

# Bottom-Up Urban Innovation and Growth through Social Technologies

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**ABSTRACT:** This paper aims to outline new and growing intersections between design innovation, social media and grassroots reclamations of abandoned, under-utilized, or neglected urban spaces, with a particular focus on New York City. Three projects of focus include the High Line, a fully functioning public park on the west side of Manhattan, converted from an abandoned, elevated freight line; +Pool, a proposed engineering strategy that uses new filtration technology to construct a river-filtering floating pool in waters around Manhattan; and finally, the Lowline, a proposed subterranean park that collects natural sunlight through remote skylights and transmits it to underground spaces through fiber optic cable, allowing for photosynthesis and plant growth. While the High Line is the only realized project of the three, all have valuable social and urban similarities that reflect a common thread of grassroots innovation. Recognizing the social potential in neglected elements of the city, the visionaries and leaders behind these projects, fought and are fighting to create life, social function and vitality in what have been underused or unusable parts of New York.

**KEYWORDS:** High Line, Lowline, +Pool, New York City, Urbanism

## INTRODUCTION

A city dweller can often see one's environment in finite terms. A city dweller, especially in a city like New York, can walk to the edge of Manhattan and stand at a river, knowing that the island is not going to grow latitudinally or longitudinally. When space is needed and terms are finite, New Yorkers have to look up, or down, or sometimes even out to expand not the island itself, but to expand its functionality. This is a common theme in many finite urban spaces.

City growth, time and again animated by prosperity and innovation, has historically, in the case of New York, occurred at a breakneck pace, often singularly accommodating the needs of the city's elite, who were also the developers, innovators, policy makers, and government all-in-one. One could argue that the history of the city only repeats itself ad infinitum, but recent trends in urban architecture and design have begun to expand the audience and key players in shaping our cities. While heavy-handed development and control of New York was evident in the birth and growth of the city, and it is impossible to deny the tremendous influence industrialists, businessmen, and bankers had on New York infrastructure through their trading, cotton, transportation, and money lending empires, a shift in power seems to be occurring in regard to urban public spaces. These changes seem to be activated, considerably strengthened by, or widely shared by newly galvanized design- and public space-oriented online communities.

While often business and policymakers have dominated the growth landscape of what is one of the most powerful metropolises in the world, the detritus of fast moving growth often has historically left the less individually powerful citizens with architecturally isolated neighborhoods, obsolete infrastructures, and unusable waterways due to pollution and overuse. Technology is universally regarded as a frequent contributor to urban development and redevelopment, but it is often applied to more quantifiable and specific instances of treatment. A recent trend in many creative cities has involved applying innovative new technologies not only to the physical landscape of the city directly, though, but to the social fabric of the city in hopes of instigating involvement and initiating social action in regard to certain proposed urban interventions. These social applications, often arriving in the form of Kickstarter, Facebook, Instagram, Twitter, Indiegogo, blogs and other publicly viewed online forums, has begun to involve a digitally savvy population that is looking to invest in the social and physical future of their urban spaces.

Land development has nearly hit a plateau in New York City, in terms of untouched earth to swell into, and

instead of trying to develop quantity, inhabitants are learning about the merit of re-utilizing what is around them to improve immediate quality of life in a non-commercial sense. While real estate prices and viable commercial endeavors are still often the underlying motivation behind most physical action and change that happens in the city, social factors are now becoming more pronounced in a public sense, and this is in part due to the dissemination of widely supported ideas online.

This paper aims to outline new and growing intersections between design innovation, social media and of-the-people reclamations of abandoned, under-utilized, or neglected urban spaces, with a particular focus on New York City. Three projects of focus include the High Line, a fully functioning public park on the west side of Manhattan, converted from an abandoned, elevated freight line; +Pool, a proposed engineering strategy that uses new filtration technology to construct a river-filtering floating pool in the rivers around Manhattan; and finally, the Lowline, a proposed subterranean park that collects natural sunlight through remote skylights and transmits it to underground spaces through fiber optic cable, allowing for photosynthesis and plant growth. While the High Line is the only realized project of the three, all have valuable social and urban similarities that reflect a common thread of grassroots innovation. Recognizing the social potential in neglected elements of the city, the visionaries and leaders behind these projects, fought and are fighting to create life, social function and vitality in what have been underused or unusable parts of New York, supported in large part by social media and other socially minded online networks.

### **1.1 The High Line**

The High Line, a very successfully realized example of obsolete technology giving way to updated ideas and reinterpretation of infrastructural use, had a long history of hard work for the commercial industries of Manhattan. Beginning as a freight line up the West Side of the island, it ran from the 1930s to 1980, when it was abandoned and left wayside. Earlier in the century, this same freight line was found at ground level, but because of safety issues it was hoisted above the city to grow up, because out was not an option. Over time, the vast highway system in the US made the line less relevant, and its closure left a skeleton of the city looming dark over the West Side for years. As developers saw potential in the raw space it was taking up, grassroots efforts began to take hold of the site and after varied attempts at preservation, The Friends of the High Line was finally founded in 1999. This advocacy effort successfully fought for years to preserve the space, and finally in 2009 the first section was opened.<sup>1</sup> The second section has subsequently opened, and the third is currently being developed to open in the next several years.

The High Line not only has a strong presence in the city now, but has also developed a significant online presence as well. On its Facebook page, The High Line has over 65,000 Likes, and over 210,000 people that noted their visit to the park by checking in. Each unique post that The High Line puts up receives hundreds of Likes and dozens of Shares. It encourages New Yorkers and visitors to comment on posts and participate in fundraising efforts, and constantly links to press articles about its own organization as well as similar projects, museums, individuals and businesses that are working toward similar goals. It extends its brand image to support local business and other industries in the city through its own Likes, and shares photos of park-goers to further incentivize participation in the living project.

In its active engagement with the public, it asks urban dwellers (and visitors) to become amateur documentarians, and in allowing these thoughts, photos, and suggestions to be published openly, give the public a forum to overtly participate in the growth of the park. The High Line highlights partners and vendors, even recently sharing with blog readers the plight of one vendor that lost their kitchen through Hurricane Sandy.<sup>2</sup> Though the project itself was unprecedented in New York, the idea of revitalizing something that had been an urban eyesore is not new to urban development. What is unique to this project, though, is the massive amount of effort that went into converting this space into park use instead of residential or commercial real estate use. Thanks to a 2002 study, it was found that tax revenues would outweigh construction costs of the park<sup>3</sup>, and the financial value was a significant factor in moving the development of the park forward. The question still remained though, whether it would catch on for use as a public space, especially because it did not live at street level, and was unusually long and narrow for a park. Many factors can be attributed to the success of The High Line as a publicly used park, including lack of green space on the west side of Manhattan, or the power of the officials and fundraisers who were behind the project, but it is undeniable that the extensive dissemination of The High Line brand online, has maintained a relevance in urban culture and planning that shows it is engaged with its users, its city, and the businesses and patrons that help support it. It capitalizes on methods of advertising and commercial methods of marketing to continue to fund and maintain brand identity in a non-profit sphere.

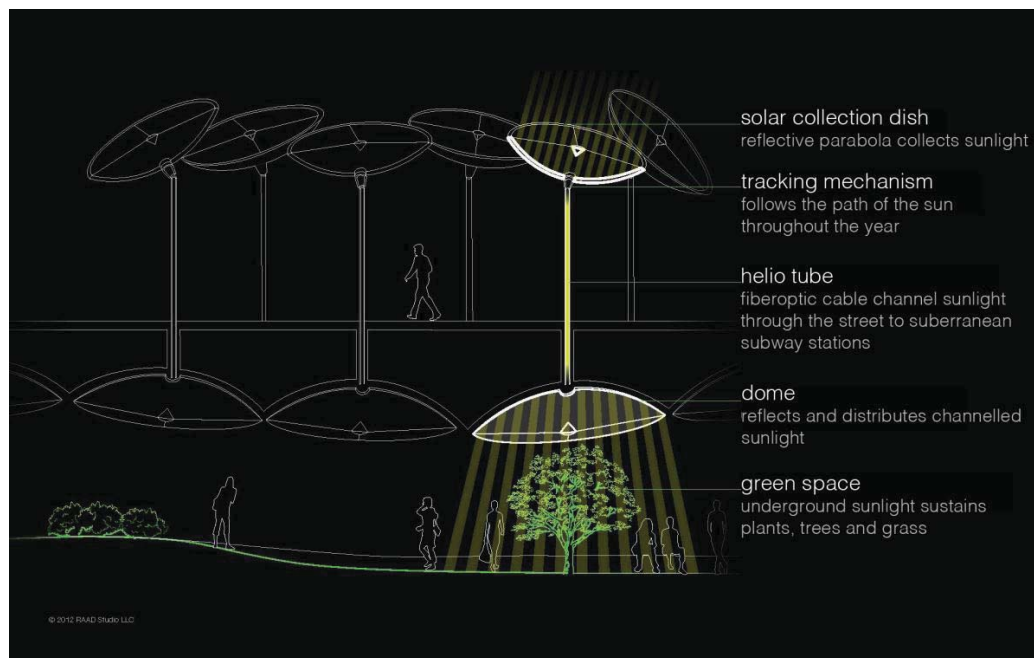
### **1.2 Unrealized projects**

Interestingly enough, two other urban interventions in New York are following a similar design trajectory as The High Line, in that both are setting their sights on unused or underused spaces in New York. In the case

of the similarly named Lowline, an abandoned underground trolley terminal in the belly of the Lower East Side is the target, and with the visually-named project, +Pool, the intimidating waters around Manhattan are in the crosshairs. Similarly to The High Line, these projects are relying heavily on their online cultural brand presence to maintain relevance, gain supporters and donors, and most importantly, to start their projects. What is unique here, though, is that these two projects are working in reverse- they do not yet exist. Their fan bases and donor bases are vast, and both projects are already garnering significant public, city, and even international support. What is most amazing, though, is that both are still in fundraising and development stages, and neither has any guarantee of realization.

### 1.3 The Lowline

The Lowline, a project started by James Ramsey, former NASA engineer and current principal of RAAD Studio, and Dan Barasch, former social innovator with Google and UNICEF, was first publicly presented through a crowd-sourcing fundraising website, Kickstarter. Ramsey had developed a unique technology that allowed for natural sunlight to be collected with solar panels and transmitted to aid photosynthesis in dark spaces. While on a trip to India in 2008, he saw the profound potential of sending natural light to low or no-light spaces, and the possibility of illuminating one of the many subterranean areas in New York became an obvious target.<sup>4</sup> Pairing with Barasch and developing strategy to move forward, the team aimed their sights on an MTA-owned trolley terminal by the mouth of the Williamsburg Bridge, and began a Kickstarter campaign with the ambitious goal of raising \$100,000 in one month. With 3,300 backers, the Lowline far exceeded their target, and raised \$155,186 in the span of one month, with only a few clear renderings, site photographs, and a promotional video explaining the vision. Subsequent development of the project included a significant free public exhibition on the Lower East Side in September of 2012, introducing a prototyped version of the proposed technology, opening the concept up to the neighbors, students, professors, designers and theorists who were interested. With tremendously positive feedback, the strategic team behind the Lowline is now focusing forward and aiming to have the Lowline included in a significant redevelopment of the Lower East Side, also known as the Seward Park Urban Renewal Area (SPURA).<sup>5</sup> This area, historically low-income because of the highest density of government-subsidized housing in New York City,<sup>6</sup> lacks any significant green space, and the Lowline hopes to capitalize on public support for the project to gain even more political support.



**Figure 1:** Illustration of proposed “remote skylight” technology for the Lowline. Source: (The Lowline,



Figure 2: Actual photograph of prototype open to public in September 2012. Source: (The Lowline, 2012)



Figure 3: Rendering of proposed Lowline park in abandoned trolley terminal. Source: (The Lowline, 2011)

#### 1.4 +Pool

Finally, + Pool, a project that is tracing a similar arc as The Lowline, also began as a Kickstarter campaign, aiming for a modest \$25,000 for initial investigations, and successfully collecting \$41,647. The project proposed something simple but profound for the inhabitants of the city- create a floating pool with permeable filtration walls in the formerly feared waters around New York. Utilizing the river water and making it safe to swim in, +Pool proposed a tangible solution to capitalize on even more of the city's resources, in a way that would once again benefit the public. The three founders- Dong-Ping Wong of Family, and Archie Lee Coates IV and Jeffrey Franklin of PlayLab, Inc.- saw an obvious opportunity in the water around the city during one particularly hot summer. Since July 2011 when their initial Kickstarter campaign closed, the +Pool team has moved on to a bigger and better online fundraising campaign, aiming to raise \$1,000,000 by April 1, 2013.<sup>7</sup>



Figure 4: Rendering of +Pool. Source: (+Pool, 2013)



Figure 5: Rendering of +Pool. Source: (+Pool, 2013)

### 1.5 Cultural branding and why social media is significant

In the above-mentioned cases, these significant urban interventions begin on a bottom-up level and are disseminated widely through a number of avenues, not least of which are new forms of online social media, including Kickstarter, Facebook, Twitter and Instagram. This kind of new civic engagement is involving a younger, more socially aware demographic of urban dwellers that span a variety of professions and economic brackets. It is this accessibility to innovation in architecture that is allowing the masses to participate in, inform, approve and support research and trial projects in urban spaces that would otherwise need to initially search for grant funding and other private means of support. While these three case studies are New York specific, the implications of this kind of new, very active social participation can be mirrored and integrated in an unlimited number of urban improvements and interventions.

What is particularly interesting in these cases is that advancing technology made each of these respective urban spaces initially obsolete or unusable. With the successfully realized High Line, years of dedication and community support led to an open public space in place of an abandoned rail infrastructure. In the case of +Pool and the waters around New York City, it was and is a river polluted over the course of the city's significant industrial past, preventing many recreational uses of the waterway. An advanced, river-permeable filtration system technology, in addition to widespread online and financial support, is leading the way for the city to reclaim part of the waterway in the form of a public pool. With the example of the Lowline, an abandoned trolley terminal in the Lower East Side of Manhattan has sat dormant since the late 1940s, a lonely relic of New York's vibrant transportation history. A testament to an ever-changing urban fabric, it is

only through a proposed new solar technology that this approximately 1.5 acre underground space may find a second life.

While the levels of new technology vary between these three projects, the common denominator is that architectural and online technology is allowing for a designers and citizens to develop and ascertain the feasibility of certain urban interventions in a direct and open way, democratizing design and demystifying urban planning. These trendsetters are capitalizing on user-generated websites and social networks to execute a publicly accessible and publicly generated project.

Capitalizing on a system that consumers are friendly with in the form of social medias, the means of contributing and means of return are different than standard consumer culture- it is not an individually owned "product", but rather a communally grown project. The product is, in fact, a quality of life product, which subverts the original intent of advertising, creating a product that is free to the public. The accumulated capital is no longer the ability to spend, or the ability to consume, but is post-consumption- the ability to reconstruct and rebuild. Utilizing these advertising tools and methods to promote these cultural and social projects, these social and design innovators are adapting and applying known business methods, and translating them to a slightly different realm.

### **1.6 Speculative motivations for public interest in shaping public spaces**

Such significant public interest in shaping one's own city and space- and in this case, New York City- begs the question of why? While many view architecture and design as historically isolated and patriarchal in relation to the layman, there is a visible interaction between the designer and its users in these specific cases. One could speculate that this is only due to the Internet's power to spread information, but it is worth considering that there are also several more key factors at play here.

Advertising provides a rich background to compare this user participation to, in the sense that now the user in the design term is also a consumer in a capitalist sense. Advertising, or "publicity" as John Berger calls it, as a means to communicate and promote a specific product, is pregnant with expectations and desire. It serves as a frozen moment in time, full of potential energy, bursting with self-expression, excitement, and possible fulfillment of a "need", giving the consumer the power to fulfil their own "needs", though those "needs" were only created at suggestion of the advertisement in the first place.

While not necessarily a consumer that spends money to consume or obtain goods, the user of The High Line or the other two proposed projects is a consumer nonetheless. In this case the currency is culture, and perhaps this cultural currency comes from an oversaturation of personal material goods. American cities are so deep in visual culture that we depend on seeing to know something exists, notable through the rise of print media, then advertising and also television. Because we have become used to the quick gratification of our imposed "needs" by big companies, could it be argued that this desire to support a public urban project is a spill-over from managing and improving the home, and consumers have become over-saturated with products to "improve" their quality of life? Are consumers now looking toward their surroundings to manage and create idealized spaces? At first glance, the public fundraising and support of these projects may seem altruistic and community-minded, because non-profit places like libraries, museums, and community centers don't revolve around making money, and therefore don't have an investment potential that returns an investor's money. Donations and grants are secured to fund programs for the public, but don't always look to reinvest that money for a financial return later.

These facts would point towards benevolent and benign urban interests on the part of the city dweller, but could there be a deeper, less obvious, slightly more insidious impetus behind the culture consumer that stems from accumulation of cultural currency, similar to accumulation of wealth of material goods? Because the capitalist consumer uses and depends on objects to curate a sense of relevance in their own lives, could it be that this cultural consumption in the form of aiding larger urban projects is just a broader example of consumer culture at work, with the user/investor/viewer accruing culture points for themselves, like dollars? Are these publicly funded projects just the physical manifestations of cultural capital?

## **CONCLUSIONS**

In a Western consumer culture that focuses on and values endless redevelopment of visual identities and material goods, we often discard these same materials at a breakneck pace, in an attempt to be competitive and equally relevant in a constantly innovating capitalist society. Abandoning the notions of utility and design for longevity, we are surrounded by a culture that is programmed to regenerate itself in increasingly smaller spans of time. These ideas of use, disposal and regeneration speak about the social identity of individuals within this wider culture, and can be analyzed and understood through patterns of consumption and reuse. Looking at urban projects that focus on infrastructural renewal, powered by the public, it is

interesting to speculate about the state of consumer culture and whether cultural capital follows the same rules as economic capital, or whether consumers are in fact breaking away from expected patterns of consumption and instead investing in socially beneficial projects.

Whatever the motivation, it is undeniable the innovative uses of social media and new technologies are helping to activate and energize an urban public that is excited to get its hands dirty in terms of funding large urban interventions, as well as giving feedback and social support. The joining of social media campaigns and rigorous explorations of urban landscapes with the intention of inserting projects that improve quality of life is a profound statement about the urban dweller and the investment she feels in her surroundings. The city dweller is actively participating in design culture in the same way that a voter would participate in a democratic election, and it is very likely that online information sharing is, in large part, very responsible for this activation.

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