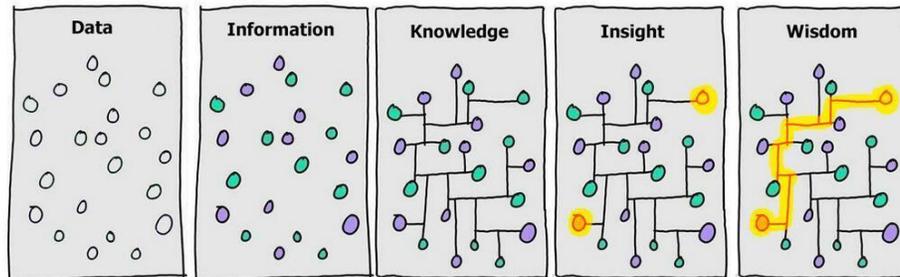# "Connecting the Dots: From Proptech to Smart Cities"
by Chungha Cha, Co-founder & Chair
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for **MIPIM PROPTECH**

Data is crucial for the success of both proptech & smart cities. But, why?
First of all, kudos to MIPIM Proptech and all the readers for this opportunity to share our research and views on the intersection of proptech and smart cities. We hope that together, we can all become better experts in connecting the dots from proptech … to better buildings … to smarter, greener cities.

To tell you a bit about myself, I spent about 30 years in the United States and graduated college there in the 1970's. Could you imagine, back then, we didn't have Internet, mobile smartphones or even laptops; things that I consider daily necessities today. Finance was my college major but, for some unknown reason, I dual-majored in an unusual field called, Decision Sciences: the study of _how to convert pertinent data into useful information upon which to base important decisions_. Maybe, that's why I like the "connecting the dots" diagram showing the "data-information-knowledge-insight-wisdom" spectrum. Too much data, too little wisdom, maybe?

As we meet with proptech and real estate experts all over the world, I sometimes wonder, "Have we been effective enough in extracting useful insights and wisdom from all that data?" Lots of people talk about data. We collect a lot of data, monitor it and throw in onto nice dashboards but the valuable insights are far and few between. We should talk less about data and focus more on building wisdom; Wisdom to ask ourselves, "Why do we do the things we do?" _We hope that MIPIM Proptech will become the leading global forum where proptech, real estate and smart city experts can discuss "WHY?" along with the "what?" and "how?":_
- ***Why MIPIM Proptech?*** To learn and to inspire each other, with multi-disciplinary teams of experts; to connect the dots toward our shared vision for a better, smarter, greener future.
- ***Why Smart Cities?*** To address the global challenges of Climate Change and rapid urbanization by reducing our carbon footprint in our cities with better buildings and smarter, greener cities.
- ***Why Real Estate?*** To accelerate "public-private" partnerships to attract the trillions of dollars needed to address these global challenges where we live, work and play.
- ***Why Proptech?*** To develop solutions to "design-build-operate" better buildings and smarter & greener cities and making it financially attractive to do so.

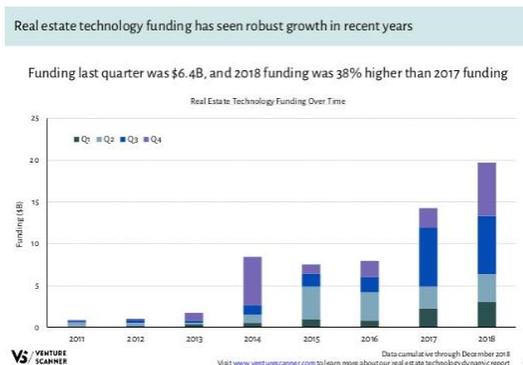**So, what exactly is a Smart City?** *A big part is about real estate!*
We collaborate with the Smart Cities Council based in Washington, DC and we like the definition framework in their "Code for Smart Communities 2018" … *to help guide urban development practices by embracing technology, data and intelligent design as a catalyst for positive change.* While much of the smart cities discussion and investment has been largely led by local governments, we need to acknowledge that cities are built upon the foundations of smaller communities like neighborhoods, campuses, mixed-use developments and the like. We believe *this community-level transformation is the most effective way to influence whole cities and regions into smart cities.* So the way we look at it, smart cities are, in large part, smart & green real estate developments consisting of smart, healthy buildings to improve the way people live, work & play.

As the global challenges of Climate Change and rapid urbanization continue to mount, it places *immense pressure on our cities to maintain a high level of livability, productivity and sustainability. Real estate investors and developers can no longer ignore these challenges* that cities face:

- Smart cities enjoy greater economic growth as companies and talent are attracted to the better quality of life, smart infrastructure and sustainable lifestyles they offer. So naturally, they are attracted to the adoption of proptech in homes and offices to improve living standards, enhance productivity and create dynamic urban places.
- Climate Change has begun to financially impact real estate. One example is New York City's passage of the Climate Mobilization Act requiring landlords to upgrade their buildings to stricter energy efficiency standards starting as early as 2024. Other Climate Change related risks are imminent: "brown discounts" of buildings that are not "green", reduced prices of buildings in cities with climate resiliency issues and increased insurance premiums. Proptech can help real estate reduce these financial impacts as well as lead positive changes.

Proptech connecting the dots … to better buildings and to smarter, greener cities.
To better understand the world of proptech, we studied Venture Scanner tracking investments in 12 defined categories of "real estate technology". As of the end 2018, proptech investments surpassed the US$70 billion mark, with almost US$20 billion invested in 2018 alone.

Proptech is a powerful enabler to monitor, measure, analyze and improve the performance of our built environment. With the help of machine learning and artificial intelligence, we can expect data analytics to play an increasingly important role *to improve the quality of life, create efficiencies, improve sustainability and create jobs for local economies.* What's great about proptech is that it can help improve existing real estate portfolios as well as new construction. Here are a few of our favorite proptech categories and objectives:

a.) **Increased profitability and enhanced asset values** for real estate investors and developers should be two very important objectives for proptech. We suspect that proptech solutions will be bundled to provide a more comprehensive solution to include: (1) energy optimization (2) preventive maintenance (3) health & wellbeing (4) improved tenant experience (5) indoor mapping for space optimization and (6) improved safety & security. And, as financial performance is improved, sustainability can also be improved in alignment with smart city goals.

b.) **Indoor mapping for Space Optimization** – As proptech solutions help companies better understand their space usage, indoor mapping data is showing that up to 30% of the office space leased is not utilized. For a company leasing office space worldwide, they are "wasting" millions of dollars each year on space they never use!
   - A new lease accounting rule came into effect January 1, 2019 requiring Lessees to recognise office leases onto their balance sheets which will have negative impacts on their financial statements. To minimize these financial impacts, proptech can help reduce the size of their leases based on data driven insights on space utilization.
   - Rental expenses could also be reduced by temporarily sub-letting their under-utilized space. For large corporate tenants, the savings could be significant. In one case, we saw that a corporate user could save over US$4 million annually.

c.) **Improved indoor health & well being** for all of us who typically spend 70-80% of our lives indoors. There are metrics that help define conditions for better health and wellbeing, i.e., indoor air quality, levels of volatile organic compounds and formaldehydes, levels of pollution coming into our indoor spaces (PM2.5), natural daylighting, natural ventilation, thermal comfort, noise levels, and so much more. Proptech solutions can monitor these metrics and provide solutions for a healthier and more productive indoor environment.

Concluding remarks. Let's get back to the basics and ask ourselves why we need to build better buildings and smarter cities? And what important roles proptech can play? This can help us define our objectives more clearly toward building a better, smarter and greener world for people, planet and prosperity. More articles to follow on how to achieve "greener & smarter" without over-investing to achieve attractive investment returns and on various use cases worth benchmarking. But don't look for perfect use cases … it's a process.

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About the Author

Co-founder & Chair of Re-imagining Cities Foundation, a proactive non-profit organization focused on sustainability in the built environment. We collaborate with large global partners like Global Real Estate Sustainability Benchmark (GRESB), Smart Cities Council, WeGO Smart Sustainable Cities Organization, Andalucia Smart Cities Cluster among others. We also work closely with proptech and real estate companies around the world to help bundle "greener & smarter" solutions without over-investing to achieve attractive investment returns.

Cha has been in finance for 20+ years (Citibank in New York, Sydney and Honolulu, Yasuda Trust Bank in Tokyo, Asian Merchant Bank and CEO of Lone Star Real Estate Funds in Seoul). And now, since 2008, Cha has focused his career on green buildings and proptech (property technology and construction technology) to help accelerate better buildings and smart, sustainable cities toward carbon neutrality and healthier, happier places to live, work and play.