ideal for social and residential complexes.

Mid-rise and high-rise residential buildings can be completed quickly and efficiently with high quality results.

ADVANTAGES:

- ✓ *3 days in shell structure work by floor vs. 2 weeks in traditional systems*
- ✓ *Steel reinforcement optimization*
- ✓ *Use of slender elements reduces the structure's weight and foundation costs*
- ✓ *Safer system; fewer people working at heights*
- ✓ *No need to brake up walls for plumbing and electrical work*

ATTRIBUTES:



*We work
side-by-side with you
on each project
to fulfill all your needs*



WE OFFER INTEGRATED SERVICES TO REALIZE YOUR NEXT HOUSING PROJECT

- Financing
- Land and Planning
- Urban Development
- Design
- Materials' Supply
- Construction
- After Sales

We can take part in any of the phases of a project or participate in all phases as a **ONE-STOP-SHOP** for your housing project.

We help your project obtain relevant sustainability credentials to differentiate it



WE BRING HIGH VALUE-ADDED GREEN BUILDING SERVICES TO OUR CUSTOMERS

Bioclimatic Architecture

Integrated Engineering

Building Energy Modeling

Sustainable Materials & Solutions

Energy Monitoring & Auditing

Renewable Energy Supply

Building Certifications [e.g., LEED, BREEAM]

We help our clients with specialized services that differentiate their projects through sustainable attributes.



breeam

*Our LEED AP's
can assist you throughout
the entire certification process*



OUR PRODUCTS, SYSTEMS & SOLUTIONS CONTRIBUTION TO LEED CERTIFICATION

UP TO 46 POINTS OUT OF 110 AT STAKE



SUSTAINABLE SITES

- Credit 2: Development Density and Community Connectivity
- Credit 3: Brownfield Redevelopment
- Credit 5.1: Site Development - Protect/Restore Habitat
- Credit 5.2: Site Development - Maximize Open Space
- Credit 6.1: Stormwater Design - Quantity Control
- Credit C 6.2: Stormwater Design - Quality Control
- Credit 7.1: Heat Island Effect - Nonroof
- Credit 7.2: Heat Island Effect - Roof



ENERGY & ATMOSPHERE

- Credit 1: Optimize Energy Performance



MATERIALS & RESOURCES

- Credit 1.1: Building Reuse - Maintaining Existing Walls, Floors, and Roof
- Credit 2: Construction Waste management
- Credit 4: Recycled Content
- Credit 5: Regional Materials



INDOOR ENVIRONMENTAL QUALITY

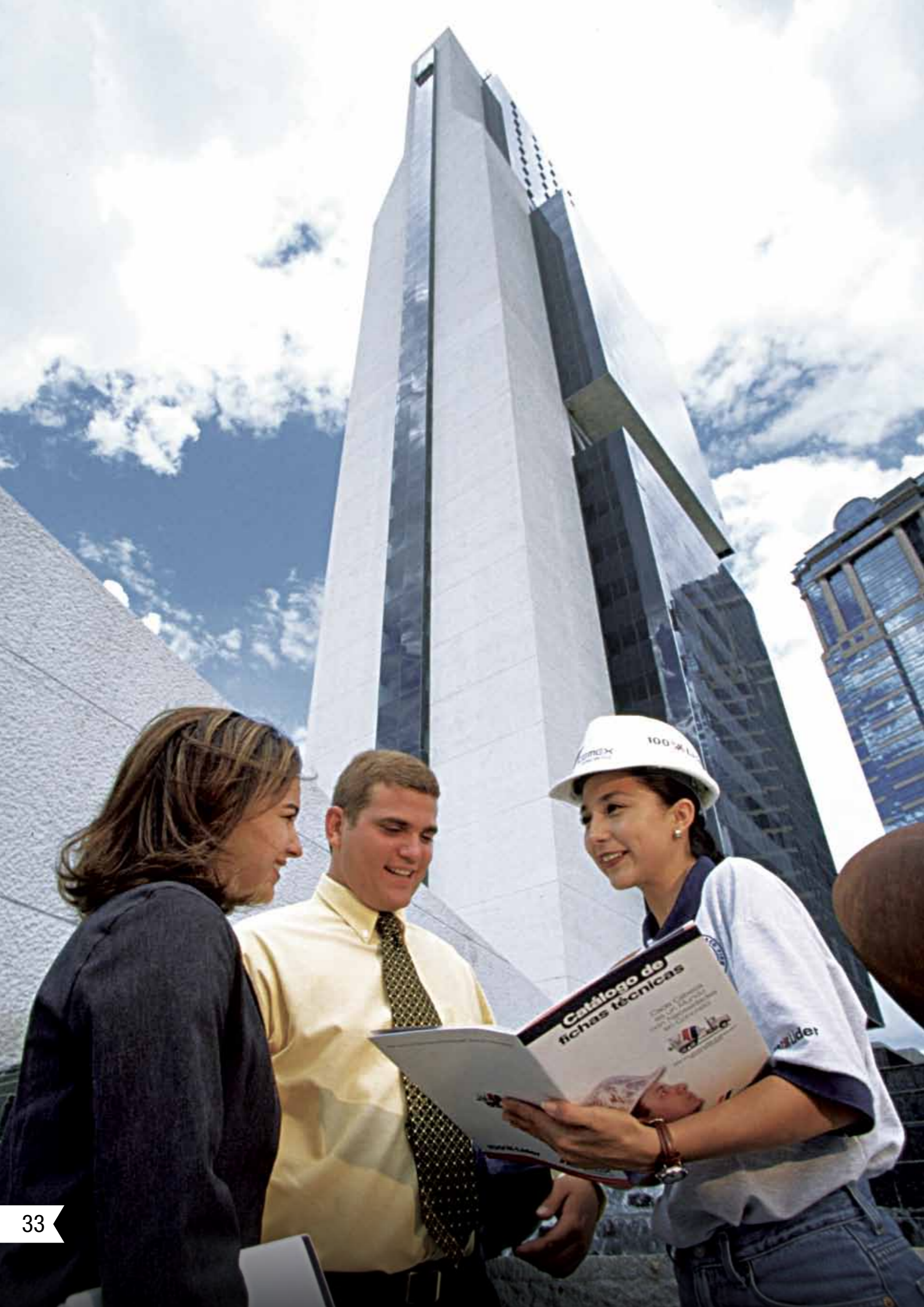
- Credit 4.3: Low Emitting Materials - Flooring Systems
- Credit 8.1: Daylight and Views - Daylight



INNOVATION IN DESIGN

- Credit 1: Innovation in Design





BENEFITS

OF CEMEX'S HOUSING SOLUTIONS TO OUR CUSTOMERS

ARCHITECTS ENGINEERS

- ✓ Adaptability to all Specifications
- ✓ High Design Flexibility
- ✓ Variety of Finishing
- ✓ Precise Construction

CONSTRUCTION COMPANIES PROJECT MANAGERS

- ✓ Reduction in Construction Time and Costs
- ✓ Savings in Labor Force
- ✓ Less On-site Supervision
- ✓ Less Waste During Construction

DEVELOPERS REAL ESTATE INVESTORS

- ✓ Lower Overall Costs
- ✓ Less Time to Recover Investment
- ✓ Shorter Construction Time
- ✓ CEMEX Warranty as Supplier and Contractor

GOVERNMENT AGENCIES SOCIAL HOUSING OFFICIALS

- ✓ Reduction of Time in Homes Deliveries
- ✓ Durable and Resilience
- ✓ Support to Develop Communities
- ✓ Social intervention



BENEFITS

OF CEMEX'S HOUSING SOLUTIONS TO OUR

FINAL USERS

OCCUPANTS

- ✓ *Higher Quality Standards*
 - ✓ *Lower Energy Bills*
 - ✓ *More durable structures, resistant to fire, tornado, earthquake and floods*
 - ✓ *High Indoor Air Quality*
 - ✓ *Improved Acoustic Performance*
-

LOCAL COMMUNITIES

- ✓ *Use of Local Labor*
 - ✓ *Utilize Regional Materials*
 - ✓ *Shorter Construction Time and less waste production*
 - ✓ *Less Requirements of Equipment On-Site*
 - ✓ *Resistant to Natural Disasters*
-



WE HAVE UNRIVALLED EXPERIENCE DELIVERING SYSTEMS AND SOLUTIONS FOR HOUSING PROJECTS WORLDWIDE



WE HAVE operations in 50 countries
throughout 4 continents.

WE CREATE

PRODUCTS, SYSTEMS & SOLUTIONS
AT OUR R&D CENTERS
IN SWITZERLAND AND MEXICO

AND ADAPT THEM TO
OUR CLIENTS' LOCAL
NEEDS & REQUIREMENTS
IN EACH COUNTRY

ARGENTINA AUSTRIA BAHAMAS BANGLADESH BARBADOS
BERMUDA BOSNIA AND HERZEGOVINA BRAZIL CHINA COLOMBIA
COSTA RICA CROATIA CZECH REPUBLIC DOMINICAN REPUBLIC
EGYPT EL SALVADOR FINLAND FRANCE GERMANY GUADELOUPE
GUATEMALA HAITI HUNGARY IRELAND ISRAEL JAMAICA LATVIA
LITHUANIA MALAYSIA MARTINIQUE MEXICO MONTENEGRO
NETHERLANDS NICARAGUA NORWAY PANAMA PERU PHILIPPINES
POLAND PUERTO RICO SLOVAKIA SPAIN SWEDEN SWITZERLAND
TAIWAN THAILAND TRINIDAD AND TOBAGO UNITED ARAB EMIRATES
UNITED KINGDOM UNITED STATES