

The old port district of Buenos Aires (above) is thriving again. Santiago Calatrava's footbridge (inset), Puente de la Mujer, spans the water at dock 3.

ore than two decades have passed since a government-led megaproject set out to transform Puerto Madero, the oldest sector of the port district at the mouth of the River Plate in Buenos Aires, Argentina. Once a center of decay that was hastening decline in the adjacent downtown, Puerto Madero is now a tourist icon and hub of progress, drawing in residents and visitors alike to its park and cultural amenities, housing approximately 5,000 new inhabitants, and generating 45,000 service jobs. Home to a number of new architectural landmarks—including Santiago Calatrava's Woman's Bridge (Puente de la Mujer) and César Pelli's YPF headquarters—the redeveloped port has contributed to the reactivation of the city center, influencing development trends throughout the Argentinean capital.

Encompassing 170 hectares near the downtown presidential palace (Casa Rosada), Puerto Madero was one of Latin America's first urban brownfield renewal projects of this scale and complexity. The project was conceived as part of a wider strategy for city-center development that also included changes in land use regulations, building refurbishments, and social housing in heritage areas. This article draws on two decades'

worth of evidence and experience with the project to examine the extent to which Puerto Madero has achieved its central objectives: to contribute to the reversal of undesirable development patterns in the city, assert the downtown as the eminent center of Buenos Aires, stimulate the local economy, and improve the living conditions of all porteños.

The Port in Crisis

Puerto Madero was abandoned as a port at the beginning of the 20th century, when operations transferred to Puerto Nuevo. By the late 1980s, Puerto Madero had suffered several decades of neglect and underutilization. The federal General Administration of Ports owned the land, but the city and national governments both had jurisdiction over planning. Similarly, greater Buenos Aires home to 35 percent of Argentina's population and producer of 46 percent of its GDP—is governed by an overlapping set of institutions that often have trouble coordinating. To simplify this interjurisdictional governance, a public limited corporation, with shares divided equally between the national and city governments, was formed to manage the project. In 1989, the federal government transferred ownership of this sector of the port to the new corporation, CAPM (Corporación Antiguo Puerto Madero).

After receiving the federal land transfer, the role of CAPM was to develop the site plan, define a self-funded financial model, undertake the site improvements associated with the project, commercialize the land, and supervise the development process in accordance with the established time frames and guidelines of the master plan. Unlike similar ventures elsewhere in the world, which generally rely on substantial public financing or access to credit, CAPM by decree would receive no public resources besides the land transfer and would generate its own revenue to cover operating costs. The port redevelopment could not have happened otherwise, as the federal government was focused on fiscal recovery and job creation amidst a nationwide economic crisis.

Context and Chronology of the Megaproject

As in most Latin American cities, the displacement of activities from Buenos Aires's traditional downtown had curtailed use of the public transit system and led to the slow decline of historical buildings, many of which had lapsed into substandard

housing. The proposed redevelopment of Puerto Madero was part of the city's broader strategy to protect heritage, promote downtown development, stimulate the local economy, and contribute to the reversal of these undesirable settlement

Development took place in four stages. During the first phase (1989-1992), CAPM sold the old docklands on the western end of the port, initiating the redevelopment process and covering initial project costs. In 1991, the city and Society of Architects signed an agreement to facilitate the Puerto Madero National Ideas Competition.

In 1992, the three winning teams collaborated to create the Draft Urban Project for Puerto Madero. The redevelopment required a new subdivision geometry that would allow for construction without requiring the demolition of valuable landmark structures. Many of the historical port buildings, such as the warehouses, would be restored with new functions, thereby com-

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bining valuable historic patrimony with new development.

During the second phase (1993–1995), the winners of the Ideas Competition were awarded the master plan contract. The original proposal called for the development of 1.5 million square meters of floor area concentrated in a central location to help revive the downtown. With a 20-year horizon, the



Harbor cranes are still an integral part of the cityscape.



New towers rise behind the old docks.

plan comprised commercial activities, cultural and recreational facilities, cafes, restaurants, amenities, professional studios, and medium-sized commercial activities (e.g. printing, packaging, and storage companies), which the 16 renovated former port warehouses could adequately accommodate. Provisions for green space, to compensate for an observed deficit in the extended city center, included a metropolitan central park, ecological reserve, and rehabilitated southern esplanade. Given the original assumption that office buildings would predominate, the number of anticipated dwelling units was to be fewer than 3,000. (Residential use experienced higher demand, however, leading to approximately 11,000 dwellings units today.)

During the third phase (1996–2000), most of the public works were built, and project expenditures peaked along with land sales. Throughout this phase, the cost per square meter of construction did not vary significantly, oscillating from around \$150 to \$300 per square meter up to the end of the decade. (Note: All prices are in U.S. dollars.) By this third phase, the investor profile had evolved from an initial pioneer group of small and medium firms that faced high levels of risk (1989–1993) to large firms that invested in proven products. By 2001, there was little public land left to sell, and the public corporation had enough liquid assets to

complete the public works required by the project.

The fourth phase of development includes two segments, from 2001 to 2003 and from 2004 to today. Initially, the project suffered from the economic, financial, and political turmoil associated with the 2001 fiscal crisis propelled by the government's default on its external debt payments. Throughout that period, CAPM faced high levels of governmental uncertainty, and land sales stalled. After the 2003 presidential elections, however, the country resumed international negotiations, restructured its external debt, and significantly improved economic conditions. Simultaneously, CAPM was able to resolve litigation on some parcels, which it then proceeded to sell, using the revenues to complete the public works on site.

As the land in Puerto Madero became scarce, developers looked to the surrounding downtown areas as alternative investment locations. The scale and complexity of the port redevelopment attracted investors with closer links to national and international financial markets. Many developers chose to invest downtown instead of in the suburbs. Thus the project succeeded in redirecting market trends to align with urban policy priorities—a shift that would not have happened without state intervention.

Project Achievements

Now the project is almost complete, with approximately 1.5 million square meters of floor area as planned. From start to finish, project funds were derived entirely from land sales and concessions.

By 2011, CAPM had sold approximately \$257.7 million worth of property and invested \$113 million in public works, with an overhead of about \$92 million, including management fees and other operating expenses. Land prices escalated from \$150 in the early 1990s to \$1,200 per square meter today, and the project has attracted considerable private investment in addition to the state's land transfer.

The project added four major bodies of water totaling 39 hectares and 28 hectares of green space to the city's parks system. It also facilitated the opening of the ecological reserve and enabled renewed access to the southern esplanade, the Costanera Sur, designed at the beginning of the 20th century by Jean-Claude Nicolas Forestier, who designed Paseo de Prado in Havana, Cuba. The adjacent downtown again serves as the undisputed reference point for public office and high-level administrative, financial, and commercial activity.

Puerto Madero spurred local economic growth, which has ultimately translated into higher tax revenues. As a state initiative, it triggered more than \$2.5 billion of private investment, with a present value exceeding \$6 billion. Although a full accounting is not available, revenues from corporate income taxes are estimated at \$158 million, and taxes paid by the public corporation are \$19.86 million. The new property owners pay approximately \$12.4 million per year in property taxes to the city government. Once construction is complete, property tax revenues are expected to reach \$24.3 million per year.

The project also stimulated job market growth. To date, private construction in Puerto Madero involved about \$450 million in labor costs—the equivalent of 900,000 months of work or 3,750 jobs per year distributed over 20 years. The project investments in public works created 313 jobs per year for 20 years plus 26,777 administrative jobs as of 2006 and 45,281 services jobs by 2010. These figures demonstrate the vital role the project has played in stimulating the local economy.

Diminished Returns

Despite the overall success of Puerto Madero, its social outcomes are considered unsatisfactory by many observers. Largely to blame was the fast sale of big land parcels during the most dynamic sales

period, from 1996 to 1999. Some of these parcels were the size of an entire city block and are now occupied by towers that function in some ways like vertical gated communities. Furthermore, large, fully equipped firms were needed to perform the tremendous

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volume of construction, which excluded smaller and medium-sized companies. Thus, the morphology of large land parcels essentially defined the types of businesses and products being offered as well as the social profile of prospective buyers.

Moreover, the marketing strategy of private developers colored the general project discourse, diluting socially inclusive public policy objectives in favor of creating an exclusive neighborhood. Wealthy citizens and high-end entrepreneurs covet Puerto Madero's residential and commercial spaces. CAPM has difficulty protecting the public character of even the district's new open spaces, such as the ecological reserve, as affluent port district residents strongly discourage entertainment and sport activities that would appeal to all *porteños* citywide. In this regard, CAPM limited itself to articulating the interests of private entrepreneurs

The ecological reserve affords views of the urban skyline.



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Bars and clubs in the renovated docks light up the port at night.

and current residents and ignored policies designed to benefit many inhabitants of the city. Affordable housing and other elements that would have ensured diversity in the residential demographics were not part of CAPM's mandate. Several social programs with this objective were planned as part of the broader downtown strategy, but they did not materialize, isolating Puerto Madero as an elite development area.

The project scale of Puerto Madero, which would have been risky and unmanageable for private investors at the time, proves that the public sector can assume a leading role in developing the city. It also demonstrates, however, that socially progressive standards are difficult to maintain once a project becomes prestigious and rising land values increase the pressure from private developers. Puerto Madero's ability to self-finance was a doubleedged sword. On the one hand, it enabled a stateled development process without incurring government costs. Because the public corporation could defer the payment of dividends to shareholders, it was able to capitalize on the proceeds of land sales and reinvest in site works and public amenities. The open and accessible neighborhood, dotted with public infrastructure and open space, largely protected the public interest. Furthermore, the project stimulated economic activity and contributed to a more efficient overall development pattern citywide, fulfilling two important public policy objectives.

Outcomes would have improved if financial support from multilateral agency loans had been available, to better pace the rhythm of sales and enable long-term decisions that would enhance the public benefit of the project. Flexible bidding requirements on large plots in the second half of the 1990s increased sales but ensured that the majority of the incremental land value from the last increase in real estate prices accrued to the large investors who commited early.

In 2011, CAPM transferred the maintenance of all developed areas to the city and determined to complete the remaining public works by 2013. Today, CAPM's

income and expenditure are balanced; income is limited to rents from the piers and the parking lots. Corporate assets include several properties (offices, lots) whose proceeds constitute the company profit and whose market value is estimated at \$50 million. These profits could seed new capital ventures or be transferred to shareholders when they decide to dissolve CAPM. The soundness of CAPM's financial statements is verified, though the criticism it inspired during the development of Puerto Madero may cost it access to new ventures from the government.

The initial public investment in Puerto Madero was \$120 million, including the land (originally assessed at \$60 million) and a set of intangible services such as project design, expertise, and consulting. Total land sales amounted to \$257.7 million with a general cost (administration, taxes) of around \$92 million (excluding start-up costs, which did not involve monetary transactions), which leaves a modest rate of return. Although prices should have been promotional during the initial stage of development, sale values could have increased over time, if sales had been timed to take advantage of increased market prices. Higher rates of return would have required higher average sales value, better paced land sales, and more modest public works commitments, such as infrastructure, public space, and parks. CAPM could have saved

considerably if construction of bridges and walkways had not extended beyond the project perimeter, under municipal jurisdiction.

The results of the project would have differed greatly had the land been sold unimproved or had it landed in the hands of private developers. In this regard, it is important to note that at the time of project inception the risk was generally considered high, and the scale of investment surpassed the capacity of local private investors. Similarly, international investors would have been unwilling to take on such a high level of risk without major concessions on the part of the government. Furthermore, private developers were interested in promoting large projects with access restricted almost exclusively to owners. A number of final project attributes, such as the public space contributions and holistic character of the development, were guaranteed by the control exercised by the government via the public corporation to ensure benefits for the community.

Conclusion

The original objectives of the project—to stimulate economic activity, affirm the role of the city center, contribute to the reversal of undesirable development patterns, and improve living conditions—have arguably been met. Puerto Madero created jobs, stimulated the local economy, and brought higher levels of investment and complexity downtown, contributing to its supremacy and leading to improvements in the surrounding area. It created high-quality open space, enhanced the metropolitan park system, and improved the overall development pattern in Buenos Aires.

However, the relaxation of quality controls, wide scope of the projects, and rapid pace of land sales at certain times reduced potential project revenues accruing to the public sector and reduced the initiative's redistributive capacity. Access to credit would have strengthened CAPM's position and allowed the careful staging of land sales and site improvements. It is encouraging that residential occupancy has greatly exceeded original projections, consolidating a trend to repopulate the city center, though the project should have included a percentage of affordable housing.

These results reveal the complexity of undertaking multiple initiatives to achieve a balanced social outcome. Puerto Madero fell short of incorporating a greater social mix, because other strategies for the downtown, including the rehabilitation of heritage buildings, were unrealized. Future urban project management initiatives should contemplate factors that would ensure the continuity of policies. Within this framework, it is important to encourage participation among the beneficiaries of specific interventions, such as

affordable housing, as their involvement and commitment is the strongest guarantor of policy continuity.

Finally, Puerto Madero indicates the state's capacity to proactively lead the urban development process. In this case, the state stepped out of a regulatory role and took charge of a significant redevelopment initiative. CAPM demonstrated a capacity to

Some of these parcels are now occupied by towers that function in some ways like vertical gated communities.

sustain a complex urban regeneration project over a long period of time and stay afloat through a turbulent political climate and severe economic crisis. The creation of the public corporation represents a creative innovation in urban management, as it offers an example of how to achieve project self-financing and interjurisdictional cooperation in urban governance. In this regard, the Puerto Madero experience serves as a convincing model for interjurisdictional urban management and reaffirms the positive role that the state can play in city planning initiatives. I

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