

Emerging PropTech

*Tech interventions are redefining the systems for
how we work, purchase, and plan our built
environment.*

Introduction

PropTech: creating efficiencies

In this age of disruption, it seems that every field is receiving a makeover. Thanks to tech interventions, broken or underperforming systems are being refined and even reinvented. The property sector and its various channels are no exception to this.

Innovative start-ups are stepping in to challenge the status quo in how we buy, rent and invest in residential property, saving time, costs and increasing accessibility. In the workplace, smart buildings and tech are being leveraged to enhance employee experience in a bid to remain competitive and retain talent. On a macro level, planning systems are also being refined, becoming more transparent, collaborative and efficient in the ways places are designed and futureproofed.

Currently there are two macro benefits of tech interventions in the property sector – referred to here as PropTech. First is the autonomy bestowed to the end user – the customer, employee, property professional or investor – in how they navigate their niche of the property sector. The second is the efficiencies created in professional systems, freeing up time and mental space to innovate and add value in new areas of the built environment.

Introduction

PropTech: creating efficiencies

Our key takeaways:

- Fractional investment models are infiltrating the property sector, enabling the part ownership or shareholding of residential property.
- VR technology is being leveraged by property managers to create immersive and realistic representations of properties, maximising transparency and building trust in the buying and rental process.
- Companies are investing in smart buildings and bespoke apps to offer a competitive employee experience.
- Access to open data and collaboration is crucial to successful PropTech initiatives seeking to create efficient processes on a city or local authority scale.
- Platforms are emerging that allow hotels to generate revenue by utilising vacant rooms on a pay-per-use basis, often charged to the hour or minute.

Ch. 1/3

Residential reframed

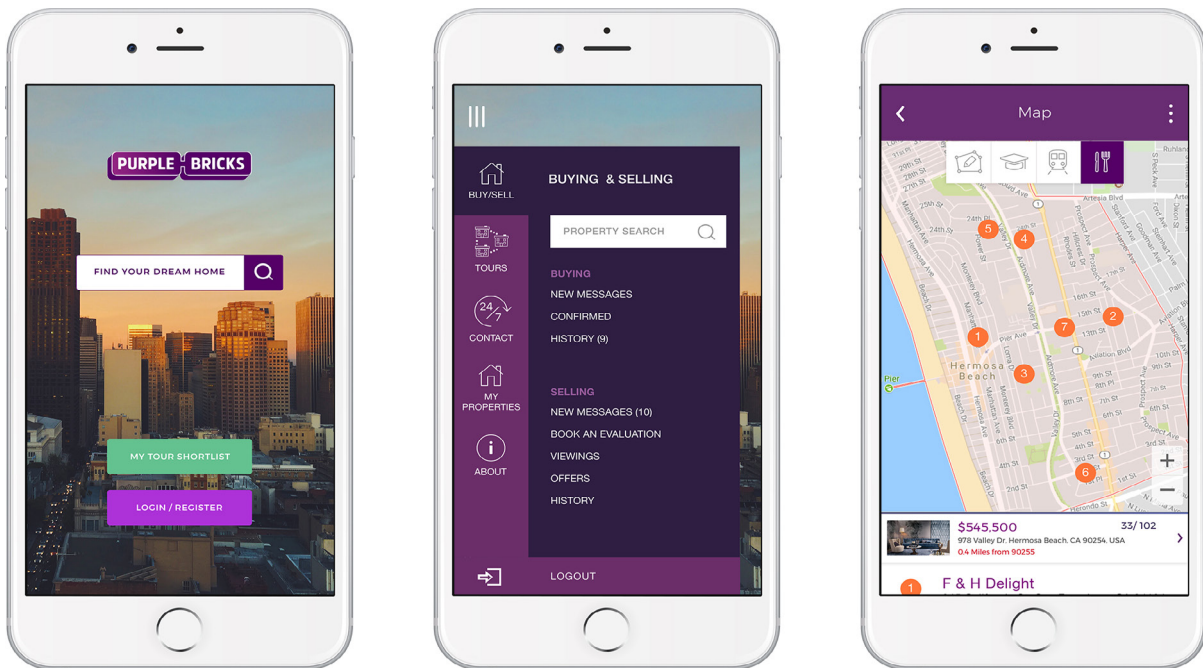
Quick reference

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- p.5 Buying
- p.7 Renting
- p.9 Investing

Virtual reality, peer-to-peer systems and fractional investing are challenging the status quo in how we rent, buy and invest in property.

It's not secret that residential property is in need of a big shake-up. Consumers have long been discontent with its systems, including buying, selling, renting or investing. Exorbitant commissions, a lack of transparency and inefficient processes are among the common pain-points for consumers. In response, we are now seeing the emergence of peer-to-peer (P2P) systems that create efficiencies and cut costs in how we buy and sell. In addition, we're seeing the leveraging of virtual reality (VR) technology to create immersive and realistic representations of properties, which maximise transparency and build trust in the buying and rental process. Finally, the sharing economy and FinTech sector are also being leveraged to establish new investment classes in residential property that are low risk and highly accessible.



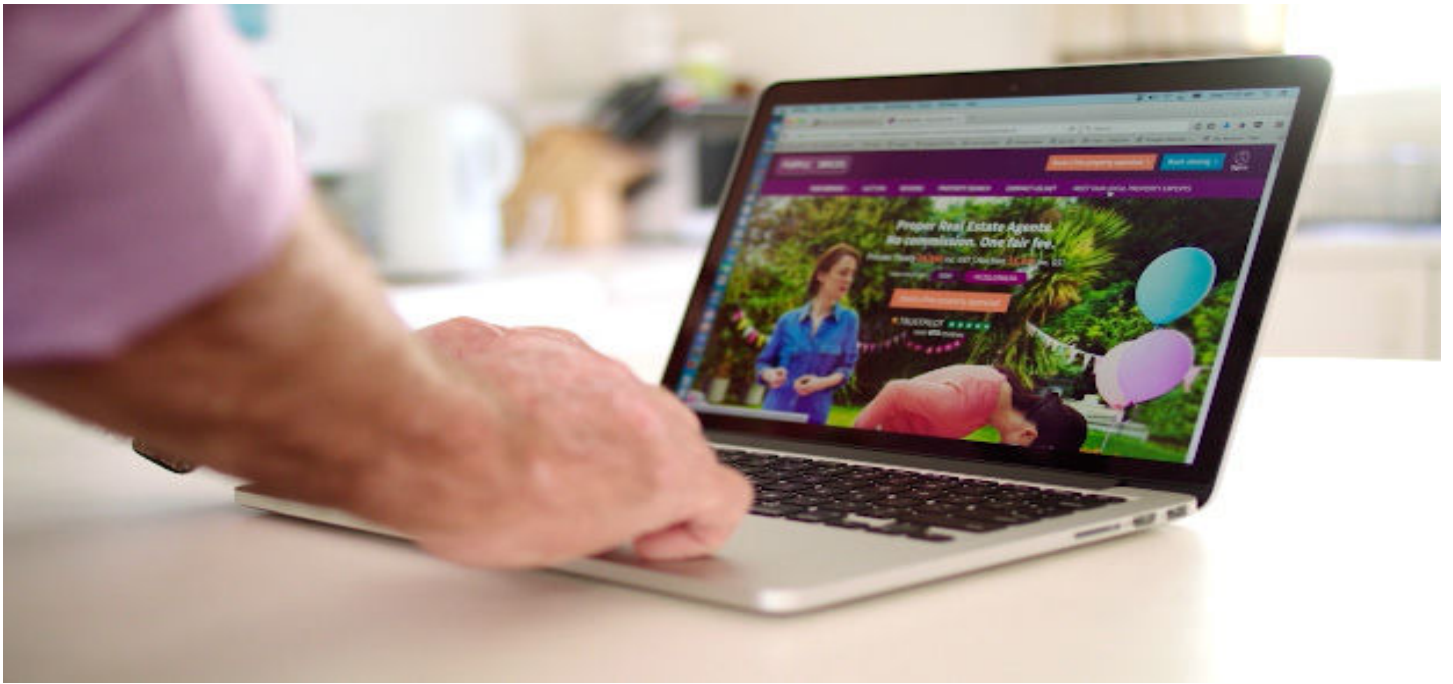
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Purple Bricks,
Australia

Buying

For sellers of residential property, the greatest areas of discontent are high agent fees and commissions. At a time when disruptors exist in nearly every other sector, and consumers have more autonomy through P2P markets, enabling even more competitive pricing, it's no wonder such expectations are trickling into the residential market.

Purplebricks is one of the first real estate companies that has disrupted the traditional mode of agent operations and selling property. Its stand-out feature is the fixed-fee model. When instructed to sell, Purplebricks charges the vendor a flat fee of AUD \$4500 (or AUD \$5870 for an auction) and does not take a commission. This is also inclusive of marketing activities, such as professional photography, signage and adverts in the leading online platforms in Australia and the UK. According to the company's website, traditional real estate agent fees and marketing costs are an average of AUD \$17,240 – resulting in a saving of AUD \$12,740. Purplebricks also purports to be open 24/7, with its online platform and live chat till 8pm, providing flexibility for today's ever-busy lifestyles. Appealing to peer-to-peer preferences and offering transparency, Purplebricks also allows sellers and buyers to communicate directly with each other through their online platform.

The trickle-down effect of such a disruptor, is that traditional real estate agents are starting to modify their offerings. For instance, Australian companies Appraisal Now and Upside Real Estate are presenting similar fixed-fee services. This is also a response to wary



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Purple Bricks
Australia

vendors, as prospects of a slowing market, concerns of high debt and vulnerability to rate increases begin to loom. This was noted by the Australian Financial Review in September 2017, referencing RBA governor Philip Lowe, who warned that overpriced dwellings in Sydney and Melbourne could lose 10 per cent of their value once rates start rising.



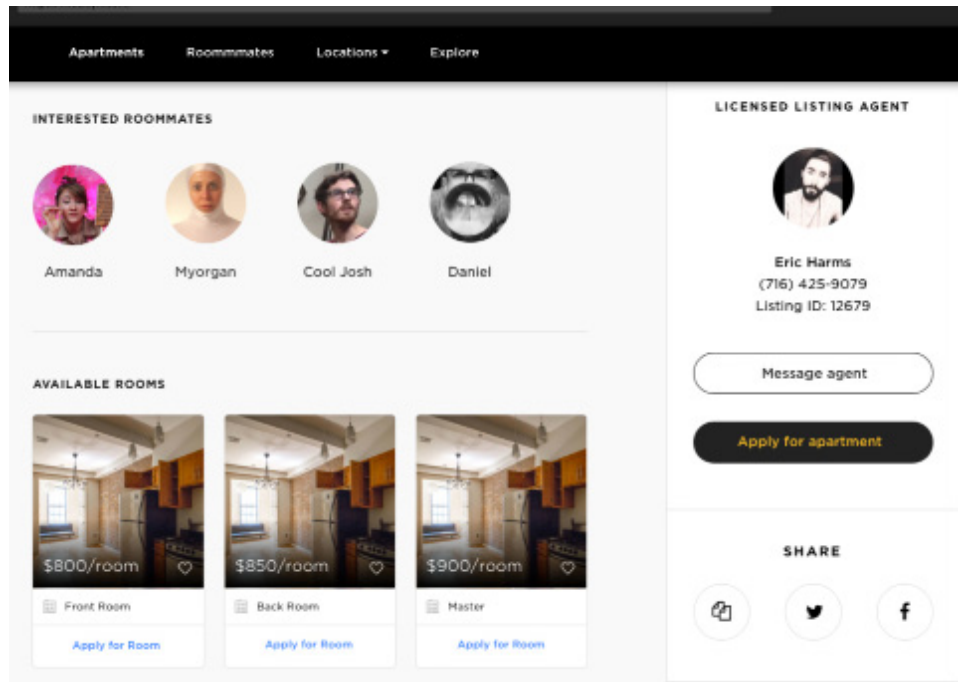
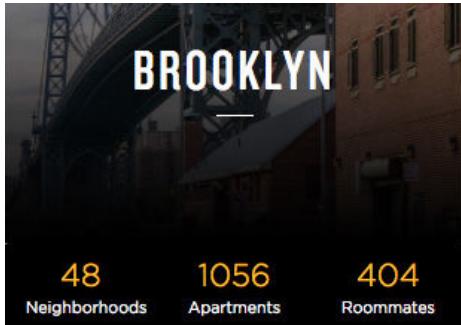
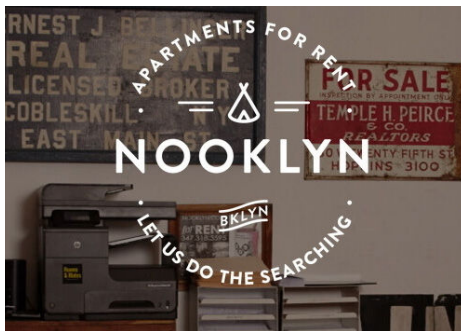
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EyeSpy360 and EyeSpy Live,
London

Renting

Rental markets are another area whose processes are not in step with the flexibility afforded by other sectors. For many, the process of finding a property is inflexible and inconvenient in the context of today's busy lifestyles. [EyeSpy Live](#) is a platform that attempts to change this by almost negating the need for physical property viewings through leveraging virtual reality and real-time remote engagement. Property managers and agents can create 3D virtual tours of spaces for prospective tenants. This can be done over video chat on a computer, phone or tablet. The platform also has the capability to 'conference' with multiple participants; for instance, a friend can call in their flatmate to view the property in tandem with the agent. According to EyeSpy360's founder Andrew Nicholls, the process is about immersion and providing more exposure to the property in a way that images can't and doing so in a way that builds trust with the prospective tenant.

(Eyespy Live is the iteration of Eyespy360, a low-cost, self-service virtual reality tour creation platform and camera used by homeowners, hotels, restaurant bars, boat owners and property developers.)

Another company creating efficiencies in the rental market is [Nooklyn](#), a platform offering brokerage services for renters. All on the one website, renters can browse listings by price, location data or subway line, contact an agent directly, and have Nooklyn prepare the application paperwork to apply on the spot. For these services Nooklyn receives a percentage of funds on application fees and transaction fees on monthly rent. Nooklyn also facilitates



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Nooklyn,
New York

relationship building between potential flatmates – a crucial and delicate part of finding a place to live. According to Nooklyn founder Harley Courts, the platform has been so successful that renters are forming relationships up to six months in advance of moving, to really find the perfect fit.

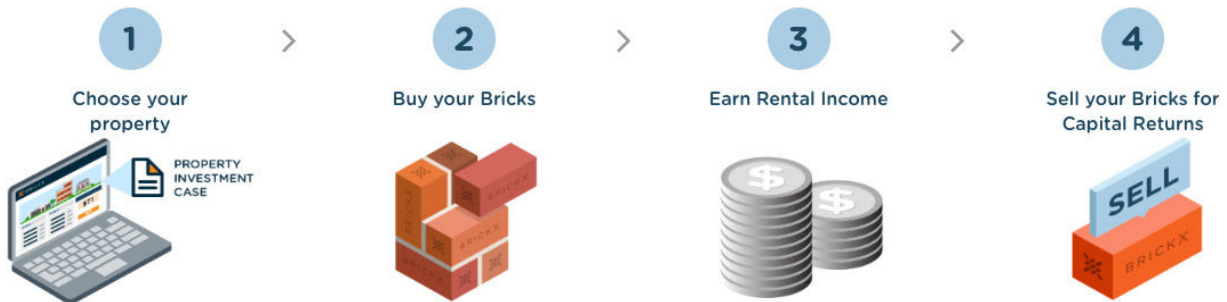
Looking to the rental market at large, according to Courts, ‘what it takes to acquire a renter today is shifting’. He says that as a result of the gig economy (that is, the prevalence of short-term contract work), and lack of opportunities in suburban markets, renters today are more transient and require greater levels of flexibility. The property players that will succeed in these areas are those who can respond to these new lifestyle needs.

What is a Brick?



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A Brick is a fraction of a property.



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BrickX,
Sydney

Investing

Tech platforms that change how we buy and invest in property are also emerging. This is particularly evident in fractional ownership, whereby many individuals can own a slice of a single property, much akin to buying shares.

Australian-based business [BrickX](#) has a portfolio of residential properties, each of which resides in an individual trust, and is split into 10,000 units or 'bricks'. Bricks can be purchased from less than AUD\$100 and entitle the owner to receiving a share of the monthly rental income and capital returns as values increase. As with traditional property investing, brick-owners are also exposed to dips in market value and vacancy periods without rental income. The model is highly liquid, allowing owners to sell their bricks, with median transaction times of 14 hours.

BrickX has proved popular amongst a variety of demographics. For the under-25s, it is a means to get into the property market for the first time, while for over-35s, it is a new investment option. According to founder Anthony Millet, BrickX doesn't seek to replace home ownership, rather it is a new model that makes property investing accessible.

Taking a macro view, the plight for accessibility and egalitarianism is the crux of most tech-disruptors across all sectors. We can expect to see more manifestations of this in the property sector, where the barrier to entry is removed.

Ch. 2/3

Working smart 2.0

Quick reference

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p.11 Smart buildings
p.12 Smart workday
p.14 Interim spaces

Smart buildings and bespoke technology are innovating the employee journey.

In the workplace, developers and employers are utilising leaps in PropTech to their own competitive advantage, from the building itself to the internal employee experience. At the scale of the building, developers are planning headquarters that are more environmentally sustainable – both in response to global pressures on climate change, and as a means of corporate responsibility. This is also in a bid to attract high-profile tenants whose core values place a priority on the environment. Looking at the workplace internally, technology is emerging to enhance employee experience, enabling a more efficient and lifestyle-based approach to work which, in turn, looks to convert to talent retention. Even hospitality spaces, such as hotels and cafes, are also utilising PropTech to maximise revenues and serve the nomadic working cohort by offering flexible spaces and amenities.

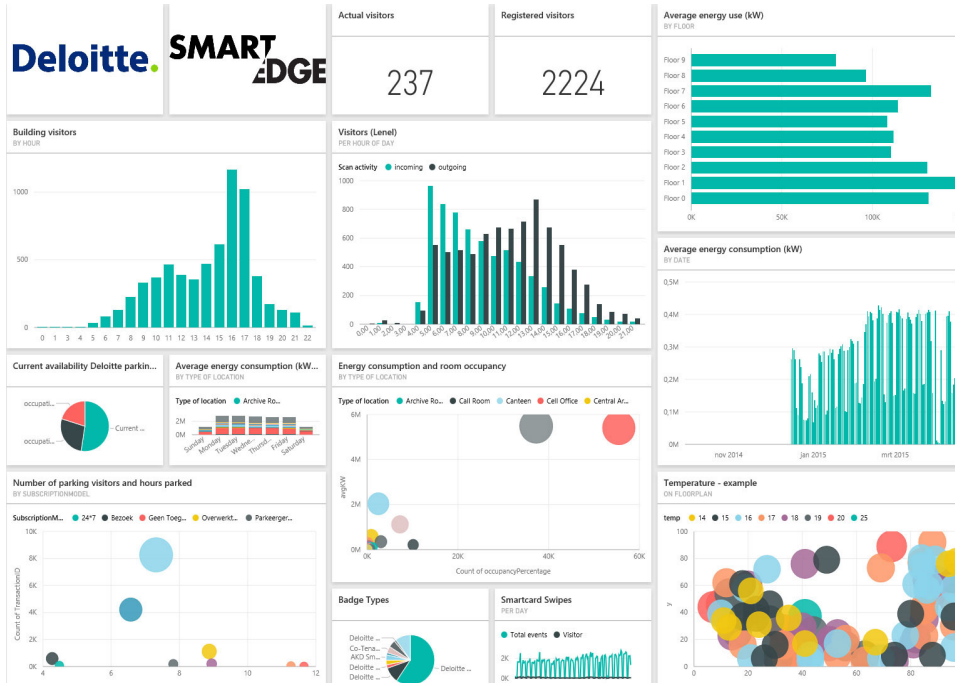


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The Edge,
Amsterdam

Smart buildings

To harness tenant retention, developers are listening to tenants who value both the prestige of environmentally sustainable buildings and the cost savings that come with them. Deloitte headquarters at The Edge in Amsterdam is considered the greenest building in the world, having been awarded the highest sustainability score of 98.4 per cent by British rating agency BREEAM. To continue saving energy and costs, a set of dashboards have been created to track employee activity and macro-scale energy use. According to a report by Bloomberg, this data is converted into building responses whereby, for example, on a day when fewer employees are in attendance, entire sections of the building may be shut down to save costs on heating, cooling, lighting and cleaning.

In response to trends in employee wellness, fitness-tech features and indoor air quality are also areas receiving attention. The architectural design of The Edge creates natural ventilation through a series of mesh panels between each floor which recycle stale office air, releasing fresh air back into the space. This feature keeps employees feeling mentally fresh and productive. Exercise is also encouraged at the on-site gym, where certain equipment captures the energetic output from an employee's workout and feeds the wattage back in to the building's power grid.

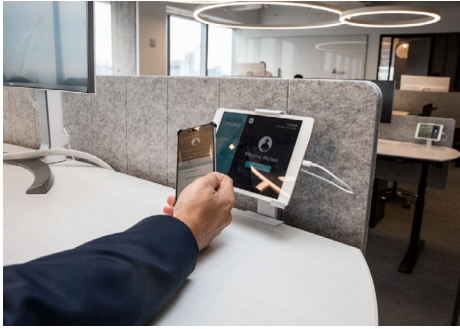
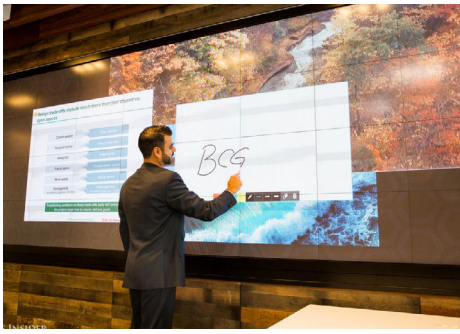


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The Edge,
Amsterdam

Smart workday

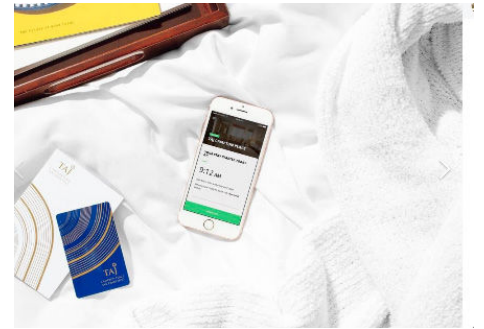
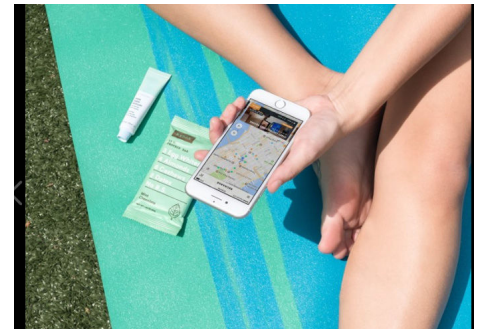
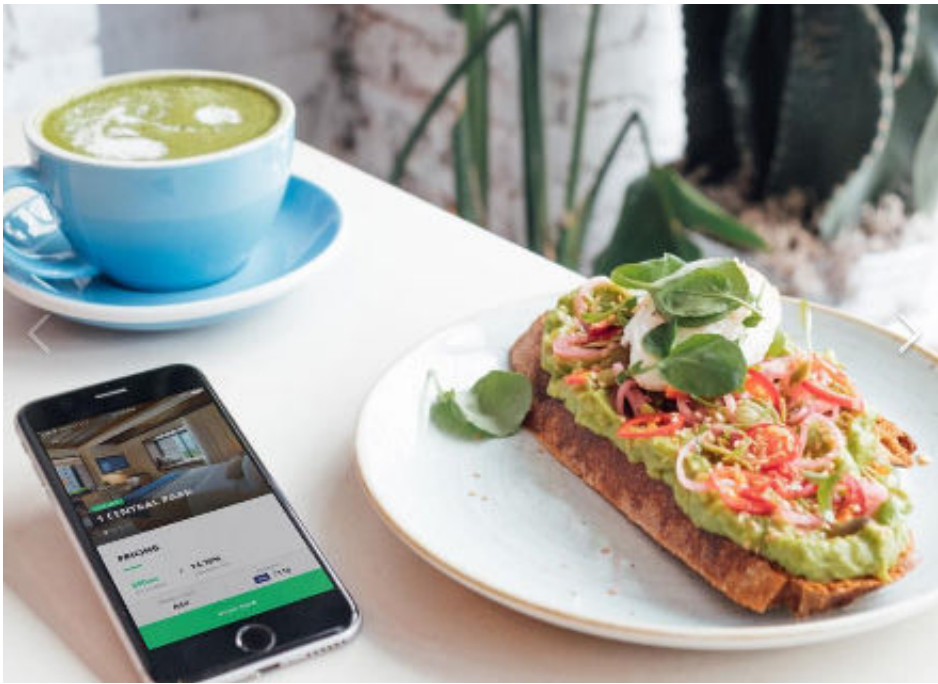
Similar to trends in retail, business owners are looking at the entire user journey to discover new touchpoints where they can add value and offer efficiencies. Large companies are engaging research firms to track employee behaviour as a precursor to developing bespoke apps to enhance the workday. Deloitte’s app for employees at The Edge assists employees before they have even entered the building, directing them to available parking spots for their bikes or cars. As the office is predominantly hot-desking, employees are also directed to available desks based on their personal profile of preferred light and temperature settings. In addition, bespoke gym programs are sent out from the app, as well as the ability to order groceries and collect them at the office before going home. This approach, which encompasses an employee’s lifestyle, offers an appealing attribute of work culture and can contribute to talent retention.

PropTech can also assist in creating more productive workplaces. The Boston Consulting Group’s office at Hudson Yards, New York has strategically created a (near) cableless office environment in an attempt to enhance employee interaction, knowledge-sharing and efficiencies. This has been achieved through an app bespoke to BCG employees that allows the reservation of desks and collaborative spaces, the use of softphone technology, and the ability to locate a colleague within the building. For conference calls, employees can use Cisco Jabber on their mobiles and laptops, negating the need for built-in speaker phones or conferencing hardware. Employees can also connect wirelessly to media walls and in-desk display systems. According to workplace consultants Unwork, such interventions



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Boston Consulting Group,
New York

create a synergy between physical and social networks, engineering serendipity and efficiency, which is a key component of high-performing workplaces.



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Recharge,
San Francisco

Interim spaces

PropTech is also helping to maximise revenues for asset owners by utilising vacant space. The hotel industry is taking advantage of this with the [Recharge app](#), a platform that enables guests to book flexible-length stays, charged by the minute, at four- and five-star luxury hotels. This concept provides a respite for professionals who are caught out between meetings or prior to an event, and would prefer a comfortable private space to catch up on work or freshen up. It is also a handy option for travellers looking for a relaxing hideaway between transit.

Ch. 3/3

PlanTech

Quick reference

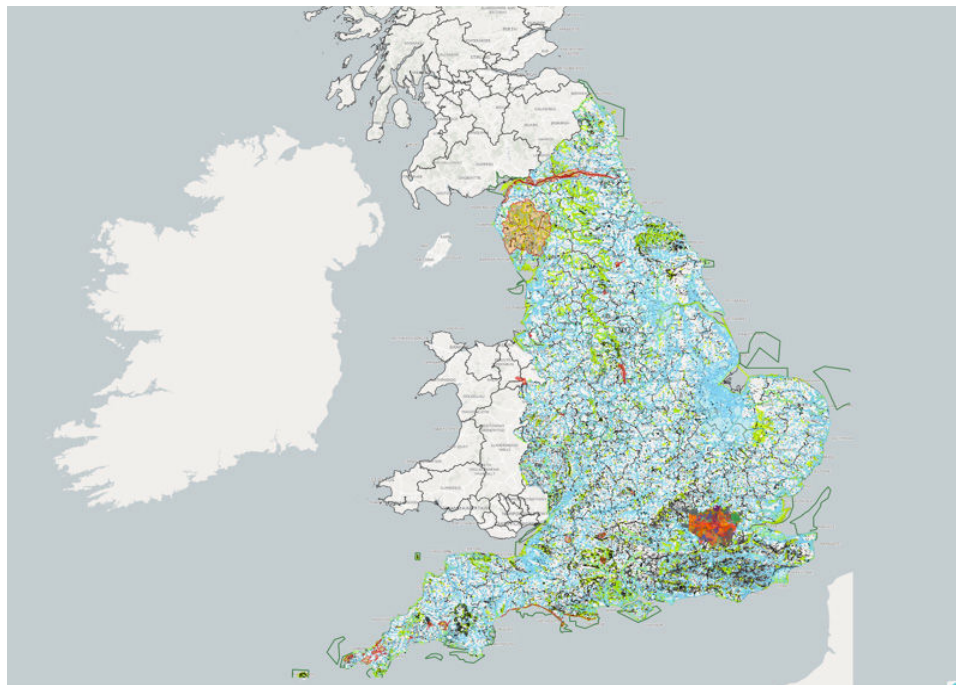
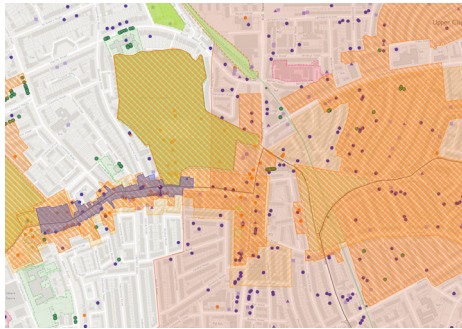
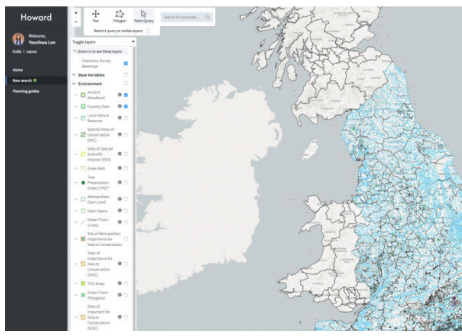
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p.16 Site search and appraisal
p.18 Community engagement
p.20 Scheme impact projection

PlanTech innovations are changing how we visualise, consult and collect data to futureproof new developments

The planning sector and its various segments is complex. As land for new developments becomes increasingly precious, and communities become ever more engaged and autonomous, there is great pressure for developers and governments to get things right. There is also a broader sense that we are at a point where, as result of tech, processes should be simple and easy. In a bid to make these archaic systems more transparent, streamlined, and human-centred, PlanTech innovations are coming online. These innovations are being spearheaded by collaborations between governments, large corporations and SMEs, universities, public authorities and civic groups.

This chapter presents a snapshot of innovations across three key areas of planning activities: site search and appraisal, community engagement and scheme communication. These are by no means exhaustive, and are derived from a broader set of categories discerned in The Future of Planning report by the Future Cities Catapult, UK, and conversations with Urban Intelligence, who are thought leaders in this area.

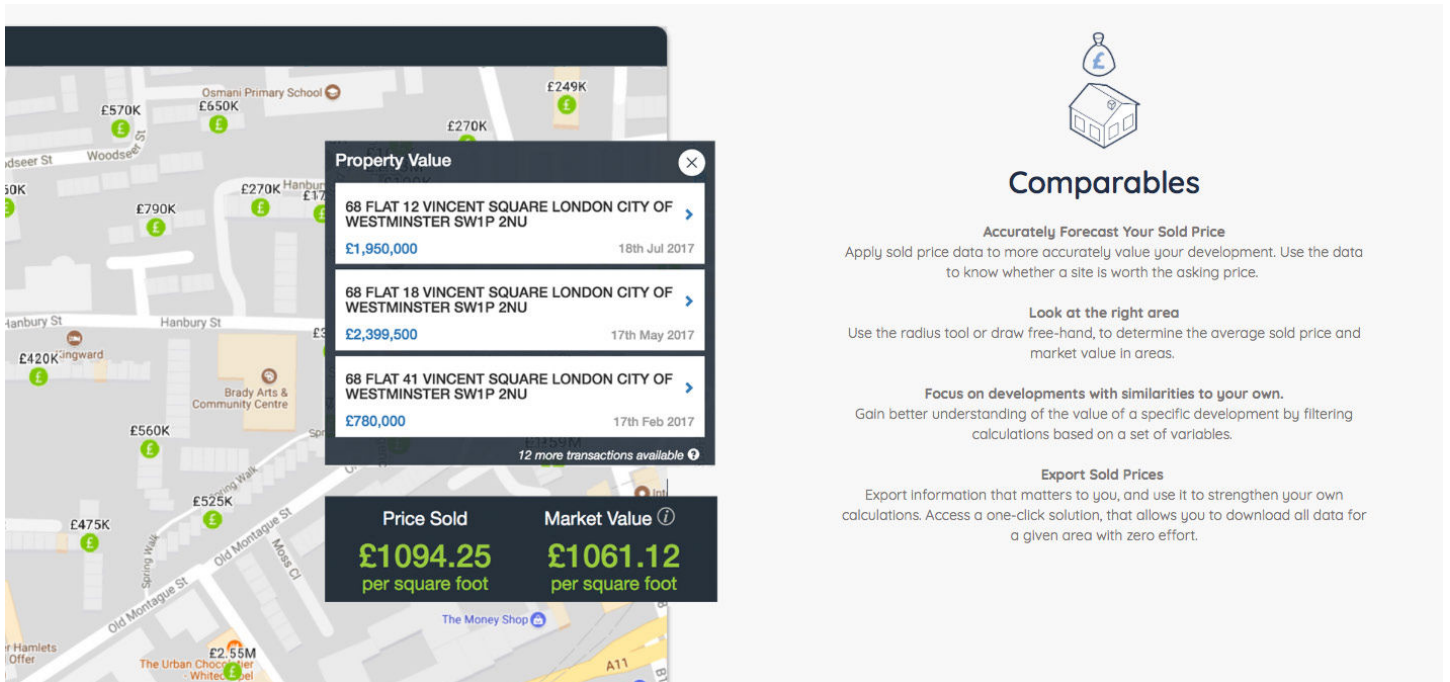


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Howard
London, U.K.

Site search and appraisal

Searching and appraising a site for development can be an intricate process of identifying and navigating overlapping sets of information. It may involve various expert professionals and the documentation may encompass a site's local development plan, zoning, policy, planning history, heritage constraints and environmental factors. This hefty amount of liaising is not in step with efficient processes afforded by other sectors. As such, a number of platforms are now emerging to help aggregate data and streamline this process.

One such exemplar is [Howard's Planning Policy Map](#), currently in Beta, by Urban Intelligence in the UK. Made possible by a standardised database of aggregated and digitised planning policy documents from across Greater London, the interactive map consolidates various policy information on particular locations. Property professionals can click on a site and instantly access all the documents relating to the existing planning opportunities and risks in that area. One of the key areas of value is the ability to efficiently determine if a site can be sold with planning permission, allowing a value uplift to the asking price, and a gain for property developers. According to Howard's co-founder Daniel Mohamed, Howard's business model is also designed to help governments innovate during times of austerity and budget cuts. The platform is offered to the private sector for a fee, which in turn subsidises government access to the platform for free. This also incentivises governments to keep opening up their data for public use, enabling the growth of the platform.

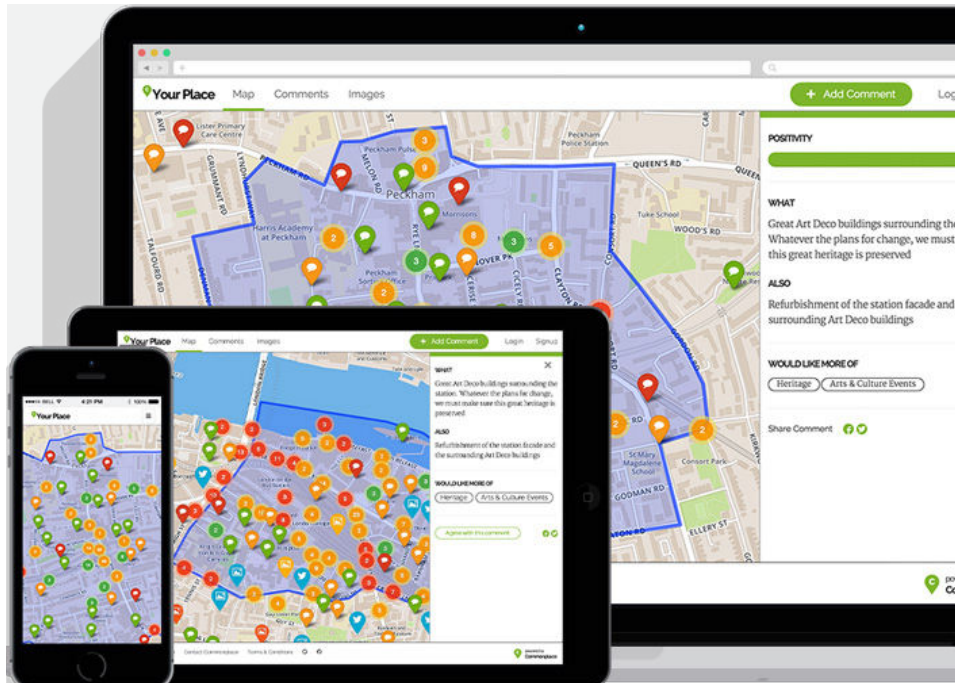
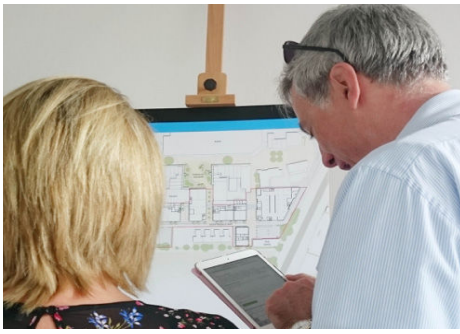


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Land Insight
London, U.K.

A current challenge to the map is maintaining consistent data in the face of diverse local planning authorities who have varying methodologies, timelines and limited resources.

Another site analysis platform is UK-based Land Insight, which also provides support for deal management and acquisition. It makes visible the ownership of a site, relevant planning data and the presence of new developments. It also presents data on sale prices and value per square foot. The value of the platform is the efficiency it affords developers and individual buyers to acquire information and secure a deal, transforming the once lengthy and costly process.

Similar to Howard, this platform is made possible by access to open data and thus the willingness of organisations to share resources. Land Insight is supported by Google Maps, the Ordnance Survey and government agencies such as the Valuation Office Agency, Companies House and Land Registry, among others.



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Commonplace
London

Community engagement

For communities, the prospect and execution of new developments can conjure up a spectrum of emotions from excitement, to anxiety, angst and, more often than not, a bit of NIMBYism. Consultation is key to garnering insights required for creating meaningful places, as well as nurturing communities through big changes. It is also common sense for minimising risk in a development, at a time when markets are volatile and the value of property is increasingly on the rise. To engage a broad range of community perspectives, a number of digital platforms are emerging that streamline the engagement process whilst offering deep local insights.

Commonplace is a digital community consultation platform that captures and maps local opinions on a particular place. For developers this presents an excellent tool in heat-mapping existing challenges of a place, down to the exact location – all in real time. Commonplace also provides developers with an online dashboard that compiles, segments and visualises the data in accessible infographics, based on demographics and geography. Such a tool proves valuable in creating meaningful, evidence-based developments that, in turn, carry stronger validity in negotiations and consent processes. Tools such as Commonplace also help to reduce risk, by both drawing broad perspectives, and allowing the presentation of design proposals for feedback and subsequent iteration.



Which would you prefer to have Downtown?



ART



Do you want something like this?



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CitySwipe
Santa Monica

Another noteworthy community engagement platform is Downtown Santa Monica’s [CitySwipe](#), dubbed by The Guardian as the ‘Tinder for cities’. The app was created in a effort to increase transparency of city developments, and enable efficiency of seeking public opinion. Modelled on the dating app, residents are presented with scenarios and images and encouraged to swipe yes/no answers. These scenarios might include anything from large-scale urban places to market stalls, and even finer details such as public art or street furniture. While it might sound like a ‘lite’ approach, the app is successful in enabling quick engagement, compared to arduous, lengthy surveys or focus groups – which are often barriers to participation. The platform is currently being trialled and feedback will be incorporated into recommendations for the City of Santa Monica’s Downtown Community Plan for the next 15 years.

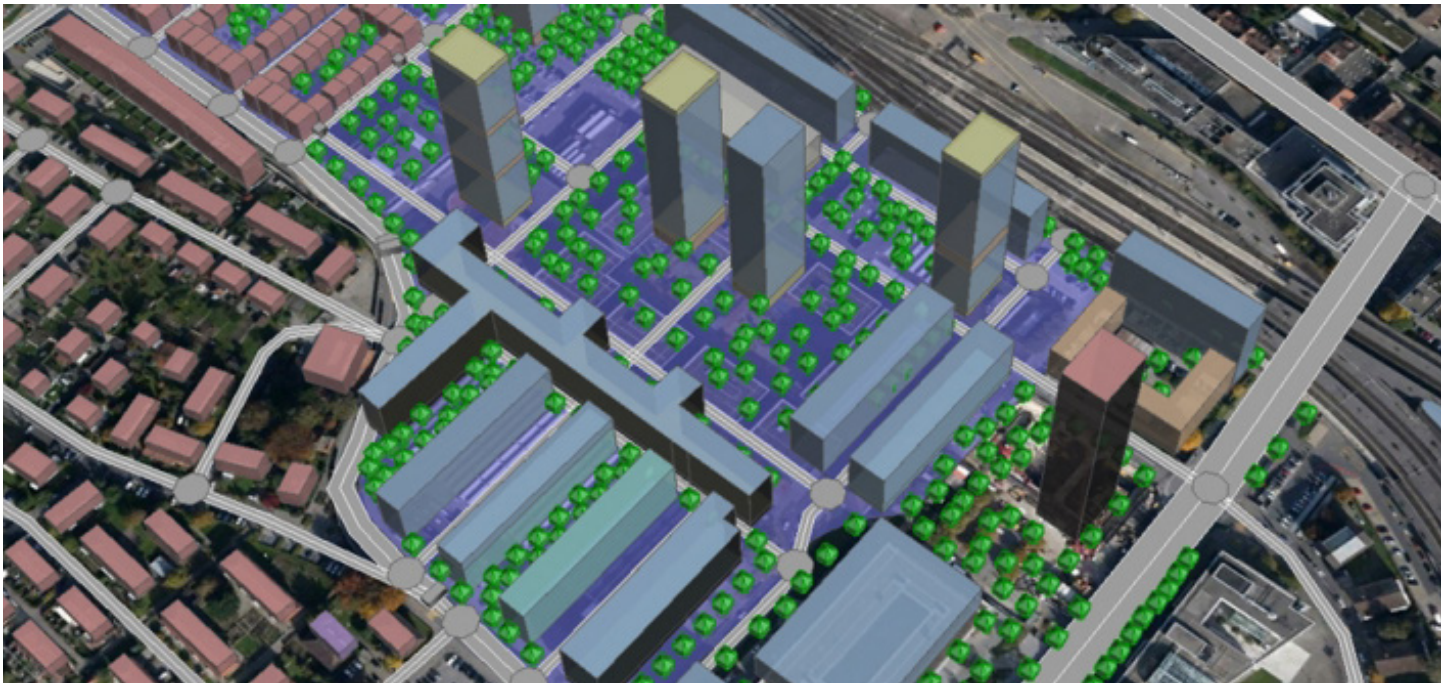


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City Life Management
Siemens

Scheme impact projection

An integral part of the planning process is the communication of proposed schemes. This is particularly pertinent at early stages and throughout design development to receive feedback from governments, authorities and communities. While 3D modelling, fly-throughs, VR and AR are bringing ever more realistic communications to the fore, the next layer of information, is the realistic communication of impacts of these schemes on the local environment and its people. At a time when cities are becoming denser, and planning decisions need to be even more discerning, this is crucial.

A tool that allows for impact communication and scenario simulation is the City Life Management (CLM) project developed by Siemens Corporate Technology (CT) scientists in Princeton and Munich. The platform is based on the use of 3D modelling, satellite imagery and aggregated data. It works such that a design can be dropped into an existing locale and intuitively remodelled to show, for example, a change in building height, an additional car park or a change in traffic direction. For each modification, data sets are generated, reflecting a building's energy demand at different times of the day, its operating costs, how many people could work in the buildings or even the amount of waste and air pollution they would produce.



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City Life Management
Siemens

According to Dr Bernd Wachmann, head of the New Technology Field 'Sustainable Cities' at CT, the tool is 80 per cent accurate. The tool allows for planners to get a real-time understanding of the consequences of their decisions, and thereby iterate, to create the best possible outcomes. CLM is also a huge time saver for a process that often requires liaising across many departments and silos to gather similar levels of information. Like many of the platforms in this chapter, it enables a minimisation of risk by being able to speculate relative economic impacts.

Conclusion

PropTech: Putting it into practice

1. Invest in time to research and assess new technologies. Developments in tech are rarely a one-size-fits-all. VR, AR, AI and bespoke apps are excellent tools in certain contexts. Consider what unique challenges exist in your business and product offering to find an appropriate tech fit that will make a genuine difference.
2. Involve your customers and clients in the creation of new products and systems. Customers will always seek out the best price with the most flexible service offering that challenges formerly frustrating systems. To innovate in a targeted way, engage and listen to your customer to find out their pain points.
3. Minimise risk by trialling new tech concepts and product in a lo-fi or beta format. Pilot phases will turn up insights that can lead to cost-saving iterations before more significant investment is required.
4. Consider the creation of platforms that build relationships. Be it in the workplace or a residential development, social connections are incredibly important to the success of existing and new places. Fostering a sense of community and building trust creates meaningful places that will stand the test of time.

Conclusion

PropTech: Putting it into practice

5. Utilise vacant assets and spaces as a means to generate additional revenue. Research market segments that might have been overlooked, e.g., travellers, commuters or other workers. Consider a tech booking and access system that would make this efficient and user-friendly.

About

Brickfields Consulting

Brickfields Consulting delivers customer and market insights that enable dynamic and innovative property investment solutions.

Over the past six years, we have developed a reputation in the property sector for unlocking project possibilities through a progressive and adaptable mindset. Our commissions involve a complex challenge which requires our clients to embrace change and seize future opportunities.

By partnering with the owners and operators of physical assets, we provide the insight through research which ensures that places develop a competitive advantage, allowing them to command a price premium and achieve financial returns above the market.

Brickfields Consulting offers a range of services covering four broad capabilities: user research, market strategy, customer experience and design activation. We provide custom strategy solutions as well as standard research and strategic tools.

Appendix

Credits

Our Team (Alphabetical order)

Researchers

Stephanie Bhim
David Grant
Heidi Krohn
Jeanette Lambert
Paul O'Connor

Writer

Stephanie Bhim

Editor

Ginny Grant

Design and web development

Paul O'Connor
Joel Warren

Photography and video

Heidi Krohn
Galloping Media

Thank you.

*We hope you enjoyed Trend #53 of
The Place Report. Keep your eyes
peeled in the coming months for
Trend #54: Immersive Travel*