



propel

by **mipim** — metaprop — **NYC**

NEW YORK 2021

AN EXCLUSIVE WHITE PAPER
PROPEL BY MIPIM NYC 2021

INTRODUCTION

Propel by MIPIM proved a key industry catalyst once again in 2021, bringing together major players in the world of proptech across **two days of live conferences**.

This year's Propel by MIPIM featured **40+ conference sessions, 60+ speakers, and leaders** sharing exclusive insights about the US and global markets. There was also no shortage of networking moments, giving the up-and-coming talents of the industry a chance to chat one-on-one with the biggest proptech players in the US and beyond.

The conference was built on five pillars, reflecting the industry's key concerns. These ranged from **sustainability** to **user experience, investment, data** and **talent**. There was also an opportunity to profile the **unique evolution of the city of New York** as it emerges from the pandemic, while cementing its place as perhaps the global capital for proptech.

Against the backdrop of the main themes, there was also plenty of chance to debate topics such as **diversity & inclusion, decarbonization, future of work, SPACs, and cybersecurity**.

Fireside chats with major names, including **Don Peebles, Bredan Wallace, François Lacoursière, Scott Rechler** and **Michael Phillips** slowed the pace for some thoughtful discussion of the industry's pain points – and enormous prospects.

As VTS founder Nick Romito noted, “we are entering the golden age of proptech”, adding that “there is more change happening in real estate now than in 50 years prior” and that the industry would be asking the proptech community to solve an “unprecedented number of problems”. He concluded: “We have become a category, and we matter.”

For actors, partners and investors in proptech, 2022 is set to define a rewarding and meaningful path towards further consolidation and opportunity.



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Nick Romito, CEO, VTS

THE INNOVATION EQUATION

The twin themes of talent and data – the ingenuity to find proptech solutions, and the metrics needed to audit them – provided key jumping off points throughout the conference. Propel’s panels displayed plenty of evidence that while the industry’s greatest minds are driving innovation, they are forging tools which have the power to learn from the past and become smarter as well.

The under-40 keynote from VTS founder Nick Romito suggested that there’s never been a more exciting time to work in proptech. “When we first started, there was no proptech. We were going door to door to find backers... Fast forward to today and it would be hard to find a venture capital firm which doesn’t have some exposure to tech.”

Romito noted that the pandemic-driven push towards greater digitalization in the real estate industry had created a tailwind for innovation. “Covid has created the single biggest opportunity for everyone at this conference. There is more change happening in real estate now than in 50 years prior.” That change, Romito added, would make proptech firms indispensable to real estate leaders. “None of them have any idea what the next few years look like. Most of them are going to be looking to technology for solutions.”

He said that VTS’ experience of the pandemic had also been transformative. “In the second half of 2020, VTS went from being a single product company to a four-product platform – because all we did was listen to clients’ needs.”

Romito concluded:

“THE NUMBER OF PROBLEMS THAT YOU’RE GOING TO BE ASKED TO SOLVE WILL BE UNPRECEDENTED. WE ARE ENTERING THE GOLDEN AGE OF PROPTech. WE HAVE BECOME A CATEGORY, AND WE MATTER.
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A fascinating two-hander from David Blumenfeld, principal, Blumenfeld Development Group, and Kai-Ewe Bergmann, partner of architects Bjarke Ingels Group, underlined the exciting realities that are emerging in this moment of acceleration.

Their latest project, The Smile, in East Harlem, is a ground-breaking and elegant residential scheme with mixed-use elements, which was ingeniously designed to occupy a former parking lot. It provides affordable housing and homes at market rents. “While there was no height restriction at first, the area was then zoned at around 125 feet. We then lost a lot of floor area ratio because of the building that was built on the front of the parking lot. We reached out to the most innovative architects around – namely BIG – to find a solution,” Blumenfeld explained.

BIG’s design, conceived as a three pronged ‘Y’ structure stretching between 125th and 126th streets, morphs from a traditional block at street level to a form which cantilevers over an existing commercial building. “For the first time ever in 100 years, we decided to take the building’s volume and scallop it across the whole façade, not just at the highest points, in contrast to the typical ‘wedding-cake’ architecture of New York,” Bergmann added.

The effect is to create a building culminating in a curve that appears as a smile from above. Collective spaces include a fitness center, lounge, and a co-working space that overlook a six-story gallery. The commercial floors incorporate the Phillips School of Nursing at Mount Sinai Beth Israel, which Bergmann calls “the first healthcare investment in this neighborhood for some time”, adding that The Smile is New York’s first development to offer the design-forward Bumblebee living solution. This AI-powered system intelligently catalogues everything, so its residents’ belongings are at their fingertips when they need them.

Another impressive case study came from the province of Québec, which has become a major technology hub, incubating a number of proptech firms. Introduced by Martine Hébert, Québec Delegate General to New York, two Québec innovators, BrainBox AI and Aïdi, told their stories.

THE INNOVATION EQUATION

Hardin Code, chief of staff at BrainBox AI explained how his firm builds a “layer of intelligence that sits on top of your building’s HVAC system in all applications of commercial real estate”. This tool “optimizes how buildings are run, and makes buildings autonomous, thanks to deep learning predictive models that recalibrate and learn”. All this means that by enriching property data with other data sets such as weather and occupancy levels, buildings can eventually anticipate climate events and turn on necessary functions “before they become uncomfortably hot or cold”.

Meanwhile Marc Parenteau, CEO and cofounder of Aidi, explained how his construction project management software assists public and private owners and building managers. “Aidi allows you to speed up your suppliers’ invoices approvals, manage your budgets and forecasts... while providing you with access to consult the construction site log.” As well as taking and storing thousands of photos, the software builds multiple data sets to allow developers to understand what is progressing on site, while tracking elements like vehicle use and manpower to help construction managers plan resource-use more effectively in future.

Propel delegates also learned that while all of these examples of innovation are contributing to better building management, the high number of

IP addresses in commercial buildings today makes them more vulnerable to cyberattacks. Robert Entin, chief information officer of Vornado Realty Trust and Greg Jones, president Montgomery technologies, ran through some of the problems and solutions. Said Entin: “Ten years ago, I spent 10-15% of my time on cyber security; today that’s 35% of my time.”

Explained Jones: “In today’s ‘smart buildings’, the building systems that are being installed all have an IP or IT component. No one is installing a stand-alone static proprietary network on old-school cabling.

“We do a lot of audits for clients and have found some frightening results. 60% of the buildings have a BMS system which is not behind a firewall. Same with digital signage – 70% of the time, there’s no firewall. Even where this is a firewall, there can be multiple internet systems in a rat’s nest of infrastructure which has evolved over time.” But he said that solutions were often fairly straightforward. “Best practices include installing firewalls, getting rules managed, putting the right systems in place.”

Added Entin: “Many tenants want to integrate access systems for multiple facilities, and they prefer to give HID credentials to any employee for all their sites. Clients say the convenience outweighs the risk, but they need to consider what happens if the wrong people gain access to their facilities.”



AI and data, an overview of successful cases studies - Thomas Yeh (Technical Advisor, NYSERDA), Marc Parenteau (CEO, Aidi), Hardin Code (Chief of Staff, BrainBox AI)

SPOTLIGHT ON NYC

Each year, Propel by MIPIM takes a snapshot of host city New York, charting its goals, improvements and ambitions over the last 12 months – and in the year to come.

2021 was no different, with the event reserving a number of exciting – and exclusive – announcements. EDC President & CEO Rachel Loeb revealed that JLL Technologies has been selected as New York’s partner to launch a citywide property technology pilot program for more than 400 million square feet of city-owned and -managed assets.



NYC’s efforts – and partnership – to become the global hub of proptech for good – Rachel Loeb (President & CEO, New York City Economic Development Corporation)

Commented Loeb:

“ THE PANDEMIC SENT US LOOKING FOR VIRTUAL SOLUTIONS TO EVERYTHING, FROM RETURN TO THE OFFICE STRATEGIES TO IMPROVING THE AIR QUALITY IN OUR BUILDINGS. WITH THE NEED TO ADDRESS CLIMATE CHANGE INTENSIFYING, TECH ADOPTION IS MORE IMPORTANT THAN EVER.

The pilot scheme has launched a call for proptech start-ups that will subsequently be vetted by JLL Technologies. “If your solution addresses an immediate priority, JLL will screen it and select it to pilot. You will enter a no cost demonstration contract to get that pilot up and running,” Loeb explained. “By this time next year, we want to have five pilots launched that are improving the sustainability and efficiency of our buildings. We hope this is welcome news to all of you.”

A subsequent session fleshed out the details of this important opportunity. Nicolas Kozubek, Propel director for RX Global, moderated a lively chat between Liz Van Dyke, managing director, public institutions, JLL Technologies and Jonathan Lane, director, Urbantech NYC, New York City Economic Development Corporation (NYCEDC).

Van Dyke traced JLL’s recent evolution in terms of technology, how it had launched the JLL Spark fund in 2017 and created JLL Technologies in 2019. “The primary mission of JLL Spark is to find early-stage start-ups, invest in them, and bring them to clients. We evaluate their success through pilot programs. This is what we are replicating for New York City.”

SPOTLIGHT ON NYC

Said Lane: “JLL has a robust public-sector practice. They have worked with city, state and federal institutions in the past to do similar kinds of work. They were deeply aligned with our goals to use proptech in order to extend the benefits of the sector to social equity groups that had largely been underinvested and underrepresented in the sector.”

The city also intends to use proptech to meet its climate change goals, including addressing matters of decarbonization. New York’s Local Law 97 calls for most buildings 25,000 sq ft or larger to reduce their emissions by 40% by 2030 and by 80% by 2050. The law is part of the 2019 Climate Mobilization Act.

“We recognize that our next existential challenge is climate change,” Lane said. “We need to have the most robust solution set possible.”

The focus on New York continued with an in-depth panel charting the city’s recovery, and proptech’s role in that process. Speakers Ken Fisher, partner, Fisher Brothers, Leslie Himmel, co-managing partner, Himmel + Meringoff Properties and John Marino, president, Marino, tracked how far the city has come – and what still needs to be addressed.

Himmel suggested that current tenancy trends gave reason for hope. “Tech leases came back first in commercial property. In residential, occupancy rates are now higher than pre-pandemic.” However, she warned that office occupancy was still sluggish, with companies still delaying back-to-work plans as the pandemic continued to

reserve surprises for business leaders. However, many occupiers are also bullish, she noted, “and office occupancy goes up in the winter”. Himmel added: “Google buying a new office for over \$2 bn was a great testament to reinvesting in NYC.”

Fisher said that the pandemic had given his company the chance “to finish a lot of the work we started pre-pandemic, and importantly, allowed us to get in and focus on proptech. It also meant we could complete a lot of infrastructure work while buildings were not full. We’ve been investing in building automation, fiber backbones to help data go further.”

However, he cautioned that many of the city’s problems that existed pre-pandemic were still present, particularly around infrastructure. “Questions remain about power and the grid, which is nearing the end of its useful life.” He added: “Gateway is one solution... but there’s more to it than that”, referencing the city’s largest energy storage system, which was installed at the Gateway Center in Brooklyn two years ago. Himmel countered by saying that H+M’s 8-acre site in Parkchester would contribute to infrastructure improvements for the Bronx.

Concluded Fisher: “I’m very optimistic about New York politically. Eric Adams is the right man at the right time. He’s pro-business and understands that the real estate industry as a whole is a means to an end. Public-private-partnerships can solve so many of the issues that we have today, from housing to infrastructure.”

SUSTAINABILITY



PropTech and sustainability in New York State – James Perakis (Associate Principal, Elementa Engineering), Michael Reed, (Building Decarbonization, New York State Energy Research and Development Authority), Dana Schneider (Senior VP, Director of Energy, Sustainability and ESG, Empire State Realty Trust)

The profiling of New York’s climate ambitions continued across another session, where sustainability became the main focus. Michael Reed, who works on building decarbonization for NYSERDA, discussed practical solutions with Dana Schneider, senior vice president, director of energy, sustainability and ESG, Empire State Realty Trust, and James Perakis, associate principal, Elementa Engineering.

Reed started by setting out NYSERDA’s ambitions to decarbonize all New York State building stock by 2050. “It’s going to require a significant collaboration between the public and private sector. We’re going to need solutions and to help bring the supply chain up to speed to meet the city’s needs – we think there are a few people well-placed to lead on that.”

Schneider explained that Empire State Realty Trust’s goals included offering “affordable low-emission buildings to our tenants”. She added: “We have committed to net zero for our whole portfolio – over 10 million square feet – by 2035, and net zero on the Empire State Building by 2030. We’re not just getting there by carbon off-sets, we have a true roadmap and have already reduced the Empire State’s emissions by 54%.”

Some of this work is being achieved in partnership with Elementa Engineering, which is a consulting firm creating what Perakis calls “well-scoped and actionable projects” for its clients. “The key factor is we’re usually working with limited data,” Perakis added. “The traditional solution is to send in an engineer to audit a building’s sustainability profile and build a calibrated energy model, but that’s inefficient across thousands of buildings. We’ve been thinking about a portfolio approach with more machine learning, so we can evaluate 100 buildings through automated modelling in the way we’d evaluate one.”

Perakis cited a case study for MIT, which has seen Elementa already analyze 200 buildings, to create a prioritization plan for retrofitting those properties.

A fireside chat with Brendan Wallace, co-founder & managing partner, Fifth Wall, also underlined the centrality of the sustainability theme. Wallace discussed Fifth Wall’s recent participation in COP26, the UN Climate Change conference, where he described seeing real estate as “finally center stage in the sustainability discussion”. The subject of a day of debate at COP26, Wallace said that there was greater recognition than ever of the importance of greening existing and future stock.

SUSTAINABILITY

“Most real estate value globally is situated in cities, which are progressive. A lot of the focus now must be on how we can encourage the real estate industry to get ahead,” he explained.

Wallace said that while Fifth Wall had initially been created to focus on pain points in the real estate industry, the firm had not originally prioritized decarbonization goals. “The reason we started the climate tech fund is because fund LPs started coming to us with sustainability problems to solve, and I realized we needed a different vehicle to articulate that, which invests in hardware and services to close the gap.” Today, many of the investors in Fifth Wall’s proptech fund are also investing in the climate tech fund, as ESG matters move into the mainstream.

A detailed session about tech and affordable housing drilled down into the potential of proptech to contribute to a more equitable society. Ryan Johnson, managing director of real estate, New Jersey Community Capital, moderated insights from Meredith Marshall, co-founder and managing

partner, BRP Companies; KC Crosby, co-founder & COO, Pronto Housing; and Emily Kurtz, vice president, housing RiseBoro.

Said Marshall: “I think we have to frame the big picture. NYC can produce 6,000 affordable units a year but we need 20-30,000. The city needs zoning, we need to phase out NIMBYism, and we need a path.”

Added Kurtz: “It is so expensive to live in this city. Neighborhoods need to be supporting households of all levels, so they’re not spending more than 30% of income on rent.” She said that solutions like Pronto help Riseboro “focus on building communities. So much time is wasted processing paperwork – it has a financial and social cost”.

Crosby explained that Pronto Housing was seeking to accelerate processes to get people into affordable housing. “It currently takes 450 days for a tenant to access affordable housing in New York City. The supply exists; this is a processing issue. We are doing anything it takes to make the process fairer and better for everyone.”

USER EXPERIENCE

The theme of user experience came under the spotlight at Propel by MIPIM, with delegates hearing that it wasn't just a 'nice to have' to boost tenant retention, but that it played an ongoing role in real estate's fightback against the pandemic.

François Lacoursière, senior vice president, innovation at Ivanhoé Cambridge talked with Brad Soderwall, managing director at Hines, and Maureen Waters, Partner, MetaProp, to discuss the future of offices – and how to make them better for their occupiers. Said Lacoursière: "We engage with buildings teams to understand their pain points. But we want to industrialize the process of taking a property from point A to point B, to build a database and create a playbook for any asset manager to use." Ivanhoé Cambridge is currently partnering with MetaProp to source proptech solutions that it can insert in pilot projects across its portfolio. He added: "People say that real estate is late to the game. There's no lack of capital or vision – there's a lack of return on investment, so we need to build confidence in the ROI."

In building a "library of case studies" the firm is also improving the portfolio it holds together with Hines. Said Soderwall: "The pace of change that we've seen over the last two years has been incredible.

We've started to gather data about what tenants want. Folks are working from home at the moment, and are comfortable at home. We have to create an appealing product – that's what employers want too."

Waters explained that MetaProp was segmenting smart buildings into "operational components and tenant experience apps", with the take-up of access apps such as HQO and Eqiuem accelerating, as well as tools to tackle the "wellness side". Underlined Waters: "There are over 8,000 start-ups in proptech and we are seeing 200 every month. The use cases don't really change, but we are looking at them continuously to see where improvements can be made."

Moving the needle on Smart Buildings: an innovation journey to redefine the future of office – Maureen Waters (Partner, MetaProp), Brad Soderwall (Managing Director, Hines), François Lacoursière (Senior Vice President, Innovation, Ivanhoé Cambridge)

Two tech giants also weighed into the debate about the future of work, as Qendrida Whitmore, senior vice president, head of community, WeWork sat down to chat with Ivan Panushev, principal partner



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USER EXPERIENCE

solutions architect – engineering, construction & real estate Amazon Web Services (AWS).

Said Whitmore: “Covid shoved us into the future – our employees demanded it. With 700 locations in over 50 cities, we had to reimagine the return to the workplace and offer on demand access. We had the opportunity to watch small, medium and large companies plan their office re-entry.”

Panushev underlined that Amazon was a huge consumer of real estate, across its offices, fulfilment and data centres. “We try and be as sustainable as possible, so the ability to use on-demand services such as WeWork or pay-as-you-go aligns with a core value.” Describing AWS’ “tremendous” partnership with WeWork, he said that the firm planned to stick to the on-demand model as much as possible going forward, but also wanted to see building stock evolve towards smart models that eventually incorporated digital twins to “allow the building to make decisions on its own”.

Whitmore agreed that property owners and managers shouldn’t rest on their laurels after – or perhaps because of – the lessons of working from home. “We have to be much more intentional today about building culture because of this flexibility. There’s also a war for talent, and an interest in offices as collaborative spaces. The other piece of the puzzle is that the space has to be clean and safe. It’s always been an unsaid expectation, now it’s a spoken expectation,” she concluded.

Another session tackled user experience from the point of view of residential property owners and

managers. Marcela Sapone, co-founder & CEO, Alfred discussed the merits of her app-based personal assistant, which allows real estate developers and property managers to provide in-home services and experiences to their residents. Yorgos Kleivokiotis, chief marketing officer for Blueground, a provider of furnished apartments, explained the demand for his firm’s facilities. “In the early months of the pandemic, when people had issues traveling, they needed a safe home to work from and where they spent most of the day was important. Then, later guests included workers who wanted to shield their families, included medical staff, and the stay durations became much longer.” Blueground offers apartment stays in the world’s leading cities from a minimum of 30 days, but said the longest-serving resident had remained for seven years. Currently, the firm is seeing rising demand from digital nomads once again; Kleivokiotis said he had personally tested this approach, dividing his time between Athens, Dubai and New York.

Sapone explained that Alfred was focusing on expanding its service portfolio, which not only brings added value to residents, but can also allow landlords to raise rents. “We were also lucky enough to acquire HOM this year which creates culturally relevant events in buildings,” Sapone added. “This includes meditation classes, yoga, stress management, henna tattoos – aspects which help you get to know your neighbors better. Studies show that being close to your neighbors changes renewal rates in a building, which can have a significant material impact.”

INVESTMENT TRENDS

Propel wouldn't be Propel without scrutinizing investment trends in the proptech industry. A number of sessions assessed the value of investment from all sides, looking not only at corporate profits but also the rewards for society and the environment.

In a session entitled "Urbanists and technologists together", a team from Sidewalk Labs presented the investment case for their AI-enabled master planning software solution, Delve. Douwe Osinga, co-head, Delve by Sidewalk Labs, said that the team had "wanted to create a tool that is effective in the market and fixes challenges in the world" and explained that "Delve is a generative design tool that reveals the best options for project priorities". Violet Whitney, director of product management, Delve confirmed that the software "evolved naturally from the aches and pains of the original processes".



*A fireside chat with Don Peebles - Don Peebles
(Chairman & CEO, The Peebles Corporation)*

Brian Ho, director of customer experience, Delve concluded: "You can only approve what you can measure. Real estate developers care about the bottom line, and ESG credentials are now critical to that bottom line. Things that are sustainable, contribute to the community – we believe that if you have a product which measures what matters, it will be needed."

Propel also provided a masterclass in investment strategy through a fireside chat with iconic developer Don Peebles, interviewed by Cedric Bobo, co-founder & CEO, Project Destined. Peebles underlined the capital challenges faced by real estate, and how it impacts the industry. He noted: "Real estate is different to tech. You can build an app in your bedroom and get it up and going, test the concept, prove it, get more capital, and raise funds as you go along. With developing a building, you have to raise 100% of the capital before you can prove anything, so that means you've got to get investors to believe in your vision."

Peebles described how the city of New York had always harnessed powerful real estate projects to overcome crises. "After the Great Depression, the Empire State Building and Rockefeller Center ignited growth and signaled it was back. After the terrorist attacks, One World Trade Center was about building back." Peebles went on to unveil his own post-pandemic icon, the Affirmation Tower, which represents not only "America coming back from pandemic" but also "highlights the quest for economic and social reform in the wake of protests against systemic injustices ignited by the murder of George Floyd". Developed by Peebles and designed by AD100 architect Sir David Adjaye, Affirmation Tower is being developed, built, and funded by Black- and female-owned businesses, while most of its tenants will be minority entrepreneurs. The \$3.6 bn project will be as inclusive as it is economically impressive.

Meanwhile, in his intervention, Fifth Wall's Brendan Wallace called for a different kind of investor daring. Referencing the climate crisis, he noted that car innovator Tesla "was a R&D company for more than a decade, before it became a car manufacturer" and that the real estate industry should think harder

INVESTMENT TRENDS

about R&D. He added: “Tesla massively invested in R&D for a long time while losing money. Real estate isn’t used to going cash-flow negative, which is what it required to run big R&D budgets.” However, he suggested that tech-forward real estate firms would eventually have better access to capital if they take a pioneering path. “Fifth Wall wouldn’t exist if the real estate industry had invested in R&D, but now there is an opportunity to create the Tesla of real estate.”

He also warned that if developers don’t work on climate tech, their tenants will ultimately walk. “Amazon has publicly committed to going carbon zero, and in doing that, they are also committing all their suppliers to go carbon zero, including providers of real estate.”

Fears aside, Wallace underlined that a “positive, caring approach” would not only provide social benefits at the end of the day, but that the markets “eventually reward a pioneering strategy”.



A fireside chat with Brendan Wallace – Brendan Wallace (Co-Founder & Managing Partner, Fifth Wall), Joy Nazzari (Founder, dn&co and Showhere)