Comparative Study of Urban Regeneration in the United States and South Korea

Wilson Center – Korea Housing and Urban Guarantee Corp (HUG)

Joint Research Initiative

Case Study

ATLANTIC YARDS, BROOKLYN NEW YORK

Authors

DR. EUGENIE BIRCH

AMANDA LLOYD, MCP

PENN INSTITUTE FOR URBAN RESEARCH

Final Report
September 15, 2020

This paper was originally prepared for a joint research initiative between the Korea Housing and Urban Guarantee Corporation (HUG) and the Woodrow Wilson International Center for Scholars, “Comparative Study of Public Financial Support for Urban Regeneration Projects in Korea and the United States,” presented on September 9, 2020.

Table of Contents

INTRODUCTION

Atlantic Yards, now named ‘Pacific Park’, is a $4.9 billion megaproject in Brooklyn, New York proposed by the development firm Forest City Ratner (‘FCR’) in 2003. FCR signed a public-private partnership, called the General Plan Agreement, with the State of New York in 2006 to support Phase 1 arena and infrastructure construction.

Anchored by a basketball arena to host the Nets basketball team owned by Bruce Ratner, the 22-acre masterplan includes 16 mixed-use residential high-rise buildings, and a platform over the open-air Vanderbilt railyard for new towers. The proposed completion date of 2016 is now 2035. However, affordable housing requirements in the General Plan Agreement must be completed by 2025.

The complex project has faced multiple hurdles, including land assembly, lawsuits, community opposition, a global market crisis, and spiraling costs in both Phase 1 and 2. As of mid-2020 only the arena and six residential towers have been completed.

Figure 1. Rendering of complete site, facing west towards Manhattan (Greenland USA, the majority owner by 2013))

Project Background

Location

The 22-acre (9 hectare) project site at the intersection of Flatbush Avenue and Atlantic Avenue, commercial corridors through the heart of Brooklyn’s residential neighborhoods. The site is 1.5 miles east of downtown Brooklyn and only 5 subway stops from Wall Street.

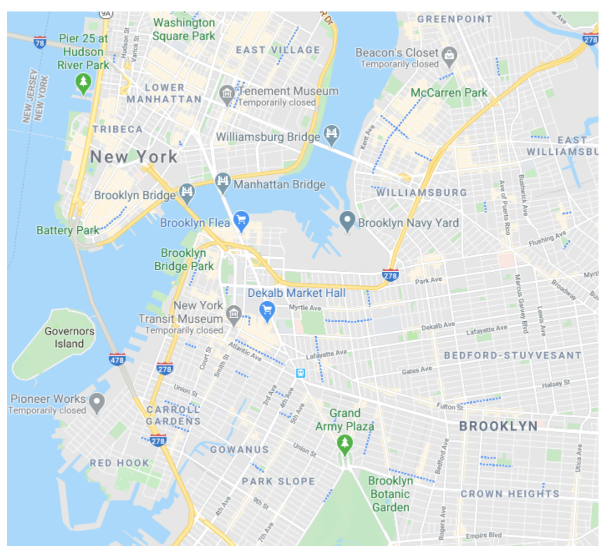

Figure 2. Site location in Brooklyn, New York

It sits at the center of four distinct neighborhoods – Park Slope, Fort Greene, Clinton Hill, and Prospect Heights. It is bordered by Atlantic Avenue to the north, Dean Street to the south, Flatbush Avenue to the west and Vanderbilt Avenue to the east. The Vanderbilt railyards (8.5 acres) covers forty percent of the site and are part of the Atlantic Terminal Long Island Railroad's Atlantic Terminal for commuter train lines across the street.

Figure 3. 19th Century Vanderbilt railyards

Site History

Nineteenth Century. The open-air Vanderbilt Yards were built in 1877 as part of Atlantic Terminal, the 3rd largest transit hub in New York City, to service Brooklyn's thriving ports, industries and fast-growing residential neighborhoods. The site is the terminus for eleven regional rail lines, where users can connect to ten subway lines and eleven bus lines. By the 1890's the surrounding area was densely packed with rowhomes, including neighborhoods of middle-class African-American dock workers.

Post-War Brooklyn. After World War II, Brooklyn's manufacturing industries started to decline. Brooklyn ports closed as deep-water container ports were opened in New Jersey. Adjacent middle-class neighborhoods lost their jobs, and many families moved to Long Island and New Jersey. However, Atlantic Terminal and the Vanderbilt railyards remained a critical part of regional rail infrastructure.

1950's. In 1954 the City Planning Commission designate the area near Atlantic Terminal as 'blighted'. Nearly 70% of the Atlantic Yards site - properties fronting Atlantic Avenue - fell within the boundaries of the newly designated 'Atlantic Terminal Urban Renewal Area' (ATURA) (See Figure 4). In 1958, the city,

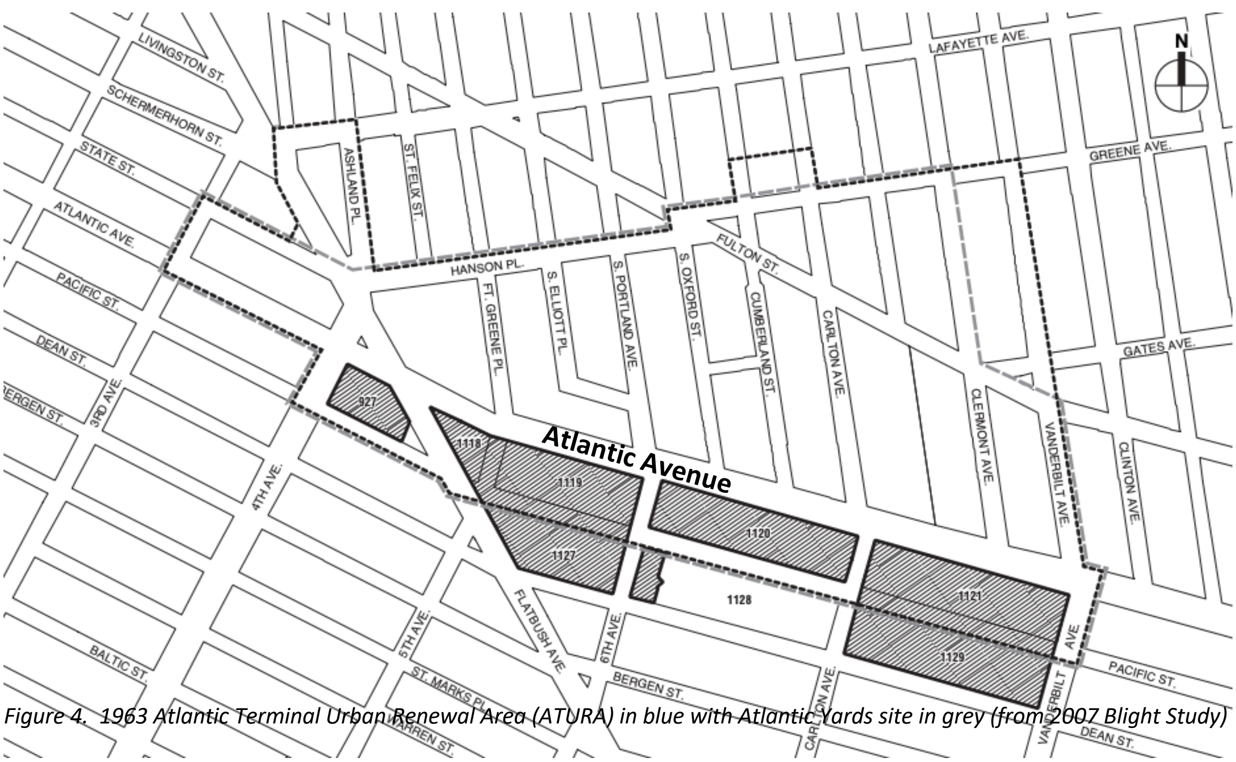

Figure 4. 1963 Atlantic Terminal Urban Renewal Area (ATURA) in blue with Atlantic Yards site in grey (from 2007 Blight Study)

using the authority of Title I of the Housing Act of 1949, start demolishing properties. *(from Blight Study 2007)*

1960's. The cost of a platform over the railyards makes redevelopment unfeasible. With the loss of federal funding support, the city focuses on redeveloping lots north of Atlantic Avenue for housing and abandoned plans for the project site.

1**970 – 1990.** The city proposes a new campus for Baruch College (part of the City University of New York) on the south side of Atlantic Avenue but the plan is canceled again because of the costs of engineering a platform over Vanderbilt Yard. New proposals end with the 1987 financial crash.

1990s. Forest City Ratner develops the commercial shopping district on the north side of Atlantic Avenue. In 1996, Atlantic Center Mall opens with nearly 400,000 square feet of commercial space including national chain retailers. No development on the south side of Atlantic Avenue.

Atlantic Yards Proposal

By 2000, the ATURA sites south of Atlantic Avenue had been mostly empty for over 30 years. However, with the success of the Atlantic Center Mall, FCR decided to create a masterplan that could afford to platform over the Vanderbilt Yards.

FCR officially announced their $2.5 Billion Atlantic Yards proposal in December, 2003. Bruce Ratner, owner of the New York Nets basketball team, wanted a new stadium for his team and proposed to anchor the project with a Frank Gehry-designed stadium and master plan filled with high-rise residential towers. The proposed site expanded past the ATURA redevelopment area and would require buying properties and demolishing existing buildings. FCR was already in negotiations for public financing and a public-private partnership with the State of New York.

Figure 5 Original Frank Gehry Masterplan

For the next few years, Forest City Ratner continued negotiations with city and state officials and community organizations. FCR proposed multiple community benefits, such as a school and a multi-generational and open space to meet community demands. FCR reached a non-binding community benefits agreement (CBA) but other community members did not want the stadium.

Community members also opposed the public-private partnership proposal and state subsidies. State subsidies to fund a sports stadium was especially not popular after the Yankee's new stadium cost taxpayers over $1 billion.

The State of New York economic development goal for the site was to transform an area that has been "underutilized" for over 45 years. All subsidies and tax incentive programs were designed to increase the affordability of the project and ensure that developers provided public benefits on the site. A vibrant mixed-income neighborhood and sports arena would attract neighborhood consumer spending, commercial space for new tenants, and green space.

To further those goals the State agreed to:

- Extend the ATURA boundary to new properties, including ones with existing housing,
- Expand the ATURA designation until 2034, ensuring FCR access to tax incentives,
- Use eminent domain to assemble 97 separate tax lots and lease them back to FCR,
- Override local land use regulations and re-zone the site,
- Agreed to sell municipal tax-exempt bonds to save FCR an over $80million in interest fees,
- Spend 100's of millions of dollars on upgrading infrastructure.

In 2006, FCR's new subsidiary, Forest City Development Corporation (FCDC) and the State of New York signed the public-private partnership, called the General Plan Agreement. By that point, estimated project costs increased to $3.5 Billion USD. Both the Gehry-designed arena and the cost of the railyard air rights doubled.

Atlantic Yards General Plan Agreement
Major Elements
16 residential towers
3,720 market-rate units
1,468 affordable-rate units
19,000-seat Stadium
Transportation Upgrades
Renovated maintenance facilities
New/Renovated Transit entrances
Open Space
"urban room" for hosting outdoor events
8 acres of public gardens/playground
Public Service Amenities
100,000 sf Middle School
Multi-generational Community Center
Community Healthcare Center

Table 1 General Plan Agreement elements

FCR negotiated for the air rights over Vanderbilt Yards separately but in parallel with the State of New York to ensure construction phasing would comply with state requirements. The Metropolitan Transportation Agency agreed sell air rights for a $100 million fee paid over 15 years, and an estimated $200 million in railyard upgrades to be completed before the platform was installed.

By 2007 there were still multiple lawsuits against the project. Lawsuits include opposition to the environmental impact statement analysis and use of eminent domain to acquire property. Most were dismissed but the most serious challenges were appealed to the State Supreme Court. In 2008, the global financial process abruptly stalls the development process, and construction planning is delayed as new financing options were found. In 2009:

- FCDC drops most of the Gehry-designed buildings and looked for cheaper options.
- FCDC brings in new investors for the arena and sells naming rights.
- FCDC and the MTA renegotiation payment terms.
- FCDC and the State re-negotiate the General Plan Agreement due to changes in lending and housing market conditions. The State agrees on new deadlines:
    - 2012: Arena
    - 2016: MTA rail yard renovations (originally 2014)
    - 2022: non-Arena buildings in Phase I;
    - 2025: ALL affordable housing units to be completed, regardless of market-rate sales.
    - 2035: The project end date

Barclay's Center

In 2010, the eminent domain lawsuits are resolved in the State's favor and it buys the last parcels needed for Phase 2 of the project. Construction began on a now smaller arena called Barclay's Center. In the autumn of 2012, Barclay's Center official opened.

Figure 6. View of the stadium site before construction

Figure 7. View of Barclay's Center after completion in 2012)

After the arena opens, FRC still had financial cashflow problems and sells 70% of the remaining project to **Greenland USA**, a subsidiary of Greenland Holding Company based in Shanghai, China. Forest City reported a $42 Million loss on the sale. In 2014, Atlantic Yards was officially re-named "**Pacific Park**" and advertised as a new luxury community. In 2015, FRC sold its remaining ownership stake in the team and the stadium. The stadium was reportedly valued at $825 million, including debt.

Residential Construction

By 2017, two residential building opened. The first, 461 Dean Street, long delayed due to construction problems, opened with 181 affordable housing units. The below-market income units were put in a lottery for eligible city employees earning up to 160% of area median income. ($2,025 for a studio apartment) and 84,000 people applied for the apartments. The second, 525 Carlton, was 100% below-market rate apartments and the city received 93,000 applications for 297 apartments.

By 2020, Greenland USA announced development partnerships for four additional residential towers, which will have the remainder of the required affordable housing units by 2025. The remaining planned residential towers will be market-rate luxury apartments and condominiums.

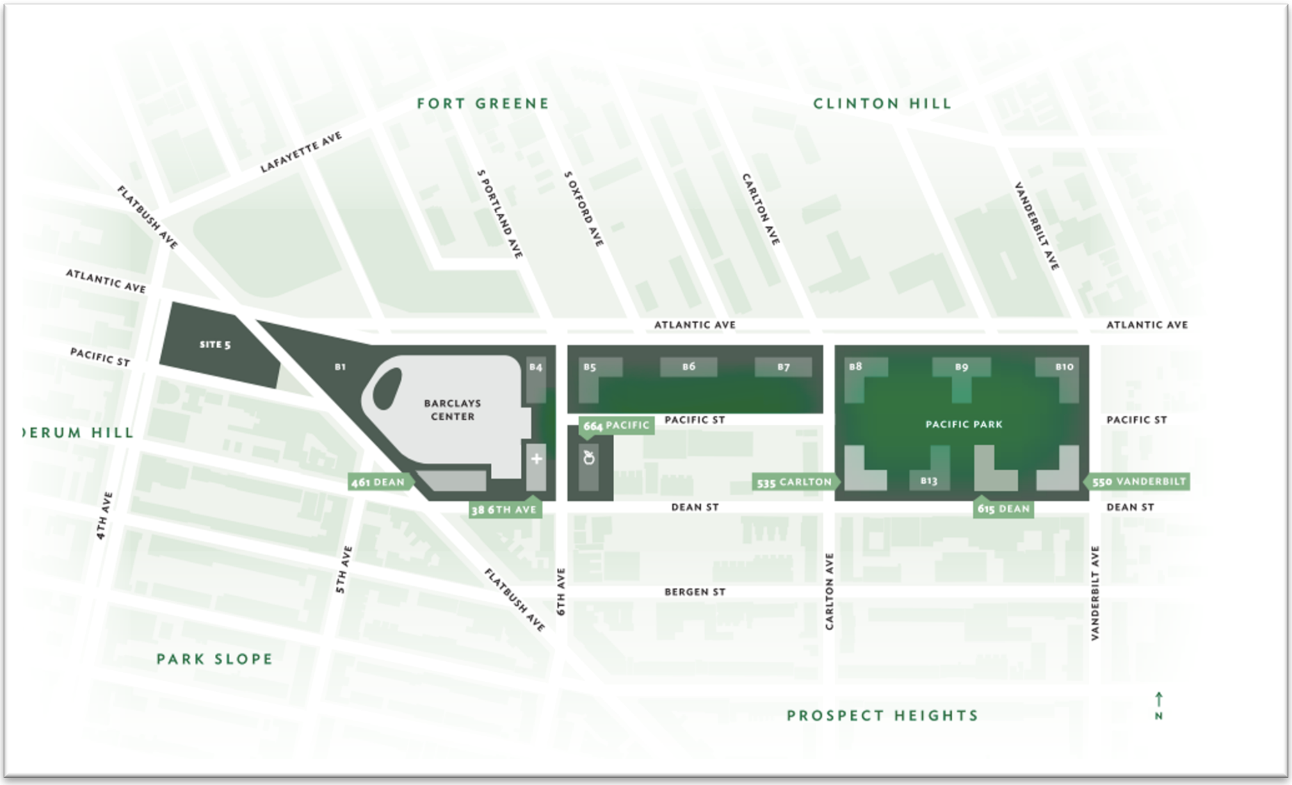

Figure 8. Pacific Park latest Master Plan with building lot labels.

Public Benefits Agreement

The General Plan Agreement with the State of New York includes a long list of public benefit requirements. These requirements were discussed and negotiated with community groups between 2003-2006 before legally added to the agreement. All private partners must comply with agreement requirements, including construction deadlines, or they will forfeit land lease terms, public bonding capacity, and all tax incentives.

Amenities

- **Affordable Housing** - 2,250 rental units required affordable to low-, moderate-, and middle-income families out of approximately 6,400 total units and 15 buildings. Total number can vary slightly, based on a formula of total square footage of commercial and residential properties, but cannot go below 2,250 units. Housing units must be completed by 2025, even if market-rate housing is not complete. First completed units were designated for city employees, and distributed by lottery (over 80,000 applications for fewer than 300 units)
    - The units are expected to be financed through tax-exempt bonds provided under existing and proposed City and State housing programs such as the City's 50-30-20 program.
- **Community Amenities**
    - **100,00SF School** with playground space – local need to be determined by the New York City's Department of Education (DOE). If required, the DOE will Lease for $1, pay fit-out costs.

    - **8 acres of public space** for general public use, not just site residents. To include child playgrounds, seating areas, bike and pedestrian paths
    - **"Urban Room"** in from of stadium for outdoor public gatherings
    - **Community Healthcare center**
    - **Intergenerational community center**. Required IF the developer maxes out their commercial square footage allowance.
- **Renovated rail yards**
    - A condition for buying the air rights over the railyard is modernized railyard tracks, renovated facilities, and new station entrances for the stadium and housing blocks. All improvement must be made *before* use of air rights can start. Published reports estimate renovations will cost over $200 million dollars.
- **Local Sports Teams Access** – Regular use of the arena and its facilities by local academic institutions (not just paid entertainment or professional teams)
- **Urban Design** – Strong urban design elements, using streetscape and landscaping to create new neighborhood 'gateway'.
- **Green Building and Sustainability**
    - Require sustainable building and landscape design for efficient energy, building materials and water. Must include green roof on the arena
    - Minimum of LEED Certification for all residential buildings
    - Construction emissions reduction program
    - Environmental Remediation (former industrial and rail contaminant)
- **Relocation funding program**. Developers must pay for the relocation of the remaining 62 residents, homeless shelter and commercial owners on the site forced to move by eminent domain.

Economic Impacts

In addition to public benefits, the state requires a determination of economic impact (net benefits) to the region. These findings are used to clarify the need for public spending and the public value of the project. The following numbers were published in 2006 with the General Plan Agreement.

- **Jobs Creation Estimate**
    - **Construction**:
        - Generate 12,568 new direct job years and 21,976 total job years (direct, indirect, and induced);
        - Direct personal income related to construction activities will be $590.0 million and total personal income will be $1.2 billion (direct, indirect, and induced);
        - Total construction employment will generate $42.1 million in City tax revenues and $89.9 million for New York State;
    - **Operations**
        - The Arena and mixed-use development will support an annual average of 4,538 new jobs in New York City (direct, indirect, and induced) and an annual average of 5,065 jobs (direct, indirect, and induced) in New York State, (inclusive of New York City);
- **Tax Revenue Estimate**: On a present value (2006) basis, the project is estimated to generate:
    - $652.3 million in City tax revenues

- $745.3 million of State tax revenues.
- Generate $944.2 million in net tax revenues in excess of the public contribution to the Project.

Project Stakeholders

The following section outlines the stakeholders involved in the Pacific Park project.

Public Agencies

The public half of the partnership required negotiations with three agencies. The General Plan Agreement was signed by the State of New York, A separate agreement was signed for the air rights over the Vanderbilt Yards and the City of New York agreed to cooperate with the terms of the General Plan Agreement.

Metropolitan Transit Authority (MTA) and its subsidiary, the Long Island Railroad (LIRR) is a public benefits corporation responsible for all public transit in the New York City region. The MTA negotiates contracts separately from the state or city development agencies but worked closely with both on Atlantic Yards. The MTA owns the Vanderbilt Railyards and all the subway and regional rail infrastructure under the site. The air rights were transferred to the State of New York.

The City of New York via the New York City Economic Development Corporation, agreed to support the Atlantic Yards plan through land transfer, tax incentive programs, and direct investment in the arena. All funds and property were transferred to the State of New York.

State of New York - via New York Empire State Development (**ESD**) and its subsidiary Atlantic Yard Community Development Corporation (**AYCDC**)- is the primary public partner in Atlantic Yards. ESD is the State of New York's development agency, with regional offices promoting business investment and job creation through loans, grants, tax credits, real estate development, and other forms of assistance.

AYCDC is a non-profit subsidiary of ESD. AYCDC was created in 2014 to oversee the General Plan Agreement, ensure all civic projects and affording housing requirements are met, and negotiate amendments. The AYCDC Board is also responsible for managing the PILOT municipal bonds that provided low-cost construction financing for the arena.

The ESD and AYCDC have substantial legal powers as a public property owner. It may transfer these benefits to private partners at-will. If it does so, agreements come with covenants, or restrictions, that require private partners to re-imbursement the state if contractual public benefits are not met. State economic development powers include the ability to:

- Structure and offer tax-exempt financial incentives, bond financing, and other tax-exempt financing.
- Buy, sell, or lease property for approved projects, including use of eminent domain[1]
- Exempt itself from all local property and sales taxes and pass the value of these exemptions to project partners.

[1] The power of the government to take private property and convert it into public use. The Fifth Amendment provides that the government may only exercise this power if they provide just compensation to the property owners. In the U.S. there is extensive case law about the definition of "public use".

- Override local land use regulations. At Atlantic Yards this includes:
    - Floor-Area and open space ratios for residential and commercial spaces
    - Project permits (used for the arena)
    - Permanent closing of public streets (Pacific Street)
    - Building setbacks
    - Parking regulations
    - Zoning (used for railyard platform)
    - Land use restrictions (extending the ATURA overlay)

Local community groups. Community groups had (and continue to have) substantial political power to ask for community benefits, but no legal or financial standing in development agreements. Although the private developers entered into a unique “agreement contract” with a local group called ACORN, it was not legally enforceable. Community groups worked with elected officials to ensure that community benefits were included in the General Plan Agreement with the State of New York.

Private Partners & Investors

The original private partners of the General Plan Agreement have gone through significant changes since the 2006. Major partners are listed below, but this list is not assumed to be inclusive of all development investors. Regardless of changing ownership, all new development partners or investors must comply with the partnership’s General Plan Agreement.

1. **Forest City Ratner (FCR).** FCR proposed the project and was the original Project Agreement partner with the State of New York. FCR was a family-owned investment real estate firm managed by Bruce Ratner with large successful projects in New York City and Brooklyn neighborhoods. Notable projects included the New York Times headquarters building in Manhattan, the $1 billion MetroTech Center, a nine-building office complex in Downtown Brooklyn, and the 400,000 SF Atlantic Center Mall across the street from Atlantic Yards. Bruce Ratner also owned the local basketball sports team, the Brooklyn Nets. Due to Atlantic Yards rising budgets, delays and market changes, the company went through substantial ownership changes over the last decade.
    - **a. 2016**: FCR Became a publicly held real estate investment trust (REIT) with public shareholders and outside Board of Directors.
    - **b. 2017**: the REIT writes off Atlantic Yards (Now Pacific Park) at a loss.
    - **c. 2018:** The company is wholly acquired by Brookfield Asset Management, a Canadian real estate investment firm with a +$500 billion global portfolio
2. **Partners – Stadium**. The original financing was not sufficient to cover the stadium.
    - a. **2010**
        - i. Sold 70% ownership of the arena to Russian investor Michael Prokhorov.
        - ii. Sold arena naming rights to Barclay’s on London.
        - iii. Smaller (less than 5%) investors were un-named
    - b. **2019**
        - i. 100% ownership sold to Canadian investor Joe Tsai, CEO of the Alibaba Group.
3. **Partners - Mixed-Use Properties.** FCR continued to have severe financial difficulties and went through significant internal changes. By 2020, the company was a subsidiary of Canadian real estate company Brookfield and owns 5% of Atlantic Yards.

a. **2010. Skanska.** The first residential building was a partnership with Skanska, developer of modular building designs. The building has 182 affordable housing units (city had 84,000 applications for those 182 units)
b. **2014**: **Greenland USA** buys 70 percent ownership of the non-arena development. Greenland USA is a subsidiary of Greenland Group, a publicly-traded partly state-owned REIT based in Shanghai, China. The Skanska building is not included in the sale.
c. **2018. Brodsky Organization and TF Cornerstone**, two local New York luxury market developers, buy lots B12, B13 and B15 on Dean Street. The public school and a portion of the public space requirements will be developed in these two buildings (B12 and B13).
d. **2019. Greenland** buys 95% stake.

Project Financing

Overview

Direct public subsidies at Atlantic Yards is limited to land assembly, infrastructure improvements, and the construction of the basketball Arena. In phase 2, city and state economic development agencies offered substantial tax incentive programs to support affordable housing requirements, as well as investor services. As the land owner for the entire site (see Land Assembly) the State of New York can enforce all restrictions and covenants in the original General Plan Agreement with all future private investors.

Project Budget Summary

The last published Budget Estimate (excluding financing costs) for the entire project. *(still working on to new budget numbers)*

Table 2. 2009 Project Budget Estimate

Project Task	Estimate Cost (USD billions, 2009)
Site Acquisition *(MTA air rights)*	$417 *($100)*
Infrastructure	$717
Arena	$772
Residential	$2,645
Commercial/Hotel	$255
Miscellaneous	$92
Total	$4,898

Arena - Public Financing

As previously mentioned, the arena would be anchor of the Pacific Park site and the first phase. In the General Plan Agreement, direct government subsidies and bond financing were limited to this phase of the project or, generally, to basic site infrastructure.

Table 3 Public Financing Summary

Type	Amount	Public Agency	Source	Costs	Payment Terms	Details
cash subsidy (reimbursables)	**$100 million**	New York City Economic Development Corporation	General Fund obligation bonds, as part of the city's capital plan	6 percenter interest rate; issue costs of 1 percent (IBO 2006 Fiscal Brief) Total cost: $100.6 million (in 2005 dollars)	30 year; annual debt service of $7.3 million	Subsidies can be used for land and infrastructure costs *except* MTA improvements.
Loss of local sales taxes on construction-related materials	**- $4.9 million**	New York City general budget	n/a	n/a	n/a/	Over the total construction period (2006-2012)
Loss of future property taxes	**unknown**	New York City general budget	City- owned land transferred to the State	Unknown	n/a	
cash subsidy (reimbursables)	**$100 million**	Empire State Development		6 percenter interest rate; issue costs of 1 percent (IBO 2006 Fiscal Brief)	30 year; annual debt service of $7.3 million	Present value of cost (in 2005 dollars) = $100.6 million, nearly face value of bonds.
subsidies (in-kind or cash?)	**$105 million**	Empire State Development	Unknown. Listed on FCR financial disclosures	Unknown.	Unknown	Listed elsewhere as related infrastructure projects, not cash subsidy.
Municipal Bonds -for Construction Financing**	**$551 million**	Empire State Development	PILOT municipal Bonds	yield between 4 and 8 percent	Bond series maturity 2014 – 2047;	Bonds sold in 2 hours. paid by 100% by 2020.
Total Public Commitments ~ $ 860 million						

Table 4. Estimated Fiscal Impacts of Atlantic Yards Arena

Long-Term Fiscal Impact of Proposed Atlantic Yards Nets Arena
Dollars in millions, 2005 dollars

	New York City	New York State	MTA	Total
Arena Construction	$13.7	$17.9	$0.6	$32.2
Arena Operations	115.4	153.1	7.3	275.9
Total Revenue Impact	*129.1*	*171.1*	*7.9*	*308.1*
Debt Service	-100.6	-100.6	N.A.	-201.1
Net Fiscal Impact	**$28.5**	**$70.5**	**$7.9**	**$107.0**

SOURCE: IBO
NOTES: Long-term impacts show as net present value through 2036. N.A. = not applicable.
Columns may not add due to rounding.

Both the city of New York and the State of New York are required by law to evaluate the impact of public debt in public-private partnerships. The city's Independent Budget Office summarized the estimated impact of public investments in the Arena in 2006 (right).

*The unknown $105 million subsidies were added later to the project and were not included in the fiscal impact study.

** PILOT bonds were not included in the impact study because the private developers are responsible for debt service payments. Per the IBO report, the reduced interest on PILOT Bonds would save FCR approximately $82 million in interest payments.

PILOT Bond Program

PILOT (Payments in Lieu of Taxes) are tax-exempt municipal bonds that were popular for financing sports arenas before 2008. Bond programs now exclude sports stadiums and are restricted to certain types of projects by Federal tax law to limit tax losses from tax-exempt investor income. The Federal government also places a dollar limit (per capita) on how many PILOT bonds can be issued by each state. However, state agencies allocate PILOT funds within its jurisdiction.

Bonds are only issued for projects on tax-exempt publicly owned land. The bonds are designed to re-capture lost revenue for local jurisdictions by requiring private partners to repay the bonds and debt service. Payments may exceed debt service requirements but may not exceed the property taxes otherwise paid if the site was privately owned. Job creation and tax-exempt value must be considered in the design of project bonds.

The Atlantic Yards project was grandfathered into the program because the project agreement was signed in 2006. The bonds were not sold until FCR secured private investors in the arena, specifically Russian billionaire Mikhail Prokhorov who took a majority stake in the team (80%) and a minority stake in arena (45%) for approximately $200 million in 2008.

How the payment process works: The EDC leases the arena land to a subsidiary, Atlantic Yards Community Development Corporation (AYDC), for one dollar. The AYDC issues one or more series of tax-exempt "PILOT" bonds to pay for the construction of the Arena and related infrastructure. Proceeds of the sale are directed to the "Arena Bond Trustee" (private partners), which pays the principal and interest payment over the 30-40 year term back to the AYDC. The AYDC pays investors and any remainder is directed back to EDC.

Arena - Private Financing

The combination of State and city subsidies and the PILOT Bond program does not cover the +1 billion cost of the arena and related infrastructure. FCR looked for additional investors to meet the projected budget. Naming rights and foreign investors financed an additional $628 million USD.

EB-5 Visa Incentive Program

ESD and FCR works with Federal government to find international investors through the Federal EB-5 Visa Program. The program provides a green card for foreign nationals who invest money in the US. Individuals must invest $1,800,000 (or at least $900,000 in a "Targeted Employment Area"), and create or preserve at least 10 jobs for U.S. workers. The Visa program is run by U.S. Citizen and Immigration Services and project funds are administered by regional investment centers.

Atlantic Yards received $228 million through the EB-5 program. All funds were paid back by 2020, resulting in 1,331 permanent green cards for foreign nationals and their families.

Table 5. Total Arena Investments

Major Capital Sources	Project Phase	Amount (USD millions)
State of New York	Site Acquisition and Infrastructure	$205
New York City	Site Acquisition and Infrastructure	$100
Foreign Investors Via EB-5 Loan Program	Arena and Infrastructure	$228
PILOT Bond Program	Arena	$551
Mikhail Prokhorov Ownership Stake (pre-build)	Arena	$205 *(estimated)*
Barclay's Bank (London)	Arena (naming rights)	$400 (over 20 yrs)
Forest City Ratner	All phases	$500 *wrote down almost half as a loss in 2013 merger; was not residential)

Residential/Commercial - Public

Land Assembly

All 22 acres of project land was assembled by the State of New York via the ESDC and leased back to private partners during construction and/or bond re-payment periods. To assemble all the properties (Figure 9) The State of New York has to use 'eminent domain'. The use of eminent domain was (and is) a controversial process particularly for economic development projects in which the state then conveys land to private developers[2]. In the case of Atlantic Yards, private properties bought by FCR, the MTA air

[2] In 2005, the U.S. Supreme Court ruled 5-4 in favor of the City of New London in Kelo v. New London. The majority opinion determined that legislatures, not the courts, have the power to define 'economic development' and if that definition is met, the government does not violate the "public use" component of the Constitution's takings clause - even when the state transfers land between private parties. This decision about 'indirect public benefits' was a highly controversial ruling; in response, 45 state legislatures passed new laws restricting the use of eminent domain. An excellent overview was published in the Harvard Environmental Law Review

rights, and city-owned streets were all conveyed by deed to the State. The remaining lots were condemned by eminent domain. All the land was then re-platted and re-zoned to align with the master plan and leased back to the private partners (Figure 11). Lease terms are $1 for 99 years.

This lease arrangement allows the State of New York to pass through tax exemptions, raise low-interest public bonds for construction (of the Arena), and override local city regulations, saving private developers millions of dollars. Some estimates put developer tax savings as high as $700 million for the entire Atlantic Yard project.

However, a lease arrangement also allows the State of New York (via the ESDC) to place development restrictions and covenants on the property via public benefit requirements in the General Project Plan. ESDC continues to hold the Fee title on non-arena lots until construction of public benefit requirements are completed (or later). Lease holders may choose to renew the lease or buy the land. If they buy it, the land will return to the city's property tax list and any further pass-through benefits cancelled.

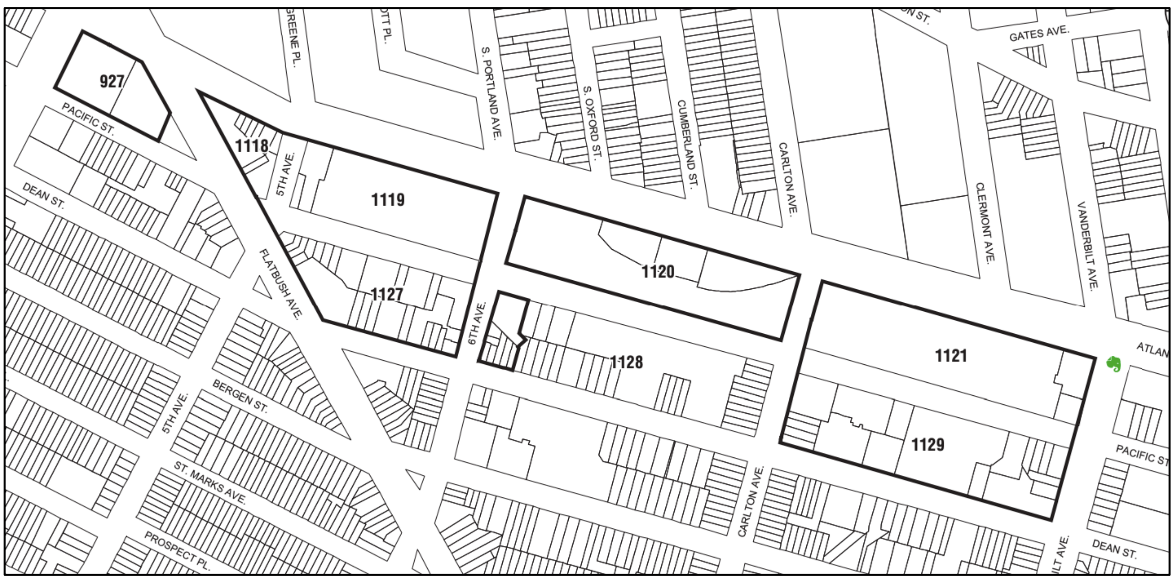

Figure 9. 2003 Original Properties on Atlantic Yards site.

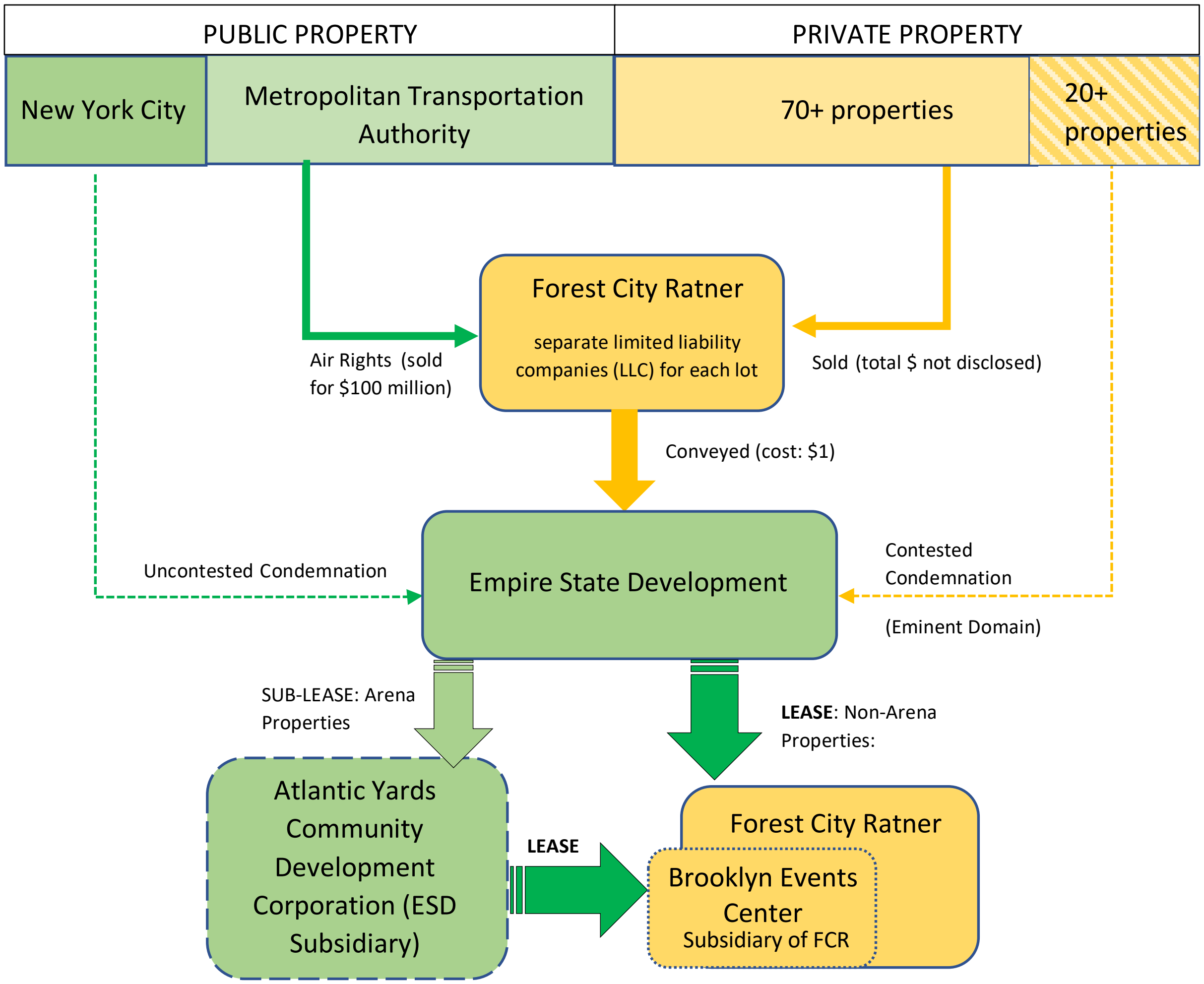

Figure 10. Land Assembly Process at Atlantic Yards

Tax Incentive Programs

Used For housing development are being used by the developers in all 15 mixed-use buildings.

1. **Industrial, Commercial Tax Abatement Programs**
    a. Programs are available to all real estate developers in New York City that meet project criteria. The program provides real estate tax abatements for up to 25 years.
2. **50/30/20 Mix-Income Low-cost Financing**. These programs are limited by city and state bonding capacity. Units are rented or sold by the NYC Housing Development Corporation (HDC) directly to tenants with no broker fees. HRC publishes detailed Term Sheets.
    a. Low-cost financing of first mortgages funded with tax-exempt private activity bonds;
    b. Low-cost financing of second mortgages funded with City Housing (HDC) reserves;
3. **"421-a" property tax exemptions** for multi-family dwellings
    a. How it works: The program is designed for large scale new housing developments. Eligibility requirements have changed multiple times. In general, projects must be new

construction on vacant or mostly-vacant lots, include a minimum of 20% affordable units, and include rent stabilization for affordable units. Other requirements depending on location and market.

4. **Low-Income Housing Tax Credits**. The Federal Low-Income Housing Tax Credit (LIHTC) subsidizes the acquisition and construction of affordable rental housing for low- and moderate-income families and is managed by state or city agencies.
    a. How it works: The federal government issues tax credits to state governments. State housing agencies award the credits through use a competitive process to affordable housing developers with priority to very low-income tenants. Credits are most popular with large institutional investors who need income tax credits. When construction is complete, investors claim the LIHTC over a 10-year period.

Investor Incentive Programs

1. **EB-5 Visa investment program**. ESD works with Federal government and developers to find international investors through the Federal EB-5 Visa Program. The program provides a green card for foreign nationals who invest money in the US. Individuals must invest $1,800,000 (or at least $900,000 in a "Targeted Employment Area"), creating or preserving at least 10 jobs for U.S. workers.

    The Visa program is run by U.S. Citizen and Immigration Services and project funds are administered by regional investment centers.
    a. Atlantic Yards received $228 million through the EB-5 program. All funds were paid back in 2020, resulting in 1,331 permanent green cards for foreign nationals and their families.

Residential/Commercial – Private

The second phase of the project has increased speed since 2018 due to the 2025 affordable housing deadline. By 2018 Greenland Forest City entered in partnerships with 2 local development firms to complete the next 4 buildings. Initial investigation of property sales shows developers are using private bank financing for construction loans. Details not available at time of draft. *(looking into terms)*

Table 6. Residential Construction through 2020

Masterplan Building #	Residential/Mixed Use Buildings	Partners	Construction Costs ($ USD millions) (public property databases)
B2	461 Dean	Forest City Ratner	195 *(sold for $156)*
B14	535 Carlton (aka 670 Pacific)	Greenland Forest City	168.8
B11	550 Vanderbilt	Greenland Forest City	362.7
B3	38 Sixth Ave	Greenland Forest City	202.7
	Combined Parking	Greenland Forest City	46.2
B4	18 Sixth Avenue	Greenland Forest City - Brodsky Organization	58.8 (land lease sale) 144 (construction financing)
B15	664 Pacific	Greenland Forest City – Brodsky Organization	58.8 (sale) 582 (construction financing)

B14	595 Dean	Greenland Forest City – TF Cornerstone	58.8 (land lease sale) ?
B13	615 Dean	Greenland Forest City – TF Cornerstone	?

Observations

The question of why the Pacific Park project has had so many setbacks and delays offers lessons in the challenges of megaprojects and risks than can only be partially mitigated by public-private partnerships. In the original proposal, the complexity of the Atlantic Yards project looked manageable; In 2003 the developer was highly experienced and would be his own anchor tenant, the growth of the Brooklyn residential market was promising, and the State of New York was strongly motivated to help fill a physical hole in the center in what was otherwise solid residential neighborhoods. How did an estimated 2016 completion date extend nearly 20 years to 2035?

1. Local (and regional) Opposition

Initially, the developer's work with the ACORN group to define a Community Benefit Agreement was groundbreaking. Atlantic Yards was the first time a developer has done this type of outreach in the region. It looked pro-active and appeared to be a generous list of services such as community center, a healthcare facility, and public space. In the end, those services actually did end up in the General Plan Agreement.

However, those benefits were outweighed by controversy over the government's involvement in stadium. First, opposition to the government's financial stake in the project was not just local, but regional and national. In 2006, after much debate, the U.S. Internal Revenue Service made a ruling that PILOT bonds could not be used for private activities such as arenas. This ruling was national-wide. However, because the Atlantic Yards agreement was approved by the State of New York before the ruling, the project's 2009 bond offering was 'grandfathered' and allowed to proceed despite city-wide opposition.

The decision by the State of New York to assemble properties using eminent domain was also bitterly fought by local residents, resulting in several court cases. Though some were dismissed, one was the appealed all the way to the State Supreme Court. Although the courts decided in the State's favor, the fights took years to adjudicate and slowed the project at the most basic level – property rights. The developer's proposal was 'all-or-nothing' – that is, the financial strategy required ALL the property in order to work. Without flexibility, the phase 1 arena was on hold as well as phase 2 residential towers.

2. Complexity and Local Real Estate Markets

In addition to local opposition the project was vulnerable because of the complexity of the project was sensitive to multiple constraints in the local real estate market. The best way to highlight those sensitivities is to compare it briefly to another regional megaproject – Hudson Yards. Superficially, the projects appear similar: they are roughly the same size, both broke ground after the 2008 global fiscal crisis, and both require expensive platform engineering over busy operating railyards. That is where the similarities end.

Table 7 Hudson Yard Comparison

Project	**Pacific Park**	**Hudson Yards**
Size	22 acres	28 acres
Location	Central Brooklyn	Midtown Manhattan
Construction Start Date	2010	2012
Estimated Completion Date	2035	2024
Costs	$5-6 Billion	$ 25 billion
Residential /Commercial	6.6 million sf/7.5 acres	20 million sf/13.5 acres
Open Space	8 acres	14.5 acres
Stadium	6.5 acres	No stadium
Railyard Platform	8.6 acres	28 acres
Transit Improvement Financing	Private	Public
Platform Air rights	$100 million + yard upgrades (~$200M)	$1 billion, no LIRR yard upgrades
PILOT Bonds?	Yes – for the arena	Yes – for infrastructure
Housing Tax Incentives?	Yes	Yes
EB-5 Investor Financing?	Yes	Yes

Location

Pacific Park is located in central Brooklyn, surrounded by low-rise residential neighborhoods and local retail. Re-zoning the area would change the fabric of the area significantly, ranging from transit usage to daylight loss from large tower shadows. The site parcels were the only remaining part of the 40 year old urban renewal area that had not been redeveloped. Pacific Park is a new development but not a new "neighborhood".

Hudson Center, in comparison, was in far west midtown Manhattan along the river and adjacent to Javits Center, the city's largest convention center with over 2.2 million visitors each year. The project sits in a larger city development plan between 42nd and 30th street dominated by Lincoln Tunnel infrastructure and manufacturing. Without a subway line the site was isolated from any low-rise residential areas. The site was re-zoned from manufacturing to match the adjacent midtown business district and the area was marketed a totally new 21st century neighborhood where none existed before.

Land Assembly Process

Land assembly at Pacific Park caused long delays. The site required buying, transferring and re-zoning 97 separate parcels in a complex legal process with the State of New York. The State was sued over the use of eminent domain multiple times. The developer also had a separate competitive bidding process and negotiation for air rights with a separate government agency. Eminent domain lawsuits Without state or city money or bond support for transit infrastructure the railyard upgrade costs had to be rolled into private development obligations, which added pressure on profit margins. Compare that to Hudson Yards, which is built over railyards 100% owned by the MTA and negotiated in a single $1 billion transaction.

FAR Density

Pacific Park will have 6.6 million square feet of residential/commercial and 8 acres of open space. Hudson Yards has a much higher density (11 FAR). It will have 20 million sf of residential/commercial and 14.5 acres of open space. The higher density at Hudson Yards allows for larger financial returns on similar lot sizes and more flexibility to handle setbacks such as delays or market shifts.

Public Transportation Investments

Unlike Hudson Yards in Manhattan, the city was not willing to take on debt and risk for transit investments at Atlantic Yards. At Atlantic Yards the real estate developers agreed to pay for MTA Vanderbilt Yard upgrades and the platform investments. (estimated over $200 million). At Hudson Yards, the city agreed to the first subway extension in 60 years. The city agreed to spend $2.4 billion on a new extension of the 7 Subway line and a new station in the center of the development. It is the only subway stop west of Ninth Avenue,

Public Partners

The primary public partner at Pacific Park is the State of New York, which only took an active role in the first Stadium phase. The City of New York has taken an active role in the entire Hudson Yards process. The subway line extension was approved in 2005 and completed only 2 years after Hudson Yards broke ground. The city created a special district fund and two investment corporations to help manage related infrastructure projects, as well as taking on larger financial risks - e.g. Bond interest repayments out of its General Fund in the event of project delays.

Market cycles

Forest City Ratner had a lot of money on the line their Atlantic Yards Proposal and was vulnerable to shifts to local market conditions. New local development grew. The historic Atlantic Terminal Building was rehabilitated and opened with 370,000 square feet of retail space. The Bank of New York Building one block away opened with 470,000 square feet of office space. Commercial space was years away after the Nets basketball stadium was completed. Deadlines for affordable housing units in the General Agreement meant front-loading the schedule with lower-priced units and delaying luxury towers. With the 2008 financial crisis the national residential market was in crisis. At 462 Dean Street the city received over 84,000 applications for 184 units. The cost of railyard renovations needed to be factored into the financials. The project could no longer factor in long-range stadium profits, because the stadium was sold at a loss. The first residential tower was also an untested design concept. Construction problems with its partner Skanska let to delays and lawsuits.

Hudson Yards masterplan, in comparison was developed without a sports stadium and focused on platform design in the first phase. The only parcel on solid land was developed first. With huge city financial outlays on infrastructure and construction bond programs, the project was able to attract large amounts of private capital and stay on schedule.

In conclusion

The question, seventeen years later, of why the Atlantic Yards project has had so many setbacks and delays offers lessons in the complexities of megaprojects and risks of public-private partnerships. In the original proposal, the complexity of the Atlantic Yards project looked manageable; In 2003 the developer was highly experienced and would be his own anchor tenant, the growth of the Brooklyn residential market was promising, and the State of New York was strongly motivated to help the project succeed. So what caused costs to spiral to recent estimates of $6 billion, the original developers to sell over 95% of the project to new investors, and the completion date to extend nearly 20 years to 2035?

The developers chose a difficult and risky site to redevelop. The project has faced almost every hurdle a project can face, including complex land assembly, lawsuits, community opposition, a global market crisis, and spiraling costs.

The site is located in low-density residential neighborhoods yet required complex land assembly, eminent domain, high density housing, and an expensive and contentious anchor tenant (stadium) to line up enough financing to make the project work.

Despite the developer's knowledge of the local market and successful projects across the street, local opposition to the project was strong, The State of New York, eager to fill in a long-vacant hole in the center of dense neighborhoods, agreed to support the project by extending the ATURA boundaries to the new properties, using eminent domain to assemble all the land and fund infrastructure upgrades and arena construction through a controversial PILOT bond program. Both decisions were controversial. Although the courts decided in the State's favor, the fights took years to adjudicate and slowed the project at the most basic level – property rights. The developer's proposal was 'all-or-nothing' – that is, the financial strategy required ALL the property in order to work. Without flexibility, the entire project was on hold.

Another factor was the decision by the State of New York and the metropolitan Transit Agency to put the responsibility of Vanderbilt Yard upgrades onto the project. The city and state invested a lot of money in basic infrastructure but chose not to invest in Vanderbilt Yards. Instead, those costs were added to the General Plan Agreement and yard upgrades, rather than platforms, were begun in Phase 1. Delaying the platform made the project more vulnerable to changing residential markets and reduced the developer's flexibility to spread out affordable housing requirements per the General Plan Agreement. Penalties for not meeting that requirement is $2,000/month per unit not supplied.

And finally, the 2008 recession hit the project when it was most vulnerable – seeking financing for Phase 1. This increased costs and put the project – and Forest City Ratner's - financial feasibility in jeopardy. Forest City Ratner had a lot of money on the line and was vulnerable to all those market conditions. Deadlines for affordable housing units in the General Agreement meant front-loading the schedule with lower-priced units and delaying luxury towers. The cost of railyard renovations had to be factored into private financing and stadium profits were no longer a long-range hedge because the stadium was sold at a loss. It eventually forced the sale of the team and the stadium. The instability of Forest City Ratner's financials mean that the schedule was delayed by company buy-outs, the stadium sale, finding new partners and venture agreement negotiations. The new project owner, Greenland Holdings, has much deeper pockets. It's a state-owned enterprise and publicly traded company on the Shanghai Exchange. In 2016 has a valuation of 733.1 billion CNY. Hopefully, this cash infusion means the project will meet its deadlines, and Atlantic Yards, - now Pacific Park – will finally complete the original developer's vision of a vibrant dense node of housing, public events and retail in the center of Brooklyn.