ESSAY

Development Above Rail Yards

City Planning's Last Frontier

The United States' largest-ever property development is being built over working rail yards in Midtown, Manhattan. **Michael Koh** and **Elgin Toh** explain how the public, private and people sectors overcame conflicts and daunting financial and bureaucratic challenges to unlock massive economic and social value at Hudson Yards.

Hudson Yards is a US$20 billion mixed-use real estate project currently being constructed in the Midtown area of Manhattan, New York City. It occupies an area just over 24 acres (100,000 square metres). By value, it is the largest property development in the history of the United States, and it is being built at what was once considered the "last frontier" of Manhattan—an area untouched by development for a long time despite its proximity to the lofty property prices in the rest of Manhattan.

Developers had long seen the potential of the site but did not unlock its value largely due to the presence of two working rail yards, belonging to the Metropolitan Transportation Authority (MTA). The yards are a depot for 30 surface trains that head east towards Pennsylvania Station daily to pick up passengers before taking them to Long Island.

CLC Fellow **Michael Koh** (left) was previously Head of Projects and Design at SC Global, and the former CEO of the National Heritage Board and National Gallery.

Elgin Toh (right) is a researcher at the Centre for Liveable Cities and a former reporter for *The Straits Times*.

An artist's impression of the Hudson Yards development when completed.

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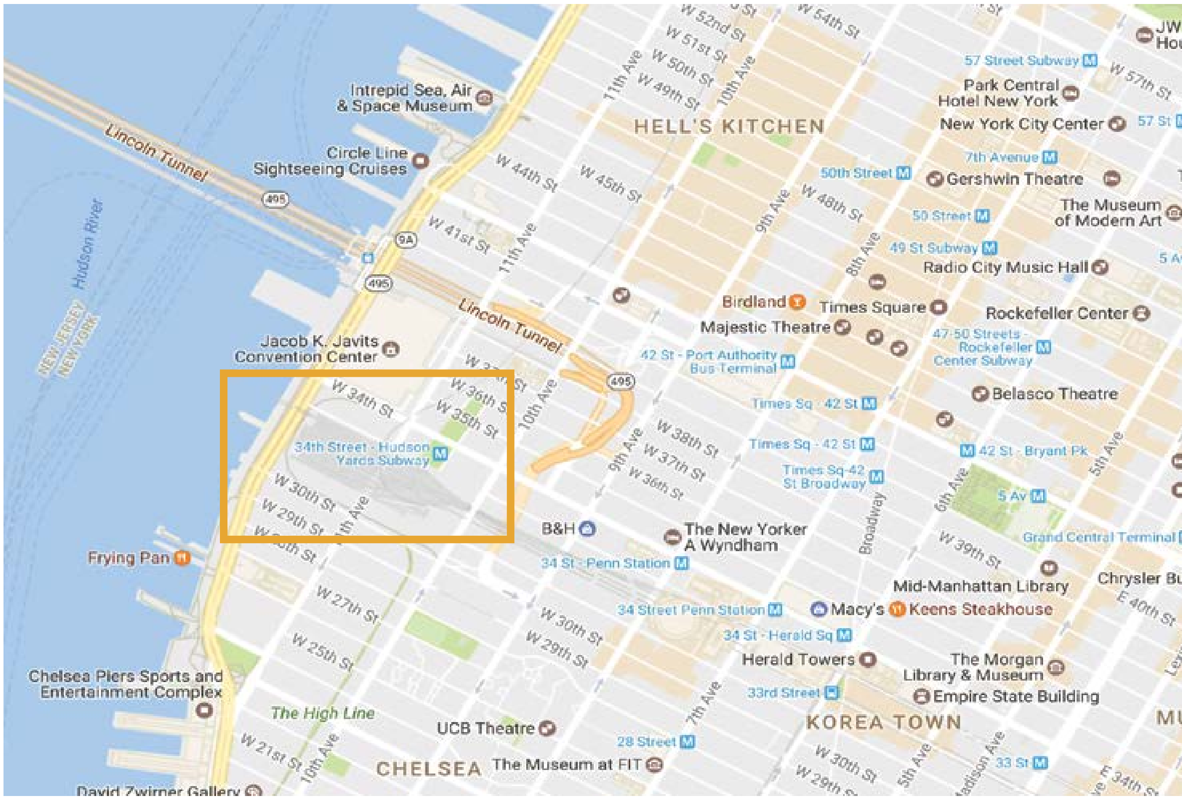


"We could see the potential of this site for many years. The question was how to unlock it."

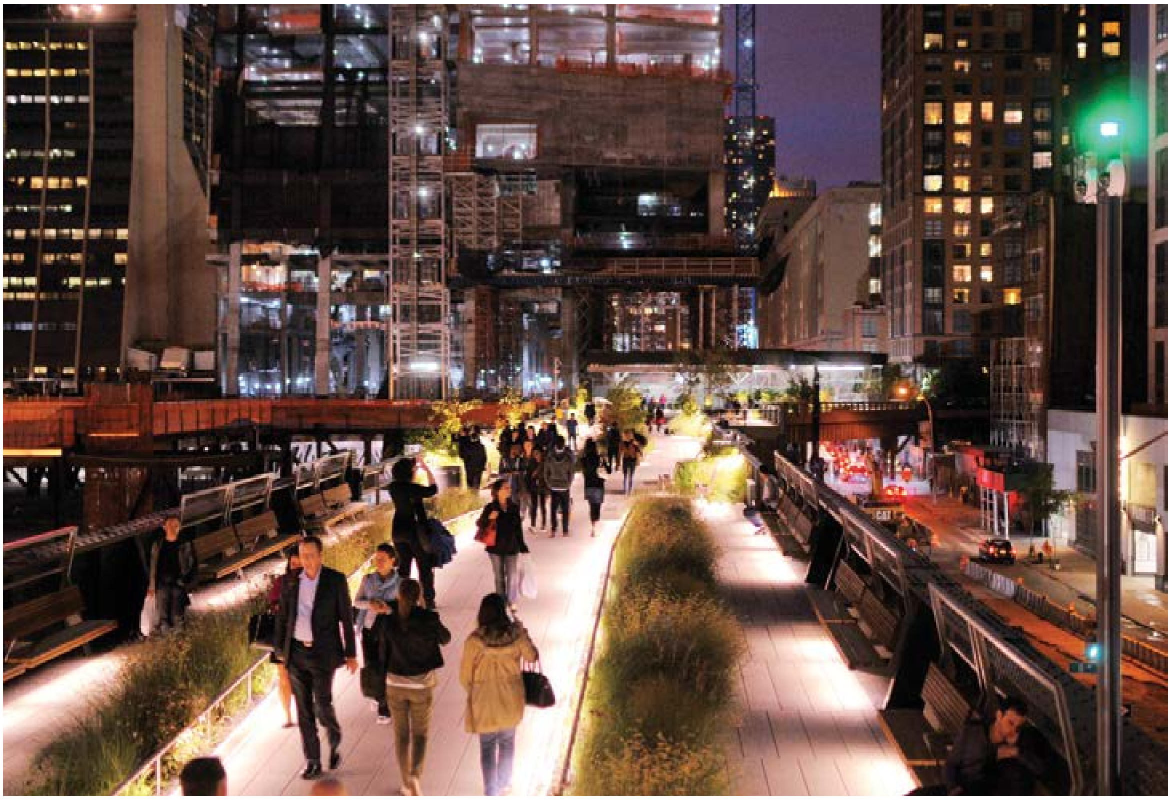
– Stephen Ross, developer

For any development to occur on the site, large platforms would first have to be built over the live rail yards so that while high-rise construction took place above, trains could continue to run undisrupted beneath—an engineering feat of heroic proportions. This had been talked about in the New York real estate industry for many years, but there were a number of impediments that had to be overcome.

First, there was the costly price tag for such a construction method. Second, the area would have to be rezoned, while better transport connections were needed to justify development. Furthermore, the site was in a depressed part of town. Other than the rail yards, the main activity used to be parking garages and automobile repair shops. The risks for any developer were significant.

The first impetus to develop the area came after Michael Bloomberg became Mayor in 2002. His plan was to build a new stadium at Hudson Yards as part of the city's bid to host the 2012 Summer Olympic Games. Although the bid was unsuccessful, redevelopment efforts were not abandoned and were redirected into a new mixed-use plan.

The onset of the 2008 global financial crisis temporarily halted development but as economic growth picked up post-crisis, a joint venture by real estate developer Stephen Ross's Related Companies and Oxford Properties secured the rights to develop the site.



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During and after the financial crisis, the High Line—a 2.3 kilometre disused elevated railroad-turned-park—was built. This iconic project, whose northern end terminated directly within the Hudson Yards site, proved wildly popular among New Yorkers and tourists, attracting five million visitors per year. It created a new vibrancy in the neighbourhood, bringing in billions of dollars in investments to surrounding areas. This gave investors confidence to develop Hudson Yards.

The first building in the development—10 Hudson Yards, an office building—opened in May 2016, beating market expectations with 96% of space leased out. Designer label Coach, the anchor tenant of the building, occupies a third of the building. Other big name firms that have signed up for current or future office space include L'Oreal, Time Warner and CNN. By 2025, the completed project will have eight million square feet (743,224 square metres) of office space and a mega mall spanning one million square feet (92,903 square metres). "If you look at the companies that are coming here, they're leaving … places like Rockefeller Center. They're leaving some of the most prestigious addresses in the city," said Mr Ross in a 2016 interview.

Strategic Public Investments

Two major factors lie behind the success of Hudson Yards: public investments and sound local planning.

In recent years, US$4 billion in public investments were made in Hudson Yards and its surrounding areas. The single most

01 Hudson Yards sits in west Midtown, Manhattan facing the Hudson River.

02 The High Line stimulated massive adjacent property investments, including Hudson Yards (background).

> "The game-changing subway extension was funded through bonds ... paid using tax monies collected from urban renewal in the area ... a model that Mayor Bloomberg often used in public projects ..."

important investment was the extension of the No. 7 Subway Line, from the original terminal station at Times Square to a new station in Hudson Yards. The US$2.4 billion subway extension gave the area transit accessibility, without which Hudson Yards could not hope to achieve its projected aim of 125,000 people coming through it daily.

Subway extensions in New York are normally built by MTA, a state agency. However, MTA was unwilling to fund such an expensive project and stalled discussions. To push the project forward, Mayor Bloomberg decided that the city government would step in to pay for the extension. He later said: "We recognised that if the state wasn't going to do it, the city should, because this is our economic future. And mass transit really does open up this part of the city."

The game-changing subway extension was funded through bonds issued by the Hudson Yards Infrastructure Corporation, an entity set up by the city government. These bonds are paid using tax monies collected from urban renewal in the area, sometimes referred to as Tax-Increment Financing (TIF)—a model that Mayor Bloomberg often used in public projects during his 12-year tenure.

In a way, the city has picked up the tab because the tax monies channelled towards bond payments would otherwise have gone to the city coffers. The key difference, however, is that bond holders are sharing in the risk of the development. If the urban renewal of Hudson Yards does not succeed as projected and the properties in the area do not generate enough tax revenues to fulfil the bond payments by the time the bonds mature, it is the bond holders who end up losing money from their investments, unless there is a government bailout.

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Other than TIF, district improvement payments—payments made by a developer in order to obtain an increase in floor area ratio (within certain limits stipulated by the Hudson Yards rezoning plan)—were also used to finance the subway extension.

Other public investments include the makeover of an adjacent convention centre, the renovation of another subway station, and funding for parks connected to Hudson Yards. These have had a combined effect of injecting new life into Hudson Yards, completely turning around the hitherto cheerless area.

01 The yards, a depot for 30 surface trains, at the early stages of construction.

02 The new "34th Street-Hudson Yards" subway station was critical to the project's success.

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Sound Local Planning

The second success factor was sound local planning. First, vital rezoning happened in two waves, in 2005 and 2009. Before this, the area had been zoned as low-intensity manufacturing and commercial land in New York City's landmark 1961 Zoning Resolution.

Rezoning proposals were initially mooted as part of the Olympics 2012 bid. After the bid failed, rezoning efforts continued as part of the new development plan for Hudson Yards. The two waves of rezoning allowed for high-rise construction as well as mixed-use development, including retail, office space and residential units.

Also passed as part of the rezoning plan were provisions for additional floor area ratio (FAR) available to various plots in the larger Hudson Yards area. These provisions were District Improvement Bonuses and Eastern Rail Yard Transferrable Development Rights (TDRs).

The Improvement Bonuses allowed additional FAR in exchange for payments into the district improvement fund, which is used on public improvements, including the No. 7 subway extension as well as other public spaces, such as parks.

The TDRs allow the developer of the Eastern Rail Yards to sell unused FAR to neighbouring plots of land. Because high-rise construction can only take place on certain parts of the Eastern Rail Yard plot (which, in turn, is due to the difficulty of building on a platform), the developer of that plot is likely to end up with unused FAR. The TDRs are therefore important because they make it financially more attractive to develop the plot, while at the same time benefiting nearby plots that have less technical difficulty in building more intensely.

Second, community involvement ensured that the Hudson Yards plan took into account the best ideas that stakeholders had to offer. The Regional Plan Association (RPA), a respected NGO that researches on urban planning issues, had advocated as early as 1996 for a mixed-use plan in that neighbourhood. When the Olympics bid failed, the RPA plan

01 Affordable housing, an arts centre, public school and open spaces contribute to inclusivity.

02 A platform was built over the train depot to allow high-rise construction.

became the natural front runner. As RPA had invested time and effort researching and substantiating it, the RPA plan was well regarded. The eventual plan adopted by the city was not too different from RPA's plan, as RPA planners often point out.

Third, there was an insistence on staying inclusive in the local planning of the area. More than half the site will be devoted to open public space. This includes two green corridors in the north-south and east-west directions, both of which will merge in a public square at the heart of the Hudson Yards development.

The neighbourhood will also have some 4,000 housing units, a public school for 750 students as well as an arts centre. Affordable rental housing—making up as much as 20% of some residential blocks—has been incorporated into the residential components of the development and is allocated by lottery, in accordance with city-wide rules on affordable housing. By 2025, as many as 125,000 people are expected to come through the area every day to work, live, play or learn.

Lessons for Other Cities

Other cities with similarly underutilised train depots should ask if the same factors that helped Hudson Yards succeed are available to them. The central idea here is that a rail yard that is not built upwards represents unlocked potential to do more, and do better, in its neighbourhood.

Given building technology today, the air rights for a rail yard plot can be fully harvested using a platform that enables high-rise construction over the trains. But a few other factors have to be favourable, among which the two most important would be location and connection. Is the depot located in a larger neighbourhood with development potential, and does it have well-connected transport nodes, preferably in the form of a subway station?

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"... a rail yard that is not built upwards represents unlocked potential to do more, and do better, in its neighbourhood."

Beyond these crucial factors, other lessons from Hudson Yards would apply to most other developments: working with NGOs and the community to harness the best ideas; and having a lead public agency to function as a champion and a coordinator for other public agencies. Importantly, the well-designed and integrated open spaces and mix of land uses lay the foundations for a more vibrant and inclusive neighbourhood.

To conclude, transforming a train depot into a lively development has not been a walk in the park. In fact, a turnaround for Hudson Yards looked distant as recently as 2005. Its subsequent success should bring optimism that other sites too can be reimagined and remade.