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The High Line Effect



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Abstract

Density and development come in many forms – not all of them tall. One of the most successful development initiatives undertaken in New York City in the last decade has been a horizontal, rather than a vertical, project: the High Line. The development of this linear park was not the idea of a savvy developer, nor of a far-sighted urban planner or city agency, but of residents who wanted to save a viaduct from demolition. The tools used to carry out the transformation from an abandoned rail line into a park included a combination of public and private money, fortuitous zoning changes, respect for the historic fabric, and a simple landscaping aesthetic that would make the park a world-class attraction. This paper identifies the ingredients that allowed this confined linear park to serve as a catalyst for urban transformation. It also examines the replicability of its success for other cities.

Keywords: Economic Impact; Elevated Park; High Line; Regeneration; Sustainability; Urban Design

Introduction

One of the most successful urban development projects in recent years has been the transformation of an elevated freight rail line into a linear urban park on Manhattan's west side in New York City. This tiny park, less than 1.5 miles long, has almost singlehandedly brought energy and vitality to a strip of Manhattan that had largely been ignored. Its impact on the cultural, economic, and social life of the area around it has been as or even more significant than much larger and more expensive urban interventions – typically buildings – designed to promote economic regeneration.



Figure 1. High Line on Manhattan's west side (Source: Friends of the High Line)

The 1.45 mile High Line starts at Gansevoort Street in the Meatpacking District on the west side of Lower Manhattan and continues northwards to Chelsea, ending in a loop around Hudson Yards between 30th and 34th Street (Figure 1). When originally built in the early 1930s, elevated trains above streets were disliked due to the shadows they cast on adjoining streets; as a result, the High Line was built in the middle of the block running through the massive industrial buildings that would profit from its freight deliveries (Lopate, 2011). It is many of these buildings, on or adjacent to the line itself, that have now seen their values skyrocket as developers move in to cash in on the proximity to the new park.

Developed and constructed in three phases between 2006 and 2014, the High Line has become one of New York City's major tourist attractions, drawing over six million visitors per year (Interview with Robert Hammond, 29.4.2015). It has driven commercial and residential property development and is seen as a key driver for the regeneration of Manhattan's Chelsea and Meatpacking Districts. The park has also served as a magnet and viewing platform for interesting architecture and design solutions, including a hotel bridging over



Figure 3. High Line running through industrial buildings (Source: Kalmbach Publishing Co.)



Figure 4. High Line Viaduct 1994 (Source: Darius V. Aidala Photography)

the High Line (Figure 2), a series of unusually shaped residential conversions, a memorable design for the relocated Whitney Museum, and a wonderful variety of unusual residential and commercial facades rarely found in such close proximity to one another.

The development of the park was not the idea of a savvy developer, nor of a far-sighted urban planner, but of two neighborhood residents that wanted to save the freight rail viaduct. After it was slated for demolition in 1999, the two individuals founded 'Friends of the High Line', a not-for-profit organization, to save the historic structure and turn it into an aerial greenway. The park's success has led to a 'High Line effect',

with many city governments in the US and abroad trying to replicate this model. The paper traces the High Line's history and examines the ingredients for its success, from the pre-existing conditions in the area through its design and development to funding and governance structure. It then addresses the question of whether the success of New York's High Line can be replicated in other cities.

From rail to trail

The High Line was built as a safer solution to the rail freight line that ran at street level along Tenth Avenue and had the notorious

name 'Death Avenue.' Despite the 'West Side Cowboys' that rode on horseback ahead of the train with red flags to warn pedestrians of its coming, the ground-level train was ultimately deemed too dangerous (Lopate, 2011). The elevated High Line was thus built from Thirty-fifth Street to Spring Street in 1934. The trains, running directly through buildings at the third-story level, carried milk, fruit, and other agricultural goods to the warehouses on Manhattan's west side up until 1980 (Figure 3).

Unused and decaying for over a decade, portions of the High Line were demolished in the early 1990s. Owners of land and buildings in Chelsea lobbied for the demolition of the remaining viaduct and then-Mayor Giuliani supported their cause (Figure 4). In 1999, the High Line was scheduled for demolition and it seemed that property owners were poised to win – until a community board meeting where Robert Hammond and Joshua David first met and founded "Friends of the High Line", one of the most successful civic organizations in New York's modern history.

The High Line was saved through a unique combination of citizen engagement, city planning, and celebrity support. Friends of the High Line staged a brilliant marketing campaign with an ideas competition that received great attention, including an exhibition at Grand Central Station that served to raise awareness. Later, they exhibited the design competition teams' preliminary design work at the Museum of Modern Art (MoMA), gaining similar visibility. Friends of the High Line managed to turn an unlikely idea into reality due to their ability to stage these campaigns, attract private funding from celebrities and other well-off New



Figure 2. Hotel bridging over High Line (Source: Sabina Uffer)



Figure 5. Third section of the High Line before it was redeveloped (Source: Sabina Uffer)

Yorkers, gain support from the City Council, and eventually convince the Bloomberg administration of the wider benefits of the proposed High Line through a study demonstrating how incremental tax revenues created by higher real estate values around the park would outweigh the costs.

Alongside political support, federal rail-banking legislation was key to turning the High Line into a park. The Rail to Trail program, established in the early 1980s, protects defunct railroad lines for possible future use by putting it into a rail bank. This allows the transformation of any rail line into a trail or linear park until it is again needed for rail use. The program has had many applications in suburban and rural contexts. The High Line was the first rail-to-trail project in a more complicated, dense urban environment (Figure 5).

CSX, the railroad company that owned the High Line, was an early supporter of the transformation of the High Line. In 1999, the company commissioned the Regional Plan Association to examine the different alternatives for re-purposing the High Line, including the possibility of using the federal Rail to Trail program (Lindquist, 2012). CSX was keen to get out of the rail business and when it became apparent that the City supported the reuse of the High Line, CSX donated the elevated structure to the City (David and Hammond, 2011).

While the High Line was the first example of re-purposing an old rail viaduct in a dense urban environment in the United States, it was not the first globally. The Promenade Plantée in Paris is a 2.9 mile elevated linear park built on top of obsolete railway infrastructure, a freestanding viaduct with large vaulted spaces which have been converted into

restaurants and boutiques. Considerably longer and wider than the High Line, it was inaugurated in 1993 and provided Friends of the High Line an example of what might be possible. The High Line has since surpassed the Promenade Plantée in fame due to some unique ingredients that made it a success with adjacent property developers, tourists, and the public at large.

The High Line Effect

When the High Line first opened in 2009, crowds lined up to walk the elevated linear park. They continue to do so today. While it was once faster to walk the High Line than at street level, it has become a challenge to navigate the masses of visitors, and almost impossible to grab one of the reclining seats. Visitors enjoy the High Line as a place to see and be seen. In contrast to conventional parks, these linear parks are not only recreational spaces, but dynamic places that allow visitors to experience the city in completely new ways (Balmori, 2010). The High Line provides a unique way to view the city from in between, observing the traffic below on street level and gazing to the high-rises above.

The most significant success of the High Line may however be its economic impact in terms of rapidly increasing property values of existing and newly developed buildings in the adjacent area. After the opening of the second section in 2011, the New York City Department of City Planning reported that since 2006, 29 new projects had been built or were underway in the neighborhood, including 2,558 residential units, 1,000 hotel rooms, and 423,000 square feet of office and art gallery space. The City attributed two billion dollars in private

investment and 12,000 new jobs (incl. 8,000 new construction jobs) to the High Line project (McGeehan, 2011). Levere, an economist from UC San Diego, who assessed the High Line's impact on house prices using home sales and property valuations estimates that, in 2010 alone, the city gained \$100 million in property tax increases as a result of the High Line (Levere, 2014) (Figure 6).

Since the opening of the High Line's first section, cities across the United States have been trying to replicate its success with their own linear parks on old rail infrastructure. Chicago's 606, a 2.7-mile park and trail system (formerly known as Bloomingdale Trail) along an elevated unused rail line, opened in summer 2015. Similar projects are under way in Philadelphia, St. Louis, and Atlanta, to name just a few. Outside the US, Rotterdam is converting an electric railway line built in the early 1900s into an elevated park (McGinn, 2014). It seems that many believe that the equation of abandoned infrastructure plus urban design equals success is simple enough. This, however, ignores the site-specific ingredients that led to the High Line's unique triumph.

The Neighborhood and City

The neighborhood has several characteristics that contributed significantly to the High Line's success. The Meatpacking District and Chelsea are historic neighborhoods with a rich architectural setting of old and new buildings in the densest urban area of the country (Rybczynski, 2011). At the same time, the area hosted an atypical number of parking lots, taxi garages, and gas stations. The combination of these two elements, followed by the rezoning (see below), allowed for a successful densification through real estate development.

By the time Friends of the High Line started their campaign to save the viaduct, the neighborhood of Chelsea was already in transition from a manufacturing area with warehouses, factory buildings, and four story-tenements into a high-end art district. Galleries that could no longer afford the rising rents of Soho started to move to Chelsea at the end of the 1990s. This early transformation planted the seeds for new development; the urgency to demolish the High Line at the end of the 1990s showed that developers saw the potential for this up-and-coming neighborhood.

It was this desire to demolish the viaduct that then provoked the response of neighborhood residents that might have otherwise not been activated. As Josh David recounts in the book

High Line: The Inside Story of New York City's Park in the Sky (David and Hammond, 2011): "The property owners were speeding things up [...]. This made us work faster, too. And the faster we worked, the more they knew they were up against something real" (p. 36).

The Public-Private Partnership

The unique public-private partnership between Friends of the High Line and the City government was instrumental in realizing the High Line. The founders of Friends of the High Line were neither real estate developers or urban planners, nor were they park enthusiasts. They were neighborhood residents who first and foremost wanted to save the old rail structure and make it available for New Yorkers to experience the city from an elevated point. This enabled them to think in more visionary ways than developers, who are usually not responsive to sites larger than their properties, or city agencies that are too often inhibited by regulatory and budgetary constraints.

Nevertheless, without City government, the park would have not become reality. Some of the first supporters to save the High Line were City Council members. They played a

key role in stopping the demolition during Giuliani's reign and convinced members of the incoming administration of the value of the project. When the Bloomberg administration entered City Hall in 2002, Friends of the High Line had several allies who helped reverse the previous Mayor's demolition order and enthusiastically worked alongside Friends of the High Line to complete the necessary paperwork for rail-banking the High Line. At the same time, the City provided Friends of the High Line with substantial leverage to develop and realize their innovative vision for the park.

With some contributions from the State (\$400,000) and federal government (\$20.3 million), the City largely funded (\$123.2 million) the construction of the High Line's first two sections that cost \$152.3 million to complete (Raver, 2014; EDC, 2015). From the beginning, however, it was clear that Friends of the High Line would help finance the construction and ultimately take full responsibility for operation of the park. To this end, Friends of the High Line raised over \$300 million from private donors for construction and maintenance to date (Interview with Robert Hammond, 29.4.2015).

The Re-Zoning

The re-zoning that happened in conjunction with the decision to preserve the High Line facilitated support from developers who had a stake in the land underneath the High Line. It is also the key ingredient that unlocked the development potential of the area. In 2005, the City adopted a rezoning proposal that created the "West Chelsea Special District" which enabled the development of new residential and commercial buildings along the High Line, protected and enhanced the neighborhoods art gallery district, and facilitated the reuse of the High Line as an urban park with protected views.

The new zoning for the West Chelsea Special District also created a "High Line Transfer Corridor (HLTC)" that was generally 100-feet wide. Owners of property within the HLTC would be allowed to transfer their development rights, equivalent to the base FAR for the property, to designated receiving sites within the Special West Chelsea District. Additional regulations for development sites located adjacent to the High Line ensured the preservation of light, air, and views around the High Line.

The re-zoning allowed for densification of the area around the High Line and justified the City's financial contribution that funded



Figure 6. Residential buildings around the High Line (Source: Eric Soltan)

the innovative and expensive design of the High Line. While there is a danger that some of the luxury high-rise developments that spring up on either side of the High Line may start to obstruct the many views the High Line offers, the re-zoning ensures the protection of the air above and some views from the High Line itself.

The Design

The High Line is a triumph of historic preservation and urban design. Friends of the High Line and the City demonstrated an appetite to take risks to create innovative public spaces in ways rarely seen in planning. The Friends of the High Line organized a design competition and were empowered by the City to choose the final winners; the selected winners were another risk, with neither the architects nor the landscape architects selected having significant built experience. As Robert Hammond recalls in *High Line: The Inside Story of New York City's Park in the Sky* (David and Hammond, 2011): "It says a lot about the Bloomberg administration, that they were willing to take a risk and pick a team that would bring such an innovative and untested design to a public space in New York City" (p. 78) (Figure 7).

The design team demonstrated careful and creative design that makes it such a pleasure to walk. The reference to its industrial past, the intelligent urban furniture, and the mixture of seasonally varying plantings coming up through the pavement - retaining some of the unruly charm of its previous abandoned state make it a unique urban experience. Regulatory constraints were turned into iconic features of the High Line; the amphitheater with wooden benches that brings visitors down into the structure of the High Line itself and serves as a viewing platform once served as the eight-foot-high barrier required for bridges and elevated walkways over city streets. This area has become one of the most popular spots on the High Line with people watching the traffic below (Figure 8).

The quality of the High Line's design became a magnet for unusual architectural form and design on the buildings that surround it, with facades referencing the industrial past of Chelsea and the Meatpacking District. The area has one of the highest concentrations of buildings from Pritzker Architecture Prize winners: Jean Nouvel's apartment block 100 11th Avenue, Shigeru Ban's Metal Shutter House, Frank Gehry's IAC Building, and Renzo Piano's new building for the Whitney Museum. Designs by Norman Foster, OMA, and Zaha Hadid are the latest additions to the architectural gallery (Figure 9).



Figure 7. Innovative public design: benches on the High Line (Source: Eric Soltan)



Figure 8. Viewing platform (Source: Nick Harris)

Conclusion

The High Line model, first realized by the Promenade Plantée in Paris, is not the first innovative urban intervention that has been exported on a global scale. Good ideas have been exported to other cities before, from the construction of civic monuments during the City Beautiful Movement to the more recent rise of bike-sharing systems for sustainable transport. Not all of these ideas are, however, equally transferrable.

There are points in favor of replicating a High Line elsewhere. It can be cheaper to renovate old rail structures than tear them down. The 606 in Chicago, for example, slices through four residential areas and was just too big to tear down. Similarly, the Reading Viaduct in Philadelphia would cost \$50 million to demolish versus \$36 million to retrofit according to a business

improvement group (Shevory, 2011). Additionally, parks can have economic impacts beyond the development boom that the High Line created. Urban planners have become increasingly aware of the economic benefits derived from greater health and quality of life that parks can create.

There are, however, several challenges that cities face when building linear parks. City resources are limited and funding, for construction and operation, often has to come from private sources. Friends of the High Line had and continue to have the backing of well-off celebrities in New York who are hard to find in other cities. Plans to transform a 2.1 mile elevated rail trestle in St. Louis and Philadelphia's Reading Viaduct have been slow to develop due to funding issues (friendsofthetrestle.org). The Atlanta Beltline is an ambitious project to create a

trail that circles the entire city of Atlanta. It is in part funded through value capture of anticipated increases in tax revenue from properties adjacent to the belt (beltline.org). Chicago's 606 received a huge push when Rahm Emanuel promised to finish it during his first term: it opened in spring 2015. These examples highlight the need for a concerted effort between public and private actors.

Finally, the High Line and the Promenade Plantée in Paris succeeded in part due to the nature of their surrounding environment. As Rybczynski (2011) points out, "while the High Line may have become a fashionable distraction for out-of-town visitors, it succeeds because it offers a green outlet to its many neighbors, who, like Parisians, live in small apartments. In no other American city do residents rely so much on communal green space, rather than backyards, for relaxation." The density of Manhattan's west side also enabled the High Line to be a catalyst for real estate development. In other contexts, parks may not have the same economic impact and alternative uses of abandoned rail infrastructure, including restoration to its original purpose as a mode of transport, should be considered.



Figure 9. Buildings by Frank Gehry and Jean Nouvel in the background (Source: Eric Soltan)

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