

Staying a Step Ahead: Institutional Flexibility in the Rehabilitation of Social Housing in Oaxaca, Mexico

Davi Parente Schoen
Graduate School of Design
Harvard University
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Introduction

The Mexican National Workers' Housing Fund Institute, or Infonavit, is the most important actor in the nation's housing market. As of 2015, it was the leader in mortgage origination, accounting for roughly 74 percent of all housing loans.¹ The institute was founded in 1972 with the mission of fulfilling the right to housing provided to workers as established in the Mexican Constitution, primarily through the provision of credit for the purchase of formal housing. Today, roughly one out of every four Mexicans lives in a home financed or built by Infonavit.² Success for the institution has traditionally been measured in terms of the number of houses built: the more the better. Through the first decade of the new millennium, Infonavit experienced tremendous growth in the number of loans originated. This expansion coincided with a transition from Infonavit's historical role as an organization that designed and constructed the housing they financed, to one reliant on private developers for the production of housing.

The construction boom of the past decade was followed by a precipitous crash, with several of the country's largest developers declaring bankruptcy in 2014. The social housing sector was hit particularly hard by this crisis. If the financial troubles faced by developers

¹ Instituto del Fondo Nacional de la Vivienda para los Trabajadores (INFONAVIT), *Plan financiero 2015-2019*.

² Ibid.

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embodied one dimension of the crash, residents experienced a parallel crisis: the large-scale abandonment of Infonavit homes in cities throughout the country. Much academic debate surrounds the complex causes of the abandonment crisis. Many of the impacted homes were poorly constructed, situated in peripheral locations, and lacked access to basic services. Some proved to be unaffordable for purchasers in the long-term. The abandonment of Infonavit-financed homes (estimates range between 74,000 and 242,000 homes³) speaks to both a growing social challenge for the country and an emergent fiscal concern for Infonavit. Within Infonavit, there is a growing acknowledgment that the prevailing policy paradigm of the past decade and a half has produced housing ill-suited for its occupants and has contributed to failed neighborhoods and investment losses. Propelled by this belief, a range of key actors within the institution are urgently exploring alternative solutions.

Among the responses within Infonavit has been a move towards broadening the scope of policy from the individual home to a consideration of the impact of housing at the neighborhood scale. One example of this shift has been a series of pilot programs, led by Infonavit's Office of Sustainability and supported by Infonavit's board, which aim to address the problems of those living in Infonavit housing by considering the relation between individual homes and their urban context. This case study closely examines a set of inter-related projects inspired by this new initiative, which were undertaken in the *unidad habitacional* Primero de Mayo in the municipality of Oaxaca de Juárez, Oaxaca and inaugurated in June 2015. The work undertaken in Primero de Mayo was part of the Infonavit-funded pilot *Rehabilitación Urbana*, which supported projects in three cities across the country (and includes the program *Rehabilitación Física*, or physical rehabilitation). In Primero do Mayo, the project consisted of a physical intervention that sought to mitigate the flooding experienced by some residents of the *unidad*, coupled with a revitalization of the neighborhood's public spaces. These aims were to be achieved through the rehabilitation of a central canal and a set of interconnected walkways and plazas. The broader objective of this work was to use this physical intervention to re-engage a sense of collective ownership of the neighborhood's shared spaces and re-establish neighborly co-inhabitation. These social ambitions were supported by engagement work conducted in the community before, during, and after the physical rehabilitation. Implementation was spearheaded by the non-governmental institution of private assistance

³ These two figures are cited from the 2015-2019 financial plan and the institute's 2015 end-of-year financial statement (see complete references below).

[Institución de Asistencia Privada] Fundación Hogares, and depended on the close collaboration of a range of local actors.

The pilot project in Oaxaca saw officials grappling with how a conceptual shift in policy meets reality on the ground during implementation. This experience was a process of adaptation and experimentation. The policy objectives of the pilot, details of the intervention, and on-the-ground tactics deployed by stakeholders all warrant careful consideration. As an experiment intended to show decision makers that conditions could be improved without a fundamental rethinking of national housing policy, the project in Oaxaca required quick execution and the flexibility to adapt to unexpected circumstances. For these reasons, the decision by Infonavit's board to bring Fundación Hogares on to lead the project was crucial, as Sebastián Fernández, Director of the Business Sector explained, not only because they provided important institutional capacities and expertise, but also because of the "natural symbiosis"⁴ that characterizes their close working relationship with Infonavit, even while they remain outside its institutional structure.

Context also matters, both for understanding the specifics of the work conducted in Primero de Mayo and for appreciating the robustness of this case. The state of Oaxaca is a challenging political environment for the implementation of public projects.⁵ Mexico's southwest region [*suroeste*] (encompassing the states of Guerrero, Oaxaca and Chiapas), which is home to a large indigenous population, is among the nation's poorest, most underdeveloped areas. The region has a long history of defiance of federal authority and resistance to political projects emanating from Mexico City. A customary land rights system (*usos y costumbres*) and episodes of labor unrest add to the range of challenges that have stalled many public projects in the state.

⁴ Fernández, Interview with author, 8/5/15.

⁵ Indeed, the successful implementation of the intervention in Primero de Mayo must be understood in light of the challenges and particularities of working in the state of Oaxaca. Many of the actors interviewed for this case study, from across the public and private sectors, mentioned the difficulties typical to working there. "It's a conflictive state," was a frequent comment among interviewees. The Oaxacan spirit of resistance and periods of political turmoil have led many in the public sector, especially those with agencies based in Mexico City, to view working in Oaxaca as anathema, because of the grievances, strikes, and local opposition that often threaten to derail work there. This reputation, whether fair or not, is important to keep in mind in evaluating the actions and decisions of various actors working in Primero de Mayo. Achievements that in other contexts might be considered mundane, like avoiding significant delays and completing the project on budget, are more notable in Oaxaca and bear mentioning in considering the project's success.

Choosing to pilot a program in Oaxaca created an opportunity to demonstrate that Infonavit could execute a significant new project even under contentious and complicated circumstances. Oaxaca's history of political resistance and intractability also informed a set of decisions by Fundación Hogares' leaders and various collaborating actors, on everything from the selection of the *unidad* to measures intended to avert residents' opposition. These actions proved particularly critical to the project's success. The challenges presented by working in Oaxaca shaped the contours of the project itself (its particular design, community building efforts, and overall economic objectives) as well as the tactics employed to achieve those results (moving the project along quickly, building consensus, etc.).

Oaxaca's topography and the spatial pattern of its growth also shaped the work carried out in Primero de Mayo. The metropolitan area of Oaxaca City sits within the Oaxaca valley, which is more precisely the convergence of three valleys. The region's morphology has had important consequences for urbanization, orienting growth and providing challenges to infrastructure and service provision. From the 1970s onward, the municipality of Oaxaca experienced rapid expansion, fueled largely by rural-urban migration and concentrated along the region's valleys. Today, the metropolitan area of Oaxaca City has reached over 650,000 residents (CONAPO).⁶ The city's pattern of growth has exacerbated a host of challenges: expensive housing, costly infrastructure, and (a product of Oaxaca's particular political history) a metropolitan area comprised of 18 different municipalities.⁷

Regional topography was also important at Primero de Mayo. At the time of its construction (1974-5) the *unidad* was on the outskirts of Oaxaca City. Since then the city has grown around it, and today Primero de Mayo is well situated within the urban fabric, with good access to the city's places of employment and services. Primero de Mayo, however, was sited on a steep hillside. The original design created a series of drainage canals to manage runoff from rain, but the design did not anticipate the subsequent growth of the city around the site. Much of the flooding experienced by residents, which the interventions in Primero de Mayo directly addressed, was caused by runoff from newer neighborhoods built further uphill.

⁶ Gustavo Vazquez Madrid, "The Oaxacan Sprawlopolis," in *Housing and Habitus: Craft, Politics and The Production of Housing in Oaxaca, Mexico*, ed. Diane E. Davis, Jose Castillo, and Yuxiang Luo (Cambridge, MA: Harvard University Graduate School of Design, 2015), 51.

⁷ Diane E. Davis and Jose Castillo, "Introduction to Craft, Politics and the Production of Housing," in *Housing and Habitus*, ed. Davis, Castillo, and Luo, 17.

Finally, Mexico's housing abandonment crisis greatly influenced the interventions at Primero de Mayo. That crisis led Infonavit to reconsider the operating housing policy paradigm of the past decade and a half. At the same time, Infonavit came to believe that it should focus not only on the individual home but also on the relationship of social housing and neighborhoods to the broader urban context. In particular, key officials wanted to explore policy models that viewed the physical environs beyond the individual house (e.g., public spaces, facilities, etc.) as key to solving the problem of abandonment, generating value, and mitigating the social problems that confront many social housing developments. The story of Infonavit's formulation and implementation of one such policy model in its pilot project in Primero de Mayo demonstrates the ways in which changes in policy require shifting institutional arrangements.

The upcoming pages review three major dimensions of the Primero de Mayo project: as an intra-institute policy innovation, as a physical design intervention, and as a community development program. In each of these realms, attendant professionals (government officials, designers and policy makers) worked together to adapt to a challenging local context, incorporate the local community in the process, and push forward an experiment in policy innovation via on-the-ground implementation. All three dimensions were intricately connected in ways that helped make the project successful. The policy innovation generated some clear criteria for the built design, which in turn were limited by the social realities on the ground, which then shaped community participation, and so on. In short, each facet of the work carried out in Oaxaca was critical, and held the potential to enable or constrain the scope of the project, but it was the constellation of effects together that generated positive outcomes.

Rehabilitación Urbana as Public Policy

The intervention in the *unidad habitacional* Primero de Mayo is a part of a pilot initiative that emerged from within Infonavit to deal with the growing problems of housing abandonment. The causes of housing abandonment remain the subject of debate (poorly located developments, poor quality construction, inflation, etc.); however, their impact is clear and significant—not only for affected neighborhoods and cities but also for Infonavit as a lending institution. Consequently, as Vicente Mendoza, Infonavit's CFO, explained, Rehabilitación Urbana responded to both social and fiscal challenges. The creation of dignified public spaces could both help restore the neighborhood's social fabric and add value to nearby

homes. A second, related concern involved the broader nature of Infonavit's mission, which encompasses not only providing credit for social housing but also supporting beneficiaries [*derechohabitanes*] as they build assets [*patrimonio*] through the (in theory) increased value of their homes [*plusvalía*]. Housing abandonment not only is dangerous for Infonavit's balance sheets, but also calls into question the entire assumption that a home purchased through the institution will increase in value and provide working families with a financial asset. Concerns about these parallel threats underlay the pilot program, of which Primero de Mayo is a case, and help contextualize the decisions made by key actors in its articulation and execution.

Today, Infonavit's mission extends beyond the fulfillment of the right to housing and encompasses the broader objective of generating value for workers, their families, and their communities and thus contributing to Mexico's prosperity. Although Infonavit has a broad mission, the wellbeing of the individual worker (throughout his or her working and retired life) remains its foundational purpose. Infonavit's core functions have transformed in the decades since its founding in response to its expanded objectives. Key among these changes have been a shift from the direct provision of housing to the provision of credit for the acquisition of housing, and an expansion of Infonavit's role in providing financial security to retired workers through management of pension funds.

Infonavit, over the first two and a half decades of its existence, both operated as a financial institution and oversaw every aspect of the housing production process (including design, construction, and sale). During this period many Mexican modernist architects, perhaps most notably Mario Pani, designed housing complexes for Infonavit. The design ambition of many of these projects reflected Infonavit's aspirational social agenda. A series of reforms enacted in the 1990s began to move Infonavit's operations away from housing production in an effort to limit overhead costs and minimize inefficiencies. The result was the transformation of Infonavit into an entity that served primarily as a financial institution, both for the management of retirement funds and the provision of housing credit for the purchase of units offered by private developers. The last of the *unidades habitacionales* designed and built by Infonavit were completed in 2000.

Although the core functions of Infonavit have evolved, its foundational institutional structure has remained consistent: it is a tripartite organization built on representation from labor, business and the national government. The directors of the workers' and employers' sectors during the work in Primero de Mayo were, respectively, Abelardo Carrillo Zavala and

Sebastián B. Fernández Cortina. The Director General was Alejandro Murat Hinojosa. Infonavit is organized into 13 subdirectory offices (e.g., Credit, Legal, Communications, etc.) and 32 regional delegations responsible for implementing policies in each Mexican state.

The Rehabilitación Física pilot program has its origins in Infonavit's Subdirectory of Sustainability. Motivated by a desire to address the problem of housing abandonment beyond the scale of the individual house, the Subdirectory of Sustainability tests innovative policy solutions in order to create a set of projects that can be closely analyzed to develop a bank of knowledge upon which to base broader policy recommendations. As Carlos Zedillo, head of the subdirectory put it, "interventions should not only be solving problems, but demonstrating possibilities for the city."⁸ The Subdirectory of Sustainability has developed three pilot programs: Pintemos México, a project that aims to use murals and art as an urban renewal strategy; Rehabilitación de Barrios and Mis Vecinos y Mi Comunidad, preventative urban community building projects; and Rehabilitación Física, which focuses on short-term (less than a year) interventions in public spaces to create a shared sense of communal space and *convivencia* [co-inhabitation]. According to Surella Segú, the head of the subdirectory's Office of Urban Development (Gerencia de Desarrollo Urbano y Vivienda or GDU) who is involved in several of the above initiatives, these programs were seen as opportunities to both "intervene and evaluate," creating a feedback loop in which "the results of these interventions then are fed back into our investigation."⁹

Although the primary mandate of Infonavit's GDU office is to address the challenge of housing abandonment by focusing on neighborhood-scale interventions, their pilot projects hold an important financial appeal. Public space interventions are highly cost-effective, especially when compared to the cost of managing individual foreclosed or abandoned homes. They also present a pre-emptive, rather than reactive, approach to the problem of neighborhood degradation and abandonment. Intervening in public spaces at the neighborhood scale simultaneously satisfied Infonavit's concerns about both housing abandonment and cost effectiveness. Given the dual objectives, which were relatively new and transcended existent program mandates and prior organizational lines of authority within Infonavit, new institutional practices needed to be established in order to carry out these new programs.

⁸ Zedillo Interview with author, 8/5/15.

⁹ Segú, Interview with author, 8/5/15.

Infonavit's funding structure grants it independence from the federal budgeting process, which gives it greater flexibility when allocating its resources. Annually, the board of Infonavit has discretion to approve and fund pilot projects if they fit into its approved budget.¹⁰ In July of 2014 Infonavit's board approved the Rehabilitación Física program for three pilot projects. The board also stipulated that Fundación Hogares would supervise and manage the pilot.

Fundación Hogares, which was founded in 2010 with seed funding from Infonavit, is led by Paulina Campos (CEO), a former manager in Infonavit's Sustainability Subdirectory. While Fundación Hogares retains strong ties to Infonavit, which provides about two-thirds of its funding, the foundation is legally independent, which allows it to receive funding from private, nonprofit and governmental sources. Following board approval, a formal collaboration agreement was signed which allocated funds from Infonavit to Fundación Hogares.¹¹ Implementing the pilot in partnership with Fundación Hogares provided Infonavit with a high level of transparency, and a collaborator able to execute quickly by avoiding some of the institutional bureaucracy involved with developing and implementing new programs within Infonavit.

Bringing Fundación Hogares into the pilot also offered Infonavit a partner with a track record of efforts to improve social conditions and address quality of life issues in housing developments (*unidades y fraccionamientos*) by actively engaging residents and seeking their participation in neighborhood improvements such as public art projects. Through this work the foundation, which has carried out projects in 170 housing developments impacting nearly 300,000 households, aims to create "communities capable of resolving their own needs and improving their living spaces."¹² Moreover, the foundation's "great management," as Sebastián Fernández put it, and their ability to operate in an open and transparent manner was important in order to execute on a model pilot that would prove "bullet-proof"¹³ to potential scrutiny.

The broader policy aim of exemplifying a new avenue for intervening in social housing facing social conflict and physical decay meant Fundación Hogares' approach to project

¹⁰ The board of directors (Consejo de Administración) of Infonavit is comprised of fifteen members: five representatives from the business sector, five representing the workers, and five representing the Federal Government.

¹¹ Fundación Hogares provided the added advantage of financial flexibility as Infonavit is legally unable to accept funds from private actors, state or local government. Making Fundación Hogares responsible for implementation reduced a juridical barrier to coordination with local governmental actors and opened up the possibility of the contribution of resources by state and municipal entities.

¹² Fundación Hogares Mission Statement/Factsheet.

¹³ Fernández, Interview with author, 8/5/15.

elaboration, implementation and evaluation would be critical to success. As Gerardo Cortés García, president of Fundación Hogares' board, made clear, the pilot represented a model for generating social cohesion and renewing care for public spaces that could be replicated. The project's implication for future policy meant that evaluation became of critical value both to policy makers within Infonavit and to Fundación Hogares. In order to have a clearer understanding of the project's impact both internally and for policy makers, Fundación Hogares set up a careful set of evaluative metrics. Among these were indicators that measured housing valuation and short- and long-term social cohesion (e.g., trust among community members, sense of identity and belonging, and social participation), as well as changes in the perception of security and the use of public spaces by neighbors.

Prior to submission to the board for funding, a team from Fundación Hogares and Infonavit's Office of Sustainability conducted a series of site visits to determine project viability. Following these visits, three *unidades habitacionales* were selected for the Rehabilitación Urbana pilot: Los Fresnos in Tepic, Nayarit; Polígono 108 in Mérida, Yucatán; and Primero de Mayo in Oaxaca de Juárez, Oaxaca, the focus of this case study [see appendix for map of locations]. All three *unidades* were designed and built by Infonavit in the 1970s and 1980s, are situated within the urban footprint [*mancha urbana*] of their respective cities, have access to public transportation, are relatively safe, and have a majority of the individual mortgages within the development paid off. Working in *unidades* with these characteristics was intended to maximize Infonavit's ability to use these interventions as a means of learning from the successes of earlier housing models, and to avoid the challenges that would have accompanied working in developments or *unidades habitacionales* experiencing severe abandonment or delinquency, or that were remote from city centers and services. Site selection was aimed to improve the chances of success and allow Infonavit and Fundación Hogares to demonstrate their ability to rapidly develop and execute urban-scale interventions.

Since the objective of the Rehabilitación Urbana pilot was to test a new model of urban-scale intervention, the ability to demonstrate success was critical. Extensive pre- and post-intervention performance indicators are a staple of Fundación Hogares' work, and in Primero de Mayo efforts were taken to measure both the project's social impact, through a set of questionnaires on communal life and public spaces, and its impact on the home values in order to quantify the return on investment. Infonavit's Office of Urban Development, for its part, drafted a business model for the pilot program with a belief that demonstrating its financial

sustainability would be seen as an important indicator of the project's success and could be used to argue for the program's expansion.

Creating a More Livable Environment

Rehabilitación Urbana was developed to produce a replicable model of intervention. As such, the policy ambitions of the program framed key objectives of the design in Primero de Mayo. The site's particularities, on the other hand, posed a series of challenges that required adapting these broader goals to realities on the ground. Individuals within Infonavit also guided a series of decisions, from enlisting Fundación Hogares to site selection that helped the project respond to the specific physical and social demands that attended working in Oaxaca. The result was a design process that balanced problem setting (in collaboration with local stakeholders), problem solving (through design intentions), and the practical realities of implementation.

Urbanistically and demographically, Primero de Mayo offered several advantages that facilitated the project's successful implementation. It is located within the urban fabric close to jobs, services, and public transportation, and it features numerous retail offerings and a pleasant range of residential/building typologies. Socioeconomically the neighborhood is relatively well off, the majority of residents have paid off their mortgage, and there is a significant retired/elderly population.

The primary aim of the physical intervention in Primero de Mayo was to mitigate the flooding that impacted roughly 20 percent of residents during periods of heavy rain. Like most good design, the physical rehabilitation leveraged the solution to one problem (flooding) into an opportunity to solve a variety of others (e.g., improving walkability for the area's significant elderly population and remodeling an existing community center). This outcome, far from predetermined, resulted from the interaction between the goals of the pilot and the constraints of context. Although the design was intended to produce certain outcomes, doing so was not as simple as laying down a physical idea on paper. The architects also had to consider possible physical and social constraints on implementation, some of which altered the initial design and resulted in the project taking on a different final form.

Some of these accommodations were specific to the site's topography, design and history. Primero de Mayo (1974-75) was among the first Infonavit projects built in the state of Oaxaca. The *unidad* was built in ten stages [*etapas*] on what was then the northern edge of town. Alex, a resident and member of the neighbors' council (who asked that his last name not

be used) recalled that wild animals from the surrounding countryside could frequently be seen in the neighborhood.¹⁴ Primero de Mayo is situated on a sloping hill, and the original design managed the attendant water and circulation problems through a series of connected plazas and walkways. Although primarily single-family homes, buildings along the *unidad's* main streets include several multi-family apartment complexes. The original model single-family house is difficult to identify today, as nearly every home has been modified in the intervening years. The project architect for the rehabilitation, Brenda Solano, pointed to the readily adaptable form of the original model as a key to the neighborhood's urbanistic success.¹⁵ Many of the small plazas and narrow walkways have been planted and tended by neighbors in the intervening decades. At the geographic core of the *unidad* is a community center, which had fallen into a state of disrepair.

If the broad ambitions of Rehabilitación Física meant that the intervention in Primero de Mayo would target the neighborhood's public spaces, the specific aims of the project were not precisely determined at the outset. Rather, the intervention evolved from the designers' careful analysis of the area, residents' input, and conversations with local government officials. From the beginning, Infonavit and Fundación Hogares prioritized the participation of local government. On a practical level, participation would facilitate implementation, particularly in navigating the permitting and approval processes. Efforts to solicit the input of the municipality and state early on in the project's development were also seen as key to the project's long-term success since maintenance and the provision of public services associated with the work would ultimately be provided by local agencies.

Preliminary conversations with municipal officials, facilitated by officials in Infonavit's Oaxaca office, attempted to gauge local government's assessments of Primero de Mayo's needs. Municipal officials suggested replacing the deteriorating community center, a priority echoed by residents in early outreach interviews. (The final design did not do so. Instead, it called for renovating the existing community center.) Articulating the specific role of each actor throughout the initial design process through conversations with state and municipal officials was key to ensuring that expectations were met. The municipality was prepared to undertake an extensive repaving around the site's perimeter and to install new streetlights. The state assisted with the permitting and licensing process. The cooperation is particularly noteworthy given that

¹⁴ Alex, Interview with author, 7/8/15.

¹⁵ Solano, Interview with author, 8/7/15.

the sitting governor and municipal president come from competing political parties (Movimiento Ciudadano and PRI, respectively).

Once target sites for the pilot program were selected, Infonavit's Office of Sustainability began the process of choosing the architects for the conceptual design. A number of firms were solicited to submit qualifications, and from this list Infonavit's Office of Urban Development selected a designer for each site based on predetermined criteria. Infonavit selected the Mexico City-based firm Taller de Operaciones Ambientales (TOA) to carry out a preliminary conceptual design for the site in Oaxaca prior to Fundación Hogares' participation. TOA is a multi-disciplinary firm with extensive experience in architecture, landscape, master planning, research, and community-based design, including both public space projects and sites with flooding issues. The project brief prepared by Infonavit was not very prescriptive regarding the specific issues the intervention needed to address. This enabled TOA to use a series of preliminary investigations, site visits and informal conversations with neighbors and officials to define the problematics addressed through their proposal.

Engaging local government officials was coupled with an effort to spark participation and generate buy-in from residents. This preliminary research conducted by TOA's designers occurred while the scope of the intervention in Primero de Mayo remained unclear because Infonavit's board of directors had yet to formally approve the project. As a result, in the early stages of the research and design process, community input was solicited informally so as to not "plant false expectations"¹⁶ about the project, said Brenda Solano, the project architect. The decision not to hold large public meetings, at this stage, was seen as a means of managing expectations among residents.

Flooding, which occurred in periods of heavy rain, emerged as a key issue in interviews with neighbors. The series of proposed public space interventions coalesced around the management and retention of water in Primero de Mayo. Some residents, however, were resistant to this design concept because flooding impacted residents of Primero de Mayo unevenly (mostly affecting the stages at lower elevations of the *unidad* in *etapas* 6 and to lesser extents 1, 4, and 5). In order to develop an intervention with broad appeal, the project aimed to balance addressing the specific problem confronting some residents with offering public benefits to community members who were not directly affected by flooding.

¹⁶ Solano, Interview with author, 8/7/15.

Moreover, as Brenda Solano made clear, the objective of the intervention was not to completely solve the problem of flooding but to mitigate its worst effects. This objective was formulated in response not only to considerations of the project's target public, but also to technical constraints identified by TOA. In their research, TOA determined that run-off from neighborhoods further uphill played a significant role in flooding, which meant that the problem could not be solved simply by improving storm water management within Primero de Mayo. Although outside the scope of the physical intervention, usage issues, such as the blockage of drainage systems caused by the improper disposal of waste in Primero de Mayo's central canal, also contributed to the *unidad's* flooding. Social work carried out as a component of the project (detailed below) attempted to address this sort of non-physical factor which contributed to the problems in Primero de Mayo and was therefore seen as a necessary complement to the physical intervention.

Once funding was approved, Fundación Hogares opted to hire TOA again to carry out the executive project for Primero de Mayo. Fundación Hogares was also charged with selecting a construction company and project supervisor. To ensure transparency and efficiency in the process, Fundación Hogares had the pro bono support of the Boston Consulting Group, which assisted in clearly defining the roles and responsibilities of each actor and laid out the steps needed to ensure the Rehabilitación Física pilots were successfully implemented. The foundation began the process by requesting that a list of firms, suggested by Infonavit, place a bid for the construction contracts. For the pilot projects in Nayarit and Mérida, construction companies with a national profile were awarded the job. In Oaxaca, five firms participated in the first round of bidding. However, all exceeded Infonavit's budget for the work. (Six firms submitted bids for the project supervision contract, which was eventually awarded to the Mexico City-based firm Asari.)

Fundación Hogares decided to conduct a second round of bidding for the construction contract, with an effort to clarify details that might help firms better estimate the project's cost. The winner was Monterey Funding Projects, a local firm focused primarily on relatively small-scale developments. The owner of the firm, David Indico, who headed the local Chamber of Developers (CANADEVI), knew the local construction industry and had experience navigating the particularities of working in Oaxaca. Although the company's local roots were not a deciding criterion in the selection process, Fundación Hogares and Infonavit described the choice to hire a Oaxacan developer as ultimately critical to the project's success. Indico, for example, recalled

that his local knowledge made it possible for his firm to successfully negotiate with competing cartels of stone-providers, each with contested claims to area of influence in Oaxaca, in order to purchase materials.¹⁷

Employees from Asari, the project supervisor for all three sites of the Rehabilitación Física pilot, also had to adapt to the particularities of working in Oaxaca. They hired a local project supervisor, with over 25 years of experience in the private sector, to oversee day-to-day operations on the construction site. The supervisor was responsible for verifying that the quality of construction matched TOA's specifications and for monitoring Monterey's expenses to ensure the project was on budget and on time. Asari's role in communicating issues that emerged on site to TOA, Fundación Hogares and Infonavit also proved critical to the project's success. The high level of design specification outlined in TOA's design made construction supervision all the more important. Throughout the process, Monterey proved willing to adapt to these demands. For Fundación Hogares and Infonavit, building to a high level of design specification was important to demonstrate their ability to implement top quality projects in challenging contexts within a compressed time frame. Fundación Hogares' desire to provide a high degree of transparency and accountability also meant Asari needed to tightly control costs and stay on schedule. These requirements were motivated by a desire for Rehabilitación Urbana to serve as an example of their ability to implement rapidly and efficiently. Members of the Asari team also identified a second, more practical reason for ensuring the project was swiftly executed: the longer construction dragged on, the more opportunities there would be for neighbors to make demands, push back against the project, or lodge complaints. As Oscar Contreras from Asari put it, "you need to get in and out quickly ... when projects [get delayed] ... it's chaos. ... If [residents] see you there they ask you for things."¹⁸

From Design Intervention to Community Engagement

Although the goals of the intervention had initially been primarily physical, it quickly became apparent that achieving the desired outcomes would require substantial community involvement. The project's overseers not only had to navigate Oaxaca's challenging social climate, they also wanted to create a sense of ownership of the neighborhood's public spaces among its neighbors. This latter desire is evident from the engagement efforts carried out during

¹⁷ Indico, Interview with author, 7/6/15.

¹⁸ Contreras, Interview with author, 8/6/15.

the project's elaboration, Fundación Hogares' responsiveness to community feedback once construction was underway, and the logistical support for continued community engagement work in the neighborhood following completion. The desire to engage neighbors was driven by both pragmatism and idealism: it was a strategy to minimize the risks of local pushback, but also to instill a sense of community and shared communal ownership of public spaces through participation. As Alberto Esteban from Fundación Hogares put it, the aim was to "create this culture of maintenance ... and ownership."¹⁹ Community participation both served the broader policy goals of the pilot and allowed Infonavit and Fundación Hogares to demonstrate their capacity to implement a community project in Oaxaca's challenging circumstances.

In order to successfully carry out the project in Primero de Mayo, community buy-in was necessary. Seeking the input of neighbors was a way of hedging against possible opposition. Fundación Hogares' experience appealed to Infonavit's belief that community engagement provided an important advantage for working in Primero de Mayo. Even though their role on the pilot was to supervise and provide technical oversight, Fundación Hogares' sensitivity to social concerns attuned them to the prevailing social dynamics required for the project's success. The foundation played another important role in enabling the necessary community engagement: it provided a neutral public face for the project, one free from residents' prior associations with Infonavit. As Fundación Hogares' head Paulina Campos stated, "people have more confidence when a non-profit does something, rather than a public institute ... because at the end Infonavit collects mortgages, so sometimes it's hard to change [that perception] ... [Residents] think about [Infonavit] in one way."²⁰ Rather than having to manage the expectations and claims that might accompany an Infonavit-led project and perhaps limit residents' willingness to participate, Fundación Hogares' public role created a climate in which residents were more likely to engage.

In the majority of their work partnering with Infonavit, Fundación Hogares had conducted the community outreach work. In Primero de Mayo, however, Infonavit employees carried out the initial six-month engagement work that followed site selection. This arrangement, laid out by Infonavit's board, placed decision-making with an organization that was nimble enough to be capable of providing tight supervision while maintaining a sensitivity to social issues that were integral to working in Oaxaca. The outreach conducted by Infonavit

¹⁹ Esteban, Interview with author, 8/6/15.

²⁰ Campos, Interview with author, 7/1/15.

prior to construction was intended to inform the community about the aims of the project, gather input, and foster a sense of ownership of the project. Infonavit employees established neighbors' councils [*consejo de vecinos*], organized a set of work days, held a series of workshops (on issues from public security to recycling), and assisted neighbors in filing requests for work from city service providers. A regulation that informed neighborly etiquette and rules [*reglamento vecinal*] was also laid out with the help of Infonavit staff. These steps were intended to provide a variety of forums for feedback and form a more cohesive social engagement strategy.

The decision to use Infonavit employees to set up advisory committees is particularly intriguing in the context of the municipality of Oaxaca de Juárez because the city already had an elected body responsible for serving as the interface between residents and local government. The so-called Committee de Vida Vecinal (COMVIVE) emerged in the early 2000s as a means of streamlining citizen feedback in order to respond to extremely localized urban problems. The decision to create a new set of advisory committees for the intervention in Primero de Mayo had several possible impetuses: these newly formed committees brought together neighbors from all ten stages [*etapas*] of Primero de Mayo, whereas the COMVIVEs were organized according to stages; second, the establishment of new committees would be more likely to operate outside the existing political patronage structure that the COMVIVEs were susceptible to.

Yet in order to facilitate implementation, Fundación Hogares and Infonavit simultaneously worked within existing neighborhood institutions. Once TOA's design was completed and its budget was approved, the project needed to be presented to residents of Primero de Mayo. Infonavit officials in Oaxaca had taken steps to prevent word from getting out about the project prior to its approval. Now, working through Francisco Ángel López, director of the municipal housing institute (IMV) in Oaxaca, they reached out to leaders of the COMVIVE of the 4th stage of Primero de Mayo, where the community center slated to be renovated was located. They invited the COMVIVE of the 4th stage to their offices and asked them to convene a neighbors' meeting where Infonavit would officially present the project to the community. The meeting took place in the community center with roughly 300 residents in attendance.

Once construction began, Fundación Hogares repeatedly demonstrated its responsiveness to feedback. The first stages of construction involved the building of the pedestrian bridges across the intervention's central canal. As crews began work, neighbors

voiced concerns about the bridges. The initial design used gabions [*gaviónes*] to create a sloped descent from the sidewalk down into the canal and back up the other side. The concept was intended to use the bridges to slow water in times of rain and provide access when the canal was dry. Residents worried, however, that the solution would prevent them from crossing the canal during heavy rains, and that the gabions would stop-up water in the canal and cause flooding in previously unaffected areas of Primero de Mayo.

Opposition to the design of the bridges began to grow as construction continued. Residents brought their complaints to the construction crews, who passed them on to the onsite project manager from Asari. Neighbors soon began threatening to shut down the project if changes were not made to the design of the bridge. These issues were communicated directly from Asari's local onsite supervisor to Asari's supervisor in Mexico City, members of Infonavit's Sustainability Office, Fundación Hogares, and TOA. It is revealing of the communications challenges in a project of this scale that despite the presence of "people from Infonavit [and] people from Fundación" it was "the people on the construction site [who had] to attend to [neighbors'] questions,"²¹ as Artemio Hernandez, the onsite supervisor said. The constant communication between the project supervisors and Fundación Hogares, however, enabled even issues raised outside the official channels (the neighbors' forums) to be communicated up the chain of command to the appropriate supervisors. Responsiveness to community input needed to accommodate communication channels outside those officially set up, because the concerns that emerged throughout construction were equally liable to garner opposition. When a resident threatened to go on a hunger strike until the bridges were redesigned, this information was quickly communicated to Paulina Campos, who explained that "[Fundación Hogares] knew we needed to handle this situation quickly before it escalated."²²

Campos flew to Oaxaca the following morning and organized a meeting with residents. The hope was that explaining the project's intentions might assuage their doubts. However, as a precautionary measure, TOA was asked to prepare a series of alternative designs in case the residents failed to accept the original scheme. In their original design, TOA had utilized a set of relatively simple elements. According to Campos, these components had the advantage that they "helped absorb the changes, and do them quickly,"²³ while avoiding the costs of a major

²¹ Hernandez, Interview with author, 7/10/15.

²² Campos, Interview with author, 7/1/15.

²³ Campos, Interview with author, 7/1/15.

redesign. The community meeting lasted roughly four hours. By the time it ended, Fundación Hogares and Infonavit had conceded and, together with the neighbors, had agreed upon a modified design scheme. Incorporating the opinion of an architect in attendance who lived in Primero de Mayo proved important in gathering support from the remaining skeptical residents.

The redesign of pedestrian bridges reveals both the mechanisms through which feedback was communicated to decision makers and who wielded decision making power. While Fundación Hogares officially had the final say on decisions, the ‘construction committee’ [*comité de construcción*], comprised of staff from Infonavit’s Sustainability Office, Asari and Fundación Hogares, deliberated together on the question of the bridges as well as on the various technical issues that emerged throughout construction.

The neighbors’ opposition to the bridges once construction was underway made Brenda Solano wonder whether a more graphic and didactic explanation of the original design when it was first introduced might have been enough to quell skepticism. She observed that “when someone is already bothered they are more closed ... Maybe if we had started [with a more graphic explanation], we could have convinced the majority of neighbors” to accept the original design.²⁴ Resistance, she seemed to imply, can be a slippery slope. Once the residents had latched onto the bridges as a problem, it was less risky for Fundación Hogares to alter the design than to argue for the merits of the original design. The pushback from neighbors on the design of the bridges convinced Campos and Fundación Hogares that they needed to take a more active role in communicating the details of the project in order to avoid the creation of false expectations, misunderstandings and speculation regarding the details and intentions of the intervention. As Oscar Contreras of Asari stated, “if you don’t explain things in detail uncertainty grows.”²⁵ Fundación Hogares subsequently set up a series of placards and billboards to communicate project details and specifics. These included information such as “Did you realize we’re planting this many new trees,” which aimed to minimize speculation around the project.

Underlying the outreach work in Primero de Mayo was a belief that this type of intervention could have important social implications for how neighbors used their public spaces and their collective sense of ownership of these spaces. From this perspective, the intervention was as much about re-instilling this shared sense of communal life in public spaces as about the

²⁴ Solano, Interview with author, 8/7/15.

²⁵ Contreras, Interview with author, 8/6/15.

built project itself. Fundación Hogares and Infonavit took numerous steps to engage residents in the design and construction process towards this end. Oaxaca has a tradition of communal work sessions, derived from an indigenous custom called '*el tequio*.' The neighborhood councils, with the assistance of social workers from Infonavit's local office, organized *tequios* to clean public areas and carry out small improvement projects like painting and weeding. The hope was that in seeing the rehabilitation as something in which they were an integral component, residents would be more likely to spend time on upkeep and use the neighborhood's public spaces with greater care.

Conclusions: The Role of Fundación Hogares in Mediating Differences and Synthesizing Objectives

How did the promoters of this project achieve the successful coordination, collaboration, and fulfillment of multiple objectives across a diverse range of stakeholders? Three major factors made this success possible.

First, the participation of Fundación Hogares, a non-governmental organization – albeit one with strong ties to Infonavit – enabled a set of institutional arrangements conducive to adaptation that may have been difficult if the project had remained entirely in-house at Infonavit. Working outside Infonavit's institutional structure, coupled with their expertise in community development, facilitated Fundación Hogares' ability to foresee and address potential roadblocks in response to rapidly shifting conditions on the ground.

Fundación Hogares' relative institutional autonomy allowed the team to move quickly and flexibly. Infonavit, on the other hand, provided financial resources, technical expertise, and scale to the project. Fundación Hogares' experience with community engagement proved important in gathering residents' input and securing their support for the project. Critically, its role as the public face of the intervention also instilled a greater sense of trust from residents. Close supervision and attention to social dynamics provided by Fundación Hogares' staff were also advantageous in navigating the community's resistance to certain elements of the design.

Second, because of the historical context of Oaxaca, decision makers sought community buy-in and feedback as a precautionary measure. The challenges of working in Oaxaca figured prominently in interviews with key actors. From the outset, officials from Fundación Hogares and Infonavit and others involved in executing the project were sensitive to the fact that neighbors might oppose certain aspects of the project. They were concerned that residents'

resistance could threaten to shut down or delay the project and that associated labor unions might call a strike. Leaders within Fundación Hogares (and to a lesser extent Infonavit) wisely undertook a series of steps that minimized the risks posed by these threats. These ultimately included hiring a local construction firm, using project supervisors with a local presence, setting a swift construction timeline, carefully communicating and managing public expectations, and reaching out to the target community. Perhaps most important was the fact that Fundación Hogares' staff quickly responded to feedback from the community and, thanks to the designer's flexibility, was able to address residents' concerns without sacrificing the project's intent.

Finally, the overwhelming concern that the growing problem of housing abandonment might irreparably damage Infonavit's reputation and operations produced a shared desire within the organization to innovate and undertake implementable actions that deviated from existing models of intervention.

Within Infonavit there was (and still is) a serious desire to address the growing problem of abandoned housing and its attendant risk to the institute's financial health. In addition, Infonavit is growing increasingly aware that the housing model it has developed over the past 15 years has led to a set of challenging urbanistic and social conditions for its beneficiaries.

These two concerns have led to an emerging consensus around the need to do *something* different. Rehabilitación Urbana represents an acknowledgment of this, and it offered a way to address the social and financial problems in the subsidized housing sector by moving beyond a narrow understanding of what makes a good home. Expanding agency focus beyond the home and towards its physical surroundings should be considered an important shift with implications for future visions of how to connect housing to community life. Yet the project did more than bring the urban design dimension into the picture. Many stakeholders found great appeal in the financial aspects of the Rehabilitación Urbana pilot project in Primero de Mayo. To these decision makers, the pilot offered a cost-efficient model of intervention that could help minimize the risk of issuing loans that may be in danger of defaulting. Moreover, the model was considered to be a relatively non-capital intensive approach that also might generate a high rate of return. That a sound fiscal model was used to call attention to the urban design context of social housing should also be considered a positive step.

In short, the Primero de Mayo intervention's success was achieved thanks to a fiscally responsible policy that enabled simultaneously a design intervention intended to solve a physical problem, a community development exercise, and a policy experiment that provided a

new means of value creation (*plusvalía*) for the owners of the affected housing development. Far from producing stalemate or conflict, the coexistence of these very different motivating agendas is precisely what made the Primero de Mayo project so significant. The challenge ahead is to determine whether and how to scale up such experiments in ways that might allow Infonavit to institutionalize this experiment in policy innovation and spread the benefits across the country.

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Interviewee list

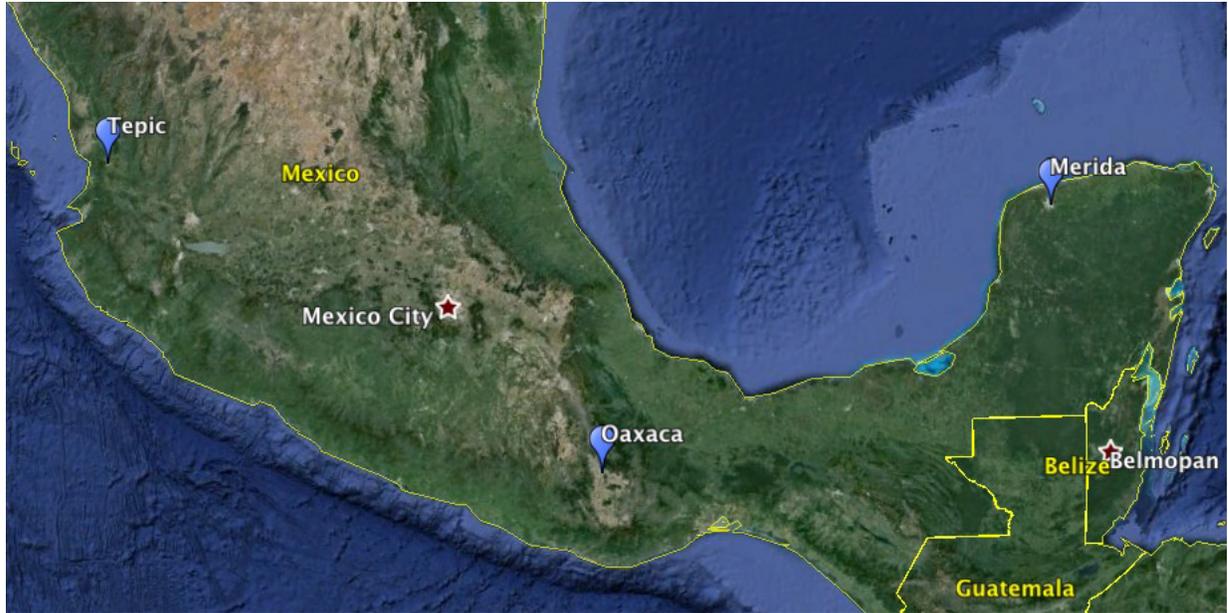
1. Alex
Resident and member of neighbors' council (who asked that his last name not be used)
7/8/15
2. Alberto Benitez
Estado de Oaxaca, Subsecretario de Planeación e Inversión Pública, Secretaría de Finanzas
7/16/15
3. Paulina Campos
Fundación Hogares, Dirección General
7/1/15 and 8/7/15
4. Bertoldo Leyva Castro
SEDATU, Subdelegado Estatal
7/10/15
5. Gonzalo Villegas Chavarria
Asari
8/6/15
6. David Cruz
Monterey Funding
7/6/15

7. Alberto Esteban
Fundación Hogares, Gerente de Programas
8/6/15
8. Don Fermin
Resident and member of neighbors' council 8/15/15
9. Sebastián Fernández
Infonavit, Director Sectorial Empresarial
8/5/15
10. Gerardo Cortés García
Fundación Hogares, President of the Board
7/1/15
11. Artemio Hernandez
Asari, Local Project Supervisor
7/10/15
12. David Indico
Monterey Funding, Director General
7/6/15
13. Helena Iturribarría
Estado de Oaxaca, Instituto de Ecologia
7/13/15
14. Jorge
Resident and member of neighbors' council (who asked that his last name not be used)
8/15/15
15. Francisco Ángel López
Instituto Municipal de la Vivienda (IMV)
7/6/15
16. Rosa Maria
Resident and member of neighbors' council (who asked that her last name not be used)
8/15/15
17. Don Mariano
Committee de Vida Vecinal (COMVIVE) Ex-Presidente
7/14/15
18. Oscar Contreras Martret
Asari, Director General
8/6/15
19. Vicente Mendoza
Infonavit, Subdirector general de Planeación y Finanzas
8/5/15
20. Joaquin Morales Noyola
Comision Estatal de Vivienda (CEVI), Director General
7/3/15

21. Doña O
Resident and member of neighbors' council (who asked that her last name not be used)
7/8/15
22. Judith Orozco
Municipio de Oaxaca de Juárez
Secretaría de Desarrollo Urbano, Ecología y Obras Publicas
7/10/15
23. Eduardo Rivera
Fundación Hogares, Coordinator General de Desarrollo Comunitario
7/30/15
24. Surella Segú
Infonavit, Gerente de Desarrollo Urbano y Vivienda
8/5/15
25. Brenda Solano
Taller de Operaciones Ambientales (TOA)
8/7/15
26. Cesar Moreno Villalobos
Infonavit - Delagación Oaxaca, Gerencia del Área de Técnica y de Sustentabilidad
7/2/15
27. Francisco Angel Villareal
Infonavit – Delagación Oaxaca, Delegado Estatal
7/2/15
28. Carlos Zedillo
Infonavit, Subdirector de Sustentabilidad y Técnica
8/5/15

Appendix A:

Rehabilitación Física interventions (Tepic, Nayarit; Oaxaca de Juárez, Oaxaca; Mérida, Yucatán)



Source: Google Earth