

A photograph of a staircase with a decorative metal railing against a textured wall. The railing features ornate scrollwork. The wall is light-colored with some darker, possibly water-damaged, areas. The stairs are visible in the lower right corner.

Innovations in the Residential Sector

June 2021

Outline

SCOPE

This report covers innovation opportunities within institutionally-owned residential RE assets. This does not cover the larger category of privately owned residential, whether primary residence or buy-to-let.

PILLARS OF INNOVATION IN RE RESIDENTIAL

TECHNOLOGY OPPORTUNITIES



Executive Summary



Overarching trends put focus on the need for change in the residential sector.

Real estate suppliers face increasing demand from regulators and consumers. Demand from the regulators is threefold :

- More sustainable and responsible project with clear ESG KPIs
- Address the affordable housing shortage and finally,
- Indirect need for the developed states to rebalanced declining public funds through a raising of taxes

Demand from the consumers is for more livable spaces in the suburban areas with outdoors and more amenities to cope with changing consumers habits.

With this increase and change in demand, new business opportunities emerge. Co-living growth drivers are now more compelling than ever, *(CBRE, 2020)*. Medium-term lets companies emerge to solve the chronic undersupply of suitable properties.

Optimising the Resi “Stack” to NOI

The 3 pillars of innovation in RE residential are: ‘What and where to build’ to identify market opportunity and demand insights, ‘Who lives there’ to support tenant acquisition & retention and ‘How to Operate’ focusses on optimization of FM and PM.

Key technologies are disrupting the real estate market.

Through the years, we observed a remarkable rapid growth of platforms & SaaS, Applications, Augmented and Virtual reality solutions, IoT sensors and data analytics, automated solutions to address the pain points of different stakeholders.

Notable startups.

Lavanda, Infogrid, Swiftconnect, Measurabl, Spotr, Spacemaker

Overarching trends put focus on the need for change in the residential sector

CONSUMER: Pandemic Rethink

DEMAND FOR MORE LIVABLE SPACE

- **Move to suburban areas or areas with outdoor space** (*Financial Times, 2020*)
- **The rise of the co-primary homes on the rise** (*Knight Frank, 2020*)

DEMAND FOR AMENITIES

- **Rise in pet ownership amongst the younger generations** (*Reference*)
- **The normalisation of online shopping require more efficient parcel management** (*Reference*)
- **Health and wellness has become at the forefront of many conversations** (*BMC Public Health Journal, 2020*)

GOVERNMENT: ESG and housing shortage

INCREASING REGULATIONS AROUND GREENER HOMES

- **Governments are starting to put in environmental targets Increase spending in retrofits to meet low carbon targets.** (*UK Ministry of Housing, Communities and Local Governments, 2021*)
- **The EU aims to be carbon neutral by 2050.** (*European Commission, 2020*)

HOUSING SHORTAGE ALL OVER THE GLOBE

- **Affordable housing shortage has become a global problem** (*Wall Street Journal, 2019*)
- **Countries all over the world are facing a housing crisis,** (*Forbes, 2021*)

BUSINESS: Increased appetite for different types of housing categories

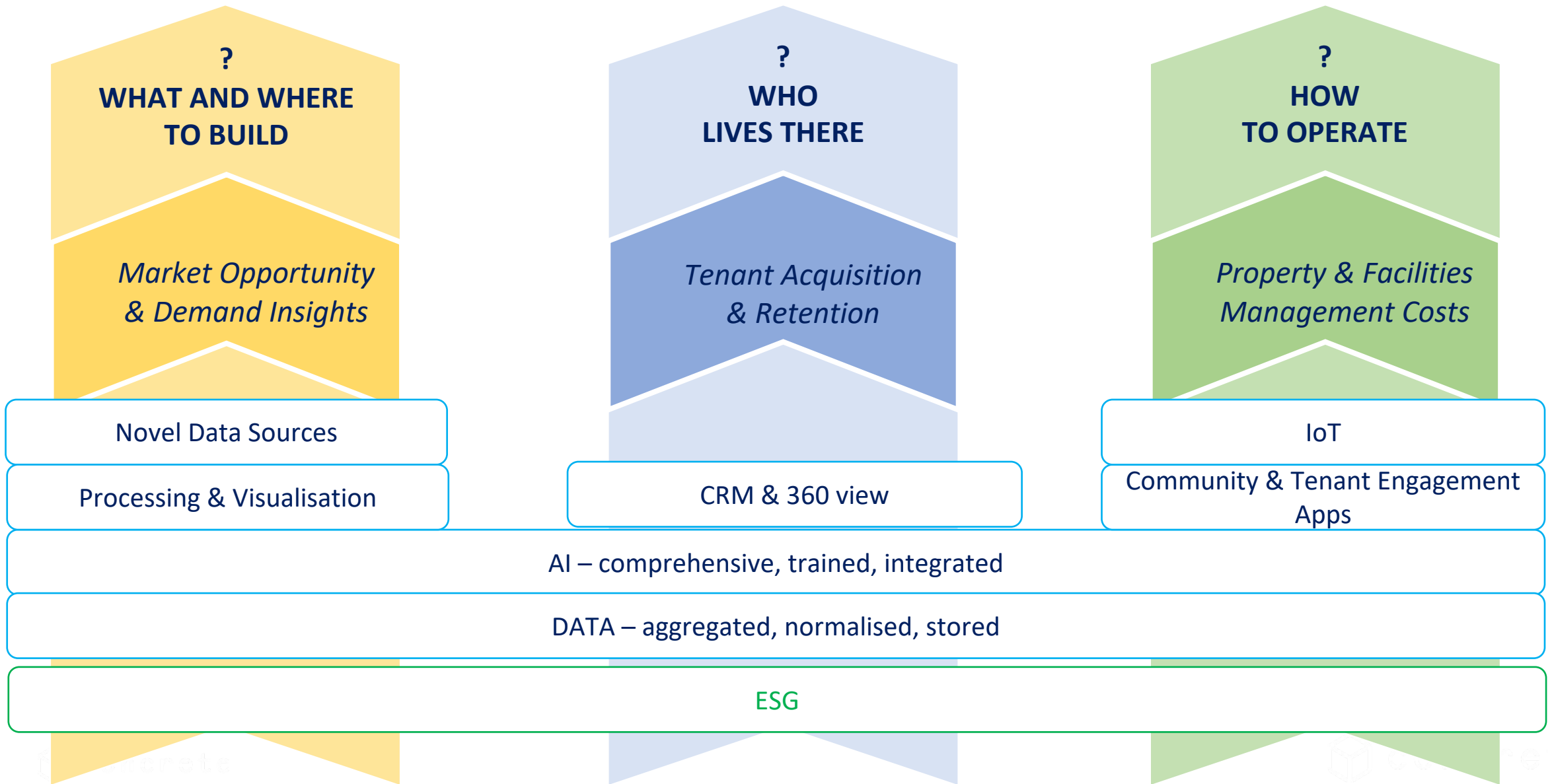
- **Co-living growth drivers are now more compelling than ever,** (*CBRE, 2020*)
- **Medium-term let companies emerge to solve the chronic undersupply of suitable properties.** (*Landlord Today, 2021*)



A photograph of a staircase with a decorative metal railing against a textured wall. The railing features ornate scrollwork. The wall is a mix of grey and light brown tones, suggesting a concrete or plaster finish. The lighting is soft, creating a moody atmosphere.

PILLARS OF INNOVATION IN RE RESIDENTIAL

Optimising the Resi “Stack” to NOI





What/Where should I build?

STAKEHOLDER NEED	DOMAIN / FUNCTION	TECHNOLOGY & INNOVATION
Market and Demand Insight	Price Location Capacity/Market Trends Segmentation / Cohorts	Sitefinding Platforms AVM & Forecasting Alternative Data Sources
Construction * <small>* Given construction technologies are broadly applicable, we spend less time on this topic in this report. Alternatively request our latest update of the ConTech report.</small>	Design Planning Procurement Fabrication Construction Management	Prefab / Modular Generative Design BIM (New Build) Digital Twin Visualisation Tools New Materials Alternative Energy

PORTFOLIO COMPANY SPOTLIGHT:

LANDTECH (Sitefinding Platform)
Creates Software to help property developers, planners and architects secure the information they need to make faster and better decisions. Landtech currently have 2 products: LandInsight and LandEnhance.

CUSTOMER TESTIMONIAL:

“With LandInsight, we’re able to find and assess the best off-market development opportunities 80% faster.”

- Chris Kerrison, Investment Manager at **Montagu Evans**



Who will live there?

STAKEHOLDER NEED	DOMAIN / FUNCTION	TECHNOLOGY & INNOVATION
Lease up and Void Fill	Distribution Viewings CRM KYC (ex-Europe tenant acquisition)	Virtual Tours Funnel Management CRM Platforms
New Types of Accommodation	Co-living Short-term Letting Mid-term/Serviced Senior / Intergenerational	Utility Bundling Yield Optimisation Software Short-term Let Platforms
Tenant Retention	Taking Payments Tenant Engagement Reputation Management Deposit Replacement Utility bundling	Rent Collection Tenant Engagement Apps Deposit Replacement Platforms Reputation Management Platform

PORTFOLIO COMPANY SPOTLIGHT:

LAVANDA (Short-term Let Platform)
Used alongside a traditional PMS (Yardi, etc), Lavanda enables a multi-family building to be 'brought live' at a unit-level in AirBnB and similar OTAs, and tuned to optimise overall revenue including leaseup, void-filling, and sub-leasing on an ongoing or ad-hoc basis.

CUSTOMER TESTIMONIAL:

"Lavanda powers Greystar's short and medium-term rental strategy. We're thrilled to partner with such a great product and team, and are super excited about the direction we're both headed in."

- Matthew Ede, Sr. Director, Sales & Marketing at **Greystar Europe**

How to operate?

STAKEHOLDER NEED	DOMAIN / FUNCTION	TECHNOLOGY & INNOVATION
Amenities	Parcels Management Access Parking Health & Wellness Cleaning Dog Walking	Smart Lockers and Delivery Management Access Control EV Charging HVAC, Intelligent Lighting
Manage Property and Facilities	Repair and Maintenance Inspection Outsourcing Cleaning Compliance	Tech-enabled Inspection PM Platform FM Platform Predictive Maintenance BMS Robotic Cleaning
Reduce Operational Costs/ESG	Occupancy Analytics Reducing Carbon Footprint	AI & Big Data ESG Sensors (IoT)

PORTFOLIO COMPANY SPOTLIGHT:

INFOGRID (IoT Sensors)

Provides end-to-end IoT sensors solution to help make buildings smarter. Sensors take in various data which is then analysed using AI algorithms.

CUSTOMER TESTIMONIAL:

"The Infogrid pipe monitoring solution fully automated our legionella reporting, allowing us to reduce the time spent on legionella compliance by 81%"

- Andre Bothma, Head of Engineering Technology, at **JLL Integral**



Innovative Technology and Business Model

	NOW	NEXT	LATER
BUILD	<ul style="list-style-type: none"> • Sitefinding (LandTech etc) • BIM (new build) • New Materials • Automated Valuation Models (AVM) - North America 	<ul style="list-style-type: none"> • Prefab / Modular • Forecasting Platforms • Alternative Data Sources 	<ul style="list-style-type: none"> • Generative Design • Digital Twin • Alternative energy
FILL	<ul style="list-style-type: none"> • Short-term Let Platforms • Yield Optimisation Software • Tenant Engagement Apps • Virtual Tours • CRM Platforms • Funnel Management 	<ul style="list-style-type: none"> • Utility Bundling • Deposit Replacement Platforms • Co-living 	<ul style="list-style-type: none"> • Intergenerational living models(?) • Mixed-use incentive programmes
OPERATE	<ul style="list-style-type: none"> • Sensors (IoT) • BMS • PM Platform • FM Platform • HVAC, Intelligent Lighting • Smart Lockers • Access Control • ESG (Measurabl) 	<ul style="list-style-type: none"> • AI & Big Data • Remote Inspection (Spotr) • Predictive Maintenance • EV Charging 	<ul style="list-style-type: none"> • Robotic cleaning

Technology and Innovation Opportunities

Sitefinding Platforms

“Where can I build my residential scheme that has right level of demand and potential for planning approval?”

– Property Developer

WHAT IS IT?

SAAS platforms that enable large scale search / filtering of real estate parcels to support site finding and site assembly. Underpinned by an increasing breadth of aggregated data sources (eg HM Land Reg, surveys, ownership data, rental pricing, etc) these tools attempt to provide a full solution to the aspiring developer.

VALUE PROPOSITION

SAVE SIGNIFICANT TIME AND COST
Where typically a developer would spend weeks gathering data from various sources, and employ a team of analysts to sift, these digital platforms allow nationwide search / filter in hours to short-list options.

GAIN GREATER CONFIDENCE in crucial decisions by backing them up with data.

GAIN COMPEITIVE EDGE and be ahead of the game by finding sites that are not otherwise listed in traditional sources, creating the best off-market development opportunities

SIMPLIFY and automate workflow following site identification.

NOTABLE PLAYERS



Creates Software to help property developers, planners and architects have the information they need to make quicker decisions. They currently have 2 products LandInsight and LandEnhance.

- Latest round £42m



Provides an algorithm-based platform that identifies ‘off market’ real estate assets that meet suitable criteria for investors, and facilitate structured finance solutions for owners of real estate assets

- The algorithm flags over 100 million data points to flag 500-2,000 UK-based assets per month.
- Raised £73m back in June 2020 from PRS funds, developers and family offices and current capital under advisory is £120m

Automated Valuation Modelling (AVM) & Forecasting

“How much is this property worth and how much it will be worth in the future? What else can I do to increase valuation?”

– Asset Manager

WHAT IS IT?

AVMs provide a data driven valuation for real estate, and are increasingly accurate (> 85%). AI/Machine Learning requires volume, so it works best in Resi, including Multifamily, not yet in other CRE. Models account for a broad variety of data (eg restaurants/green space within 5 minutes walk) instead of traditionally jus “comps” plus “opinions”.

VALUE PROPOSITION

FASTER (NUMBERS) Reduces time, cost and effort usually spent on a physical valuation, thereby making the process faster and cheaper.

CHEAPER (how much) The standardisation of valuation method and data sources typically give more accurate valuations (depending on property type)

MORE ACCURATE - Removes any margins of error typically incurred from human biases and gives an extra layer of confidence on physical/manual valuations It augments humans and help make decisions to increase asset value

NOTABLE PLAYERS



RQR is a rating platform for CRE with a focus on office. It objectively ranks occupier preferences, running costs, and ESG capex planning as a single score. Scores correlate to price/sqft and offer a remediation roadmap to lift the rating.

- > 1000 buildings rated in Paris
- In trial with global leading landlords and valuation players.



Geophy provides an alternative and traditional data platform that helps real estate professionals identify opportunities and associated risks in the multifamily residential property space.

- They look at hyperlocal data, sales comps, benchmarks and value estimates
- Raised \$33m Series B from Index in 2019



Price Hubble provides a data analytics software that delivers machine learning-enabled valuations, predictive analytics and actionable insights in a faster and more transparent way.

- Raised \$34m Series B in June 2021
- Has over 800 customers (agents, developers and banks) across Europe and Asia

Short-term Let (STL) Platforms

How can I tap into the growing STL segment?

– Asset Manager

WHAT IS IT?

Platforms that allow Property Managers to ‘get a handle’ on the phenomenon that is ‘free money’ from AirBnB (and others). Providers typically handle distribution marketing (acquisition), concierge, and review management, and in full-service variants, the cleaning & maintenance as well.

VALUE PROPOSITION

REVENUE VIA VOIDFILLING, LEASEUP, HOTELLING, Increase top line as STL are typically rented out at a rate which is 50%-70% more than the long term equivalent

CONTROL Enables the effective management of STL properties at scale through the use of end-to-end software that provides visibility on all managed properties

OPTIMIZED STL MANAGEMENT AND HAVE HAPPIER RESIDENTS and help guarantee rental yield on a long term basis.

NOTABLE PLAYERS



Used alongside a traditional PMS (Yardi, etc), Lavanda enables a multi-family building to be ‘brought live’ at a unit-level in AirBnB and similar OTAs, and tuned to optimise overall revenue including leaseup, void-filling, and sub-leasing on an ongoing or ad-hoc basis.

- Currently serving 25,000 properties
- Customers include Greystar, Blackstone and Hines among others.



Platform for short-term apartment rentals that feel like a luxury hotel.

- Total 2020 Series A round \$36.4m (Pitchbook). Investors include Lakestar, HV Holzbrinck and Picus Capital
- Grew rapidly from founding back in 2018. They are now in 30 locations, making it the second largest hotel concept operator in German-speaking countries in 2020.



Property management software for hosts on short-term rental platforms like Airbnb and Vrbo

- Recently raised a 50m round (2021) led by Apax Digital Fund,
- Acquired MyVR and Your Porter
- Recently expanded to support other types of property, including multi-unit listings and “aparthotels.”

Tenant Engagement Apps

How can I create a residential space that is highly desirable to my target tenants?

– Asset Manager and Building Manager

WHAT IS IT?

Digital solutions, usually in the form of mobile apps, that are created for tenants within residential buildings and neighbourhood which allows them to actively engage and communicate with their immediate communities (events, services, amenities etc.) as well as with the building management (maintenance, rents, etc.).

VALUE PROPOSITION

RETENTION INCL NUMBERS An increased sense of connectedness and efficiency gains in building management improve tenant loyalty and retention

CONVENIENCE Optimises building management and operations, ensuring a quick way for tenants to report any issues

COMMUNITY Creation of a more vibrant community increases desirability of a residential development, thereby increasing asset value

NOTABLE PLAYERS



MOBILE DOORMAN

Develops white label tenant engagement app for residential communities which increases residents' interaction with their communities while unlocking new revenue streams for property managers.

- Acquired by Zego (a resident experience management company) in 2021
- Over 1 million tenants using the app.



Offers an enterprise-ready, fully-integrated solution to help property managers, owners and homebuilders automate operational processes and have control of all smart devices in their properties.

- Their customers own an aggregate of 2.9 million rental units
- \$2.2 billion SPAC (Fifth Wall Acquisition Corp.)



Rise is a tenant experience and property operations platform that allows for an integrated management for access control, visitors, sensor systems and amenities among others, giving landlords a better portfolio overview and tenants, a better experience.

- Acquired by VTS in Q1 2021 for \$100m
- Customers include Hines and Blackstone

Virtual Tours

Are there other effective ways in which I can conduct a property viewing other than the usual in-person way?

– Lettings Agent, Asset Owner

WHAT IS IT?

Virtual Tours offer an alternative for prospective tenants/buyers to view a property they are interested in without needing to be physically present. In an increasingly digitised world, consumers are becoming more and more accustomed to making decisions remotely, opening up more opportunities for Real Estate asset owners to market their properties and have a wider outreach.

VALUE PROPOSITION

VOIDFILLING - Increase viewing accessibility and tenant reach, helping to find the right tenant quickly and efficiently.

COST SAVINGS AND SAFETY - Be able to conduct viewings remotely and avoid any in-person viewing risks (as in during the pandemic), as well as save costs incurred from in-person viewings

ELIMINATE TIMEWASTING - Increase efficiency by helping prospective tenants become more familiar with the property prior to any in-person viewings, thereby filtering out low quality leads.

NOTABLE PLAYERS



World leader in 3D technology that captures a physical space and transforms it into navigable virtual tour digitally.

- Largest spatial data library in the world
- Digitized representations of more than 10 billion square feet of space from millions of buildings in more than 150 countries
- \$2.9 billion SPAC



Vu City allows real estate professionals to visualise what a new development might look like as well as how it will affect the built environment using augmented reality technology.

- Mapped out all of London's 33 boroughs and have expanded to major UK cities. Clients include Foster and Partners.
- Funding received totals over GBP 8m.



Allows construction workers to build from a hologram which is accurate to 5mm accuracy using augmented reality-enabled helmet.

- Raised a Series A round totaling GBP 20m led by Octopus Ventures

Lead Generation and Funnel Management

How can I fill my property with the right tenant, quickly and smoothly?

– Lettings Agent, Asset Owner

WHAT IS IT?

Software solutions and digital platforms which assist the Real Estate broker or asset owner to market their properties and find potential tenants (or buyers) in a quick and efficient manner. These solutions can offer beyond just lead generation and include other related activities such as lease signing and even physical move-in.

VALUE PROPOSITION

Find the right tenant in a faster, better and cheaper way.

Optimise rental yields and reduce agency costs

For tenants – an easy and hassle-free way to find and move into a rental property.

NOTABLE PLAYERS



Online platform that allows private and social housing landlords rent their property in a faster, cheaper way. They provide services from lead generation, reference check to move-ins.

- Rented out over 175,000 properties in the UK in 2020, making them the single platform with the largest market share of the UK rental market
- Expanding their services to other legally-required landlord activities such as inspections, EPC and insurance.



Centralised letting agent that primarily services institutional landlords. They manage the full funnel from discovery to move-ins and do so in a very operationally efficient way.

- 2,500 units rented out per annum.
- Over 5,000 units from private landlords and 40,000 units from institutional landlords on their platform.

Sensors (IoT)

How can I manage my property at scale in an optimum way?

– Asset Owner, Building Manager

WHAT IS IT?

Sensors and Software systems that automate the collection and analysis of residential assets data such as building temperature, occupancy, amenity and utility usage data and energy consumption for the purpose of maintenance tracking and optimising towards low carbon and ESG goals. The use of sensors and software systems is what effectively can make a building “smart”.

VALUE PROPOSITION

SAVE COSTS - Reduced overhead costs for property, facility and portfolio managers.

INCREASE TENANT RETENTION - Enhance tenant experience by automating environment/ambience control across residential building assets at scale.

OPTIMISE MAINTENANCE SPEND - Ensure timely maintenance and repair of building asset through built-in automated problem alert systems.

ACHIEVE ESG TARGETS - Makes it possible to achieve ESG and low carbon footprint targets through automated and continuous monitoring and reporting

NOTABLE PLAYERS

INFOGRID 

Provides end-to-end IoT sensors solution to help make buildings smarter. Sensors take in various data which is then analysed using AI algorithms.

- Recently raised \$15.5m Series A round which Concrete participated in.
- Infogrid system saves 81% of staff hours saved and 45% of labour.

 **AIRTHINGS**

Manufactures sensors and IoT systems that detect radon and other harmful pollutants and continuously monitor indoor air quality.

- Went public in October 2020 in the Merkur Market initial offering at 263m market cap.

Smart Lockers and Delivery Management

What can I do to increase secure storage space and better manage parcel delivery for tenants?

– Building Manager

WHAT IS IT

Delivery management solutions include both software and hardware-enabled software that allow the property manager to seamlessly manage parcel delivery and other tenant storage needs. Solutions in this space can range from physical lockers whose access can be controlled based on specific delivery times and tenant availability/needs as well as delivery management and optimisation software to ensure successful deliveries at first attempt. Amazon leads this space with their own lockers to manage delivery and collection of Amazon parcels.

VALUE PROPOSITION

REDUCE COSTS - Reduce reception costs and ensure that tenants get their parcels on time and in a safe way, reducing the need for redeliveries.

TENANT RETENTION - Increase storage space and flexibility for tenants and guests in the building, without compromising their living space.

INCREASE SECURITY - Increase safety, security and accountability around parcel management.

NOTABLE PLAYERS



Provider of a smart locker system that allows delivery, storage and collection of parcels from different ecommerce companies including Amazon.

- Zero-emission Delivery technology is 30x faster than current methods



Platform to help connect carriers with recipient of parcel and helps to ensure carriers deliver at first attempt, helping them save costs.

- 250,000 users of 30,000 boxes across Spain and France



Bringme's Residential box are typically installed in entrance halls of resident buildings and allows for Contactless receipt of parcels and meal boxes, increasing tenant convenience.

- They have over 300,000 users and 1,500 customers across all their product offerings.

Access Control

How can I manage access to the building in an easy, safe and secure way?

– Building Manager

WHAT IS IT?

Access Control technology can be in the form of software, hardware or middleware. The aim is to remove the complexity around granting access to the right person at the right time in any given moment. There are many solutions in this space, with different business models. Apple has recently released a feature that allow mobile phones to interface with access control systems, potentially changing the landscape of value-adding companies in this space.

VALUE PROPOSITION

SAVE COSTS - Reduce operational overheads due to automation of access security system

INCREASES TENANT RETENTION - Improve building design and create a seamless experience for both tenants and building staff.

ENSURES SAFETY AND COMPLIANCE
Ensures compliance with safety and security protocols by having end-to-end visibility and tracking who accessed what on a continuous basis.

NOTABLE PLAYERS



Swiftconnect operates as a middleware layer between the wide ranges of physical devices (doors, gates, etc) and user management platforms (co-working, HR, etc)

- Recently raised a £7m seed round which includes JLL Spark



Provides a full suite of products to help in building operations, most notably smart access control.

- Raised a total of \$327m before going public at a \$1.56bn market cap
- 1 out of 10 new apartments in the US are being built with Latch



Hardware and Software (Middleware) to digitally and seamlessly manage access control in residential and commercial buildings.

- They are in 65 countries and have opened over 100 million doors in 2020
- Raised \$5.8M in Series A round in May 2018 from Iron Gate Capital

ESG

How can I operate the building in a way that achieves my ESG and low carbon targets?

– Asset Owner and Operator

WHAT IS IT?

Software and Sensor systems that automates the collection and analysis of portfolio-wide ESG data for benchmarking, target setting and reporting.

VALUE PROPOSITION

Automated ESG reporting.

Reduced overhead costs for property, facility and portfolio managers.

Tracked progress on policy requirements and internal sustainability goals.

NOTABLE PLAYERS



SaaS platform for collecting, managing, disclosing and acting upon CRE ESG data.

- *Global leader, active in over 40k commercial buildings representing 9bn ft² across 75 countries.*
- *See Case Study on the next page*



Deepki accelerates transition towards net zero and sustainability, powered by ESG and data
 Total funding amount \$11.4M (last round €8M from Statkraft Ventures on june -2019, series B)
 Key customers – French players (Bouygues, icade, BNP Paribas, Eiffage, Groupama, Catella) and much more
 Estimated revenues - \$19M



Environmental management platform that tracks, monitors, and predicts project environmental risk.

- Raised \$2,4M in seed round from Green Angel Syndicate in August 2021

Key clients – Bouygues UK, Landsec, John Perkins, Canary Wharf, Multiplex Construction, Berkeley Group
 Estimated revenues - \$9M

Pre-fab/Modular

How can I build a good-quality home in the quickest, most efficient way?

– Asset Owner and Operator

WHAT IS IT?

Pre-fab and Modular homes offer an alternative way to build houses that have more potential to be economical and environmentally friendly. The sections of a pre-fab home are manufactured off-site and delivered to the construction site for installation, significantly saving time and money.

VALUE PROPOSITION

SAVE COSTS - Allows for a cheaper way to build good quality and well-designed homes

SAVE TIME - Reduction of construction time and labour costs pave the way towards solving the housing shortage all over the world

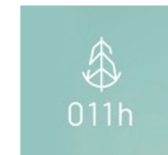
ACHIEVE SUSTAINABILITY GOALS - Modular homes are generally more environmentally-friendly, non-disruptive and minimises construction waste

NOTABLE PLAYERS

modulous

Develops digital solutions to bring affordable and sustainable housing thanks to optimised supply chain instead of asset-ownership.

- Raised £5M from Blackhorn Ventures, CEMEX Ventures and GroundBreak Ventures in June 2021.



Low-carbon wood smart houses based on digitalisation of the construction process.

- Raised €10M in dec 2020 from A/O Proptech and Fundamental.



Use Digital Twins to design and manufacture modular and sustainable buildings.

- Raised €2.6M from Karista in October 2020

Alternative Data Sources

“How can I leverage data to help me make better decisions and gain a competitive edge?”

– Asset Manager

WHAT IS IT?

Software or technology that gives insights on critical information that is key to making business decisions. In the more advanced forms, the insight is often derived from novel data sources and uses machine learning and other forms of AI to identify patterns and predict eventualities.

VALUE PROPOSITION

MAKE FASTER DECISIONS Data-driven insights leading to faster, more informed decisions.

LEVERAGE EXISTING DATA Extract value from internal and external data-sources.

GAIN COMPETITIVE ADVANTAGE Optimise key levers (pricing, market, location, usage) and gain competitive advantage

NOTABLE PLAYERS



Alternative data and intelligence platform that provides unique, point-of-interest data to drive exclusive insights for real estate, retail, hospitality and insurance sectors.

- Customers and partners include JLL, PropertyGuru, CoreLogic, etc.



Provider of comprehensive, point-of-interest dataset. Started in the US but are now expanding into the UK

- Data covers 400 categories in 188 countries
- Customers include TripAdvisor and Carto

Utility Bundling

How can I make it easier for my tenants to pay and manage their utility bills?

– Asset Owner and Operator

WHAT IS IT?

Solutions to easily aggregate and manage utility usage and bills.

Rewrite 2: Utility bundling platforms aggregate and manage utility usage bills to enable tenants to just have one bill per month as well as an easy way to access and track their utility usage. The data from these platforms are also vital in achieving ESG goals for the asset owner and operator.

VALUE PROPOSITION

MORE EFFICIENT MOVE IN/MOVE OUT - Simplifying the process of managing and paying for household bills means the moving-in and moving-out processes also become easier.

TENANT RETENTION - Increases tenant satisfaction and retention, especially for those living away from home for the first time (such as students)

MORE EFFECTIVE DATA GATHERING - Potential to have a one-dashboard overview of utility usage, allowing for more visibility on overall usage.

NOTABLE PLAYERS

- oneutilitybill.co** Customisable bundling of bills through a single monthly payment.
- Raised £1.6m from DSW Venture and North East Innovation Fund in April 2021. 3500+ customers.
 - Revenue model - Management fee of £4.00 per property, per month and £4.75 per person, per month.



- A digital home manager, taking care of chores, bills, maintenance and administration.
- Raised £1M from Concentric back in July 2019.

Deposit Replacement

How can I protect my property without putting up too many financial barriers?

– Asset Owner and Operator

WHAT IS IT?

Deposit Replacement often come as tech-enabled insurance product that allows a potential tenant to have the option of not having to outlay the cash for a deposit, while giving the landlord peace of mind. Success of this product often lies on the ability of the algorithm to determine the pay-out risk for each applicant.

VALUE PROPOSITION

INCREASE OUTREACH TO POTENTIAL TENANTS - Less initial cash outlay for the tenant, so tenants can secure a place without the deposit barrier.

LANDLORD PEACE OF MIND - More protection for the landlord, with deposit replacements cover for a longer period and are typically underwritten by large insurers.

EXPAND TO OTHER REVENUE-OPTIMISING PRODUCTS - Some schemes also include rental guarantee.

NOTABLE PLAYERS

 mashroom

End-to-end property letting services to landlords and tenants without use of letting agents.

- Raised £4M on August 2020 from UK government's Future Fund.
- Revenue model – multi-packages from free to service-based price for property listing on platform, tenant management, and property management.

 Garantime

Guarantor-free rentals where the guarantor is replaced by an annual premium of 3.5% of the rent paid by the tenant.

- Raised €4M in a Series A round in September 2020.

 Fronted

Offers tenants to pay for their deposit and reimbursed on a bank-loan model with an APR of 19.5%.

- Raised £1M from angel investors (ex-Monzo's employees) in May 2021
- Revenues are generated through the interests of the deposit loan.

Tech-enabled Inspection

How can I monitor my residential assets remotely and in real time?

– Asset Manager and Operator

WHAT IS IT?

Software and hardware systems that monitor building assets remotely through the use of drones, cameras or sensors for the purpose of property inspection and maintenance.

VALUE PROPOSITION

QUICKER RESPONSE TO ISSUES - Be able to remotely inspect and monitor residential assets, allowing for quicker responses to issues while reducing overhead costs

OPTIMISE MAINTENANCE PROCESS- Remote inspection systems typically gather crucial data which can eventually be used to build maintenance optimisation models

MAKE QUICKER DECISIONS - Faster inspection done in real time means being able to make quick asset management decisions

NOTABLE PLAYERS



Spotr (Netherlands) inspects buildings automatically with Artificial Intelligence on images collected from various sources.

- *Raised €2.5M Seed funding round in June 2021 from Volta Ventures, InnovationQuater and Concrete Ventures .*



SatelliteVu (UK) monitors the temperature of any buildings or pipelines in real time to determine valuable insights into economic activity, energy efficiency and carbon footprint.

- Raised \$5M seed funding in April 2021, from Seraphim Capital and A/O Proptech and others
- Revenues are generated from prescriptive analytics-based insights from the data collected. B2B focused.

Generative Design

What should I build?

– Property Developer

WHAT IS IT?

A design method that takes a design concept and generates other alternative designs based on some pre-determined set of requirements and parameters, with an aim to improve upon the first initial design. Today, this is typically done through the use of software technology as well as the use of AI algorithms to speed up the process.

VALUE PROPOSITION

FASTER - Quickly optimise the design of a building or interior to suit the precise needs of the target occupants

ENHANCE CAPABILITIES - Increase productivity in the whole building construction process and augment design and building capabilities of architects and engineers.

INNOVATE - Potential for design to go beyond the human imagination through parametric or computational architecture

NOTABLE PLAYERS



Spacemaker, (Norway) - a cloud-based AI software, for teams to collaborate, generative design and analysis of real estate sites.

- Acquired by Autodesk in November 2020 for €202M
- Company now covers 7 locations of which are 6 European cities and has built several partnerships through 2021 including Yit, one of the largest northern European construction companies.



Archistar, (Australia) – AI-based software that helps property professionals to more quickly find development sites, assess for feasibility and generate multiple architectural design strategies

- Raised A\$6M (£3M) in April 2021 from Skip Capital at Series A.
- Archistar won state government contracts and has large property developers using their platform

 concrete