Safe Agua
Colombia

Art Center College of Design
Designmatters
USA
Project Team: Mariana Amatullo, David Mocarski, Dan Gottlieb, Penny Herscovitch, Javier Palomares, and Stella Hernandez
Promoters.
Designmatters at Art Center College of Design, Socialab, Techo, Compartamos Con Colombia

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Daniel Quintero, Maryam Tertel, Lina Perez, Ignacio Vidal, Patricio Guzman, Francisco Noguera, Nohora Guerrero
Context.
Safe water is the foundation of life. Yet worldwide and throughout the developing world, 768 million people still lack basic access. Building on the investigations and experiences of the award-winning SAFE AGUA Chile and SAFE AGUA Peru projects, students traveled to Bogota, Colombia to design solutions to overcome social issues created by water.
The project.
Student teams worked directly with families from Altos del Pino community in Bogota and partner organizations to design affordable products, systems, and services for access to safe water and hygiene.
The design process. The process began with 2 weeks of field research. An ethnographic research methodology kept students focused on design goals that would allow them to create affordable products & systems for sustainable, scalable implementation. Emphasis was placed on addressing specific problems, with both quantitative and qualitative benefits.
The project identified & addressed the two key barriers to access of safe water systems: 1) Lack of municipal support to peri-urban zones and rural settings; and 2) low citizen participation in the management of these problems. Through the private/public sector alliance of Pioneros and Compartamos con Colombia, a framework has been created to develop the outcomes of Safe Agua Colombia into market-based opportunities for the families of Altos del Pino.
Each household in Altos del Pino receives water for one hour every eight days. For most families this is not enough, while others have water to spare at the end of the week. Papa, an entrepreneurial model for a Community Water Exchange incentivizes those with extra water to donate it to the local soup kitchen, ensuring that every child in the community has access to clean drinking water every day. The Papa water-sharing dispenser is economical to produce and inexpensive to maintain. It could be purchased by a local NGO and distributed with other food/supplies going into the communities.
Gender dynamics and lack of resources prevent women from lifting their families and community out of poverty. Tejo Conejo, a children’s game inspired by the Colombian national sport of Tejo – is aimed at breaking the cycle of poverty by connecting women with social value- and income-generating opportunities. Women would collaborate to develop successful sewing micro-factories, while allowing them to collectively care for their children.
Residents of Altos del Pino come from a long history in farming/agriculture before being displaced to relocate to outskirts of big cities. The Learning Garden would reconnect the children with their heritage. It further seeks to enrich the lives of the children using gardening as a means for education, building values, teaching responsibility and strengthening focus. Located adjacent to the local Community Center, the garden design optimizes reclaimed materials and rainwater, to create a sustainable, fun, educational, natural space for the community’s children. The learning garden will feature “living fences” by using reclaimed materials such as plastic bottles for growing containers; worn tires painted bright colors and used as planters and swings; concrete stools cast from discarded 5-gallon buckets.
Without running water, hand-carrying water within and between homes is physically straining, inefficient, and makes water prone to contamination. Balde Movil is an inexpensive, lightweight dolly that makes it easy to transport two common 5 gallon buckets, along with other heavy items such as gas cylinders, bags of rice or firewood, even when rolling on hilly terrain. This innovative product makes water accessibility more efficient, sanitary, and less physically stressful. With a low cost and easy assembly, the Balde Movil could be accessible to all families or, as an alternative, a system of sharing or providing services to other families.
The initial co-created design concepts, first ideated during the field research trip, were then developed, reiterated and refined over a 14-week studio at Art Center’s on-campus studios. This process of development included significant feedback from the Altos del Pino community at the mid-way mark, when the team returned to Colombia to test the prototypes-in-progress with families and get their suggestions. This user-centered approach to this project allowed community members to define and refine some of the initial assumptions. Friendships were developed and the community members felt there was new hope, possible jobs and an improvement in the quality of life.
The home-based, micro-entrepreneurial business model for Tejo Conejo has 3 specific annual milestones: 1) a 10% increase in household income; 2) the business would increase to include 200 women by the 2nd year, plus develop business literacy; 3) an introduction of additional products to provide income to 1,000’s of women in multiple locations.
At the end of the Safe Agua Colombia project, a publication was produced to document the process and outcomes. This book tracked the design process from ideation to execution and also featured testimonials from project partners and community members from Altos del Pino.