Collective Knowledge of Habitat-HABARK

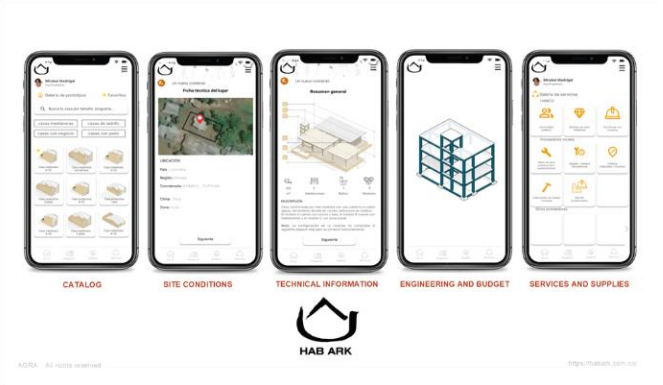
Submitted By: Anzellini Garcia-Reyes S.A.S.

Organization Profile

Organization Name: Anzellini Garcia-Reyes Arquitectos AGRA

Organization Type: Private sector

Website: www.agrarquitectos.com



Practice Details

Country(ies): Colombia

City(ies): El Torno, Tosnován, Cecilia, 50 villages in post-conflict zones (Antioquia, Putumayo, Nariño, Chocó, Tierra Grata and Agua Bonita), La Victoria de San Isidro, and Estados Unidos.

Start Year: 2015 **Ongoing:** Yes **End Year:** N/A

Main Adequate Housing Components:



Housing Thematic Areas:

Social Housing

Technology & Digital Solutions in Housing

Relevant SDGs:



UN-HABITAT

Problem & Context

In Colombia, it was only in 2021, through Law 2079 of 2021, that the housing and habitat policy (rural and urban) was recognized as a State policy.

Specific problems and challenges:

- The state and private rural housing supply does not consider the diversity of households, the need for progressive development and productivity, nor the importance of the relationship between housing–plot–parcel–village, responding to specific means and ways of life in highly diverse contexts.
- There is a clear lag in the provision of support facilities for communities that offer opportunities for interaction, income generation, education, recreation, and potentially shelter.
- The inclusion of local materials and labor has not received sufficient support.
- The participation and decision-making and investment capacity of households in their own housing and surroundings has been underestimated and considered as factors of inefficiency or low quality.

Solution Developed

AGRA has developed, applied in rural Colombia, and documented since 2015 the methodology "Collective Knowledge of Habitat–HABARK" for knowledge exchange in the collective production of housing and facility designs and construction.

1. Incorporate the knowledge of inhabitants about their own territory, combined with the technical knowledge of professionals (from social, engineering, and architectural fields) to reduce vulnerability to climate risks from events and variability, with architectural and construction proposals governed by the specific conditions of ecosystems (81 in Colombia).
2. Generate and systematize designs through participatory processes and guides that respond to local typologies, the application of appropriate techniques and materials, and local labor. Scale them using digital technology, incorporating them into a publicly accessible digital catalog.
3. In an understanding of multiple dimensions—territorial, social, and cultural—under an ethnographic and diversity-based approach, user participation in decisions about their surroundings and homes is integrated.

Implementation

1) Actions implemented using the Collective Knowledge of Habitat–HABARK methodology:

- Participatory design of modular homes and collective facilities with peasant communities in villages of the La Mojana subregion (3); construction of a replicable model in the village of El Torno (years 2015–16).

- Diagnosis and participatory design with various communities: Afro-descendant communities in the Pacific (4), Indigenous communities in Putumayo (2), peasant communities in Nariño (2), Indigenous communities in Nariño (3), and reincorporated/post-conflict communities (49) (years 2017–22).
- Participatory design and construction of a community shelter for the Community Council of La Caleta, Acandí (years 2017–18).
- Participatory design of facilities: 4 headquarters of National Natural Parks on the Caribbean coast, 1 headquarters in Boyacá, and 4 on the Pacific coast (years 2020–24).
- Participatory design of rural housing (4) using digital tools in Cundinamarca (year 2024).

2) Actors:

- The rural communities, families, and officials with whom the projects were developed.

3) Funders:

- For field trips, designs, and technical coordination of works, AGRA obtained funding from UNDP, WWF, PPD, Global Environmental Fund, Natural Heritage Fund, Ecotrópico Foundation, Community Council of La Caleta, and investment from PNN Colombia, KFW, and the Compensation Fund Compensar.

Enablers & Obstacles

Through participation in international cooperation calls (UNDP, PPD, WWF, KFW), National Parks, and Compensar. But the main drivers have been the communities themselves and their leaders, and in the case of PNN, the field officials.

The main obstacle is accessibility to isolated rural territories and marginalized urban areas, which hinders support and monitoring of initiatives and works.

To enable scalability, the application of the Collective Knowledge methodology has been complemented with the HABARK digital platform, with a simple and accessible interface: a catalog of construction components, designs, budgets, and process guides, open and adapted to regions with diverse conditions.

The platform already includes a catalog of housing prototypes and a Pitch Deck aimed at inviting interested investors to expand coverage, refine digitalization, and facilitate accessibility on mobile devices and PCs.

Results & Impact

Population in more than 75 villages across regions was served, plus 11 National Park headquarters. An estimated direct impact on approximately 1,500 households.

In the component of housing and collective facility design and construction with active social participation, all general and specific objectives were met through the formulation and application of the Collective Knowledge of Habitat–HABARK methodology. This component was very well received and appreciated by residents.

Although not precisely measured, the impacts are significant, especially at the local level, showing effects in social, economic, and environmental areas. For example, in La Mojana, UNDP executed 11 of the prototype projects designed by AGRA for community centers in an equal number of villages in the subregion; peasant communities supplied materials and transmitted local vernacular techniques; in neighboring villages, households themselves replicated modular homes based on the one built in El Torno (due to its impact, the project was recognized with the 2020 BIBO Award for “Best Environmental Practice”).

The methodological relevance of “Collective Knowledge–HABARK” is demonstrated, as illustrated in the attached Timeline, through successive experiences and applications that have ensured active and factual involvement of local actors, especially communities.

Replication & Scale Up

In La Mojana, Acandí, Nariño, Putumayo, Cauca, Valle del Cauca, Chocó, Cundinamarca, PNN Caribbean and Pacific Region.

The structure of Collective Knowledge of Habitat–HABARK allows entries corresponding to Process Moments (see diagram in Product 1 of La Mojana–LAMO) and differentiated approaches depending on the type of project (recognition+design or design+construction or research+legitimation, etc).

The step-by-step participatory method, by phases, allows for information collection, systematization, and feedback in accordance with the contractual timeline.

HABARK enables scaling through an APP that accesses a housing catalog, represented through adaptive BIM models, which automatically generates specific designs, plans, and budgets.

A digital technology interface, linking users in decision-making and providers, small builders, and institutions to massively share information, drastically reducing design and fieldwork costs.

It can be integrated into institutional programs and replicated as a tool to address the growing global demand for housing.

Policy Uptake

This housing practice is a new or innovative practice that is not yet adequately or fully integrated into formal policy frameworks.

Dissemination and communication strategies: continue presenting the methodology and its applications to public and academic entities in Colombia and abroad. Continue with the AGRA Forums (see AGRA YouTube link)

Standardization of practices: integrate guiding principles and successful methodological applications into public policies

Deployment of the HABARK APP on a robust interface, for example, for subsidy allocation, for interaction between public and private participants interested in the management, design, and construction of housing

Lessons & Takeaways

The specificity of the designs in line with the developed approach requires developments in legislation, financing schemes, and technical regulatory requirements.

It also requires adapting the short-term timelines foreseen for project implementation by funding entities.

The methodology demands a paradigm shift based on parameters that incorporate flexibility as a principle (modularity, progressivity, adaptability) and household conditions.

A virtual relationship with households should be offered, supported by digital communication technologies.

Note

The original submission was received in Spanish. An automated translation was prepared using Copilot to enable broader multilingual access.