

CEMEX PiAC: Enhancing low-income families' capacities for affordable housing



Initiative Description

In January 2014, CEMEX joined the Business Call to Action with its Assisted Self-Construction Integrated Program (*Programa Integral de Autoconstrucción Asistida* or PiAC) – demonstrating a commitment to enhancing low-income families' capacities for attaining safe and affordable housing.

Goals of PiAC:

- Establish 30 additional Self-Employment Production Centres (SPCs) in Mexico and 5 in Central America to assist an additional 26,700 low-income families (approximately 120,000 people) in accessing safe and affordable housing by 2016
- In 2014, introduce *ConstruApoyo*, a component of PiAC that allows the use of pre-paid cards to purchase building materials, in Colombia
- Contribute to achieving the Millennium Development Goals by providing affordable housing



Business Model

The majority of people living in extreme poverty in Mexico lack access to financing for safe, high-quality housing. As a consequence, most low-income families rely on self-construction, where homeowners manage every aspect of building, extending, or refurbishing their homes.¹ Without technical and financial assistance, these families often pay high prices for low-quality construction materials, reinforcing the cycle of poverty.

With the success of its *Patrimonio Hoy* programme, which allows low-income families to access services and building materials through a well-planned savings and credit scheme, CEMEX has integrated other affordable housing initiatives into its holistic PiAC programme.

PiAC is designed to enhance low-income families' self-building capacities by offering the training, funding and technical assistance needed to construct

CEMEX is a company that is constantly striving to innovate so that our products, services and strengths contribute to improve the quality of life, especially of vulnerable families. To achieve this vision we need to join global collaborative networks, and these coordinated efforts will impact people's lives while achieving the Millennium Development Goals.

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their own homes. PiAC's business model is based on a public-private partnership involving local governments, non-profit organizations and universities. In this business model, families actively participate in strengthening their capacities and improving their living situations.



1. Global Property Guide. Available at: <http://www.globalpropertyguide.com>

How it Works

Enhancing low-income people's capacities for accessing affordable housing is a multi-dimensional challenge requiring different approaches. Low-income families not only lack access to financing for purchasing building materials and hiring masons – they also lack the technical skills to build safe and sustainable houses. PiAC aims to tackle these challenges, as well as the challenge of creating cohesive and self-confident communities by integrating four components under one umbrella through PiAC:



Self-Employment Production Centres (SPCs)

Self-Employment Production Centres (*Centros Productivos de Autoempleo; SPCs*), established in 2006, comprise the core component of PiAC. At these centres, low-income families receive training and materials to manufacture brick blocks that can be used to construct their own homes or improve existing structures. SPC can be also customized for manufacturing other materials such as roofing, urban infrastructure and even clean cooking stoves.

Half of the blocks produced are provided to families for use in home construction, repair, or expansion as payment for their labour. The state or local government, NGOs, social entrepreneurs, and other actors buy the other half for infrastructure development. The resulting proceeds are reinvested in the centres to make them self-sustaining.

In addition to federal, state and local governments, CEMEX's partners at these centres include universities and NGOs. CEMEX currently runs 72 SPCs in 11 states throughout Mexico, 5 in Colombia, and 2 in Guatemala. Since the first centre opened in 2006, the programme has reached over 35,000 families and has produced more than 12 million cement blocks for construction.

ConstruApoyo

The second component of PiAC is *ConstruApoyo*, a platform that allows

people to use pre-paid cards to purchase building materials from more than 7,000 distributors in order to complete or improve their homes. In this component, the local or regional government identifies beneficiaries based on a public tender process. Governments invite families to apply in an open call and then select beneficiaries that meet selection criteria. These criteria prioritize families with incomes less than US\$25 per day (five persons earning less than the minimum wage of US\$5 per day), ownership of their land and family vulnerability (e.g. single mothers, old or handicapped people in the household). Governments, NGOs and private companies provide the needed financial resources, and CEMEX distributes the funds in the form of debit cards. The company also produces a catalogue of materials at fixed prices, manages the entire supply chain and reports on the results.

This solution speeds the delivery of financial assistance to families in need; enables real-time tracking of materials delivery; provides an audit trail showing how funds are spent; and ultimately creates a transparent process through which beneficiaries can purchase needed building materials. Since 2006, the *ConstruApoyo* programme has distributed over 350 million pesos to more than 32,000 families in Mexico.

Technical Assistance and Training

PiAC also offers technical assistance and training to families in building, expanding and remodelling their homes. Technical support includes advice on architectural design, training on construction, monitoring during the construction

process and documentation.

In addition, CEMEX trains university-level civil engineering and architecture students in social housing production techniques, improving their skills in coordinating collective self-construction in vulnerable communities. Students may also receive a certification in Assisted Self-Construction, which allows them to participate in other home-construction or renovation projects.

Psychosocial intervention and evaluation

The fourth component of PiAC aims to strengthen relationships within families and among neighbours through a training programme implemented with the help of psychology students and social workers. In workshops, families learn which capabilities they need to work together in SPCs. The training covers teamwork, the efficient use of machinery and materials, and safety measures. More broadly, this training helps beneficiaries to strengthen their collective capacity for addressing the challenges faced in their daily lives. This direct interaction with beneficiaries allows CEMEX to gather valuable feedback on the initiative from participating families.

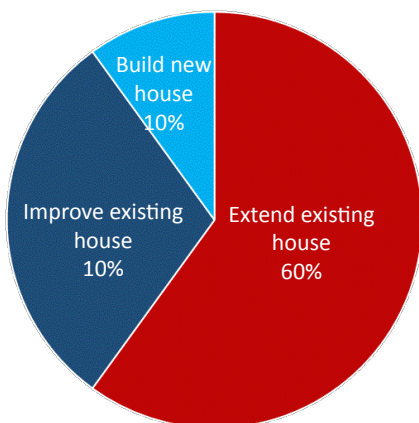
By integrating these four initiatives into a comprehensive programme that assists low-income families, CEMEX has been able to increase its outreach and solidify its reputation. At the end of September 2013, close to 75,000 families (350,000 individuals) had benefitted from PiAC, over 132,000 people had been self-employed and more than 968,000 m² of new structures had been built.

Business Impact

CEMEX's participation in PiAC not only heightens its reputation and increases customer loyalty, but helps to improve the company's sales position. Sales increase both directly through concrete brick production and the *ConstruApoyo* platform, and indirectly through the training in self-construction, which creates a greater demand for building materials. By 2016, CEMEX aims to reach 120,000 new customers through PiAC, generating an additional US\$7 million in revenues.

By collaborating with companies, NGOs, governments and universities, CEMEX has succeeded in expanding the affordable housing market while securing its position as a leading vendor of streamlined, low-cost housing solutions. Strengthening its connections to public and private actors through PiAC also allows CEMEX to build new networks for future projects and products. CEMEX's involvement in the bottom-of-the-pyramid (BoP) housing sector also promotes further innovations such as clean cooking stoves made of concrete, thus expanding CEMEX's market opportunities.

Finally, thanks to an open innovation process, PiAC and *Patrimonio Hoy* are giving entrepreneurs opportunities to develop new business models that meet social needs while developing new products and services for the company's business portfolio.



Graph: Solutions promoted by PiAC



Development Impact

PiAC promotes the formation of social ecosystems, enabling low-income families to access an integral housing solution that is specifically designed to improve their quality of life. Target customers include households that make under US\$690 per month, many of whom live in irregular or risk zones, in dwellings with no floors or roofs, or with walls made of inappropriate materials. Such conditions can harm the health of inhabitants and do not adequately protect them from natural risks.

By participating in PiAC, families acquire quality construction materials under preferential terms, and can utilize their own capacities – with PiAC's assistance – in home building or expansion. While it normally takes families up to 15 years to build a 44 m² house, PiAC helps them to reduce this time to 3–6 months.

In addition, PiAC can save families up to 6,000 Mexican pesos (around US\$460), which would take one year for the average family to save on its own by reducing expenses on quality food and education. The programme strengthens social cohesion and spurs local economic development through community cooperation and solidarity, civic participation and family integration.

Key Success Factors

Needs-based project support and involvement of low-income families in the production process

When starting a new production centre or business unit, CEMEX makes sure to involve all local actors in order to consider their needs and understand the local context. Then, CEMEX provides the materials and training low-income families need to produce their own building materials. This not only enables beneficiaries to build or expand their houses, but also enhances their capacities and knowledge.

Policy alignment

The dynamic design of PiAC allows governments to align the initiatives' components to their own public-housing programmes. Since PiAC offers knowledge transfer to local municipalities at no cost, it is an ideal partner for governments to transfer resources and subsidies for housing at the BoP.

Collaboration with partners

By collaborating with governments and an international network of developers, CEMEX has been able to help expand the affordable housing market and position itself as a pioneer in the low-income market segment. CEMEX uses public-private partnerships to take advantage

of local resources and create self-sufficiency. These partnerships comprise local governments, universities, private companies and non-profits. While local governments provide space (including official land titles), access to water and electricity for SPCs, they also act as buyers of the produced bricks. Private companies and associations also act as buyers, while universities provide technical advice and psychosocial support. CEMEX partners with non-profit organizations to provide training and technical assistance. This wide collaboration with communities and local partners allows PiAC to develop local capacity for continuing projects and ensuring their future sustainability.

Open communication among CEMEX departments

Diverse departments within CEMEX are involved in implementing the PiAC business model. In order to ensure that the model meets the needs of CEMEX and improves the lives of families at the BoP, open communication is essential.

Next Steps and Spin Off Effects

Through PiAC, CEMEX is scaling up its activities in the low-income segment of the housing market, and building synergies with similar programmes such as Patrimonio Hoy. The company plans to establish 30 more SPCs in Mexico and 5 throughout Central America to reach an additional 26,700 families by 2016.

Currently, CEMEX runs ten pilot projects with the German international cooperation organization GIZ, the National Housing Commission and the government of Guanajuato Province in western Mexico. Many municipalities

have already benefited from PiAC's know-how and tools.

The pilots involve social entrepreneurs that are already active in the brick-production industry, but need to reduce their CO2 emissions. Thus CEMEX not only aims to extend the PiAC model, but to reduce the environmental impact of its brick production. In the future, CEMEX is counting on social entrepreneurs, NGOs, social micro-franchisees and impact investors to support the business model and scale up the initiative.



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