

PROJECT SUMMARIES PART 2



Municipal Public-Private Partnership Framework

The Municipal Public-Private Partnership Framework can be found at www.thegpsc.org and www.worldbank.org/ppplrc.

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TABLE OF CONTENTS

INDEX OF PROJECT SUMMARIES BY SECTORS

Urban Development	28
70. City Improvement Districts, Johannesburg, South Africa	28
71. Durban Point Waterfront Development Project, eThekweni, South Africa	29
72. Croydon Council Urban Regeneration Vehicle, London Borough of Croydon, United Kingdom	30
73. Redevelopment of Library and Fire Station, Washington, District of Columbia, United States	32
74. Fire Station Refurbishment, Chapel Hill, North Carolina, United States	33
75. Capitol Crossing, Washington, District of Columbia, United States	34
76. Downtown Renewal, Silver Spring, Maryland, United States	35
77. South Waterfront Central District Greenway, Portland, Oregon, United States	36
78. Mixed Use Development, Virginia Beach, Virginia, United States	37
79. Long Beach Civic Center Project, Long Beach, California, United States	38

Affordable Housing	40
80. Regent Park Affordable Housing Project, Toronto, Canada	40
81. Sustainable Housing Project in Turin, Italy	41
82. Challenging Case: Slum Rehabilitation Scheme, Maharashtra, India	42
83. Challenging Case: Dege Eco Village, Dar es Salaam, Tanzania	43
84. Challenging Case: Unity Housing Estate, Bauchi Town, Nigeria	44

TABLE OF CONTENTS

INDEX OF PROJECT SUMMARIES BY COUNTRIES

F / G

France

54. Aquanova America, Saint-Dié-des-Vosges **10**

69. Reconstruction, Management, and Maintenance **27**

of Street Lighting and Other Public Facilities,

Juvignac

Germany

55. Düsseldorf Museum, Kunstpalast **11**

58. Elbphilharmonie, Hamburg **14**

S / T

Singapore

51. Sports Hub **06**

Spain

95. Majadahonda's Puerta de Hierro Hospital, Madrid **54**

South Africa

61. Kruger National Park **18**

62. Jozini Tiger Lodge, Jozini Municipality of **19**

KwaZulu-Natal

70. City Improvements Districts, Johannesburg **28**

71. Durban Point Waterfront Development Project, **29**

EtheKwini

93. Inkosi Albert Luthuli Hospital, KwaZulu-Natal **52**

I

India

57. Jal Mahal Palace in Jaipur **13**

64. Roof-top Solar Program, Gujarat, Gandhinagar **21**

67. Street Lighting Project, Nasik, Maharashtra **24**

68. Energy-efficient Street Lighting, Bhubaneswar, **26**

Odisha

82. Slum Rehabilitation Scheme, Maharashtra **42**

86. Free Computer Training for Underprivileged **46**

Children, Kolkata, West Bengal

98. Dialysis Services in Andhra Pradesh **58**

Italy

81. Sustainable Housing Project in Turin **41**

Ireland

85. Bundled Schools **45**

T

Tanzania

60. Marine Sanctuary and Forest Preserve, Chumbe **17**

Island

83. Dege Eco Village, Dar es Salaam **43**

Turkey

56. Akaretler Row Houses, Istanbul **12**

Sporting, Cultural, and Tourism Venues

Sports Centers

51. Sports Hub, Singapore



Photo Credit¹⁰⁵

Background

Following the closure of the old Singapore National Stadium in 2007, the Singapore government needed a replacement venue to host national events and major concerts. The city-state wanted the site to not only meet existing needs, but also to serve as a regional sports hub for Southeast Asia, attracting major events to the country.

Project Structure

The project was awarded under a concession arrangement between Sport Singapore, the government's sports statutory board, and Sports Hub Pte Ltd. (SHPL), a consortium consisting of InfraRed Capital Partners, the majority equity partner, Global Spectrum Pico, Dragages Singapore, and DTZ Facilities and Engineering. Under the agreement, SHPL would bear the initial construction cost of the project, with Sport Singapore making monthly payments over the 25-year term that would total an annual payment of SGD 193.7 million.

After the ground-breaking was delayed by the financial crisis in 2008, the 35-hectare 'Sports Hub' was completed in 2014 at cost of SGD 1.33 billion (USD 990 million). It consisted of an 80-meter high National Stadium along with an adjoining mall called the Kallang Wave.

The deal benefited both parties in that the Singapore government was able to avoid the large, upfront capital expenditure, while SHPL avoided

any cash-flow volatility over the contract term due to the periodic payments from SHPL. The agreement also provided protections for commercial viability, as the stadium was without an anchoring sports franchise to host home games regularly. SHPL would receive payments as long the venue was available and satisfied performance metrics defined in the contract.

All commercial profits from the stadium's operations would be split between SHPL and the government, which gave both parties an incentive to support the development, promotion and operation of the site and adjacent outlets.

Lessons Learned

After completion, the Sports Hub stumbled in its first set of high-profile ventures. A 2014 friendly football exhibition between Japan and Brazil was hampered by the condition of the sandy field. Later that same year, a major concert was disrupted by a leaky roof that led Sport Singapore to publicly criticize SHPL's work.

The Singapore government threatened to withhold payments, citing deficiencies in the field surface as not meeting key performance standards. This led the consortia spend SGD 1.5 million on lamps to replicate the effects of sunlight to help grass grow. However, this work led to events being cancelled and tickets refunded, which further exacerbated public displeasure with the project.

¹⁰⁵ by CEphoto, Uwe Aranas (https://commons.wikimedia.org/wiki/File:Singapore_Singapore-Sports-Hub-with-National-Stadium-01.jpg), „Singapore Singapore-Sports-Hub-with-National-Stadium-01“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Upon resolving the initial technical problems, SHPL encountered still more problems when it was accused of being too expensive for many local sports organizers and community event operators, with even some global promoters suggesting that leasing charges for the stadium were not affordable. SHPL also clashed with the Singapore government over extra rehearsals for the National Day Parade and stadium rental.

The pricing structure led to a shortage of events staged at the site. Executive suite owners who had paid SGD 180 thousand/year were unhappy with the programming schedule and demanded refunds or refused to pay membership fees. Internally, SHPL saw a number of senior staff resignations.

In a recent audit by KPMG, the firm found that there was misalignment of interests among the different stakeholders for the Sports Hub. SHPL wanted to prioritize commercial shows and sporting events for the venue. In contrast, Sport Singapore

preferred hosting more community programming at the site. While most of the major difficulties concerning technical issues and pricing have been resolved, the larger disagreement between the two stakeholders still remains, as there are over twenty years remaining on the concession contract.

This provides a good example of how a PPP can be structured to allow the public entity to avoid the initial, large capital expenditure for a project by deferring and spreading this cost out over a number of years in the form of regular payments to a private partner. However, it also shows the importance of ensuring that the parties' incentives align. The private partner will nearly always prioritize profits, while the public partner may prefer less profitable pursuits that generate other, non-monetary benefits. Where this is the case, the public partner should have a plan in place to mitigate the opportunity cost attendant to its preferred use of the asset or there is likely to be friction between the two partners.¹⁰⁶

52. Ricoh Coliseum at Exhibition Place, Toronto, Canada



Photo Credit¹⁰⁷

Background

The Coliseum was an 80-year old arena located on the Canadian National Exhibition grounds, originally built for livestock and Royal Agricultural Winter Fair horse shows. In 2002, the City of Toronto decided to refurbish the Coliseum using a PPP, with the aim of converting it into an 11,000-seat ice hockey arena that could attract a professional ice hockey team to the area.

Project Structure

The City entered into a partnership with BPC Coliseum Inc. and Coliseum Renovation Corporation (CRC) in November 2002. The project

entailed renovating the arena in exchange for the right to lease the premises for 49-years at a total of CAD 38 million (USD 28 million). BPC and the local government each contributed capital for the renovation. BPC contributed CAD 9 million (USD 6.7 million) and procured CAD 20 million (USD 15 million) in debt financing. Toronto City contributed CAD 9 million to the project. The City guaranteed BPC's CAD 20 million in loans and retained ownership of the building. Under the agreement, CRC contributed an American Hockey League (AHL) team, the Toronto Roadrunners, as the sub-tenant of the project. The construction of the Ricoh Coliseum was completed in November 2003.

¹⁰⁶ Source: <https://cmp.smu.edu.sg/article/public-private-partnerships-case-study-singapores-national-stadium> Accessed on June 14 2019

¹⁰⁷ Pjposullivan (https://commons.wikimedia.org/wiki/File:Ricoh_Coliseum_entrance,_Toronto.JPG), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

The project receives its revenues from sub-leasing the arena to the local hockey league, selling the naming rights of the Coliseum, and renting the place for other events, such as the Royal Winter Fair, the sportsmen's show, and concerts. In addition, the government will receive taxes on the lease and additional net revenue from the service and parking fees from event activities in the Coliseum.

Each partner is entitled to a share of the net revenues, after debt servicing, with the City and BPC each to receive an agreed return on capital and the tenant retaining the remainder, if any. The CRC forecasted that the tenant would generate around CAD 9,500 (USD 7,000) from Toronto Roadrunners per game, enough to repay the City and BPC's investment in the project. This figure came from the forecasted average of 7,000 paid attendees plus other revenues expected from these games (merchandise, sponsorship, suite sales, food, and beverages).

Lessons Learned

The project did receive CAD 10 million (USD 7.4 million) from Ricoh Canada, a document imaging company from Japan, for the naming rights of the building for ten years, with a five-year renewal option. However, the actual attendance for the first season was only 1,200 per game, despite continued marketing efforts. As a result, by June 2004, the CRC was experiencing a negative cash flow and owed CAD 2.4 million (USD 1.8 million) to BPC. Fortunately, the agreement with CRC included performance security that could be encashed by the other two partners if attendance did not meet expectations. This led to the termination of the sub-lease with compensation through the performance security.

Subsequently, the City and BPC entered into a flat rental agreement with Maple Leaf Sports & Entertainment Ltd., which contributed the AHL St. John's Maple Leaf hockey team, for a term ending on 30 June 2025. The agreement ensured that the City and BPC would receive roughly the same, periodic rental payment irrespective of actual attendance. The flat rental agreement was suitable to the City as it was sufficient to repay the loan guaranteed by the City and also provide the City with a return on its cash investment. In 2018, Coca-Cola purchased the naming rights to the facility for ten years, and the Coliseum was re-named as "Coca-Cola Coliseum."

The project highlights that any municipal government will need to anticipate significant uncertainty with any type of project that heavily upon attendance of events. It is important to note that consumers may be choosier when it comes to entertainment expenditures than their primary consumption costs. In this regard, the municipality needs to carry out thorough due diligence on demand for the facility, including conducting surveys to confirm prospective interest in the type of event on which the project depends.

Nonetheless, the Toronto municipality was able to divert a significant portion of the financial risk as a result of its partnership with an experienced infrastructure firm. The firm helped structure the agreement to include a performance security that could be cashed in case the attendance did not meet expectations. The infrastructure firm brought extensive experience with sports facility construction and operation that helped the parties obtain a mutually acceptable solution under a tight timeframe.¹⁰⁸

¹⁰⁸ Case source(s):
<https://www.explace.on.ca/about/history/plaques/ricoh-coliseum>
 Accessed on June 4, 2019.

<https://www.theglobeandmail.com/sports/coliseum-gets-makeover/article1009714/>
 Accessed on June 4, 2019.

https://www.gfoa.org/sites/default/files/GFR_JUN_09_73.pdf
 Accessed on June 4, 2019.

<https://web.archive.org/web/20140103154508/http://www.explace.on.ca/database/rte/files/Item%2017-MLSEL.pdf>
 Accessed on June 4, 2019.

<https://www.newswire.ca/news-releases/new-coca-cola-and-mlse-partnership-expands-commitment-to-the-community-through-coca-cola-coliseum-687890611.html>
 Accessed on June 4, 2019.

53. Campin Coliseum (Movistar Arena), Bogota, Colombia

Before



After



Photo Credit¹⁰⁹

Background

The Coliseo Cubierto El Campin is a multipurpose event facility constructed in 1973 in Colombia's capital city, Bogota. The coliseum provides ample space to carry out a wide range of sporting, artistic, musical, and other social events. After many years of use, the Coliseo el Campin was showing severe signs of deterioration. By 2011, it was clear that the Coliseo needed substantial technical and structural upgrades.

Project Structure

In September 2012, Colombiana de Escenarios S.A.S. presented an unsolicited proposal to the entity in charge of the facility, Instituto Distrital de Recreación y Deporte (IDRD), to carry out the structural renovation, technological update, and operation and maintenance of Coliseo, now called Movistar Arena. Per the unsolicited proposal, IDRD would undertake full responsibility for the design, financing, and construction of the project. The private financing would be a mix of 50 percent equity and 50 percent debt, and no public resources were to be used for this project. After reviewing the project's feasibility study, assessing the proposal's technical and financial aspects, and fulfilling the legally established procedures for

unsolicited proposals, the parties entered into a concession agreement in December 2015.

The agreement is structured as a 300-month concession that provides the concessionaire with exclusive rights of usage over the public property to complete the architectural renovation and technological update and operate and maintain the Arena. The contract value is estimated at COP 90 billion (USD 29 million). The project includes the rehabilitation of the Arena, to add capacity for up to 17,000 spectators, 14 boxes (special seating spaces), and 2 VIP rooms; construction of a new building for users' circulation, evacuation routes, food courts, and restrooms; construction of a three-story parking building with capacity for 330 vehicles; a closed-circuit TV system and exterior urbanism works. Rehabilitation and renovation of existing public areas, such as gardens, sidewalks, and plazas, were included as part of the urban intervention, which would also help improve public access to the renovated facility.

The concessionaire derives revenue from the Arena's usage right fees, sponsorship fees –such as the name right fees currently paid by Telefonica - Movistar (a telecommunications company),

¹⁰⁹ Photo on the right: Felipe Restrepo Acosta (https://commons.wikimedia.org/wiki/File:BOG_Coliseo_El_Camín.jpg), „BOG Coliseo El Camín“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Photo on the left: Dco98 (<https://commons.wikimedia.org/wiki/File:Movistar-Arena-Bogota-2.jpg>), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

commercial exploitation revenues, and any other monetary or non-monetary revenue reasonably within the ambit of the project. The concessionaire agreed to pay IDR D a monthly amount equal to two percent of the project's gross revenues. In addition, IDR D or any IDR D-designated entity is entitled to use the Arena for a total of 12 days per year free of charge, for free-entrance events. These 12 days have an estimated value of COP 960 million per year (USD 310,000).

Lessons Learned

The project was successfully inaugurated on October 21, 2018¹¹⁰ and has been reported to be an excellent facility for cultural and sporting events. The following are the lessons learned from this project.

- Having an established regulatory framework for managing unsolicited proposals is an important step in managing and potentially leveraging such proposals.
- It is best practice to do an in-depth and thorough study of the implications of carrying

out an unsolicited proposal, in addition to having a real understanding of the actual need for the proposed project. This is necessary for government to understand and evaluate the impact, benefits, and weaknesses of an unsolicited proposal.

In this case, Colombian national laws demand a special study, process, and analysis for unsolicited proposals. Questions and complementary information were solicited from the private initiator; certifications about financing and borrowing capabilities and investment experience were also required by the contracting authority.

In addition, the project was subject to a series of requirements and safeguards, including: allowing third parties to participate, question, and comment on the project; asking specialized public entities and external experts to review and validate the proposal; and publicly publishing the proposal for third parties to express interest in executing the project.

54. Aquanova America, Saint-Dié-des-Vosges, France



Photo Credit¹¹¹

Background

Saint-Dié-des-Vosges is a small city in France with a population of only about 21,000 people, the majority of whom are low-income status. In 2012, the municipality viewed the construction of a new aquatic center as a necessity to attract people and tourists to the city and help boost the local economy. Supported by strong political will and significant administrative investment, the municipality decided to build an aquatic center using a PPP.

Project Structure

Following a competitive dialogue process, the aquatic center project was ultimately awarded to

Groupe Duval, a consortium comprising Patrimoine & Partenariats Publics as the investor, Dalkia France as the facility maintainer, and Espace Récréa as the facility operator, pursuant to a 25-year contract. Under the resulting agreement, the private consortium undertook to design, finance, construct, maintain, and operate the aquatic center. The project value is forecasted at about EUR 18.5 million (USD 21 million). Construction of the facility began in June 2012 and was completed in January 2014. The result was an aquatic center with an area of 4,800 m² that offers multiple services, such as swimming and diving pools, massage facilities, and a fitness center, with water-saving equipment and thermodynamic dehumidification that comply with

¹¹⁰ Source(s) accessed on February 5, 2019 <https://www.contratos.gov.co/consultas/detalleProceso.do?numConstancia=15-20-855> <http://www.contraloriabogota.gov.co/sites/default/files/Contenido/Informes/Estructurales/Planeaci%C3%B3n/2018%20Informe%20de%20Asociaciones%20P%C3%ABlico%20Privadas%20en%20Bogot%C3%A1.pdf>

¹¹¹ [Swimming_pool_with_lane_ropes_in_place_cropped.jpg](https://commons.wikimedia.org/wiki/File:Swimming_pool_with_lane_ropes_in_place_cropped.jpg); Xander from Yellowknife, NT, Canada derivative work: ConsciousBurning (talk) (https://commons.wikimedia.org/wiki/File:Swimming_pool_with_lane_ropes_in_place_cropped.jpg), „Swimming pool with lane ropes in place cropped“, <https://creativecommons.org/licenses/by/2.0/legalcode>

sustainable development objectives. The private partner undertook responsibility for constructing and regularly updating and maintaining the facility, subject to inspections by the municipality. Following the end of the 25-year contract term, the private partner will transfer the asset to the city.

Initially, the city considered using a concession model to finance the project. After a year of consideration, however, it decided to use an availability-based contract. Under this scheme, the private partner is paid by performance-based maintenance, meaning it is paid a standard availability fee with penalties for below-standard performance. For example, the agreed maximum response time to a failure in the water treatment system is one hour. If the operator fails to rectify the negligence in time, it must pay a penalty of EUR 100 (USD 114) per hour of delay. The parties further agreed that the availability fee payable by the city would not exceed the price the city had been paying for its previous swimming pool facility. The private sector partner is also entitled to collect all revenue from aquatic center visitors, which was forecast at an estimated EUR 1.1 million (USD 1.25 million) per year. At the same time, 82 percent of

the revenues generated by the project are subject to added value taxes (VAT). The VAT is expected to generate substantial revenues for the city.

Lessons Learned

The facility currently has 1,140 members, which is a sizeable figure for a city of only 21,000 residents. Recently, it recorded a massive spike in visitors from 19,500 in 2016 to 28,200 in 2017, aided by the establishment of a nearby campervan area nearby. The private partner has also been creative in developing fun aspects of the establishment to increase visitor numbers. This includes signing an agreement with a Belgian holiday center to promote the center as a summer vacation destination.

The municipality benefitted from the project as it offers good value for money in terms of providing multiple new services at the same price as the previous swimming pool. At the same time, it has increased the attractiveness of the city. The requirement that the city does not pay an amount in excess of that paid for the previous swimming pool also incentivizes the private sector to be innovative in generating revenues from the center, which in turn benefits the municipality through its VAT.¹¹²

¹¹² Source(s) accessed on February 6, 2019 <http://www.vosgesmatin.fr/edition-de-saint-die/2016/11/20/les-succes-d-aquanova-america>

<http://www.chaire-eppp.org/wp-content/uploads/2018/04/ssaussier-2017.pdf>

http://duval360.com/wp-content/uploads/2016/01/NOR-PPP-Aquanova-America-Saint-Die%2%A6%C3%BC-des-Vosges-88.indd_.pdf

<https://www.groupeduval.com/cfa-nord-ppp-aquanova-america-centre-aqualudique-inaugure-decembre/>

https://saint-die.eu/images/07_SPORTS_LOISIRS/AquaNova_America/Diaporama.pdf

¹¹³ © Raimond Spekking / CC BY-SA 4.0 (via Wikimedia Commons) ([https://commons.wikimedia.org/wiki/File:Museum_Kunstpalast_-_Haupteingang_im_Westfl%C3%BCgel_\(8238-40\).jpg](https://commons.wikimedia.org/wiki/File:Museum_Kunstpalast_-_Haupteingang_im_Westfl%C3%BCgel_(8238-40).jpg)), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

Cultural Heritage

55. Düsseldorf Museum, Kunstpalast, Germany



Photo Credit¹¹³

Background

The historical building of Düsseldorf Kunstpalast, which was the city's oldest exhibition building having been built and opened in 1902, was in a state of despair. The city of Düsseldorf began to consider plans to renovate the historical building as far back as 1980, but available public resources were too limited. Finally, in 1998, the City decided to renovate the building using a PPP.

Project Structure

In 1998, a PPP agreement was signed by the City of Düsseldorf and the energy corporation E.ON (then known as VEBA AG) to renovate the building

and establish the Museum Kunstpalast Stiftung. The private partner was selected based on its long-standing, pre-existing relationship with the City concerning the project site. Under this contract, the city agreed to sell a plot of land behind the Kunstpalast to the private partner for EUR 10 million (USD 11.3 million), on which the private partner planned to construct a new office building. A joint fund was then created for the reconstruction, maintenance, and operation of the cultural facility. The private partner contributed approximately EUR 11.5 million (USD 13 million) to help fund the rehabilitation of the Kunstpalast and about EUR 9 million (USD 10.2 million) for the adjacent

museum complex and its ventures on a long-term basis through a sponsoring contract. The city of Düsseldorf contributed about EUR 4 million (USD 4.5 million) for the building rehabilitation and provided a grant of the same amount to cover the yearly operational costs of the building. In addition, the project received EUR 12 million (USD 13.5 million) from urban funding programs of the land of the North Rhine Westphalia.

In 2000, the Kunstpalast became a foundation under private law and since this time is no longer a city-run institution. The foundation was joined by other private partners such as Metro Group and Evonik Industries AG as founder-sponsors in 2001.

Lessons Learned

The sustainability of the project was made possible by the joint fund established by the public and private partner. It also benefitted from knowledge transfer from the private partner. The private partner, E.ON, provides legal and tax advice to the museum as well as financial support for marketing. As a result, the museum attracted additional partners such as Zero-Foundation, the independent Willi Kemp-Foundation, and the Hoehme-Foundation to showcase their significant collections to the public. The marketing team also managed to secure a loyal partner, the association Friends of the Museum (Freunde Museum Kunstpalast), to attract art enthusiasts.¹¹⁴

56. Akaretler Row Houses, Istanbul, Turkey



Photo Credit¹¹⁵

Background

The Akaretler Row Houses, built in 1875, are a cultural and historic structure in Istanbul built originally to provide housing for prominent and high-ranking officials of the Dolmabahçe Palace. The landmark structure was owned by the Turkish Foundations, a national public sector real estate owner, and was subject to strict regulation for the preservation of the structure. Consequently, obtaining construction permits for the structure was quite complicated and time-consuming. In 1987, the necessary licenses to reconstruct the Akaretler Row Houses were granted. The municipal authority issued a construction permit and a certificate of occupancy, while the General Directorate of Preservation of Cultural and Historical Heritage and the General Directorate of Turkish Foundations approved the redevelopment plans.

Project Structure

After the permissions were granted, attempts were made with numerous developers to rehabilitate the site, but to no avail. In 2005, the municipality, the General Directorate of Preservation of Cultural and

Historical Heritage, and the General Directorate of Turkish Foundations appointed the Bilgili Group to redevelop the site using a PPP. The public authorities agreed to share the balance sheet with the private developer for investment purposes.

The private developer undertook to build a mixed-use development containing office and retail spaces, a hotel, single and multifamily units, and parking spaces, in addition to restoring the historic structures. The General Directorate of Turkish Foundations would oversee the construction. The Bilgili Group was further responsible for marketing the development, completing additional renovation projects in the neighborhood, as well as maintaining a small local park. The total project cost was estimated at USD 58 million. In 2009 it was projected that the net return on investment for the Bilgili Group would be around USD 12 million.

The municipality would benefit from the local taxation, the private-led real estate renovation, and through the performance of the local maintenance agreement. The local taxes generated for the

¹¹⁴ Source(s) https://www.culturepartnership.eu/upload/editor/2017/Factsheets/pdf-12/12_Influence%20of%20culture%20on%20social%20development.%20Public%20and%20private%20partnership_ENG.pdf accessed 13 February 2019

¹¹⁵ Photo published by Engin_Akyurt <https://pixabay.com/photos/istanbul-turkey-travel-islam-cami-4386286/>

municipality through the project would be used to fund infrastructure improvements to the site to be completed in conjunction with the primary development process. This includes the renewal of a cobblestone road surrounding the Akaretler Row Houses, improvements to telephone lines, laying ethernet and fiber-optic cables, as well as the reorganization of the existing road layouts.

To help create demand and potential value, the municipality provided real estate and tourism tax incentives. This, combined with the marketing efforts by the private developer, has increased the stream of tourists to the area, which in turn created jobs and supported local businesses.

Lessons Learned

The project was completed in 2008, resulting in the creation of 98 offices and residences, 42 shops

and restaurants, and the Hotel W Istanbul. The project was selected as a winner of the Urban Land Institute (ULI) Awards for Excellence in Europe, the Middle East, and Africa.¹¹⁶

This case is a good example of how PPP can leverage private expertise and capital to refurbish and maintain historical and cultural assets, while creating many revenue streams from spaces above and around the historic site, such as office buildings, retail spaces, hotels, residential units, and parking spaces. The case also exemplifies the sharing of responsibilities between the municipality and the private partner. While the private partner refurbished the historic structure and conducted the marketing, the municipality supported the project by developing the required, ancillary infrastructure -roads, telephone lines, fiber-optic cables - and also offering tax incentives.

57. Challenging Case: Jal Mahal Palace in Jaipur, India



Photo Credit¹¹⁷

¹¹⁶ Source(s) accessed on February 15, 2019

<http://www.bilgiliholding.com/en/projects/mixed-use/akaretler-row-houses>

<http://1jh8wu3evfwz3jruef1p1wj2-wpengine.netdna-ssl.com/wp-content/uploads/sites/127/ULI-Documents/Value-Capture-Finance-Report1.pdf>

World Bank, The Economics of Uniqueness, investing in Historic City Cores and Cultural Heritage Assets for Sustainable Development, 2012.

¹¹⁷ Firoze Edassery (https://commons.wikimedia.org/wiki/File:Jal_Mahal_in_Man_Sagar_Lake.jpg), „Jal Mahal in Man Sagar Lake“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Background

Jaipur City is a tourist destination in India. It is home to the Jal Mahal or the Water Palace, a 200-year-old palace built in 1734. It is called the Water Palace due to its location in the middle of the Man Sagar Lake. The palace, made from red sandstone, is a five-story building, of which four floors are submerged underwater when the lake is full, exposing only the top floor. Around 800,000 tourists visit Jaipur City every year, of which 175,000 are foreign nationals.

However, the Man Sagar Lake was in the midst of an ecological disaster. It had been reduced to a muddy swamp throughout much of the year, saturated with garbage and sewage from Jaipur's two major drains. The Rajasthan Tourism Development Cooperation (RTDC) decided to enter into a PPP to restore the site to its former beauty.

Project Structure

In 2004, the RTDC issued a global tender of a project to restore the 432 acres Jal Mahal complex, including the Jal Mahal Palace and the Man Sagar Lake. Following the bid, the Jal Mahal Project was awarded to the KGK Consortium in the form of a 99-year lease contract for the development of 100 acres of land around the Jal Mahal, with a lease payment of INR 2.52 crore (USD 360,000) per annum. The contract included provisions for a 10 percent increase in the lease amount every three years over the contract term. The consortium would be responsible for financing all of the restoration work in exchange for the rights to build a private commercial development next to the lake.

The project was structured into three phases. The first phase included the overhaul of the Man Sagar Lake and the Jal Mahal Palace; the second phase involved the construction of entertainment and

retail facilities, to be opened in 2013; and the third phase included upgrading hotels, to be completed in 2014. The first phase entailed the restoration of the lake ecosystem through the creation of sewage treatment plants, diversion of city drains, de-silting and bioremediation of the lake, and reforestation of the surrounding hills. The lake restoration was funded by a dedicated fund which is replenished by an annual contribution, paid by the private partner in lieu of the development rights for the site. The consortium invested INR 20 crore (USD 2.8 million) for the lake restoration and INR 10 crore (USD 1.4 million) for the palace restoration.

Lessons Learned

The first phase of the project – renovation of the Jal Mahal Palace and restoration of the Man Sagar lake – successfully concluded in 2011. The palace is fully restored and the lake has been cleaned. However, the 99-year lease subsequently came into question due to political disagreements. The

Rajasthan High Court ruled that the tender process in 2004 was fraudulent, unconstitutional, and a violation of public trust. The court reasoned that: (i) the value of the lease payments is well below the true value of the land, which is supposed to be worth INR 10,000 crore (USD 1.4 billion); and (ii) the plan to increase the hotel capacity from 200 to 435 rooms did not follow required procedures. This led to the closure of the Jal Mahal Palace to the public before the private developer could start the second and the third phases of the project.

One of the significant challenges of a PPP project is political risk, which can threaten the project's long-term viability. To mitigate political risk, a PPP project must have a strong justification and robust communication with all stakeholders to assure their buy-in. Rigid adherence to all applicable laws and regulations in the development and award of a PPP, including those related to PPP, procurement and land and natural resource rights, is also essential.¹¹⁸

58. Elbphilharmonie, Hamburg, Germany



Photo Credit¹¹⁹

Background

The city of Hamburg has been undergoing a process of redevelopment and expansion, which led to the idea of constructing a philharmonic hall upon a 1960s factory building that enjoys a magnificent view of the Elbe River. The project was intended to give a new life to Kaispeicher (part of Hamburg's harbour) by constructing a philharmonic hall on top of the historic warehouse building, surrounded by private business facilities and a freely accessible plaza.

Project Structure

The Elbe Philharmonic Hall in Hamburg is designed to host a concert building, a wellness and conference zone, 47 owner-occupied apartments and a five-star hotel with 250 rooms.

The Philharmonic Hall's design concept was private and unsolicited, originating from a real estate developer and then informally accepted by the city of Hamburg without undergoing a competitive selection process. After undertaking a feasibility study in 2004 that estimated the project costs at EUR 186.7 million, the Free and Hanseatic City of Hamburg conducted a Europe-wide tender to construct, finance, and operate the project for 20 years, and began negotiations with six bidders. After the feasibility study and the tender process began, the Philharmonic Hall suffered intensive design changes several times in order to improve the project's revenue prospects. This, coupled with planning missteps, skyrocketed the cost estimates on various occasions.

¹¹⁸ Source(s) accessed on February 16, 2019 <https://jaipur.org/2016/08/03/future-plans-for-jal-mahal/>

<https://www.outlookindia.com/magazine/story/a-jewel-finds-its-water/272097>

¹¹⁹ Hackercatxxy (https://commons.wikimedia.org/wiki/File:Elbphilharmonie,_Hamburg.jpg), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

By 2006, the total project costs had increased to EUR 228.6 million, with EUR 143.7 million needed for the public core and EUR 84.9 million for the commercial facilities. It was later suggested to switch the commercial structure from the initial thought-of investor model to one where the City would own the commercial facilities (hotel, parking lots and restaurants –excluding the apartments). The new structure would make the city the bank's creditor which allowed them to achieve more affordable interest rates, reducing the estimated costs by EUR 10 million. Now the city, as the owner of these facilities, would lease them to the private partner for 20 years after construction, and use the income to repay the debt. However, this shifted the entire construction risk and financial risk for the project's commercial facilities to the city. When the contract was awarded, the project cost was estimated at EUR 351.8 million, of which the city would provide EUR 142.3 million and the rest would be covered by private donations and cross-financing. These cost projections were unrealistically low due to the unfinished planning, inadequately detailed construction design and weak oversight. It is reported that the decision-makers "underestimated the difference between the value of the contract and the value of the planned building".

In September 2006, the project was awarded to Adamanta, a consortium made up of Hochtief Construction AG and Commerz Real AG, which would be responsible for building the Elbphilharmonie and operating the commercial part of the project. The income for the private partner would come from the high-class hotel, restaurants, apartments, and parking lots, as at the same time the lease and sale profits from this part would cross-subsidize the Hall, requiring minimum financial commitments from Hamburg. The contract was amended four times through the end of 2008, and in April 2013 a new contract amendment was signed with a new total of EUR 575 million in estimated construction costs, and under which the constructor agreed to accept all liabilities for the part of the edification that was already built and the portion that was to be built.

Reports indicate that the role of the company appointed for the management of the project, ProjektRealisierungsgesellschaft mbH (ReGe) which was originally only for stakeholder management and then, for several reasons, became the project's overall developer, planner, and manager, lacked significant risk management and planning proactivity. Optimism bias, high expectations for the project, an upcoming election, and a rush to include the project within the planned budget for the next fiscal year, led ReGe and the Mayor's Office to underestimate the costs and feel

pressured to close the deal before the end of 2006. ReGe reported directly to the Mayor in an informal basis and was the only point of contact between the rest of the agencies, the construction company and the Mayor's office. This meant that it was the center for all stakeholder communication and could filter feedback to the authorities.

The project started its construction in April 2007 and was only completed in 2016 at a cost of around USD 850 million.

The construction stopped in 2011 for over 18 months, and only after a long negotiation process the project started running again after a turnaround in 2013. The project faced a cost increase of 145.9 percent and opened seven years later than originally planned. The largest amount of overrun costs was driven by "decisions and external influence factors in the projects development phase before construction contract signature in late 2006". It is reported that "a lack of detailed planning, insufficient risk management, an overambitious tender schedule, and public pressure led to a premature lump-sum contract signature with unrealistically low cost assumptions when measured against the value of the envisaged building."

Fortunately, demand for the concert hall, after it opened in January 2017, is growing – subscriptions for classical concerts have doubled since the hall opened and tickets have sold out. The building was recently named among the "World's Greatest Places 2018" by TIME Magazine.¹²⁰

Lessons Learned

- Adequate planning and proper preparation cannot be circumvented. In this case, unfinished planning at the time of contract signature, such that planning continued in parallel with construction, led to several design changes and constant cost increases. Although the contract had been initially agreed on as a lump sum structure, the indefinite nature of several significant construction details nearly annulled the guaranteed fixed character of the payment.
- External expert advisors that can guide and oversee the project can help give a vital, objective look at a project.

¹²⁰ Case source(s): https://www.researchgate.net/profile/Genia_Kostka/publication/316559651_Large_infrastructure_projects_in_Germany_Between_ambition_and_realities/links/5b6ca50245851546c9f953f0/Large-infrastructure-projects-in-Germany-Between-ambition-and-realities.pdf?origin=publication_detail Accessed on August 13.

http://www.secondchanceproject.si/wp-content/uploads/Trans_PPP_Concept_final1.pdf Accessed on June 25, 2019

https://www.washingtonpost.com/graphics/augmented-reality/what-perfect-sound-looks-like/?noredirect=on&utm_term=.e31735b6aa35 Accessed on June 25, 2019

<https://www.presseportal.de/en/pm/75051/4042582> Accessed on June 25, 2019

Tourism

59. Bundled State Parks, California, United States



Photo Credit¹²¹

Background

Due to public budget pressure in 2010, California officials reduced state park budgets by USD 11 million and planned an additional USD 22 million in cuts over the coming years. As a result, 150 state parks were shut down part-time or suffered a severe decrease in service provision. Moreover, state parks had accumulated over USD 1 billion in deferred repairs and maintenance costs. In response to the budget cuts, the state parks division of the California Department of Parks and Recreation, California State Parks (CSP), began seeking partnerships with cities, counties, nonprofit organizations, and private entities that would allow it to keep as many of the parks open as possible. As a result of these efforts, partnership agreements were signed for 69 threatened state parks. Of the 69, three parks (Brannan Island, Turlock Lake, and Woodson Bridge State Recreation Area) were to be operated under a PPP using a private concession management model.

Project Structure

In June 2012, the public authority awarded the three-park package through a competitive bidding process to American Land & Leisure (AL&L) under a five-year management contract. Under this agreement, AL&L is required to implement an operational plan for each park, to be prepared by AL&L and approved by the state, that outlines how services will be provided and facilities maintained throughout the concession. The concession holder is also responsible for minor improvements and the day-to-day operation of the premises. CSP remains responsible for major maintenance works in the parks, which is funded through the park maintenance fund.

AL&L obtains revenues from visitor fees, including entrance fees and associated recreation fees such as those charged for camping, boat rentals, and from retail sales within the park. In return, AL&L pays rent to CSP, which is set at the greater of a fixed, minimum payment or a percentage of gross receipts. This concession fee is paid into a park maintenance fund. AL&L provided a performance bond covering 100 percent of the rental payments due over the next five years.

Lessons Learned

By bundling three parks into one concession agreement, the project could generate a sufficient potential return on investment to attract the interest of private companies. In addition, since the private partner's revenue comes entirely from user fees, the concession-holder has a clear incentive to make the parks attractive to visitors. The project also protected the workers at the three parks, as any workers not hired by AL&L were transferred to other parks in the CSP system.

Based on an FTI consulting assessment, revenue from each of the three parks increased under private operation. The assessment found out that the gross revenues from all three parks increased by 28 percent in the first period of operation by AL&L, up from USD 522,000 in 2011/12 to USD 670,000 in 2012/13. Prior to the partnership, each of the parks operated at a deficit.¹²²

¹²¹ Dr. Marcus Gossler ~ commonswiki assumed (based on copyright claims). (https://commons.wikimedia.org/wiki/File:Graz_Rosenhain_tree-face.jpg), „Graz Rosenhain tree-face“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

¹²² Source(s) accessed on January 27, 2019

<https://reason.org/commentary/apr-2013-state-parks-privatization/>

<http://parksforward.com/site/uploads/CA%20State%20Parks%20Report%20Nov%2030%20final.pdf>

<http://parkppp.com/how-does-the-private-company-get-paid/>

60. Marine Sanctuary and Forest Preserve, Chumbe Island, Tanzania



Photo Credit¹²³

Background

Chumbe Island, a 55-acre, uninhabited island located about eight miles southwest of Zanzibar, Tanzania, is home to a rich natural environment. The island is blessed with coral rag forest and surrounded by coral reefs, which are home to more than 420 fish species and 200 hard coral species. However, the sensitive ecosystem was under threat from overfishing and overharvesting, which were contributing to the degradation of the marine environment.

Project Structure

A private company named Chumbe Island Coral Park Ltd (CICP) submitted an unsolicited proposal to the Revolutionary Government of Zanzibar (RGoZ) for the establishment of a marine sanctuary and forest preserve in Chumbe Island. To gain political support for the proposal, CICP worked closely with seven government departments and garnered the support of the region's fishermen and local communities to get the project approved. In 1993, the CICP was given a 33-year land lease to develop eco-friendly bungalows and a visitors' center on 5.9 acres of land on Chumbe Island. In 1994, the RGoZ granted CICP exclusive management rights over the marine sanctuary for ten years and over the forest reserve for 33 years. In 2004, the marine contract was renewed for another ten year.

USD 150,000 and USD 200,000 per year. The revenue generated by small-scale eco-tourism to the island is sufficient to cover the costs of managing the sanctuary and preserve, research projects, conservation, and public education programs designed to generate support for the sanctuary.

The RGoZ maintains ownership of the marine areas and Chumbe Island, including CICP's developments, with the Zanzibar Ministry of Agriculture, Livestock, and Natural Resources and the Zanzibar Ministry of Lands and Environment responsible for the direct supervision of the project.

Lessons Learned

Since 2000, CICP's operations on Chumbe Island have been fully self-sustaining. Latest available reports indicate that the number of visitors to the island reached only 40 percent of total capacity. The primary goal of the project is not to make a profit, but rather to achieve both financial and environmental sustainability. This means that, if the island were to reach full capacity, CICP could recover its investment and even fund a limited expansion in some areas.¹²⁴

Obtaining support from key stakeholders – in this case, the region's fishermen and local communities – is vital for the successful development and delivery of a project, even or especially when initiated as an unsolicited project proposal.

CICP provided about two-thirds of the initial capital investment for the project, totaling USD 1.2 million, with eco-friendly donors contributing the remainder. The operation and maintenance costs are between

¹²³ Photo in the public domain published by Skeptic_cdn https://commons.wikimedia.org/wiki/File:Chumbe_island_lighthouse_bungalow.jpg

¹²⁴ Source(s) https://www.esc-pau.fr/ppp/documents/featured_projects/tanzania.pdf, accessed 16 February 2019

61. Kruger National Park, South Africa



Photo Credit¹²⁵

Background

South Africa National Parks (SANParks) is a government agency under South Africa's Department of Environmental Affairs, which manages South Africa's 19 national parks. In the 1990s, SANParks began to look to PPPs as an opportunity to reduce dependence on state grants, to transfer risks to the private sector, and at the same time allow SANParks to focus on its core function, which is wildlife conservation. In 2001, SANParks decided to enter into a PPP for the operation and management of one of the biggest game reserves in Africa, the Kruger National Park, located in the Limpopo and Mpumalanga provinces of South Africa.

Project Structure

SANParks signed a concession agreement with Nature's Group, a consortium consisting of a technical partner, a financial partner, and an empowerment partner, to operate and manage Kruger National Park's 11 restaurants, two shops, and three picnic sites for a period of up to 10 years. The consortium was granted the right to operate the facilities, including the right to use, design, and construct, subject to specific parameters provided by SANParks. In return, Nature's Group pays a monthly concession fee of approximately 13 percent of its revenue.

Lessons Learned

Based on a 2004 review of the partnership between SANParks and Nature's Group by the National Business Initiative and InWent (a German capacity building foundation), the concession has resulted in a significant increase in SANParks' profits, due to the upgrading of restaurants and shops and the improvement of service quality. However, the project did face some challenges in its initial stages. These included staff resistance to the new conditions of service, such as improved performance expectations and stricter control of stocks, as well as a lack of experience on the part of the technical partner in the consortium, which resulted in poor customer service in the first year. Consequently, SANParks instructed the consortium to find a new technical partner, produce an operation manual, improve skills development, and implement an incentive program for the staff. SANParks' interventions helped save the concession from potential failure.

Through 2017, SANParks had 45 PPPs in operation across its 19 national parks, which had directly created a total of 1,946 jobs. These PPPs provide a range of facilities and services, including the development of tented camps, lodges, boutique hotels, and retail kiosks, as well as outdoor activities such as helicopter flights, hot air balloon trips, zip-lining, and hiking activities.¹²⁶

¹²⁵ Dario Crespi (https://commons.wikimedia.org/wiki/File:Giraffes_in_Kruger_National_Park.jpg), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

¹²⁶ Sources: Peter Farlam Working Together, Assessing Public-Private Partnerships in Africa, The South African Institute of International Affairs, Nepad Policy Focus Series. <https://www.oecd.org/investment/investmentfordevelopment/34867724.pdf>, accessed 19 February 2019; https://www.sanparks.org/assets/docs/parks_kruger/conservation/scientific/noticeboard/science_network_meeting_2012/6-1-varghese.pdf, accessed 19 February 2019; <https://www.brandsouthafrica.com/tourism-south-africa/public-private-partnerships-national-parks-boost-tourism>, accessed 19 February 2019

62. Jozini Tiger Lodge, Jozini Municipality of KwaZulu-Natal, South Africa



Photo Credit¹²⁷

Background

The Jozini municipality is situated among several UNESCO World Heritage Sites, strategically located near Mozambique and Swaziland, and home to the third largest dam in Africa. It has a population of about 187,000 people, of which some 72 percent are under 29 years of age. Despite its strategic location with abundant opportunities for tourism, it struggled with challenges related to poverty caused by unemployment, limited resources, and poor access to basic infrastructure. To boost the economy of the area and tap into the tourism opportunities provided by the Soccer World Cup coming to South Africa in 2010, the municipality, private sector representatives, the National Empowerment Fund (NEF), and local community groups decided in 2008 to establish a PPP to build the Jozini Tiger Lodge, a 4-star hotel, using an old hotel site which had been closed 30 years earlier.

Project Structure

This culminated in ten-year PPP agreement signed by all key stakeholders. Under the agreement, the municipality, as the main facilitator of the PPP, was responsible for helping with the provision of services and providing necessary approvals. The private investors were responsible for designing the concept and project plan, in addition to providing seed and venture capital. In turn, the local community would make the necessary land available to private investors for the development of the hotel infrastructure. NEF financed the project by providing an initial working capital loan in the amount of RD 28 million (USD 2 million). At the end of the contract term, ownership of the Jozini Tiger Lodge transfers to the local community. During the ten-year agreement, the private partners own 69 percent of the shares in the Jozini Tiger Lodge and are responsible for providing the financial means necessary to maintain and sustain the high-quality standard of the lodge, which is vital to sustaining its image and market value and ensuring

its profitability. The local community owns 31 percent of the shares through a Community Trust, which uses the dividends from its shares in the lodge to assist the community. In addition, the agreement stipulates that 80 percent of persons employed at the lodge must come from the local community.

Lessons Learned

Construction of the lodge was completed in December 2009, and the lodge opened in March 2010, four months ahead of the Soccer World Cup. It consists of 70 guestrooms, conference venues, a spa, a wellness center, and a swimming pool. Within the first six months since its opening, the lodge broke even in terms of generating sufficient revenue to cover loan payments and operations and maintenance costs. In 2012, revenue increased sharply, by 117 percent year-on-year, due to an increase in conference, wedding, and day visitor business. To accommodate the increased demand, the lodge built an additional, 21-room bed and breakfast.

At the end of the project, Jozini had become a tourist destination. Due to that success, large companies were attracted to invest in businesses within the Jozini area, which further increased infrastructure development. This helped spur employment, boosted the local economy, and increased the general living standard of the local community.¹²⁸

The project shows the value of the affected community's engagement and buy-in for mobilizing a tourism project in a disadvantaged community. By communicating with and involving the local community, the project helped ignite a sense of belonging and pride, which are vital to the sustainability of this project.

¹²⁷ Frans-Banja Mulder (https://commons.wikimedia.org/wiki/File:Bayala,_African_Landscape_-_panoramio_-_Frans-Banja_Mulder.jpg), „Bayala, African Landscape - panoramio - Frans-Banja Mulder“, <https://creativecommons.org/licenses/by/3.0/legalcode>

¹²⁸ Source(s) accessed on February 17, 2019 Local Government Tourism Conference 'Tourism Development: Why Local Government Matters Report', SA National Department of Tourism (NDT), 2013.

<https://www.tourism.gov.za/CurrentProjects/Documents/Jozini%20Tiger%20Lodge%20Story%20-%20Re-thinking%20PPPs%20in%20Tourism.pdf>

https://www.ajhtl.com/uploads/7/1/6/3/7163688/article_41_vol_7__2__2018.pdf

Energy

Heating Supply

63. Qiaoxi District Central Heating, Zhangjiakou, China



Photo Credit¹²⁹

Background

The central heating service for the Zhangjiakou municipality was provided by a state-owned enterprise called Zhangjiakou Hengfeng Heating Company (ZHH). Previously, it was not being adequately maintained and monitored under ZHH. As a result, the central heating had become inefficient and led to an increased level of sulfur dioxide pollution. The state-owned company was also operating at a deficit and had been accumulating significant debt, partly due to uncollected pipeline installation fees and user charges. The local government of the Qiaoxi District decided to remove the old heating boilers and install new ones, and then pursue a PPP for the operation, maintenance, and financing of the central heating system.

Project Structure

Following a competitive bidding process initiated in 2014 by the local government, Beijing Yuanlong Heat Company Limited (BYHC) was selected as the preferred bidder in 2015. BYHC subsequently established the Project Company, a joint venture that was 90 percent owned by BYHC and 10 percent by the Qiaoxi District government. ZHH, acting on behalf of the local government, signed the PPP contract with the Project Company. Under the agreement, ZHH would transfer the existing heating assets to the Project Company, at which time the Project Company would assume responsibility for the operation and maintenance of the assets for 25 years. After this term, the assets would be

transferred back to the local government at no cost. The agreement includes requirements for the Project Company to provide improved heating supply services with an extended coverage area, undertake management and maintenance of the central heating facilities, and install two new heating boilers during the contract period.

The Project Company receives revenue primarily from user tariffs charged for the heating supplied and collecting central heating pipeline connection fees, among other operational incomes. The user tariff was set by the local government, based on national, provincial, and local regulations and policies.

Lessons Learned

The project faced some initial difficulties, including challenges arising from the transfer of staff from ZHH to the Project Company, opposition from local communities to the removal of their small boilers and paying the new pipeline installation fees. However, the Project Company was able to overcome the employee issues by introducing a performance-based incentive scheme for the staff. The local government also helped overcome community opposition by agreeing to share the cost of the new pipeline installation fees. Ultimately, the Project Company was able to provide more reliable central heating, saw an 80 percent decrease in user complaints, increased the average indoor temperature from 19.3 °C to 21.4 °C, and increased the user-fee collection rate from 80 to 93 percent.

¹²⁹ 黑夜有灯 (https://commons.wikimedia.org/wiki/File:堡子里书院巷_-_panoramio.jpg), „堡子里书院巷 - panoramio“, <https://creativecommons.org/licenses/by/3.0/legalcode>

In addition, the area covered by the central heating service increased by 20 percent, as a result of the construction of additional boilers and the extension of the pipeline distribution network.

The involvement of the private sector helped free up public capital for other utility projects and promote knowledge and technology transfer. This in turn

helped the government to improve the management of future infrastructure projects. It is estimated that the core of the Project Company's 20 percent increase in revenue came from cost savings, mainly as a result of reduced energy consumption.¹³⁰

Renewable Energy

64. Roof-top Solar Program, Gujarat, Gandhinagar, India



Photo Credit¹³¹

Background

In 2010, the Municipal Government of Gujarat launched the 'Gandhinagar rooftop program,' the first of its kind in India, to help meet the ever-growing demand for power in the region. The 5 MW solar rooftop program aimed to place photovoltaic panels on government buildings and private residences in Gandhinagar. The Gujarat Department of Energy and Petrochemicals appointed IFC as its lead transaction advisor to execute the pilot PPP project for its solar rooftop program.

Project Structure

The public authority, consisting of the Department of Energy and Petrochemicals of the Government of Gujarat, the Gujarat Energy Development Agency (GEDA), and the Gujarat Energy Research and Management Institute (GERMI) and assisted by IFC, designed the project and coordinated the bidding process for the selection of project developers. Two companies, Azure Power and Sun Edison, were selected as project developers through a tariff-based competitive bidding process.

Each private company was allocated the development of 2.5 MW. The project developers agreed to design, install, finance, operate, and maintain the required solar energy infrastructure for 25 years. The private developers recover their

capital investment and operating costs by selling the power generated by the solar installations to an off-taker, for distribution to end-users. However, the fee offered by the successful bidders was slightly higher than the tariff approved by the state electricity regulatory commission. Specifically, the private companies proposed a tariff of INR 11.21 (USD 0.16) per kWh, while the regulator-approved fare was INR 11.14. Consequently, the municipality agreed to pay the private developers INR 0.07 (USD 0.001) per kWh difference between the allowed tariff and the tariff needed to make the project viable through the duration of the project.

The public authority was required to provide the project developers with access to the rooftops of public buildings for the installation of solar panels, facilitate the power purchase agreement (PPA) with the power off-taker, and monitor performance standards. As the municipality only agreed to provide sufficient space on government buildings to accommodate 80 percent of the required installations, accounting for 4 MW of generation, the project developers needed to secure additional terrace space on private residences to produce the remaining 1 MW. To motivate private households to participate in the program, the project developers planned to pay the private terrace owners a 'green incentive' in the form of a generation-based incentive. This would function as a rooftop lease

¹³⁰ Source(s): https://github-managingppp-tools.s3.amazonaws.com/live/media/1434/gih_casestudy_china_qiaoxi-district-central-heating.pdf accessed 11 February 2019.

<http://www.bestchinanews.com/Finance/490.html> accessed 11 February 2019.

¹³¹ Worldciv 2017 kushan (https://commons.wikimedia.org/wiki/File:Academic_Area_of_Technology_of_Gandhinagar.jpg)

<https://creativecommons.org/licenses/by-sa/4.0/legalcode>

payment of INR 3 (USD 0.04) per kWh of solar power generated by the household's solar panels.

It was forecast that the solar project would provide the city government of Gujarat with an annual net revenue of USD 400,000 over the 25-year term and reduce the city's carbon emissions by 6,000 tons annually.

Lessons Learned

During the initial period of implementation, the project faced many challenges, including the reluctance of private and commercial property owners to allow the installation of solar installations on their buildings, complications related to the sale of power and revenue model, as well as difficulties

in the operation and maintenance of the system. However, the situation has greatly improved. Currently, Gandhinagar generates nearly 7.5 MW of energy from solar PV plants on rooftops. As a result of the success, the project is being replicated in more cities in Gujarat.¹³²

The project was made feasible through the support of the municipality, especially its provision of a modest tariff subsidy (to cover the slight price difference between the regulator-approved price and the tariff required by the private developers), and providing space on government buildings for the rooftop solar PV installation.

¹³² Source(s)
https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/sba-proj-gujarat accessed 12 February 2019

<https://mnre.gov.in/file-manager/UserFiles/workshop-gcrt-0870616/Gandhinagar-RTPV-Programme-GERMI.pdf> accessed 9 February 2019

Agravat, Sagarkumar (2015). "Case Study of Gandhinagar Roof Top Solar PV Program." https://www.researchgate.net/publication/280094237_Case_Study_of_Gandhinagar_Roof_Top_Solar_PV_Program accessed 9 February 2019

<https://yourstory.com/2015/06/solar-rooftop-gandhinagar/> accessed 9 February 2019

¹³³ World Bank <https://www.flickr.com/photos/worldbank/13929524718/in/photolist-ndUsph-dtm7qX-ndUtZk-qYhZee-ndZ5rk-bq5VmZ-ndYQQb-nvp8NH-ntr3tU-ntgQ4w-nxaZCX-fJ2uCT-8nQdQP-fgNu7E-nv8gUm-ndXFvy-nv3RWj-rRPEPc-42CWAz-nvjxs6-dnxrKr-8wEqLM-nx6oRk-nvsuifP-sbnSzx-ndUhrv-nvjAiB-ndQ4By-8wEqEp-dnxvFJ-bUrxen-dtm7jP-s95X9u-dnxvvy-8wEWwP-bv31WB-8wHqsE-dnxrYT-qFQyPz-ecBwUC-saqWkt-fr3Sea-8wEqci-nv7h7M-44nHjj-bUrxoe-7tu1Y7-dtm7xV-42CJh8-s8RNxN>

65. Bioenergy Plant, Nuevo Leon, Mexico



Photo Credit¹³³

Background

Aiming to reduce the contamination and greenhouse gas emissions stemming from the methane gas generated by a landfill located in Salinas Victoria, Nuevo León, and to harness the biogas emanating from this landfill for a productive purpose, the state of Nuevo Leon decided to construct a biogas plant that could convert this by-product into electrical power.

Project Structure

Hoping to deliver the project as a PPP, the landfill owner, Waste Processing and Ecological Comprehensive System (Sistema Integral para el Manejo Ecológico y Procesamiento de Desechos, SIMEPRODE), initiated an international two-stage bidding process in October 2000. The winning bidder, a private company named Bioeléctrica S.A. de C.V., was selected in December 2001. A specific purpose vehicle (SPV), Bioenergía de Nuevo León, S.A. de C.V (BENLESA), was then established for the operation and maintenance of the plant.

The bioenergy plant was financed, designed and built by another company, SARET, but a review of the publicly available documents revealed no information as to this portion of the project. The plant consists of a pipeline network that captures the gas in an area of about 44 hectares and a central system for electricity generation that consists of 7 internal combustion engines – each with a capacity of 1.06 MW.

The original corporate composition of the plant operator, BENLESA, consisted of two shareholders: SIMEPRODE, which contributed USD 5.1 million USD of the initial capital (47 percent), and Bioeléctrica, which contributed USD 5.7 million USD and state-of-the-art technology, accounting for 53 percent of the upfront investment. The project also received financing from the World Bank and the Global Environment Facility. No publicly available information was found regarding the project's revenues, tariffs, or duration.

The PPP's primary objective is the operation and management of the bioenergy plant, including the provision of equipment and maintenance services.

In addition, the operator is responsible for selling the energy surplus to the Electricity Federal Commission. SIMEPRODE retained partial financial risk and land risk as the owner of the landfill and the grounds where it is located. BENLESA assumed partial financial risk and the operation and maintenance risk.

In addition to the original two partners, the SPV was expanded to include another category of partners called "User Partners". This category exists because the Public Energy Service Law stipulated that permission for public or private partner investors to form an energy co-generation company only could only be given if the energy generated by the plant would be sold to the partnered members. Thus, to comply with this law, seven municipalities and three governmental agencies entered into associated agreements (as partnered members) and signed 5-year independent power production

contracts with BENLESA. Thus, these municipalities and public agencies are at the same time official partners and power purchasers of BENLESA. These partner purchasers are the only entities authorized to purchase the energy produced by the plant.

Lessons Learned

Today, the plant supplies almost sixty percent of the energy needed to power the Monterrey Metropolitan Area's public street lighting, public buildings and drinking water pump, as well as eighty percent of Monterrey's transportation system energy requirements. The plant also covers its own energy needs. By 2009, the plant had reduced greenhouse gas in an amount equal to 1,351,171 m³ of CO₂. The plant is considered the most important electrical energy generation plant of this type in Latin America.¹³⁴

66. Rooftop Solar PV and Energy for Underserved Communities, Connecticut, United States



Photo Credit¹³⁵

Background

Connecticut (CT) has the most expensive energy tariffs in the continental United States (US), which disproportionately impacts its poorest residents. In Bridgeport, CT, around 26 percent of the lowest-income households' annual revenue is spent on energy bills, which average about USD 4,078 per year. In 2015, under the "Solar for all" program, the CT Green Bank decided to pursue a PPP that could help low-income households reduce their energy costs. The "Solar for all" program involves various programs, including the installation of rooftop solar PV generators and other energy efficient solar products on homes. CT Green Bank is a state-supported institution established in 2011 to catalyse clean energy development in several sectors, by providing low-cost, long-term sustainable financing to maximize the impact of public funds. In December 2014, CT Green Bank issued a request for proposals from solar providers

interested in engaging with the low- to-moderate income markets, which had been largely ignored by most solar enterprises.

Project Structure

PosiGen, a solar enterprise that had experience serving underserved communities across Louisiana in the aftermath of Hurricane Katrina, was selected as the winning bidder for the project. The program is designed to offer affordable solar panel leases paired with energy efficiency measures, regardless of the participant's income or credit score. CT Green Bank would provide some funding in the form of up-front rebates and performance-based incentives (PBIs) (subject to phase-out) to PosiGen for solar PV installations on low- to-moderate income residential properties.

CT Green Bank also provided a direct credit enhancement in the form of USD 5 million in subordinated debt to PosiGen's CT lease fund, and a USD 3.5 million working capital loan to address timing gaps associated with third-party tax equity financing.

The low-cost capital and performance-based incentives provided security to PosiGen investors and enabled PosiGen to offer an affordable lease product to customers. It also helped leverage over seven times more private investment than the Green Bank's term financing contribution, amounting to USD 37 million for PosiGen's CT solar lease installations.

¹³⁴ Case Source: http://www.cca.org.mx/ps/funcionarios/muniapp/descargas/Documentos_de_apoyo/informaciontematica/capp/APP_Bioelectrica.pdf

¹³⁵ Photo in the public domain published by U.S. Department of Energy <https://www.flickr.com/photos/37916456@N02/9787445386>

PosiGen leases the solar PV installation to the homeowner for a 20-year term, with fixed lease payments – around USD 75 per month – and an option to purchase efficiency upgrades for an additional USD 10 per month. The lease agreement also guarantees the production of electricity. If the system does not produce the forecasted amount of electricity, the homeowner is eligible for reimbursement. Towards the end of the lease term, the homeowner is given an option to purchase the solar PV installation at fair market value.

Lessons Learned

As of June 2018, PosiGen had leased 1,651 solar installations to homeowners across CT, namely in Bridgeport, Hartford, New Haven, and New London, equating to USD 46 million of installed equipment. This amounted to an 188 percent increase in solar dissemination among Connecticut's low-income communities.

The success of the project stemmed in part from the willingness of the private partner to proactively engage with the affected community and its representatives – including elected officials, NGOs, and faith leaders, with strategic support from CT Green Bank. Understanding the local community helped the private provider in its marketing campaigns.

The private provider also adds a personal touch by offering to sit down with the customer to discuss ways the customer can reduce their monthly payments and guarantee savings through a solar PV lease. In addition, the provider keeps the contract simple and offers a standard, 6.2-kilowatt installation to minimize installation and operating costs.

The private provider did face some challenges at the beginning of the project, due mainly to a negative perception that solar energy is expensive. In addition, the provider faced some backlog in obtaining required permits and inspections, as well as outdated infrastructure, namely structurally unsound rooftops that would not support solar panel installation and dated electrical systems. Nonetheless, in time, by proving its customers could reduce their energy bills, PosiGen was able to expand its market and attract new customers, overcoming the initial, negative perception. It was reported that in Bridgeport, the average family that leased a solar PV reduced their energy bill by more than USD 1,280 annually. Around 30 to 40 percent of PosiGen's new sales come from referrals by existing customers.

CT's "Solar for All" partnership received the 2018 State Leadership in Clean Energy Award from the Clean Energy States Alliance.¹³⁶

¹³⁶ Case source(s): <https://energynews.us/2018/09/04/northeast/connecticut-public-private-partnership-deploys-solar-to-underserved-communities/> Accessed on June 13, 2019.

<https://www.renewableenergyworld.com/ugc/articles/2018/07/19/connecticut-green-bank-and-posigen-solar-for-all-partnership--bringing-the-benefits-of-clean-energy-.html> Accessed on June 13, 2019.

<https://www.nrdc.org/sites/default/files/green-banks-connecticut-tt.pdf> Accessed on June 13, 2019.

<https://energynews.us/2019/06/07/northeast/connecticut-program-pairs-energy-efficiency-with-all-solar-installations/> Accessed on June 13, 2019.

¹³⁷ Mahi29 (https://commons.wikimedia.org/wiki/File:Dwarka_circle,nashik.jpg), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

Street Lighting

67. Street Lighting Project, Nasik, Maharashtra, India

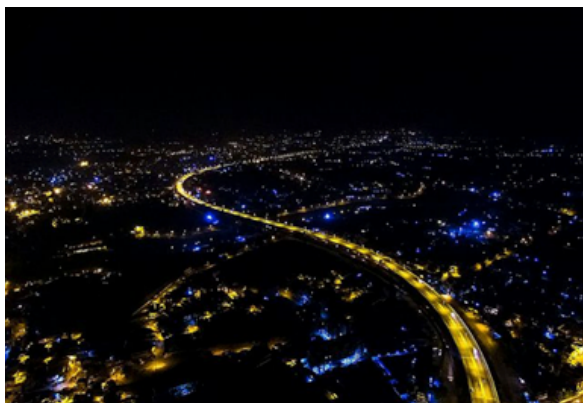


Photo Credit¹³⁷

Background

Nasik, in Maharashtra, is among the most rapidly developing municipalities in India, which has led to shortages of power supply and, at the same time, increased the cost of electricity. To help address this problem, the Nasik Municipal Corporation (NMC) launched the first Energy Saving Company (ESCO) project to be implemented in Maharashtra state on a shared-savings basis. Sahastratronic Controls Private Limited (SCPL) was appointed by

NMC as the ESCO to implement the project, which entailed upgrading the existing street lighting facilities.

Before the project was implemented, NMC was using around 5,000 kW of energy per hour in a 12-hour day, throughout the year, for its street lighting, which translated into RS 5.5 million (USD 80,000 approx.) in monthly costs for this system.

Project Structure

After a thorough audit of all the street lighting locations, SPCL provided different options to NMC on how to achieve energy savings.

The Corporation approved a specific type of panels that carry a new technology advanced enough to vary voltage according to different traffic conditions but maintaining the lumen requirements intact in each condition.

Under an Energy Services Agreement (ESA), and following a build, operate, and transfer project structure, SCPL agreed to design, manufacture, supply, erect, commission and maintain 486 street light controllers at various lighting stations, which cover about 19,000 street lights, to improve street lighting efficiency, and guaranteed a minimum of 25 percent in energy savings to the municipality from these installations for five years.

The project cost is estimated at INR 2 crores (USD 290,212), out of which INR 83 Lakhs (USD 120,483) is financed by a local bank, and the balance is paid by SCPL.

According to the ESA, NMC would issue a no-objection certificate for mortgaging assets owned by SCPL set up in the NMC area, in an agreeable arrangement to the lender. In exchange, NMC required SCPL to execute an indemnity bond to compensate NMC against all transactions by SCPL to raise funds for the project.

To recoup SCPL's investment in the installation of the controllers, cover its operation and maintenance costs, and obtain a reasonable return on investment, SCPL is entitled to a share of the subsequent energy savings for a period of five years, at the conclusion of which ownership and control of the installations would transfer to the NMC. SCPL's share in the savings is progressive,

as follows:

Year	NMC SHARE	SCPL SHARE
1	70%	30%
2	60%	40%
3	50%	50%
4	35%	65%
5	19%	81%

After the completion of Phase 1 in March 2004, 361 streetlight controllers had been installed, covering 12,000 streetlights. An additional 125 street light controllers operating 7,000 street lights were installed by the end of Phase 2, in November 2005. The total load under the project is 3.8 MW.

Lessons Learned

Through 31 March 2007, the savings achieved in both phases was INR 48.1 million (USD 670,000) and the average energy cost savings per year has been 31 percent, with peak savings for some sub-sections reaching as high as 44 percent. The value of the savings achieved in both phases per year totaled INR 16 million (USD 232,170).

By 31 March, 2008 SCP has repaid INR 7.5 million out of the total assistance of INR 8.3 million sanctioned.¹³⁸

This was the first energy savings company project in India to be implemented under the concept of sharing basis. Its successful energy-saving results and timely repayment of debt to the lenders has made it a role model for other municipalities throughout the country.

¹³⁸ Source(s) accessed on January 24, 2019
http://smartcities.gov.in/upload/uploadfiles/files/Compendium_of_PPP_CasesMoUDs.pdf

<http://www.cips.org.in/documents/DownloadPDF/downloadpdf.php?id=232&category=Urban+Governance>

68. Energy-efficient Street Lighting, Bhubaneswar, Odisha, India



Photo Credit¹³⁹

Background

The street lighting infrastructure in Bhubaneswar, the capital of the Indian State of Odisha, was outdated, inefficient, and in poor condition. Small streets and residential areas had poor, if any, lighting. Resource inefficiencies also made the lighting system expensive to maintain, straining the budget of the city.

The Bhubaneswar Municipal Corporation (BMC) asked for IFC's assistance to design and structure a PPP and manage the tendering process to choose a qualified private sector partner to upgrade and maintain the street lighting system.

Project Structure

Through a competitive bidding process, the resulting project was awarded to Shah Investments, Financials, Developments, and Consultants Private Limited, an Indian Energy Service Company (ESCO). The contract was signed on 5 October 2013 and entailed a 10-year concession period.

Under the project agreement, ESCO is responsible for financing and installing energy-efficient street lighting, as well as operating and maintaining the

city's street lighting system by way of a remote-control center covering 20,000 streetlights. The municipality is responsible for setting the performance standards and specifications, as well as monitoring and verifying the performance of ESCO.

With the installation of the energy-efficient lighting system, the municipality is expected to realize annual savings of around USD 100,000 as a result of decreased energy consumption, optimized operation and maintenance costs, and emissions savings. ESCO is entitled to a fixed, monthly fee from the municipality, defined as 90 percent of the energy savings plus a flat operation and maintenance fee for each light pole.

Lessons Learned

A modern control center to run the street lights of Bhubaneswar and a toll-free customer service line for receiving complaints became officially operational in 2015.¹⁴⁰

The project is innovative as it uses the savings derived from the decreased energy consumption to pay the monthly fee due to the ESCO.

¹³⁹ Sabyasachi Baldev (<https://commons.wikimedia.org/wiki/File:Bhubaneswar.jpg>), „Bhubaneswar“, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

¹⁴⁰ Source(s), accessed on February 17, 2019: https://ppp.worldbank.org/public-private-partnership/sites/ppp.worldbank.org/files/documents/PPP_Stories_India_Bhubaneswar_Street_Lighting_EN_2013.pdf

<https://www.pidg.org/resource-library/other-documents/ppp-odisha-govt-new-final.pdf>

<https://slideplayer.com/slide/4895501/>

<http://www.bhubaneswarbuzz.com/updates/infrastructure/bhubaneswar-street-lighting-goes-smart-now-can-be-controlled-via-control-room-computer>

69. Reconstruction, Management, and Maintenance of Street Lighting and Other Public Facilities, Juvignac, France



Photo Credit¹⁴¹

Background

Due to a significant increase in population, the city of Juvignac in France needed to adapt its infrastructure services quickly and efficiently. To this end, it decided to pursue a PPP to renovate, manage, and maintain its public lighting installations, traffic lights, video surveillance, and the civil engineering works for the city's high-speed communications network.

Project Structure

Through a competitive bidding process initiated in 2013, a private company called SPIE Sud-Ouest was awarded a PPP contract with a duration of 18 years and an estimated worth of EUR 8.8 million (or USD 10 million). The winning bidder was selected based on total proposed cost, the time required for implementation, and relevancy to the energy management and long-term development plans of the city. Under the PPP agreement, the private partner is responsible for replacing the city's street lighting in two phases, as well as upgrading the traffic lights at six intersections,

installing a video surveillance network comprising 12 cameras connected to a PC, and completing 9.4 km of civil engineering works for the high-speed communications network.

SPIE Sud-Ouest will provide maintenance with guaranteed results throughout the contract. Regarding the first works phase, for example, the street lighting failure rate is not to exceed 0.5 percent, meaning no more than 10 of 2,000 lighting points may be out of order at the same time, and outages should be remedied in less than one hour.¹⁴²

Lessons Learned

Tying in the availability payment to the performance of the private company provides a strong incentive for proper operation and maintenance work. However, it also means the municipality must have adequate project management and monitoring mechanisms in place, to ensure it receives the full benefit of the project.

¹⁴¹ IngolfBLN ([https://commons.wikimedia.org/wiki/File:Montpellier_-_Tramway_-_Ligne_3_-_Centre-Ville_-_Juvignac_\(4\).jpg](https://commons.wikimedia.org/wiki/File:Montpellier_-_Tramway_-_Ligne_3_-_Centre-Ville_-_Juvignac_(4).jpg)), „Montpellier - Tramway - Ligne 3 - Centre-Ville - Juvignac (4)“, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

¹⁴² Source(s) <http://www.spie.com/en/spie-sud-ouest-and-town-juvignac-herault-sign-public-private-partnership> accessed 8 February 2019.

Urban Development

70. City Improvement Districts, Johannesburg, South Africa



Photo Credit¹⁴³

Background

The City Improvement District (CID) structure used in Johannesburg City emerged from a voluntary pilot project initiated by business and property owners in Central Johannesburg in 1993. CID is a PPP comprising the local business community, the City of Johannesburg, and the local community. The CID concept arose in part in response to the high level of violence occurring in the City as a result of the lasting effects of the apartheid regime and the fragmented municipal structure. Citizens recognized the need to join forces to overcome these issues by collectively ensuring the provision of essential services, including security, urban area upgrades, and the cleaning and maintenance of public spaces.

Project Structure

First, the CIDs needed to be carried out separately in multiple Districts and, therefore, the geographic extent and boundaries of each District had to be established. Property owners and major tenants within a defined area were identified and informed of the proposed intervention, after which a referendum was conducted, with a pre-determined majority required to establish a District legally. Specifically, a CID can only be created if more than 50 percent of the property owners, representing over 50 percent of the total property value in the

area, agree to the proposal. Once established, 100 percent of the property owners within the designated area are obliged to contribute financially – equally sharing the financial risk.

Subsequently, each District needs to create a Board, which consists of property owners, business owners, representatives of the residents' organization, and representatives of the local authority. This Board then selects a specialized urban management company to manage the day-to-day operations within the District and to effectively manage the district for a period of two to five years. By law, the cost of procuring CID services is divided among all property owners within the geographical area under a predefined formula. In practice, the costs are borne in proportion to the value of each owner's property.

However, it should be noted that the CID services are expected to be only supplementary, as opposed to a replacement for the services provided by the local authority. Consequently, the local authority is obliged to inform the Board of its current level of service and must maintain the same level of service within a newly formed CID.

A CID is meant to be implemented within three to five years and can continue indefinitely unless

¹⁴³ Photo on the left: Kounosu (based on copyright claims). (https://commons.wikimedia.org/wiki/File:Johannesburg_Park_Railway_Station_01.jpg), „Johannesburg Park Railway Station 01“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Photo on the right: Evan Bench (https://commons.wikimedia.org/wiki/File:Johannesburg_CBD.jpg), „Johannesburg CBD“, <https://creativecommons.org/licenses/by/2.0/legalcode>

decided otherwise. The decision to dissolve a CID is subject to the same referendum process and requirements as its establishment. That means, more than 50 percent of property owners in the CID, representing over 50 percent of the total property value, must vote in favor of dissolution. A referendum on dissolution may be held at any time during a CID's lifetime.

Lessons Learned

The first CID was established in 1994 in the Central Business District of Johannesburg and focused on security, cleaning, and maintenance, as well as upgrading the facilities for informal traders. Due to the success of this project in reducing crime, five other Districts in Johannesburg launched CID projects between 1995 and 1999, namely South-Western Improvement District, Retail Improvement

District, the Legislature/City Hall Improvement District, the Gandhi Square Improvement District, and the Newton Improvement District. This idea has been replicated in other cities in South Africa, such as Cape Town and Pretoria due to its success. The services provided by CIDs have further expanded from security, cleaning, and maintenance to include physical improvements, the creation of associations for the homeless, and the development of income-generating activities.¹⁴⁴

The success of the CID initiative can be largely attributed to: (i) alignment of needs and incentives; (ii) shared objectives; and (iii) shared responsibilities among key stakeholders. These three factors helped build a sense of ownership among the property owners, which in turn kept them more engaged during the project, even amidst challenges.

71. Durban Point Waterfront Development Project, Ethekwini, South Africa



Photo Credit¹⁴⁵

Background

At the entrance to Durban Harbour, which is the busiest port in Africa, there lies the Durban Point Waterfront. Paradoxically, the Waterfront was largely abandoned and only used by a small group of people. To optimize the use of this space, the Point Waterfront development project was conceived and being pursued by the eThekweni municipality following its Development Framework Plan; which grants mixed-use development rights for this land. Early development projects in the area were faced with high skepticism by existing users, but in 2015, a new development company was established to pursue the project, and a new urban development was envisioned taking into account the current users concerns.

Project Structure

The Point Waterfront plan consists of a modern, mixed-use development project covering 750,000 square meters of bulk floor area, to be undertaken in three phases over the next five to ten years. The project is divided into 6 precincts and a promenade. Precinct 1 will be primarily residential and offices, with a few retail spaces. Precinct 2, which abuts the uShaka Marine World Theme Park, will contain high-end stores, hotels and condominiums. Precinct 3 consists of mainly historic buildings with limited redevelopment options due to their heritage status, though these have attracted the interest of several investors. Precinct 4 offers a sea-view and it is anticipated that developments in this space will be residential and commercial. Precinct 5 provides immediate access to the beach and will feature high-rise residential buildings; restaurants and bars. Precinct 6 is the intended site for the public transportation node, high-tech commerce and parking facilities. Finally, the promenade will be

¹⁴⁴ Source(s) accessed on February 15, 2019

http://www.urban-improvement-districts.de/files/File/Peyroux_CID_Johannesburg.pdf

https://www.researchgate.net/publication/265148761_City_Improvement_Districts_in_Johannesburg_An_examination_of_the_local_variations_of_the_BID_model

¹⁴⁵ PhillippN (https://commons.wikimedia.org/wiki/File:Durban_skyline.jpg), „Durban skyline“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

constructed along precinct 5 and will provide a continuous walking space along the shore, facing the beach that will accommodate commercial areas and public facilities, such as toilets, changing rooms, and spaces for watersports clubs.

The ZAR 35 billion (USD 2.5 billion) project's master developer is the Durban Point Waterfront Development Company (DPDC), a joint venture owned in equal parts by the eThekweni municipality and RocPoint Ltd., a private consortium that is majority-owned by UEM Sunrise, a publicly-listed Malaysian company and one of Malaysia's top property developers.

DPDC has invested about ZAR120 million (USD 8 million) in upgrading infrastructure on the project site. It has also sold about ZAR 190 million (USD 13 million) of land to private investors for development, which has resulted in about ZAR 1 billion (USD 71 million) in privately financed construction costs alone.

The property values of the existing properties in the area are forecast to increase by 10 percent per annum at least, as a result of the developments. By comparison, property values in the central business district are expected to increase by only 5 percent per annum. According to eThekweni Mayor Zandile Gumede, the gross public revenues derived from various taxes applicable to the area could amount to an additional ZAR 1.7 billion (USD 12 million).

The community will also benefit from the project by having public access to the beach and the entire area through modern sidewalks and canals within Point Waterfront. The canals and walkways are owned by the local authority, but their management is carried out by the Lot Owners Association.

Lessons Learned

The project commenced construction at the beginning of 2018, beginning with the beach promenade.¹⁴⁶

¹⁴⁶ Source(s) accessed on January 26, 2019

http://www.durban.gov.za/City_Services/development_planning_management/Land_Use_Management/Town_Planning_Regulations/Special_Zones/Pages/Point_Waterfront.aspx

http://www.pravinamar.com/reports/downloads/small_craft_harbour/BRDPDC.pdf

http://www.durban.gov.za/Resource_Centre/Press_Releases/Pages/Beachfront-Promenade-Extension-to-Support-Point-Waterfront-Development.aspx

<https://uemsunrise.com/property/region/durban-point>

<https://www.durbanpoint.co.za/>

¹⁴⁷ Dr Neil Clifton (https://commons.wikimedia.org/wiki/File:Croydon,_High_Street_-_geograph.org.uk_-_1775262.jpg), „Croydon, High Street - geograph.org.uk - 1775262“, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

72. Croydon Council Urban Regeneration Vehicle, London Borough of Croydon, United Kingdom



Photo Credit¹⁴⁷

Background

The Croydon Council Urban Regeneration Vehicle (CCURV) is a creative, 28-year joint venture aimed at regenerating a portfolio of key real estate assets in the London Borough of Croydon. CCURV was formed in 2008 with an estimated worth of GBP 450 million (USD 580 million).

Project Structure

The Croydon Council initiated the process to create CCURV in April 2007, using a competitive dialogue process provided in applicable European Union Regulations to select the private partner. This entailed publicly advertising the project and

providing a memorandum of information and pre-qualification questionnaire to all parties that expressed interest in the project. A total of 19 pre-qualification questionnaires were received and evaluated. From among these bidders, the eight strongest were invited to participate in the first stage of the competitive dialogue, at the end of which five bidders submitted outline proposals. Based on the strength of these proposals, three bidders were selected to participate in the second stage of the competitive dialogue process, during which one bidder withdrew. The remaining two bidders submitted final tenders and John Laing Equity was selected as the winning bidder in 2008.

The Council and John Laing Equity formed a limited liability joint venture, owned in equal parts (50:50) by the two partners. The partners to the joint venture exercise equal voting rights. For its stake in the CUURV, the Council contributed land and property assets, while the private partner contributed equity funds. The private partner further offers development expertise, including with respect to leveraging mixed-use development opportunities in the project area. The joint venture also has the right of first refusal for all surplus properties that the Croydon Council decides to sell, is empowered to purchase additional properties, and may obtain debt financing for its works.

The joint venture functions essentially as a commercial land developer – investing in and revitalizing properties not only for the economic and social benefits but also to generate sufficient income from the improved properties to make the investments sustainable and profitable. At the same time, the Council retains its role in public oversight and planning, which it exercises both as a separate entity and as a fifty-percent shareholder in the joint venture. The private partner, in return for its capital and development expertise contributions, receives privileged access to development opportunities in the borough.

Revenues generated from the urban redevelopment projects are used to pay any outstanding land value, senior debt, and recovery of Council and private sector equity contributions. Profits from the redevelopment works and other profitable assets acquired by the joint venture are shared 50:50 by the two partners, per their equity shares. The works delivered by the joint venture include the relocation of the Council to new offices, the redevelopment of several publicly-owned properties, and other land developments and property regeneration works across the London Borough of Croydon. Ownership of these developments remains with the Council. The first project undertaken by CCURV involved the construction of the Bernard Weatherill House (BWH), which is Croydon Council's new administrative headquarters located next to

the Town Hall. The BWH includes a dedicated conference enter, health suite, meeting room suite, union facilities, staff canteen, and external amenity spaces. The construction started in March 2010 and was completed in 2013.

The second project involved the Waddon Leisure and Housing Scheme, a project comprising a leisure center equipped with a swimming pool, sports hall, gym, and community space, as well as new residential units, of which 119 were to be affordable units. Construction started in January 2011 and was completed in October 2012. The most recent project undertaken by CCURV concerned the Taberner House, which used to be home to the Council offices before the transfer to BWH. The Taberner House was demolished in 2015 and the site is to be used to construct 513 homes, of which 40 percent will be designated as affordable units, within four buildings ranging from 13 to 35 stories. The ground floor level will be dedicated to retail and office space, a new children's play area, a pavilion café, and high-quality public space. The construction started in 2018 and is scheduled to be completed in 2021.

Lessons Learned

Positive attributes of this partnership include, but are not limited to, accelerated project delivery, risk transfer, alignment of public and private sector incentives, private sector expertise, receipt of full land value, sharing of the forecasted increase in value from development investments, and public control of regeneration as both a shareholder and planning authority.

The projects have provided new and improved facilities for the Croydon community. At the same time, it also created employment and training opportunities for residents. In fact, around one-quarter of the people employed on-site are drawn from the local workforce. Also, by partnering with schools and colleges, the project has offered skills development opportunities for residents, as well as opportunities for local companies to take part in the supply chain.¹⁴⁸

¹⁴⁸ Source(s) accessed on February 17, 2019
<http://news.croydon.gov.uk/work-is-now-under-way-on-the-taberner-house-site-to-bring-hundreds-of-affordable-homes-to-croydons-town-centre/>

<http://news.croydon.gov.uk/stunning-new-development-approved-for-taberner-house-site/>

<https://environment-analyst.com/dis/brownfield/34257/alternative-regeneration-solutions>

https://www.laing.com/project_portfolio/22/128/croydon-council-urban-regeneration-vehicle-waddon.html

https://www.laing.com/project_portfolio/105/62/croydon-council-urban-regeneration-vehicle-couldon.html

<http://news.croydon.gov.uk/work-is-now-under-way-on-the-taberner-house-site-to-bring-hundreds-of-affordable-homes-to-croydons-town-centre/>

<https://www.epr.co.uk/projects/architects-offices/bernard-weatherill-house/>

<https://www.croydon.gov.uk/sites/default/files/articles/downloads/ccurvpresentation.pdf>

73. Redevelopment of Library and Fire Station, Washington, District of Columbia, United States



Photo Credit¹⁴⁹



¹⁴⁹ Photo on the left: ParentingPatch (https://commons.wikimedia.org/wiki/File:Shelves_of_Language_Books_in_Library.JPG), „Shelves of Language Books in Library“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Photo on the right: Tony Hisgett from Birmingham, UK ([https://commons.wikimedia.org/wiki/File:DC_Fire_and_EMS_unit_\(27610832282\).jpg](https://commons.wikimedia.org/wiki/File:DC_Fire_and_EMS_unit_(27610832282).jpg)), „DC Fire and EMS unit (27610832282)“, <https://creativecommons.org/licenses/by/2.0/legalcode>

¹⁵⁰ Source(s) accessed on January 27, 2019

<http://dcclims1.dccouncil.us/images/00001/20100910152405.pdf>

<https://dmped.dc.gov/sites/default/files/dc/sites/config/publication/attachments/West%20End%20Executed%20Land%20Disposition%20Agreement%20-%20Part%201%20of%2011.pdf>

<https://caselaw.findlaw.com/dc-court-of-appeals/1641431.html> accessed July 22, 2019

<https://www.smartergrowth.net/wp-content/uploads/2012/11/pl4pg-final.pdf> accessed July 22, 2019

Background

Washington D.C. (the District) needed to refurbish the West End Library and West End Fire Station and also needed to develop additional, centrally located low-cost housing. As the library and fire station were almost functionally obsolete, their renovations would be extremely costly. The District was able to acquire new, modern facilities, while also providing affordable housing, by leveraging the air rights above the library and fire station.

Project Structure

In 2009, the District issued a competitive tender for bids for the redevelopment of the District-owned parcels. Through the competitive selection process, the development rights for the site were ultimately awarded to EastBanc Partner on 10 March 2010, whose proposal included USD 149 million in capital investment. The project leverages adjacent, privately-controlled parcels along with the District-owned parcels, to deliver a new fire station and library, approximately 150 multifamily residential condominiums, 900 m² of retail space, and 52 residential rental units affordable to households earning at or below 60 percent of the area's median income on the fire station site. The high-end condominiums provide additional tax revenue to the District, while the affordable housing adds much-needed housing space to the city.

The District sold the Developer all of the rights, titles, and interests in the District-owned parcels of land, with the exception of the air rights necessary to construct the new library and the new fire station in accordance with the new development plans, in addition to the easements, covenants, and other rights necessary to the support the operation of these facilities. The budget cap for the new library design, development, construction, furnishing, and equipment was USD 9,400,000, which would be financed from the purchase price. Once this cap

had been met, the new fire station budget cap was USD 8,600,000 for its design, development, construction, furnishing, and equipment. After the library and fire station caps were met, the remaining amount would be used for the design, development, and construction costs relating to the affordable units.

The District assumed the environmental risk (existence of environmental waste, USTs, asbestos, in the property) to a point. Namely, the District retains liability for these occurrences if the Developer finds any of these hazards within a specific, contractually agreed to period of time, during which it should have carried out an environmental test or study. After that period, the Developer loses its right to object to any conditions that may be discovered. Likewise, the property was sold to the Developer in “as is” condition. All risk of loss was borne by the District up to the moment of the contract's closing. In addition, the District retained review and approval rights concerning the construction drawings, but waived any liability in connection with them.

Lessons Learned

By the end of 2018, all of the newly developed facilities were open and functioning, bringing new life to this D.C. neighborhood.¹⁵⁰

This project highlights the following.

- Community engagement throughout the entire process is key for the successful completion of a project and for the stakeholders' opinion about the opportunities and benefits that the project offers to the citizens.

At the beginning of the process in the District, the community felt that the property disposition process moved rather fast and without much public input. Different community groups

approached DC's Council and conveyed their concerns, to which the District responded by rescinding the initial disposition process and restarting it again. This provided time to hold several meetings in which the community voiced their opinions to the District and expressed their ideas about the project, especially the new library. The Deputy Mayor for Planning and Economic Development, prior to the official release of the project's request for proposals, indicated that all future bidders should take into account the community's input and integrate it in their proposals. Once the proposals were received, the city consulted the community once again for their views and to inform them about the proposals. Following their endorsement, the project was awarded to the Developer EastBanc.

- Political will and involvement by different public entities of the local government can help to make a project commercially viable.

In the beginning, this project faced strong criticism and a lawsuit from an activist group because D.C.'s Zoning Commission had waived the Inclusionary Zoning requirement for the construction of the building above the new library, which otherwise would have mandated that a portion of the new residential space be reserved for affordable housing units. However, the Commission found that "the enhanced level of service that will result from the construction of the new Library and Fire Station so clearly will enhance the neighborhood that they set a benchmark in excellence for any future requests for Inclusionary Zoning waivers", and that, without waiver, the project would not generate enough revenue for the Developer to build the new library and the fire station. The Commission concluded that "under these unique circumstances" waiving the Inclusionary Zoning requirements was warranted. The District of Columbia Court of Appeals upheld the Commission's decision.

74. Fire Station Refurbishment, Chapel Hill, North Carolina, United States



Photo Credit¹⁵¹

Project Structure

In January 2014, the town of Chapel Hill issued a request for proposals to redevelop a functionally obsolete fire station, on a site with a golf course view and next to a main transportation corridor. At the end of the process, East West Partners was chosen as the developer to partner with the town to deliver a new and modern 930 m² fire station, a four-story 4,650 m² class-A office building, and a shared onsite parking deck with 133 parking spaces. The development agreement was signed in November 2016.

The developer agreed to contribute USD 1.75 million towards the cost of constructing the new fire station, in exchange for the right to build, own, and operate the office building on the site. The town would contribute USD 750,000 and the

county would contribute another USD 500,000. The developer was in charge of applying for the development permits required prior to the project construction. Force majeure risk is shared, with only contract time extensions available as compensation for occurrences beyond the reasonable control of the affected party.

The project entailed the demolition of the existing fire station, which would be temporarily relocated until the completion of the new facility, and construction of the new fire station, office building and parking site. It also included improvements to sidewalks and roads surrounding the project. The town retained ownership of the property on which the fire station was built, control of which was transferred back to the town on 30 May 2018.

¹⁵¹ Ivy Dawned (https://commons.wikimedia.org/wiki/File:Chapel_hill_firetruck.jpg), „Chapel hill firetruck“, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

Lessons Learned

The project was built entirely in 2018 and the office building has already achieved 100 percent rental occupancy.¹⁵²

This project highlights the following lessons:

- By leveraging the strategic location and corresponding value of the land, Chapel Hill was able to deliver a state-of-the-art fire station through a PPP. This allowed the town to leverage the private party's significant, upfront capital investment, which the town on its own may not have been able to afford.

- The developer indicated in the development agreement that the certainty, timeliness and predictability of the town's related developments was important to the success of the project and to the developer's willingness to enter into the PPP. This justified the specific standards and mitigation measures established in the contract; for example: how stormwater management will be integrated into the site, how it impacts the project, and what mitigation measures are taken in that respect.

75. Capitol Crossing, Washington, District of Columbia, United States



Photo Credit¹⁵³

Background

Capitol Crossing is an ambitious project to develop a multi-level podium over the busy I-395 highway that runs through the middle of Washington, District of Columbia (the District), as the District sold the air rights and land over a strip of the highway to a private developer to leverage the property's land value. The project will also reconnect the Capitol Hill and East End neighborhoods of the District, redefining downtown through the creation of three new city blocks to revitalize this part of the city.

Project Structure

The platform supports a 7-acre (204,386 m²), mixed-use development space for four office buildings, and one residential structure with 70,000 square feet retail facilities at the ground floor, parking facilities with four underground levels and a capacity of 1,146 vehicles, 440 bicycle parking spaces, and green space. This is a USD 1.3-billion multiuse development project that includes USD 270 million for utility upgrades and replacements as well as foundation work. The project is entirely privately funded. The land value created by the platform and the Washington DC real estate prices

warranted the investment cost of constructing the platform.

Plans for decking over the site and using the developing rights above I-395 were revived in 2006, when Property Group Partners (PGP), then known as the Louis Dreyfus Property Group, proposed purchasing (rather than leasing) the development rights based on the future value of the property and the space that would be built there. A deal between PGP and the city was ultimately closed in 2012 for around USD 11 billion and is expected to generate as much as USD 120 million in payments to the District.

PGP committed to construct and develop, at its sole cost and expense, no less than 50 affordable residential units in the project that should be sold or rented to households earning 80% of the area median income or less. PGP further committed to comply with the Small, Local, and Disadvantaged Business Enterprise Development and Assistance Act, under which the Developer is required, inter alia, to contract for at least 35% of the contract dollar volume of the project, at least 20% equity

¹⁵² Source(s) <https://www.townofchapelhill.org/town-hall/departments-services/planning-and-sustainability/development-projects/development-activity-report/station-at-east-54-the> accessed on 27 January 2019

¹⁵³ Payton Chung (<https://www.flickr.com/photos/paytonc/33409896375/>), „Capitol Crossing, platform over 395 complete“, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

and development participation of local, small, and disadvantaged business enterprises.

The deal calls for semiannual payments in lieu of taxes, also known as PILOT, pursuant to which PGP will remit a negotiated fee rather than real estate taxes based on an Office of Tax and Revenue assessment of the air rights over the highway until the freeway deck is completed. PILOT payments accrue and defer until PGP requests its first vertical building permit, at which point all payments will be due, minus USD 2.4 million to offset the capital cost of building the 50 units of affordable housing. Once the shell is finished, each building on the deck will be taxed like any other D.C. real estate.

The legislation authorizing the disposition of the air rights and establishing the PILOT scheme was enacted in 2010.¹⁵⁴

Lessons Learned

- Community engagement has been key to the success of the project as it involves many actors and institutions of the city. It is reported that the Developer has maintained an open dialogue with several important stakeholders in order to get community feedback throughout the entire process.
- Political will, patience and openness to negotiation and different options can make unique projects a reality. This project took three mayoral administrations to gain traction. It was challenging to reach an agreement with the District, because the cost of building over a highway was unknown. Ultimately, it was decided that it would be better to wait until the deck is finished and costs calculated to determine how much the air rights are worth. It was also challenging to agree on the deal structure and to get permits and approvals from other public authorities due to the uniqueness of the project.

76. Downtown Renewal, Silver Spring, Maryland, United States



Photo Credit¹⁵⁵

¹⁵⁴ Source(s) accessed on January 27, 2019
<https://code.dccouncil.us/dc/council/laws/docs/18-257.pdf>

https://www.fhwa.dot.gov/ipd/project_profiles/dc_capitol_crossing.aspx

<http://capitolcrossingdc.com/2016/12/19/dc-air-rights-project-restores-city-traffic-grid/>

<https://www.lera.com/capitol-crossing-platform>

<http://www.pgp.us.com/2016/04/19/pgp-acquires-air-rights-for-capitol-crossing/>

http://www.dcstudentsctf.org/PDFs/JOBS_SeptOct2014.pdf

¹⁵⁵ Photo in the public domain published by Crzytwnman
https://commons.wikimedia.org/wiki/File:Downtown_silver_spring_wayne.jpg

Background

The downtown area of Silver Spring had been slowly deteriorating for several decades. Prior attempts were made by the local authority to redevelop the area but to no avail. The situation changed when private developers and the Montgomery County authority developed and negotiated a joint development plan to bring Downtown Silver Spring back to life. This culminated in a PPP for the redevelopment of the 90,000 m² Downtown Silver Spring site, which was established in 2000.

Project Structure

Foulger-Pratt, a seasoned local constructor; Argo Investment Companies, an investment organization; and Peterson Companies, a retail development

expert, decided to approach Montgomery County Executive, Douglas M. Duncan to redevelop the area. Due to the companies' experience and the need to revitalize the downtown of Silver Spring, Montgomery County decided to enter into an exclusive agreement with PFA Silver Spring, LC to negotiate a joint development plan for a mixed-use project in the area.

Under the instruction of Mr. Duncan, PFA began meeting with relevant stakeholders and community representatives to explain the project, design the development plans, receive ideas and input, and address their concerns about the demolition of existing properties. Later, Montgomery County and PFA entered into a general development agreement that established how they would work together to

develop the mixed-use urban project. The County conveyed the land to the private developer through land leases with durations of 99 years at a rental fee of one dollar per year.

The rehabilitation project is a mixed-use development that includes 17,187 m² of offices; 40,876 m² of retail space; 23 movie screens in two facilities; housing and civic facilities, restaurants, a 179-room hotel, and public parking garages for more than 3,800 vehicles. The project strengthened the transportation between the area's neighborhoods and the downtown area through creative use of the local metro station. The community benefits from the public spaces filled with public artwork, fountains, and green areas. The project also served as a catalyst for other developments in the area.

The revitalization costs totaled about USD 517 million, of which about USD 330 million was privately sourced and USD 187 million was contributed from public funds. Lease and deed restrictions in effect for the project's first ten years allow PFA to finance 100 percent of the cost of the project or sell it at cost. However, if the developer finances or sells any project for more than cost, the County will receive 50 percent of the profit.

Lessons Learned

Today, Downtown Maryland is home to the American Film Institute and Discovery Communications' world headquarters. The project was the Silver Medal Winner of the 2005 Rudy Bruner Award for Urban Excellence.¹⁵⁶

This project provides the following lessons:

- Community engagement and stakeholder communication, involving the public sector, private partners, and non-governmental actors, was crucial to the project's success. Montgomery County's Silver Spring Regional Services Center served as a liaison between the stakeholders, as well as Montgomery County. It regularly communicated the redevelopment goals to generate political and financial support to implement the project. The private sector, with input from citizen groups, oversaw the design process, developed the final design, and marketed the facilities.
- The implementation was successful because both parties had a financial stake in the project, such that both assumed risks but also stood to benefit, which creates the type of aligned incentives that can help a project succeed.

¹⁵⁶ Source(s)

<https://casestudies.uli.org/wp-content/uploads/2015/12/C035021.pdf>

<http://www.rudybruneraward.org/wp-content/uploads/2005/01/04-Downtown-Silver-Spring-1.pdf>

<https://www.terrain.org/2013/unsprawl/downtown-silver-spring/>

http://uli.org/wp-content/uploads/2005/01/TP_Partnerships.pdf

¹⁵⁷ Photo on the left: M.O. Stevens (https://commons.wikimedia.org/wiki/File:South_Waterfront_Portland_Oregon_construction.JPG), „South Waterfront Portland Oregon construction“, <https://creativecommons.org/licenses/by/3.0/legalcode>. Photo on the right: Photo in the public domain published USEPAGOV <https://www.flickr.com/photos/24400159@N05/5794272244>

77. South Waterfront Central District Greenway, Portland, Oregon, United States



Photo Credit¹⁵⁷



Background

In 2003, the Portland Development Commission formed a partnership with major private developers to transform the South Waterfront Central District from an underused riverfront industrial area to a vibrant, mixed-use central city neighborhood. Most of these developers already owned land in the areas to be developed by the project.

Project Structure

The South Waterfront Development Plan comprised three phases that aimed at progressively developing the area's transportation, housing, sanitation, and public recreation infrastructure. This plan included the development of the South Waterfront Greenway (SWG), 1,900-meter linear park and urban walkway/transportation lane along the west bank of the Willamette River, which aims to connect people to Portland's downtown, central eastside, and the City's bike and pedestrian network.

SWG opened to the public in 2015, intending to create momentum for the other planned housing and commercial developments in the area, including condominium towers, apartments, and neighborhood retail and services, as well as the Oregon Health & Science University's plans for a campus expansion.

The owners of the land needed for the development of SWG, which included private developers and Oregon University, agreed to dedicate the land for the project at no cost to the City. The City oversaw the Greenway Development Plan and two of the developers agreed to pay USD 25,000 towards the cost of the Plan's design development. Although the City was not obligated to commence construction until after substantial completion of other buildings in the area by the developers, the City contracted for the construction of the Greenway right after the land dedication had been completed. The City will operate and maintain the Greenway parcel.

Funding and financing for the project was provided by a variety of sources. These included: USD 9.26 million in Parks System Development Charges, USD 4 million in Tax Increment Funding obtained from the North Macadam Urban Renewal Area, USD 1.42 million from TriMet (Portland' public transportation provider), USD 750,000 in Environmental Remediation funding from the City's Bureau of Environmental Services, and USD 68,000 in miscellaneous Portland Parks & Recreation funding.¹⁵⁸

Lessons Learned

- **Environmental impact**
In addition to the aims of better connecting the City, offering an alternative recreational space to Portland's citizens, and being a catalyst for other development projects, the SWG also planned to restore the riverbank to a more natural condition and provide a better habitat for juvenile salmon. The project also included several systems that would improve the environmental condition of the landscaped areas of the SWG, such as the installation of bioswales that cleanse rainwater from contaminants before it arrives in the Willamette River.
- **Stakeholder engagement**
As part of the initiative to reclaim the river's edge from the industrial activities that characterized the area decades ago, the City and the private partners engaged with stakeholders at different levels and across sectors. For example, they engaged with environmental advocates to design a project plan that would meet all the objectives of the development plan of the City without compromising the natural habitat. Likewise, a strong emphasis was given to building consensus among stakeholders and getting support for the initiative while balancing their individual needs and objectives.

78. Mixed Use Development, Virginia Beach, Virginia, United States



Photo Credit¹⁵⁹

Background

Virginia Beach's oceanfront resort area is a popular vacation destination for people on the East Coast of the United States and was among the City's highest priorities for redevelopment. In particular, the area immediately west of the resort strip at Virginia Beach had struggled to become a premier, year-

round destination for either tourists or locals. It was limited mainly to surface parking lots and one-story commercial buildings.

Project Structure

In September 2011, the City of Virginia Beach received an unsolicited proposal from the Breeden

¹⁵⁸ Source(s), accessed 21 March 2019: <https://www.portlandoregon.gov/parks/45643>

https://web.archive.org/web/20051223044028/http://www.pdc.us:80/pdf/ura/north_macadam/greenway/fact_sheet.pdf

http://vmw.pdc.us/ura/north_macadam/sowa-central-district.asp

¹⁵⁹ gargola87 from Virginia Beach, VA (https://commons.wikimedia.org/wiki/File:Virginia_Beach_waterfront.jpg), „Virginia Beach waterfront“, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

Company to convert a little-used, 244-space surface parking lot into 147 residential apartments, a unique 743m²-indoor sky diving facility, approximately 233 m² of commercial space, and a public parking garage with 377 spaces.

After the proposal was accepted and went through all of the required processes, both parties entered into a Comprehensive Agreement, as required by the Virginia Public-Private Education Facilities and Infrastructure Act. Under the agreement, Breeden was allowed to purchase the site for a price of nearly USD 8 million and develop it. Related public streetscape and utility infrastructure costs were shared. The private developer assumed the financial and construction risks. The City would reimburse a portion of the cost covering the design and installation of a stormwater feature for the parking garage.

The new parking facility increased the stock of public parking spaces by over 50 percent. Upon

completion of construction, the developer would sell the parking garage back to the City together with the real property on which the structure is located. Under the contract, once the new parking is conveyed to the City, it will be subject to a long-term lease in favor of the developer, which will be used to provide 221 parking lots exclusively for the newly built apartments. The Developer installed the parking garage's revenue collection equipment and, following completion of the facility's construction, the City would be responsible for the acquisition and installation of the equipment within the parking garage, at the City's sole cost and expense. Installation of the equipment was not an obligation of the Developer as a condition of transferring the parking garage to the City.

Lessons Learned

The project was awarded an annual Vision Award from the Urban Land Institute of Virginia in December 2016, based on its recognition as one of the best PPPs in mixed-used development.¹⁶⁰

79. Long Beach Civic Center Project, Long Beach, California, United States



Photo Credit¹⁶¹

Background

The City of Long Beach has an abundance of land but was facing significantly inadequate public facilities, maintenance deferral problems, underutilized public parks and downtown areas, and budget constraints. In parallel, the Port of Long Beach needed a new location for its headquarters (HQ), preferably closer to City Hall. In light of this, the City and the Port of Long Beach decided to cooperate with the private sector to develop a new Long Beach Civic Centre and move the Port HQ downtown.

Project Structure

To build the new Long Beach Civic Centre, the City and the Port of Long Beach selected the Plenary Properties Long Beach LLC (PPLL) through a competitive bidding process. The total project

cost has been forecasted at USD 520 million.

The civic center facilities to be developed by the private sector include a new city hall and port HQ, civic plaza, a central utility plant, main library, new underground parking, a three-rooftop solar array system that would provide up to 25 percent of the Civic Center's energy needs, a refurbished Lincoln Park with a playground, outdoor performance stage, cultural loop, and history walk, as well as a mixed-use, commercial development that would include up to 580 residential units and up to 200 hotel rooms, as well as some retail space. This was the first project in North America to combine both public infrastructure and private development components within a single project.

PPLL is responsible for financing the project's investment costs, through an equity contribution and

¹⁶⁰ <https://www.vbgov.com/government/departments/sga/projects/Pages/25th-Street-Unsolicited-PPEA-Proposal.aspx>

https://pilotonline.com/business/real-estate/article_d026452c-7706-5998-9e4b-721551283ff4.html

¹⁶¹ Darkest tree (https://commons.wikimedia.org/wiki/File:Downtown_Long_Beach_California_Aerial.jpg), „Downtown Long Beach California Aerial“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

commercial loans from financiers that include HSBC, Allianz, and Sumitomo Mitsui Banking Corp. In return, PPLB receives an operational concession for 40 years, after which the facilities will be transferred to the City, with the condition that the Civic Center be transferred in 85 percent “like new” condition. During the concession period, PPLB is entitled to an annual availability payment from the government, which will be adjusted by CPI over the 40-year term. The availability payment is meant to repay the debt and cover the operating and maintenance cost for the Civic Center. The annual payment for 2016 amounted to USD 15.2 million. The project will also generate significant revenue from private developments, such as commercial leases and mixed-use residential developments.

The project is also expected to produce more than USD 1 million in annual tax revenue for the City of Long Beach and create an estimated 8,000 jobs. The overall economic impact of the project is estimated at over USD 1.3 billion.

Lessons Learned

By using a PPP, the City of Long Beach was able to redevelop the Civic Center at a lower cost than it had been paying to maintain its existing facilities, without assuming any new debt or levying any new tax measures. The private solution also offered lower financing costs than tax-exempt lease revenue bonds and better risk allocation for the City of Long Beach.

As of December 2018, the project was still under construction. It is scheduled to be completed in 2019.¹⁶²

¹⁶² Source(s):
<https://www.cacities.org/Resources/Documents/Education-and-Events-Section/Municipal-Finance/2016-Session-Materials/Municipal-P3-Case-Study-Long-Beach-Civic-Center>

<https://plenarygroup.com/projects/north-america/long-beach-civic-center-redevelopment>

<https://www.prnewswire.com/news-releases/long-beach-civic-center-p3-reaches-513-million-commercial-and-financial-close-300254970.html>

<http://www.nortonrosefulbright.com/news/144340/long-beach-civic-center-and-port-headquarters-ppp-project-nabs-top-industry-honors>

https://www.p3buildings.org/wp-content/uploads/2016/07/Long_Beach_Civic_Center_may_influence_pipeline___InfraAmericas.pdf

http://www.p3point.com/yahoo_site_admin/assets/docs/Bond_Buyer_Long_Beach_Closes_on_Financing_for_Civic_Center_P3.128120014.pdf

Affordable Housing

80. Regent Park Affordable Housing Project, Toronto, Canada



Photo Credit¹⁶³



¹⁶³ Photo on the left: Kevin Costain ([https://commons.wikimedia.org/wiki/File:There_Goes_The_Neighbourhood_\(24328647145\).jpg](https://commons.wikimedia.org/wiki/File:There_Goes_The_Neighbourhood_(24328647145).jpg)), „There Goes The Neighbourhood (24328647145)“, <https://creativecommons.org/licenses/by/2.0/legalcode>.

Photo on the right: DanielsCorp (<https://commons.wikimedia.org/wiki/File:6acreRegentPark.jpg>), „6acreRegentPark“, <https://creativecommons.org/licenses/by/3.0/legalcode>

¹⁶⁴ Source(s) accessed on February 7, 2019 <https://www.toronto.ca/legdocs/mmis/2017/cc/bgrd/backgroundfile-101361.pdf>

<https://www.torontohousing.ca/regentpark>

<http://www.stmichaelshospital.com/pdf/crich/summer2008/Morgan.pdf>

<https://medium.com/sidewalk-talk/amid-an-urban-affordability-challenge-a-model-for-inclusive-housing-grows-in-torontos-regent-park-aa6ae06de92d>

https://www.nytimes.com/2016/02/29/world/americas/in-toronto-a-neighborhood-in-despair-transforms-into-a-model-of-inclusion.html?_r=0&source=post_page-----

Background

Regent Park, a 100 percent government-owned and subsidized neighborhood built more than 50 years ago, was in dire need of renovation. Among the poorest neighborhoods in Canada, Regent Park was home to a culturally diverse group of low-income individuals and families. To improve the situation, the Toronto Community Housing Corporation (TCH), the owner and operator of the property, proposed a plan to the Toronto City Council in 2003 to revitalize Regent Park. TCH is the largest Canadian public housing provider and its sole shareholder is the City of Toronto.

Project Structure

A CAD 1.1 billion (USD 831 million) redevelopment plan was proposed for implementation in five phases over a 20 to 25-year period. The plan called for replacing old buildings with towers and townhouses and developing new community facilities, public streets and parks. The plan envisioned the construction of 2,083 replacement rent-geared-to-income (RGI) units, approximately 700 new affordable rental units, and 4,000 new market condominium units that would include affordable ownership opportunities.

After consultations with stakeholders TCH decided that the redevelopment process would be completed with a private partner, which would help to design and construct the first phase of the project. Following the first tender, TCH and the chosen private partner failed to agree on the terms of the project, leading TCH to cancel the award. A second competitive tender was held and TCH selected Daniels Corporation as the winning bidder. The resulting PPP agreement stipulated that if

Daniels Corporation failed to fulfill the requirements of the project's first phase, the company would not be eligible to participate in any of the remaining phases.

Each phase of the mixed-income revitalization project used different financing structures. For Phase 1, TCH financed the private partner's construction of the housing units, which was repaid with the proceeds from the sale of completed market condominium units. TCH also covered all of the costs for new municipal infrastructure during this phase. Given the failed first tender and the poor reputation of the neighborhood, TCH deemed it necessary to assume these risks and obligations in Phase 1 to attract a private investor.

For Phase 2, TCH took less risk, as the new condominium projects were able to be financed by traditional lenders and the majority of the condominium units had been sold prior to construction. Beginning in Phase 2 and continuing in Phase 3, the City of Toronto agreed to fund 60 percent of the cost of the municipal infrastructure and waived development fees and property taxes on all affordable housing units. For Phase 3, TCH negotiated a sale of the necessary land to the private development partner, such that it would no longer bear any market risks related to sale of the condominiums.

Daniels Corporation successfully met the requirements for Phase 1 and 2 and is continuing as the developer for Phase 3. The first building was opened in 2010 and Phase 3 is expected to be completed in 2019/2020.¹⁶⁴

Lessons Learned

It has been reported that the project is a success both in terms of refurbishing affordable housing stock and for being more inclusive towards a part of Toronto that had been underserved for several years.

Formal and informal community engagement was crucial for the success of the project as, from the beginning, it was hoped that the revitalization of the area would be not only physical but also social. Around 2,000 people were consulted prior the development in 2006 and, although a number of meetings were held officially, informal meetings among residents were also highly encouraged. THC conducted several community engagement

activities, including hiring and training community residents to provide information about the redevelopment to their fellow residents, gather their concerns and opinions, and the report them back to THC. This was particularly impactful as there are more than 50 languages spoken in Regent Park. Furthermore, involving several non-profits active in the area helped different stakeholders get engaged, learn more about the project and collaborate with it. One example of inclusion of the community's concerns is the decision to provide women with exclusive space at public pools, which was a direct response to concerns voiced by the Muslim community engagement activities conducted in relation to this project.

81. Sustainable Housing Project in Turin, Italy



Photo Credit¹⁶⁵

Background

In order to provide housing for vulnerable individuals and families, including families waitlisted for public housing, single-income families, low-income young couples, posted workers, students, and immigrants, the City of Turin initiated a series of affordable temporary social housing projects. These projects leveraged innovative financing mechanisms, including PPPs, by reusing abandoned buildings. One such project used a nine-story building that was in deplorable condition, having been unused for over 20 years. The building was located in a northern suburb of Turin, between a residential district and a large industrial plant, with a population of 3,000.

Project Structure

In December 2008, the municipality of Turin issued a public tender for a PPP to refurbish, modify, and manage the building. Following the public tender, the municipality awarded the project to a temporary consortium led by Oltre Venture. Oltre Venture later established an SPV called Ivrea 24 in collaboration with an operative partner, Cooperativa DOC, and a financial partner, Fondazione CRT, a bank. A management company was further created, called

Sharing Ltd., to provide management services for the social housing project. Oltre Venture owns 70 percent of the shares of Sharing Ltd. and Cooperativa DOC owns the remaining 30 percent. Cooperativa DOC's role is to provide the consortium with hotel and hostel management expertise.

The municipality agreed to allow the SPV to take over the ground lease of the property for 90 years. Under this arrangement, the lessee is permitted to develop the property during the lease period, at the conclusion of which the land and all improvements will revert to the property owner. As part of the agreement, the City imposed requirements for energy efficiency and defined environmental impact measures.

Oltre Venture and Fondazione CRT co-financed the capital costs of the project, providing about EUR 1.3 million (USD 1.5 million) and EUR 13.2 million (USD 15 million) in equity, respectively. The restored building opened on 4 September 2011, with Sharing Ltd. running the building and paying rent to the SPV. The building consists of 182 flats equipped with 470 beds, kitchen and

¹⁶⁵ chensiyuan
(https://commons.wikimedia.org/wiki/File:Turin_aerial_2009.JPG), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

other ancillary services such as a bar, restaurant, laundry, grocery store, a medical and dental clinic with controlled prices, employment office, after-school activity center, and car/bike-sharing system. All of these services are managed by Sharing Ltd. and open to tenants and all neighborhood residents. Aside from the flats, which are rentable for a maximum of twelve months, the building is equipped with 58 affordable hotel rooms. About 20 residential units of the apartments are reserved for families waiting for public housing. These families only need to pay “social rent,” which is fixed at an amount below the rental fee otherwise charged

by Sharing Ltd. For each of these 20 units, the municipality pays an annual fee of up to EUR 366 (or USD 417) to Sharing Ltd.

Lessons Learned

In 2014, Sharing Ltd. reached the break-even point. The energy-efficient measures allowed Sharing Ltd. to increase rents, while still keeping them below-market rates, as a result of the energy costs saved by tenants. The project showcases the private developer’s innovativeness in generating revenues through energy-efficient capital investments.¹⁶⁶

82. Challenging Case: Slum Rehabilitation Scheme, Maharashtra, India



Photo Credit¹⁶⁷

Background

Since the beginning of the 20th century, Mumbai has experienced a massive influx of migrants from all over India. This has contributed to the emergence and expansion of slums. In January 1995, there were 805,000 slum dwellings with 4,000,000 slum inhabitants. To tackle this problem, the Government of Maharashtra launched its Slum Rehabilitation Scheme (SRS) in December 1995. It is a PPP scheme that invites private developers to invest in slum rehabilitation projects in return for extra Floor Square Index (FSI). The program is expected to be implemented without any investment from the Government. The Slum Rehabilitation Authority (SRA) was formed to oversee, coordinate, and approve the SRS.

Project Structure

The salient features of the SRS are as follows:

- Eligible slum inhabitants are given new, on-site, tenements consisting of a bedroom, kitchen, bathroom, and toilet at no cost, while ineligible slum inhabitants are relocated;
- Implementing the scheme requires first obtaining the consent of at least 75 percent of the slum inhabitants;
- The slum inhabitants select the developer; and
- The tenements then cannot be sold by their residents for the next ten years.

To attract private developers, the scheme introduced Transferable Development Rights (TDR). The TDR allowed the developers to “transfer a portion of the surplus development rights provided under SRS to any other sites in the city,” which are many times more profitable than the SRS.

The Government provides a Floor-Area Ratio or FSI to incentivize the private developers to demolish existing slums and provide new, on-site housing. This means that extra units constructed can be sold at market price, with the private developer retaining the full proceeds from these sales. This effectively allows the Government and private developer to cross-subsidize the provision of new apartments to slum inhabitants. These on-site apartments have an approximate value of INR 15,000 (USD 300).

The project’s initiation was assisted by The Alliance, an advocacy organization comprising the Indian non-governmental organization Society for the Promotion of Area Resource Centers (SPARC) and two community-based organizations: the National Slum Dwellers Federation (NSDF) and Mahila Milan. The Alliance has been vital in aligning the SRS projects with the slum inhabitants’ interests, including obtaining the financing and licensing between the slum inhabitants, private developers,

¹⁶⁶ Source(s)
https://evpa.eu.com/uploads/documents/CASE_OltreVenture_Ivrea24Sharing.pdf
 accessed 14 February 2019

Copiello, Sergio (2015), “Achieving affordable housing through energy efficiency strategy.” <https://www.sciencedirect.com/science/article/pii/S0301421515002359>
 accessed 8 February 2019

<http://www.sharing.to.it/site/en/> accessed 8 February 2019

¹⁶⁷ François Zeller from Montreal, Canada ([https://commons.wikimedia.org/wiki/File:Dhobi_Ghat_-_Mumbai_\(Maharashtra,_India\)_ \(32876891863\).jpg](https://commons.wikimedia.org/wiki/File:Dhobi_Ghat_-_Mumbai_(Maharashtra,_India)_ (32876891863).jpg)), „Dhobi Ghat - Mumbai (Maharashtra, India) (32876891863)”, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

and the Government. It also rehabilitates slums at its own cost and cooperates with financiers like Citigroup to partially fund the scheme.

The involvement of The Alliance made the scheme unique as most risks, technical and financial, are under The Alliance's responsibility, while the municipality assumes the political risk and the private developers bears the construction risk.

Lessons Learned

The SRS did not realize all of the projected results, partly due to the 75 percent consent requirement as well as the collapse of the Mumbai real estate market in the 2000s. The latter created an unstable market for the TDR – which is supposed to be the primary source of revenue for the private developers. Between 1995 and 2000, only 3,486 units were redeveloped. Out of 75,000 requests in 1998, the SRS had moved only 26,000 households as of 2002.

In 2013, the High Court of Mumbai ruled that the Government of Maharashtra must revoke the requirement of obtaining consent from 75 percent of the slum inhabitants. However, this ruling is only applicable to cluster development projects, which are those that involve the integrated development of slums into townships. In addition, reports have indicated that some slum dwellers sold or leased their new apartments and returned to their previous housing, due to poor quality, unaffordable maintenance costs, and disrupted networks found in the new apartments.

This case suggests that affordable housing, if attempted without adequate government support and direct involvement, may be hard to materialize, given the complexities involved. Transferring nearly all of the risks to a third party, in this case The Alliance, also makes the project more vulnerable to crises. Government should strive to play an active role in stages of affordable housing projects, as it remains the central authority responsible for the provision of this service in response to a private market that has priced out some residents.¹⁶⁸

83. Challenging Case: Dege Eco Village, Dar es Salaam, Tanzania



Photo Credit¹⁶⁹

Background

Dar es Salaam is the second-fastest-growing city in the world. The city's population has been projected to grow from six million in 2015 to 13.4 million by 2035, well in excess of the 10 million "megacity" threshold. This increase has been attributed to a high birthrate and growing migration to the city. These urban migrants came from all over Tanzania to improve their standard of living. As a result, Tanzania is facing an acute housing deficit of three million units that keeps growing by 200,000 units per year, mostly in Dar es Salaam. To address the housing deficit problem, the National Social Security Fund (NSSF) of Tanzania partnered with a private company called Azimio Housing Estate Limited to construct Tanzania's "most ambitious housing project," called Dege Eco Village in Dar es Salaam. The project aimed to provide 7,160 apartments and 300 villas catering to all income brackets.

Project Structure

The project began as an unsolicited proposal submitted by Azimio Housing Estate Limited, with the private partner offering to provide 300 acres of land located in Kigamboni District in Dar es Salaam for the project. A joint venture (JV) called Hifadhi Builders Limited was created between NSSF and Azimio Housing Estate with 45 and 55 percent shares, respectively. Of the 55 percent shares held by Azimio, 20 percent reflected its land contribution and the remaining 35 percent was provided as cash. The project was reportedly expected to comprise three phases; scheduled for completion by the end of 2016, 2017, and 2018, respectively, with a total cost of USD 653 million. The joint venture would use the returns from the high-end housing units to subsidize the less profitable, lower-priced units.

¹⁶⁸ Source(s)
Jagdale, Rohit (2014).
"An Overview of Slum
Rehabilitation Schemes
in Mumbai, India"

Mukherjee and Raut.
"Assessment of Slum
Rehabilitation Scheme"
<https://www.carecinstitute.org/wp-content/uploads/2011/03/03-Financing-Slum-Rehabilitation-in-Mumbai-A-Non-Profit-Caught-in-the-Middle-Case-Study.pdf>
<https://www.livemint.com/Opinion/AhwjNLTtMS8GK7i1RBqnSI/Opinion--Indias-failure-to-address-its-urban-slum-problem.html>

¹⁶⁹ Rocky Mbithi ([https://commons.wikimedia.org/wiki/File:Dar_es_Salaam,_Tanzania_-_panoramio_\(2\).jpg](https://commons.wikimedia.org/wiki/File:Dar_es_Salaam,_Tanzania_-_panoramio_(2).jpg)), „Dar es Salaam, Tanzania - panoramio (2)“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Lessons Learned

After construction started in 2014, progress was slowed by the absence of basic infrastructure connections such as water, roads, and electricity. An audit done in 2015 exacerbated the situation, as it indicated that the project exhibited irregularities and was “not serving the public interest.” Apparently, the project did not go through the PPP Financing Unit within the Ministry of Finance or the PPP Coordination Unit for approval out of concerns over government bureaucracy. Following the

inspection, development stopped and the project site was deserted.

This project highlights the need to perform adequate due diligence, secure all necessary approvals, and identify and source all of the resources needed before breaking ground on any project. This project seemingly failed for many reasons, ranging from poor contracting and procurement, to project mismanagement and allegations of corruption.¹⁷⁰

¹⁷⁰ Case source(s): <http://daman.co.tz/portfolio/dege-eco-village/> accessed on July 2, 2019.

<https://www.thecitizen.co.tz/news/business/1840414-2647148-11i5aq3/index.html> accessed on July 2, 2019.

<http://www.arcom.ac.uk/-docs/proceedings/e5594aa1eec77ada98f48946496b6d0d.pdf> accessed on July 2, 2019.

<https://www.nationalgeographic.com/environment/2019/04/tanzanian-city-may-soon-be-one-of-the-worlds-most-populous/> accessed on August 20, 2019

¹⁷¹ Lucky Uwakwe (https://commons.wikimedia.org/wiki/File:Top_view_of_bauchi_state_capital_Nigeria.jpg), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

¹⁷² Case source(s): <https://www.vanguardngr.com/2018/07/abandoned-housing-projects-litter-nigerian-cities/> accessed on July 4, 2019.

<http://www.macrothink.org/journal/index.php/ijrd/article/download/9933/8319> accessed on July 4, 2019.

<http://housingfinanceafrica.org/the-rise-of-housing-public-private-partnerships-in-africa/> accessed on July 4, 2019.

84. Challenging Case: Unity Housing Estate, Bauchi Town, Nigeria



Photo Credit¹⁷¹

Background

Nigeria faces a significant shortfall in housing stock, particularly in urban areas such as the town of Bauchi. To help address this problem, the then Governor of Bauchi, Mallam Isa Yuguda, initiated a PPP project for low-cost housing in 2009, due to the limited funds available through the state budget.

Project Structure

Bauchi state government partnered with a private company called Terraquest Development Company Limited to deliver 1,000 units of low-cost housing intended for civil servants in three phases. The first phase consisted of 288 housing units, the second phase consisted of 171 housing units, and the third phase consisted of 112 housing units.

The project was based on a design-build-finance (DBF) model. Terraquest would be responsible for designing, financing, and constructing the project. The state government would provide the land, payment for the final works completed, and enabling infrastructure and serve as guarantor for the financing acquired by Terraquest. The state government would also assume ownership of the housing units upon completion of the construction. Federal Mortgage Bank of Nigeria (FMBN) sponsored the project.

Lessons Learned

The first phase was completed and occupied but failed to meet expectations. The state government breached the contract as it only provided the land, while refusing to pay the promised compensation of NGN 23 million (USD 64,000). Only about NGN 10 million (USD 28,000) was released to the private company during the visit by the Federal Minister for Housing. With the government declining to pay for the infrastructure, the housing units were poorly built and the private partner had to increase the price of the housing units by 19-23.5 percent. In addition, the intended beneficiaries were discouraged from purchasing the units due to the complicated process involved. Recipients were required to provide guarantors and fulfill difficult conditions to qualify for mortgage loans. As a result, most of the housing units remained empty.

This project underscores private sector concern over payment obligations by the public partner to a PPP, which may go unfulfilled for any number of reasons and threaten the private partner's investment in a PPP. This project failed primarily on these terms, though the non-payment was exasperated by the government's failure to take steps to simplify the process for intended beneficiaries to acquire the affordable housing units.¹⁷²

Education

85. Bundled Schools, Ireland



Photo Credit¹⁷³

Background

In 2005, Ireland's Minister for Education and Science established a Schools Program aiming to deliver 27 new schools in rapidly developing areas, either by replacing existing schools with new facilities or refurbishing existing schools. The 23 post-primary and 4 primary schools were to be delivered as PPPs, in 5 bundles. Each project is named 'Schools PPP Bundle 1', 'Schools PPP Bundle 2', 'Schools PPP Bundle 3', and so on.

Project Structure

Schools PPP Bundle 3 entailed the design, construction, finance, and maintenance of eight schools (seven post-primary schools and one primary school) that would serve a student population of approximately 5,700. In some locations, the project delivered new facilities. In others, it replaced existing schools. In certain areas, the project provided new accommodations for schools formed from the amalgamation of existing schools.

After a competitive bidding process, the 25-year contract was awarded to BAM Schools Bundle 3 Ltd., a joint venture between BAM PPP and Dutch pension fund administrator PGGM. The value of the contract was estimated at EUR 100 million and was signed in November 2012. Construction commenced immediately and the first school was inaugurated just over a year later, in November 2013. The last school in the bundle opened in April 2014.

The financing was provided by Bank of Ireland, the European Investment Bank, and the

National Pensions Reserve Fund. The private partner assumed all of the financial, design and construction risk. It also undertook to deliver and maintain the schools to a defined standard and provide a range of ancillary services (such as cleaning and building maintenance) for 25 years after construction. The projected total expenditure in unitary charge payments and projected future commitments throughout the project's life is approximately EUR 412 million (fully inclusive of VAT). Should there be any additional income generated throughout project's life, it will be shared 50:50 between the PPP company and the relevant school.

The project was carried out with due care to concerns expressed by stakeholders about the impact of the construction on the school's educational mandates. For example, the school management expressed concerns regarding school active hours and the provision of exams. In addition, special consideration was given to the environment surrounding some of the locations, as construction during breeding season posed a risk to certain animals in the vicinity.

Three additional bundles accounting for more than forty schools have also been delivered. Brief information on each is provided, below.

- Schools PPP Bundle 1:

Following a competitive bidding process, in March 2009 Macquarie Partnerships for Ireland (MPFI) was awarded the contract for the first bundle, which comprised four post-primary schools in three locations. Construction work began the same month and the four schools

¹⁷³ Tulane Public Relations ([https://commons.wikimedia.org/wiki/File:Studying_\(2759729091\).jpg](https://commons.wikimedia.org/wiki/File:Studying_(2759729091).jpg)), „Studying (2759729091)“,

<https://creativecommons.org/licenses/by/2.0/legalcode>

were delivered in August 2010. Sodexo Limited, the facilities management company engaged by the MPFI consortium, is providing operation and maintenance services including cleaning, maintenance, energy management and life-cycle replacement services.

- Schools PPP Bundle 2:
The second bundle entailed the delivery of education facilities for 4,700 students across six schools on five sites. Pymble Schools Ltd. was awarded the contract on 2 June 2010, after a competitive process that involved soliciting expressions of interest, shortlisting, tendering and evaluation. Financing was provided by the European Investment Bank, Bank of Ireland and NIBC. The construction works commenced the

same month, June 2010. The last school in this bundle was delivered in October 2011, one month ahead of schedule.

Lessons Learned

The Schools PPP Bundle 3 project has been awarded several prizes such as: Silver Award - Best Completed Project in the Partnerships Awards 2016; Winner - Education Project of the Year in the Irish Construction Industry Awards 2015; and Winner - Best Education Award in the Irish Architecture Awards ceremony – the Royal Institute of Architects Ireland 2015.

It is reported that the project created approximately 2,500 jobs.¹⁷⁴

86. Free Computer Training for Underprivileged Children, Kolkata, West Bengal, India



Photo Credit¹⁷⁵

Background

In today's world, knowing how to use a computer can be an important gateway to success. However, due to the high cost of attaining computer-related skills, computer education was largely inaccessible for many poor communities in West Bengal. In light of this, the Bengal Services Society (BSS), an NGO based in West Bengal, collaborated with the Kolkata Municipal Corporation (KMC) in 2003 to establish a free computer training center for underprivileged children using KMC-owned and under-utilized school.

Project Structure

The project was spearheaded by the public sector and an NGO, with contributions from a leading computer company. KMC provided the space for free, the NGO provided the training, and the computer company donated nine personal computers (PCs) to the school. These nine PCs

were meant to be used by 18 students per session. Each session would last for 45 minutes and be held six days a week. The training would be open to all underprivileged children aged 10 to 14. Each child would be able to receive free training twice a week. The children would be awarded certificates upon completing the course.

Lessons Learned

The collaboration between KMC and BSS was innovative as it utilized an old and under-used public asset to deliver a much-needed project for children from economically-weak families. According to the last news from 2003, KMC was planning to initiate similar collaborations with other NGOs to revive 15 other under-utilized school buildings. However, no further information could be obtained from publicly available reports regarding the scaling up of the project by KMC.¹⁷⁶

¹⁷⁴ Case Sources: https://www.ndfa.ie/project_sectors/education; <https://bamcareers.com/ie/projects/irish-schools-ppp-programme-bundle-3/>

¹⁷⁵ Frederick Noronha. (https://commons.wikimedia.org/wiki/File:India_Goa_computers_kids.jpg), „India Goa computers kids“

<https://creativecommons.org/licenses/by-sa/3.0/legalcode>

¹⁷⁶ Case source(s): <https://www.telegraphindia.com/states/west-bengal/computer-skills-free-for-street-kids/cid/1086566>

87. Mafra and Ericeira Business Factory, Portugal



Photo Credit¹⁷⁷

Background

The municipality of Mafra has an area of 291 km² and 76,685 inhabitants. In 2015, it wanted to nurture entrepreneurship in its villages in order to create jobs and thereby encourage people to stay and contribute to the villages. The municipality realized that, to do so, they would need to build and develop an entrepreneurial ecosystem. With little internal expertise in developing such an ecosystem, the municipality decided to pursue a PPP to create a business incubator and outsource the training services to an experienced private partner. Subsequently, it established two business incubators, one in Mafra village and another one in Ericeira village.

Project Structure

The municipality awarded the PPP contract to Territórios Criativos, a private operator specializing in entrepreneurial activities and training, business incubator management and incubator community management. The private operator provided the direct services, including offering trainings and micro-managing and operating the incubator, while the municipal provided the physical site – which was previously under-utilized primary school building. At the same time, national government institutions, including QREN and PORLISBOA, funded the supporting infrastructure.

The project derives its revenues from aspiring entrepreneur attendees' monthly fees, renting rooms, and sponsorship from a local bank (Caixa de Crédito Agrícola). The monthly fees for entrepreneurs are very low compared to the market price. The monthly payments include working space, access to the internet, mentoring, business boot camps, consultations (e.g., legal advice), training programs, marketing, and leadership programs, among others.

Management of the incubator goes beyond the contract as the private operator also provided capacity building to the municipality staff in case the municipality does not renew the contract.

Lessons Learned

Since the incubator opened in April 2015, it has created a network that connects all local players in entrepreneurship, including local schools, angel investors, and authorities. It fosters the exchange of expertise between the hired experts and the entrepreneurs and municipal staff. Thus far, there are 60 projects in the business incubator and 50 percent of the entrepreneurs are women.

To achieve financial sustainability, the business incubator plans to introduce progressive fees to newcomer and solicit more prominent local companies to sponsor some rooms.

This project provides the following lessons.

- The project was thoughtfully and purposefully designed, with close engagement between the key local and national players from the very outset. The municipality also leveraged the private service deliverer's expertise in nurturing fruitful partnerships among the players.
- The project focused on long-term gains by maximizing all possible revenue streams. It even introduced new policies to enable self-financing and provide capacity building to municipality staff to ensure the project's sustainability in the long term.¹⁷⁸

¹⁷⁷ Moyan Brenn from Italy ([https://commons.wikimedia.org/wiki/File:Study_\(16840395246\).jpg](https://commons.wikimedia.org/wiki/File:Study_(16840395246).jpg)), „Study (16840395246)“,

<https://creativecommons.org/licenses/by/2.0/legalcode>

¹⁷⁸ Case source(s): https://www.unece.org/fileadmin/DAM/ceci/documents/2017/PPP/Forum/Case_Studies_Compilium.pdf

88. James F. Oyster Bilingual Elementary School, Washington, District of Columbia, United States



Photo Credit¹⁷⁹

Background

The James F. Oyster Bilingual Public Elementary School was almost closed in 1993 due to the poor physical state of the building and a lack of public capital funds to rehabilitate it. This motivated the establishment of a PPP between the District of Columbia's Public School District, which controlled the school and site; the District of Columbia municipal government (municipality), which owned the site and was responsible for levying property taxes; and a national real estate development company.

Project Structure

The municipality recognized that the school was situated in an attractive neighborhood, such that the property on which the school was located had added value. Acknowledging the real value of the property, the municipality agreed to allow the private developer to develop an apartment building adjacent to the school, which would generate the cash flow needed to finance a new school building.

The private developer tore down the old school and divided the school property in half. One portion was reserved for building a new school, and the other half was set aside for the development of a nine-story, 211-unit upscale apartment building. Per the PPP contract, the school's design was carefully overseen by the School Board, with input from the community. A USD 200,000 grant from the Ford Foundation helped to pay for the initial design and planning.

To fund the construction of the new school building, the municipality issued USD 11 million in 35-year, tax-exempt bonds, repayable entirely from the revenue generated by the private apartment building. Thus, the school was rehabilitated at no cost to the taxpayers.

Lessons Learned

The school re-opened in 1998. It consists of a three-story brick building equipped with a computer lab, library, gymnasium, 33 underground parking spaces, classrooms designed to accommodate the school's bilingual program, office space for after school programs, and other spaces available for community use.¹⁸⁰

The case showcases innovative exploitation of space around a public asset. By leveraging a portion of the valuable land parcel on which the school sits, the project was able to generate sustainable revenues to fund the refurbishment of the public asset, which otherwise would not have been possible using public school construction funds alone.

89. Varaždin County School Program, Croatia



Photo Credit¹⁸¹

Background

At the time this project was initiated in 2006, the schools in Varaždin County, Croatia had become significantly overcrowded. To accommodate all students, schools had started organizing their classes into two core sessions per day, one morning school and one afternoon school, for six days each week instead of five. To address the overcrowding issue, the County identified a need to build one new school, reconstruct 21 existing schools, and construct ten gymnasiums.

¹⁷⁹ AgnosticPreachersKid at en.wikipedia (https://commons.wikimedia.org/wiki/File:John_Quincy_Adams_Elementary_School.JPG), „John Quincy Adams Elementary School“

<https://creativecommons.org/licenses/by-sa/3.0/legalcode>

¹⁸⁰ Source(s):https://www.esc-pau.fr/ppp/documents/featured_projects/usa_oyster_school.pdf accessed 15 February 2019

<https://www.edweek.org/ew/articles/2001/09/05/01oyster.h21.html> accessed 15 February 2019

https://www.washingtonpost.com/archive/local/1998/09/14/as-schools-reopen-problems-return/69d431c1-07b3-4a43-a170-b35e896dc29c/?noredirect=on&utm_term=.f4023f0a5410 accessed 15 February 2019

¹⁸¹ Suradnik13 (https://commons.wikimedia.org/wiki/File:Madarevo,_Varaždin_County.jpg)

<https://creativecommons.org/licenses/by-sa/4.0/legalcode>

Project Structure

The County elected to pursue a PPP for the project using an availability payment mechanism. To this end, the County began competitively tendering the projects at the beginning of 2006. Through competitive negotiations, the County awarded and executed eight PPP contracts with three special purpose vehicles (SPVs), mostly consisting of domestic companies. Through these eight contracts, which had an estimated value of EUR 40 million (USD 46 million), the SPVs assumed responsibility for designing, financing, constructing or reconstructing, and operating the 22 schools and ten gymnasiums. Construction was to begin by the end of the same year and the concession period would last for 25 years, after which the schools and gymnasiums would transfer to the County. The SPVs financed the capital investment cost with a commercial bank loan.

In return, the SPVs are entitled to availability payments, which are shared by the County and the local municipalities served. The County is liable for 80 percent of the amounts payable, and the municipalities are responsible for the remaining 20 percent

The contracts stipulated the standards, key performance indicators, and payment mechanisms, including service failure deductions, over the

contract's lifetime. They further included other facility requirements, such as environmental, structural, health and safety, fire protection, and natural disaster parameters. The contracts also delineated when the school facilities needed to be available for school use.

Lessons Learned

Construction started towards the end of 2006 and the premises opened in September 2008. The project was developed as planned, without any delays or additional costs. By bundling the project, the County allowed for the construction or reconstruction of several schools within a short period. The project helped the County ensure equal standards in education delivery in these schools and contributed to higher educational achievements, as evidenced by these students' exceptional performance in several national competitions. The PPP approach further allowed school principals to focus on education rather than building administration and operational issues. This program was later used as a precedent for similar PPP projects in other counties and municipalities in Croatia.¹⁸²

90. Public Schools, Belo Horizonte, Minas Gerais, Brazil



Photo Credit¹⁸³

Background

The city of Belo Horizonte, the capital of the Brazilian state of Minas Gerais, is one of the largest cities in Brazil, with a primary population of 2.4 million and a total of 5.4 million people living in the greater metropolitan area. However, Belo Horizonte was facing a critical deficiency in access to education. The school buildings and resources available to the municipality could only meet about 35 percent of the demand for

education. Over 11,000 children, many of which were underprivileged, were on a waiting list to enroll in schools. Consequently, the municipality, with the assistance of IFC, decided to leverage private sector finance and expertise to expand and strengthen its early childhood education system within a condensed timeframe.

Project Structure

The municipality designed the project and initiated a competitive bidding process to select a private partner, facilitated by IFC, that began March 2011. In August 2012, the Educar Consortium, led by Odebrecht, a leading Brazilian construction company, won the 20-year concession to finance, build, and equip 32 new preschools and five primary schools. The company also assumed responsibility for non-pedagogical services, such as building maintenance, security, cleaning, surveillance, laundry, utility management, and environmental sustainability. The municipality agreed to give the land required for the facilities and retained responsibility for staffing administrators, teachers, cafeteria workers and performing educational monitoring.

¹⁸² Source(s)
https://www.unece.org/fileadmin/DAM/ceci/documents/2018/PPP/Forum/Documents/Case_Study_Database_2018.pdf

<https://www.ebrd.com/downloads/research/news/lit112c.pdf>
 accessed 8 February 2019

Hudek and Sinkovic (2018). "Public-Private Partnerships as a Model for the Development of Education Infrastructure and Pedagogical Standards: The Case of Varaždin County, Croatia."

¹⁸³ Photo in public domain published by Prefeitura de Belo Horizonte.
<https://www.flickr.com/photos/portalphb/5249699584/in/album-72157625444894549/>

The PPP was structured using an availability-based PPP model. The municipality pays the private partner a regular, monthly fee based on a set of performance and availability indicators. The indicators include quality of service, end-user satisfaction, security, and timely delivery of capital works, which are to be assessed by an independent verifier.

The private partner was expected to deliver the new facilities within two years of signing, with the primary schools entering into operation about one year after construction. In constructing the schools, the private partner was obliged to comply with the regulations of the Brazilian Ministry of Education, Brazilian Association of Technical Standards and the Belo Horizonte Municipal Department of Education.

Lessons Learned

The project was completed in 2014 and mobilized USD 95 million in private sector investment. The project allows over 18,000 children from low-income areas of the municipality to attend kindergarten and elementary school. Due to its success, the project was upscaled in August 2014 through an amendment to the PPP contract. Specifically, the scope of the construction works was expanded from 37 to 51 school, with a capacity to serve 25,000 students.¹⁸⁴

The project benefitted from bundling, which made the construction of several schools possible in a short period of time, without comprising the quality of the infrastructure.

91. The North Toronto Collegiate Institute (NTCI), Toronto, Canada



Photo Credit¹⁸⁵

¹⁸⁴ Source(s)
<https://www.odebrecht.com/en/new-contract-established-between-inova-bh-and-belo-horizonte-city-government-increases-number>

https://www.ifc.org/wps/wcm/connect/b81888004c410f909f12dff12db12449/PPPStories_Brazil_BeloHorizonteSchools.pdf?MOD=AJPERES

<https://www.odebrecht.com/en/communication/releases/public-private-partnership-education-started-belo-horizonte-expanded-another>

<http://blogs.worldbank.org/ppps/ppp-take-pride-early-education-brazil>

https://www.ifc.org/wps/wcm/connect/b81888004c410f909f12dff12db12449/PPPStories_Brazil_BeloHorizonteSchools.pdf?MOD=AJPERES

¹⁸⁵ Photo in the public domain published by Oreo Priest
https://commons.wikimedia.org/wiki/File:New_North_Toronto_Collegiate_Institute.JPG

Background

The Toronto District School Board (TDSB) was struggling to fulfill its mandate due to limited funds and land availability. One immediate priority was rehabilitating the NTCI, a public high school founded in 1912 with aging and deteriorating facilities. TDSP recognized that NTCI occupied a strategic location in midtown Toronto with direct access to public transit and a vibrant retail main street. The strategic location motivated TDSP to leverage private investment to deliver the project.

Project Structure

The redevelopment of the school was made possible through a unique PPP between the TDSB and a private developer, Tridel. Tridel was chosen from among ten bids received for the project. A portion (0.7 acres) of the school grounds was sold to Tridel for CAD 23 million (USD 17 million). The proceeds from the sale then used to fund part of Tridel's investment in the new school building.

Put differently, Tridel received this 0.7-acre portion of the project site in return for its USD 17 million capital investment in the new school. Tridel would then use this land for profitable, residential developments to recoup its investment.

The total cost of constructing the school was CAD 52 million (US\$ 39 million). Tridel was able to obtain financing for the project by leveraging its residential developments. As the building was designed to LEED standards, innovative green loan financing was obtained, based on utility payback and life-cycle costing. TDSB also provided additional funds for the completion of construction of the school, and alumni contributed funds of approximately CAD 300,000 (USD 225,700) to pay for the school heritage courtyard. The project also helped in clearing a CAD 52 million (USD 39 million) capital deficit from TDSB's accounts.

Lessons Learned

The rebuilding process began in 2005, and the new school was occupied in 2010. The school facility has about 14,500 m² of floor space, and the two residential towers have 46,500 m². The four-story school building is designed to accommodate 1,200 students and includes science, art, music, and drama classrooms, as well as a 600-seat theatre, library, and triple gymnasium. There is also an outdoor playing field on the site, which is used by the school and accessible to residents and the general public.

The project has been praised for its participatory design approach, which involved input from a number of stakeholders, including councilors, representatives of the local community, NTCI alumni, students, parents, the school board, the developer, and architects. Decision-making was done based on maximum value-generating propositions for the school, the developer, and the community at large.¹⁸⁶

92. Kenyatta University Hostels, Kenya



Photo Credit¹⁸⁷

¹⁸⁶ Source(s):
http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1548402095467~429 accessed 25 January 2019

https://www.thestar.com/life/parent/2010/09/05/new_north_toronto_collegiate_opens_sharing_space_with_condo_towers.html accessed 25 January 2019

<https://canada.constructconnect.com/dcn/news/others/2011/04/tridel-builds-new-north-toronto-collegiate-institute-incorporating-features-from-original-1904-school-dcn044128w> accessed 25 January 2019.

¹⁸⁷ Stephenwanjau (https://commons.wikimedia.org/wiki/File:Jomo_Kenyatta_University_Juja_Campus_Main_Library.JPG), „Jomo Kenyatta University Juja Campus Main Library“

<https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Background

Many Kenyan universities are facing accommodation shortages for students due to the increasing number of Kenyans seeking higher education. This is particularly true for Kenyatta University, which had a population of 74,000 undergraduate students and space to house only 10,000 in 21 hostels. To address this issue, Kenyatta University pursued a PPP to build and operate more hostels to accommodate the growing number of students. The project received IFC advisory support.

Project Structure

In 2014, a consortium of several domestic Kenyan companies led by Africa Integras won a public tender for a PPP worth of USD 57 million to construct and operate Kenyatta University Hostels for 20 years. Africa Integras is a US-based private equity firm that specializes in developing education infrastructure using PPPs. The hostels would be transferred to the University at the end of the contract. The contract with Kenyatta University was signed in June 2015.

The project entails the construction of handicapped-accessible dormitory facilities sufficient to house 9,350 undergraduates, 500 postgraduates, and 150 married students on 70,915 m² of land. The hostel amenities are to include leisure facilities, cafes, and study areas.

Africa Integras obtained financing for the project from international financiers. The hostels generate revenue from the students who pay to reside in them. However, to reduce the collection risk, the hostel rents are collected by the University as part of the tuition. The University would then pass these payments on to the project company.

Lessons Learned

This PPP model made it possible for Kenyatta University to address the housing shortage for university students, while also keeping university education affordable through lower cost accommodations. The project began construction in April 2018.¹⁸⁸

Healthcare

Hospital

93. Inkosi Albert Luthuli Hospital in KwaZulu-Natal, South Africa



Photo Credit¹⁸⁹

Background

In the 1990s, the Provincial Government of KwaZulu-Natal wanted to create one of the best hospitals in the Country. Initially, the idea was to build an academic hospital with 1,000 beds. But, due to its complexities and a lack of funding, the KwaZulu-Natal Department of Health (KZNDoh) decided to scale down the project to a referral-only hospital with 846 beds. The construction of the hospital began in 1996. To help realize the conceptual vision of a hospital with cutting-edge technology and high-quality services, the KZNDoh initiated a PPP process to select a qualified, private partner to deliver all nonclinical services. In 2000, the KZNDoh appointed a transaction advisor to complete a feasibility study and ensure the best value for money. The chosen advisor was the Ezempilo Consortium, consisting of Pricewaterhouse Coopers (PwC), Gobodo, White & Case, EC Harris/SAICOG, and Hiltron.

Project Structure

Selection of a private partner was conducted through a competitive tender process. A total of 23 pre-qualification documents were received, from which five bidders were selected to proceed with the submission of a proposal. After the bidding process in December 2001, a 15-year PPP contract worth approximately ZAR 746 million (USD 56 million) was awarded to the Impilo Consortium (Pty) Ltd. The consortium consists of Siemens Medical Solutions (31 percent), Vulindlela Holdings (26

percent), AME Austria (20 percent), Drake & Skull (9 percent), Mbekani (7 percent), and Omame (7 percent). Financial close was reached in February 2002.

Per the PPP agreement, the private partner would be responsible for all non-core functions of the hospital, including the cycling planned replacement and maintenance of medical equipment and IT systems. The agreement also required the establishment of a sinking fund for the duration of the project to fund periodic equipment refreshment. The KZNDoh would be responsible for the staffing and operation of the medical facilities. The equipment is to be handed over to KZNDoh after the 15-year contract, subject to an option for renewal.

The private consortium provided financing for the project in the form of ZAR 60 million (USD 4.5 million) in equity and ZAR 326 million (USD 24.5 million) in long-term debt. The KZNDoh made an additional ZAR 360 million (USD 27 million) capital contribution to improve the viability of the project.

The KZNDoh is also responsible for making availability payments to the private partner. An annual payment of ZAR 304.9 million (USD 22.9 million), linked to the Consumer Price Index, is payable in monthly installments.

¹⁸⁹ Vince Smith
(<https://commons.wikimedia.org/wiki/File:VWestDurban.jpg>),
„VWestDurban“, <https://creativecommons.org/licenses/by-sa/2.0/legalcode>

¹⁹⁰ Source(s):
<http://municipalfocus.co.za/public-private-partnerships/> accessed 5 February 2019

<http://www.ppp.gov.za/Documents/Closed%20PPP%20Projects%20as%20at%20December%202011.pdf> accessed 5 February 2019

<https://core.ac.uk/download/pdf/37321232.pdf> accessed 5 February 2019

http://www.ppp.gov.za/PPPQuarterly/2001/apr_2001.pdf accessed 5 February 2019

<http://www.dpsa.gov.za/dpsa2g/documents/networks/sms2009/DHLOMOA%20case%20study%20of%20best%20practice%20Inkosi%20Albert%20Luthuli%20Central%20Hospital.pdf> accessed 6 February 2019

https://researchspace.ukzn.ac.za/bitstream/handle/10413/12059/Ngwamba_Feruzi_2014.pdf?sequence=1&isAllowed=y accessed 6 February 2019

<http://www.sabcnews.com/sabcnews/albert-luthuli-hospital-a-first-of-its-kind/> accessed 6 February 2019

Farquharson, et.al. "How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets" available at https://books.google.co.id/books?id=SGcbNKhiG_IC&pg=PA126&lpg=PA126&dq=inkosi+hospital+availability+payment&source=bl&ots=snRA8KqQ_0&sig=ACfU3U03CajqG9lunold7fJQbR5_y-MoQ&hl=en&sa=X&ved=2ahUKEwjOYSIlgprgAhWrl-AKHUhCDSAQ6AEwAnoECAUQAQ#v=onepage&q=inkosi%20hospital%20availability%20payment&f=false accessed 6 February 2019

Lessons Learned

The Inkosi Luthuli Central Hospital project started its operations in June 2002. Due to the positive response to the services delivered by the private sector, the contract has been extended through 2019.

However, the project did not adequately protect against foreign exchange risk, which can be significant as a significant amount of the equipment is imported. As the ZAR weakened by more than 20 percent after the feasibility study, the annual fee payable by the KZNDoH increased from ZAR 230 million (as stated in the feasibility study) to ZAR 250 million (USD 18 million).

The following lessons may be learned from this project.

- Be realistic and distinguish between wants and needs. The contracting authority prudently decided to downscale the project's scope after realizing the original concept was too complex and expensive.
- Invest in a good transaction advisor.

The project was fraught with risk at the beginning, as construction had begun while the feasibility study for the project was still underway and not yet

approved by the National Treasury.

With assistance from the transaction advisor, the project was able to mitigate this risk by refocusing on the services, facilities, and operation and maintenance components of the hospital.

- Focus on the long-term. This project insisted on selecting a private consortium that would provide cutting edge technology, rather than proposals that offered cheaper, but lower quality, technology. The superior technology ensured a higher quality of service and provided savings on replacement and maintenance costs in the long term.
- Consider all of the ways that foreign exchange risk might impact a project. Typically, municipal PPPs face foreign exchange risk where revenues are derived in local currency while debt is provided in a foreign currency. In this case, however, the foreign exchange risk arose from the project's dependence on imported equipment. As the underlying PPP agreement failed to account for this risk, the municipality had to bear the full consequences of the weakening exchange rate.¹⁹⁰

94. Challenging Case: Construction of District Hospital, Żywiec, Poland



Photo Credit¹⁹¹

Background

The City of Żywiec, with help from Poland's National Health Fund (NFZ), decided to pursue a PPP to build a new hospital to replace an existing, 100-year-old hospital. The new hospital would be constructed according to European Union (EU) technical and sanitary standards, as required by EU regulations. In addition to the new facility, the City aimed to benefit from a transfer of skills and know-how by partnering with a qualified private company.

Project Structure

The public authorities solicited bids and initiated a competitive dialogue with nine bidders interested in the project. However, only one of the nine bidders would agree to invest in the project if it did not include availability payments from the government. In 2011, the PPP contract was awarded to this bidder, InterHealth Canada Ltd., for a duration of 30 years. The private partner is obliged to design,

finance, construct, and supply equipment to the new hospital. It is further responsible for the day-to-day maintenance and management of the facility, as well as providing healthcare services.

The capital investment value was estimated at EUR 35 million (USD 40 million), with the cost of the required hospital equipment estimated at an additional EUR 17 million (USD 19 million). The project was to include the construction of a hospital with 18,000 m² of usable area and equipped with 340 beds. The City would provide the necessary land to the private partner and construct a new access road for the hospital.

The project was financed by an equity contribution from the private partner, amounting to about 25 percent of the total investment cost, a long-term loan from the European Bank for Reconstruction and Development (EBRD) of EUR 10 million (USD 11.3 million), and loans from several commercial banks, including FM Bank PBP and Alior Bank, which agreed to co-finance the project with the EBRD.

The private partner would receive payments from the NFZ, not the City, based on a separate contract with NFZ for InterHealth's provision of healthcare services. Payment would be mainly based on the volume of services provided (e.g., number of patients treated, procedures carried out). The payment was expected to total about USD 14 million over the course each one- to three-year term of the agreement. The contract with NFZ could be renewed, but the renewal was not guaranteed. In addition, the City would be responsible for monitoring the quality of services and the efficiency of the facility.

The private partner is expected to recoup its investment through its contract with NFZ as well as through potential, additional commercial medical services. To help the private partner to achieve its target, the City agreed not to allow any other entity to provide medical services in the area.

Lessons Learned

Construction of the project started in 2015 and was expected to finish by the end of 2018. However, no further publicly available information was found regarding the status of this project.

The project was set back by long delays arising from a number of risks. First, significant financial risk arose from the mismatch between the short duration of the contracts with NFZ, which were one- to three-year agreements at most, with no guarantee that another deal would be concluded; and the long-term, 30-year duration of the PPP agreement. There would otherwise be no minimum guaranteed payment or availability payment, nor any guarantee for the financing obtained by the private partner. Consequently, the private partner had difficulty acquiring loans.

Second, the governing law provided that investments in hospitals are the responsibility of district authorities. Nonetheless, it was the NFZ that made the public investment in this project, giving rise to political and organizational risks.

Finally, the private partner chose to start preparation and construction work before reaching financial close, to show its commitment to the project. Accordingly, the completion of the hospital would be at risk of being discontinued if the private partner was unable to secure the required financing.¹⁹²

95. Majadahonda's Puerta de Hierro Hospital, Madrid, Spain



Photo Credit¹⁹³

Background

The Puerta de Hierro Hospital, constructed in the 1960's, was nearing obsolescence, while Madrid's population had been increasing exponentially in the intervening decades. Accordingly, the new Hospital of Majadahonda was included in the Sanitary Infrastructure Plan 2004-2007. However, Madrid's budget restrictions forced the municipality to look for alternative ways to finance the project, ultimately deciding on a PPP as the preferred option.

The choice of a PPP was based not only on the need for private financing, but also the desire to leverage the expertise and experience of Spanish contractors and their management capacity for non-clinical services.

¹⁹¹ Photo in the public domain published by Kikorik https://commons.wikimedia.org/wiki/File:C5%BBywiec_Rynek_2012-10.JPG

¹⁹² Source(s) https://www.cliffordchance.com/briefings/2013/03/ppp_projects_in_thehealthcaresector.html accessed 11 January 2019

<https://www.ebrd.com/news/2015/ebd-cofinances-new-hospital-in-ywiec.html> accessed 11 January 2019

<https://www.jsbmarketresearch.com/construction/ihcl-zywiec-hospital-development-silesia-province-project-profile> accessed 11 January 2019

http://english.eurobuildcee.com/?page=edition&id=1279&id_article=2648 accessed 11 January 2019

<https://link.springer.com/content/pdf/10.1007%2Fs10389-018-0920-x.pdf> accessed 11 January 2019

¹⁹³ Antonio Rubio from Madrid, España (https://commons.wikimedia.org/wiki/File:Puerta_de_Hierro_Hospital.jpg), „Puerta de Hierro Hospital“, <https://creativecommons.org/licenses/by/2.0/legalcode>

Project Structure

A two-stage competitive bidding process was launched in December 2004 and, in March 2005, the concession was awarded to a consortium formed by ACS, Dragados, Bovis Lend Lease and SUFI. The consortium later established a special purpose vehicle called Hospital of Majadahonda S.A. to enter into the concession agreement with Madrid. The time from the announcement of the bidding process to contract award spanned less than 6 months. Financial close was achieved in February 2006 and, in July 2007, the new hospital commenced operations.

The project entailed designing, building, financing, operating, and maintaining a 172,000 m² hospital with capacity for 700 beds, 20 operating rooms, and 70 urgent attention points, at an estimated investment cost of EUR 242 million. The contract's scope included the hospital construction, provision of equipment and furnishing, and operation and maintenance of the facilities. This included making the facility suitable for use through the provision of non-clinical services, such as cleaning, security, restaurant management, laundry, waste management, and transportation. In addition, the contract provided for the commercial exploitation of authorized complementary zones and commercial areas, such as shops, cafeterias, parking lots, vending machines, and commercial stands, which would also generate additional revenues for the private partner. No medical services would be provided by the project company. Hospital operation and maintenance was contracted out to another company created by the consortium shareholders, called Sociedad Hospital Majadahonda Explotaciones, S.L.

Financing was provided through an equity contribution of EUR 27 million and a syndicated loan of EUR 222.6 million (senior debt carrying a 27-year tenor) from the following financial institutions: Dexia Sabadell, ING, Ahorro Corporación Financiera, Santander Bank, Sabadell Bank, Banesto, Espiritu Santo Investment, La Caixa, MCC and RBS. The debt leverage of the project was 90/100. Key to obtaining the high financial leverage and long-term tenor was the absence of 'white coat' risk (i.e. provision health and sanitary services)

and the good standing and name of the project sponsors. In addition, the operating risks had been fully transferred to the operating company, such that the payment deduction risks would be completely absorbed by it.

The concessionaire assumed the following risks and responsibilities: permitting and licensing, construction, furniture acquisition and maintenance, facility maintenance and non-medical/sanitary exploitation, and service provision at the agreed level of service. The public partner was responsible of transferring the land to the private partner for construction, making regular payments for use of the facility, and re-establishing the economic equilibrium of the contract should the circumstances require.

The project's revenue sources include commercial revenues generated through the exploitation of the commercial areas and the monthly availability payments paid by Madrid, which consist of a variable and a fixed amount. These payments can suffer deductions in the event of service level breaches, based on either facility availability or quality factors.

Lessons Learned

The project was not delivered on time, although a review of the publicly available reports on the project did not reveal the reason for the delay. Today, the hospital is functioning as planned and the project has been reported to be a success from the relevant stakeholders.¹⁹⁴

The reported reasons for its success include: the clear social and economic need for the hospital; the construction phase was not complex, though the operation phase presents more management challenges; the government payments were only tied to the inflation rate; and the sponsors were seasoned experts in the field with high financial liquidity and technical experience.

¹⁹⁴ Case source: http://www.cca.org.mx/ps/funcionarios/muniapp/descargas/Documentos_de_apoyo/experiencias_internacionales/Experiencia_espana/capitulo_6_2.pdf

<https://piappem.org/file.php?id=224> Accessed on August 15, 2019.

Clinical Services

96. Challenging Case: Hemodialysis Centers, Dhaka and Chittagong, Bangladesh



Photo Credit¹⁹⁵

¹⁹⁵ Irvin Calicut at Malayalam Wikipedia (https://commons.wikimedia.org/wiki/File:Bed_side_Dialysis.jpg), „Bed side Dialysis“, <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

¹⁹⁶ Case source(s): https://www.ifc.org/wps/wcm/connect/40b6a9804bf943048918d97cbf6249b9/PPPStories_Bangladesh_DialysisCenters.pdf?MOD=AJPERES

https://www.unece.org/fileadmin/DAM/ceci/documents/2016/PPP/Forum_PPP-SDGs/Presentations/Case_3_Bangladesh_Health_Sector_Syed_Afsor_H_Uddin.pdf

<https://blogs.worldbank.org/ppps/measuring-success-lives-saved-pioneering-health-partnership-bangladesh>

https://www.pppo.gov.bd/events2019_ceo-of-the-ppp-authority-visited-the-ppp-project-hemodialysis-centre-at-nikdu.php

<https://www.daily-sun.com/printversion/details/216084/2017/03/31/Poor-patients-deprived-of-treatment-at-NIKDU>

<http://www.theindependentbd.com/arcpri/details/83740/2017-03-05>

private operator would employ and maintain all staff other than nephrologist.

The project entailed the installation of 110 dialysis stations – 70 stations at NIKDU at a total cost of USD 2 million and 40 stations at CMCH at a total cost of USD 1 million. The project was financed at a debt to equity ratio of 40:60, where the debt is mainly used for equipment and machine imports. The project uses a cross-subsidization model with dual pricing – one (highly subsidized) fixed tariff for government patients, and a higher but still below market tariff for private patients. The private operator was obliged to provide 1950 dialysis sessions for free and 19,500 dialysis sessions for USD 5 for government patients, while private patients would be charged USD 27-28 per session, at most. The Government of Bangladesh would pay around USD 700,000 each year to the operator to subsidize the fees charged to patients.

The dialysis centers in CMCH and NIKDU were inaugurated in March and July 2017, respectively.

Background

Kidney failure is very prevalent in Bangladesh. Around 40,000 patients die each year due to kidney disease and approximately 150,000 patients lead restricted lifestyles due to lack of access to treatment. Existing dialysis facilities at hospitals were inadequate, with obsolete equipment and rundown buildings, as well as costly for poorer individuals. In response, the Bangladesh PPP Office requested IFC's PPP transaction advisory team to help structure a PPP transaction for the construction, operation, and maintenance of dialysis facilities in select hospitals in the country's biggest cities, namely the National Institute of Kidney Diseases and Urology (NIKDU) in Dhaka and Chittagong Medical College and Hospital (CMCH) in Chittagong.

Project Structure

In 2015, following a competitive and transparent bidding process, the Bangladesh PPP Office awarded the PPP contract to an Indian company, Sandor Medicaids Private Limited. The winning bidder was known as a well-regarded company that was already operating a network of dialysis centers across India. The private operator would be responsible for designing, refurbishing, procuring and installing equipment, and financing and maintaining operations of dialysis centers for ten years. NIKDU and CMCH would provide space, utilities, and nephrologists at the two centers. The

Lessons Learned

This project was featured as one of the two “Pioneering projects” in KPMG Infrastructure 100 World Markets Report 2015 and selected as one of the top 100 projects worldwide in 2015. The project increased Bangladesh's national treatment capacity for dialysis by 12.3 percent, potentially saving over 1,200 lives per year. Around 150 to 180 patients come each day to receive dialysis service at the centers. Nonetheless, there have been reports that dialysis service schedule/dates at NIKDU are being sold illicitly by some hospital staff. The Government of Bangladesh has issued an official order to strengthen the monitoring system and has stated it will take punitive action against any employee who is found to be involved in this practice.

The project benefitted from the following:

- Having a good transaction advisor, here IFC, to help structure the project. As a result, the contract has a fair and balanced allocation of risk between public and private sectors based on international PPP contracting standards, adapted to the context of Bangladesh;
- A transparent and competitive bidding process that resulted in a suitable deal for the public authority; and
- Proactive involvement by the government, including the provision of the availability payment and efforts to curtail the illicit sale of dialysis services.¹⁹⁶

97. Hemodialysis Center at the National Kidney and Transplant Institute, Quezon City, Manila, Philippines



Photo Credit¹⁹⁷

¹⁹⁷ Photo on the left: Judgefloro (https://commons.wikimedia.org/wiki/File:05375jfLung_Center_Kidney_Transplant_Institute_Quezon_Cityfvf_30.JPG), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>.

Photo on the right: Judgefloro (https://commons.wikimedia.org/wiki/File:05350jfLung_Center_Kidney_Transplant_Institute_Philippinesfvf_08.JPG), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

¹⁹⁸ Source(s) <https://www.adb.org/sites/default/files/project-document/79124/41664-012-phi-tacr-01-a10.3.pdf> accessed 17 February 2019

<https://www.officialgazette.gov.ph/2013/04/24/nkti-hemodialysis-project-among-the-top-10-ppp-projects-in-east-asia-pacific-and-south-asia-region/> accessed 17 February 2019

<https://www.slideshare.net/TedHerbosa/ppps-in-health> accessed 17 February 2019

<http://www.nkti.gov.ph/news/533-the-nkti-hemodialysis-project-as-featured-in-the-ppiaf-s-publication-entitled-emerging-partnerships-top-ppps-in-emerging-markets> accessed 17 February 2019

<https://www.scribd.com/document/121923270/NKTI-s-Presentation-to-ADB-on-Hemodialysis-Project-Public-Private-Partnership> accessed 17 February 2019

Background

The National Kidney and Transplant Institute (NKTi), a government hospital specializing in renal care in Quezon City, Manila, was facing numerous problems, including an insufficient number of hemodialysis machines, outdated equipment, and increasing costs stemming from the maintenance and repair of old equipment. As a result, NKTi struggled to accommodate emergency cases and was forced to turn down one to two patients each day for treatment, which increased the level of dissatisfaction among patients. Initially, the NKTi planned to invest in a new hemodialysis center to address these problems. However, due to an annual budget deficit, the NKTi not able to purchase sufficient equipment to meet demand.

Accordingly, NKTi decided to pursue a PPP to help solve NKTi's problems and convert the facility into a world-class hemodialysis center.

Project Structure

On tendering the PPP project, NKTi received three principal bids and awarded the project to Fresenius Medical Care Inc. on the basis that it was the most responsive proposal. The project was structured as a five-year equipment lease agreement, reflecting the estimated useful life of a hemodialysis machine. Under the agreement, the private partner is responsible for: (i) supplying all hemodialysis equipment, including state-of-the-art water treatment and dialyzer reprocessing machines; (ii) providing maintenance, including service technicians; (iii) ensuring the availability of hemodialysis supplies at all times; (iv) training staff; and (v) maintaining and upgrading other relevant technology and equipment.

In return, NKTi agreed to: (i) provide space, staff, and access to utilities; (ii) maintain quality performance of health services in accordance with international standards; (iii) ensure compliance with government regulations and policies; and (iv) make timely lease payments to the private partner for the use of the machines, in the form of adjustable lease fees per treatment.

Lessons Learned

The hemodialysis center of the NKTi became fully operational in August 2003. Currently, the NKTi has 47 state-of-the-art hemodialysis machines that operate 24 hours per day to provide efficient services to patients. The center helps ensure patient satisfaction by providing high standard hemodialysis treatment at competitive rates. The center now accommodates about 120 outpatients each day, with an average number of 34,283 treatments per year. This has resulted in increased revenues from both hemodialysis services and other ancillary units, providing NKTi with income above the lease payments owed to the private partner. Due to this success, the NKTi entered into a second contract with Fresenius Medical Care Inc. in 2009.

The project allowed the NKTi to secure state-of-the-art technology for dialysis treatment and accommodate more patients, at the same cost of treatment and less risk to the government. Accordingly, the project shows the hallmarks of good value for money for a PPP project. IFC and the Infrastructure Journal have also recognized the project as one of the 40 best PPPs in the world.¹⁹⁸

98. Dialysis Services in Andhra Pradesh, India



Photo Credit¹⁹⁹

¹⁹⁹ Yedla70 (https://commons.wikimedia.org/wiki/File:Hyderabad_Financial_district,India.jpg), „Hyderabad Financial district,India“

<https://creativecommons.org/licenses/by-sa/3.0/legalcode>

²⁰⁰ Source(s) http://healthsystemshub.org/uploads/resource_file/attachment/567/PPP_in_health_sector_2-_Muraleedharan.doc.pdf accessed 18 February 2019

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http://www.knowap.com/index.php?option=com_content&task=view&id=1621&Itemid=182 accessed 18 February 2019

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<https://www.thehindubusinessline.com/news/nephroplus-dialysis-project-in-ap-a-great-success/article23606669.ece> accessed 18 February 2019

Background

The Government of Andhra Pradesh was faced with a high demand for dialysis service requests from below poverty line (BPL) patients. However, the existing public facilities had limited capacity to perform such services. Furthermore, the qualified facilities charged around INR 1,200 to 2,000 (USD 17 to 28) per dialysis, which was too high for BPL patients in need of regular dialysis. Under the circumstances, the Government of Andhra Pradesh decided to pursue a PPP to increase its capacity to provide dialysis to low-income patients.

Project Structure

To improve the quality, accessibility, and affordability of dialysis care, especially for BPL patients, the Government of Andhra Pradesh selected B Braun Medical (India) Private Limited to build and operate dialysis centers in 11 tertiary care state-run hospitals. B Braun Medical (India) is a subsidiary of B Braun Melsungen AG, a leading healthcare supplier from Germany. Private operations were to begin in 2010 and last for seven years. After the contract term, the dialysis centers would be transferred to the government.

Under the agreement, the private operator would establish the dialysis centers at an anticipated investment cost of about INR 45 million (USD 630,000). In return, the Government of Andhra Pradesh agreed to pay about INR 1,200 (USD 17) per dialysis treatment, of which INR 1,080 (USD 15) was payable to the private partner and INR 120 (USD 2) was payable to the host hospital.

The Government of Andhra Pradesh also assumed responsibility for mobilizing patients, while the state-run hospitals would be responsible for providing space, an uninterrupted power and water supply, and a clinical nephrologist. The hospitals also assumed clinical liability for the patients, as 90 percent of staff were hired from state-run hospitals to make the project cost-effective.

Through this PPP, the population of Andhra Pradesh, including and especially BPL patients, would be able to access dialysis care at no cost through Aarogyasri, a state-sponsored health insurance scheme.

Lessons Learned

Following the end of the contract with B Braun in 2016, the Government of Andhra Pradesh expanded the project to cover 26 hospitals in the state at a lower cost per treatment, about INR 1,000 (USD 14), and selected another private operator, NephroPlus, through a competitive tender. Under the current scheme, the private operator is obliged to follow world-class protocols and undergo regular audits. In 2018, NephroPlus reported having served more than 5,000 patients through the project.

The project benefitted from economies of scale through bundling services for several state-run hospitals under one PPP agreement.²⁰⁰

