

Here at Land Insight we find ourselves lucky to be part of the UK's blossoming property technology – “proptech” – industry... some say the “proptech revolution”. In these early days, it's difficult to predict the extent of how far the dial will shift, but one thing is for sure: the movement is being driven by talented, dynamic, determined people who see an opportunity to make a big impact.

This series of guest blog articles is written by the founders and forces at work within of some the hottest UK proptech companies.

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## **Why we need #plantech**

Planning and planners are often the focus of ire from politicians, developers and communities. The task of mediating space and making place is one that involves many interested parties, all of who are equally passionate in their belief of what should (or should not) happen. What is not equal is the tools and information that those parties, including the planners, have at their disposal.



The method by which cities develop, design and communicate how they intend for the city to change has remained essentially the same for the past 70 years. Since Abercrombie's London Plan of 1944 the process of gathering evidence about the city, how it has changed, how it is today and how it could change in the future, remains paper (or pdf) based. There have been similarly glacial changes in how the resulting plan is consulted on and communicated to stakeholders and citizens. The only process that remains as stubbornly analogue is the one by which planning applications are submitted and communicated.

A recent report by McKinsey<sup>1</sup> evaluated the extent to which different industries are digitised and their productivity. Unsurprisingly the construction industry is close to the bottom of the table on both accounts. Whilst developments in BIM may raise this, productivity will be limited unless the accompanying planning process can help in realising construction quicker.

In the same way that robotics offers the opportunity to remove the 'dirty, dangerous and demeaning' jobs in construction, data science, data visualisation and digital transformation in planning offers the same potential for planners, with the added bonus radically improving the speed and transparency of the process for all.

Future Cities Catapult has been working with the Greater Manchester Infrastructure Advisory Group to explore how investment by Government in the Open Data Infrastructure map could be leveraged to support the evidence base for the first Greater Manchester Spatial Framework but also collaboration and coordination between different stakeholders.

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<sup>1</sup> McKinsey Report -

<http://www.mckinsey.com/~media/McKinsey/Industries/High%20Tech/Our%20Insights/Digital%20America%20A%20tale%20of%20the%20haves%20and%20have%20mores/Digital%20America%20Full%20Report%20December%202015.ashx>

We began by conducting user research with a variety of city planners, infrastructure providers and developers.

As soon as you begin to scratch the surface of what information and tools these professionals use, how they currently communicate and collaborate and how they make decisions, it's clear how much the sector requires digital transformation. Just thinking about the information in the Open Data Infrastructure Map<sup>2</sup>, we generated a long list of over 30 use cases. We prioritised three of these and have developed a working prototype for one, a tool that fuses utility capacity data and planning pipeline data, to forecast likely future demands on infrastructure networks.

This short piece of work has opened our eyes to the scope and value of potential innovations within the plan making and planning application field that could reduce risk, increase certainty and critically increase the speed of these processes. By thinking of the city plan as a digital spatial platform, there is the opportunity to deliver a radically more efficient and transparent process, which would deliver both better market information but also stronger democracy.



**Company Bio:** Future Cities Catapult  
[www.futurecities.catapult.org.uk](http://www.futurecities.catapult.org.uk) @futurecitiescat

The Future Cities Catapult accelerates urban ideas to market, to grow the economy and make cities better. Bringing together businesses, universities and city leaders solve the problems that cities face.

**Personal Bio:** Stefan Webb @stef\_w

Stefan Webb is Head of Projects at the Future Cities Catapult. He has a background in planning, public policy and politics, previously working at the Greater London Authority.

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<sup>2</sup> Open Data Infrastructure Map - <http://www.mappinggm.org.uk/gmodin/>

## **Flexible Workspace in Agile World**

*'The only thing that is constant is change'*  
— Heraclitus

The last two decades were marked by the significant organisational transformation from predictive to an adaptive way of working. Business organisations of all sizes had to adapt and react quicker in order to stay relevant in the world of breakneck technology disruption. The agile – rapid and flexible response to change – became the preferred way of working even for large organizations.



The higher pace of change, agility and innovation require more flexibility in all services and facilities used by businesses. However, commercial real estate still operates within the traditional model and has been slow to adapt.

### **Flexible Workspace**

Companies of all sizes demand flexible terms when it comes to office lease. They want to pay for the space they use, when they use it. When the business grows, the office grows with it. Flexible working will boom in the next 20 years. Most commercial real estate buildings will be managed by flexible facility management operators that provide the office and business support services needed by the organisations. The office space will become a service. Business organisations will pay only for what they use.

The creative and agile workforce expect flexibility and collaboration in the office. Different tasks require different ways of working; whether working from home, collaborative space or a quiet office.

Coworking spaces bring flexibility and collaboration into one physical space. Organisations and freelancers will be able to choose from a variety of flavours – ranging from boutique small spaces for creative professionals to high rise buildings for established companies.

### **Managing Flexibility**

The transition from rigid to flexible space management can be tricky. We saw this for ourselves when the startup we worked in became a huge corporate beast. The company tried to create a dynamic and agile corporate environment that provided the necessary

flexibility but it was clear that managing a flexible workspace required a huge effort from the office and facility managers.

The trend towards co-working was already studied, so the opportunity was defined from both experience and analysis. We decided to leave our work and develop a platform to completely remove all the hassle in managing flexible offices and coworking spaces.

The future of office management is to provide a flexible and collaborative environment for its occupiers to grow and thrive, offloading all facilities management and minimising real estate costs. Only specialised software, like OfficeR&D, can manage collaborative, efficient and flexible coworking spaces, serviced offices and business centres. As workspaces accommodate co-working they need systems to automate the members on-boarding and billing cycles, easy conference room bookings, space management, help desk support and also integrates with security and wifi systems.



**Company bio:** OfficeR&D  
[www.officernd.com](http://www.officernd.com)

OfficeR&D is a beautiful platform for managing coworking spaces, serviced offices and business centres. It enables the managers to handle all

business critical processes in very visual and interactive way. Furthermore, it gives the community a means to collaborate, book meeting rooms and engage via the web portal and mobile app.

**Author bio:** Miro Miroslavov, CEO OfficeR&D

Miro is a software engineer, entrepreneur and co-founder of OfficeR&D. He loves everything about office design, flexible working and high-quality software. He tries to bring this all together into OfficeR&D.

## **When it comes to the biggest financial transaction of your life, isn't it about time we enshrined the 'right to know'?**

As a failed and frustrated lawyer, one of the things I love to get passionate about is data protection. Granted, it's not the sexiest pillow talk imaginable, but just trust me: when it comes to data, transparency and access to information, nothing sets my heart more aflutter than a good old argument about what I like to refer to as the 'right to know'.



What am I talking about, you might ask? Well, let me put it simply: I believe that the current data protection framework fails to protect homebuyers during the conveyancing process, with the result that people buying property are subject to the most terrible information asymmetry that exists, particularly considering the financial impact of a purchase gone wrong.

First off though, let me explain the argument more thoroughly.

When you buy a house, your vendors' conveyancer issues them with the Sellers Property Information Form, also known as the SPIF, asking the vendor to answer a range of questions about the property, ranging from the banal (who provides your broadband) right through to the serious (have there been any disputes about neighbouring properties).

As a buyer, there are several major issues with this process, made worse by the fact that you have no right to access critical local information that might help you make a better decision about the property you're thinking of buying.

To start with, it makes absolutely zero sense that it is the vendors' solicitor that issues the SPIF. An analogy might be one whereby we allow the pupils to set the exam questions; if there's something to be covered up, isn't it more appropriate for the buyers' solicitor to be issuing the SPIF, with any additional questions contained therein?

More importantly though, if a buyer wants to raise legitimate queries about data appertaining to that property, where the data is held by a local authority, existing data protection legislation creates a barrier to them accessing the insight they need.

A good example would be 'complaints about neighbours', which is something that vendors' are obliged to disclose on the SPIF. Let's say you didn't trust the vendors very much, and you wanted to verify the absence of any issues yourself. Well, an FOI request to the local authority and district council would be a great starting point. Except the Data Protection Act provides an exemption for 'personal information' to be disclosed, meaning that most district councils will refuse to disclose any correspondence relating to nuisance neighbours, environmental health issues, dangerous dogs, antisocial behaviour...and so on.

I would like to argue that we need to do more to relax data protection issues where there exists a direct financial and personal interest for the benefit of the person making the data request. Specifically, if you're buying a house, you should be able to ask a local authority for any and all information about the properties that fall within its jurisdiction, even if you're not the owner or occupier.

Someone moving home needs to get into the data held by a local authority that might influence a decision whether to buy or rent. I'm not talking about open data, or a broad dataset under the Open Government Licence; rather, I'm arguing for the expansion of the Subject Access Request to encompass situations where you have a direct, financial, transactional relationship with the Subject.

Like buying a home.



**Company bio:** Property Detective  
[www.propertydetective.com](http://www.propertydetective.com)

Property Detective an online tool that helps consumers save time, money and effort by equipping them with all the insight they need to rationally evaluate a property, street, neighbourhood or locality more effectively.

**Author bio:** Barry Bridges

CEO and Founder of several successful businesses, including my current startup PropertyDetective.com Guest lecturer, public speaker and consultant to startups; when I'm not working I'm spending time with my wife and two young children, or running, cycling or paragliding when time permits!

## **The future of property is virtual**

“The secret of getting ahead is getting started” Mark Twain said. And technology’s journey within the property market has definitely started. In the last few years technology has taken an increasingly central role in property, and it will disrupt the entire industry over the next twenty years. In the last year alone PropertyTech startups worldwide raised a record high of \$1.7B across more than 190 deals. We see this momentum not only in NYC, the world’s largest commercial real estate market and auto proclaimed epicenter of PropertyTech innovation, but also in Europe and especially in the UK with London leading the way.



A technology which is getting a lot of media attention at present is virtual reality. Like many new technologies it is easy to see virtual reality as just another cool piece of tech or marketing gimmick. But let me be blunt: virtual reality will become central in property within the next 10 years. Millennials will use virtual reality when buying their first property.

Virtual reality is the opposite of teleportation. Instead of you going somewhere, it brings the place you want to see to you, whether real or imaginary. You wear a headset which is basically goggles with a screen. That virtual reality headset tracks the movements of your head and adapts the view very quickly. So you look around and feel like you are somewhere else, totally immersed. The first functioning virtual reality environment came in 1968, and we saw the first virtual reality products in the early 90s. But it is the recent technological developments made primarily by the mobile industry that has brought virtual reality back into the foreground, and it is here to stay.

Although the technology has yet to reach mass market, virtual reality is already relevant in property today. Buying a property is one of the biggest decisions in people’s life. Therefore using virtual reality already makes sense from a business perspective even if it is not part of everyday life just yet. At PropertyScape, we launched a virtual reality solution that allows property developers to market off-plan properties. We convert architectural models into virtual reality experiences. Prospective buyers and investors can walk through a property before construction has even started, and our application lets the agent take control of the viewing by changing light, furniture, etc in real-time. We also provide virtual reality viewings

of existing properties for estate agents and are already working on how the technology will reach mass market.

Virtual reality not only solves some of today's problems but has great potential, especially in the second-hand market. It is often said in property that agents don't sell properties but viewings. That is because many prospective buyers do not know what they are looking for and are waiting for that magical 'feeling' when they will 'just know' it's the right home for them. And that makes the job of the agent difficult, as they need to get their clients across the door of as many listed properties as possible. That is why virtual reality viewing is not just the new generation of property visualization, because the experience and immersion it provides allows buyers to get that magical 'feeling' without physically going to the property! After just a quick tour of one of our virtual reality viewings, users feel as if they have been in the property. They can even draw the floorplan from memory.

Virtual reality still has a lot of progress to make and we will see significant technological improvements and consumer adoption in the next decade. Today property developers and estate agents can market off-plan properties better with our solution and there is so much more to come. PropertyTech is going to deeply transform the industry over the next decade. Virtual reality will have a key role in that transformation and we want to be ahead of that change. So at PropertyScape, we got started.



**A company bio:** PropertyScape  
<http://www.propertiescape.co/>

PropertyScape was founded by computer engineers and business graduates of the Imperial College London during summer 2015.

They have developed a one-stop-shop virtual reality viewing solution for property developers. [@PropertyScape](#)

**Author bio:** Edouard Bessire, Co-Founder & COO at PropertyScape  
Edouard graduated in Applied Mathematics & Computer Science in France before undertaking a Masters from Imperial College Business School. With a great understanding of technology and business, he then co-founded PropertyScape.

## **Need for liquidity will drive #proptech adoption**

There are 2 big trends that I foresee happening in the commercial property industry:

- 1) demand for more liquidity, and
- 2) property technology offering room to the commercial property market to consolidate.

Let me explain:

### **Increase in Liquidity**

A non-changing, uncertain, macro-economic climate and low interest rates will shift the investment mindset. Capital will no longer search for surplus returns, but will pay a premium for market liquidity.



By nature of real assets, they offer limited liquidity relative to other investments and are highly cash flow dependent. A vast increase in predictability of cash flow will make the property market more liquid over the next 20 years. This will be achieved through fast access to accurate data and the ability to communicate in real-time.

A concrete example for this trend is the success of leasing management tools such as Rialto which help asset managers monitor and forecast net operating income (rent minus costs, including interest). Outside of the rent, the other income sources such as debt financing or tax shelters are less predictable, given they depend on macro-economical factors.

In summary, if the traditional property industry doesn't manage to answer the capital market demand for liquidity, their products will lose traction. This leaves room for adopters of technology that provide real-time information facilitating faster transactions and control to better hedge against risks.

### **Consolidation**

According to the Global Real Estate Transparency Index 2014 by JLL, only a couple of markets such as the UK, USA, Australia, New Zealand and France are fairly transparent in terms of real estate investments.

Indeed, real estate is very much a local affair, which gets reflected in a largely fragmented industry. I predict, though, that in the next 2 decades, due to the increased liquidity, there will be an increased opportunity for real estate investors to consolidate. On the one hand,

intra-organisational transparency – enabling teams to collaborate and build together for success – will allow organisations to adopt a multi-local approach. On the other hand, property technology will be key in unlocking the current challenge of access to local accurate information knowledge.

In summary, assuming technology will help create more transparent real estate markets, I believe the opportunity lies with investors cutting indirect investment lines and directly investing in those local markets.

### **What that means for now**

It's time we all face today's reality where well educated property professionals are left with tools from last century to operate their businesses. They need to manually hunt for information, dig through PowerPoints, coordinate their business over email and report over Excel. Businesses that are not ready to adopt technology, will see their market share shrink away by other companies that do embrace property technology to eliminate human errors and save time.

Existing powerful data processing already allows for visualisation of historical information. Mobile and cloud technology allows cross-organisational interfaces that protect the privacy of all companies and users. The mission of Rialto is to work on top of these ever more powerful technologies, to build a toolset for the commercial property leasing industry to collaborate over; therefore not only facilitate transactions faster, but also to build up business intelligence over time.

### **Company bio:** Rialto

[www.rial.to](http://www.rial.to)

Rialto is London & Europe's Preferred Commercial Leasing Platform. Rialto helps landlords and agents in commercial properties collaborate on leasing activity in real-time. [@getrialto](https://twitter.com/getrialto)

### **Author bio:** Nicolas Kint

Nicolas is a 29-year-old millennial, part of generation flux. He holds a double MSc degree in economics and entrepreneurship from top-ranking universities, and is founder of Rialto. For the last 5 years, Nicolas has been working as an internet entrepreneur in the property industry, interviewing 200+ industry specialists, which resulted in bringing several innovative #proptech business models to this market, including Rialto, a leasing collaboration platform for landlords and agents in commercial real estate. [@nicolaskint](https://twitter.com/nicolaskint)



## **Open-data revolution meets planning**

The property industry is on the cusp of a technological revolution — a revolution that has shaken many if not most other industries but somehow left the property sector largely untouched. Slowly but surely, the property industry has begun incorporating technology and data to fundamentally change how built environment professionals work and how their clients access services. The open-data revolution is at the heart of this transformation.



The US was the first country to make all government data (excluding personal and national security information) “open by default” seven years ago, and Britain soon followed suit, rising to score the highest on the open-data index score worldwide. The result, in the UK property sector, has been the emergence of companies that build on and curate such open data, such as Land Insight, which helps developers find off market land by presenting data on ownership rights and past planning applications, and GeoLytx, which has collected and mapped information of over 10,000 supermarkets in the UK and provides chains with insights on opportunities for new stores. Other companies such as Zoopla and Rightmove are also worth mentioning, for creating online real estate search platforms that bring the information directly to consumers.

The above is a snapshot of 2016: data is constantly being collected, published, and curated, and the “world of bricks and mortar” is beginning to see its value. The property sector is undergoing a transformation to become faster, simpler, and more transparent. In 20 years, the disruption brought by the open-data revolution will have matured, and the data, technology, and tremendous increase in efficiency and unambiguity will seem unexceptional, just as now we can't imagine the days before Google Maps.

All of this sounds great. However, there is one caveat. The innovations occurring in the property sector will not fully realise their potential to streamline processes if the ultimate hurdle that private sector actors must jump over, the planning system, remains as it is today: with minimal exposure to technological revolution and accepting slowness and inefficiency as an inherent characteristic of the public sector. The UK planning system has seen little innovation since its inception in 1947, and researching planning policies to

understand what exactly is allowed remains a labour-intensive, time-consuming, and costly task.

This is where we come in.

Urban Intelligence seeks to revolutionise the way built environment professionals interact with the planning system. We are building a search engine that allows one to access all planning policies (currently dispersed in various formats, on websites of inconsistent layouts) relevant to one's area of interest on a single, central platform. Furthermore, we plan to embed this policy data into 2D, 3D maps, so that planners, architects, and developers can visually understand how the textual policy manifests in the real world.

Planning policies are open data, but they are not in user-friendly formats despite the extensive research and interaction required to comprehend them. Urban Intelligence seeks to pool and curate this data, so that navigating through the planning system is up to speed with how information is shared and decisions are made in the private sector. Breakthroughs in the private sector must be complemented by innovations in the public sector. Urban Intelligence is here to bridge the gap.



**Company Bio:** Urban Intelligence  
<http://urbanintelligence.co.uk/>

Urban Intelligence is a proptech startup that is using tech to boost productivity in the planning system. They are currently participating in the third cohort of the Pi Labs accelerator.

**Author Bio:** Yeonhwa Lee

Yeonhwa is a senior planning policy analyst at Urban Intelligence. She studied PPE at Penn and is currently undertaking a masters in international planning at UCL.

## Looking back from the future of property

It's been 20 years since the United Kingdom exited the EU, opening up this small but wealthy collection of states to massive change.

While some of that upheaval was negative: farmers went out of business en-masse as the UK government didn't fully replace subsidies provided by the common European market.

On the other hand, the U.K. attracted inflows of capital and skilled labour from the most unexpected places across the Commonwealth.

Technologists from India, entrepreneurs from the Caribbean and Pacific rim and a whole host of highly skilled workers from Africa were welcomed to a UK that saw a massive outflow of people from Europe afraid of a population that increasingly was anti-Europe in the wake of the European project rapidly unraveling.

Much of what used to be farmland was provided with permitted development rights to create 'English Villages' linked to the major cities by Hyperloops paid for by the socialist government that was elected soon after then Prime Minister David Cameron was forced to resign amidst an embarrassing referendum defeat.

While the scale of young people flooding to London did not abate, campaigns like Create Streets managed to sway public opinion with clever use of technology. They used tools like Land Insight to show where streets could be built to increase population density and create lots of mini-Kensingtons across the South East of England.

By now Generation Rent has completed its transformation into Generation Unmortgage. Their kids, nearing the age when they themselves fly the coop, have less tension about housing thanks to widespread institutional investment in shared ownership.

Britain went from a nation with landlords owning £1.2tn of property and homeowners having £1tn in outstanding mortgage debt, to one with over £2tn of residential property owned by pension funds.



Those pension funds weathered another three property recessions thanks to the Liability Matching characteristic of residential property, which continued to outperform every other asset class through all the intervening economic cycles.

Even the two Presidential terms of Donald Trump in the US did little to dampen the pace of change in the world away from fossil fuels and into even more intricate globalisation. The world is now super-connected with Internet beamed from the skies for free, bringing the Earth's 9 billion population unprecedented levels of prosperity.

E-commerce and intense competition for last mile delivery fulfilment in the £1tn a year logistics industry finally broke the back of paper money, with the world now exchanging electronic currencies at spot rate via a whole host of Mondo-style mobile only banks.

We expect the first colonisation trips to Mars, sponsored by Tesla-X (after the merger of Elon Musk's various enterprises), to leave Earth this year.

They'll take with them the latest biological building materials, which will be grown in the newly found reservoirs on the red planet.

In the ashes of capitalism, socialism's time didn't last very long as the onset of free global internet access brought down many governments across the world, as Big Brother lost his ability to keep track of both people and money.

Much of that money, which used to be kept in old style banks and under people's proverbial mattresses, increasingly found its way into real estate.

Sadly, property never became more affordable. But with the world looking toward Mars, none worried too much about life's daily grind.



**Company bio:** The Unmortgage

Opening up Owner-occupied residential real estate as an asset class for pension funds. Occupiers get capital to buy a home up to 10x their income with only 5% down, and pension funds get paid inflation-linked rent on the portion the occupier doesn't own.

**Author bio:** Rayhan Rafiq Omar  
Property and LOLz. Founder @TheUnmortgage. I write about PropTech, a lot: <http://realpundit.com>