

# BEHIND THE EXECUTION OF DEVELOPMENT PROJECTS:

CHALLENGES THAT SEEMED INSURMOUNTABLE



**SUPERHEROES**  
OF DEVELOPMENT >>>



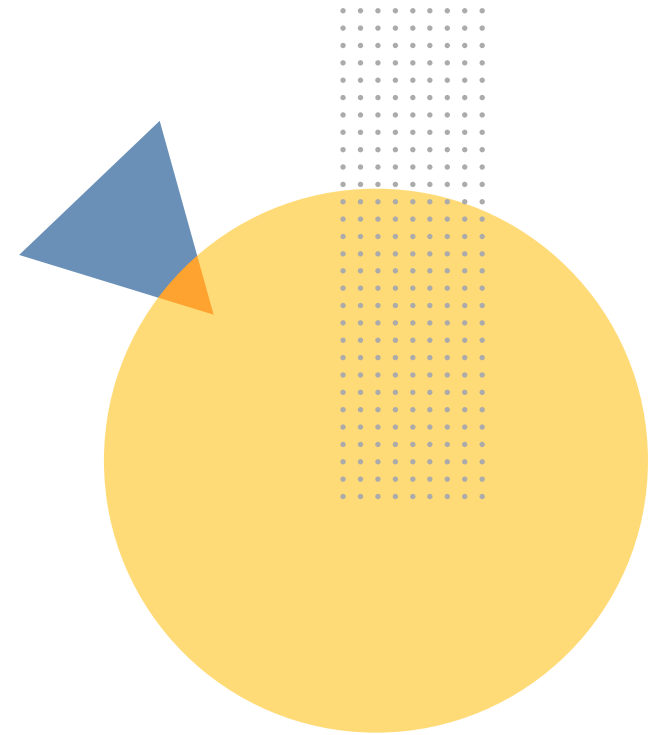
# AU TH ORS

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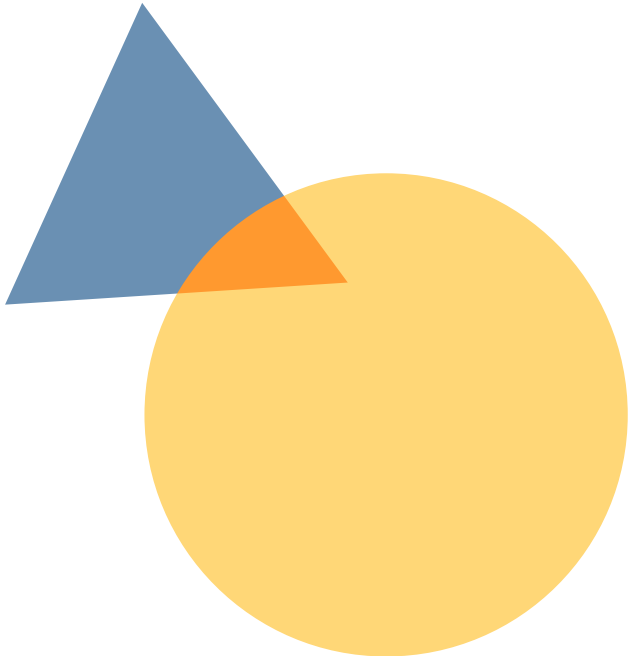
# ACKNOWLEDGEMENTS

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**For all executing units in Latin America and the Caribbean, this publication is for you.**



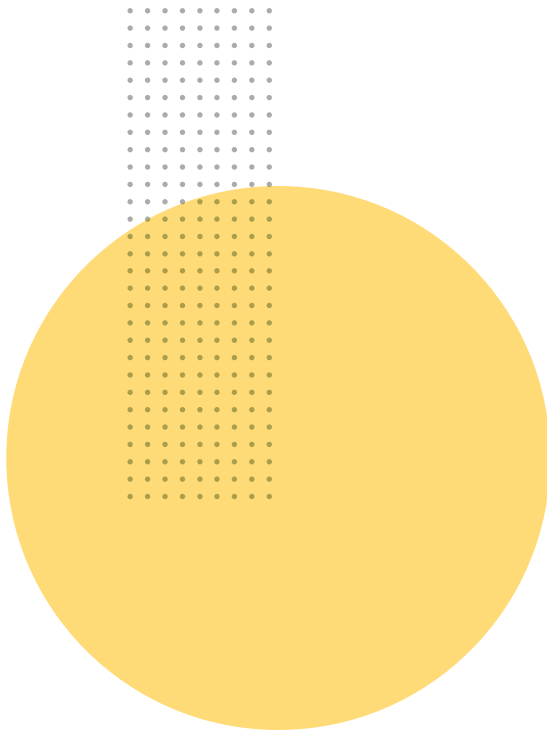
# WORK THAT IS ALWAYS DECISIVE, THOUGH OFTEN INVISIBLE



**P**residents and ministers tend to cut the ribbon on a new project. They're the ones who appear in the photos in the newspapers. By contrast, those who work day in and day out making the project possible keep a low profile, as if anonymity were a necessary condition for saving the world. Superheroes' lives are like that. The front pages are reserved for Superman, Batman and Spider-Man. Clark Kent, Bruce Wayne and Peter Parker don't get the credit for their good deeds.

This publication seeks to change that by describing the work of "executing units" from various countries and projects in Latin America and the Caribbean. These are the teams responsible for implementing the operations that the IDB finances on the ground.

They are feats that could help others overcome their own challenges, a mirror in which the executing units of the region could look at themselves so that they can better address a setback or surprise. They are reference lessons for officials who are implementing one project today, or will do so tomorrow. They will make it possible for them to avoid starting from zero down a path that has already been traveled -and weathered- by colleagues from different sectors or neighboring countries.







Since 2016, an average of 600 IDB loan operations have been executed annually involving a total of nearly US\$54 billion. In one particular year, for example, 96 projects were completed and 93 approved. There are major challenges to address in all of these initiatives, and it would be useful to learn about similar experiences. The testimonies of those who have already found solutions may help others who come up against comparable difficulties in the future.

The 13 stories that are told in the pages that follow are part of Superheroes of Development, a competition that IDB holds to recognize the work of the executing units which develop their projects amid obstacles that might seem insurmountable. One example of this is a sewage project in Bolivia that was used by very few people after it was built. Another is a housing program in Guyana in which the houses were desperately hot even though they had been designed in collaboration with the community. And yet another is a crucial plan to protect and manage two important basins in Jamaica without the full support of the various entities responsible for such work. Over 160 teams responded to the invitation to participate in the first two editions of this competition (2018 and 2019).



IDB President Luis Alberto Moreno praised the finalists in his closing remarks at the 2019 awards ceremony: “A German general once said that no strategy survives initial contact with the enemy. Development projects experience something similar. You can put anything on paper [...] The enemies emerge when the execution stage begins: cumbersome paperwork, legal ups and downs, delays in the delivery of materials, blackouts, storms, devaluations, strikes [...] It takes dedication, patience, perseverance, intelligence, creativity and patriotism. Only someone who truly loves their country and its people can give what this type of projects demand.”

Behind the dream that any initiative meant to improve people's lives inspires, there is a difficult process with moments that seem insurmountable. The stories that follow involve constant learning by heroes dressed as civil servants who overcame major problems and frustration or the feeling of powerlessness, drawing on their determination, ingenuity and commitment to the public. It is recognition for work that is always decisive, but often invisible. But it is more than that. The lessons from each case that are also gathered here will cease to be lessons for the few and will become knowledge that is available to everyone.



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# THE ABILITY TO COMMUNICATE BETTER



The ability to engage in dialog and persuade audiences changes everything

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JAMAICA

**STARTING OVER**  
DOESN'T MEAN  
**STARTING FROM NOTHING**





➤ ➤ **“Self praise a nuh no rekumendayshan”**. According to the Jamaican National Library, this proverb means, “Self-praise is not a recommendation.” In other words, praise has more weight when it comes from a third party.



**T**his may be why project coordinators prefer to place self-criticism before self-praise when managing the Yallahs and Hope river basins in Jamaica and start by recognizing what had gone wrong. “Submission of qualifications’ day came for our project... And it did not look good at all: spending execution rejected; implementation rejected. Rejected, rejected, rejected...”

1. The story is based on this [operation](#)





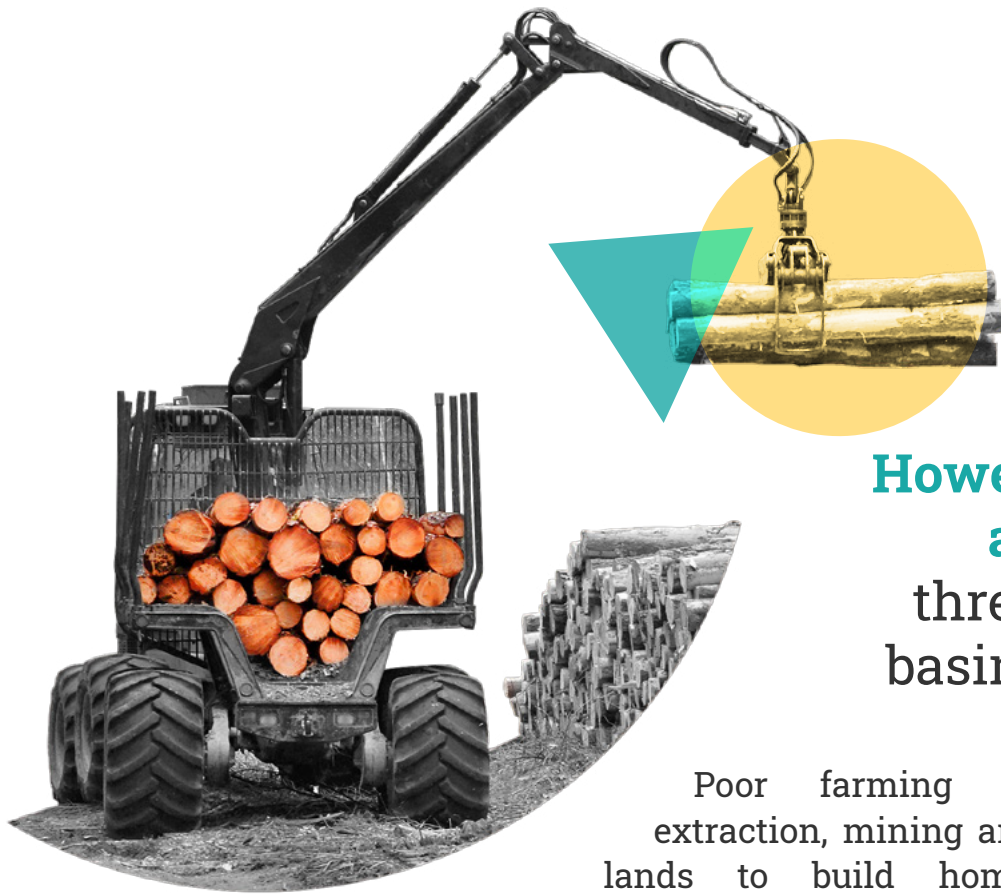
# FIVE YEARS HAD PASSED

➤➤ (2012 a 2017) between the design and execution of an initiative that saw very little progress.



**T**he reality of the implementation surpassed the theory on paper even though the purpose was always clear: to protect an area of great importance due to its environmental richness and role as a source of water for Jamaicans and the farming activities that sustain local residents.

The Yallahs and Hope Rivers provide nearly 40% of the potable water used in Kingston, the Jamaican capital. Their basins hold 7% of the land that is farmed on the island. The highest area is part of Blue and John Crow Mountains National Park, a wooded region from which various rivers descend, and is also home to endemic species of flora and fauna. Due to its exceptional biodiversity, the park has been named a UNESCO World Heritage Site and was included on the World Wildlife Fund's Global 200 list as an eco-region that deserves special care and protection. It is also a point of transit for North American migrant birds.



However, human activity was threatening the basins' integrity.

Poor farming practices, wood extraction, mining and the clearing of lands to build homes resulted in deforestation and degradation of biodiversity.

The land became less fertile. The amount of potable water decreased, as did its quality. Pollution in the Caribbean Sea increased, impacting the protected area of Palisadoes and Port Royal, which is also in Jamaica. The combination of erosion and intense rain made the area more susceptible to flooding and landslides.

A privileged area ended up becoming a threatened and dangerous region. This was so much the case that a major fire seriously impacted the basins' residents in 2015, causing US\$3.7 million in damages in a matter of days. The support secured by the Jamaican government -with the IDB's support- in the form of a donation through the Global Environment Facility was worth almost the same amount (US\$3.9 million). The purpose was to make progress on a project that had seen none through 2017.

# THE STRATEGY THAT CHANGED EVERYTHING

When the plan to protect the Yallahs and Hope river basins was designed, no one considered the enormous complexity of coordinating actions and public policies among all of the institutions that had a role in the work. These included the National Environment and Planning Agency, the Planning Institute of Jamaica, the Forestry Department, the Water Resources Authority, the National Water Commission and the Rural Agricultural Development Authority. In addition, the project director changed three times during the design, approval and implementation processes, which contributed to the lack of continuity.

It was a national priority, but it was just one on a much longer list. It is natural that the most pressing needs are prioritized based on their seriousness in any government and its agencies, as occurs in a hospital emergency room. There was no strategy to help them to stand out in this sea of priorities.





# “WHA GAWN BAD A MAANIN, CYAAN KUM GUD A EVELIN”

This means: **“What ends poorly in the morning can't be remedied at the end of the day.”** This Jamaican proverb helps explain the decision made in 2018 that changed everything: they completely retooled their strategy in order to actively involve the various stakeholders.

**T**o that end, they proposed aligning the initiative's objectives with the Jamaican National Development Plan's 2030 Vision, the most important road map that the government and its entities use to commit to results. In other words, they wanted to make the basins a national obligation.

“We had to become politicians,” explain representatives of the National Environment and Planning Agency. “We got involved in the entire government discussion about agriculture so that we could talk about the benefits of the Hope and Yallahs River project. One day, we managed to get it onto the development agenda as a priority goal.”





# FROM PARALYSIS TO EFFECTIVE IMPLEMENTATION

The lobbying work was so effective that they included the project in the 2018-2021 public policy framework, one of the three-year phases that is set out in the National Development Plan to propose short- and medium-term goals and actions. The protection of the Yallahs and Hope basins became a key component for meeting National Goal 13 on the sustainable management and use of natural resources, which was also aligned with various Sustainable Development Goals (those related to marine life, land and water ecosystems, and responsible production and consumption).



That radically transformed the governance of the initiative. It exponentially increased coordination and the level of participation and support of all of the institutions. Various responsibilities were taken up by entities with greater decision-making power and authority among the entities, which streamlined the process. The monitoring meetings moved from quarterly to monthly. In addition, they ceased to be so dependent on staff changes within the various offices because this was no longer a matter to be managed by the official in place at the time and became an institutional duty.



Finally, the entities were working as a united front and focused on two topics: reforestation in the basins and training for rural residents; the latter in order to promote more sustainable use of the land, including agriculture and forestry, that is, combined management of forests, crops and livestock.

contained in time by residents of rural communities who had received proper training.

## Can a project be successfully reactivated after its strategy for approaching all of the stakeholders involved has been completely overhauled?

The answer is yes. Starting over doesn't mean starting from nothing. This case study shows how a failed experience is a fundamental lesson for making progress the next time around. "Ole fiya tick easy fe ketch." Translation: "Charred sticks are easier to light again."

The first results were quickly visible. The project went from reforesting an area equivalent to just 100 football fields in 2017 to reforesting an area equivalent to approximately 1,000 football fields in July 2019. In addition, nearly 600 rural residents were trained on best land management practices to prevent soil erosion and 400 were certified on smart farming activities in terms of the environment.

They even trained several communities on forest fire management, which avoided a tragedy in 2019 when another conflagration began to quickly spread. The flames were







# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When a project manages to open up a space for itself in a country's national development strategy, it considerably increases the level of commitment of the institutions responsible for implementing the initiative in question. This happens when project goals are aligned with national priorities and even with more global targets such as the Sustainable Development Goals. Working this way encourages robust inter-institutional synergies and engages high profile officials who have more decision-making power. Furthermore, it fosters process continuity -despite personnel changes- because the tasks become institutional commitments.
- If a project is halted due to a lack of interest among the responsible institutions, the communications strategy that is used with those entities can be completely overhauled. Starting the process of interacting with stakeholders all over again doesn't mean starting from nothing, particularly if the initiative's objectives remain the same. In the case of this project -which lacked the support that it needed from various stakeholders for years-, the executing team's capacity to adjust its operations role to engage in lobbying and get the government's attention was key because it gave new life to the initiative.



# 2



# BOLIVIA

## THE ART OF COMMUNICATING FOR CULTURAL CHANGE



**In El Alto, the second most populated city in Bolivia,** an estimated 5 out of every 10 households lacked sewer network connections in 2016.



**T**his means that half of the families in this community of over 900,000 inhabitants had to use latrines on a daily basis, most with cesspools, which tend to overflow when it rains hard and can even leave wastewater in streets. They are sources of infection that expose the entire community to illness.

There, 4,100 meters above sea level, right next to La Paz, there has been exponential population growth since the 1990s along with growth in infrastructure and economics. However, local residents claim that there have been delays in an aspect of life as basic as household sewer connections.

2. The story is based on this [operation](#)



» » **In 2014 and 2015, the government sent representatives to El Alto with an initiative that would benefit residents.**

They built a network of underground tubes to run the wastewater from homes to treatment plants, extending this infrastructure to the door of every home. The families were responsible for connecting to the system built under the concrete just in front of their homes, paying for and managing in-home installations in the kitchen, laundry area and bathrooms.



However, a 2017 study found that 4 out of every 10 families in El Alto had not run this “last mile.” In other words, they still hadn’t connected to the new sewage networks. The reasons could be economic, social or a product of simply not knowing that it was necessary. At the end of the day, it was also a cultural matter. Families were so used to lacking this basic service that they accepted that it was not a priority even when they were just one step away.



# A SCALED PLAN

## FROM MASS MEDIA TO DOOR-TO-DOOR VISITS

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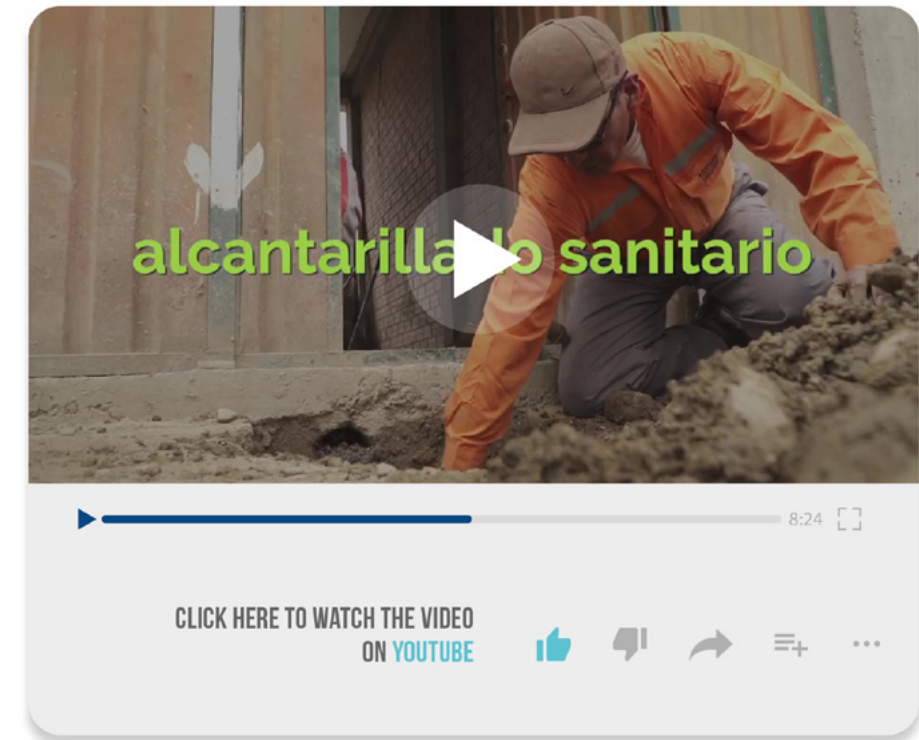
**T**he Ministry of the Environment and Water did not want to lose the benefits of the efforts that had been made in the context of the Periurban Sewage and Water Program financed with an IDB loan in the amount of US\$20 million and a donation from the Spanish Water and Sanitation Cooperation Fund in Latin America and the Caribbean for US\$80 million. They understood that cultural challenges require cultural interventions. Changing local residents' mentality required the use of strategies that were different than the ones that had been used during the installation of the main network.

This was when they decided to implement a pilot initiative in 17 communities in District 8 of El Alto, where the connectivity rate of households to the sewer system was estimated to be 67% (higher than the average for the entire city). First, they met with various neighborhood groups to learn why they had not connected and better understand their way of thinking. They conducted a "qualitative study" to understand their motivations. It was organized around four areas: responses on an individual level, family level, neighborhood level and city-wide level.





**The results allowed them to design a scaled communications plan that played a key role in the outcome.**



It was called “CONNECT to the city that we want.” First, they approached the community using mass media channels such as TV and radio to publicize the importance of the sewer system. Then, with the help of neighborhood groups, they trained community members to complete the installations in their homes, explaining that they were not as costly or complex as they had thought. They also promoted fun spaces for neighbors and local providers of goods and services associated with the connections that had to be created inside of the homes. This allowed them to reinforce messages about the importance of using the sewer system and the ease with which the adjustments could be made within the home. Finally, they conducted home visits, knocking on every door to complete the socialization process with one-on-one encounters.



# THE POWERFUL TOOL OF THEATER



Conducted across the board, one of the interventions that the leaders of CONNECT highlighted the most was: “The Espejo Family from Villa Esperanza” which featured a group of characters in which El Alto residents identified. According to spokespeople from the Ministry of the Environment and Water, “This family was on the radio, TV, in neighborhoods and local markets and in every home, encouraging people to learn how the sewer system works and how ‘I’ will use it.”

Another one of the most popular approaches to communicating the messaging was a performance that was brought to various schools and public spaces in District 8. It can be viewed on this Youtube [link](#). The members of the Altoteatro Group played a group of neighbors who were tired of living with latrines before dozens of students. The goal was to get young people interested in the topic so that they could encourage their families and the community to make the change. “Theater is a powerful tool. It not only reached people, but also educated and encouraged them to install the infrastructure in their home,” explain the initiative’s coordinators.

This comprehensive strategy allowed them to far exceed the initial goal of having 80 percent of families connected in the area



where the pilot project was implemented. According to the Ministry of the Environment and Water, “In just 11 weeks, we achieved a rate of 96% of households connected to the sewer system.” This result has encouraged them to replicate and scale up the CONNECT experience in other parts of the city and the country and in other areas in which cultural shifts must be implemented within communities. The words of one character from the play are an example of just how universal the message can be:

-This place is not for self-centered people. This place is for giving the best of ourselves. This is our neighborhood. We have to work for our neighborhood. Our children live here. Our families live here. I am going to connect and make sure that everyone does so.



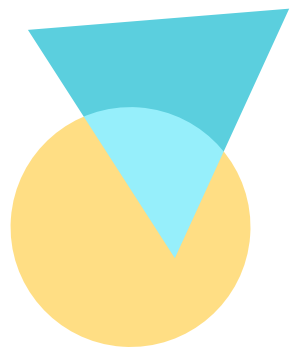
# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When projects that offer basic services are executed to improve people's quality of life in communities accustomed to living without them, comprehensive communications strategies can play a key role. Depending on the target audiences, these may include using non-traditional methods like theater to encourage cultural change and ensure that communities make effective use of the solutions that have been developed. In El Alto, Bolivia's second most populated city, sewer networks were installed up to the front doors of homes with the goal of making progress on sanitation in a community in which half the households continued to use latrines. Each family was responsible for connecting to the network and had to bear the costs of installing the system inside of the house. After evaluating the impact of the project, it was found that many homes had not connected to the network. The issue was that it was not a key priority, among other reasons, because they had become accustomed to using cesspools for years even though they were sources of infection. After conducting a study and examining the reasons for this in the community, a pilot project was implemented in 17 communities in District 8. Organizers executed a comprehensive communications strategy that included an artistic component. They developed mass media campaigns, promoted gathering spaces for residents and providers and conducted home visits to socialize with the families one on one. The strategy even included using a group of fictional characters (the "Espejo family from Villa Esperanza") to encourage El Alto residents to identify with them. They also presented plays in schools and public spaces so that young people could influence their families at home. Coverage increased from 67% to 96% in just 11 weeks in the area where the pilot project was implemented.



# COMMUNITIES'



SIXTH

SENSE



Making the most of local knowledge and experience

3 COLOMBIA  
Beneficiaries who execute projects  
(Colombia, 2019).

4 ARGENTINA  
When communities decide: Tourism projects strengthened by consensus  
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COLOMBIA

**BENEFICIARIES**  
WHO EXECUTE  
PROJECTS





➤ ➤ Imagine that you live in a city where there is only electricity from 6 p.m. to midnight. Think about how productive your workday would be without electricity. You wouldn't be able to charge your cell phone after midnight, which means you might end up with no battery until the late afternoon.



Y our laptop would last for an even shorter period of time, and desktops would be useless. Given that Wi-Fi is off most of the time, you wouldn't be able to execute all of those daily Google searches or watch videos whenever you wanted unless you were willing to use up your data package quickly. Nor would you be able to watch TV, use a blender or run a washing machine whenever you feel like it.

3. The story is based on this [operation](#).



**Now imagine that none of this is serious** compared to the inability to run your refrigerator 24 hours a day,

especially in a poor part of the planet where the average temperature is 27 degrees Celsius, knowing that unrefrigerated food products can cause illness. This is how the Río Gualajo communities on the Pacific Coast of Colombia lived for decades. Four diesel plants offered irregular energy service for periods of four to six hours each day. The lack of continuous service was not only a latent danger for residents' health, but was a cruel drain on their progress.



In addition to having limited access to computer devices that could improve the education of several generations of children, it was impossible for them to engage in productive activities that could have changed their present much earlier, from common businesses like hair salons to the development of more complex projects like coconut processing. Even worse, their cost of living was higher than that of residents of urban areas due to their dependence on a fossil fuel like diesel and the options that they had to turn to to refrigerate food items, such as buying blocks of ice on a weekly basis.

In 2018, the Colombian government launched an electrification project for four rural settlements grouped into the Community Council of the Black Community in Río Gualajo with financing and support from the IDB. They initially thought that the beneficiary population would be 2,000 people, but they found that there were fewer than 1,000. Why? "The Pacific Coast of Colombia has the greatest poverty gaps in the country. When [residents] have no opportunities, they go elsewhere to find them," explains a representative of the We Are All Pacific Plan (FTSP) Development Fund, one of the initiative's executing units.





# THE COMMUNITY WORKED SHOULDER TO SHOULDER WITH THE GOVERNMENT AND THE CONTRACTOR



Reaching the rural settlements of the Gualajo River isn't just a trip. It's an expedition.

**F**irst, you have to travel to Tumaco, the closest urban center. Tumaco is a two hour flight from Bogotá. If you take the highway, it takes at least 21 hours and stretches 1,100 kilometers. Up until that point, it is just travel. The next step involves traveling by boat on the Pacific Ocean and then on the Rosario and Gualajo Rivers through mangroves for up to six hours depending on the boat's capacity. The boats can't travel at low tide, so the passengers need to get out and walk. That's the expedition part.

If it is tricky for one person with just a backpack on their shoulder to get there, imagine bringing in the materials required for this project: 15 kilometers of electrical network, 11 transformers and over 200 light poles.

It wasn't just hard to get there- it was also tough to reach and gain the trust of the residents. Any community that wakes up without basic public services in this century feels abandoned and let down, having been promised many times that they would receive something that was never delivered. Their skepticism had accumulated over the course of seven generations.







## WE MADE IT INTO GUALAJO “ THANKS TO THE WOMEN , ”

the members of FTSP explain. “We convinced them how important it was to their families’ health... If they had an opportunity for development with energy, families that had left would probably come back.”

**B**ut it was more than that. What convinced them was the fact that their participation would not be limited to the role of beneficiaries who share opinions or make decisions about some parts of the initiative. Rather, they would have specific responsibilities related to the execution of various activities and projects. To put it differently, they weren’t just asked if they agreed with the plan, expected to give a simple “yes” or “no” answer. They were asked how they would do it together. Residents were invited to work shoulder to shoulder with the government, the contractor and the auditors.

They weren’t empty words. The residents of Río Gualajo provided river transportation services and meals, were responsible for over 50% of the labor and even helped bring in the materials needed to develop the project. For example, thanks to the residents -who know the land and its unique characteristics best-, the contractors knew how and where to bring in 200 light posts after 70 boat trips in order to navigate the dense vegetation. They used a pulley system installed in the trees to bring in this type of heavy equipment. Instead of cutting down 150 trees, as they had initially planned to do, they took down only 60 because community members explained the best route to use to transport the posts.



# “WE ARE THE OWNERS OF THE PROJECTS”



**The level of involvement was such that** beyond recognizing the importance of the residents' expert advice, they had shared work agendas. It went from being “a project for the community” to “a project executed with the community.”

**T**he residents of Río Gualajo felt that the electrification initiative belonged to them to such a degree that they decided to give the projects the green light without completing the entire prior consultation process, a fundamental right of ethnic groups for any public or private activity that is to be executed on their lands. They decided that the process wasn't necessary because it was not an initiative executed by third parties, but one that they themselves were carrying out.

One local leader remembers it this way: “We skipped the prior consultation because it was something that was in the Life Plan of our community council.” This plan is an autonomous planning tool for this type of protected population. “Anything that is in the Life Plan has already been approved by the community,” he adds. In the words of another local leader, “We have to support the projects because we own them.”

They were right. Safe electricity became available 24 hours a day in every one of the 189 homes in the area in December 2018. They were all connected to the National Interconnected System. The project reduced residents' cost of living and immediately improved their quality of life. In addition to having the opportunity to refrigerate food on an ongoing basis, now they can more freely access computer devices and undertake new enterprises. Some even enjoyed luxuries they had never known before, like drinking juice made in a blender.

Ninety-seven percent of Colombia's residents have access to electricity. Until recently, the Río Gualajo rural settlements were part of that 3% that still supplemented their energy needs with firewood or diesel. That doesn't seem like a dramatic or urgent statistic, but imagine being part of that unfortunate minority for decades and then suddenly being able to do new things that most people take for granted: turning on the TV any time, cooking in the oven at lunchtime and ringing in the New Year listening to music without worrying that the lights will go out after midnight. “Little projects are big, too... They also offer opportunities,” the FTSP representatives explained. “That is when we can show that we are improving lives.”





# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When projects are implemented in locations with extreme geographic conditions, executing units can delegate key responsibilities to local communities in order to ensure that initiatives are properly developed. What happened with the residents of Río Gualajo is that -beyond participating through the consecrated mechanisms of consultation and agreements to electrify the area- the residents played a leading role in key aspects of the projects' execution. On the one hand, the community played a decisive part in activities like bringing heavy materials into such a remote, hard to access area that could only be reached by boat. Valuing their local knowledge facilitated the complex task of bringing in over 200 light posts using pulleys in the trees. The community also contributed over 50% of the labor and provided essential services such as river transport and meals.
- If a community is wary about a project, organizers might try contacting groups of women who can facilitate dialog and consensus between the population and executing units. In the Río Gualajo rural settlements, women who were disappointed after decades of abandonment and broken promises played a key role in involving the community in an electrification process, raising awareness about how important it would be for the local households to have energy 24 hours a day.



4



ARGENTINA

WHEN COMMUNITIES



DECIDE:

TOURISM PROJECTS STRENGTHENED BY CONSENSUS



➤ ➤ **There are no luxury stores in Seclantás, Argentina.** However, that community is home to centuries' old looms that are used to craft their famous Salta ponchos from llama and sheep wool using a process that takes between 15 and 20 days. A luxury item by any standard.



**T**here are no fancy restaurants in Chicoana, another town in the Salta province located 120 kilometers away. But their legendary ball-shaped tamales filled with meat, onion and egg- have fascinating details worthy of haute cuisine. For example, they use ash to thresh the corn that is used in the dough. In the end, the tamal is wrapped in a chala (the leaf that protects the cob), giving it a "green touch." Each one is then tied up with pieces of the leaf.

4. The story is based on this [operation](#).



**Part of the charm of this town** is how different it is from a city and how much it can teach us about history, art, professions and traditions that have been forgotten or were simply never widely known.



**I**n many cases, several of these cultural gems have been preserved precisely because they were kept off the radar of the masses. In fact, Chicoana is a Quechua word that means “a hidden piece of heaven.”

The question that has to be asked in this sort of community is how to share their hidden secrets with the rest of the world while protecting their “hidden piece of heaven.” That is what was proposed by the residents of six towns in the Salta province: San Antonio de los Cobres, Guachipas, Campamento Vespucio and San Carlos plus Seclantás (“the home of the Salta poncho”) and Chicoana (“the national tamal capital”). All of them were chosen to be part of “Magical Places,” a program implemented by the region’s Ministry of Culture and Tourism and financed by the IDB. The goal was to expand tourism offerings in Salta, investing in towns that are attractive because of their historical, architectural, cultural and natural heritage.







# “DO WE REALLY WANT TOURISM IN OUR COMMUNITY?”

**The biggest challenge** is not the dilemma of opening the doors to new visitors while protecting towns' heritage.

**W**hat is truly difficult is the number of parties that must reach an agreement in order to respond to that dilemma. “The great challenge along this whole road is how to engage so many stakeholders with so many participants and so many perspectives that are so different,” explain Magical Places Program spokespeople.

Seclantás tourism officials reveal that local residents posed pointed questions like, “Where are we? Where are we headed? What do we want to do? Do we really want tourism in our community? What sort of tourism do we want? What would our icon be? What type of commitment do we have? Which projects have to be developed in the town that will be representative and have positive impacts for tourism development?” It was useful to reach this sort of consensus, but it involved a long coordination effort so that the various opinions could be reconciled.





Although it looked complex, they were determined to do it that way from the beginning.

## “THE MAIN STRATEGY



was participation and social coordination at every stage in the process,” explain representatives of the Sustainable Tourism Development Program, an umbrella plan in the Salta province that includes “Magical Places” and other programs and strategies.



They note that the public process through which various towns applied to be one of the six chosen for the program allowed them to present their “magical and unique value.” They also developed concrete proposals for projects that they saw as necessary. It was a first step in an ongoing process of examining themselves in community and thinking about a future as a tourism development site.



# PARTICIPATING IS A PRIVILEGE; REACHING AGREEMENTS IS A DUTY



One crucial part of facilitating consensus was the creation of two types of committees. On the one hand, an “evaluation and monitoring committee” was created that was composed of representatives of various agencies from the Salta province. They were responsible for developing the selection process for the towns, offering advice and technical assistance to each of them and coordinating inter-institutional efforts. During the implementation stage, they monitored investment plans and tourism improvements in the six selected towns.

Each town also created a “local committee” composed of municipal government officials, business owners, individuals who were active in culture and tourism and even groups of neighbors. These were essential spaces for dialog for developing the program

because they became decision-making spaces. The participants had the privilege of discussing the towns’ future tourism activities. They also had the duty to reach agreements and avoid eternal discussions. Bringing together their visions and wills -and giving in when they had to do so-, the residents determined their own destiny.



According to program coordinators, this participatory approach strengthens the sustainable development of tourism activity in towns because “it is cemented” in collective decisions that are influenced by local realities and goals.



# THE SIX “MAGICAL PLACES”

that were part of the program seemed to understand their vocation and responsibility from the outset.

This is shown in a promotional [video](#) from Guachipas. We hear a voice speaking as if reading a poem and see a series of images of fascinating primitive paintings on the walls of a cave that date back over one thousand years:

“ I come from a time without time.  
For centuries we walked, seeking our destination.  
It was the magic of this place that captivated us.  
[...] I am the ‘shield man’ and I protect these lands.  
[...] Mother Earth, I promised to protect you, and I continue to deliver on that promise.”







# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When communities not only share opinions but also make decisions about the projects that are implemented in their towns, initiatives can be more sustainable over time. Collective decisions that respond to communities' needs strengthen projects' foundations. Furthermore, if the right of those communities to determine their own future is accompanied by the duty to reach concrete agreements, they can avoid eternal discussions that stand in the way of the initiatives' progress. For their part, governments contribute to this scenario when their entities support, provide advice and facilitate the implementation of local projects without imposing preconceived solutions that ignore communities' realities and dreams.



# 5



# GUYANA

**AND WHAT HAPPENS IF EVERYTHING**  
PLANNED IS DONE RIGHT

**BUT THINGS GO WRONG BECAUSE OF UNFORESEEN CIRCUMSTANCES?**



➤ ➤ **Only after having completed the construction of 122 homes in Guyana** for some of the poorest families in two of the country's poorest regions, did the community report that the heat in their new homes was nearly unbearable. It had to be serious, particularly considering that the local Amerindian communities are very familiar with what it means to coexist with Amazonian heat.



“**I** maging bringing your three-day-old baby home to a building without walls that has a dirt floor and palm frond roof. When it rains, the water leaks in,” explains a representative of the Guyana Central Housing and Planning Authority. “Your baby is exposed to the elements. They even receive ‘royal visits’ from the king of the jungle himself: the jaguar. That is the reality of Susanne, an 18-year-old mother from the Macushi indigenous community. Hers is not an isolated case.”

5. The story is based on this [operation](#).



➤ ➤

**The situation is worsened by geographic isolation.**

These communities live far from the coast in remote areas that are difficult to access. There is no potable water in their homes and there are few or no opportunities for work. Many families survive by farming or fishing. For all of these reasons, the indigenous community was enthusiastic about this IDB-financed project, which offered housing and employment solutions and with them opportunities for progress for several communities living in extreme poverty.



# A 14 YEAR-OLD GIRL'S DREAM: ROOMS WITH DOORS

**T**he initiative, which went from pilot project to national plan between 2015 and 2019, involved the community in every stage of the project. They had a say in identifying the families that would be eligible for the program. They also participated in the design of the homes to be built. Various community members -homemakers, young people, leaders and builders- met and got to work modeling their future homes using simple materials like sticks and cards so that they could see what their solutions would look like.





To give an idea of the details that they were interested in, the project implementation team recalls the story of 14 year-old Melissa, who participated in the workshops in representation of the youth:



“She was very insistent that the homes in her community should have rooms with doors. That is a basic idea for many of us. But for Melissa, her design would guarantee that she would never again have to get dressed or undressed in front of her uncles, father or brothers. She was the only woman in a seven-person household.”

Laborers were hired from within the community including women so that they could build their own homes. Materials were also locally sourced. The community could not have been more satisfied with the process and the final result: 45 square meter homes with brick walls, a zinc roof, concrete floor, rainwater collection system and a bathroom with an improved pit latrine.



The community members themselves chose the project beneficiaries, worked at the sites and sold the construction materials.

It was a huge success until people moved into the homes and discovered something unexpected: they had never thought about how humid or hot they would be, especially during the day. Many of these beneficiaries had never lived like this. The zinc roof was new for them. Furthermore, climate change and the heat of the Rupununi savanna, which is next to the Brazilian Amazon, made the homes difficult to inhabit.



# “SMALL CHANGES LEAD TO BIG RESULTS.”



It was a project based on pilot experiences, of course, with progressive phases meant to allow them to learn along the way. The goal was to build another 218 homes as part of the Sustainable Housing Program for the Interior of the Country. But they couldn't overlook this situation. On the one hand, they had to

solve the problem for the 122 homes that had already been built. On the other hand, they had to quickly find a solution for the design of the next homes to be built. The challenge was to reduce the temperature inside of the homes without changing the time-line or budget so that the number of beneficiaries would not be impacted.

learning from them again,” said a representative of the Central Housing and Planning Authority.

Together they designed a set of modifications that would solve the problem. They increased the height of the homes from 2.7 meters to 3, which improved air circulation. They left space between some of the bricks above the windows to provide vents that would allow the wind to enter. They added a wood sheet to the rooms to reduce heat transfer from the zinc roof. Finally, they built new homes in a position that would facilitate air flow in the rooms.

Given the time constraints, they might have made decisions unilaterally in order to move forward more quickly. But they didn't. They decided that this sort of unforeseen circumstance should not change the participatory spirit that had guided them throughout the process. So all of the stakeholders went back to the drawing board: the executing team, builders, beneficiaries and community representatives. “We went back to the solution that had worked so well for us: calling a community meeting and discussing it,





**“Small changes lead to big results,**  
especially when we allow the beneficiaries  
to have a seat at the decision-making  
table,” concluded the initiative's  
implementers.



They're right no matter how you look at it. A series of “small changes” with community participation led to a happy ending for this project: increasing the buildings' height by 30 centimeters and creating barely visible spaces between some of the bricks. To this we add the other simple things that made the difference even though they are overlooked in other contexts: doors, walls and roofs that won't let the rain in so that adults, children and newborns never have to sleep outside again.





# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When communities actively participate in the entire cycle of a development project, it is possible to reach agreements with them about agile, timely solutions that emerge from unexpected events or results that have a considerable impact on the purpose of the initiative and its impact on beneficiaries. When these solutions are agreed upon with the communities, they end up being cost-effective because they ensure satisfaction. This contributes to staying within the established time frames and budgets. As part of the Sustainable Housing Program for the Interior of the Country, 122 homes were built for poor families in remote areas of Guyana after having involved the indigenous population in each step of the project. Once they were completed, the beneficiaries rightly complained about the high temperatures inside of their homes during the day. They were used to living almost outside without walls and under palm frond roofs. They didn't anticipate how hot it would be once they were surrounded by brick and under zinc sheets. After bringing everyone back to the table (the executing unit, contractor and community), and based on a good participatory experience during the first phase, they valued consensus for finding solutions that would adequately address the population's needs. They designed a series of changes that could be made to the homes that had already been built and improved the design for the construction of another 218 units without impacting the timeline or budget.





# 6



## PERU

# CITIZENS FROM POOR TOWNS CAPABLE OF MANAGING

## PROJECT FUNDS



## People tend to speak proudly about how development projects empower initiative beneficiaries in different ways.



**T**hey give them a “voice” because they can contribute a great deal when they are asked to do so. They are given a “vote,” because it is important for them to make decisions about their future. They are invited to participate in the implementation process by providing labor, selling materials or providing services to contractors such as transport and meals. Up until that point, normal. There is another less common level, which involves delegating responsibility to the community that puts them to the test: project implementation and management of project resources.

In Peru, the decision was made to entrust 183 rural communities -some of the country’s poorest and most isolated- with the management of a project that involved nearly \$750,000. These resources were not managed by local governments or public officials, but by the people themselves, low-income residents of the Huancavelica, Ayacucho, Apurímac, Cusco and Puno Regions.

6. The story is based on this [operation](#).



**The idea was for them  
to manage a bank  
account in which the  
Ministry of**

Housing, Construction and Sanitation would deposit resources. They were to hire the staff including engineers, archaeologists and environmental specialists to create the water and sanitation systems that they had lacked their whole lives. They were also to purchase the necessary materials and hire workers.



A total of 183 communities were to manage the project resources because it was hard to find companies interested in the calls that the government published for these populations. Due to the remote location, geographic obstacles and the distance between homes within the communities, everything was more expensive and the contracts provided limited profits. And even so, the projects were extremely urgent.

It is common for residents to have to walk for hours to fetch water in ponds that are also used by the animals in the area. According to spokespeople from the National Rural Sanitation Program, chlorinated potable water can reduce childhood malnutrition by 30% because it prevents children from getting sick. This is a key piece of information for these regions in which 43% of children under the age of 3 have chronic anemia.



# 183

## TEMPORARY “EXECUTING UNITS”



They turned to a figure that is well-known in Peru: “executing cores,” each of which has a president, treasurer, secretary, and legal representative.



In order to serve as a member of one of these units, the person must be elected by the local assembly and be adults who are stable residents of the community in question. In addition, at least one member must be a woman.

Through the Water and Sanitation Services Improvement and Expansion Program -which received support from the IDB and a US\$72 million donation from the Spanish Cooperation Fund for Water and Sanitation-, the process of these executing cores was supported from 2014 to 2018. The goal was to allow them to implement sanitation infrastructure in their communities with a total investment of approximately US\$32 million.





**While that institutional support -which was used, for example, to conduct the pre-selection process for specialized staff- was important,**

at the end of the day each core had the legal authority to hire for and manage their own projects, including the financial resources. “I pay all of the workers, operators, officials and laborers myself,” explained the treasurer for the Huanupata executing core in the Huancavelica Region. In practice, they functioned as 183 temporary “executing units” in which the leaders were the communities, represented by 732 residents (four in each unit).



This experience allowed communities’ capacities to grow in terms of developing projects and leading this sort of initiative. Once the executing cores were disbanded, the beneficiary populations created the Sanitation Services Administration Boards (JASS for its Spanish acronym), which are now responsible for managing, operating and maintaining the systems that had been installed. In other words, at the local level, they took on the role of providing continuity to the project with a sense of ownership that contributes to the sustainability of the services that they now provide.



# THEY FINISHED BEFORE TRADITIONAL CONTRACTORS AND AT A LOWER COST



**T**he women who were strengthened and empowered by this initiative -very much despite the fact that they are immersed in societies that continue to be patriarchal- can attest to all of this. “They always isolate the women in this town. I was elected, and from now on women must take on roles in our community,” said one JASS leader from Condorhuachana in Huancavelica. The JASS treasurer from Aucayacu shared a similar sentiment: “Women can be leaders, presidents in any community. If you are trained, you can be elected president of the community. Women can hold any position they want.”

The overall results of the work are noteworthy. One hundred percent of these projects were completed by October 2018. By contrast, only 126 of the 158 projects undertaken by traditional contractors were completed by that date. In addition to finishing first and requesting fewer extensions, the water and sanitation systems implemented by the communities cost less. “The profit margin for these projects is usually around 30%,” a representative of the National Rural Sanitation Program explains. “But the executing cores have returned that 30% because they don’t have profits here. They simply use the resources from their infrastructure.” In other cases, the surplus from the projects is reinvested in the communities themselves.

Beyond those numbers, the community feels the difference in daily life, especially for their



young people. A teacher from Totorapampa in Apurímac explains that, “Now our children can wash their hands after they finish their homework and before meals.” Her testimony complements that of the Condorhuachana Health Center’s nurse: “Their educational level has improved because they used to miss class when they got sick. Now children are healthy and go to school on time. The water in the three water systems is chlorinated monthly.”

Something as basic as potable water makes a difference in the health and education of the children in these 183 remote communities, which are home to over 40,000 people. But that is not the only thing that began to make a difference for all of them. The leadership that they have demonstrated shows that these are communities that can have a voice and vote in determining their own destiny. They can manage development projects, including the resources, and obtain better results than the traditional contractors.



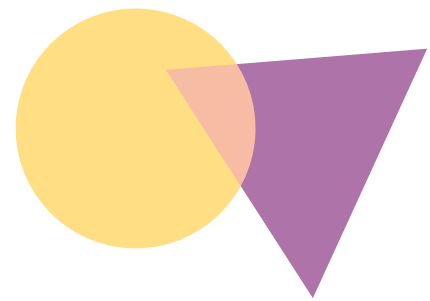
# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When governments can't find contractors to execute infrastructure projects in hard-to-access areas, organized communities can be given responsibilities such as managing resources, hiring staff and purchasing materials. It was hard to find contractors in Peru who would answer the call to build water and sanitation systems in 183 rural communities. Due to their remote locations, they did not represent a good investment for parties that might be interested in the work, given that the isolated conditions make various aspects of any project more expensive. They thus turned to the idea of “executing cores” comprised of local residents -rather than local governments or public officials- with the legal capacity to manage the funds and properly monitor the progress. They were created as 183 temporary “executing units” with very positive results. In addition to finishing their work more quickly and less expensively than traditional contractors, the skills that they developed remained in the community, allowing them to operate and maintain the systems that had been installed, providing sustainability and a sense of ownership that contributes to their proper care.
- If development projects include the active participation of women in decision-making and execution spaces, it is possible to use their leadership capacities and allow female empowerment to stand out and be strengthened. In this case, one of the requirements was that each “executing core” include at least one woman. As a result, women were responsible for tasks such as managing the funds, supervising spending and executing the projects. Their important work allowed them to subsequently be chosen for administration, operation and maintenance positions related to operating and maintaining the installed water and sanitation systems as members of the Sanitation Services Administration Boards (JASS).



# THE PRIVATE SECTOR,



## A PARTNER IN SUCCESS



Companies and members of civil society fight for the common good

### 7 PARAGUAY

This is how you fight gender inequality in “the country of women”: By training for “men’s jobs” (Paraguay, 2019).

### 8 PANAMA

Public policies developed in the private sector (Panama, 2019).

### 9 BARBADOS

Companies and training centers: The duo that will change the face of a country’s productivity (Barbados, 2018).





# PARAGUAY

**THIS IS HOW YOU FIGHT**   
GENDER INEQUALITY IN

**"THE COUNTRY OF WOMEN": BY TRAINING FOR "MEN'S JOBS"**



**It is estimated that the Guaraní population was just over 150,000 after the Triple Alliance War (1864-1870), which pitted Paraguay against Brazil, Argentina and Uruguay.** One in every five survivors was male, and most had disabilities, were elders or were children. That’s why it was called “the country of women.” And they were responsible for rebuilding.



**D**espite the fact that they won a more than well-deserved place in Paraguayan history, women still fight to create a better place for themselves in a society that continues to offer them fewer job opportunities than men. “The statistics tell us that 37 out of every 100 Paraguayan women do not have their own income, and that gap is much greater in rural areas,” explains the representative of the Neighborhood Roads Improvement Program, an initiative executed by Paraguay’s Ministry of Public Works and Communications and financed by the IDB.

7. The story is based on this [operation](#).



➤ ➤ In addition to improving roadway connectivity in rural areas,

the program sought to develop a pilot project that would allow women to work in non-traditional roles. An initial assessment found that 42% of women in rural areas did not have their own income. And those that did earned 62% of what men were paid for the same work. That meant that for every three dollars a man earned, a woman would earn only two for doing the same thing.



## TWO PROBLEMS THAT SOLVED EACH OTHER

**T**he assessment also showed that women did not hold specialized, well paid jobs in construction and road maintenance, which meant that they had fewer opportunities. At the same time, an important lack of labor was identified in that same sector. They were two different problems that, when placed in perspective, solved each other.





**The challenge was thus to open up the field of job offers that had not been available to women because of cultural stereotypes about their ability to do work that men have traditionally done.**

A series of courses and training activities on heavy machinery operation, topography, soil labs and occupational safety were offered in three regions of the country in 2016 and 2017. Men and women were trained for this pilot project in different areas. Specifically, they trained with roadway machinery simulator equipment to train and prepare for their jobs. Sixty-one of the 167 participants were women.



The experience marked a path that had not been previously explored: considering women as part of the labor force in a male-dominated sector and recognizing that women's abilities had been dismissed in certain activities. The next step was to move from theory to practice.

A total of 24 women completed paid internships in different activities of the Neighborhood Roads Improvement Program between 2017 and 2018. Fourteen of them then were given a job offer to perform this sort of non-traditional work, and 11 accepted. It was a comprehensive strategy that also involved adjusting the camp facilities so that women could use them (including bathrooms and dormitories), developing coexistence manuals and offering courses on gender sensitivity for colleagues and supervisors.



The move to achieve equity through this initiative was the spark that started a revolution that still has a way to go. But it has started and has showed the path to be followed. In the context of the same program, a second group of 21 women started internships in 2019 as heavy machinery operators, fuel use supervisors, laboratory assistants or topography assistants.





# OTHER EXECUTING UNITS ARE ADOPTING THE MODEL



**“Today we can see women in Paraguay driving a truck, tractor or compactor, or serving as topography or soils laboratory assistants. There are even women who are project managers,” a Program representative explains.**

**E**ven more important is the fact that this experience has become an inflection point. The gender strategy is now included in the bidding specifications and technical specifications for project contracts and oversight. Project leaders report that other executing units are adopting the model and that it can be extended to other sectors.

Representatives of the Ministry of Public Works and Communications are pleased to have been pioneers in Paraguay for this inclusion effort. They note that one of the most positive impacts of the initiative apart from men in this sector recognizing their female colleagues as equals is that the women themselves have overcome prejudices and stereotypes



about assuming traditionally masculine responsibilities: “We are proud that this experience is yielding results, that we can change our reality, that women feel that they can do more, that they can improve, that they are doing work and driving machines.”

No one should be surprised. Female participation in non-traditional roles is a challenge that is well within the reach of a country that survived thanks to women’s efforts. All Guaranis are heirs of the post-war heroines who allowed Paraguay to emerge from the ashes.



# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When gender inequities that prevent women from accessing income and job opportunities under the same conditions of men persist, it is possible to design comprehensive strategies that lead them to sign labor contracts that are usually only offered to the male population. These strategies include proper training under equal conditions in roles that are not traditional for women and then paid internships that include an environment that is conducive to their inclusion. This involves, among other things, adjusting the facilities so that women can use them (including bathrooms and dormitories), developing co-existence manuals and offering courses on gender sensitivity for colleagues and supervisors. In the context of Paraguay’s Neighborhood Roads Improvement Program, a pilot project was implemented that allowed a group of women to be trained on operating heavy machinery, topography and soil laboratory work, among other things, for the first time. They then completed paid internships as part of construction and road maintenance projects. In the end, 11 of them accepted job offers in those areas. Both the participating women and their male colleagues overcame prejudices regarding the performance of duties that have usually been assigned to men. Other projects are developing similar gender strategies based on this project and are even incorporating them into the bidding conditions and technical specifications of work contracts and oversight.



# 8



# PANAMA

## PUBLIC POLICIES DEVELOPED IN THE PRIVATE SECTOR

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**Governments are frequently called on to address a wide range of issues**, from those that directly impact everyday people to those that impact specific sectors of society. But what happens when stakeholders outside of the public sphere offer governments a hand?



**T**hat happened in Panama thanks to an initiative that was originally coordinated by the Private Sector Council for Educational Assistance (CoSPA), which is comprised of Panamanian business, civic and academic associations. From there they focused on a major goal: reducing the gap between the talent that companies need and the skills and competencies of young people who are old enough to work.

8. The story is based on this [operation](#).





## The statistics speak to the size of the challenge.

According to CoSPA E spokespeople, the unemployment rate for young people between the ages of 15 and 19 is nearly triple the overall unemployment rate. Furthermore, 60% of the students who enter high school do not graduate. Many drop out, lacking guidance and disappointed by an education that does not reflect the reality of the labor market. This situation is even more concerning if we consider the fact that 70% of jobs require at least 13.5 years of education. In this context, an estimated 240,000-plus young people in Panama do not go to school or work, based on 2019 calculations.



The issue here, in practice, is one of new generations that see no job opportunities due to the deficiencies of the educational system. Behind every one of these 240,000 young people are personal and family dramas of human beings who face the inability to generate sufficient income. At the national level, this is a threat to productivity despite the fact that Panama's is recognized as one of the economies in Latin America that is enjoying the greatest growth.





# THE MISSING INGREDIENT: PUBLIC SECTOR PARTICIPATION



**F**rom 2001 to 2011, CoSPAE led “Enter 21,” a program financed by the IDB Lab and executed with the International Youth Foundation. They tried out various comprehensive training models and, after analyzing the needs of the industrial sector, offered young people vocational orientation and training services, labor intermediation and internships. That experience yielded lessons and positive results, but they were aware that the plan as it was conceived was not scalable and that its execution was not sustainable over time because, among other things, they depended on limited third-party funding that could disappear sooner or later.

The missing ingredient was public sector participation. They decided to take the seed of this project to the Ministry of Education and Ministry of Labor. In 2014, they founded the NEO Alliance, a multi sectoral initiative that now includes 20 organizations including schools, employment centers, professional associations, universities and other representatives of civil society. It was a process of collaboration and participatory planning that connected various services and offered them to young people in an integrated manner.



**The new alliance sought to capitalize on the lessons learned during the first program (Enter 21) and provide inputs that could be used to develop public policies.**

“

By the end of the project, we had benefited over 33,000 young people, 500 teachers, 25 service centers and over 200 companies. It was a good deal more than we had anticipated, but it was not enough,” CoSPA E representatives stated.



It was not enough because they understood that even though they were working with the government, there were structural gaps in the educational system that continued to stand in the way of the initiative’s sustainability and scalability.

For example, they improved the vocational guidance services offered by the Ministry of Education, which provide young people with advice based on their goals and the existing opportunities in the labor market. They trained a sample of counselors and “train the trainer” experts to develop more effective processes with some groups of students, following international standards in the area and encouraging schools to keep the knowledge gained through said processes. However, they concluded that it would continue to be an isolated effort due to both budgetary limitations and dependence on whichever official was in place to continue to move forward.





# A MODEL FOR PANAMA'S ENTIRE EDUCATIONAL SYSTEM



**I**t was time to take what they had learned over the course of nearly 15 years about improving training services, vocational guidance and labor intermediation to another level. It was time to refocus technical programs -in terms of both content and teaching- and significantly increase the likelihood that young people would be able to find decent work. The NEO Alliance simply stopped “offering inputs” to develop public policies and began to shape them directly.

They decided to plant the seed of all of their lessons in the heart of the matter. Together with counselors, academics, principals and the young people themselves, they developed a comprehensive care model based on NEO standards and methodologies and incorporated it into the National Educational and Professional Guidance System. This means that the “NEO model” became the guiding framework for this area for the entire Panamanian educational system with the goal of benefiting over 180,000 students each year.





## They even developed the online platform Chart Your Course (Marca Tu Rumbo),

a tool that connects young people to counselors and businesses to allow them to be advised on their professional future and find job opportunities. The platform has been adopted by the Ministry of Education and authorized as the system to be used at all levels and modes of the national education system.



Nearly two decades had to pass for this initiative to become deeply rooted in the Panamanian government. They tested different methods and scales, learning from trial and error along the way. They understood that the public sector was fundamental to multiplying their actions' impact, but they also discovered that civil society could help governments to improve public policy.



# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When countries lag behind in the design of public policies that are fundamental to their development, civil society and the government can work together to build projects that start with private initiatives and have been tested on a smaller scale and then implement them at the national level. Panama took such steps in response to an alarming situation of youth unemployment. They adopted the model of a project that was developed at the beginning of this century in the private sector to reduce gaps between young people's capacity to work and the demand for qualified staff on the part of companies. Inspired by this initiative, which had already yielded its initial lessons, they created a multisectoral alliance of up to 20 public and private organizations that served to incorporate standards and methodologies that renewed Panama's National Educational and Professional Guidance System.
- If a social impact project that is executed exclusively by private stakeholders yields positive lessons and results but sees limited opportunities for scaling and sustainability, the public sector can be involved to increase the scope of the initiative and take it to the national level. In Panama, the Private Sector Council for Educational Assistance (CoSPA) led a vocational guidance, training, labor intermediation and internship project for years which, in spite of making important strides, saw its scope and survival over time as limited. Among other things, it depended on third-party funding, which made it susceptible to closing at any time. When they started to work with the national government, they proposed bringing the lessons from the original initiative to public policies in Panama's education system, which allowed them to scale up their model to the national level and guarantee that it would be funded.



# 9



# BARBADOS

## COMPANIES AND TRAINING CENTERS: THE DUO THAT WILL CHANGE

THE FACE OF A COUNTRY'S PRODUCTIVITY

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**The private sector was not sure that it wanted to work with the government again.** “One of the first challenges was convincing them that this initiative would be worth it,” admits a representative of the Ministry of Education, Technological and Vocational Training of Barbados. “They had a certain level of distrust of the public sector. They said: «We tried this before. We have already worked with you, and it did not go well»”.



**T**here was a difference, though, regarding previous situations in which they tried to work to improve the island's labor force capacities. This time they were not calling on business leaders for the same old thing: to gather ideas and general information about the talent they needed in different fields. Now they were calling them with a proposal to get directly involved in the training of the people who would be their next employees so that they could contribute to efforts to solve a major problem: the lack of productivity and its effect on national competitiveness.

9. The story is based on this [operation](#).





➤ ➤ **Barbados is one of the smallest countries in the world. Cuba is about 255 times its size.**



Although it is considered a stable economy, it is susceptible to external shocks, as was demonstrated by the impacts of the 2008 global recession over the course of several years. This combined with the scarcity of natural resources has led the country to see its human capital as a priority.

Three main challenges were identified in the initial assessment: one, the great majority of educational, technical and vocational programs were offer-driven, that is, driven by training centers; two, those entities lacked solid relationships with business owners; and, three, they had little motivation to change and improve because they were guaranteed a public budget allocation.





# DUPLICATE EXPECTATIONS



**In 2013, they designed a new instrument called the Competency-Based Training Fund** in the context of the IDB-financed Skills for the Future Program.



Unlike past efforts, this Fund was designed to promote a training system guided by employers in order to ensure that the programs covered the business sector's real, concrete needs.

As a basic condition, interested business owners would have to form alliances with training centers and present training proposals together, competing as a team for resources allocated to fund up to 100% of their training initiatives as long as they did not exceed the equivalent of US\$250,000.

The requirements included ensuring that the participants would be certified by the Barbados Technical and Vocational Education and Training Council (TVET) that evaluates training programs and their participants based on national and international standards. They also will focus on initiatives presented in sectors prioritized in the national development strategy.





**This is a milestone** because in addition to promoting collaboration between companies and training institutions, it promoted a close, ongoing relationship between those stakeholders and the government.



The project coordinators recognize that their expectations were low when the Fund started operating in 2014. They estimated that there would only be one alliance between companies and training centers during the first year. They also had moderate expectations for the medium-term, predicting that they would allocate resources to 14 proposals in the best of cases. What actually happened far exceeded that: they granted funds to seven alliances in the first year and 30 in 2018.





# THEY TRAINED

## 1.5% OF THE ISLAND'S INHABITANTS

**A total of over 4,000 Barbadians were trained, which is equivalent to approximately 1.5% of the population.**

The most important impact is there, in the people, and that is the reason for a project like this one.

Training citizens on high quality skills and roles when many of them had never earned any certification at all is an opportunity that can change lives. They automatically improve their job profile and employment opportunities in Barbados and abroad.

Furthermore, acquiring capacities and specialized technical knowledge opens the door to higher income and even safer work. For example, a company that loaded and unloaded cargo in the port of Bridgetown received Fund resources in cooperation with a training center. When they completed the training programs, the company reported a decrease in the number of accidents. They also observed that the stevedores started to manage the containers more quickly. Thanks to their increased productivity, they increased their income and had a positive impact on the company's productivity.

The fund for this initiative -which was initially financed using loan resources granted by the IDB- transferred its experiences and the lessons learned to the Barbados Employment and Training Fund, an



entity that had already existed but allocated resources using other criteria that had not yielded such positive results. In late 2018, they began to migrate the best practices from one fund to the other so that this effort would transcend and become part of the island's institutional structure, ensuring its sustainability using local resources.

Despite the general skepticism on the part of the private sector regarding working with the public sector and on the part of the government in terms of obtaining more ambitious results, the project taught them that they could trust again and work together. While it is possible to fail -as had occurred before-, it is always worth taking the risk, especially when the reward involves helping the country's economy and, more importantly, the wellbeing of its people.





# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When the private sector is a fundamental stakeholder in the achievement of a national goal -improving the country's productivity-, it is possible to design government programs that encourage companies to work directly with other stakeholders that are also key for achieving the aforementioned objectives. In response to a lack of skills among the island's human talent that did not align with the needs of the business sector, Barbados designed an instrument that would go beyond simply considering the opinions and information provided by business owners. It was the Competency-Based Training Fund, a mechanism that provided resources to finance training programs as long as the proposals were submitted by alliances between companies and training entities. The idea is that the courses would be guided by the employers themselves, thus guaranteeing that they address the real and concrete needs of the business sector. The results exceeded the expectations. They expected to allocate resources to 14 projects and ended up funding 30, providing relevant training to over 4,000 Barbadians.



# MISSION:

## IMPOSSIBLE

Obstacles that seem impossible to overcome lead to exceptional alternatives



**10** **HONDURAS**  
**2019**  
A drone and an algorithm: The technology that transformed the supervision of a roadway project (Honduras, 2019).

**11** **ECUADOR**  
Speaking to contractors as equals (Ecuador, 2019).

**12** **PERU**  
Temporary solutions that turn out to be permanent (Peru, 2018).

**13** **HONDURAS**  
**2018**  
Saved by unknown but duly validated innovation (Honduras, 2018).



# HONDURAS

## **A DRONE AND** **AN ALGORITHM:**

**THE TECHNOLOGY THAT TRANSFORMED THE  
SUPERVISION OF A ROADWAY PROJECT**



**What the eye doesn't see, the heart doesn't grieve over.** That happened when Hondurans knew little or nothing about the delays and excess costs of the rehabilitation of the country's main logistical corridor: highway CA-5.



**T**he 50-kilometer intervention on the roadway began in 2002 and was to be completed by 2006 with an estimated investment of US\$62 million. However, by 2010 progress had stopped. The contracts were suspended and less than 60% of the work had been done.

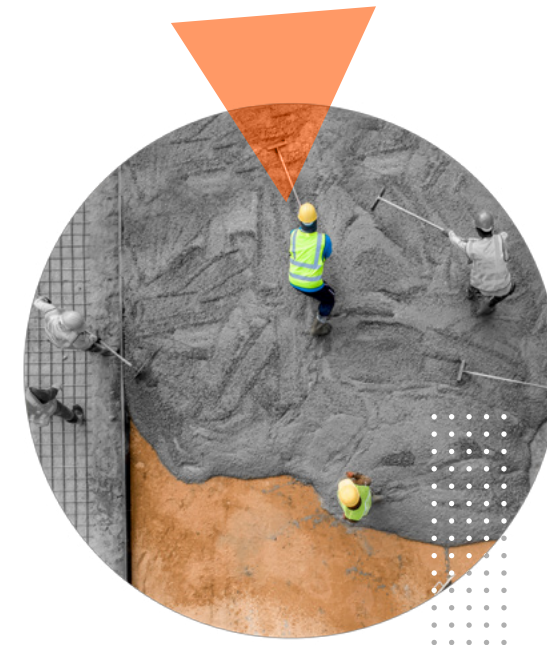
"The main party that was impacted, the public, was not aware of the situation. The lack of adequate verification methods and deficient reporting limits citizens' participation in these processes." This from INVEST-Honduras, the entity entrusted with restarting the initiative as the IDB executing unit and the Honduran government's project implementation entity. "We finished in 2014, but at twice the cost, and it took three times as long," they admit.

10. The story is based on this [operation](#).





Based on that experience and the need to improve the quality of public investment, they recognized the need to design a new system for monitoring this sort of projects. They had two goals: first, empowering citizens by allowing them to access the real status of projects and, second, by gathering more reliable information on project execution and progress in order to make decisions about various aspects during the contract management period.



Until then, INVEST-Honduras monitoring of this type of projects had been fairly manual: reviewing written reports and having an engineer conduct monthly field inspections. Although they took photographs at the site to create evidence of certain activities, the method does not provide a comprehensive, accurate view of the projects' progress. As such, neither the government nor the financial entities could arrive at a precise understanding of the progress that was being made, much less the citizens, who are the ones who pay for the projects through their taxes.



# CITIZENS ONE CLICK AWAY FROM COMPARING PROJECT PROGRESS

“This led to the idea of flying drones,” explain INVEST-Honduras representatives.



**T**he idea was to take pictures and video from the air from above (like the images you see on Google Maps) to obtain visual information about a roadway project and share its progress on the website in multimedia format. This would allow people to easily access information about the status of a project and compare the progress on different dates.

INVEST-Honduras was able to implement the idea in 2018. They created a pilot project on the La Barca-Pimienta section of the road, a 22-kilometer segment that would expand from two lanes to four on the CA-5 highway that was mentioned at the beginning of this text. The intervention is part of a broader program that the Honduran government undertook with the IDB's support in order to improve roadway connectivity in the region.



The result was a public, easy-to-use Internet platform that can be accessed using this [link](#). It takes just one click (on the “Compare Progress” button) to start to look at the progress being made kilometer by kilometer on seven different dates between June 27, 2018 and December 9, 2019, when the project was 96% complete. Furthermore, users can view contractual information on the contractor and the supervisor’s firm.

**Though they were satisfied with the web platform, they wanted to go beyond simply disseminating information.**



The idea was also to monitor the progress using something more sophisticated than a written report and site visit. The answer lay in the use of artificial intelligence. Using an algorithm that analyzes the pixels of drone images, they generated automatic calculations of the progress on different aspects of the project. This allowed them to determine, for example, where there was still old roadway, where the work had been finished and where they were halfway between some of the layers that the highway requires.



# A TOOL FOR IDENTIFYING PROBLEMS

## AND MAKING TIMELY DECISIONS

But they still weren't completely satisfied. They wanted to use the drone and artificial intelligence to obtain technical information about roadway quality given that certain standards had to be reached under the contract, specifically the International Roughness Index (IRI). This is basically an indicator that measures the comfort that one feels while driving on asphalt depending on the regularity of the surface.

Calculating this index using the photos and algorithm was initially an unattainable goal, but they persevered. They changed the drone, adjusted some of the programmed flight parameters and conducted new tests on different types of highways. "Today we can say that it is possible to calculate the IRI using analyses of the photos taken with the drone," representatives of INVEST-Honduras explain. It is a tool that can now be used for early detection of problems and thus to make timely decisions that can help them achieve the expected results on time.

The project basically offers the opportunity to use technology to substantially improve the quality of monitoring an initiative. On the one hand, it facilitates the documentation of the construction process and its progress with periodic evidence in multimedia format. It even

allows users to compare the reports submitted by project supervisors and validate the veracity of technical information like the IRI. It also makes it possible to easily consult the progress on a project using easily understandable visual tools. This mechanism promotes transparency and empowers the public.

We mainly know drones as toys that we can use to make videos and memorable photos of anything from a wedding to a vacation. Using them to monitor a road project might be less entertaining, but it will undoubtedly be very useful for Hondurans who travel on the La Barca-Pimienta segment without indefinite delays or overcharges. Innovation is available to anyone who dares to use it.





# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- If the processes used to monitor an infrastructure project prove to be insufficient in regard to transparency, accountability and the necessary technical verifications, it is possible to try new technologies (like drones and artificial intelligence) that can transform and improve mechanisms for supervising an executing unit. In this case, a drone that captured aerial images initially was used to provide multimedia monitoring of a road project and share the progress made on it with the public through an easy-to-use web platform. After using artificial intelligence to analyze the drone images, they generated automatic calculations -with a high level of precision- of the percentage of progress made on different aspects of the project. They even managed to validate very technical information such as the International Roughness Index of the finished road.



# 1

# 1



# ECUADOR

..... **SPEAKING TO**  
**CONTRACTORS**  
**AS EQUALS**



➤ ➤ **Discussing an issue from a place of ignorance with someone who is an expert on the topic** can put anyone at a significant disadvantage.



**I**t happens when there is wetness in a house and there is no way to contradict the plumber if you don't know anything about plumbing. They might propose breaking through a wall to find the leak. Or they might offer to use cutting-edge technology to avoid doing so at a price that makes your hair stand on end. The homeowner, the one who is paying for it, has no idea which is better or less expensive.

Something similar happens, though on a different scale, when governments hire experts to build megaprojects. More often than they would like, these projects get press coverage because of cost overruns, addenda and delays. Lack of knowledge among members of the public sector keeps them from questioning any of this or reacting in a timely manner to specialized matters more familiar to engineers.

11. The story is based on this [operation](#).



One would expect something like this to happen with the largest transportation infrastructure megaproject in Ecuador's history: the Quito metro.



Especially because they themselves recognize that they knew very little about the subject when they took the first steps in 2010. "Yes, it's true: we had no experience. We didn't know how to build a subway. We had never seen one in the city. Everything was new here," explain representatives from the Quito Metro Public Enterprise.

But despite starting from an almost complete lack of knowledge, today they are close to reaching 100% execution of their first 22-kilometer line. They have completed the work on time and under budget with a per-kilometer cost of US\$87 million, which is lower than the average cost for similar transportation systems of US\$97 million.







# THEY ADDED AN EXPERT WHO SPECIALIZES IN SUBWAYS TO THE SUPERVISION TEAM



They had to start from zero and learn a lot about topics

such as how to develop a project in a regulatory framework that was foreign to them in light of a contract that was completely different from the one they were used to: the FIDIC contract. This model proposed by the International Federation of Consulting Engineers, which is based on Geneva, Switzerland, has been proven to allow for a more productive relationship with the contractor and even includes a dispute resolution mechanism. The format promotes flexibility, dialog and results in contrast with local frameworks, which tend to be more rigid.

But the true secret, the underlying decision that let them move forward with sure steps on such a huge project, is that they were supported by experts who knew as much as the contractor: a Spanish consortium responsible for project management. This entity was comprised of established specialists in underground transportation systems with real experience who had worked on the Madrid metro.





**On this type of megaproject, the supervision of the oversight team can be limited or not very specialized.**



For example, they audit the materials used to authorize payments as the project moves forward, but they do not go beyond that metric. In the case of the Quito metro, by contrast, adding the Spanish project management consortium allowed them to recruit an expert with in-depth knowledge on issues that range from geotechnics and tunnel excavation to structure building and underground facilities. Their advice and assistance allowed the city to provide very high level technical supervision to make better decisions and be on the same level as the contractor.

It was a tripartite work model: the Quito Metro Public Enterprise, the oversight team and the project management entity worked together, and the latter even reviewed and improved upon the original designs



for the project. They proposed a series of optimizations to increase the functionality of different aspects of the project and to save resources without altering the quality.

For example, they adjusted the design of the stations, reducing various costs that had originally been anticipated while maintaining and even improving the functionality of the projects. Between one intervention and the next, they not only increased the quality of the project but also created US\$120 million in savings that would allow them to cover any unanticipated expenses.



# OVERCOMING EMERGENCIES WITHOUT AFFECTING THE OVERALL BUDGET



**“Everything that could go wrong actually did go wrong on this project [...]**

One day the tunneler had to stop working. We found land that had been polluted with hydrocarbons on the exact same site where we were supposed to build a metro station. We could not go any further,” recalls a spokesperson for the Quito Metro Public Enterprise. They are referring to a leak that was found coming from a service station. The expert advice provided by the Spanish consortium allowed them to use those savings to address the emergency -without generating extra costs in the overall budget- and played a key role in determining which steps would come next.

The project management entity supported the city, identifying the area affected by hydrocarbons and designing a remediation plan so that the situation could be safely managed. That work facilitated the decontamination of some areas and the transportation of polluted soil to an appropriate site.

Second, thanks to the experience of the project management team, they determined that they could change the order in which they were executing the project in order to avoid delays. First, they continued to excavate using the tunneler under the affected area. Next, they built the station when it was safe to do so. Normally, they would have built the station first. Failing to recognize that option would have meant stopping work on the project with the resulting delays and expenses.

Governments have a responsibility to thoroughly understand the execution of the projects that they are leading, even when they are unable to manage the technical, specialized details. That’s what happened in Quito. Given the absolute lack of knowledge of underground mass transport systems, they sought the advice of a group of expert engineers to maintain a technical dialog as equals with the contractor. The result: a metro like few others, with no delays or extra costs. A source of pride for Ecuador and an example for the region.



# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When governments lack sufficient technical knowledge about the execution of major infrastructure projects, they can turn to a group of experts with experience and specialized training in different areas of engineering. These professionals can help supervise and communicate as equals with the contractor when discussing technical matters. Those experts can contribute in areas that improve the quality of the work and allow for better decisions to be made. Monitoring can go beyond the capacities of traditional oversight teams which, for example, audit the amounts of material used but do not have the knowledge required to understand if they were used properly or could be used better. In this case, the Quito Metro Public Enterprise and the oversight group were joined by a project management team staffed by members of a Spanish consortium with experience and staff who were familiar with underground mass transport systems. It was a tripartite work model in which the consortium understood the initiative in great detail, even reviewing and optimizing the original designs. They made improvements in various areas such as the stations and made adjustments that did not impact the quality of the work but allowed them to save US\$120 million. Those funds later allowed them to cover emergencies without increasing the project cost. Thanks to the consortium's experience, they successfully addressed emergencies including a hydrocarbon leak from a service station that polluted the area where one of the metro stations was being built.





# 12



# PERU

## TEMPORARY SOLUTIONS THAT TURN OUT TO BE PERMANENT



➤ ➤ **Costa Rican Keylor Navas was a backup goalkeeper for Real Madrid, Forbes magazine's highest-ranking soccer team in recent years.** When Navas became a starting player in 2015, the club leadership kept looking for a goalkeeper with a bigger name.



**E**veryone thought he would be a temporary addition. What they didn't count on was the fact that they would make history with him -and thanks to him. Navas' efforts to protect the Madrid goal were a crucial part of the team's three consecutive European Cup wins. After the World Cup, this is the most sought-after soccer trophy on the planet.

There are "Plan Bs" that shine with their own light and are so exceptional that they overshadow the "Plan A." This happened in Peru in the context of a project designed to improve water and sewage access for residents of Cajamarquilla, Nievería and Cerro Camote, some of the fastest growing communities on the outskirts of metropolitan Lima. A shock measure -that could be conceived of as temporary- became a permanent response both to protect the initiative itself and to extend it to related sanitation projects in the region.

12. The story is based on this [operation](#).



**The problem was the result of a significant delay in the execution of a fundamental project component:**

The La Atarjea Wastewater Treatment Plant or PTAR for its initials in Spanish. The plant would not be ready until 2021. A major glitch. Without the plant, there was no place to send the wastewater from the water and sewage systems, which were scheduled to be ready in 2019.

The Special Projects Team at the Lima Potable Water and Sewage Service (SEDAPAL) recognized that they were going to deliver a project that they could not make operational. Once the infrastructure was finalized, it would not be used, which would put it at risk for malfunctions.



## A SITUATION THAT REQUIRED A PROMPT RESPONSE

**T**he worst thing about this setback was the impact on the public. It meant that the response to a sanitation emergency would be delayed for years for thousands of families in Lima who had already waited too long for essential public services.

2009 calculations suggested that 63% of the communities in the intervention area used water from cisterns and 17% used water from public wells. The great majority of them used latrines or dumped waste in rivers or relieved themselves outdoors. Intestinal infections that affected children became the third leading cause of morbidity.



**The situation  
required a  
prompt  
response.**



They had to come up with a way to treat wastewater from project beneficiary households without waiting for the La Atarjea plant to be finished. And as if the level of complexity of this sort of challenge wasn't high enough, the solution had to have a minimal impact on the budget.



After discussing various possibilities, they decided to build a sort of detour to temporarily redirect the wastewater to an existing treatment plant. That led to the installation of what is called a “relief collector,” a tube that would temporarily bring wastewater to PTAR Taboada until PTAR Atarjea was open.

The solution, which involved installing three to four kilometers of tubing, involved a US\$2.5 million investment, which is equivalent to less than 3% of the total cost of the water and sanitation project, which was estimated to be US\$97 million. They had initially estimated that the initiative would benefit 88,000 residents (a little over 17,000 households), but it ended up impacting 100,000 (20,000 households) due to elements such as demographic growth in the area.





# FROM TEMPORARY TO FAR-REACHING



**T**he intervention of the relief collector was so effective and so concrete that the social and environmental impacts turned out to be minimal.

Furthermore, the collector was initially conceived of as a project that would be temporary for this particular project -used while the Atarjea treatment plant was being built-, but that would also serve as an emergency plan for future situations. They would also use it to manage other SEDAPAL projects in the area that would need a carrier to transport wastewater.

To put it differently: a temporary measure created as a result of an emergency to address a specific initiative became a permanent tool for the executing unit. "When the PTAR (La Atarjea) is in place in 2022, this relief collector will continue servicing other geographic areas of

SEDAPAL," spokespeople from the institutions explained.

Sometimes solutions that are initially meant to be temporary become permanent. It is like when minor characters end up starring in their own film. A little like Keylor Navas who, despite being interim goalkeeper for Real Madrid, went far beyond the team. He is only one of seven goalies in football history to win three European Cups. None has won four... yet. Navas is the only goalkeeper on that list still playing. This means that he is the only keeper in a position to surpass them all.





# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When provisional solutions are designed in infrastructure construction to address problems that pose a serious risk to a project's implementation -and its benefits in the communities-, they may involve a tool that executing units can use to manage their own projects on an ongoing basis due to their functionality. In this case, water and sanitation systems that would benefit over 17,000 at-risk households on the outskirts of metropolitan Lima were expected to be ready in 2019. However, the initiative was threatened because the treatment plant that would receive the communities' wastewater would not be finished -in the best case scenario- until 2021. This situation would prevent use of the installed water and sanitation infrastructure. It not only threatened to hinder what had been built due to a failure, but would also prolong the critical sanitary situation of families who have lived without basic services for decades. They decided to apply an "alleviation collector," an auxiliary tube between three and four kilometers long that would temporarily carry wastewater to another treatment plant. Rather than being seen as a temporary alternative, this project would be used for emergencies and to manage other projects that are being developed in the area and might need the same device to transport wastewater from neighboring communities.



# 13 HONDURAS



SAVED BY  
UNKNOWN BUT DULY  

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VALIDATED INNOVATION



➤ ➤ It would not be correct to say that INVEST-Honduras “knew how to improvise well” in the face of an unexpected challenge that seemed insurmountable. According to Merriam-Webster, “improvise” means “to make, invent, or arrange offhand.” And although they were forced to “arrange offhand” in response to a problem that took them by surprise, they did, in fact, have study and preparation and did not have to invent a solution.



They had a major responsibility: the overhaul of the Agricultural Corridor, a 416-kilometer road that connects central and northeastern Honduras from Tegucigalpa to Puerto Castilla on the Caribbean Ocean. They wanted to reduce costs and travel times for passengers and cargo while benefiting neighboring communities.

13. The story is based on this [operation](#).

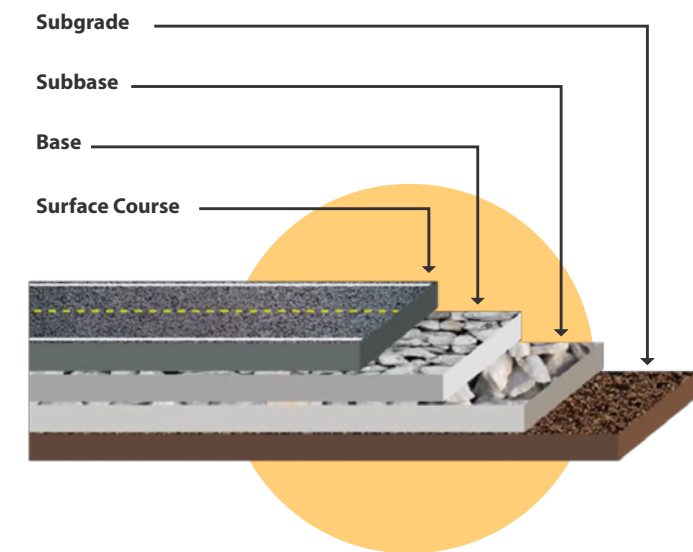




**The problem emerged  
in a nearly  
46-kilometer long  
section that had to be  
paved in its entirety.**



This represented over 10% of the highway.  
When they looked at the natural soil conditions -namely the “subgrade layer” on which the route would be built-, they found that its characteristics were different from those anticipated in the original design. They found soil that was softer than they had expected, which meant that using cement to provide stability to the highway foundation, as had originally been budgeted, would not be sufficient.



Addressing this sort of obstacle posed a triple threat of moving forward without generating increased costs or delays and while ensuring that the project would have the quality that had been considered from the outset. After evaluating several options, they concluded that the only one that could be used to meet all of the expectations was a technology that INVEST-Honduras spokespeople said had never been used in that country, Central America or Latin America: triaxial geogrid.



**T**he material in question is a triangle-shaped polypropylene fabric that is spread out like a blanket over the lowest layer of the road that is being built (the subgrade). The grid -which looks like a fence spread out on the ground- can provide stability to the other highway layers, preventing the earth from giving way and damaging the structure early on. It is like using the triangle from a billiards table to position the balls into a pyramid. Once the triangle is removed, the balls spread out.

## 21 FIELD TESTS

Using the information available on the geogrid, they determined that the highway could be used for twice as much traffic as they had originally estimated. However, INVEST-Honduras members recognized that adopting new technologies generates a certain level of resistance in the infrastructure sector. As such, they would need to secure the commitment and conviction of the stakeholders involved -the contractor, employees and supervisors- to implement this sort of unprecedented solution. They had to find a way to involve everyone in the geogrid proposal. And if there was a way to persuade a group of engineers, it was conducting tests and procuring evidence that would validate the technology they planned to use.



They conducted 21 field tests following international standards, specifically a method developed by the American Association of State Highway and Transportation Officials. They assessed the capacity that the highway would have and discovered that if the geogrid was used, it would tolerate not two but five times as much use as had been calculated in the original design.

The work began in March 2015 and ended in May 2017, and they overcame the triple challenge: they maintained the time-line, did not generate extra costs and not only preserved the road's resistance but increased it.



# “WE CAN USE THIS TECHNOLOGY TO REDUCE THE INFRASTRUCTURE GAP.”



**T**hey even went as far as to meet an additional goal: they reduced anticipated pollution levels by using fewer materials extracted from quarries and less machinery and by making other changes related to the installation of the geogrid. The initiative coordinators report, “We can use this technology to reduce the infrastructure gap.”

In addition to all of this, they met the main goal: to make life easier for people. They reduced the costs of operating a vehicle by 66% for lightweight cars traveling between Gualaco and Bonito Oriental and by 20% for passenger buses traveling the same route. Travel time between Tegucigalpa and Trujillo (on the Honduran Caribbean Coast) dropped from over ten hours to a little over six.





**Their efforts resulted in both solid results and international recognition.**



The British publication International Journal of Pavement Engineering published an article on the field validation that was conducted, highlighting it as a case study. INVEST-Honduras was recognized for its “leadership in highway innovation” at a conference organized by a leading company in the development of geogrids for roadway construction projects.



There are literally no words for the way they worked. There is no word -at least in Spanish- to express “doing something quickly (as one does when improvising) but with study and preparation (in contrast to improvisation).” When a term is invented for this, Hondurans will be able to use it to describe the initiative, which marks a precedent in that country, in Central America and in the entire region.





# SELF-REFLECTIONS, LESSONS WORTH SHARING

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- When there are no known solutions for overcoming unanticipated obstacles in the execution of a project, new technologies can be used. Even if they have never been utilized at the national level or even in the region, they can be validated during the development of the project and prior to the final implementation. In Honduras, during the execution of a roadway project it was discovered that the soil did not have the characteristics that had been used to make the initial calculations. This meant that they could not continue with the process that they had set up for building the highway. They turned to a technology that was unprecedented in that country and in Latin America, but first they validated its appropriateness, conducting tests at the site and following international standards. They confirmed that the technology could be used to stabilize the base of the highway without excessive costs during the stipulated time frame. In fact, they determined that they could multiply the lane's capacity for vehicular traffic by five while generating less pollution during construction.
- While various stakeholders resist the use of new technologies that are unknown in the local milieu, it is possible to convince them by conducting scientific tests and obtaining evidence about the benefits of the technology in question. In the case of this story, contractors and supervisors had reservations about the use of a triaxial geogrid in the stabilization of the base of one lane. To that end, 21 field tests were conducted to determine the capacity that the highway would have with that netting following a methodology of the American Association of State Highway and Transportation Officials. This is how they managed to reassure all parties that the proposed technology would yield the expected results and even better results in some aspects. The process and test results were published in the British publication International Journal of Pavement Engineering, which highlighted this effort as a case study.

# SUPERHEROES OF DEVELOPMENT >>



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