



## Introduction

We are pleased to introduce the sixth annual edition of our international Real Estate Innovations Overview (REIO). Throughout the years the interest in innovation in the Real Estate and Construction industry has grown considerably. The COVID-19 pandemic has demonstrated the need for real estate professionals and companies to remain agile, for which innovation is key. KPMG aims to provide insights into the innovations that will shape the Real Estate and Construction industry of the future.

Our previous international editions already incorporated innovations spread around the globe; this year we have further extended the list of innovations and included insights into the added value of innovation for business by means of specific use cases. Please refer to the section <u>A. Innovation Trends</u> and <u>C. Factsheets</u> for more information.

This year's issue has been co-created with KPMG real estate, construction and innovation experts from 18 KPMG member firms all over the world. Combining their knowledge and experience, this edition has grown to provide an international overview of Real Estate and Construction innovations. This edition demonstrates that true innovation has a different meaning in various parts of the world. It also shows that different trends in innovations serve different needs. This overview underlines the dynamics within the Real Estate industry, containing a record amount of nearly 740 innovations. Innovation is essential, and the need for the industry to embrace innovation in long term business strategies is inevitable.

The aim of this document is to provide its readers insights into the current innovative developments in the Real Estate and Construction industry: what is going on in the world of innovation, what trends are driving change and how can innovation be of real added value to business. In the first section of this overview we elaborate on the key success factors for leveraging innovation and the way in which way KPMG can support Real Estate and Construction companies and society in doing so. Subsequently, we show the most important innovative trends in the Real Estate and Construction sector and showcase various practical examples of innovative solutions. The central part of this publication is our structured list of innovations, including key company info and characteristics such as the position in the Real Estate value chain and the respective field of expertise of a company. In the final section, we provide insights into several PropTech Ecosystems around the globe that contributed to the realization of this publication.

Please note that this overview can never be complete due to the nature of its existence, as new innovations will continue to change the sector every day. In our attempt to keep up with market developments and trends, please feel encouraged to reach out and inform us about new innovations or additional information about the listed companies. Please find our contact details on the right bottom corner.

We are confident this overview will be an insightful read for you.

On behalf of our international team, Sander Grünewald

KPMG Netherlands - Global Head of Real Estate Advisory

Disclaimer: KPMG has no business interests in the innovations and start-ups that are included in this document and is not liable for the actions of these companies. KPMG did not assess their (financial) continuity, quality and credibility. The fact that they are included in this document does not imply recommendation by KPMG. This document is based on publicly available information only and as a result not exhaustive. All companies included in this publication have been requested for permission (opt-out).

If you would like to add or update a listed innovation, please send an email to NL-FMKPMGRealEstateAdvisory@kpmg.nl



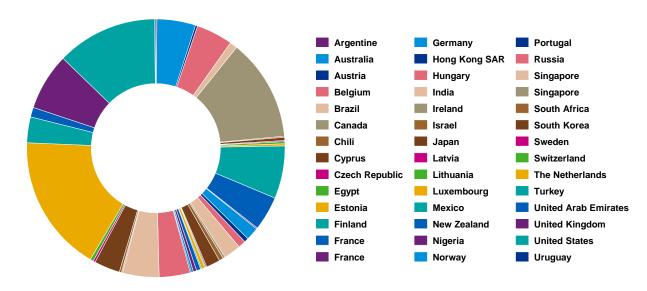


# Executive Summary (1/2)

For the past two years the Real Estate Innovation Overview has gained an international character, which has further increased in this years edition. It features a broad scope of innovations, including companies from **42 Countries/Territories**. The record amount of incorporated innovations (742) has resulted in a balance between the various countries and territories, including a larger presence of the American continent.

To provide better insides into the specifics of all innovations, **40 Fields of Expertise (FoE)** have been included. These help to describe a company's core competence. Next to the FoE, the innovations' position in the **Real Estate Value Chain** has been included as well, consisting of six key positions: *Sourcing, Design & Planning, Construction, Property and Facility Management, Transaction and Leasing and Investing and Financing.* 

## Distribution of innovations per Country / Territory



The goal of the Real Estate Innovations Overview is not only to showcase the various innovations in the Real Estate sector across the world, but also to inform professionals on the latest trends in local and international markets. While the pandemic has an evident impact on the importance of safety and hygiene, integrating our physical and digital environment has become pivotal. Our industry moves towards a greater focus on end-to-end user experience in which a building becomes more than a place to e.g. live or work; transforming to an integrated environment in which the provision of services complementing real estate assets is central to living, working and building. Additionally, ESG (Environmental, Social, Governance) measures are already a key topic for many companies in the industry; sustainable and ESG innovations may become essential for true operationalization of ESG and sustainability.

All in all, innovation is recognized as an inherent part of business strategy. We conclude that the industry is transforming for the good and innovation plays a key role to support and accelerate change in any way necessary.



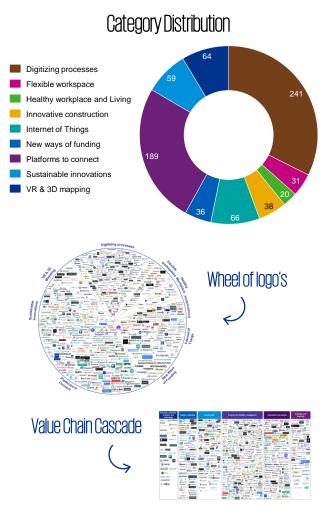
# Executive Summary (2/2)

To classify the innovations, we have used nine categories:

- The first category, <u>digitizing processes</u> consists of innovations that digitize traditional processes. This enables the processes to analyze more data, be accessible online and real-time while making them more efficient and user friendly.
- Flexible workspaces entails innovations that create the opportunity for Real Estate to be flexible in time, location and environment. Workplaces can be allocated 'anywhere' and 'anytime'.
- Innovations in <u>healthy workplace and living</u> focus on the physical working environment, ranging from air purity to office treadmills for walking meetings, optimizing employee satisfaction, health or productivity.
- Innovative constructions contribute to new ways of constructing Real Estate. This may
  include architectural benefits or enhancements in construction materials and processes (e.g. 3D
  printing, modular building and wooden skyscrapers).
- Internet of Things (IoT) applies to innovations that connect multiple devices, systems and/or buildings with the aim of making Real Estate more efficient, sustainable and user-friendly.
- New ways of funding are innovations that aim for making funding less complicated, more accessible and/or increase liquidity for both the demand and supply side.
- Platforms to connect allow users to connect and interact with stakeholders (e.g. buyers/sellers, owners/tenants, or construction parties and maintenance). These could essentially result in optimized communication, collaboration and knowledge-sharing.
- Sustainable innovations focus on aspects such as ESG, energy savings, water-efficiency and circular economy in order to sustain our natural resources. Drivers may be regulatory changes, sustainability agendas or cost reductions. Please also have a look at page 20.
- Virtual reality and 3D mapping replicates an environment using computer and/or drone technology or allows users to create an alternative reality (e.g. BIM)



Skip to page <u>28</u> to discover practical examples of innovations for each category. Explore the real value add of innovation for companies in the industry!





## Find our interactive innovation dashboard online!

KPMG aims to provide relevant insights into the Real Estate & Construction sector. We intent to shed light on a variety of innovations and inform all stakeholders in the market about relevant developments that (may) drive the future of Real Estate.

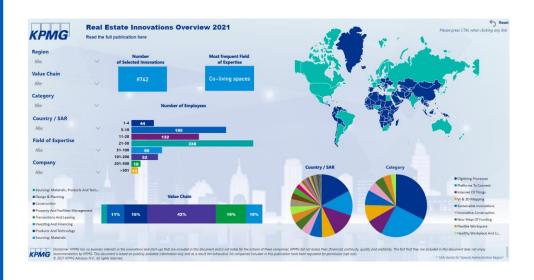
Besides this annual publication presenting hundreds of innovations, we have developed and included an interactive Real Estate & Construction innovation dashboard.

This dashboard provides accessible insights in key statistics of all innovations listed in the sixth edition of the Real Estate Innovations Overview. Hence, you'll be able to create personalized insights on a selection of individually adjustable parameters.

We encourage you to have a look and try it out yourself!

Enjoy!

## A preview of the interactive innovation dashboard!





Please scan or click the QR-code and discover the interactive Real Estate & Construction innovation dashboard powered by KPMG



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# A. Innovation Trends

The Real Estate has traditionally been characterized as conservative. To an increasing extent, innovation plays its part by contributing to a gradual change of existing business models. The recent pandemic has proven that a change of external market circumstances may happen without a warning, underlining the need for business model agility and openness to innovation.

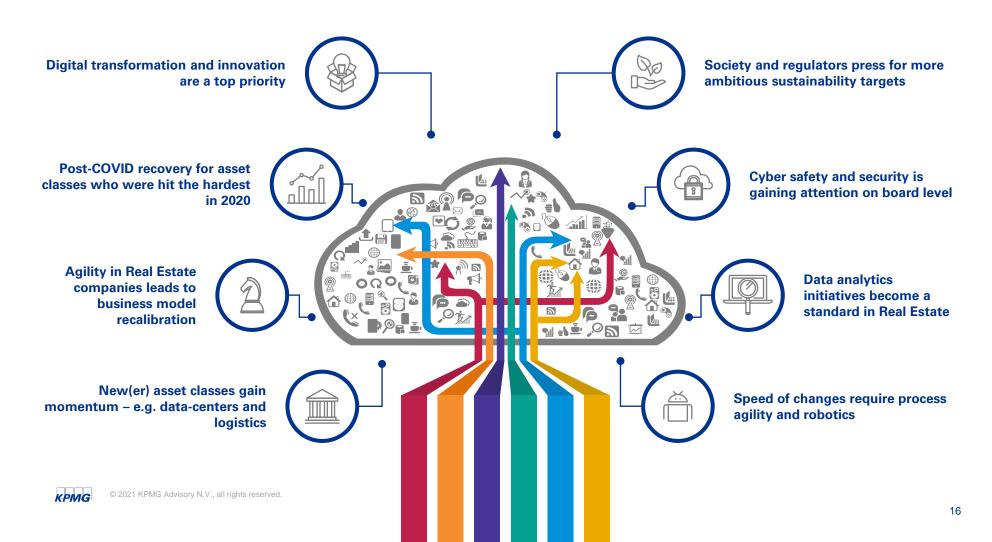


# A bird's eye perspective on post-COVID-19 recovery in the international Real Estate market



# Innovation and agility are pivotal to remain relevant in current market conditions and to future-proof business continuously

KPMG real estate experts have identified a set of key trends for 2021/2022, driving the importance of innovation within the industry



# These trends are leading to an acceleration in digitization, evident by workplace innovation in the short-term



## Real Estate digital transformations



Integration & retro-fitment of IoT-based solutions in buildings to accelerate access to real-time data and visuals



Use of digital twin technology grew significantly, combined with a 3D model of the facility



Globally, brokerage firms are using virtual reality for realtime space visualization and 360° tours



Increased reliance on robotic process automation (RPA) for processing contracts and management



Onset of cloud-based platforms, for virtual commercial Real Estate transaction/deal related services



## Spotlight on workplace changes



Remote working became the norm which shifted the focus of companies towards space occupancy management to offload excess leased spaces



Intensified the urgency for energy efficient buildings resulting in increased adoption of energy management information systems



Automation through IoT sensors, and remote monitoring **software** applications surged to reduce the need for on-site staff



COVID-19 has fueled the use of touchless entry systems which rely on facial or voice recognition and biometrics to ensure safe and healthy ecosystem



# A fully integrated physical and digital environment is expected to become a must-have within the industry



## Safety and hygiene

- For both newly built and existing real estate, there is an increased focus on sustainability, health and wellness
- Wearables and monitoring devices ensuring safety and social distancing may become more important
- UV-light equipped robots to ensure consistent cleaning cycles and to avoid human error, are arising
- Data driven cleaning services based on usage of space become relevant in the new commercial real estate reality



## Integrating physical with digital

- Cutting-edge technologies such as Al-powered tools, virtual reality, robotics will continue to change the industry by seamlessly integrating the physical and digital environment
- Tech will be instrumental in automating Real Estate processes and enhance customer expectations



## User experience

- User experience will become a core value for developers, property manager, owners and brokerage firms, transforming from product push to client first concepts
- For optimizing tenant experience, data management and compliance will be key
- Through data, operational efficiency can be achieved, and the right customer can be targeted and matched



# Construction and architectural innovation

- Net-zero carbon building goals will act as a catalyst for sustainable building materials
- Off-site construction management using cloud-based software will enable remote collaboration
- Widespread adoption of 3D printing and modular construction



# Innovations can enhance and complement existing real estate, resulting in a 21st century Amsterdam Canal House

In the spotlight



connect your

stakeholders, streamline

processes and reduce

management costs.

with irregular shapes customization, 3D printed building parts



### **Digital Twin**

Digitalize the user experience of existing (ancient) buildings before starting the construction to optimize user experiences, tenant safety or reduce construction costs



## Safety & security

Safety & security Manage facilities remotely in terms of user rights, access schedules and user groups. Opening doors any time, any where.







# Making sustainability real throughout the value chain

In the spotlight

Sustainability and innovation are becoming increasingly intertwined. Throughout the real estate value chain, innovations are providing the answer that real estate investors, designers, real estate development companies, construction companies, users and property managers are looking for:

Practical examples of solutions to overcome the sustainability challenges of today, which are all to be found in this issue of the REIO.



**Sustainability risk assessments**, to base portfolio selection on sustainability criteria

Real estate asset tokenization, making sustainable investments more accessible for the public

Collective green investments in solar and win energy to supply neighbourhood energy demand

INVESTING & FINANCING



Smart building sensors supporting optimization of building

performance

Digital twin technology and 3D/BIM modelling of assets improving sustainable design

Parametric design, optimizing design choices based on sustainability demands

choices



### **Materials passport**

for circular real estate solutions and improving sourcing of building materials

Construction material based on reused waste materials

Sustainable insulation solutions



Circular building systems for better re-

Integrated solar panels in roofing and facades

Modular wooden construction

Low carbon materials, such as CO<sub>2</sub>- injected concrete



Innovative cooling technology optimizing energy usage

Insights in **thermal data of buildings,**visualizing energy
escaping through the
building

Real time energy performance monitoring, providing real insights

Al tech for optimizing energy consumption of buildings

DESIGN &
PLANNING

SOURCING: MATERIALS, PRODUCTS & TECHNOLOGY

CONSTRUCTION

PROPERTY & FACILITIES MANAGEMENT





# B. KPMG & innovation

KPMG understands the importance of innovation. KPMG is actively involved in supporting Real Estate professionals with all aspects of the innovation process. To stay on top of trends in the Real Estate and Construction industry, KPMG is a founding member of Global PropTech.



# How to implement innovative solutions in your running business?

## Collect Ideas



- Enhance your employee engagement and improve your everyday operations by challenging the entire organization to crowdsource and collectively enrich ideas
- Host an external innovation challenge to collect proven solutions from startups and alike and adopt these collaboratively with your in-house experts
- Connect to your entire supply chain by jointly realizing specific innovations to collectively benefit from improvements on e.g. safety, sustainability and/or operational excellence

## Accelerate Solutions



- Apply Design Thinking, Lean Startup and (Scaled) Agile best practices to design a tailored innovation process fitting your organization
- Create step-by-step guides for your colleagues to experiment with technologies, test new business models and verify customer demand
- Host collaborative (online) sessions with SMEs and/or enthusiasts to advance multiple ideas simultaneously and grow innovation experience and awareness more effectively

## Generate New Value



- Anticipate on the latest trends, technologies and startups and reinvigorate your innovation strategy
- Create a transparent innovation portfolio and focus ideation efforts on underexposed themes
- Measure the results of innovation by determining the Brand, Business and/or Culture Value of each project

Eager to find out more?

Get in touch for an (online) innovation maturity assessment for your organization or to participate in our three-day innovation bootcamp!



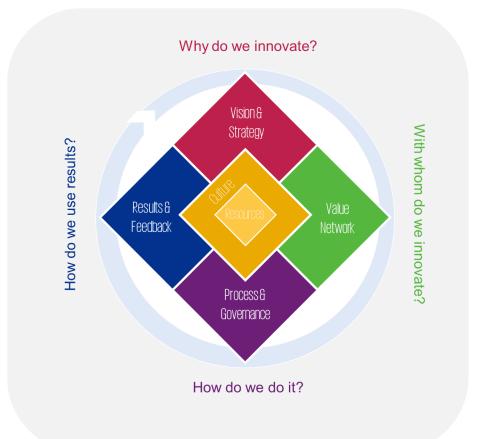
# Our Innovation Maturity Assessment helps real estate businesses kick-start their innovation efforts

Why do you innovate and how do you do it? With whom do you innovate and how do you use the results of innovation?

Those questions and their answers are central to our innovation capability maturity model, which covers all the aspects of innovation necessary to enable successful and efficient innovation. This empirically tested model forms the basis of the innovation maturity assessment, focusing on the six enablers of innovation:

- Vision & Strategy
- Value Network (incl. Ecosystem)
- Process & Governance
- Results & Feedback
- Culture
- Resources

In our assessment, you and your employees are actively encouraged to share their perspective and think about the different innovation aspects, their maturity and priority. This rich feedback can be collected online or in a collaborative workshop and serves as valuable input for decision-making and determining next steps to improve your innovation efforts. Whether your ambition is to industrialize or to offer fully circular products and services, this feedback will structure the dialogue about innovation and help you focus on optimizing the key enablers quickly and iteratively.



# Our environmental-friendly reads

Scan or click the QR-code / headset!

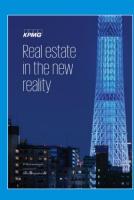


## **Visioning the Future of Work**

Investigating how a future proof Real Estate strategy can lead to an effective workplace design, and the important role Real Estate managers play in creating the conditions for optimal performance in the 'new reality'.







## Real Estate in the new reality

KPMG Real Estate practice leaders from around the world, share their insights and analysis on key trends and developments.

Such as the digitization of work; the transformation of physical retail; and the shift towards ESG considerations.







## KPMG Data strategy survey: Better data, better decisions

KPMG surveyed 188 real estate leaders and technology professionals, in order provide a deeper understanding of how commercial real estate companies can progress on their enterprise data management journeys.







# Or listen to one of our podcasts or webcasts!

Scan or click the QR-code / headset!



## Talking Asset Management with KPMG

Asset managers are facing an environment of enormous challenges and opportunities. Listen to the KPMG Talking Asset Management podcast series ESG and sustainable investing, regulatory, operational, and valuation news and trends.





## KPMG Global Real Estate Conference: Insights

The Global Real Estate conference covers a range of topics, featuring industry experts and KPMG thought leaders, as they address key challenges and opportunities facing the sector today





## Smart buildings, Smarter decisions

Investigating how smart building technology can contribute to an outstanding customer experience, as well as drive improved decision-making for owners and operators in various segments of commercial real estate.







# C. Factsheets

Our factsheets showcase real life business challenges tackled by specific solutions directly derived from innovations found in this publication. We present a factsheet for each category, demonstrating the potential impact that the innovative solutions have for Real Estate professionals.









## Digitizing processes

## **Business Challenge**

Although many people are used to having most tasks done digitally and having an unlimited world of data at their fingertips, many (Real Estate) companies often face situations and own procedures which are still performed manually. Companies struggle with implementing data solutions, trying to reap benefits of the digital world. This is due to a variety of reasons, such as having a legacy of systems which make integration of new solutions harder. Another reason is lacking resources to correctly gather and analyze data. Moreover, most firms use data to drive insights on financial analysis, while strategic decision making is less often a goal. Let alone tenant experience, which is rarely an aim at all.

Not utilizing company data to its fullest comes at the cost of efficiency, lacking insights for decision making and ultimately, lagging behind the competition.

#### **Solution**

Data Analytics, Al and Machine Learning | Al or machine learning can facilitate digitizing processes by automatically collecting and

In the market KPMG observes that only analyzing data is not enough, a solid foundation is crucial and requires a combination of a for a sustainable data management program. For more information see: Data strategy survey: better data, better decisions

## **Potential impact**









**Enhanced decision making** 

Real time and more in depth insights into running projects or processes

Increased efficiency and cost 
Increased customer or tenant reductions

satisfaction







# Flexible workspaces

### **Business Challenge**

As organizations begin to plan their return to (shared) workspaces, a challenge is to enable a hybrid-workplace model that combines the aspects of remote and in-office working. Challenges related to modifying or adjusting seats, and workstations to ensure flexible arrangements could also mean deciding on situations such as:

- Impact on working culture and satisfaction
- Staff satisfaction and needs
- Optimal collaboration models

#### **Solution**

Flexible workspace providers and platforms | Flexible workspace providers offer solution which respond to the need for office space on demand; working from various locations at any time becomes reality. Companies are no longer obliged to facilitate in large communal offices to meet as they can empower employees by giving them the choice of where to work. This could be the traditional office, working from home, or through an external flexible workspace platform. Flexible workspace platforms connect supply of excess workspace to demand for additional needed space, thereby optimizing the use of existing assets.

KPMG observes that a hybrid and tailor-made model combining flexible workspaces and traditional corporate workspace is considered by many employers, in order to adapt to the changing needs of the modern day employee. For more information see: <u>Visioning the</u> Future of Work

## **Potential impact**

o → o O ← O

Optimize office space utilization



**Hybrid work environments** 



Office space on demand



Ability to scale instantly on demand

Do you want to reap the possible benefits and incorporate data analysis into your organization, and are you curious what insights KPMG can provide? Please reach out to your local KPMG contact or find contact details <u>here</u>.







# Healthy workplace and living

### **Business Challenge**

The COVID-19 pandemic has demonstrated the importance of healthy and safe workplaces. While starting to return to the office work space, employers have to deal with new insights in health requirements to create comfortable and safe environments for their employees and ensure their peace of mind. Specifically, dealing with challenges such as distancing, clean air, and proper ventilation to maintain a healthy work environment. This involves connecting multiple stakeholders like tenants and landlords, the tenants' employees and external service providers like cleaning companies or suppliers.

#### **Solution**

Robotics, Biometrics, Al and IoT Sensors | Sensors to monitor for air pollutants, ventilation speed or humidity, autonomous

KPMG observes that robots and touchless entry systems may help facilitate the shift to the new normal, especially for places that

## **Potential impact**









mitigation

Smart access control and risk Remote facility management

**Reduce cleaning costs** through sensors and robots Safer and healthier working conditions







## Innovative constructions

## **Business Challenge**

In an ever-changing world the construction sector has proven to be fairly conservative. Several challenges within the construction sector are becoming increasingly urgent. The productivity increase in the construction sector has been lagging in comparison to the larger economy, the construction sector is facing high failure costs, raw material costs have increased, labor shortages are worsening and craftsmen are becoming scarce. All the while the demand for affordable housing is structurally growing. Additional pressure from stakeholders, due to environmental concerns, is driving a call for change. Specifically for the construction sector this focuses on the negative impact on the environment through emissions, the production of large waste streams, and the part played in the depletion of natural resources.

#### **Solution**

**Modular Construction** | Standardized components of a building are produced in an off-site location under controlled plant conditions, before transporting the components to a final location where they are assembled. Components are standardized, therefore construction is faster and can be scaled more easily, while still allowing to build personalized and unique buildings.

KPMG observes that transitioning to modular construction is often accompanied by the need for a digital transformation. We find that modular construction is most effective and efficient, when data, robotics, and technology drive process improvement. Focusing on standardization regarding design, production, and realization, while allowing for personalization through modules usable in different configurations.

## **Potential impact**



Increased speed, productivity, efficiency and quality of construction



Limitation of weather constraints due to off-site construction



Improved forecasting and predictability, thus reducing failure costs



Reduced waste and the need for scarce resources, due to circular utilization.

Do you want to reap the possible benefits and incorporate modular construction into your organization, and are you curious what insights KPMG can provide? Please reach out to your local KPMG contact or find contact details here.







# Internet of things

### **Business Challenge**

The pandemic has made enterprises realize that the possibility of acquiring insight by being on site is not always a given. Without remote access and control, assets might become inaccessible or inoperable resulting in increased costs or an inability to provide the right service. Moreover, an inability to access the right data may result in erroneous decision making. Internet of Things (IoT) technologies, whether it's sensors or data systems, is believed to be the crucial technology to overcome challenges related to service delivery. Additionally, providing the ability to seamlessly carry out business operations, and increase efficiency due to fast and accurate measurements.

#### **Solution**

**IoT Sensors, Platforms, Applications** | Organizations have the ability to embed camera, sensors, actuators, software or other applications to existing infrastructure to create a connected and automated world; one that can be monitored and analyzed on a real-time basis. Moreover, this creates the opportunity to take preventive and detective measures. Note that the Internet of Things is already an advanced innovation and that many applications – e.g. pipes, lights and plants – can complement your online domain

KPMG observes that post-COVID, IoT solutions will become indispensable for companies to manage organization and workforce. As in a world in which physical presence is becoming less off a norm, remote access and insight will be a prerequisite for doing so.

## **Potential impact**



Reduce operating and maintenance cost



Optimize facility management/building systems



Real-time security and survelliance



Data insights of segregated facilities through seamless integration

Do you want to reap the possible benefits and incorporate data analysis into your organization, and are you curious what insights KPMG can provide? Please reach out to your local KPMG contact or find contact details <u>here</u>.







# New ways of funding

### **Business Challenge**

In the traditional way, financing any Real Estate transaction has been limited to a limited number of channels, making access to finance rather challenging. Consequently, this has impeded smaller investments such as those originating from non-professional investors. Besides access, the process of acquiring Real Estate often comes with plenty of challenges, right from selecting a property, to finalizing a broker (for selling and purchasing) and a mortgage lender to finance the purchase. The process is complex due to the many parties involved and possible issues related to the expensive and time-consuming process of underwriting loans due to changing lender guidelines and rates.

#### Solution

**Digital platforms using AI or blockchain** | Digital RE platforms leverage big-data and AI technology to provide services related to title operations, closing deals, escrow services and other facilities like mortgages and shopping for insurance. These platforms have integrated all services into a single digital solution thereby eliminating commissions and excess cost for consumers. Moreover, platforms using blockchain can provide access to the Real Estate sector for all levels of society by tokenizing the asset or portfolio and removing the minimum investment hurdle.

KPMG observes that the Real Estate sector benefits from technological upgrades such as loan automation, digital leasing, and online nvestment platforms. Each of these innovative solutions in various parts of the value chain contributes significant value to the efficiency of Real Estate industry by decreasing cost and simplifying deals, enhance communication and customer experience.

## **Potential impact**



Enhance customer interaction and accessibility



Predictive modelling offers accuracy in operations



Improve workflow and scale with ease



Speed up transaction/ Improved processing time

Do you want to reap the possible benefits and incorporate data analysis into your organization, and are you curious what insights KPMG can provide? Please reach out to your local KPMG contact or find contact details here







## Platforms to connect

### **Business Challenge**

Technology is playing an increasingly important role in our daily lives. Connecting efficiently with other stakeholders in the Real Estate value chain becomes more and more critical. This requires professionals to have the ability to communicate instantly and provide accurate and up-to-date information. Communication through traditional modes such as phone or email are no longer sufficient to provide the required speed and hence there is a need for additional and widely accessible platforms.

#### Solution

Collaboration platforms | Platforms which connect several stakeholders into one digital environment enable smooth collaboration and communication. Moreover, these can provide a market place for supply and demand where the need for middle man disappears and a service provider can communicate directly with the requestor (e.g. tenant), thereby paving the way for introduction of new and innovative business models.

In a world in which digital communication is becoming the norm, and efficiency, safety and hygiene are of paramount importance, KPMG observes that digital collaboration tools will continue to play a pivotal role in ensuring seamless workflow.

## **Potential impact**









Enables remote collaboration

Real time and more in depth insights into running projects as well as processes

Increased efficiency and cost reductions

Seamlessly connecting supply and demand

Do you want to reap the possible benefits and incorporate data analysis into your organization, and are you curious what insights KPMG can provide? Please reach out to your local KPMG contact or find contact details here







## Sustainable innovations

## **Business Challenge**

Long-term benefits of integrating ESG-efforts into business are more evident than ever. Organizations get evaluated by clients and challenged by society on their carbon footprint. The industry is still struggling with prioritization of ESG on the executive agenda. At the same time, public opinion keeps shifting and regulation becomes more strict (i.e. for asset managers), in particular at the end of the current COVID period where Real Estate owners are pushed to deliver on their promises regarding ESG, making it a top priority.

#### **Solution**

**Embedded sustainability** | There are several solutions available within the Real Estate value chain. Real estate owners and occupiers are able to reduce carbon footprint by increasing utilization efficiency of Real Estate through sensor-based technology. Investors are able to implement these technologies on a large scale, driving the change towards sustainable Real Estate. Moreover, sustainable or re-usable materials and circular Real Estate help improving carbon footprint, i.e. with help of a materials passport.

Embedding circular models and implementing ESG solutions in different aspects of a Real Estate or Construction company is essentia to reduce our industry's carbon footprint in the long-run while at the same time providing favorable opportunities to stand out towards clients and investors.

## **Potential impact**



(





Ahead of regulatory changes

Building connections with clients

Increasing business performance

**Improving society** 

Do you want to reap the possible benefits and incorporate data analysis into your organization, and are you curious what insights KPMG can provide? Please reach out to your local KPMG contact or find contact details here







# VR & 3D mapping

#### **Business Challenge**

Digitalization has further accelerated through working from home. On-premises tours are no longer a must have and architectural viewings take place in the online domain, 24/7 globally. Marketing properties, showing photos and videos are more commonly replaced by immersive experiences and 3D visualizations and tours. Property managers need to invest in their capabilities and technology to ensure their properties stand out – everywhere and continuously.

#### **Solution**

**3D mapping & VR** | Adoption of virtual reality or 3D mapping technology for providing digital walkthrough allows prospective tenants, buyers or manager to carry out a full property viewing/inspection online. The technology merges the images and videos of a property to create a digital space that is practically indistinguishable from the real property. This potentially provides new exclusive experiences for investors, and hence the chance to differentiate from competitors. Moreover, pre-construction architectures can be viewed with minimal clicks. Herewith, constructions can be viewed ahead of laying the first brick.

#### **Potential impact**



Enhanced customer experience



Flexibility in presenting a property to different tenants



Wider reach with potential audience



Under construction inventory captured by creating photorealistic interiors

Do you want to reap the possible benefits and incorporate data analysis into your organization, and are you curious what insights KPMG can provide? Please reach out to your local KPMG contact or find contact details <u>here</u>.



## Reader's guide for this overview

Since our overview is an extensive guide of Real Estate Innovations worldwide, the below overviews provide you with some information on the overall structure as well as some background on key statistics which are *new* in this year's edition.

#### Structure of overview

- 1. First, the overview is structured along nine familiar categories (a chapter for each category);
- 2. Within these chapters, innovations are classified per region from West to East. I.e. (i) Americas; (ii) EMEA; and (iii) Asia Pacific;
- 3. Finally, alphabetical order is followed for (i) Founding Country / Territory; and (ii) Name of Innovation.

#### **Key statistics**



Field of Expertise (FoE) – describes the core competency in a few key words and provides more in-depth insights into the market focus.

(Geo)Location analytics	Data-driven pricing & valuation tools	Plumbing	Smart buildings
3D printing	Drones	Predictive maintenance	Smart cities and infrastructure
Agent matching	Energy efficiency	Property information platforms	Supply chain management
Air quality	Fire protection	Property portfolio management tools	Tech-enabled brokers
BIM and Digital Twin	HVAC	Real estate investment platforms	Technical planning
Building automation	Indoor mapping	Recycling solutions	Tenant services
Building design	Mobility	Remote monitoring	Virtual viewing
Collaboration software	New materials	Rental and sales platforms	Transaction administration
Co-living spaces	Off-site construction	Robotics & automation	Water efficiency
Co-working spaces	Online direct lenders	Safety & security	Other



**Value Chain Segment (VCS)** – Describes the position within the Real Estate value chain on which an innovation focuses and hence, gives insight into the strategic activities of the innovation and which market needs it acts upon.

Sourcing: materials, products and technology

Design & Planning

Construction

Property and facilities management

Transaction and leasing

Investing and financing





# .c.prototype.cycle=functi ptions, interval

# 1. Digitizing processes

In our everyday life, more and more tasks get digitized. Most of us embrace the opportunity to manage certain tasks digitally by having all relevant information at hand within seconds. While the underlying processes are getting increasingly more efficient and user friendly, the digitization of processes also allows for an increasing amount of data collection, storage and analysis. Consequently, this results in higher quality, costs savings and improved customer satisfaction, applicable in all parts of the Real Estate industry.









Transactions and leasing



Transaction administration





Alude's technology developed a platform capable of automating the rental process. The software is responsible for background checks, document collection, online signature, and insurance purchases.



www.alude.com.br





🔀 2013 ္ဂိပိုဂ္ဂိ 201-500 🜀 Brazil





Construction



Technical planning





Ambar Tech offers digital products and services that use data, technology, and intelligence to increase productivity and reduce cost of construction and the amount of labor required. Its software integrates the states of construction, from the architectural project, through the purchase of building materials to management of the actual construction



www.ambar.tech











Property and facilities management



Predictive maintenance





RIO Analytics uses data generated by equipment sensors to predict and prevent failures, reduce equipment downtime and increase operational efficiency through Artificial Intelligence. RIO analyzes sensor data in real time using Machine Learning to improve the insights and predictions it generates.



www.rioanalytics.com.br

















Technical planning





E-Construmarket offers online solutions for the construction industry. It provides several solutions like a digital platform to connect supply and demand for construction projects, a market intelligence solution which enables access to market information and maintenance software to improve project planning and management.

www.e-construmarket.com.br

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Property and facilities management



Property portfolio management tools





**1VALET** is focused on creating a unified experience between users, residents and their property managers. By developing a comprehensive building management platform, 1VALET has created a solution that consolidates otherwise independent building components into one simplified, userfriendly platform.



www.1valet.com

#### **ALTRIO**

🔀 2020 ္ဂိုပို္ဂ္ဂ 5-10









Investing and financing



Property information platforms





Altrio has built a deal management platform which automatically extracts deal information from various sources comprehensive overview.



www.altrio.com





2019 ္ဂိုိ္ဂ္ဂ 5-10







Transactions and leasing



Property portfolio management tools





**Arextech** is a real estate technology platform in the field of business software which conceptualizes, designs and develops easy-to-use and visual solutions in the global cloud. Making complex processes and systems automated and agile.



www.arex.technology













Investing and financing



Data-driven pricing & valuation tools





**Anow** is a real estate appraisal software provider which streamlines a wide range of everyday appraisal processes while offering business insights to help appraisers compete in today's digital



www.anow.com

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Investing and financing



Transaction administration





BRED Token offers a platform that streamlines the onboarding of investors by providing KYC, AML and investment suitability automation. It also onboards assets as well, and has an indicative portfolio of luxury apartments and hotels in Ontario, Canada and the USA.



www.bredtoken.com



( Canada



Property and facilities management



Property portfolio management tools





**Building Stack** is a property management software that focuses on ease of use and increased efficiency. By automating repetitive tasks and providing a fully integrated hub for communications, payments and listings, the Building Stack platform helps property owners get the most out of their investment while keeping their



www.buildingstack.com









Construction



Technical planning





Civalgo has created an Operational Project Management Platform that links schedule to daily logs to provide an optimal workflow, and past cost data and simplifies the administration process of upcoming, ongoing and completed projects.













Property and facilities management



Collaboration software





**BuiltSpace** has built a facility maintenance platform which puts facilities services securely online in the cloud, connects assets through among others, QR code activated mobile application and, people & processes across the facilities supply chain.

www1.builtspace.com

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Transactions and leasing



Transaction administration





**Dwello** is a technology company that provides a platform for landlords and tenants to connect, pay rent electronically, and improve their credit. On top of automated payments and notifications, Dwello provides a full suite of reports that you can use for your tax purposes.



www.dwello.com











Property and facilities management



Property portfolio management tools





**Enso Connect** is an automated communication software that allows control of the home by leveraging smart home devices and Al systems. Designed for existing property managers and Airbnb hosts, Enso Connect gives full control to such customers by everything from preboarding, checking in, checking up, checking out, and getting the cleaning team, in a streamlined manner.



www.ensoconnect.com









Construction



Technical planning





Harbr develops construction management artificial intelligence software for organizing and managing data to keep projects on schedule. It offers construction super schedule, such as free, protects user and construction site with daily logs; pro, connects all team members on the job site; and enterprise, connects all the job sites and teams.



www.harbr.com











Construction



Technical planning





Giatec has combined wireless concrete sensors and mobile apps to develop smart IoT-based technologies for realtime monitoring of concrete properties such as temperature, humidity and strength. This provides critical information to contractors so they can make efficient and informed decisions on the jobsite, ultimately saving time

www.giatecscientific.com

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2018 ္ဂိုပို္ဂ္ဂ 5-10



Transactions and leasing



Data-driven pricing & valuation tools





HonestDoor combines real estate data with data science to produce estimated values of houses and condos. In addition to the estimated HonestDoor price, it contains property taxes, transaction data, permit data, and neighborhood growth rates for over 4M properties in Canada. By creating a comprehensive source of commercial and residential real estate information in Canada, it empowers existing and potential home owners to make more informed decisions.



www.honestdoor.com



<u>Σ</u> 2013 χ<sup>δ</sup>ς 21-50

( Canada



Property and facilities management







**iLobby** is an innovative SaaS-based visitor management platform that optimizes a company's front desk by streamlining the management of visitors and contractors with a convenient selfserve checkpoint.



www.ilobby.com





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Property and facilities management







**Instanet Solutions** is a provider of paperless technologies in real estate. The company offers several solutions: transaction management software and an app version thereof, an e-signature service, an online form system, an online file review and compliance system, document digitization.



www.instanetsolutions.com





Property and facilities management



Indoor mapping





**InnerSpace** is a platform delivering GPS for the indoors - instantly and in realtime. The platform empowers businesses in commercial real estate. manufacturing, logistics, healthcare and retail, to streamline operational costs, guickly create new lines of revenue, and leverage existing physical assets and buildings to improve their bottom line.

www.innerspace.io

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2016 ္ဂိုပို္င္ဂ 21-50



Property and facilities management



Tenant services (e.g. wellbeing solutions)





**iRestify** is a tech-based solution offering property managers an all-in-one platform that enables them to efficiently run their cleaning and maintenance operations remotely, simplifying tasks while elevating the experiences of staff and tenants.



www.irestify.com



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Transactions and leasing



Other





**IXACT Contact** is an easy-to-use webbased real estate CRM and marketing solution. IXACT Contact includes robust real estate contact management, powerful email marketing, and mobile friendly agent websites. They help real estate agents generate leads that convert into clients, keep in touch with past clients, hot prospects, and important referral sources, and stay organized and in control as their business grows.



www.ixactcontact.com



🔀 2016 ္ကိုိ္င္ကို 11-20







Property and facilities management







MoveSnap is an online concierge service that helps your clients complete their moving-related tasks in a snap, saving them time, money and stress.

www.movesnap.com

#### JOIST

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Joist develops and offers a mobile app on iOS and Android platforms for industrial contractors to make estimates of costs and invoices.

www.joist.com

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( Canada



Property and facilities management



Remote monitoring





Operto Guest Technologies offers a platform for managing short-term vacation rentals, hotels, and other types of guest accommodation. The platform utilizes data from smart home devices to offer property managers real-time visibility and control over their units. The platform's functionalities include integrated keyless entry, energy savings, noise and occupancy monitoring and personalized in-suite technology.



www.operto.com









Design & planning



Technical planning





Probuild has been devoted to helping small contracting businesses harness the power of mobile technology, and manage projects, estimates, invoices, timesheets, and communications through one app.



www.probuild.app









Property and facilities management



Tenant services (e.g. wellbeing solutions)





**PropertyApps** is a cloud-based property management toolbox designed for residential real estate which features service requests management, payment collection, tenant communication services and building operation management.





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Property and facilities management



Property portfolio management tools





**Property Vista** is a property management software solution that aims to transform how property managers manage their properties and build tenant relationships to grow their business. Property Vista integrates all of the necessary tools for property managers to efficiently manage their properties and improve the tenant experience - from prospective tenant applications to move-out inspections and everything in between, Property Vista's intuitive cloud-based platform helps property managers create a meaningful and modern tenant



www.propertyvista.com

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🔀 2017 ္ဂပိုဂ္ဂ 21-50



Design & planning



(Geo)Location analytics





Ratio.City develops and delivers datadriven tools for urban transformation. From locating land parcels to modelling buildings, they put all the data and tools a real estate professional needs in one easy-to-use platform so they can focus on creating solutions and advancing your projects.



www.ratio.city



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Sourcing: materials



Supply chain management





RenoRun is an efficient way of getting last minute construction materials delivered to construction jobsites within 2 hours. The app maximizes productivity, saving contractors time. Their trained RenoRunners will collect and deliver the desired materials to the jobsite of choice.



www.renorun.ca







Property and facilities management

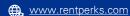


Rental and sales platforms





RentPerks is a tech and data enabled property management platform that combines proprietary technology with a full-service in-field operating model. RentPerks provides a a loyalty program to renters, aiming to reduce payment risks for Landlords.





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Transactions and leasing



Transaction administration





RentMoola is an online rent payment platform. They make collecting rent and property-related fees simple and efficient. Property Managers can go paperless and give tenants the flexibility of choosing their preferred payment method, while remaining in control with the intuitive management dashboards.

www.rentmoola.com

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( Canada

Property and facilities management



Property portfolio management tools





Rethink Solutions is a developer of property tax and real estate expense management software. They are dedicated to building software solutions that help owners and occupiers of real estate portfolios manage their multijurisdictional and global property tax processes.



www.rethinksolutions.com

#### Setter

**三 2016 パーク 21-50** 

( Canada



Property and facilities management



Other





**Setter** provides a home service for residential housing, offering home check-ups for home maintenance and repairs, covering health and safety checks, providing personalized recommendations, and proactive home care suggestions.



www.setter.com

# Smart ONE



( Canada



Property and facilities management



Smart cities and infrastructure





SmartONE Solutions has created a technology for multi-dwelling developments that hardwires hundreds or thousands of smart homes together over a common network to create a Smart Community. The SmartONE solution transforms a building into a living community by acting as the central nervous system which coordinates all the services needed or desired by the community.



#### simplelease









Transactions and leasing



Transaction administration





SimpleLease streamlines the commercial leasing process for landlords, property managers, brokers and tenants. SimpleLease dramatically cuts down on paperwork, legal fees, and most importantly, the time it takes for a business to secure a commercial lease.

www.simplelease.co

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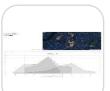




Transactions and leasing



Data-driven pricing & valuation tools





**SquareFeet.ai** is designed to reinvent the way real estate developers and brokers work on launching a new condo or rental project, aiming to ensure the highest revenue given the current demand in the market. Their product offer a new way to monitor how residential projects are sold and rented by providing 3 services in one product, (1) real time market analysis (2) sophisticated initial price list generation and (3) real time revenue optimization.



www.squarefeet.ai



လို 101-200 🚺 Canada





Property and facilities management



Property portfolio management tools





Traction Guest is a developer of cloudbased visitor management systems (VMS) which make hosting visitors effortless, memorable, and safe. The highly customizable Traction Guest platform enables global enterprises to leverage visitor data, shape their brand experience, and strengthen security. Its central administration and integrations with strategic business systems like Salesforce, make this SaaS solution attractive to large, multi-location



www.tractionguest.com

#### **IPSUM**











Technical planning





**IPSUM** has created an online productivity management platform for the construction industry called ProPlanner. It is a collaborative and integrated ecosystem that helps to plan and manage engineering and construction projects as per the Lean Construction and BIM methodologies. Their services are available for both residential and commercial projects.



#### zoocasa





Transactions and leasing



Agent matching





**Zoocasa** is a provider of online real estate brokerage services. The company operates a real estate website where the user has the ability to search for home or rental listings across the MLS database by neighborhood or on an updated map. The user can search for housing with the help of an in-house real estate agent.

www.zoocasa.com

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🔀 2019 ္ဂိုဟို္ဂ 5-10



Design & planning



Technical planning





**1build** uses machine intelligence to convert building blueprints into material shopping lists and cost estimates. The company aims to create a data-driven approach for humans and algorithms to collaborate on building design and construction.



www.1build.com









Property and facilities management



Safety & security





Actuate builds firearm detection systems using computer vision software and artificial intelligence, which turns security cameras into gun-detecting smart cameras. The company aims to accelerate security response time and improve safety outcomes during active shooter situations. The company's software solution features integration with existing security camera systems without on-site installation or other physical considerations.



www.actuate.ai









Property and facilities management



Tenant services (e.g. wellbeing solutions)





**Bixby** offers a building amenity platform for property owners and managers. The company offers software enabling operations automation and organization, focused on the processes of overseeing repairs, communicating with tenants, and collecting payments. Additionally, the platform offers tenants on-demand services, weekly discounts and promotions, and an interface with smarthome devices.











Design & planning



(Geo)Location analytics





AirWorks' software helps land developers and engineers evaluate job sites within their critical planning and software features autonomously converting aerial datasets into CAD site plans, a centralized database and a detailed aerial site inspection.

www.airworks.io

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Property and facilities management



Robotics & automation





Cobalt Robotics merges hardware, software, people, and data to transform enterprise security and facility management. They create autonomous indoor robots, that are managed by highly-trained remote Specialists, to offer an innovative solution to address important operational issues consistently and accurately.



www.cobaltrobotics.com









Property and facilities management



Property information platforms





CommercePromote offers Cloud base SaaS solutions for the PropTech industry by offering a comprehensive suite of ERP solutions which covers the operational, workflow, sales and marketing needs.



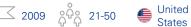
www.commercepromote.com













Property and facilities management



Smart buildings





**Enertiv** is a NYC based Real Estate technology company that delivers visibility and drives NOI growth by reducing expenses associated with maintenance and repairs, utility costs, CapEx budgeting and forecasting, vendor & staff management, retrofit decisions, and the due diligence process. The firm leverages performance captured data to deliver actionable insights to stakeholders in office, multifamily, industrial and hospitality Real Estate.



www.enertiv.com













Transactions and leasing







CompStak focuses on gathering information that is hard to find, difficult to compile, or otherwise unavailable in commercial real Estate markets. The company then delivers these insights to real estate transactions in a U.S.-wide network of members and clients.

www.compstak.com

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Property and facilities management



Safety & security





**Everbridge** has developed a solution which helps manage commercial and residential owners keep their tenants safe by alerting them in case of an emergency, automating IT incident response and keeping track of operations.



www.everbridge.com









Construction



Technical planning





Fieldlens is a project management tool that gives insights into what each member of a team needs to do now and reminds them, while giving decision makers a bird's-eye view of every project without stepping on-site, enabling them to spot trends and see where and when outperformance was



www.fieldlens.com

#### PROCORE\*











Supply chain management





Honest Buildings offers a project management and procurement platform built for commercial Real Estate owners and managers. The company aims to ensure that capital and construction projects are delivered on time and on budget. The platform's features include centralizing project data, increasing transparency, automating bid management, and standardizing reporting.



www.honestbuildings.com











Property and facilities management



Water efficiency





**Flo** is a proprietary water control and monitoring system for homes and buildings that virtually eliminates flooding caused by plumbing leaks, potentially saving billions and empowering conservation.

www.meetflo.com

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Design & planning



3D printing





**HOVER** is a 3D data and technology company for home improvement and property insurance professionals. It transforms smartphone photos of any home to a fully measured, customizable 3D model.



www.hover.to











Transactions and leasing



Tenant services (e.g. wellbeing solutions)





**Dynasty** offers artificial intelligence (Al) solutions for the real estate market. Founded in 2016 by a team of Al experts, Dynasty uses innovative technology and machine learning to automate manual leasing tasks and empower real estate customers to elevate their service and grow their portfolios.



www.dynasty.com











Property and facilities management



Remote monitoring





**LogCheck** builds software that helps operations & maintenance teams anticipate and prevent problems before they happen; saving time, money, and frustration for building operators and property managers. LogCheck, is a mobile and web application that streamlines routine inspections, maintenance tasks, and meter readings in hospitals, data centers, power plants, schools, universities, museums, commercial, and residential buildings.













Investing and financing



(Geo)Location analytics





LocateAl is enabling machine learning in the commercial real estate industry. They created a location intelligence platform that is powered by artificial intelligence (AI). LocateAI's proprietary artificial intelligence enables clients to uncover hidden insights about their business and identify prime growth



www.locate.ai



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Property and facilities management



Property portfolio management tools





Optii Solutions provides housekeeping software solutions for the hotel industry. Optii recognized he need for technology in the hotel housekeeping market, and specifically the necessity for an improved approach to the management of this vital function. Optii's patented software technology revolutionizes housekeeping functions across global hotels and resort delivering greater profitability and enhanced quest experience.



www.optiisolutions.com









Property and facilities management



HVAC





Ravti tracks, manages, and procures HVAC for large property owners. Specifically, Ravti manages all your HVAC maintenance programs, emergent repairs, scheduled repairs, capital replacement, capex management, and all the associated headaches that come along with that - multiple bids,



www.ravti.com









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**Skyline AI** offers a real estate investment technology platform using artificial intelligence. The platform mines data from different sources and applies artificial intelligence architectures. It's features include detecting market anomalies, identifying risk-reward investments, and discovering value creation opportunities.

















Tech-enabled brokers (e.g. mortgage



search and comparison)





Reali is creating a shift in real estate to deliver an innovative model that makes the homeownership journey simple, affordable, and stress-free by blending high-tech with high-touch. By combining all disciplines under one roof — from agents and loans to escrow and title — Reali provides solutions that address common pain points. Innovative financing options put dream homes within reach. Trade-in programs make buying and selling at once affordable and enjoyable.

www.reali.com

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🔀 2017 ္ဂိုပို္ဂ္ဂ 5-10

Sourcing: materials, products and technology

Transaction administration





StreetWire provides oracle data services to support and promote blockchain adoption in the real estate industry. StreetWire's decentralized network offers two services for professional industries operating in the real estate ecosystem.



www.streetwire.net



2012 ခိုင်္ခို 101-200 🖨 United States



Transactions and leasing



Transaction administration





VTS offers a cloud-based leasing and asset management platform. The platform enables tracking and analytics across live, active deal flow and centralizes the data and workflows of properties. It's features include identifying trends, highlighting opportunities and raising red flags when



www.vts.com

#### indocrs









Property and facilities management



Indoor mapping





Indoo.rs is a technology development company that creates indoor mapping, localization, and routing technology, as well as SDK for application developers and device manufacturers. The company's solutions are developed by signal processing and navigation experts to offer accuracy and availability for both iOS and Android.













Property and facilities management



Property information platforms





WiredScore owns and operates Wired Certification, a digital connectivity rating scheme for commercial real estate that leverages technology by providing certification for rating the infrastructure, connectivity and technological capacity of commercial buildings. It aims to help landlords understand, improve, and promote their buildings' digital infrastructure and to provide transparency for tenants looking for office space.

www.wiredscore.com

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Construction



Technical planning





PlanRadar offers a cloud based SaaS solution for construction documentation and defect management in real estate projects and tries to minimize the average 1-2 defects per 10m<sup>2</sup> in real estate projects. The company's solution with web access and native apps for smartphones and tablets supports the user in recording, documentation, communication and tracking of tasks and defects.



www.planradar.com









Belgium



Property and facilities management



Property information platforms





**Chapps** offers an app that can be used for locational descriptions and/or rental inspections on a tablet. Due to the optimization of workflows and the simple user-interface, production is



www.chapps.com

#### **>> LETS**BUILD









Construction



Technical planning





LetsBuild is a construction management software that collects real time key project data and storing it in one place. Providing a clear overview which allows project managers to track changes, improved decision making, and link all task updates to the main planning. The construction management software aims to improve timemanagement, productivity, and profitability.



www.letsbuild.com













Design & planning



BIM and Digital Twin





hsbcad is a 3D CAD/CAM software solution provider for the offsite construction industry. The company develops applications for Autodesk's AutoCAD® and Revit® platforms, enabling a smooth transition from design to production. hsbcad's products offer architects, engineers and manufacturers the ability to create a scalable 3D manufacturing model with full quantity take off. The flexible software can be adapted to individual requirements, and it interfaces with the industry's CNC machines.

www.hsbcad.com

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Transactions and leasing



Virtual viewing





**Nodalview** is a mobile-based photography solution that leverages smartphone technology, Al and cloud computing to produce instantly available high-quality visuals for real estate properties. Nodalview's all-in-one digital solution enables real estate agencies to easily create perfectly exposed HDR photos, 360° immersive virtual tours and full HD videos.



www.nodalview.com







Belgium



Design & planning



(Geo)Location analytics





Rockestate is a data science startup founded in 2017 in Brussels. Belgium. The company builds products that help mortgage lenders and property insurers improve their risk management and the customer journey of their products. The company's starting point for this is open geo-data, which is used to calculate 3D models and build features for each and every house in Belgium.



www.rockestate.be









Construction



Collaboration software





**Smartbeam** is a budget management SaaS that helps construction teams increase project efficiency, team collaboration and manage budgets seamlessly with reliable data drawn from the field. Every site stakeholders can collaborate on one single platform to track expenses against budget in real time, manage progress billings, BOQ, change orders, payment certificate and invoices with a clear approval workflow.



www.smartbeam.co









Transactions and leasing



Technical planning





Setle's goal is to make the buying of property easier and more transparent for every stakeholder involved, by creating a renovation tool for the support in the pre-purchase phase. With a clear overview of costs in a user-friendly interface, the search for the ideal home for both brokers and prospective buyers becomes more efficient and



www.setle.be

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🔀 2017 ္ဂိုပို္ဂ္ဂ 1-4

Belgium

Property and facilities management



Property portfolio management tools





**Smovin** is a company that aims to ease property portfolio management. The company delivers a property management tool on which documents can be managed, rent payments can be followed up and expiring contracts can be managed.



www.smovin.be



2016 දුරිදු 21-50



Transactions and leasing



Robotics & automation





**SweepBright** aims to help save time and costs by reducing manual data input and by making the entire sales process manageable on the go. It's product was designed from the onset with mobile usage in mind and integrates with thirdparty applications. This enables agencies to transform their sales flow into a fully digital journey and to deliver better customer experiences and increase



www.sweepbright.com



2016 ္ဂိုိ္ဂ္ဂ 11-20





Construction







Aiforsite offers an all-in-one solution for moving from closed construction projects to a fully transparent industrial process production model. This is achieved by digitizing the construction with the use of cameras and AI, to be able to see progress in real-time remotely.











Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





**Nozol** offers customer relationship management software that contains a set of tools that aims to allow users to achieve optimal performance in selling, managing and marketing real estate assets. Data is gathered from various sources and analyzed through a set of performance dashboards regarding the sales pipeline and KPIs.



www.nozol.com

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Property and facilities management



Property portfolio management tools





**Assetti** develops and markets a collaboration tool for property asset managers and investors, allowing them to develop portfolio strategy, control property financials, and secure rent rolls, all in one application.



www.assetti.pro







Finland



Property and facilities management



Property information platforms





**Avaa.io** is a collaboration platform for real estate communities. It includes comprehensive toolset for property managers and building users. Stakeholder collaboration, data management, reporting, task management, document archives, communication, digital signing are must have tools for all modern property



www.avaa.io

### Blok







Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





Blok offers a service where homeowners manage viewings themselves, while Blok takes care of the other processes involved in selling a real estate property, such as paperwork, photographs, classifieds, marketing, and managing the tendering process, for which it takes a 0.95% commission (instead of the average 4.3% in Finland). By automating these processes, Blok's brokers are able to sell more properties than conventional brokers.





2016 ္ဂိပိုဂ္ဂ 11-20







Property and facilities management



Safety & security





Bitwards access platform enables access with digital keys from the mobile app. The flexible cloud solution for managing access to desired spaces and assets — doors and other — costefficiently and securely.

www.bitwards.fi



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Finland



Construction



Collaboration software





Builderhead offers a smart software solution that brings construction project management, CRM and procurement in one system. With the software general contractors and builders are able to gather all the project information, people and tasks in one place and keep everyone informed of the status of the project.



www.builderhead.io



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Finland



Investing and financing



Property portfolio management tools





CHAOS is an urban forecasting company for real estate investors and city developers. Their Al platform processes urban data and crowd insights to forecast investment and development opportunities for creating liveable cities.



www.chaosarchitects.com



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Design & planning



BIM and Digital Twin





**Datacubist** designs and develops construction software that address the business, process, and technology aspects of using BIM in real projects. The company additionally provides consulting on building information models.



www.datacubist.com



🔀 2016 ္ဂိုကို 21-50





Construction



Other





Cloudpermit is an all-in-one and cloudbased e-permitting software (automatically saves and updates, hosted in the cloud, and is managed by Cloudpermit). It enables local government building departments to work digitally, remotely, and collaboratively – this helps future-proof processes and create opportunities for local governments to thrive.



www.cloudpermit.com



🔀 2013 ္ဂမို္င္က 11-20





Construction







**Easoft** offers a software for installation and project management in the construction industry, which covers sales, customer acquisition, tendering, construction sites/projects, margin calculations, reporting, and monitoring of working hours.



www.easoft.fi



🔀 2012 స్ట్రిస్త్ర్ 1-4





Finland



Investing and financing



Data-driven pricing & valuation tools





**Exquance** provide automated financial modelling solutions for property professionals with two platforms. ModelTree is an all-in-one financial modelling and reporting platform for investment management and property valuation and Fundy is the power steering for fund management, offering easy and robust interface to manage investments, payment and reports.



www.exquance.com









Transactions and leasing



Rental and sales platforms



With zero hassle and maximum flexibility.



Kodit.io offers a direct purchase model (i.e. iBuyer), where the company buys the property from homeowners with instant cash offers based on their proprietary data-based market price, renovates it and resells it on their marketplace, reducing the time and expense homeowners normally allocate to switching homes. They also offer home sellers the opportunity to lease back their old home in order to avoid temporary housing arrangements.













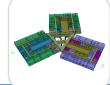


Design & planning



BIM and Digital Twin





**Gravicon** provides IT software and Building Information Modeling services to the building industry as an IT developer and external consultant. Services include project management support, software solutions to optimize repetitive tasks, and trainings.

www.gravicon.fi

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Construction

Collaboration software

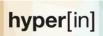




**Homerunbynet** is a company that offers software for building developers to manage interior selections, project portfolios, tenant communications. Including the warranty processes and communication after the construction project.



www.homerun.net



Finland

Property and facilities management



Property information platforms





**Hyperin** offers an integrated tool for shopping malls to administrate all tenant and consumer information and communication, as well as reporting, contracts, marketing, and footfall in one place. The software also enables the selling of advertising and promotional space online through the same platform.



www.hyperin.com

#### Quuppa

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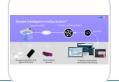






Indoor mapping





Quuppa manufactures and markets technology for location-based services and applications. Its unique Direction-Finding methodology and positioning algorithms enable real-time tracking of Bluetooth® Low Energy tags and devices, with centimeter level accuracy. The Quuppa Intelligent Locating System is a reliable, versatile, highly customizable, fully scalable, and costeffective Real Time Locating System solution for all industries.











Design & planning



(Geo)Location analytics





Mapple offers urban intelligence software that combines, enhances and analyzes multiple streams of location data on the fly, to provides insights on people, infrastructure, and mobility for real estate and cities. The software is based on state-of-the-art algorithms for accessibility and mobility modelling, providing users with easy to understand, visual insights to support decision

www.mapple.io

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YOUR SMARTER ACCESS



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Property and facilities management



Safety & security





Rollock smart lock is operated with a mobile app, enabling keyless access and remote opening. The easy-to-use access control system is designed to suit both private homes, apartment buildings, offices and other premises. The cloud service removes the need for traditional forms of access control. Temporary or permanent access rights can be tailored to each separate user. In addition to the mobile app, the smart lock can be opened with a tag or a NFC-card that is encoded as a key.



www.rollock.fi



Finland



Property and facilities management



Fire protection





**Safetum** offers fire and safety measurements, monitoring, planning, communications, and prevention as a



www.safetum.fi





🔀 2015 ္ဂိုပို္င္က 11-20





Investing and financing



Data-driven pricing & valuation tools





SkenarioLabs offers automated, Albased property valuation and technical risk assessments for both residential and commercial real estate.



www.skenariolabs.com











Property and facilities management



Safety & security





Shaper Shape with the open REST application programming interface, makes it possible to combine outside systems, for example a HR-system to manage access control, or create new services that control access, such as clean up, security or food delivery

www.sharpershape.com

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Property and facilities management



Virtual viewing





**Habiteo** offers a collaborative platform that simultaneously manages sales and marketing activities to build a tailored customer relationship through their 3D solutions and CRM system. Habiteo does so by building a link between 3D visualizations of properties, customer relationships, and sales.



www.habiteo.com



🔼 2015 ္ဂိုပို္င္ဂ 1-4



France



Transactions and leasing



Transaction administration





Happywait is a platform that allows in a very short period of time to generate a booking contract, to sign it remotely or in the office. The remote signing can be done with a digital signature.



www.happywait.com



2014 ရှိတို့ 21-50 **()** France









Property and facilities management



Smart buildings





**Hxperience** is a real estate startup that has developed SMATI: a platform for (smart) buildings, based on predictive analysis and connected objects in order to make all this data usable. The goal is to optimize the operation of buildings, examples of this are: predicting the occupation of the rooms, adjust the temperature accordingly, and observe unnecessary expenses.



www.hxperience.com

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Property and facilities management



Property portfolio management tools





MYRE provides collaborative data-based SaaS applications designed to optimize the relationship between stakeholders at all stages of the real estate assets lifecycle. MYRE is bought for 6 main reasons: financial risk avoidance; time saving; higher reactivity,; enhanced data control & traceability; independence enabled by knowledge management; consolidated view on portfolio.



www.getmyre.com









Construction



Property information platforms





**SCOPLAN** is a web space that builders, builders or architects make available to individuals to follow their work from their smartphone. They bring this assurance of visibility that the professional will give. In fact, a reassured and informed client is less tense; which reduces the risk of conflict.



www.scoplan.com

#### 21st







Investing and financing



Data-driven pricing & valuation tools





21st Real Estate offers an innovative platform that digitizes the investment process of real estate. 21st Real Estate provides a market place that is connected to a database-matching tool, which helps finding properties that match customers' investing strategy. Next, the user can transfer properties to a Shaping Tool, in which investments can be calculated and analyzed using market data. Lastly, investors can finish the buying process within the platform and optimize existing and new deals.











Property and facilities management



Collaboration software





**Urbest's** collaborative job tracking platform allows organizations to seamlessly capture, organize, track and take actions in workloads between issuers, managers and workers.

www.urbest.io

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Construction



Collaboration software





Alasco's web-based software solution digitizes the financial management of construction projects by combining modern workflows and digital networking of all project participants. The software shows the current project status including all necessary data and information. By automating work processes and making all financial data available in a central information source, the productivity of project managers, project developers and all project participants is increased. Errors are avoided, comprehensive transparency is established and decisions are made faster.



www.alasco.de







Germany



Construction



Technical planning





Capmo is a cloud-based SaaS solution for the construction industry. It equips construction workers with digital tools automating repetitive and error-prone tasks to construct buildings at an improved pace. Digital construction plans on mobile devices are the base of Capmo to innovate processes such as auto-construction documentation, punch listing or sheet comparisons. Capmo is used across Europe.



www.capmo.de











Property and facilities management



Safety & security





**KIWI** is the keyless entry system for apartment buildings that enables property managers to centrally manage all access rights in real time via the KIWI Portal. KIWI wants to spare property managers unnecessary trips and the worry about keys. Over 150,000 residential units in Germany and Switzerland are connected to the KIWI infrastructure.



















Transaction administration





**Eucon** digitalizes the invoice workflow for real estate companies. The solution uses Artificial Intelligence and reads, recognizes and classifies invoices and records them into the respective ERP system ready for account assignment. Historical data from individual objects or service providers is incorporated into the process, enabling the system to learn with every run.

www.eucon.com

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Design & planning



Property information platforms





**Korasoft** aims at operating real estate with maximum efficiency. Korasoft offers the complete implementation of the relevant processes with SAP 3D Visual Enterprise for the Real Estate Management. This gives their customers product support by supporting the new SAP standard and by integrating it firmly into their established solutions



www.korasoft.net









Construction



Remote monitoring





Molteo is a digital tool, using cloud software to help construction companies have real-time data, statistics and analyses of the building process. This is helpful to optimize the usage of resources and manage daily working processes faster, while reducing



www.molteo.de









Transactions and leasing



Rental and sales platforms





**Arminimum** crawls and processes property advertisements on the web on an hourly basis, analyses the mass of ads, and recognizes which advertisements advertise the same properties. Arminimum shows the offers for a given property and shows available information. Moreover, Arminimum provides a supply index showing how the supply changes on daily, weekly, monthly basis, as well as a demand index showing how long it takes to sell a property.













Property and facilities management



Smart buildings





**REOS** provides technology for smart buildings and asset management purposes. The Real Estate Operating System (REOS) supports landlords and asset managers in managing and operating their facilities and rental processes digitally and in real time. The company can help clients fast track to digital leadership by transforming their real estate management into a simplified, affordable and efficient digital process. The software offered is flexible and could be integrated with existing IoT and smart buildings.

www.reos-software.com

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2018 ဗိုလို 5-10



Hungary



Construction



Collaboration software





Lokcheck accelerates the digitalization of construction implementation. The company does this by enabling construction workers to document and communicate progress and blockers in a quick and understandable way.



www.lokcheck.hu









Property and facilities management



BIM and Digital Twin





OrthoGraph provides digital twins of buildings for facility and maintenance management. Its mobile technology controls the data quality with strict workflows and live graphic feedback. A fast learning curve, simplicity and the used rugged tools let BIM become part of the everyday operations, workflows and third-party systems.



www.orthograph.com





2018 % 51-100





Construction



Technical planning





**Buildots** is an innovative construction tech start-up creating the equivalent of a mission control room for construction sites. Bringing together AI and wearable hardware, Buildots technology creates seamless construction process visibility and fully digitized construction workflows with the aim of optimizing processes, minimizing delays and avoiding budget overruns. Easy integration, fast access and user-friendly interface make Buildots the perfect solution for any team looking to streamline its construction processes.



www.buildots.com



PARKL



2016 දුරුදු 11-20





Property and facilities management



Mobility





Parkl is a digital platform which integrates parking and e-mobility services in a single system. They install state of the art parking solution, which can be easily integrated with existing parking systems. Using Parkl app, motorists can manage parking and EV charging related processes conveniently and in a cashless way. Parkl also offers a solution for office buildings, which optimizes the management and utilization of their parking capacities.



www.parkl.net

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🔀 2018 ဗိုကို 11-20

Property and facilities management



(Geo)Location analytics





**Placense** empowers decision-makers to understand people in any given location - without the need to install hardware or conduct surveys. Optimize your properties and benchmark against competitors using location insights such as visitor catchment, retention and demographics. Turning millions of smartphone signals into anonymized statistics, any business can analyze offline locations with privacy peace of



www.placense.com



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Property and facilities management



**Drones** 





Aerones, robotic WTG maintenance system is a method of delivering various tools to the blade for inspection, cleaning and maintenance of windmills. WTG maintenance using robotic technology to reduce downtime and blade care system is similar to drones and ensures safety and efficiency.



www.aerones.com



#### домиленд

2016 నిగ్గా 51-100



Property and facilities management



Property information platforms





**Domyland** is a mobile application and a system for property management which consolidates the entire customer journey from searching and buying properties to living and managing a house and includes all participants in the housing ecosystem into one solution.













Transactions and leasing



Property information platforms





Estate Intel is a real estate and construction information portal aiming to aid industry professionals in finding leads for their product sales, secure new tenants for their properties and understand trends, rents or sale prices to help them make optimal decisions. EstateIntel seeks to have a strong profile in data analytics and organizational performance monitoring.

www.estateintel.com

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Investing and financing



Data-driven pricing & valuation tools





Fincase has developed a service that allows users to estimate the value of a residential, commercial property and land in a few minutes. This instantaneous assessment of the value of the underlying real estate assets allows decision-makers - potential investors or other users - to gain an initial cost-efficient and quick insight into the value of a property, to enable further decision-making.



www.f-case.ru

#### FTS Property Solution

္ကပ္နို 51-100





Transactions and leasing



Property portfolio management tools





FTS is an IT solution for real estate management companies, developers and investors. This solution is used for real estate income/cost planning and accounting purposes; for managing relationships and effecting settlements with customers, lessees and contractors; keeping record of contracts and other documents related to real estate; planning and documenting technical operation of real estate properties; analyzing big data and retrieving information for management



www.fts-eu.com





2015 నిగ్గా 51-100







Construction







Mobile Solutions for Construction has developed a service offering of a Cloud software for building quality management throughout the construction phase. This application allows users to instantly upload photo's of focus points during the construction of properties and interact with internal and external stakeholders on the development.











Property and facilities management



Technical planning





Ksuto aims to be an all-in-one system of managing technical maintenance of movable and immovable assets, thus facilitating Facility & Asset Management. The system thus allows the control and oversight on technical personnel, process streamlining and ultimately aims to allow the reduction of maintenance and repair costs of real estate assets. Client groups include asset management companies, owners of commercial real estate (shopping/business centers, warehouses, manufacturing organizations and other public



www.ksuto.ru

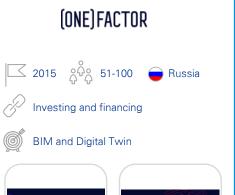
KPMG

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NPO Analitika aims to deliver data insights on visitor behavior based on Wi-Fi signals of mobile phones when present in real estate assets (shopping & leisure centers, retail, etc.). These audiences can be further targeted via all advertising platforms, and ads efficiency is measured as a physical attribution.





**oneFactor** solutions allow to create a "digital model" of any city on the base of telecom data. It allows to get the most current market data on the actual size and structure of the population, optimize route networks and transport infrastructure. Based on machine learning technologies, their services create an aggregated "portrait of a resident" and defines residents with a similar behavioral profile.



www.onefactor.com











Construction



Technical planning





Puzzle Home developed a digital solution simplifying the construction of private homes for consumers, by categorizing the construction process into 3 stages with underlying construction tasks. The tasks can be performed by the consumer or outsourced to a contractor, if so, Puzzle Home provides information regarding the required time and estimated costs. Puzzle Home covers all backlog tasks into smart-contracts, thereby keeping control over financial transactions and construction operations.

















Property and facilities management



Rental and sales platforms





Pro.rent - commercial property lease the entire owner-tenant relationship, from creating interactive floor plans and listings to tracing rental payments.



www.pro.rent

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Construction







**SKYEER** platform is a cloud platform used to control and manage construction sites by the usage of drones. The solution provides for remote, direct and objective control over the process, schedules and budgets of construction projects through the use of drones to monitor facilities and 2D/3D alignment of aerial photography results with project data; and for automated determination of the amount of work completed and fact-plan gaps and forecasting of project timelines.



www.skyeermap.com



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Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





**Propertyfox** offers proprietary software and systems that help to coordinate the tasks of marketing and selling property as quickly as possible while saving sellers on transaction fees. A special feature of the company's business model is that all the information is actively shared with the seller and Propertyfox handles all the logistics, scheduling and security vetting.



www.propertyfox.co.za









Property and facilities management







**EstateLogs** tries to optimize property maintenance by capturing all activities in and around the property and analyze the data to identify and reduce inefficiencies and reducing cost.







1997 % 11-20





Transactions and leasing



Property information platforms





**Datscha** is a company that offers several web-based solutions offering access to data of registered commercial properties, as well as analytics. The company buys and collects data that is property-related from information providers. The company then structures, matches and aggregates the data, to make it available in their interface afterwards. An additional feature is that clients can upload their own data in Datscha, enabling new analyses, insights, and business opportunities.

www.datscha.co.uk

# **Archilyse**

🔀 2017 ္ဂပို္င္ဂ 11-20





Property and facilities management



Property information platforms





Archilyse makes architecture and real estate quality measurable, comparable and understandable for everybody what gets measured will be improved. Based on data analytics, Archilyse provides qualitative KPIs to enhance accuracy of estimations, empower decisions and optimize processes along the entire real estate value chain.



www.archilyse.com





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Design & planning



BIM and Digital Twin







**Nomoko** is aiming to unlock the power of Digital Twins one industry at a time – and they're starting with real estate. The first solution, Nomoko Praedia is a web app that harnesses the power of location intelligence, spatial data and 3D visualization to supercharge investor and developer real estate projects.



www.nomoko.world











Property and facilities management



Property information platforms





**BRES** offers a data and information platform which creates a clear overview of relevant information for a company's or person's real estate portfolio, combining business data with external and open data from different perspectives. Moreover, it provides information of similar real estate assets in the neighborhood and tracks performance based on KPI's.













Property and facilities management



Virtual viewing





3DUniversum offers 3D scanning, recognition and analysis solutions for the real estate industry by using consumer level mobile devices. The solution is powered by artificial intelligence and deep learning technology. It provides users a platform to create, share and interact with the content, including 360 panoramas, virtual tours, measurement reports, videos, VR and high quality images of the property. The aim is to simplify and digitize the listing process and make room for flexibility.



www.3duniversum.com

#### **CALCASA®**

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Investing and financing



Offsite construction (e.g. prefabricated components)





Calcasa is an independent technology company providing an automated valuation model (AVM). Calcasa's AVM provides an estimation of the current open market and foreclosure value of a given residential property based on comparable sales and advanced modelling techniques. Valuations of homes and portfolios are accessible via a variety of sources. Additionally, Calcasa has developed tools for real estate analytics, supporting real estate professionals in reviews and decision making processes.



www.calcasa.nl



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Transactions and leasing



Transaction administration





Fillthedoc is a tool, which is easy to integrate and enables organizations to create digital documents in their (legacy) systems to support tenant services. The company offers its solution to property and facility managers.



www.fillthedoc.com













Investing and financing



Offsite construction (e.g. prefabricated components)





Flamingo.report combines a wide variety of data sources to help clients get informed about specific neighborhoods or homes. By mapping data sources with geolocations and running data analytics the company offers insights to various sectors of the Real Estate market. Services include providing risk analysis, predictions of future property developments, aid in picking store locations and assisting in investment opportunity decisions based on pricing and valuations analyses.

















BIM and Digital Twin





Fimble focuses on facilitating building information throughout the entire life cycle of a building based on BIM and works exclusively with open data, which means that communication with thirdparty software is always possible.

www.fimble.nl

#### **II** FundStar

 $\subseteq$  2015 ္ဂိုပို္ဂ္ဂ 5-10



Investing and financing



Offsite construction (e.g. prefabricated components)





FundStar offers insights into real estate returns through performance reporting for investors and allows for internal and external benchmarking of returns, including pre-set budgets to pinpoint expectations. Performance data can be visualized through interactive graphs that include key industry KPIs. Next to the software, the company offers the possibility to run scenario testing.



www.fundstar.nl









Property and facilities management



Offsite construction (e.g. prefabricated components)





GateSoft develops Cloud solutions that aim to create success in the property management world. Independent, professional with personal service, they optimizing their business processes.



www.gatesoftware.nl

# gary.®







Property and facilities management



Offsite construction (e.g. prefabricated components)





Go Gary offers a way to present your assets and real estate portfolios. The company creates digital brochures for clients, which can then be uploaded into their own app or website, entirely in the client's own branding or corporate identity. Each object is given its own (.com) domain and finished assets are available to the larger public and are automatically linked to Google Maps for directions.













Investing and financing



Offsite construction (e.g. prefabricated components)





**Geophy** sources, links, and cleanses traditional and unconventional data, then applies algorithms (supervised machine learning) to provide a unique perspective on commercial property values. This approach enables Geophy to provide objective property valuations and tools that enable users to develop a deeper understanding of the factors influencing property values.

www.geophy.com











Property and facilities management



Offsite construction (e.g. prefabricated components)





Hero Balancer offers solutions to optimize heating systems by connecting their software system to the heating systems of schools, offices and houses. Hero Balancer's software balances the water levels in radiators to ensure an optimal division of heat throughout a property. This results in more comfort for the users of the building and lower electricity bills.



www.herobalancer.com











Property and facilities management



Offsite construction (e.g. prefabricated components)





homeDNA offers an online software system for new construction and renovation projects. The company offers a digital solution as an integral package from preparation up to and including the service phase for customer contact and build quality. An as-built home file with the details per property/customer and a personal housing file for the buyer/occupant are the system's core. Furthermore, the company is developing BIM integration.



www.homedna.nl











Property and facilities management



Offsite construction (e.g. prefabricated components)





Jumba offers home owners a central place to find information about their property and what relates to it; the neighborhood, the pricing development, the bigger market. The company gathers information from various online resources and combines it into one central place. Through their solutions, home owners are supported in decisions about their property like selling, buying or redesigning.















Property and facilities management



Offsite construction (e.g. prefabricated components)





**Ingy** develops innovative lighting control solution which provides a high-end lighting control system which optimizes energy consumption. The smart lighting sensors form together a mesh throughout the whole building, enabling applications such as asset tracking, indoor navigation and occupancy analytics. The mesh can be used by many software platforms to gather data.

www.ingy.nl

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2013 ္ဂိုပိုဂ္ဂ 5-10





Transactions and leasing



Offsite construction (e.g. prefabricated components)





KATE Innovations provides advisors with digital solutions which organize the whole valuation process of commercial real estate. In this way, the property market is able to structure data, optimize work processes and develop new and future proof business models. In addition, KATE offers IT solutions that enhance the collaborating of advisors, banks, and real estate owners within the eco-system of the commercial real estate sector.



www.kateinnovations.com



The Netherlands



Construction



Offsite construction (e.g. prefabricated components)





**KYP FLOW** offers software that gives people the possibility to optimally participate in a process. This is achieved by having information digital and up-todate on mobile devices for stakeholders. KYP Facilitates LEAN planning on the construction site and communicates about the progress of projects.



www.kyp.nl











Property and facilities management



Offsite construction (e.g. prefabricated components)







**Mapiq** provides a smart office platform that enables full and flexible use of workspaces, and aims to offer employees a more collaborative, efficient, and frictionless workday. Mapig offers user-centric hard-andsoftware that combines technical expertise and integrations with clean, functional design. The platform matches users with spaces, facilities and other colleagues.















Property and facilities management



Property portfolio management tools





LOEK! has developed a platform to digitally connect assets and people. The platform includes the Self Managing Toolkit offering solutions to more efficiently and effectively organize property management, specifically by involving and connecting parties such as real estate agents, owners, tenants, and

www.loekonline.nl

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# **MatriX**ian

🔀 2016 ္ဂိုပို္ဂ္ဂ 21-50





Transactions and leasing



Offsite construction (e.g. prefabricated components)





Matrixian links online coordinates to physical coordinates and provides a matrix of data points that connect online and offline data to each other. This way, Matrixian Group supports its clients in making decisions surrounding marketing, customer communication and credit management in order to improve their operating result. Examples include property valuations based on big data.



www.matrixiangroup.com









Property and facilities management



Offsite construction (e.g. prefabricated components)





Movin's technology allows users to navigate through buildings or find assets (via apps). The technology allows users to highlight important Points of Interest, show nearest bathrooms, check out the restaurant's daily special, search through destinations and more. This indoor technology makes it possible to create smart buildings. These smart buildings feature optimized processes, reduced costs and increased safety.



www.movin.io

# omrt







Design & planning



Building design





**OMRT** has two main systems: Olysis is an integral building physics engineering tool that can compute design both parametrically and fast. Aming to optimize every project on sustainability, comfort and quality. Ostate is a generative design tool that can design a full building in a single day, including building physics analysis, costs and benefits analysis, and even materials and building elements. Ostate aims to streamline the design to creation processes.

















Offsite construction (e.g. prefabricated components)

Property and facilities management





OmgevingsAlert Pro aims to make the for the owners of Real Estate portfolios more efficient and Real Estate management more effective. Users have insights into what is happening near their properties, such as building permits, zoning plans or other government announcements that could affect the value of properties. OmgevingsAlert Pro is meant for property managers, asset managers, appraisers and professionals in government functions.

www.omgevingsalert.nl





Netherlands



Investing and financing



Offsite construction (e.g. prefabricated components)





Perfect Place analyses data to determine the attractiveness of locations for different target groups. It offers up-to-date and nationwide data on one platform. The company's product enables companies to make better investments by reducing risk and increasing (social) return. Perfect Place serves companies involved in the development of residential and commercial Real Estate.



www.perfectplace.nl











Property and facilities management



Offsite construction (e.g. prefabricated components)





Planon offers software for streamlining business processes surrounding real estate, people and the workplace. The company's product called Accelerator provides pre-configured processes, including workflows, catalogues, reports, dashboards, templates, roles, authorizations, data import facilities and configuration descriptions.



www.planonsoftware.com









Transactions and leasing



Offsite construction (e.g. prefabricated components)





Qii offers multiple services to brokers to respond to the needs of tenants and landlords. It does so through knowledge and advice provision, practical services and an online application that automates rental processes.













Transactions and leasing



Offsite construction (e.g. prefabricated components)





**Provadie** is a real estate assessment app that uses smart algorithms and many external data sources. This makes assessments faster and more accurate. Provadie started for appraisers, they save an average of one hour per assessment and their clients experience higher quality. Due to the high degree of flexibility, the app can be used for any type of real estate.

www.provadie.nl

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🔀 2016 ္ဂိုပို္င္ပ္ပ္ 5-10





Transactions and leasing



Rental and sales platforms





**Qlinker** developed an app to digitize and automate rental activities. Covering the search for housing, application for a rental contract, signing a rental contract, payments, and appointments for repairments. Aiming to simplify the rental application process in order to improve the customer experience, while simultaneously reducing operating costs.



www.qlinker.nl



🔀 2016 ္ဂိုပို္င္ဂ 11-20



Property and facilities management



Offsite construction (e.g. prefabricated components)





Readar provides datasets and maps from aerial imagery and LiDAR data containing detailed information about Real Estate. Information is given about solar panels, volumes, roof type, changes and more. To do so, remote sensing and machine learning are



www.readar.com

#### SIMOME MADE EASY



🔀 2017 ္ဂိုမို္င္က 5-10





Property and facilities management



Offsite construction (e.g. prefabricated components)





**S1MONE** is a unique communication tool for efficient management of malfunction reports and repair requests, whereby the entire chain is kept informed of the status and all involved people and companies are in contact with each other.



www.s1monegroup.com











Property and facilities management



Offsite construction (e.g. prefabricated components)





Realtech focusses on reducing risks, efficiency for property developers. The company does so by forecasting demand per lot number prior to sales opening, which allows pricing to be adjusted based on demand. After sales open Realtech offers solutions that digitalize the real estate sales. Wwft and financials are checked, and assignments of lot numbers are optimized.

www.real-tech.nl

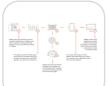


🔀 2015 ္ဂိုပိုဂ္ဂိ 51-100 🖨 The Netherlands

Property and facilities management



Predictive maintenance





Semiotic Labs developed a software SAM4 that aims to reduce downtime of equipment, due to failing AC motors and failing rotating equipment, and can predict 9 out of 10 failures up to 5 months in advance. SAM4 does so by using sensors that continuously analyze the sine wave of equipment and identify whether there is a disturbance due to mechanical and electrical failures.



www.semioticlabs.com



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Property and facilities management



Property portfolio management tools





**Spotr.ai** is an asset management platform that analyses the conditions of your buildings in detail using public information and data like satellite pictures and street view photos. It combines this information into one platform to ensure a quick and easy overview of an entire portfolio.



www.spotr.ai

( TRYLIKES







Property and facilities management



Smart cities and infrastructure





TryLikes, developed an Al driven platform where visitors of shopping malls /areas can interact with a digital assistant. The assistant (NiKi) will help customers to find restaurants, products, make reservations, provide information and presents personal offers. The use of the app/platform generates rich data streams and creates customer profiles. Tenants can place special offers or information on the platform, which will be presented to the relevant target group via NiKi with automated proximity campaigns. This creates a hyper personal customer experience which drives traffic and increases revenue resulting in higher valuation of the real









Property and facilities management



Safety & security



**TBD** 

**TBQ** provides software tools and services for inspection of, advice regarding, and maintenance of the real estate portfolio. Aiming to create safer and more efficient buildings and demonstrate compliance of rules regarding fire safety and building

www.tbq.nl

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#### **Vastgoeddata**

🔀 2013 ္ဂိုပို္င္ဂ 21-50

Transactions and leasing



Property information platforms





Vastgoeddata is a commercial real estate research agency that supports the real estate professional in his or her day-to-day work.

The in-house research department develops the most complete and accurate data set in the Netherlands. This data is structured so that users can quickly perform tailor-made analyzes themselves, for example to determine the value of real estate assets.

In addition to processing its own data, Vastgoeddata links the information from various sources into one integrated system.



www.vastgoeddata.nl

## **Veneficus**

🔀 2007 ္ဂိုမို္ဂ္ဂ 21-50





Transactions and leasing



Data-driven pricing & valuation tools





Veneficus turns numbers into visuals, abstraction into ideas and code into business plans. Through combining data about assets, the market, demographics, the neighborhood and benchmark objects the company's software helps estimating current and future valuations of real estate and future cash flows, all modeled



www.veneficus.nl



2013 ္ဂိပ္နို 21-50





Design & planning



Offsite construction (e.g. prefabricated components)





White Lioness technologies' online parametric platform Packhunt.io enables real estate and construction companies to digitize and automate processes ranging from design, engineering and sales to construction and manufacturing. From start-ups to multinational market leaders; Packhunt.io makes it easy to reach customers and provide product configuration, personalization and customization options.













Property and facilities management



Property information platforms

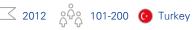




Volgiewoning.nl offers buyers and tenants a personal building file. This contains important documents and information such as offers, quotations and order confirmations. The software is linked to multiple platforms. Users of the software are automatically alerted to upcoming deadlines and updates regarding their projects. Consequently, the supervisor of the project can track progress and involved parties are aware of relevant information.

www.site.volgjewoning.nl

# **公**Apsiyon





Property and facilities management



Property portfolio management tools





**Apsiyon** is a cloud-based online platform that serves as a digital assistant for property managers servicing residential and commercial buildings, gated communities and mixed-use developments. The firm enables personalized solutions on all their platforms spanning the whole property management business cycle, from finance to CRM. Apsiyon has been developing solution since 2009 and aims to unite people and technology to simplify property management activities.



www.apsiyon.com







Turkey



Property and facilities management



Smart buildings





Bagaj is a locker service that can be used via a mobile phone application. Individuals can use their lockers as luggage storage and leave their personal belongings in the lockers. Their service is available on locations with high footfall like city centers, large venues, concert halls and beaches. In addition, clients can pick up their packages from and send cargo to the lockers.



www.bagaj.co









Transactions and leasing



Data-driven pricing & valuation tools





**Endeksa** is a predictive real estate data analytics and insights platform offering automated property valuation, appraiser marketplace, asset management, and location optimization services. Data collected by Endeksa field experts is combined with data from various resources; then by Endeksa's machine learning technology enhanced real estate and location analytics data is produced. Endeksa enables companies shape their strategies by the power of real estate and location data.



www.endeksa.com











Property and facilities management



Indoor mapping





Boni Global is a location-based platform for mobile devices to interact with the physical world. The firm provides indoor navigation, analytics and engagement for publicly available buildings to improve indoor wayfinding and accessibility solutions for people who need more assistance and independence allowing them to easily navigate inside complex buildings.

www.boniglobal.com

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🔀 2013 ్లర్లో 5-10



Property and facilities management



Indoor mapping





**Indoora** provides high-accuracy positioning service for smartphones within indoor spaces where GPS does not work. Its patent pending positioning technology helps users find their way in complex buildings such as shopping malls, airports and exhibition centers. Indoora also offers navigation, locationbased information/advertisement services via push notifications, and customer behavior analytics. The technology is available as a SDK and can be easily integrated to 3rd party apps.



www.indoora.com





Turkey



Property and facilities management



Indoor mapping





inMapper is an indoor maps, navigation and search platform for large buildings such as malls, museums, airports. With real-time indoor positioning, navigation and location-based services, clients can enhance your customers' experience inside their venue.



www.inmapper.com









Property and facilities management



Indoor mapping





PoiLabs offers locations based services including indoor analytics, proximity marketing, and indoor navigation by using a large network of ibeacon. The company focusses on location-based technologies to enrich mobile moments and provides customizable and flexible solutions from beacon to SDK, platform to operation and installation. PoiLabs also provides easy, safe indoor navigation for people living with some form of vision impairment. In pandemic, PoiLabs launched a social distancing solution to stop the spread of covid-19.



## keyyazılım

조 2014 영화 21-50









Transactions and leasing



Data-driven pricing & valuation tools





**Key Yazilim** is a software company that provides real estate appraisals. Their solutions include Real estate appraisal and Archiving Software for Investment Banks and Real Estate companies (Invex); Tracing and Archiving software for Investment Banks (Hyporex); CRM & ERP software designed for Chambers of Turkish Engineers and Architects (Inforex); and Data Minings for Statistical Appraisal. Currently they are working on Statistical algorithms which affects Real Estate values in Turkey.

www.keyyazilim.com

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## Seyisco





Property and facilities management



Smart cities and infrastructure





**Seyisco** provides municipalities and governmental parties with high-tech solutions to help them with smart city concepts. Sevisco is working on a SaaS platform called "GovernOs" for Smart City applications that include spatial analytics with advance geographical information systems know-how. Their first product "Roan (Road Analytics)" is a hardware solution that is integrated on governmental vehicles and finds road problems in real time. This includes potholes, irregular bumps and cracks on any asphalt road it covers.



www.seyis.co











Property and facilities management



Smart buildings





**Udentify** is a business intelligence solution that enables collecting all the data that can be collected in the electronic environment, in a physical environment. This includes facial recognition and image processing techniques, offering a set of solutions to be used in actions such as user scenarios, promotion campaigns, and shop designs. Ultimately it helps companies optimize customer experience and increase profits by providing information such as square meter efficiency, product conversion rate and staff performance.



www.udentify.co











Property and facilities management



Property portfolio management tools





Masterkey is a SaaS-provider for the real estate industry in the Middle East. For over twelve years, they create specialized software for real estate marketing, listing syndication, property management and CRM, as well as provide tailored consultancy services for regional businesses.













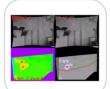






Smart buildings





**V-Count** provides visitor analytics solutions. They offer global organizations the latest in people counting, heatmap, queue management, staff exclusion and business intelligence platforms. Solutions are backed by a secure cloudbased business intelligence platform that leverages Al and machine learning tools to analyze collected data. Moreover, they provide clients with actionable reports and software-based recommendations on how customers behave in their physical locations.

www.v-count.com



🔀 2019 ္ဂိုပို္ဂ္ဂ 5-10



Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





**OVERWRITE** uses AI to instantly create property marketing content. They employ a user-friendly web-app where Al is applied, creating content that real estate agents, landlords and copywriters can use, and thus save time to focus on other activities.



www.overwrite.ai









Construction



Agent matching





**ProTenders** is a platform for construction companies. Developers using ProTenders potentially increase their efficiency by streamlining their tendering activities such as shortlisting bidders, centralizing all tender documents, managing RFIs and receiving and comparing bids online. Architects, Engineers, Contractors and Suppliers can use the platform to generate more business by building their online profiles and get detailed updates of ongoing projects. ProTender is available to over 29,000 businesses of all sizes from 105 countries.



www.protenders.com











Construction



Collaboration software





BaseStone offers a digital platform built for construction teams to access, capture, share and communicate information during the delivery of construction projects. Throughout the project, BaseStone digitizes and streamlines processes for project delivery. BaseStone is currently deployed in projects across the UK and beyond.













Transactions and leasing



Rental and sales platforms





**Urban** is an app-based solution that makes renting easy, honest and empowering by bringing the entire rental journey online. With GoUrban, renters can discover inspected homes, visit on their own with digital locks and pay rent online with flexible payment plans. For landlords, the company cleans and lists their property with professional photography and virtual tours, hosts live auctions, leases properties out with paperless contracts, and collects rent -

www.gourban.com

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Construction



Safety & security





Biosite Systems is a company developing biometric security and access control systems for construction sites, as well as integrating other safety and security systems such as CCTV, fire alarms, guards, and document management.



www.biositesystems.com











Property and facilities management







Coniq is a company that has developed software that enables retailers to create and track offers and promotions. The company operates exclusively in the shopping mall sector.



www.coniq.com











Transactions and leasing



Property portfolio management tools





Coyote offers a commercial real estate software platform used to track the global real estate market. Coyote aims to speed up the transaction process, making it faster to review potential acquisitions and to buy commercial assets. Consolidating data from property management systems and market data providers, creating actionable insight on assets under management, supporting remote teams to collaborate across multiple locations.



www.coyotesoftware.co.uk







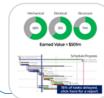




Construction



Technical planning





Contilio is a UK based company that provides automated, Al-based construction progress, installation quality and predictive risks from a central platform. This enables Real Estate companies to build their assets cheaper, faster and more sustainably, while enabling better build quality, risk management and whole life efficiencies through smart digital twins.

www.contilio.com



🔀 2012 ္ဂိုပို္င္ဂ 21-50



Property and facilities management



Technical planning





Fixflo is a specialist repairs and maintenance management software solution that allows property management companies and operators to boost operational efficiencies, improve resident experience, drive up compliance levels, reduce costs in repairing and replacing amenities and building assets, and maximize profitability. Over 1 million residential and commercial properties are managed through Fixflo.



www.fixflo.com









Transactions and leasing



Transaction administration





Goodlord is a company developing an online system to simplify the house letting process. It allows the creation of tenancy agreements, collection of holding deposits and online signing of contract and streamlines these processes online for agents, landlords and tenants.



www.goodlord.co









Property and facilities management



Tenant services (e.g. wellbeing solutions)





**Houst** is a company that offers property management services for short-term rental properties. Services provided include cleaning, guest communications, running the listings, supporting maintenance, advising on pricing and helping maximize occupancy.

www.houst.com

## **HABIT**<sup>©</sup>





Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





**Habito** is a website that allows consumers to compare and apply for mortgages. The company offers several services in comparing mortgages that entail different service levels, as well as offering their own mortgage.

www.habito.com



Transactions and leasing



Transaction administration





**Insurami** provides a deposit guarantee platform for commercial Real Estate landlords. The company removes friction from the on-boarding process by allowing landlords to vet the financial health of tenants up-front, and then offers prospective tenants the opportunity to purchase a Deposit Guarantee, replacing the traditional deposit. This allows tenants to save on their traditional upfront office costs and reduces landlord's on-boarding costs, process times and default rates.



www.insurami.com







Investing and financing



Data-driven pricing & valuation tools





Intellect Automation offers an Albased mobile app called Dashflow that enables investment appraisals of commercial Real Estate assets. Property data can be imported from an Excel rent roll and DCF profitability parameters can be manipulated, generating scenarios. It is both an underwriting tool and a business tool contributing to the Features include generating investment highlights, PowerPoint presentations and Excel financial models that make it an auditable DCF appraisal tool.



www.dashflowcre.com







Property and facilities management



Property information platforms





**Nimbus** offers the property information platform called Nimbus Maps which gives users access to a data set of property intelligence and invests in training the users on how to get the most from the information. The company offers a free to use entry level version, as well as a more advanced version aimed at the property professional and aficionado to access data and intelligence available.





🔀 2014 ္ဂိုပိုဂ္ဂိ 51-100 🤀 United Kingdom



Transactions and leasing



Property information platforms





LandTech has built a web-based tool that allows users to gather information on land ownership in the UK and assess risks associated with the valuation of land, such as planning permissions.

www.land.tech

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🔀 2013 ္ဂိုမို္င္ဂ 101-200 🦀



Investing and financing



Property portfolio management tools





Oxane CREST transforms the way real estate investments are screened. analyzed and managed. The platform brings all stakeholders including originators, underwriters, valuers, portfolio/risk managers, and investor relations on a unified platform, and empowers them to efficiently run the entire lifecycle of investments from origination until exit. Oxane CREST helps investment managers evaluate more opportunities faster and better manage their risks. The platform supports £200b deal flow and 5,000+ users globally.



www.oxanepartners.com

#### PLACEMAKE.IO







Investing and financing



(Geo)Location analytics





PLACEMAKE.IO is an artificialintelligence company with a focus on understanding and powering the world of location and mobility. Their Al operating system leverages Al and large amounts of heterogeneous data to drive investment management and is designed to serve as the underlying infrastructure for all location and mobility



www.placemake.io

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Transactions and leasing



Property information platforms





REalyse uses data science to bring together and verify property datasets, and make them available to lending, investment and development professionals – whether via API or through a user-friendly web analytics platform. This includes prices, rents and yields, to ownership information, new development projects, and demographics. The platform helps real estate companies to gather the information they need to make investment and development decisions.



#### **PROPRLI**









Property and facilities management



Property portfolio management tools





**Proprli** is a portfolio management and procurement platform for landlords and technical managers. Proprli enables landlords to track projects and budgets and make data-driven procurement decisions. The platform provides realtime insights into all expenditure and technical management throughout your portfolio. Proprli centralises all building related data and workflows, increasing efficiency and control for landlords and

www.proprli.com

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Transactions and leasing



Property portfolio management tools





Rialto offers a leasing software to institutional landlords and office operators, to streamline their leasing. From sharing vacant units with the market to sourcing new tenants, Rialto provides tools to manage the leasing of commercial property portfolios and flexible office locations. Features include automated marketing of offices, transparent communication to leasing channels, organized tenant candidate profiles, a structured leasing flow and a leasing reporting suite. Rialto is available on desktop, tablet and mobile.



www.getrialto.com









Transactions and leasing



Rental and sales platforms





**Shieldpay** is a regulated payments institution providing secure payments and digital escrow solutions. Shieldpay helps professionals make the home buying and selling process more secure, transparent and stress free for their clients by collecting the funds from the buyers and lenders and making payments to sellers, land registries, tax authorities and others directly. Shieldpay will be further leveraging the opportunities that open banking brings for both identity and payments and has recently been involved in two block chain-based projects.



www.shieldpay.com











Property and facilities management



Indoor mapping





BindiMaps offers a mobile application which provides indoor navigation. The aim is to help users find their way around indoor spaces such as shopping centers, transport hubs, educational institutions, hospitals, and other large complex buildings. The application features a voice over solution for people who are blind or vision impaired.













Property and facilities management



Property portfolio management tools





Travtus is a company focused on using data & machine learning to automate property management. This research is given commercial form as ADAM. ADAM is an Al property manager who can take calls, texts and respond to gueries and trigger work flows without any human intervention for the domain of residential Real Estate.

www.Travtus.com



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Investing and financing



Data-driven pricing & valuation tools





**Insight Data Solutions** aims to enable governments, corporates and consumers to meet their property valuation needs. The company offers several solutions, like valuing a single property via its Automated Valuation Models ('AVMs'), or multiple parcels via its Computer Assisted Mass Appraisal ('CAMA') platform.



www.ids.io









Transactions and leasing



Rental and sales platforms





MadeComfy is an Australia based shortterm rental company, providing an endto-end management solution for property owners to generate higher rental returns. This is achieved through dynamic pricing strategies, professional property marketing and the MadeComfy website booking platform. Technologies such as the MadeComfy Dashboard are streamlining the experience of property owners to control their property's calendar in real-time and track their earnings from short-term rental



www.madecomfy.com.au





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Transactions and leasing



Agent matching





**OpenAgent** brings together real estate agents and vendors using personalized recommendations based on past sales expertise and customer reviews. The company aims to bring more information, better insights and an independent voice to property transactions.





neighbourlytics



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Design & planning



(Geo)Location analytics





**Neighborlytics** technology synthesizes data from digital sources to help governments, town planners, property developers and asset managers deliver better economic and social value in communities. The company provides a standardized tool to analyze data trends and patterns, to better understand social wellbeing based on local activities and lifestyle choices.

www.neighbourlytics.com



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Design & planning



(Geo)Location analytics





Propella.ai is a geo-spacial analytics company that uses advanced analytics and artificial intelligence coupled with big data, to generate insights that inform key property decisions for Australia's leading property companies.



www.propella.ai

### REALTAIR

조 2016 원 51-100







Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





Realtair aims to provide end-to-end technology solutions for the real estate transaction process and thereby empower agents. To this end, the company provides a digital platform and offers several solutions including an administrative system, digital document signing and a CRM dashboard.



www.realtair.com



Your online interior designer



🔀 2014 ္ကမို္က 51-100





Design & planning



Building design





Foyr supports and empowers real estate professionals in the design process to experience an immersive visualization. Foyr's solutions are cloudbased and mobile friendly, utilizing Alenabled visualizations to ensure that real estate professionals can design, collaborate, and present their ideas and plans to their prospects and customers.













Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





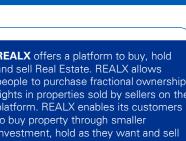
**Daebuild** provides a centralized platform to capture and process leads from voice, property portals, social media and corporate websites. The post booking processes like Auto Invoicing/Demands, 3 Tier Payment Reminders and Customer Interactions automate the core workflow. The platform's features include capturing leads, tracking follow ups, gaining access to a real time inventory status and blocking units.



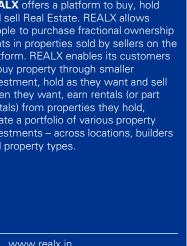
www.daebuild.com



**Livspace** is a brand for complete home interior design for homeowners. The company provides its customers with interior designers to design homes using space planning, 3D Design, Modular Solutions with all services, complete with online status updates, furniture and décor.



www.livspace.com



## Props{AMC}









Property and facilities management



Property portfolio management tools





Props(AMC) offers a real estate insights and asset monitoring platform organizing the real estate portfolio through a single, integrated interface. The company offers two products: (1) Zone provides asset information like Government rates, Online listing, Registered Transactions and Title records (2) Real Estate is a real estate management suite for asset owners of multiple properties and asset managers of multiple clients' financial assets.



www.propsamc.com













Transactions and leasing



Real estate investment platforms (e.g. crowdfunding)





**REALX** offers a platform to buy, hold and sell Real Estate. REALX allows people to purchase fractional ownership rights in properties sold by sellers on the platform. REALX enables its customers to buy property through smaller investment, hold as they want and sell when they want, earn rentals (or part rentals) from properties they hold, create a portfolio of various property investments - across locations, builders and property types.























**Propstack Services** offers a real estate data, analytics and workflow solutions platform. Propstack provides predictive and prescriptive analytics based on deep data. The company's suite of online services enables clients to analyze, interpret and gain insight on commercial property values, market conditions and current availabilities.

www.propstack.com

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Transactions and leasing



Robotics & automation





Sell.Do provides automation technology to the real estate industry that allows for streamlining marketing campaign performances and sales team productivity. Sell.Do has two products: Sell.do Sales provides a Smart Call Center solution, managing and gaining intelligence on leads, an in-depth presales report to know the top and low performers, and automate complete presales per business process. Next to that, Sell.do Marketing tracks all campaigns at one place and manages and executes marketing campaigns.



www.sell.do











Design & planning



Safety & security





Softtech Engineers offers a building plan scrutiny and approval system. The system reads CAD drawings and maps them to the development control regulations for approval by municipal corporations and approving authorities. The software is designed to bring greater efficiency and effectiveness in compliance through collaboration between the organization and the approving authorities.



www.softtech-engr.com











Investing and financing



Tech-enabled brokers (e.g. mortgage search and comparison)





iYell Mortgage Platform consists of three pillars, "Media" that can be used for marketing, "Technology" to make the procedure more efficient, to provide a remote support, to forecast interest rate etc, "Professional team" which is a faceto-face consultation with the consumer and performs the examination procedure.















Transactions and leasing



Co-living spaces





**ADDress** is the fixed price service helping you to find a place to live in Japan. All facility fees are included, no initial cost is required, and you can move around and live-in other places as many times as you want.

www.address.love

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Investing and financing



Data-driven pricing & valuation tools





**Leeways** develops and operates "Gate." A service that predicts future revenue by artificial intelligence (AI). The real estate investment platform "Gate." analyzes over 58 million property data collected independently over the last 10 years, and provides high-precision cash flow simulation to financial institutions, real estate companies and investors.



www.leeways.co.jp

# Linough Inc.

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Property and facilities management



Safety & security



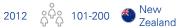


Linough develops systems, applications, and hardware products for real estate management clients. The company produces Ninjalock, a smart lock device that allows users to unlock their doors via smartphone, share digital key access, lock and unlock doors automatically. This allows for remote services and monitoring of properties.



www.linough.com







Property and facilities management



Property portfolio management tools





Re-Leased is a modern cloud-based property management solution that automates and centralizes the real estate accounting, lease management and reporting of commercial real estate portfolios. It is an intelligent and intuitive user experience that provides users and management with increased control, risk management, insight and efficiencies.

CREDIA (a Re-Leased product) aggregates the 60,000+ leases on the Re-Leased platform to provide live industry benchmarking.



www.re-leased.com

### **Photoruction**









Design & planning



Technical planning





**Photoruction** provides an app for architects, construction teams, and landowners to take, save, and share blueprints or photos documenting the construction process. The app's selling points include its digitization of normally paper-based work, its automation of album and photo organization, and its data sharing abilities.

www.photoruction.com











Property and facilities management



Property information platforms





**Uxtrata** is a late-stage SaaS solution company targeting the real estate sector. The company's cloud-based, full featured strata management and rental management solutions enable managers and operators take complete control of every aspect of their businesses, save costs and increase efficiency especially in compliance, accounting/finance and payment.



www.go.uxtrata.com











Design & planning



Energy efficiency





Qi Square's BtrLyf.com is a green assessment-as-a-service platform that helps accelerate sustainable development through digitalization. Its Al-powered building simulation engine aggregates multiple sources of data, including open source, API linked, and user entered data for performance insights and retrofit analytics. This results in reduced transaction time, improved productivity of business process by up to 10x for the green building industry.



www.qisquare.sg





2016 ္ကိုိ္င္က 21-50





Property and facilities management



Smart buildings





Habitap has developed a fully integrated platform that aims to blend smart home control, smart condominium management and lifestyle offerings to provide holistic luxury smart home living. The app connects people together through physical and virtual spaces.



www.myhabitap.com

# Digital Matter \*\*











Building design





**DigitalMatter** provides one-stop combined services across architecture, structure and MEP, including design and submissions. Costumers get plug-andplay benefits from innovative BIM technologies, cross-disciplinary teams and the latest Digital Project Management (DPM).

www.digitalmatter.co

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### iglooh~me





Property and facilities management



Safety & security



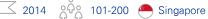


**Igloohome's** smart locks and lock boxes allow home or property owners to grant access to their property remotely, via a mobile app. The company's products work offline, with no internet connection required. The company is a partner of Airbnb, HomeAway and Booking.com.



www.igloohome.co







Construction



Technical planning





**Novade** offers smart field management software for the building and construction industry. Site processes including quality, safety, progress monitoring, workforce management, and maintenance are digitized and automated using mobile devices. The data captured provides insights to streamline operations and drive results. Contractors, real estate developers, owners, and operators around the world trust Novade to drive their digital



www.novade.net













Transactions and leasing



Property portfolio management tools





**Showsuite** is a property-technology company which started with the digitization of transactions of new homes in 2018. The proprietary digital booking platform offers property developers real-time inventory management capabilities, smart digital contracts for paperless signing, integrated with a booking workflow, CRM tools, payments and performance trackers. Showsuite connects the entire new homes sales eco-system comprising agents, lawyers, architects, home buyers, and banks through the unified platform delivering deal-closing, management and cost efficiency.



www.showsuite.com













Transactions and leasing



Property portfolio management tools





Real Estate Doc developed Redoc.co, a cloud-based front-office revenue and deal management software for businesses. Redoc.co tools help sales and revenue-driven businesses to win more deals, track business pipelines, manage assets, and eliminate



www.realestatedoc.co

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🔀 2017 ္ဂပို္ဂ္ဂ 21-50

South Korea



Property and facilities management



Tenant services (e.g. wellbeing solutions)





**Aptner** is a smart residential life platform that provides convenience services and communication channels for residents and helps building managers by automating and digitalizing unnecessary and repetitive tasks. Not only offering B2C services for residents, but also B2B service is being developed through cooperating with construction companies and local governments.



www.aptner.com







South Korea



Investing and financing



Data-driven pricing & valuation tools



Richgo

DataKnows forecasts the future of the real estate market, including real estate prices, based on big data analysis and Al technology. It operates a subscription platform through Richgo Expert, which consists of more than 20 indicators and charts related to real estate prices, allowing users to view and judge the real estate market from various perspectives and metrics.



www.richgo.ai









Property and facilities management



Building design





**Spacework** has been researching and commercializing AI architectural design since 2012 for the most efficient use of land. It innovates the land development and investment market with Al architectural design technology and big data. They provide the optimal development solution by evaluating the business feasibility of land under 661m2 through their service Land Book.



## ul disco







Transactions and leasing



Property information platforms





**Disco** provides real estate investment information, including actual transaction prices, listings, auctions, land and building registers, and registered information for all real estate and property in Korea.

www.disco.re

KPMG

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Transactions and leasing



Property information platforms





ValueMap is a land and building information platform service in Korea. It delivers big data analysis services including real estate price (actual transaction price, auction, property listing), market trend, development, and loan information. It has established a large real transaction price data base and collect and analyze unstructured data for the country's land market. Additionally, offering data services such as IBK corporate real estate and Value Map Campus.



www.valuemap.com



# 2. Flexible workspace

While the traditional view of Real Estate is one of immobility, the new workplace is quite the opposite; it is both flexible and on demand. Real Estate is transformed from being a fixed asset into a flexible service. Office spaces are available in any given district, city or country / territory and can be booked for an hour, a week, 10 years or anything in between, while all necessary services are included.







🔀 2016 ဗိုလို 11-20



Property and facilities management



Tenant services (e.g. wellbeing solutions)





GoSpaces offers a Mobile App that seeks to "gamify" workplaces, incentivizing employees to work towards corporate challenges (e.g. going Paperless for a week). The app also allows users to report workplace issues, locate available space and produce analytics for metrics such as occupancy and utilization.



www.gospacesmobile.com

## convene







Transactions and leasing



Co-working spaces





Convene creates dynamic work experiences by designing and servicing premium places to work, meet, and host events. Through strategic partnerships with commercial real estate landlords, Convene operates a network of hospitality-driven locations in office buildings across major U.S. cities, with imminent plans to expand globally.



www.convene.com

# saltbax







Property and facilities management



Co-working spaces





Saltbox is a real estate company that provides shared warehouses and office spaces built for local entrepreneur communities. The company offers private micro-warehousing units complimented by co-working areas featuring private offices, conference rooms, community spaces.



#### KNOTEL







Design & planning



Co-working spaces





Knotel aims to cater to the office market with its Agile HQ™ Platform. Knotel designs, builds, and operates branded spaces for established and growing brands, such that the brands can outsource this activity and aim to focus on core business for themselves.

www.knotel.com

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# wework







Property and facilities management



Co-working spaces





WeWork offers various working spaces varving from a desk in a common area, a desk in a shared space or a fully furnished space for all kinds of businesses. WeWork is a worldwide network of workspaces (27 countries) and the company aims to transform buildings into dynamic environments for creativity, focus and linkage. WeWork offers businesses the possibility to have flexible workdays, with innovative office designs, and a numerous community of entrepreneurs.



www.wework.com













Property and facilities management



Co-working spaces





Workstation aims to bring people together through shared workspaces. special events, social spaces and their digital member network. Next to their co-working space, they provide corporate solutions that accommodate every company size. Workstation has the proposition of decreasing operating costs, increasing employee satisfaction and enabling flexibility for clients.



www.workstationng.com









Transactions and leasing



Co-living spaces





**Cohabs** is a startup that provides flexible, fully furnished accommodations through a network of sustainable & community-driven shared homes. Currently primarily active in Belgium, the company has began intercontinental expansion with locations in New York, and is aiming to bring its concept in other, cosmopolitan locations as well.









solutions)









Property and facilities management Tenant services (e.g. wellbeing





**Ask Nestor** is a digital building app providing practical services an assistance to businesses and residences. Offering daily service logistics, direct assistance, and on-site concierge. Visitors can be welcomed through live video communication, using the latest video and internet techniques. The concierge takes care of registration and the exchange of documents and has an info kiosk with a preprogrammed video.



www.savviva.be

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🔀 2016 ္ကိုင္ကို 21-50

Property and facilities management



Co-working spaces





**COMET Meetings** creates and operates meeting rooms by combining an inspiring environment and a service designed in every detail to enable participants to evolve in a setting that stimulates their productivity, creativity and welfare. All these locations are in the center of Paris in buildings dedicated to meetings and seminars.



www.comet-meetings.com

#### SPACEPASS | PRO

🔀 2017 ్దిల్గ్లో 11-20

Property and facilities management



Co-working spaces





**SpacePass** is an enterprise-based platform intended to manage office space, Flex offices and Co-workings. SpacePass is integrated with services that allow users to engage accounting activities, customer-relationship management systems, pass-entry systems, printer management, and



www.spacepass.global









Property and facilities management



Offsite construction (e.g. prefabricated components)

CLUB HNK		
Club HNK Memberships	Basic	Business
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**HNK** is an office provider that offers different workspace ranging from flexible workspaces to full-service offices. HNK offers a multitude of workspaces and amenities, such as meeting rooms and catering for tenants of every size, from start-ups to multinationals. The concept of HNK challenges traditional long-term office rental contracts and offers tenants the flexibility to work at multiple locations across The Netherlands.











Transactions and leasing



Offsite construction (e.g. prefabricated components)





**Deskbookers** offers a trusted platform where people around Europe can find and book unique and inspiring working spaces, online, via a mobile device or room for an hour, a flex working space for a day or a coaching room for a fixed period of time. The locations on the Deskbookers website are available in several price categories, in more than 1,500 cities in 4 countries.

www.deskbookers.com

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Netherlands



Property and facilities management



Offsite construction (e.g. prefabricated components)





MyPup places lockers in offices, buildings or other locations where post and other delivery items can be received and stored temporarily, before a recipient can come pick it up when he/she has time to do so. In doing so, MyPup aims to provide convenience to recipients rather than having to be present at home, for instance, to receive a delivery. The company also claims that it is a sustainable solution, given this construction allowing for less couriers on the roads.



www.mypup.nl







Netherlands



Sourcing: materials, products and technology



Offsite construction (e.g. prefabricated components)





Ritswand offer - by selling (with buyback option) or leasing - flexible and free standing partition walls and cubicles. The walls or cubicles consist of frames that are joined using industrial zippers. The product aims to meet all requirements that would normally be asked from partition walls and/or cubicles in terms of acoustics, lighting, ventilation and electrification.



www.zipperwall.com

#### **SI\_**SUPERLOFTS







Design & planning

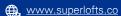


Building design





Superlofts combine modular design with prefabrication methods in a diverse mix of loft types and flexible programs. Offered as a trendy, sustainable and modern concept, this system also aims to cater to property managers by reducing maintenance costs and increasing the building's life span.











Property and facilities management



Co-working spaces





**Spaces** offers flexible working, office spaces, offices, networking, meeting rooms, hot desks, conference rooms and meeting location. The company offers offices for companies of all sizes, ranging from large corporates to starting entrepreneurs. All contract terms are based on flexibility, whether a customer needs a 25 square meter office or 700 square meters for a studio. The flexible offices aim to create an atmosphere where social and creative activities are both stimulated.

www.spacesworks.com

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🔀 2013 ္ကပို္င္က 21-50

Netherlands

Property and facilities management



Co-working spaces





Tribes offers flexible office spaces as a service. Customers are able to choose from several membership options, varying from a membership for one Tribes office to access to all Tribes. Currently, Tribes has 23 locations spread over Belgium and the Netherlands. The company is expanding to new countries, like Germany this year. Tribes offers high level material finishing, performance IT facilities, amenities which simplify tenants' lives such as dry-cleaning, shoe repair service, high level fitness and restaurants.



www.tribes.nl

# **e**Ofis

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Property and facilities management



Co-working spaces





eOfis provides flexible workspaces at 37 Locations worldwide. With Flexible Lease Model, members can use the meeting rooms, seminar rooms, flexible offices or work desks in shared offices at all eOfis locations with a pre-booking. Hourly, daily, weekly, monthly bookings are possible.



www.eofis.com

#### KOLEKTIF HOUSE

🔀 2014 ္ဂိုပို္င္က 21-50







Property and facilities management



Co-working spaces





Kolektif House provides space and services ideally designed for startups, corporates, freelancers and all other creators. They apply multiple memberships to their customers to be fully customizable and improve the feeling and creativity my matching the customer's needs and wants.















Property and facilities management



Smart buildings





**Inohom** provides services in the smart home and building management systems sector with its inohom registered trademark. It creates flexible solutions that have a wireless communication infrastructure, which is free from infrastructure dependency, hybrid solutions, and which phase of the project. Inohom smart home systems, makes users control lighting, curtainsblinds, heating, security with special keys or via a smart phone connection, including voice control.

www.inohom.com

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Property and facilities management



Co-working spaces





Work Club provides flexible workspace solutions and access to a diverse network of discerning professionals, with the intention to foster innovative thinking and encourage new ideas. Work Club aims to create a community of people, by offering a stimulating environment in which to engage in flexible working.



www.workclubglobal.com





Hona Kona SAR



Property and facilities management



Co-living spaces





Weave Co-Living creates and manages residential communities for millennials and young professionals in major cities. The company provides residents with designed places to live at affordable, allinclusive rents. The company also aims to cultivate a strong sense of community by creating social events for their young residents.



www.weavecoliving.com







Property and facilities management



Co-working spaces





**Skootr** is a chain of managed offices, co-working spaces, private and custom offices. Serving a variety of customers such as freelancers or entrepreneurs, Skootr offers co-working office space to meet individual needs of a dedicated plug & play work space. Skootr provides fully-furnished and ready-to-move private offices, flexible to meet expansion needs for agencies. It also includes custom designed office Spaces in any size, with full flexibility to scale up or down as per business needs.







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Property and facilities management



Co-working spaces





Awfis innovated the concept of Pro-WorkingTM that focuses on People, Proximity and Performance. Its aim is to bring workspaces closer and make them more accessible to people. They aim to create an ecosystem to facilitate community based working advantage and facilitate performance through strong operations, well defined training processes and consistent service

www.awfis.com

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# Just



Property and facilities management



Co-working spaces





JustCo designs and redefines workspace experiences for communities, by way of a collaborative ecosystem where members can share insights, network, and help drive success to each other. JustCo aims to empower the workforce of the future through flexibility, opportunities and experiences.



www.justcoglobal.com







Singapore



Property and facilities management



Co-working spaces





ProSpace provides smart solutions in advanced workplace analytics and space scheduling to increase workplace productivity. The various Al powered tools are designed to increase collaboration, integration and ease management within a company. ProSpace helps drive an office's design to not just be spaces, but to serve as a medium for growth.



www.prospace.io

#### **FASTFIVE**







Property and facilities management



Co-working spaces





FastFive is a coworking space in Korea that offers its tenants flexible work spaces, and a range of office services such as IT support, healthy workspace solutions, catering and more. In addition, FastFive offer solutions to businesses to turn client's offices into fully serviceflexilble work spaces that suit the identity of the brand.

















Property and facilities management



Other





Smarten Spaces is a global SaaS company that offers an end-to-end solution for workplace safety and flexibility on a single technology platform, to help businesses navigate the new hybrid workplace. The SaaS technology simplifies Desk Management with Workforce Scheduling, Digital Workplace experience and Space Management; bringing together key workforce and workplace considerations for a futureready solution.



www.smartenspaces.com



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Flexible Workspace

#### **MHOMES**

🔀 2015 ္ဂိုပို္င္ဂ 21-50

South Korea



Property and facilities management



Co-living spaces





Homes Company plans a co-living service in Korea to provide housing services suitable for a new form of lifestyle. Using IT and IoT technology, it has built an application called 'Homes Family' and a rental management solution for efficient operation as well as space development and design. Through their home IoT system, they collect customer data as well as selfoperation. The company runs Homes Studio and Homes Living Lounge.



www.mrhomes.co.kr



🔼 2018 ္ဂိုပို္င္ဂ 11-20

South Korea



Property and facilities management



Co-living spaces





MGRV plans, develops and operates shared housing for single-person households in the city. The company is a start-up that offers customized services, combined with global scale, differentiated public space, and IT. They formed a 'co-living blind fund' with IGIS Asset Management in 2020 and opened their first Mangrove Store in Jongno, in June 2020.



www.mangrove.city

#### **SPARKPLUS**



🔀 2016 ္ဂိုပိုဂ္ဂိ 51-100 🚷 South Korea



Property and facilities management



Co-working spaces





Sparkplus is a Korean co-working space that currently has 16 locations throughout the country. The company offers flexible work space to start-ups including office and business services. Sparkplus also facilitate start-up training and incubating programs to further accelerate their clients businesses.



www.sparkplus.co



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Flexible Workspace





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# 3. Healthy Workplace & Living

'A workplace which is cost efficient, sustainable and healthy', a description of the ideal future workplace, but this may become the standard very soon. Indoor climate of Real Estate is gaining more importance and attention by tenants when considering new Real Estate locations. COVID-19 may very well be the accelerator to make a healthy and clean indoor climate a prerequisite for future Real Estate. Besides health and safety reasons, smart technology innovations such as air sensors and smart lightning improve the work floor environment and employee satisfaction and productivity may rise. Real Estate owners should be aware of the opportunities a healthy (work)place can offer for their own portfolio.

















Air Quality





**B-Line** is an Al-powered contact tracing and facility management platform that helps building owners and employers prevent the spread of infectious disease through capacity monitoring, access controls, and the collection of highly accurate location data to identify possible chains of transmission.



www.bline.io













Property and facilities management



Air Quality





**Awair's** product identifies five factors that determine air quality. Namely, chemicals, temperature, humidity, fine dust and CO2. The Awair display and app show air quality, as well as track improvements over time. Additionally, personalized recommendations are provided to improve air quality.



www.getawair.com











Property and facilities management



**HVAC** 



**Keen Home** develops proactive hardware and software products to protect and enhance a home's core systems, providing homeowners with increased comfort, improved efficiency, and a better maintained home.

Smart Vent controls individual room temperature by regulating airflow, providing a cost effective and efficient zoning solution for homeowners. The software platform serves as a proactive home health dashboard while offering partners data for lead generation, actuarial price risk data, and peak load management control.



www.keenhome.io











Property and facilities management



Remote monitoring





Intenseve uses artificial Intelligence, powered by video analytics, to prevent workplace incidents. By automating inspections, it can provide instant notifications, and potentially prevent



www.intenseye.com













Smart buildings





Orro aims to go beyond smart lighting. Orro integrates with your favorite smart home systems by implementing one system that integrates lighting, intercom and home control. An easy-to-install lighting system that unifies your smart home and creates perfect lighting, automatically.



www.getorro.com













Sourcing: materials, products and technology



New materials





SageGreenlife designs, manufactures and installs living green walls that can be scaled for any size project, as well as interior design products that rethink the way people engage with nature. Utilizing patented hydroponic technology, Sagegreenlife is committed to designing healthy, sustainable and aesthetically captivating spaces.



www.sagegreenlife.com

# freesilli











Property and facilities management



Air Quality





**IISY** is a digital expert house specializing in indoor air and prevention of indoor air problems, this helps property owners lead the development of indoor air quality in large property portfolios with their digital Freesi indoor air service. Freesi is a SAAS and DAAS solution with a twist of civil and HVAC engineering, offers indoor air management tools and a turnkey service for indoor air analysis.















Property and facilities management



Air Quality





**720 Degrees** offers a cloud and Al based analytics solution for monitoring the quality of indoor environments, by tracking for example air quality.



🔀 2011 ္ဂိုပိုဂ္ဂို 51-100 🕀 Finland



Property and facilities management



Air Quality





Naava manufactures and distributes green walls for offices and learning spaces.



www.naava.io







France



Property and facilities management



Air Quality





Atmotrack is developing a network of sensors allowing to measure the air quality in a given environment and enable decision-making accordingly. Based in Nantes, it positions itself within cities primarily and is aiming to expand geographically as well.



www.atmotrack.fr









Property and facilities management



Smart buildings





Healthy Workers creates smart, healthy and sustainable buildings within every P&L's reach by providing building owners, managers and users the right tools, insights and actionables with the Building Performance Platform. They connect their platform with the core of existing building systems which is interoperable with every other relevant system available.



www.healthyworkers.com









Property and facilities management



Air Quality





CleanWave delivers bio-security in terms of indoor air and surroundings by means of its innovative, high tech and sustainable systems for air and surface disinfection and thereby creates safe indoor environments.



www.cleanwave.nl







Offsite construction (e.g. prefabricated components)





Nowi climate sensors are able to use the energy available in WiFi. 4G and GSM signals to power themselves. They are focusing on climate sensors such as temperature, humidity and light. Thousand of these are needed per building and changes the batteries of such sensors every year is simply not feasible and too expensive. Nowi aims to change the paradigm from the old 'plug and play' to something that fits better with the Internet of things, 'plug and forget'.



www.nowi-energy.com











Property and facilities management



Smart buildings





Priva developed Priva ECO, a selflearning sustainable software solution that automatically optimizes in-door climate conditions and energy usage for buildings. Through artificial intelligence and machine learning Priva ECO constantly aims to improve comfort and reduce energy costs by 10-20%, and doing so without any human











Property and facilities management



Air Quality





ConstructionDNA is made up of individual SaaS products such as ConcreteDNA, StructureDNA, and LogisticsDNA, which each optimize a different part of the construction process with intelligence generated from data captured by their sensors deployed on-site and off-site.













Property and facilities management



Offsite construction (e.g. prefabricated components)





Quest Life developed WalkingRoom, the only green park where you can walk endlessly. It contains World's largest moving meeting room. This is a 12 square meter treadmill which can handle up to 8 people to walk, work, meet, collaborate and even present to colleagues and clients. WalkingRoom is delivered with fully equipped work- and health stations, safety and sensor

www.questlife.io



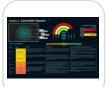














Centric Lab is a neuroscience lab delivering data driven solutions to urban health challenges. Using a smart cities geospatial tool the company analyses environmental and urban data through a neuroscience health lens to help real estate developers, urban planning policy makers, and third sector organizations create area specific and research driven health codes. Their neuroscience research underpins climate change related scenario modelling and targets the reduction in mental and metabolic disorders such as depression and diabetes.



www.thecentriclab.com

#### R/4ZZ



Hona Kona SAR



Sourcing: materials, products and technology



Air Quality





Raze Technology is a material science company that developed a lightactivated disinfectant coating that provides continuous protection from general pollutants while improving air quality. Raze launched a consumer sanitizing spray series and a B2B coating service. The company has invented a paint integrating their nanoparticles that removes air pollution and an air purifier that does not require filter replacement.



www.nanoraze.com

# gush









Construction



New materials





**Gush** is an advanced materials company dedicated to innovating and developing sustainable advanced materials that improve living environments. From airpurifying paints that combat indoor air pollution (created from personal problems of asthma and sinusitis) to new anti-thermal materials that have been proven to reduce a building's cooling energy usage by 10%.





uHoo



Hona Kona SAR



Property and facilities management



Air Quality





**uHoo** provides a dashboard and app for air monitoring and management. Alerts, tips and recommendations are provided to help people take action in managing the air-quality within their surrounding(s). uHoo can also be integrated with various smart devices and can be used to automate entire

www.getuhoo.com



# 4. Innovative constructions

Construction technology (ConTech) has evolved over the last years and is expected to expand even more. New building methods, 3D printing, special barriers, specialized gadgets and multifunctional paints are just a few examples of new innovation being applied to construction. With these innovations, construction can become less complex and safer, while offering cost savings due to efficiency and/or sustainability reasons at the same time.











New materials

Construction





BONE Structure® is a steel construction system aimed to produce high performance, energy efficient homes, designed and built using an integrated process inspired by the aerospace industry.



www.bonestructure.ca



🔀 2014 ္ဂိုပိုဂ္ဂိ 101-200 🕑 Canada







Construction



BIM and Digital Twin





CadMakers is a construction and manufacturing technology company that has developed a digital twin solution for virtual construction which includes parametric modelling.



www.cadmakers.com

#### DIRTT Build better."











Construction



Building design





**DIRTT** creates customizable, sustainable prefabricated interior wall and millwork systems. It supports reconfiguration, levels of customization, and distributed manufacturing. Enabled by its proprietary software platform, its solutions include various DIRTT wall solutions, along with ICE® technology, and ICEberg®, a modular vs. traditional construction cost-comparison tool. It has over 100 North American Distribution partner locations, 233 patents and 3 manufacturing plants.



#### CarbiCrete









Construction



New materials





**CarbiCrete** is a cleantech company that develops innovative, low-cost building solutions that contribute to the reduction of greenhouse gas emissions. They offer concrete manufacturers the process, materials and support to make lower-cost, higher-quality precast concrete in a way that reduces their carbon footprint. Their technology enables the production of cement-free, carbon-negative concrete using industrial by-products and captured CO<sub>2</sub>.



www.carbicrete.com

## evercloak.





Sourcing: materials



New materials





Evercloak is tackling global climate challenges by innovating with materials. Their technology is an economical and energy efficient manufacturing process for continuous coating of single layer nanomaterials over large areas.



www.evercloak.com







( Canada



Construction



Building design





Falkbuilt develops and builds Digital Component Construction for commercial office, healthcare and education. They combine proven interior construction methods with nextgeneration technology to highperforming and cost effective



www.falkbuilt.com







Sourcing: materials, products and technology



3D printing





**Branch Technology** is a prefabrication and technology company that specializes in large-scale 3D printing. Branch Technology offers a patented 3D printing process called Cellular Fabrication, C-Fab™. This printing method allows material to solidify in open space, creating a matrix of polymer in virtually any shape. This brings large design freedom and resource stewardship to next-generation wall systems.



www.branch.technology.com







🔀 2010 ္ဂိုပို္င္ဂ 21-50 🚺 Canada



Construction







**Upbrella** is an innovative construction system for high rise buildings. It doesn't require a tower crane and uses a protective enclosure to make construction more efficient and safe. Upbrella also uses greener structures and methods that reduces urban disturbances associated with high rise construction in dense area or complex sites. Upbrella addresses labor shortage, green construction and safety issues related to open air construction in large



www.upbrella.com

# CONNECT











Construction



Offsite construction (e.g. prefabricated components)





Connect Homes is a prefab home builder based in Los Angeles. The Connect Homes housing system has emerged from a decade of research on making high-modern, green architecture affordable to the mass-market. The results are low-cost modular prefab homes that mimic the spatial and aesthetic qualities of mid-century modern California residential architecture. These homes can be shipped anywhere, adapted to any environment, and are move-in ready a few weeks later.



www.connect-homes.com











Sourcing: materials, products and technology



Building design





**ECOR** is a sustainable building and design material designed to be 100% recycled and recyclable. It is non-toxic, 100% certified bio-based and can be used as an alternative for i.e. traditional wood, plywood and plastics. ECOR is replacing traditional wood-based and plastic materials in several applications including graphics/signage, packaging, construction, architecture and design, furniture, fixtures and consumer products.



www.ecorglobal.com











Sourcing: materials, products and technology



New materials





Katerra exists to help transform construction with the use of material technology. Katerra is developing a broad portfolio of products - including structural systems, utility systems, finish materials, and more - that will improve building performance and lower carbon footprint. Recently Katerra has launched new types of cross-laminated timber to build wooden skeletons for properties.













Sourcing: materials, products and technology



Tenant services (e.g. wellbeing solutions)





**imageSurge** develops digital interactive hardware and software applications for the real estate industry. Their flagship product is the Interactive Real Estate Storefront - which includes features like: through-window interactive; sunlightreadable displays; multiple listing services: and user-metrics and leap

www.imagesurge.com

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Innovative Construction

# KISI













solutions)



Kisi develops cloud technology to build secure access control systems that use a combination of sensors and mobile devices to grant facility access to authorized personnel. Designed for commercial and enterprise applications, the system software streamlines access management for operations teams while generating sophisticated data visualizations and personnel tracking for advanced IT departments.



www.getkisi.com













Property and facilities management



**Drones** 





Lucid Drone Technologies build drones that clean buildings, anything from washing windows to roofs and nearly every surface in between. Rather than needing lifts, ladders, and scaffolds, they lease their technology to cleaning companies, allowing them to safely relocate their workers to the ground.



www.lucidddronetech.com

# view











Building design





View offers large-scale commercialization of dynamic glass. The company manufactures View Dynamic Glass, a new generation of architectural glass that intelligently transitions through multiple tint states to control the sun's energy, aiming to provide an enhanced occupant experience and optimum natural light and thermal comfort.













Construction



Offsite construction (e.g. prefabricated components)





**Veev** is a home company founded on the belief that homes are the ultimate consumer product, and they need to be built better, and faster. Working across real estate, design, development, engineering, manufacturing, and construction, Veev's vertically integrated approach productizes the home to improve cost and quality, building 4x faster than traditional construction. Veev builds multi-family homes, single-family homes, and accessory dwelling units (ADUs) at scale, bringing exceptional living to all.

www.veev.com







Construction



Building automation





Genda leverages field data and AI to automate construction management and make sure projects are meeting their milestones. They have developed an easy to deploy, worker engaging, location monitoring solution for labor and equipment which requires no prepreparation and maintenance. Their data is combined with common data sources to map the construction process, identify bottlenecks and streamline dayto-day operations.



www.gendatech.com









Construction



Collaboration software





BrigadierApp helps developers and construction contractors to manage their field operations and run highly effective site and the office. The company provides a platform with a set of applications to control the construction site and get insights into the field operations and productivity with tools such as daily reports, procurement management, field operations analytics and mobile apps for workers.



www.brigadier.app

#### TRACEAIR



2015 ္ဂိုို 21-50





Construction



**Drones** 





**TraceAir** is a construction acceleration solution for the site development phase. Their turnkey service captures highresolution aerial images, overlays project documents, and allows teams to collaborate in the cloud. The easy-to-use software helps owners, contractors, and consultants keep projects on schedule, maintain site balance, minimize waste, and track progress remotely using a mobile-friendly platform. TraceAir allows the entire team to plan, execute, and communicate more efficiently, creating a transparent and collaborative project experience.



GEOSCAN



2007 ရှိတို့ 201-500 Tussia



Construction



**Drones** 





**Geoscan** is involved in the design and manufacturing of drone aircraft systems and software that could be used to create 3D models of cities, 3D mapping of construction sites pre-development and thermal imaging.

www.geoscan.aero



BetonBallon building technique allows vaulted structures for houses and tunnels to be made in an innovative, affordable and sustainable manner. With this technique, construction time and CO2 emission are significantly reduced. Cost savings of up to 50% and 70% can be realized for concrete and steel respectively. This is all possible thanks to form, process and materials being optimally aligned. The BetonBallon building methodology is applicable in the different construction industries, being home, infrastructure and utility construction.



Bio Bound produces sustainable concrete, by recycling old concrete and combining this with miscanthus, a type of grass that is highly efficient at capturing carbon emissions and thereby efficient at storing carbon emissions in concrete for longer periods of time. Moreover, Bio Bound utilizes a Take Back System, meaning the concrete is taken back at the end of its life cycle to be recycled into a new product.



www.biobound.nl















**CyBe Construction** is a technology company which develops software, hardware and durable materials in house for the construction industry. It aims to become a one-stop-shop for construction innovation such as concrete 3D Concrete Printing and Parametric design.

www.betonballon.nl





Chess, in over 20 years developed Mymesh, a network protocol that is capable of making large and complex professional locations smart. It does so by wirelessly connecting and managing an unlimited amount of devices throughout a location. Today, Mymesh is globally used by market-leaders to optimize their performances with advanced business intelligence.

www.chess.nl



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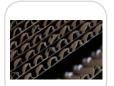




Construction



Offsite construction (e.g. prefabricated components)





Fiction Factory offers microhomes made of lavered cardboard with a long life span. The Wikkelhouse is made out of durable corrugated cardboard glued together with an eco-friendly adhesive. The cardboard is topped with a waterproof, breathable film called Miotex and finished with an open facade cladding system of pine slats. It is up to three times more sustainable than traditional construction technology. The Wikkelhouse building technology can be used for home, recreational or offices construction.



www.fictionfactory.nl







Netherlands



Construction



Offsite construction (e.g. prefabricated components)





Flexotels offers Short Stay Solutions and is an innovative manufacturing and rental company of temporary accommodation solutions. Flexotels mainly service temporarily events like music festivals and business events all over Europe through their foldable accommodations solutions. The company aims to develop a variety of flexible accommodation facilities that can be placed at any location, at any



www.flexotels.com





Netherlands

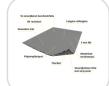


Construction



New materials





Leadax is a sustainable lead replacement material, applied in construction to make roofs water repellent. In contrast to traditional materials, Leadax is not a toxic metal and therefor better for the environment, Leadax is lighter in weight, more cost efficient to procure and apply, and is a completely circular product.



#### Karbonik<sup>®</sup>









Construction



Offsite construction (e.g. prefabricated components)





**Karbonik** produces thin (<0.5mm) innovative carbon based foil that can be applied to floors, walls and ceilings to provide warmth. The infrared radiation coming from the foil heats up spaces. The foil is 100% recyclable and environmentally friendly. Furthermore, the foil can be easily placed underneath carpets or tiles. Karbonik operates on electricity and is therefore often more sustainable. The system can easily be controlled from inside a property or from a distant location.



www.karbonik.nl











Construction



Recycling solutions





**New Horizon** is a demolition company that aims to be circular by demolishing buildings and recycling the most amount of usable resources as possible. Salvaging reusable resources, New Horizon gives materials a second life that have demonstrable lower environmental impact, while still maintaining regulatory qualifications and standards.



www.newhorizon.nl









The Netherlands



Construction



Offsite construction (e.g. prefabricated components)





**Novito** provides a building system that makes it possible to adapt homes to the specific needs of homeowners. This can be done in several ways, from dometics to care facilities. Novito provides buildings that can be built within one day, and it takes another two weeks to make them ready to use. Novito's buildings can be taken apart easily and rebuilt in a different location, making them a sustainable solution.



www.novito.nl

#### SUSTONABLE









Construction



Recycling solutions





**Sustonable** is a 100% circular and sustainable material. It is a thin and ultralightweight surface made with a unique combination of quartz and recycled PET plastic as the only binding agent. Repurposing plastic that has been thrown away into something useful and perdurable while protecting the environment by eliminating the need for natural stone by 80%. Sustonable turns traditional composite stone surfaces and countertops into a more ecological, affordable, and recyclable alternative for any architectural and decor projects.



www.sustonable.com















Construction



Safety & security





**Skelex** designs, produces and markets custom exoskeleton solutions for large scale manufacturing companies. The firm's products allow workers in industries like aerospace manufacturing, shipbuilding and heavy manufacturing to be more productive while minimizing the risk of ergonomic injuries by offering upper body and neck support through their exoskeletons.



www.skelex.com











Construction



Technical planning





**Oflow** enables a shift in the way construction teams collect and use material and waste data on live projects. Using a combination of artificial intelligence and machine learning, Oflow automates the time consuming and error prone process of onsite data capture and analytics, enabling engineering teams to deliver quality and sustainability while minimizing project risk.



www.qualisflow.com









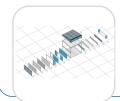
Australia



Construction



Offsite construction (e.g. prefabricated components)





**Spacecube**'s modular building system provides architects, designers and creatives a solution for any temporary or transitional infrastructure projects or developments. Spacecube's are designed to be flat-packable, customizable, re-locatable and re-usable.



www.spacecube.com













Construction



Offsite construction (e.g. prefabricated components)





LWC is specialized in custom-order architectural precast concrete and GFRC façade systems. Aiming to provide unique concrete finishes, in their colour, texture, profile and form. Achieving this through attention to detail, dedicated design process and extensive technical knowledge. Their services range from feasibility studies, design, manufacture, and installation.















Design & planning



Building design







**uDrew** is a cloud platform that utilizes custom AI to allow homeowners and Industry, without any technical skills, to design, engineer, manage & create their own custom building project, throughout the process. As projects are drawn 100% digitally, all offsets, infrastructure, environmental conditions, local and national regulations are checked in real time as the project is sketched, allowing anyone to instantly create their own autonomous & fully compliant building plans, no matter what their background.

www.udrew.com











Sourcing: materials, products and technology



New materials





Widuz is developing a new class of renewable and sustainable construction materials called BVL (Bamboo Veneer Lumber), a high-performance structural lumber synthesized from bamboo fibers. BVL™ is up to 3 times stronger than timber, is not susceptible to any decay or degradation, and is dimensionally stable. Due to its strength-to-weight ratio and durability, BVL™ is suitable for use as structural elements (e.g. beams, columns, trusses) in construction of buildings replacing other construction materials such as concrete, timber and steel.



www.widuz.com









South Korea



Construction



Offsite construction (e.g. prefabricated components)



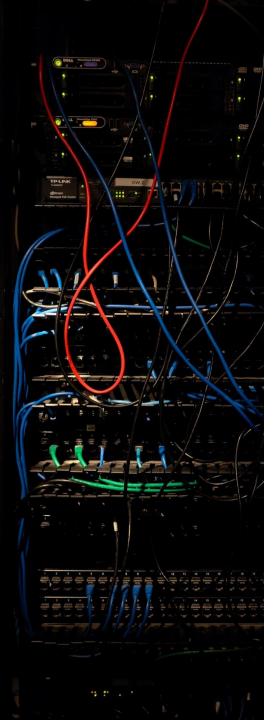


Ten-Eleven aims to innovate the whole process of architecture through research and development of IT and construction such as Al architectural design and factory automation solutions, and the prefabricated modular method they transform the construction process in an eco-friendly, faster and smarter way. The main services are Build It, an artificial intelligence architectural design service, and BuildIt-M, a modular



www.buildit-m.com





# 5. Internet of Things

The rise of Internet of Things (IoT) is changing Real Estate from being a stand alone asset to an interconnected product which offers endless possibilities for owners of Real Estate. IoT innovations lead to more efficient, sustainable and user friendly buildings. These technologically advanced electronic products enable tenants and commercial property managers to control in-house traditional devices in an easy and centralized way. The list of traditional devices made smart is non-exhaustive, but current applications are often aimed at smart heating systems, security systems and lightning control.

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Property and facilities management



Smart buildings





Alert Labs builds easy-to-use smart building sensors and software that lowers utility costs and minimize property damage.



www.alertlabs.com

#### **Avidbots**







Property and facilities management



Robotics & automation





Avidbots builds indoor autonomous cleaning robotics systems which optimize cleaning processes by increasing productivity, enhancing oversight and increasing insight trough



www.avidbots.com

#### ORELOGIX









Property and facilities management



Smart buildings





Relogix's flexible workspace analytics platform, data insights and domain expertise is market proven with customers who wish to continue to transform their global real estate portfolios and use this deep learning to improve user experience that ultimately impacts productivity and well-being.















Property and facilities management



Safety & security





**Keycafe** provides solutions for property access management. Keycafe has enterprise level key exchange solutions for Real Estate Agencies, Cleaning Companies, Property Management Agencies. Keycafe also has a network of locations in 42 major cities to allow forward deployment of keys near properties. Keycafe essentially digitizes existing keys and allows key owners to go online and assign access to guests.

www.keycafe.com

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Safety & security





Abode offers a DIY smart security solution, which combines a no-contract home security platform with a smart home functionality. On-demand shortterm monitoring and most smart home devices on the market are supported.



www.goabode.com













Property and facilities management



Property portfolio management tools





Aquicore's cloud-based platform tracks, analyzes and predicts building performance factors in real time to create actionable insights. With selfinstallable IoT sensors, the company additionally offers an asset operations solution.



www.aquicore.com

# enlighted









Property and facilities management



Smart buildings





**Enlighted** is an Internet of Things solutions company that delivers a technology platform for smart buildings. With its sensor technology, scalable network to real-time data collection and high-value applications, Enlighted helps its customers to reach long-range sustainability goals while saving money and increasing efficiency. Enlighted provides smart energy solutions for commercial environments, saving customers up to 90% in energy costs while improving the comfort of workspaces and the efficiency of the people who work in them.













Property and facilities management



Smart buildings





**Cohesion** is a Real Estate software company that creates smarter buildings and improves experiences by unifying systems and people in a single platform. Their secure, converged, Internet of Things-enabled solution unites core building workflows, optimizes portfolio management, and generates actionable insights resulting in increased profitability and improved tenant

www.cohesionib.com



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Construction



Remote monitoring





**Kwant.ai** uses proprietary low powered sensors network to automate construction site data collection to improve safety and productivity. Using Al, Kwant .ai provides analytics like schedule and cost risk, early warning signals to optimize workforce and predict/prevent safety incidents. Kwant collects real-time location, time, identification and activity data of craftworkers and assets using minimal infrastructure and visualizes in 3D heatmap. Their platform empowers owners, real estate developers, builders and insurance companies measure and mitigates risks.



www.kwant.ai

#### LATCH









Property and facilities management



Smart buildings





**Latch** allows you to open and manage every door in an apartment building—all from your smartphone. A fully integrated system of both hardware and software, Latch is expanding smart access through thoughtful and intuitive design made for modern living.



www.latch.com

#### senseware







Property and facilities management



Property portfolio management tools





**Senseware** offers facility monitoring and controls platform for the commercial and industrial building market. It developed into a universally connected IoT ecosystem capable of connecting any device, system, or piece of equipment. The wireless platform delivers building owners, operators, and facility managers a way to integrate, monitor, and control all of their systems. The cloud-hosted platform's combination of hardware and software enables a wide range of applications from energy management, equipmentlevel monitoring, HVAC control solutions.



www.senseware.co











Property and facilities management



Smart buildings





**Notion** is a smart security system that empowers home and property owners to be proactive in protecting and maintaining their spaces, people, and most valued possessions. Powered by a multifunctional sensor and app, Notion is committed to reducing risk and increasing protection of a property with the ultimate goal of becoming a requirement for insurance.

www.getnotion.com

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Products and technology



Smart buildings





SmartRent develops a smart home automation platform. It enables control all of the smart devices in client's properties. Property managers can monitor all vacant unit activity and remotely control door locks, thermostats, cameras, lights and other smart devices.



www.smartrent.com









Property and facilities management



Smart buildings





Switch Automation is a global real estate software company that helps property owners and facility managers reduce operating costs, improve energy efficiency and deliver exceptional occupant satisfaction. Their comprehensive smart building platform integrates with traditional building systems as well as Internet of Things (IoT) technologies to analyze, automate and control assets in real-time.



www.switchautomation.com











Property and facilities management



Smart buildings





Facility lockers is a connected parcels locker for office and residential buildings. Together with its integrated marketplace of concierge services, the facility locker offers a unique experience to tenants.













Property and facilities management



Smart buildings





VergeSense is a provider of an Al-Powered SaaS platform for commercial real estate. The VergeSense platform creates a sphere of intelligence within properties to unlock the data-driven office and provide real estate investors, property managers, and workplace tenants increased asset value and a more productive workplace. Costeffective VergeSense sensors can be installed in minutes and the platform gives actionable insights and Alpowered recommendations to building managers through an easy to use



www.vergesense.com

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Property information platforms





Spacewell, a Nemetschek Group company, is a technology and consulting firm, supporting its clients across the globe to improve the performance of their building portfolios. Their core purpose is to make buildings work harder for their occupants through unlocking the power of building data. By making this data actionable Spacewell provides smart solutions in the field of cleaning, technical maintenance, space efficiency, financial performance, tenant services and occupant experience.



www.spacewell.com



🔀 2016 ္ဂိုဟို္ဂ္က 21-50





Property and facilities management



Smart buildings





**Spaceti** has produced innovative enterprise software and IoT systems for commercial real estate since its comprise an integrated turnkey solution that digitizes indoor environments, making commercial offices interactive and optimizing their efficiency and



www.spaceti.com

# **G**Gate







Property and facilities management



Smart buildings





eGate offers an IoT/SaaS service that enables wireless, transparent, and realtime measuring of conditions from structures and air during the entire life cycle of a building. Multiple reports can be generated from measurement results and the collected data can be utilized to develop processes and building quality.





SMART LIVING. FOR LIFE.











Property and facilities management



Smart buildings





Cozify offers a wireless smart home hub that connects smart devices from different manufacturers into one seamlessly working entity. The hub is controlled by a mobile application.

www.en.cozify.fi



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Property information platforms





Enermix Oy offers software, design, professional services, and SCADA (Supervisory Control And Data Acquisition) services to control and monitor apartment, commercial, and industrial buildings. The software and professional services are mainly related to building automation, energy management, energy efficiency improvement, renewal energy, and hybrid heating systems.



www.talotohtori.fi







Finland



Property and facilities management



Energy efficiency





Fourdeg offers a B2B SaaS service of heating optimization for construction, energy, ESCo, property management companies and building owners. The service improves indoor comfort and saves in heating costs through lower heating energy consumption and Demand-side Management. The technology works automatically at roomlevel accuracy in any size of old and new buildings, including commercial, public, and residential premises.



www.fourdeg.com







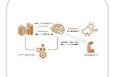


Property and facilities management



Energy efficiency





Leanheat provides a turnkey IoT solution that upgrades building HVAC systems for the digital age. Fully automated and self-learning, Leanheat's solution provides real-time optimization not only for individual buildings, but entire clusters of apartment buildings while at the same time giving the opportunity for district heating companies to serve their customers more efficiently and with a smaller carbon footprint. In short, climate sensors are installed in apartments, that are then governed by an Al software to maintain optimal indoor climates and reduce energy waste.



www.leanheat.com











Sourcing: materials, products and technology



Smart buildings





Haltian designs and develops premium quality products and IoT services to global high profile electronics companies. IoT services include the Empathic Building digital twin service for smart buildings, and Thingsee, the proven IoT technology platform that enables faster IoT launches for massscale deployments. Specialties include design and engineering for IoT solutions, wireless devices, wearables,

www.haltian.com

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Safety & security





Lukoton offers modern access management solutions that enable housing real estate locks to be opened via a mobile device application.



www.lukoton.com



🔀 2012 ္ဂိုမို္င္က 11-20



Finland



Property and facilities management



Energy efficiency





Nuuka Solutions offers a platform to centrally monitor and manage energy efficiency, indoor air quality, and HVAC processes in commercial and public buildings, visible at the entire real estate portfolio level. The Nuuka SaaS device is independent of manufacturers, which helps to automate data collection directly from energy meters, building automation systems, IoT systems, and utility companies.



www.nuukasolutions.com

# WIISTE







Construction



Remote monitoring





Wiiste manufactures and distributes technology that allows the humidity and temperature of concrete to be measured remotely via IoT sensors. Monitoring moisture levels can bring holistic cost-efficiency to the site management.



## **OptiWatti**



☑ 2013 გებ 21-50 🕀 Finland



Property and facilities management



Energy efficiency





OptiWatti offers a smart software solution that analyzes outside temperature, weather forecasts, electricity prices, how each room reacts to temperature changes, to minimize heating and cooling costs for residential

www.optiwatti.com

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Property and facilities management



Other





Wirepas aims to solve large scale IoT challenges. Their product. Wirepas Mesh, is an IoT connectivity software, which provides one horizontal connectivity layer for all IoT use cases, enabling the flow of data between devices and back-end reliably. This includes collecting data from sensors to an IoT application in the cloud, controlling remotely located devices, communicating device-to-device in the network with or without cloud, and tracking the location of moving assets.



www.wirepas.com









Construction



Smart buildings





360SmartConnect has developed a "connected concrete" system. In other words, a construction equipment which is capable of communicating with connected devices using NFC contactless technology. In fact, this type of material allow to include connectivity into the building. Finally, the building is able to keep in memory the different works, to send information according to different scenarios, etc.



www.360sc.io









Property and facilities management



Virtual viewing





nxtBase develops an Industrial IoT platform for mobile workflows that combines augmented reality (AR), artificial intelligence, computer vision and pattern recognition. Their smart glass solution is providing digital assistance to facility manager, service technicians, as well as caretakers, and support them with voice-controlled applications on corresponding smart glasses in their tasks.





**SmartHab** is a connected apartment operator for owners of residential real estate, mainly developers. SmartHab provides them with a fully integrated platform: equipment, information system, advice and services. Customers can thus massify the connected home by equipping all the lots of their programs. Native integration in the rack reduces costs and provides better

www.smarthab.fr

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Remote monitoring





Simplifa developed a digital service platform for elevator monitoring:

360° recordings reconstruct an elevator virtually, IoT device placed over the existing technical architecture and acquires sensor data and acoustic signals, transmitted via secure data transfer (MQTT), machine learning and predictive maintenance algorithms are evaluated and presented in a dashboard.

In a fully digitized process, the Elevator Twin is available to all stakeholders at the push of a button or synchronization of existing ERP systems.



www.simplifa.de











Property and facilities management



Smart buildings





**OOT Technologies** provides smart home solutions for home security. energy efficiency, cost saving and comfort for new and used properties. The multi frequency/protocol OOTT HUB smart home hub offers compatibility to most existing and future smart home accessories. Their system enables users to control everything with their mobile phones, installing cost efficient smart home systems without wall drilling, rewiring, or mess, existing appliances, such as heating, climate, shutters, garage and door



www.oott.hu













Property and facilities management



Water efficiency





**ROBEAU** is a start-up company offering IoT turnkey solutions for water management. It allows to measure direct water consumption in all buildings and properties, including leaks and over consumption, allowing to reduce up to 40% of water consumption.















Property and facilities management



Smart buildings





**Rollet** is a new payment service that enables drive-through payments with any car. With Rollet's car recognition cameras, the vehicle becomes a cash or card payments and no queuing is needed in parking lots. Rollet also deals with the development of traffic management systems to control and manage vehicle traffic at industrial areas and office campuses.



www.rolletpay.com

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Smart buildings





PointGrab developed IoT sensing solution for commercial real estate. providing accurate data about the workplace, including count and location of people, social distancing, occupancy, environmental data and more. Allowing customers to have real time data, as well as clear analytics and predictive information about the way they use their real estate



www.pointgrab.com





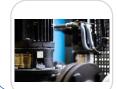




Property and facilities management



Remote monitoring





Disruptive Technologies has developed a simple and secure wireless sensor solution that delivers useful insights to customers, enabling more sustainable, safe and efficient operations within substations, buildings and offices. Examples of usage include remote monitoring, predictive maintenance, smart cleaning, legionella prevention and cold monitoring using temperature, humidity, proximity and touch sensors. The sensors are tiny, have a battery life of up to 15 years and can be installed anywhere, literally.



www.disruptive-technologies.com











Smart buildings





Infraspeak is the Intelligent Maintenance Management Platform (IMMP) that helps operational teams thrive in a world of data, intelligence and automation. Infraspeak is a platform-bydesign connecting apps, other software, IoT devices, and smartphones. Powered by intelligent technology — the Infraspeak Gear™ — it transforms data into actionable insights and suggestions, and automates recurring tasks.



## unloc



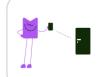




Property and facilities management



Safety & security





**Unloc** is your digital key chain. It is a mobile application which allows you to collect all your digital keys, from different hardware producers, in one place and share with whoever you want, as easy as sending a text message.

www.unloc.app

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# sodis lab

🔀 2011 ဗိုလို 11-20



Property and facilities management



Remote monitoring





**SODIS Building** is a monitoring system for building structures and engineering equipment. SODIS Building allows their customers to process large data streams in real time and collect all information about the state of the facility into a single digital hub. SODIS Building allows to customize the rules for information processing, perform online statistical analysis, forecast technical condition, ensure safety and control the efficiency of the facility.



www.sodislab.com







Russia



Construction



Other





**SOLUT** is B2B, Al-powered motion recognition SaaS company. Increasing labor productivity of blue-collar workers by creating AI models that recognize human activity by hand and body movements. Pilot projects identified a possibility of increasing the output by more than 20%. Additionally, the system can be used to identify high performers to scale up their experience, and provide quality control over the operations processing.



www.solut.ai

**bGrid** building data for all









Property and facilities management



Smart buildings





**bGrid** is innovating since 2015 and enables communication with everything in your building and connection with multiple 3rd party applications. Creating smart buildings which are user friendly, bGrid multi-sensors sense all that happens in the building, to provide control of personal comfort and enable fast accurate positioning of smart devices.



www.bgridsolutions.com









Property and facilities management



Smart buildings





**Athom** has produced 'Homey', a device which connects with all your devices, and makes them approachable at one central place. Devices can subsequently be voice-controlled, controlled by smartphone, or can be programmed to automatically follow specific rules. As a result, users have a home without remote controls, that listens and does exactly what the owner wants. As a result, users can play their music and save energy from just one device. The connected devices can be a combination of different brands and



www.athom.com

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Smart buildings





**EDGE Next** provides platform solution and related services to improve the performance of office buildings globally in the areas of sustainability, health- and wellbeing and asset usage. EDGE Next builds its solutions based on its 20+ years of expertise and experience in building smart and sustainable buildings in the world as part of EDGE Technologies.



www.edge.tech.com









Property and facilities management



Smart buildings





Lone Rooftop is a Building Intelligence Platform that provides real estate & workplace teams with aggregated utilization data and guided analytics for data-driven decision making. Lone Rooftop enables customers to reduce overall real estate spend while positively impacting employee productivity and workplace experience.



www.lonerooftop.com











Property and facilities management



Offsite construction (e.g. prefabricated components)





Openr offers an intercom that wirelessly communicates with mobile devices. Openr aims to make the central reception and wiring in a building redundant. Openr provides a dashboard that gives the administrator a structured overview and the rights to add or remove digital keys.













Property and facilities management



Offsite construction (e.g. prefabricated components)





Niles provides, installs, and integrates home automation into the customer's daily routine. Through the installation of a computer in the house, that connects existing smart home solutions into one integrated customized pack, allowing for expansion when needed. By using this method, they make living environments more comfortable, smarter and more

hello-niles.com

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Energy efficiency





**Shifft** is a software developer for the new energy world. Shifft developed an IT-(data)platform able to deliver different kinds of software solutions. Varying from consumer portals for gamified energy insights to intelligent energy monitoring and billing solutions. All based on collecting data from multiple sources, like smart meters (based on their own ODA-status), multi commodity submetering or other certified metering companies. The company works for different types of clients, ranging from energy start-/scale-ups (PV-supply) to large companies in residential realestate.



www.shifft.com











Property and facilities management



Smart buildings





**Simaxx** translates the data, generated from installations controlling the indoor climate in buildings, stored in a Building Management System (GBS), into information usable for controlling maintenance, comfort and sustainability. The platform's features include 70 scripts in its Smartbridge, algorithms converting data into information and a user-friendly interface. Dashboards, reports and event lists are generated based on these analyses, making clear how the building functions. The platform aids in preventing malfunctions and



www.simaxx.com







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Mobility









Parxlab collects the data generated in the car parks with its own production hardware systems and optimizes personnel and parking for the enterprise. Thus, it offers insights into workload and to monitor all the data generated. It also minimizes the problem of finding a parking space by showing empty parking spots within the drivers on platforms such as mobile applications and screens.













Property and facilities management



Smart buildings





**SWYCS** offers a universal, interoperable and vendor-neutral Internet of Things (IoT) platform. The SWYCS technology contains hardware and software and is based on open standards that are compliant with relevant international IoTprotocols. The system is API-driven to integrate with third party software. SWYCS connects devices and installations to make buildings and home environments smart. The integrated infrastructure offers a plug&playplatform controlled by a single app or



www.swycs.com

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#### venuex

🔀 2017 ္ဂင္ဂ်ိဂ္ဂ 11-20



Property and facilities management



Indoor mapping





Venuex creates detailed geo-referenced indoor maps of properties, which can be utilized through customer's apps and Apple Maps. Through a one-stop-shop solution ensuring secure API's, venues and tenants indoor maps and business details can be shared to online platforms for utilization.



www.venuex.io









Property and facilities management



Smart buildings







IOT Plus Middle East provides Internet of Things (IoT) solutions, System Integration, Technical Support & Maintenance & Turnkey Solutions. IOT Plus solutions can be used to remotely monitor a variety of "Things" (i.e. temperature, motion, humidity, energy use, etc.), alerting users by text and by email when user-defined conditions are



www.iotplus.ae











Property and facilities management



Remote monitoring





Hoxton Analytics' foot traffic technology counts people based on footsteps going past a low-level camera. It collects no personal data, so the company can continually audit its accuracy. The technology provides additional insights such as gender, occupancy and average dwell times. It can be installed both indoors and outdoors, only needing a power socket. The data is presented back to clients in a real-time cloud data platform.



www.hoxtonanalytics.com











Construction



Technical planning





Converge generates Al-based construction intelligence and real-time digital twins through their ConstructionDNA platform, powered by smart sensors deployed across the entire construction operation, enabling companies to build more efficiently, safely, and sustainably. ConstructionDNA is made up of individual SaaS products such as ConcreteDNA, StructureDNA, and LogisticsDNA, which each optimize a different part of the construction process with intelligence generated from data captured by their sensors deployed on-site and off-site.



www.converge.io

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# CALUMINO

🔀 2014 ္ကို္င္ကို 11-20





Property and facilities management



Smart buildings





Calumino have developed an A.I. computer vision enabled thermal sensor. The Calumino Thermal Sensor (CTS) extracts data from the heat signatures of humans and objects, providing unseen insights for healthcare, security, smart building, fire safety and automotive industries. If an elderly resident is to fall, the Eve Care algorithms recognize this and the care givers are alerted immediately. In addition, behavioral data analysis using the Eve Care system (e.g. sleeping patterns and activity monitoring) provides revolutionary insight into a resident's health and wellbeing.



www.calumino.com









Construction



Smart buildings





Ynomia leverages a proprietary, shortand long-range, Bluetooth-enabled IoT network to actively capture real time resource insights in order to increase productivity, visibility, safety and enable dynamic construction program management. Ynomia aims to reduce total cost of construction, and improve safety on projects by providing a realtime view of construction projects to



www.ynomia.io











Water efficiency





WEGoT's VenAgua, a sensor based IoT solution, is an end to end water management system that captures information in a multi-inlet plumbing layout and provides the end user with real time information. The information includes minute-by-minute consumption details; alerts (over-usage, leak detection, open taps and predictions) based on historical data and consumption patterns of other residents on the campus. Additionally, VenAqua also provides the option to remotely shut off the supply of water in case of any alerts.



www.wegot.in













Property and facilities management



Smart buildings





Cosine Labs is an IoT company that builds hardware and software products for the rental real estate market like Coliving and Student/Dorm Living segment. The company provides the tech to transform existing/new buildings to IoT enabled Assets To optimize operations, create seamless access controls and a sustainable-energy efficient property. Their solutions include IoT Hardware system applications like their smart digital door locks that support pin codes and real time information. In addition the firm provides smart energy meters and facial recognition with thermal sensing.



www.cosinelabs.com

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Property and facilities management



Smart buildings





**ACCEL LAB** is a smart home platformer that provides SpaceCore, a service platform that makes real estate and spaces more attractive. Utilizing IoT, smart home and AI technologies, ACCEL LAB creates convenient living spaces in a smart way.



www.accel-lab.com







Property and facilities management



Smart buildings





Photosynth focuses on rediscovering new values for daily supplies through technology, aiming to enhance userexperiences. The company's latest product is a smart lock called 'Akerun', which enables people to use smart phones, PCs and wearable devices to open doors. Based on this product, the company also provides an online key management system for business owners with 'Akerun remote' and



www.photosynth.co.jp

### TRAKOMATIC







Property and facilities management



Tenant services (e.g. wellbeing solutions)





Trakomatic enables data driven decisions by making physical locations smarter. It tracks shopper behavior at different touch points, like image and video interaction, across the online and offline space, empowering business owners to make data driven decisions and transforming the overall shopper experience. Trakomatic enables businesses and organizations to discover the ways people interact in a physical environment using video and sensor technology. The data is transformed into actionable insights that drives optimization and improvement of clients' core business processes.



www.trakomatic.com

### FALLOCATE -SPACE







Property and facilities management



Smart buildings





Allocate Space aims to utilize technology in all spaces, thus empowering real estate owners with the ability to analyze, learn, share, and ultimately leverage on insights to maximize the usage of their space.

www.allocatespace.co

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Internet of Things











Property and facilities management



Building automation





Vital Xense offers industrial design sensor hub solutions. Through their solution, deploying a sensor or a string of wired sensors takes little time and system configuration. Their solutions are re-usable, plug and play and allow fro quick modification and adaption of the sensors. This way, users benefit from saving, scalability and easy adoption of



www.vitalxense.com



# 6. New Ways of Funding

Traditionally, Real Estate was financed through specific funds with a substantial minimum investment. Alternative funding methods result in a more accessible financing of (inter)national Real Estate projects. Although alternative funding has been coined frequently in the context of banking, it can also be applied to Real Estate. In addition to institutional investors, individuals are now able to invest in Real Estate projects with smaller amounts of funding, thereby opening up the market to everyone.















Real estate investment platforms (e.g. crowdfunding)





Addy is an online real estate investment platform which allows investments starting from 1 dollar, giving everyone access to real estate investment opportunities.



www.addyinvest.com









Investing and financing



Real estate investment platforms (e.g. crowdfunding)



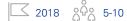


Coinvestion is a two-sided marketplace for anyone to invest in fractional ownership of real estate as securities using blockchain. In regulatory compliance, they allow crowdfunding and exchange of real estate shares.



www.coinvestion.com













Investing and financing







Liquuid provides consumers with cash to live the life they want to live. In exchange, when a consumer decides to sell their home, Liquuid receives a share of the sale proceeds. No interest and no monthly payments.















Investing and financing



Real estate investment platforms (e.g. crowdfunding)





Finneo offers a cloud-based SaaS debt management and placement software solution designed for Property owners, developers, REITS and pension plans. In a nut shell, Finneo is an End to End technology platform for CRE Debt Placement and Management.

www.finneotech.com

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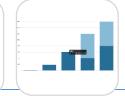


Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**100 Ladrillos** is a digital platform where properties are divided into parts to enable investment by multiple (smaller) investors. Through the use of blockchain technology, investors can buy and sell parts of properties and receive rental income, making real estate investment possible for all types of investors.



www.100ladrillos.com











Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**AlphaFlow** is a tech-driven investment manager, providing professionally managed portfolios of real estate loans to institutional investors. The company partners with non-bank real estate lenders around the USA who provide 6-12 month bridge loans on single-family and small multifamily properties, to buy their loans and help them grow their businesses. The company uses software to streamline and automate today's manual workflow and strive for simple and sufficient solutions at every



www.alphaflow.com

# (D DEALPATH









Transactions and leasing



Real estate investment platforms (e.g. crowdfunding)





**Dealpath**, with smart pipeline tracking, collaborative workflows, and reporting, enables real estate investment teams to focus on value-add work that delivers optimal risk-adjusted returns. Investment teams use Dealpath as their virtual command center for buy-side principals deploying capital in the acquisition, development, and financing of real property.





















Cadre offers a technology-enabled investment platform that connects qualified individuals and institutions to fully vetted Real Estate investment opportunities. Cadre wants to transform the investing market by building a digital exchange for alternative assets. The company combines their institutional experience with differentiated technology in order to empower their investors, aiming to offer direct access, low fees, and transparency. The company's technology is meant to drive efficiency and power insights for clients.

www.cadre.com

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Real estate investment platforms (e.g. crowdfunding)





Fundrise offers a diversified real estate investment available directly to anyone online. The company aims to make the process of investing in commercial real estate from around the country simple, efficient, and transparent. By combining technology with new federal regulations, Fundrise brings the world of private investments closer to customers. The platforms allows its customers to invest directly in a real estate portfolio that its team identifies, acquirers, and manages on behalf of the customer.



www.fundrise.com

## HARBOR







Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**Harbor** is a digital investment management platform for alternative assets that streamlines onboarding and subscription processing, simplifies investor communications, and unlocks enhanced liquidity options through branded private marketplaces. Harbor's easy-to-use software enables issuers and broker-dealers to remove friction and inefficiencies from the fundraising process and ongoing investor and placement agent management.



www.harbor.com

# **SOLIDBLOCK**









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





SolidBlock utilizes real estate asset tokenization – the convergence of real estate investing and blockchain technology - to transform real estate into a tradable financial product. This gives investors the opportunity to buy shares in a property and trade them on an exchange or ATS.













Investing and financing



Tech-enabled brokers (e.g. mortgage search and comparison)





**Homebot** is a high performance client engagement tool for the mortgage and real estate industries. Homebot is a dynamic financial dashboard designed to empower homeowners to build wealth with their home.

www.homebot.ai

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Real estate investment platforms (e.g. crowdfunding)





BeeBonds is an alternative financing platform that can resort to public offerings and allows investors to directly finance corporate projects by subscribing to bonds issued by these companies. Beebonds aims to give people the possibility to invest in building development projects at no



www.beebonds.com







Estonia



Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**EstateGuru** is a European marketplace for short-term, property-backed loans. EstateGuru offers its services to entrepreneurs in the property development business who do not fit in the standardized offers by banks and major financial institutions. The company connects diverse investors and borrowers, and offers borrowers their own terms, while investors can access pre-vetted and diversified, crossborder investment opportunities with total transparency.



www.estateguru.co







≾ 2014 ຊໍວິດ 11-20 **(** France







Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**Homunity** offers a crowdfund platform that is available for private investors from 1000 Euros to invest in short-term real estate projects that last for 12 to 24 months. The platform aims on providing transparency, detailed project information and internal audited projects.













Investing and financing



Real estate investment platforms (e.g. crowdfunding)







Fundimmo offers a platform specializing in real estate crowdfunding. The company was founded in 2014 and is registered as Advisor for Participatory Investments with the Autorité des Marchés Financiers. Fundimmo allows its investors to invest from EUR 1,000 in a range of real estate projects (residential, commercial, office, development, real estate renovation, etc.), selected by an advisory committee made up of real estate professionals.

www.fundimmo.com

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Real estate investment platforms (e.g. crowdfunding)





Tokeny Solutions allows financial actors operating in private markets to compliantly issue, transfer and manage securities using blockchain technology, enabling them to improve asset liquidity.



www.tokeny.com





Nigeria



Investing and financing



Real estate investment platforms (e.g. crowdfunding)





Rise Vest is an investment app that lets anyone put their money in automated safe dollar investments around the world. Rise users can invest in three asset classes - US Real Estate, US Stocks, and Fixed Income (Eurobonds). Next to being a wealth management app, Rise also includes a community that offers financial guidance.



www.rise.capital





Netherlands



Investing and financing



Offsite construction (e.g. prefabricated components)





Bloghouse Technologies applies tech and engineering capabilities to empower clients to unleash their full potential. The company has created a software solution for fund managers and investment firms in need of an online syndication or funding platform for equity and debt offerings. By utilizing the customizable, responsive and flexible software platform fund managers can (1) Tap into a novel network of international investors, (2) Manage investors and funds efficiently and (3) Automate deal flow administration.











Investing and financing



Offsite construction (e.g. prefabricated components)





**Blandlord** enables clients to take partial ownership of a real estate object. By dividing ownership, investing in properties becomes feasible for people who normally don't have the resources to invest, because of the size, risk or complexity associated with the investment. Starting from EUR 100,people can buy a ownership in an object. The economic ownership of the properties is administrated in blockchain technology to provide openness to all parties involved.

www.blandlord.com

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### BOUWAANDEEL

2014 ္ဂိုိ္ဂ္ဂ 5-10





Investing and financing



Offsite construction (e.g. prefabricated components)





Bouwaandeel uses crowdfunding as a basis for financing real estate projects. The Bouwaandeel platform offers project developers and real estate investors access to funds of private investors and private companies. A key distinguishing factor of the platform compared to traditional traditional real estate funds is that investments are possible starting from EUR 200,-. Propositions up to EUR 300.000,- can be placed on the platform and the to be financed object always serves as collateral.



www.bouwaandeel.nl



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Netherlands



Investing and financing



Offsite construction (e.g. prefabricated components)





Brickfund offers a new method of investing in real estate. The company selects appealing properties for investments and offers a transparent platform. Investors receive personalized online access, which provides detailed information regarding investments. Users are furthermore empowered to make their own decisions and can make investments starting at EUR 5,000.



www.brickfund.com

### **▲**Y de Windcentrale



Netherlands



Investing and financing



Offsite construction (e.g. prefabricated components)





De Windcentrale facilitates households and companies to become joined owners of a large wind turbine. All electricity produced by the wind turbine is deducted from the energy use of the individual owners which leads to a lower energy bill. De Windcentrale offers a simpler and cheaper alternative for solar panels. Currently 15.000 households and companies are producing their own green electricity with their own wind turbine. With De Windcentrale App users can check the production of their turbine real time.



### crowd estate







Investing and financing



Offsite construction (e.g. prefabricated components)





**Crowdestate** is a crowdfunding platform for real estate linking project developers and investors. Prior to a project being published, screening is performed to ensure that the quality is up to par and the project is feasible. Crowdestate offers Dutch and international projects to allow investors to build a diversified real estate portfolio. Crowdestate selects multiple projects from which its customers can choose to invest in. The customers of Crowdestate can follow the developments of their investment portfolio easily.

www.crowdestate.nl

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# SameninGeld

🔀 2013 ္ဂိုပို္ဂ္ဂ 5-10





Investing and financing



Offsite construction (e.g. prefabricated components)





SamenIngeld offers its clients the opportunity to invest in various real estate projects through investments starting from € 250, -. Investors pay 0.5% of the invested capital to SamenInGeld in the first year and a lower percentage thereafter. Furthermore, investors acquire their mortgage right by the foundation Investeerders SamenInGeld, increasing the certainty of their investment.



www.sameningeld.nl





United Arab



Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**SmartCrowd** is real estate investment platform that uses a crowdfunding model. It provides the opportunity to access real estate through beneficial fractional ownership. The online platform enables the average investor to build a personalized investment property portfolio with a minimum investment of \$1.500.



www.smartcrowd.ae











Investing and financing



Online direct lenders





**Proportunity** uses technology to remove the biggest barrier to homeownership: large down payments. They lend the down payment gap that would take buyers years to save, in exchange for equity in these homes, helping people with their home ownership. Because Proportunity models future home prices and spot low-risk homes, they can offer these loans at lower interest rates. Proportunity has helped customers buy homes, secured debt funding from a pension fund and is an FCA-authorized mortgage lender.





### bricklane.com



🔀 2014 ్గిస్ట్ర్లో 11-20





Investing and financing



Real estate investment platforms (e.g. crowdfunding)





Bricklane provides people with a way to receive the financial benefits of owning UK residential property, without the inflexibility, hassle and tax-inefficiency of direct investment. From £100, customers can invest in geographically targeted residential property portfolios, and earn returns from rental income and price changes, using an innovative take on the REIT structure. Compass, their proprietary data analytics platform, supports their expert property team in selecting properties for each of the portfolios, and shaping their overall



www.bricklane.com

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BrickX aims to transform the notion of property ownership in Australia. The company provides an online investment platform that allows Australian's to invest in residential property with a minimum of \$50.



www.brickx.com









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**EquiKey** aims to enable homeowners aged 65 and over to supplement their retirement income by trading a share of the future value of their home (equity) for a lump sum, fixed-term or lifetime payment. Payments are guaranteed by institutional investors such as super funds & insurance companies who use the equity investments to duration match their long-term liabilities. EquiKey is a debt-free way to unlock the wealth tied up in a primary residence.



www.equikey.com.au









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**Crowd Realty** is an equity crowdfunding marketplace specialized in real estate. The firm offers investment opportunities that enable both enterprises and investors to realize their own ideas through P2P financing, low costs of securitization and low minimums to invest. Crowd Realty enables the realization of small real estate projects in Japan.



www.crowd-realty.com







Hong Kong





Real estate investment platforms (e.g. crowdfunding)





**Liquefy** is a proptech platform which enables the issuance and distribution of tokenized securities backed by commercial real estate. Tokenization leverages blockchain technology to enhance operational efficiencies and reduce the time and economic costs associated with trading previously illiquid assets, bringing asset owners and investors alike the benefit of unlocked

www.liquefy.com

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# hf HonestFund

🔀 2015 ္ဂိုဂို္ဂ္ဂ 101-200 🚷 South Korea

Investing and financing

Real estate investment platforms (e.g. crowdfunding)





HonestFund is a simple P2P financebased investment service which allows anyone to experience investment and loans online 24 hours a day. As a comprehensive P2P financial company, it handles a wide range of loan products in the P2P industry, such as real estate PF loans and small and medium-sized business mortgage loans.



www.honestfund.kr









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





Kasa aims to safely secure title deeds to commercial buildings, by placing the asset into a disposal trust with a real estate trust firm. Based on this trust agreement, the trust companies issue digital ABS, or DABS, with the entrusted property as collateral. DABS holders can take their earnings from rental income and capital gains as they buy or sell



www.kasa.co.kr

# **TANKER**

🔀 2015 ္ကိုပို္င္ကိ 11-20 🕟 South Korea











Tanker is a real estate venture company, based on Al source technology, that operates PropTech business. Three business models they use are P2P real estate mortgage loan platform, real estate price calculation automation service and financial connection solution, and real estate brokerage and recommendation service. From the technology of accurate real estate market price prediction, it is running data-based business in the real estate service industry and finance sector.

www.tanker.fund

### LUCENTBLOCK









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**LucentBlock** provides services that can be traded on Lucent Block's Exchange platform after securitizing profitable real estate, which is generally considered to have low liquidity, in small units through a trust transaction with a trust company. The company provides and operates a platform that allows people without large amount of money to easily and transparently trade part or all of the real

www.lucentblock.com

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# 7. Platforms to Connect

The rise of social media made it possible for people around the world to easily connect with each other. Thanks to multiple innovations the connectivity between stakeholders in the Real Estate industry has improved as well. Different platforms link buyers and sellers of both private and commercial Real Estate or property owners and construction/ maintenance workforce. Furthermore communities are connected to each other either for retail purposes or for storage rental. All these inventions lead to more digital visibility of Real Estate and speeds up transactions between tenants and owners.





# **alquilando**







Transactions and leasing



Rental and sales platforms





**Alquilando** is an online marketplace for long-term rentals which tries to simplify the rental process and minimize risks. It combines real estate services with InsurTech and FinTech solutions (e.g. by replacing normal bank guarantees with its own guarantee system) in order to deliver a wholistic long-term rental service for landlords and tenants.



www.alquilando.com











Transactions and leasing



Rental and sales platforms





Housi has created a platform where it receives, manages, and leases real estate for other owners. Properties displayed through Housi can be rented to live in for longer periods, as well as for short-term use on platforms. The startup also furbishes and prepares properties so they're ready for moving in on demand.



www.housi.com











Property and facilities management



Tenant services (e.g. wellbeing solutions)





**Angus Systems** is a provider of customer driven mobile and cloud-based work orders and operations management solutions for commercial real estate.

















Rental and sales platforms

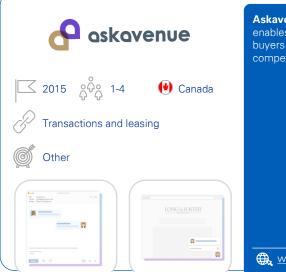


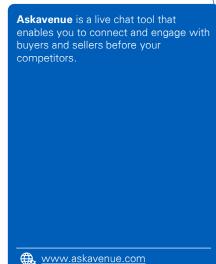


**Kzas** is a real estate transaction platform through which buyers are matched with real sellers/properties through the assistance of AI or a specialized team to increase efficiency and transparency in the process.

www.kzas.ai

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Avesdo created a SaaS platform specifically for pre-construction condo and home developers to manage their relationships with buyers. From marketing distribution to sales occupation, Avesdo fully digitalizes the entire process.



www.avesdo.com



🔀 2015 ္ဂိုပိုဂ္ဂိ 51-100 📵 Canada







Design & planning



BIM and Digital Twin





BIM Track offers a cloud-based communication platform allowing users to centralize project coordination information and access it through various platforms. The functionalities focus on project management and include coordination automation, custom analytics, issue resolution, reporting and templates.





BenchMarx's has built a data-driven and cloud based time and material platform for construction sites which helps reduce risk and improve cost recovery of changes on the job site.



www.benchmarx.io



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( Canada



Property and facilities management



Property portfolio management tools





BonAprt is an online platform offering handymen on demand and is developed for Landlords. BonAprt offer an on demand handyman service that can manage small repairs, paint jobs, apartment visit.



www.bonaprt.com



**2016** χΦχ 21-50







Investing and financing



Tech-enabled brokers (e.g. mortgage search and comparison)





**BrokerBay** is aiming to evolve the way real estate is bought and sold. BrokerBay's cloud-based ecosystem replaces multiple legacy systems in use by brokerage firms across North-America. Aiming to consolidate, automate and modernize the core functions of the traditional brokerage model. The result, an exponentially improved home buying/selling process for agents and their clients.



www.brokerbay.ca











Agent matching





**Dozr** offers a platform that facilitates short- and long-term rental of heavy equipment by acting as a middleman between business owners looking to rent out heavy equipment and contractors looking to rent. Dozr offers a fleet of heavy equipment such as excavators, loaders, skid steers, tractors, vehicles, rock trucks, and lifts.

















Property and facilities management



Rental and sales platforms





Casalova is a real estate marketplace that algorithmically matches prospective renters to nearby agents who are live and ready to take on new clients. After a renter enters their requirements (such as price, location), the company a variety of condo, home and apartment listings.

www.casalova.com

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# find space

🔀 2011 ္ဂပို္င္က 11-20



Transactions and leasing



Rental and sales platforms





Findspace empowers owners, managers and brokerages to expertly manage, market & lease their commercial real estate portfolio, anytime, anywhere, while tracking leads & opportunities. They do so with easilyaccessible, smart, low-touch management tools for real-time performance analytics and reporting, through seamless integration with internal processes and external marketing channels.



www.findspace.com

# flexday

🖂 2017 ္ဂိုဗို္င္ဂ 11-20





Transactions and leasing



Co-working spaces





Flexday offers a mobile platform where users get access to co-workspaces via a monthly subscription or a single use



www.flexday.com









Property and facilities management



Tenant services (e.g. wellbeing solutions)





**GreenApps** develops building-specific resident portal applications for residential and commercial property managers. Each app is customizable to complement the needs of specific brands and features communication possibilities, smart building options and repair notification possibilities.



www.greenapps.com



🔀 2018 ္ဂိုဂို္ဂို 11-20 🚯 Canada









Real estate investment platforms (e.g. crowdfunding)





Fundscraper is an online platform that estate projects sponsored by proven real estate developers and owners. Fundscraper offers investors the opportunity to co-invest and fund real estate projects alongside Fundscraper's

www.fundscraper.com

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Hauscall is an app that connects consumers with realtors on-demand, no strings attached. Users select a location anywhere in the world and are presented with local realtors in the area to get instant advice. Consumers swipe and select realtor profiles they want to talk to. Easily share listings, photos and videos and anonymously interact with the realtor through the app by message, phone, or video chat.







( Canada



Property and facilities management



Tenant services (e.g. wellbeing solutions)





**HILO** Tenant Experience Network is a SaaS platform that powers building operators to attract tenants, boost revenues, and streamline operations by creating connected, engaged and informed building communities.



www.hiloapp.com











Property and facilities management



Rental and sales platforms





**HostOften** is a vacation rental property management company that allows owner's property to be listed as a vacation rental, executive rental and long-term rental. It also offers full service property management and online Airbnb management. All services are covered from creating a listing with professional photography to 24/7 guest communication and support to cleaning/restocking services.

www.gethauscall.com















Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





**Homicity** is a real estate marketplace where customers can find mortgages, insurance and properties. The customers can use the company's Al powered search engine to find the property which suits their needs.

www.homicity.com

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Property and facilities management



Tenant services (e.g. wellbeing solutions)





Lane offers a platform for property owners, which focuses on digitizing and automating office portfolios. The platform's functionalities include managing employee handbooks, tenant directories, guest registration, maintenance updates, and communication, amongst others. Lane aims on changing the way people interact with the places they work and the people they work with.



www.joinlane.com



FORMERLY REPREE









Transactions and leasing



Transaction administration





NexOne Agent is providing real estate agents with a software solution that automatically tracks all aspects of real estate transactions. Aiming to fully digitize transaction processes for real estate professionals in order to increase efficiency and productivity. Allowing for the utilization of secure e-signatures for any scenario, and providing detailed activity reports.



www.agent.nexone.ca











Transactions and leasing



Rental and sales platforms





**Properly** had developed a product that uses machine learning to offer homeowners a market price for their home. The owner can choose to list it on their market or sell it to Properly directly.















Transactions and leasing



Agent matching





**Nobul** is an open digital marketplace connecting home buyers and sellers to the right real estate agent for them. Nobul's platform introduces simplicity to the real estate industry by enabling consumers to choose the agent who presents the combination of services, pricing, reputation, and fit that is suited to them personally.

www.nobul.com

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### RoomKey PMS Local experts, the best support









Property and facilities management



Tenant services (e.g. wellbeing solutions)





RoomKeyPMS is a cloud-powered software for hotel management, it lets users manage every aspect of their hotels. RoomKeyPMS integrates to hundreds of hospitality systems, drives revenues with no transaction fees while saving time with an easy to use system.



www.roomkeypms.com

### SMARTPIXEL









Transactions and leasing



Rental and sales platforms





SmartPixel offers turnkey interactive, digital presentation tools, focused on high quality graphics and interactive strategy. The application's features include solutions for real estate like finding units based on search criteria, comparing plans, viewing simulated panoramas, capturing ambient light according to time of day, visiting and customizing interiors, and exploring common areas and the project's surroundings. Their tools help prospective buyers to make their buying decision quickly.



www.smartpixel.com

## **TAP**REP**O**RT









Property and facilities management



Safety & security





Tap Report has made it easy for property owners to track and see if their mechanical equipment has been logged and if the inspections were completed on time. Their innovators are developing tools aiming to make the world a safer and less stressful place.

















Property portfolio management tools





SuiteSpot offers multifamily property managers and owners an automated property operations platform which entails both communication with tenants as workflow, maintenance and

www.suitespottechnology.com

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Transactions and leasing



Property information platforms





**Yuhu** is a multi-family operations platform built for site teams and dataaggregation. Yuhu's platform enables its partners to connect and empower their site teams and residents, while driving cost savings, efficiencies and comprehensive data insights for owners. Yuhu aims to supply open, easy-to-use cloud-based software with partner support.



www.yuhu.io









United States



Design & planning



Collaboration software





**Arcbazar** is a crowdsourcing platform for architectural design services. Services such as remodeling jobs, additions, retail, office spaces, landscape, or any other architectural project. The client describes the project, uploads images and basic info. Arcbazar distributes the financial awards, and hands the project to the client.



www.arcbazar.com







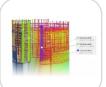


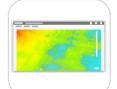


Construction



Remote monitoring





**Avvir** is a software platform aiming to bring transparency to construction and building management. The company continuously updates its digital replicas of buildings, offering up-to-date as-builts and other information. This allows for tracking building progress and catching mistakes before major rework is required.













Transactions and leasing



Rental and sales platforms





Avail is an online, end-to-end platform for DIY landlords and their tenants, offering tools for landlords owning a smaller amount of units. Its features include advertising vacant units, requesting rental applications and credit reports, signing leases, and collecting



www.avail.co

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Transactions and leasing



Transaction administration





Betterview offers a property data platform offering insights in transactions concerning buildings and properties to real estate practitioners. The platform's features focus on capturing, organizing, and analyzing data for buildings and properties, aimed at reducing risk, costs and waste.



www.betterview.com



🔀 2017 ္ဂိုပို္င္ဂ 21-50







Property and facilities management



Energy efficiency





Blueprint Power has the mission is to accelerate the growth and financial sustainability of distributed, intelligent clean energy by helping regional groups of real estate companies transform their portfolios into power plants. More specifically, they manage these power plants to generate excess supply that they can then sell to markets and customers who increasingly need a more and higher quality supply of



www.blueprintpower.com









Design & planning



Technical planning





**BuildingConnected** is a preconstruction platform to streamline the bid and risk management process, thereby enabling real estate owners and general contractors to hire qualified contractors for their projects.

BuildingConnected's platform is used by over 2,500 general contractors and owners, and more than \$100 billion in new construction is enabled through the BuildingConnected platform every month. Previous projects range from the new Golden State Warriors stadium to local schools and hospitals.



www.buildingconnected.com











Property and facilities management



Safety & security







Brivo combines access control and video surveillance to manage facilities from anywhere. Remote management lets security administrators add users, edit permissions, create access schedules and user groups, and open doors without having to be onsite.



www.brivo.com

KPMG

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# **≪** Common

2015 ເວົ້າ 201-500 **⊕** United States



Transactions and leasing



Co-living spaces





**Common** is a membership organization building social, flexible, communitycentric accommodations for shared living. The company partners with local organizations to create residential communities with monthly terms, large common spaces, and active community management.



www.common.com

# COMPASS









Transactions and leasing



Rental and sales platforms





**Compass** is a real estate technology company with an end-to-end platform that supports the real estate buying and selling workflow. The company aims to deliver an efficient experience to both agents and their clients and is active across the U.S.



www.compass.com









Property and facilities management



(Geo)Location analytics





Eagle Eye Networks' cloud managed solutions provides cloud and on-premise recording, security and encryption, and broad analog and digital camera support - all accessible via the web or mobile applications. The company provides RESTful API platform and Big Data FrameworkTM, which allows indexing, search, retrieval, and analysis of live and archived video. Examples include warnings if unauthorized areas are entered, the amount of people in a retail store and display analytics.











Design & planning



Collaboration software





coUrbanize gives real estate and planning teams a suite of online tools to manage information and communication for a project. Their technology and services are engineered to help project teams increase engagement from a broader audience while saving time and money. The customized project plan can be launched in minutes.

www.courbanize.com

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# EasyKnock









Transactions and leasing



Rental and sales platforms





EasyKnock offers a solutions to unlock the value of real estate. Sell and Stav is a commercialized residential sale leaseback program that allows homeowners to sell their home, and thereafter lease it back. MoveAbility is a sale-leaseback product designed for homeowners planning on moving. MoveAbility enables homeowners to access their home equity before it hits the market. It enables homeowners to access the money and time to find (and fund) their home, without losing out on their current home's market value.



www.easyknock.com











Design & planning



Building design





**Havenly** is a convenient, personal and affordable way to redecorate homes room by room. On their online platform, clients can collaborate with professional interior designers.



www.havenly.com

# Homelister







Transactions and leasing



Rental and sales platforms





Homelister is an online resource to help homeowners sell their property. The platform provides a guided step-by-step process and offers resources on an as needed basis enabling sellers to keep more of their equity. There is also an app that allows buyers to view the home virtually.





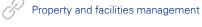


solutions)









Tenant services (e.g. wellbeing





Hello Alfred has developed a humandriven, home-operating system. The company makes help more accessible to more people, by partnering with real estate developers to integrate their software directly into homes and existing property management platforms.

www.helloalfred.com

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2015 လိုလို 51-100 **(a)** United States



Transactions and leasing



Rental and sales platforms





Knock operates an online home selling platform. The Company's personalized dashboard gives users total transparency into their market analysis, local trends and comparable houses used to derive a fair market value for their houses. It aims to remove the stress, uncertainty, and risk from home buying and selling.



www.knock.com









Investing and financing



(Geo)Location analytics





Mall IQ is a Location Intelligence Platform, bridging offline & online for payment/banking, retailer, loyalty, ecommerce and telecom companies. Mall IQ applies data analytics by measuring purchasing intent of customers in shopping malls and high streets in real-time and making it actionable & insightful with no hardware indoor location technology by integrating SDK into payment/banking, retail, loyalty, e-commerce and telecom apps.



www.malliq.com

# REASI

🔀 2016 ္ဂိုမို္င္က 5-10





Transactions and leasing



Rental and sales platforms





Reasi is an automated real estate closing platform for vacant land buyers, sellers, and brokers. Geared for realtors, Reasi is a digital clearinghouse for money that provides a secure and seamless home closing experience, eliminating escrow costs. Powered by blockchain technology, Reasi empowers real estate agents to be the convenient one-stop-shop home buyers and sellers.



# **Opendoor**







Investing and financing



Rental and sales platforms





**Opendoor's** provides people across the US the services of selling, buying or trading in their own home. The company improves the process of the buying, selling and trading of homes by ensuring safety and the transactions.

www.opendoor.com



🔀 2015 ္ဂိုပိုဂ္ဂို 11-20 🌘 United States



Transactions and leasing



Co-living spaces





**Silvernest** is an online home-sharing service designed to pair aging homeowners with qualified roommates, giving Baby Boomers and empty nesters an aging-in-place alternative. Through its roommate matching, lease management, and localized support services, Silvernest combines the tools, expertise, and commitment to provide a comprehensive home sharing platform. This hassle-free service takes care of the details, providing piece-of-mind by enabling people to stay in their homes while benefiting from increased income and shared experiences.



www.silvernest.com









Transactions and leasing



Transaction administration





**Snappt** offers a tenant screening service. This service aims to spot fraudulent documentation in the tenant screening process.



www.snappt.com











Investing and financing



Rental and sales platforms





**States Title** uses predictive analytics and cutting-edge technology to deliver a modern title and escrow platform. As part of the digital transformation occurring in the mortgage industry, States Title believes that all underwriting, settlement and closing will be quickly and efficiently administered using technology that is built with the lender, agent and customer's experience in mind.

www.statestitle.com

# **SPACEFLOW**













Tenant services (e.g. wellbeing solutions)





**Spaceflow** creates digital experiences to enable better life in buildings. Integrating data, technology, and people, the company helps landlords and building operators go through digital transformation to finally connect buildings with their occupiers. Spaceflow allows landlords and space operators to customize services and improve tenant satisfaction. Occupants have amenities, services and community life in the mobile app and community managers provide content, events and personal communication.

www.spaceflow.io

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Property and facilities management



Tenant services (e.g. wellbeing solutions)





Workwell creates a mobile platform that centralizes the access to all services made available to tenants in an office building. Workwell is built as an open platform and comes with a software development kit ("SDK") that enables third-parties to integrate themselves. Workwell offers features, and the ability for both building owners and tenants to make their services available.



www.workwell.io











Property and facilities management



Mobility





iParkings they provide intelligent guidance systems for big parking lots. Reducing gas emissions, driver frustration in finding an available place and giving important tools for the parking owner in order to make up decisions based on real time info (telemetry).

The company distributes and installs their solution in the entire Americas.



www.iparkings.com

# Build≡ye









Construction



Collaboration software





**BuildEye** is a customer portal in the residential construction sector that aims to increase customer satisfaction for turnkey companies and real estate developers. Based on an easy-to-useplanning tool this customer portal is a selected view on a collaboration platform.

















Property and facilities management



Mobility





**BePark** is a digital parking operator that aims for a better mobility experience for this and future generations. The company uses its parking network to change the mobility landscape and create value for users, owners and the community. With smart technology, BePark offers the full array of parking solutions to help individuals and enterprises solve their parking challenges.

www.bepark.eu



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Property and facilities management



Mobility





Commuty is a web and mobile application, which is designed for a better parking and mobility management within companies. Through it application it is possible to determine rules for parking spots and the usage is reported and its data shared with their clients to further increase efficiency of their parking facilities.



www.commuty.net







Belaium



Construction



Remote monitoring





**C-SITE** is a platform to visualize developments engineering, real estate and infrastructure projects through a plug & play camera system that automatically create images, livestreams and time-lapse videos. The cameras that are used by customers are linked to the company's cloud based online C-SITE platform that ensure a secure and 24/7 connection that allow even for life monitoring of progress.



www.c-site.eu









Transactions and leasing



Co-living spaces





iKoab is a start-up specialized in developing co-living projects in Belgium. Koab helps landlords in leveraging a rental yield through co-living projects while providing young professionals comfortable accommodation and flexible lease terms. From locating the right property to rental management, IKOAB will take care of every aspect of the project: research and analysis of assets adapted to co-living, renovation, design of the property and property management.













Property and facilities management



Smart cities and infrastructure





**Hoplr** is a private social network for neighborhoods in Belgium and the Netherlands. The platform focuses on social interaction between residents and neighborhood engagement.

www.hoplr.com

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IMMO IQ sets up a network of freelance experts who take care of inspections, estimates and photography. The company also takes care of the sales process, promotion and digital marketing for the sale of real estate.

www.immoiq.be



Neanex wants to make the built environment more sustainable through data driven asset insights. Their cloudbased Digital Asset Register works as a single source of truth. They combine, enrich and handover information from different sources, throughout the complete asset life cycle, to give owners insights and control over their assets. Information is consistent, approachable, and re-usable. They aim to connect the worlds of requirements, design, BIM, construction and operations to be Smart Building Ready from day one.



www.neanex.com



Smartbeam offers a collaboration platform on which all stakeholders of a construction project can cooperate. The platform can be used for budget management, process automation and bid management.

www.smartbeam.co



**OpenMotics** is an Open Source software & hardware platform that automates a house, building or neighborhood. The platform offers the possibility to link up all the various technologies for automation and optimization. They create one central platform for monitoring, consultation and management of all technologies.

www.openmotics.com

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🔀 2019 ဗိုမို့ 5-10













**Smartyard** is a platform on which building material and machines can be rented or put up for rent. The Company's platform connects the borrowers and lenders with each other and supports the process along the way.



www.yoursmartyard.com







Belaium



Property and facilities management



Mobility





Tapazz develops sharing solutions. By sharing cars and spaces with others via user-friendly software and hardware, more people can enjoy their use. This ensures more efficient use of materials, less CO2 emissions, more space for greenery, more efficient use of (parking) space and a higher financial balance.



www.tapazz.eu



☑ 2018 ຊີບິຊີ 11-20 **I** Belgium





Transactions and leasing



Co-working spaces





Workero offers a tech-focused environment that maps out the latest start-ups and technologies, creating interactions between flex-desk workers and facilitating new business opportunities. Idle workspaces can be transformed into places where companies and workers can connect and share knowledge.



www.workero.com











Property and facilities management



Smart buildings





**Trigrr** is a software platform that orchestrates the different systems of a building (lightning, heating, security, access, audio) and make them play together for the benefit of the tenants, owner, developer or facility manager. The ESVT technology permits to talk, communicate and interconnect with the different building systems independently of any hardware, connectivity or communication

www.trigrr.io

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🔀 2018 ္ဂမို္င္က 11-20



Property and facilities management



Collaboration software





Ziggu offers a customer follow-up platform which is for property developers. On this platform, the developers can engage with their customers and automate tasks, which is to support the customer follow-up and therefore satisfaction.



www.engage.ziggu.io



🔀 2018 ္ဂိုပိုဂ္ဂိ 1-4

**Cyprus** 



Transactions and leasing



Rental and sales platforms





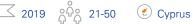
Hizzle built a platform where home seekers and home sellers can communicate in a transparent and trustworthy way. Both parties are supported within the platform, which speeds up the process and the deals can be signed online.



www.thehizzle.com

# qobrix







Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





**Qobrix** was built to assist property developers and agents capture more opportunities for growth and profitability by focusing on customer acquisition and service. With a robust, multi-featured CRM System and truly innovative portals, the company provides the platform for increasing operational efficiencies and maximizing customer exposure through a variety of digital channels.













Transactions and leasing



(Geo)Location analytics





MResidence Now developed an ondemand app that uses geolocation technology to alert users in real time on nearby properties, which match with customized criteria. The app instantly connects users with an uber like agent, allowing to book viewings and make

www.mresidencenow.com

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# SPACENT

🔀 2019 ္ဂမို္င္က 1-4







Property and facilities management



Co-working spaces





Spacent App allows you to search, find and book desks and meeting rooms all around the city, with only one membership fee. In addition, an existing company headquarters can be added as a workplace location for the company's employees to book.



www.spacent.com



🖂 2013 ္ဂဗို္ဂ္ဂ 11-20







Transactions and leasing



Rental and sales platforms





**Venuu** makes it easy to find a perfect space for parties, weddings, seminars, meetings, and other events. To venue owners the platform provides a costeffective sales and marketing channel to



www.venuu.fi





2016 ္ဂိုိ္ဂ္ဂ 11-20





Construction



Safety & security





CAD.42 solution functions like a software-based platform for Production Operations Management. CAD.42 Production Execution System (PES) offers a service to manage people, processes and resources of production operations at a plant. CAD.42 PES product offering is a global solution to manage production, safety, quality, maintenance and labor tracking processes across all locations.





2016 ္ဂိပ္ဂို 5-10









Property and facilities management



Property information platforms





Bazimo offers a web solution that adapts to the landlords. The application collects and synthesizes all the information and facilitates decisionmaking by extracting customized analysis. The exchange of information and documents with tenants is



www.bazimo.fr

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🔀 2016 ္ဂိုပို္င္ဂ 101-200 🅕 France



Design & planning



Virtual viewing





**HABX** offers a crowdbuilding solution that relies on three digital tools: localize. price and optimize. Localize is an algorithm of geographical recommendation, offering clients a place of life according to their displacements, his work, his hobbies. Price offers clients to configure their home, from the interior design to the exhibition or places shared with neighbors, measures the related financial impact. Optimize allows the production of plans considering inhabitants' desires.



www.habx.fr



🔀 2015 ္ဂိုမို္ဂ္က 21-50





Construction



Rental and sales platforms





**Hemea** assists and advises individuals who want to renovate their apartment or house by offering services from reliable companies and in doing so simplify and offer secure relationships. The startup is positioned as a trusted third party to rebalance the relationship between the individual and professionals. It certifies its companies by checking their solvency and their insurance, and questions their previous customers before their integration.



www.hemea.com



🔀 2015 ္ကိုကို 5-10









Smart cities and infrastructure





**Idealys** offers innovative solutions and a services platform to meet the challenges of the Smart City including: creation of social cohesion, energy, access control, home automation, mobility, intelligent parking and the relationship with building stakeholders.





2016 స్టిస్ట్ 5-10



France



Property and facilities management



Tenant services (e.g. wellbeing solutions)





**Hostnfly** provides Airbnb rental management. The owner can choose the dates, receive an income proposal and the website takes care of the logistics related to seasonal hiring. Other services as cleaning, reception and maintenance is taken care of.

www.hostnfly.com









Property and facilities management



Other





Immodvisor assists real estate professionals in the management of their e-reputation. The company offers a community platform to provide controlled customer opinions on real estate and housing professionals as well as advice, testimonials and tips. The company aims on creating transparency in the real estate sector and has integrated Block technology to authenticate the reviews.



www.immodvisor.com









Property and facilities management



Mobility





Mobypark's system opens up unoccupied spots for travellers to rent through its online reservation platform, generating additional revenue for the building owners and solving parking problems in city centers. Additionally, Mobypark offers parking technology, that provides a solution for parking issues by registering all users, providing real-time availability of parking spots, and allowing different automated means of access.



www.mobypark.com











Transactions and leasing



Collaboration software



project

**MyNotary** is a collaborative platform for real estate professionals (notaries, developers, real estate agents, social housing owners, real estate agents) that allows them to digitize the transaction path and save time while increasing customer satisfaction.





MONBUILDING











Property and facilities management



Tenant services (e.g. wellbeing solutions)





**MonBuilding** is an app for improving communications and creating one entry point for all services available to tenants. It allows managers to gather their services, communicate easily with their tenants and providers, and allows customization based on the customers

www.home.monbuilding.com

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Property and facilities management



Tenant services (e.g. wellbeing solutions)

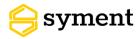




Smiile works alonside lessors, real estate developers, syndicates and communities to invite them to use its platform to create a link between their customers. The solution developed by Smille aims to integrate, as a place of exchange between the various stakeholders. The goal is to recreate the social bond within the residence as well as to facilitate communication between the resident and his managers.



www.smiile.com



France



Property and facilities management



Tenant services (e.g. wellbeing solutions)





Syment is a digital hub for residential property managers to connect stakeholders. Syment aggregates real estate data to help residential property managers to manage their portfolio. Moreover, by involving users they create the opportunity to communicate with all real estate departments, which in turn increases the ability to rent.



www.syment.com

# In unlatch







Transactions and leasing



Rental and sales platforms





Unlatch takes care of time-consuming tasks revolving around the sale of properties. It offers simple, user-friendly design suitable for all (mobile) devices. Their property development software will help streamline transactions. Services and options include CRM, sales agents space, digitized documentation(including e-signature and eIDAS-accredited electronic registered delivery) and automation of manual processes (like alerts and reminders). In addition it hosts a customer portal and a collaborative workspace for cooperation between stakeholders like property developer, seller, financial adviser, sales agent and solicitors.



# take a desk

**三** 2016 パヴァ 5-10





Transactions and leasing



Co-working spaces





Take a desk rethinks and revives vacant spaces while creating an accessible, consistent and comprehensive hosting offering for talented young businesses. It offers innovative co-working and office spaces or desks across France.

www.takeadesk.com

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Construction



Rental and sales platforms





**WeMaintain** is a platform that connects technicians and customers. The customer gets responsiveness and quality of service thanks to a dedicated technician, empowered and motivated financially. Digital brings the necessary transparency on operations and visibility on prices.



www.wemaintain.com



**三** 2016 パーク 21-50





Investing and financing



Tech-enabled brokers (e.g. mortgage search and comparison)





**Checkmyguest** is a company specialised in turning commercial premises into short term rentals. Checkmyguest enables real estate owners to maximize profitability for short term rentals with an optimized listing of these properties on platforms like Airbnb, Booking.com, Expedia, Abritel or HomeAway. It is a complete solution integrating all the skills required to manage property rentals, from feasibility study to running operation.



www.checkmyguest.fr









Property and facilities management



Property portfolio management tools





casavi offers a cloud-based service and communication platform for property management companies. By connecting these companies with property owners, tenants and relevant service providers as well as automating routine tasks, casavi acts as a central hub for all key stakeholders. The company aims at increasing cost-effective business processes and increasing customer satisfaction.





🔼 2018 ္ဂိပိုဂို 51-100 🛑 Germany









Property and facilities management



Property portfolio management tools





BuildingMinds, creates a Common Data Model, in conjunction with machine learning and artificial intelligence. The company enables building owners and investors to handle future challenges and sustainably manage their portfolios. Owners can more effectively manage their assets through real-time transparency on compliance, usage optimization, reduced energy and service costs, and increased tenant satisfaction.

www.buildingminds.com

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Transactions and leasing



Real estate investment platforms (e.g. crowdfunding)





BidX1 is a digital property company, using technology to enhance the experience of buying and selling property. The company aims to become an international property trading platform, allowing buyers and sellers across the globe to complete transactions digitally.



www.bidx1.com







Lithuania



Construction



Collaboration software





VSight is an industrial augmented reality software platform that helps enterprises transform workforce into intelligent workforce and increase productivity by integrating wearable and mobile software into the enterprise workflow. Through smart glasses they offer the expertise of others remotely, hands free and real-time. This enables construction workers to leverage on the knowledge of (external) colleagues.



www.vsight.io









Transactions and leasing



Rental and sales platforms





**Fibre** is building a convenient way for consumers to get a home. Whether clients are starting a career, starting a family, or buying their first home Fibre offers services to find housing options, offer flexible payment plans and lease terms. Next to this they have optimized the process of finding tenants for landlords, guarantee payments and verify tenant backgrounds.

















Transaction administration





Ziggu helps property developers better manage, understand and engage with their own customers - homebuyers - by offering an online customer portal to manage the complete customer journey, from signing the initial contract, following up construction, up until final delivery. This results both in efficiency gains for the property developer and increased satisfaction rates for



www.ziggu.io

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Property and facilities management



BIM and Digital Twin





**Alphaopen** is a software platform for Intelligent Building solutions. It unites technologies (such as artificial intelligence and BIM) and management of the entire engineering and technical infrastructure of buildings (security, remote access control, interphone, and engineering systems, IT infrastructure, multimedia) into a single integrated solution that provides for end-to-end infrastructure and information digital services to residents, lessees, all functions of a management company, as well as for the automation of dispatching processes and incident management.



www.alphaopen.com











Sourcing: materials, products and technology



BIM and Digital Twin





**BIMLIB** is an ecosystem of services for managing object and resourcetechnological information models. Their services provide delivery and management of up-to-date engineering data on construction resources: properties, prices and logistical availability based on digital product passports, BIM components and AR models.



www.bimlib.pro













Tenant services (e.g. wellbeing solutions)





**Domopult** is an online platform which automates communication between tenants and property management companies where tenants can raise issues and file requests. The platform enables people to track property and utility bills, get visibility of property issues solving and get an access to ondemand services of property management company and local thirdparty service providers.











Property and facilities management



Tenant services (e.g. wellbeing solutions)





**Brainsoft** serves as a marketing and loyalty programs platform for shopping centers, which includes online & offline visitor identification, analysis and segmenting modules and all available channels of personal communications. Through dashboarding, Brainsoft aims to visualize organizational performance.

www.brain-soft.ru



🔀 2018 ္ဂိုပိုဂ္ဂိ 101-1200 🔵 Russia

Investing and financing

Rental and sales platforms





**Domoy** is a platform for real estate transactions that combines the services of selecting and buying an apartment, optimizes processes and services for both individuals and partners, real estate



www.domoy.ru

# **Exon**

2017 ္ဂိုပိုဂ္ဂ 201-500 📦 Russia

Construction

**Building automation** 





**Exon** is a cloud-based control system developed specifically for construction projects administration and whole range of expenses optimization. It aims to do this by a unified workspace, easy interface of planning, approving, monitoring processes and documents consolidation modules integration.



www.gaskar.group

# **InState**

🔀 2019 ္ဂိုမို္င္က 11-20













**InState** are a property management low-code platform with integrated property, facility and incident management solutions for all real estate sectors allowing owners, managers, investors and other stakeholders access to information specific to their queries.

www.instate-pm.com



2015 ္ဂိုမိုဂ္ဂ 1-4











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**HARDROLLER** is a workspace for construction customers, contractors and subcontractors built around digital work logs. Aiming to reduce labor costs and eliminate errors in paperwork through the automation of data entry, forming, checking and approval of executive

www.hardroller.ru



🔀 2014 ္ဂိုပို္ဂ္ဂ 21-50



Property and facilities management



Collaboration software





Kvado is a SAAS-based service providing for the automation of business processes of housing and public utility sector management companies and the organization of interactions between market players and owners, lessees and residents.



www.kvado.ru

# сделка.рф







Transactions and leasing



Collaboration software





**SdelkaRF** is a platform where every participant can engage in real estate transaction in a timely, comfortable and safety manner communicating online with the government authorities, banks, centers of digital signatures, companies providing utilities and other stakeholders of the real estate industry.



sdelka-rf.ru











Property and facilities management



Tenant services (e.g. wellbeing solutions)





Allthings offers one single platform that connects tenants, property owners and service providers, thereby optimizing the tenant experience and increasing operational efficiency. The company offers a solid foundation for the longterm digitization strategy of operational process landscapes.













Transactions and leasing



Rental and sales platforms





**HouseME** is an online platform that aims to take the hassle, cost, and risks out of managing long-term residential rentals. Located in South Africa. HouseME provides a rental process by connecting landlords and tenants alike in a free and less stressful way.

www.house.me

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Area of People turns residential buildings into micro-villages. By using their proven community service platform, fueled by the power of selforganization among residents, they offer real estate professionals a new and sustainable operational model.



AssetLog is an online platform that supports real estate managers in managing their assets. All stakeholders are able to work together in one online environment that is always up-to-date. Through unique QR codes the AssesLog App registers relevant information such as maintenance activities for every asset. All documents such as certificates, renderings and notes are online available and users are notified in case any of these documents expire.



www.assetlog.nl











Property and facilities management

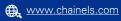


Property portfolio management tools





Chainels is an all-in-one digital solution which enables owners and operators to connect with occupiers, create a transparent dialogue, and both inform and receive feedback on diverse topics organized into workflows. Accessed with a single portal, Chainels connects internal and external departments as well as stakeholders such as security and local public officials. From Europe to Latin America, international stakeholders have chosen Chainels to transform their mixed-use destinations, shopping centers, office buildings into collaborative communities.





ASSETLOG.

Property and facilities management

Property portfolio management tools









Construction



BIM and Digital Twin





**Blockbax** provides business experts with low code capabilities for transforming IoT data into a long lasting competitive edge.

www.blockbax.com

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Sourcing: materials, products and technology

Property portfolio management tools





Facilitee connects all stakeholders related to technical property management via their software. This results in transparency, relevant insights, control and cost reduction for owners and management companies while increasing tenant satisfaction.



www.facilitee.com

#### hello energy...







Property and facilities management



Energy efficiency





hello energy is a SaaS solution that enables real estate owners to engage tenants and stakeholders to connect and create energy positive buildings. Collecting, validating, and enriching sustainability data from all kind of sources to create insights, stories, and challenges to trigger behavioral change.

Hello energy can earn buyers up to 10 points on GRESB, 2 credits on BREEAM, create investor value, critical credits on WELL, help comply with legislation and make positive environmental impact.



www.hello-energy.com













Transactions and leasing



Rental and sales platforms





**OSRE** aims to increase efficiency and profitability and to make the real estate transaction smarter everyday. By offering their clients direct results, data and insights they aim to shape the future of real estate transactions. With the OSRE Platform and Market Suite they accelerate go to market and time to deal for clients' real estate while aiming to provide candidates with a flawless user experience.















Transactions and leasing



Offsite construction (e.g. prefabricated components)





**HousingAnywhere** is a European booking platform for student accommodation. Working closely together with over 120 universities their students to easily find and securely book accommodation abroad - and connects students with trusted landlords on its platform., Housing Anywhere offers students, private landlords and commercial housing operator a platform to advertise their rooms to -- and get them booked by -- a global audience of over 3 million students annually.

www.housinganywhere.com











Mobility





ParkBee is a digital platform playing at the heart of the parking ecosystem, connecting users to available spots at existing public and private carparks. Users in need of parking find ParkBee either directly via the website and ParkBeeGo, or through front-end partners (mobility apps). ParkBee offers them a dense portfolio of off-street parking spots near the user's destination. Generating additional income for real estate owners and contribute together to liveable cities.



www.parkbee.com









Transactions and leasing



Tenant services (e.g. wellbeing solutions)





**SKEPP** serves 3 products: Officelisting, Officeplanner, and Officekit, Officelisting brings supply and demand for office space together, while Officeplanner serves as a one-stop-shop for your interior design. Additionally, Officekit offers various hospitality-facilities and tech-solutions for property owners.



www.skepp.com







Design & planning



Collaboration software





**Transformcity** is an online platform for collaborative urban development, aimed at growing a sustainable and inclusive local community of co-owners. This platform brings together stakeholders and the local government to directly share and discuss data, plans, ideas and resources and collaborate on local projects. Furthermore, Transformcity helps to build a local community and empower it to structurally self-organize through crowdfund capital. Transformcity is currently being implemented in two of Amsterdam's largest transformation areas.











Transactions and leasing



Rental and sales platforms





**Storage Share** is an online marketplace which makes vacant real estate available as a cheap form of self-storage. Renting out vacant offices as a temporary selfstorage solution and transforming industrial buildings into long-term cheap self-storage spaces.

www.storage-share.nl

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Robotics & automation





WELBO's mission is to 'Excite your guests and transform your organization by creating new experiences with social robots that continue to grow and learn.'



welbo.eu

#### ziezedan





The Netherlands



Property and facilities management



Property portfolio management tools





Ziezodan is a service provider and digital partner in the real estate & maintenance domain. They bring tenants, property managers and maintenance companies together on a user-friendly platform. Ziezodan increases the insight into (and the efficiency of) non-planned repair maintenance. They simplify the process and communication regarding reporting, planning and repair on an automated platform.



www.ziezodan.nl









Property and facilities management



Tenant services (e.g. wellbeing solutions)





Armut is a marketplace for local services like cleaning and maintenance in Turkey and uses proprietary matching and pricing algorithms. Customer satisfaction is in the heart of its business model. Armut's marketplace makes purchasing professional services as easy as shopping for any other product online. With a fully automated site that matches customers with local professionals, Armut has simplified and streamlined an otherwise daunting process.



www.armut.com









Property and facilities management



Tenant services (e.g. wellbeing solutions)





Zig Websoftware offers a digital solution for housing corporations, allowing them to collaborate more efficiently online, both with tenants and people searching for a house. The online platform allows tenants to upload repair requests, pay their rent online or change personal details through one central system. Another solution the company offers is a platform connecting people looking for a house or office with housing corporations.

www.zig.nl



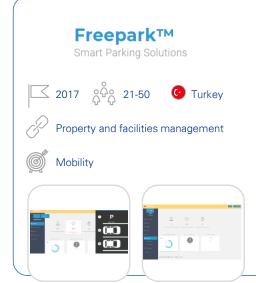
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ConSubcon is an innovative and digital marketplace that brings together thousands of professional and reliable construction contractors (subcontractors) with service providers, filling a major gap in the construction industry.

www.consubcon.com



**Freepark** is a hardware and software solution that creates reservable parking spaces. OKB Technology company producing smart parking barriers that allows remote authorization by smartphones, web panel or Bluetooth. Freepark Smart Parking Lock enables you to authorize anyone you want to park in your reserved parking spot by using a smartphone or a web panel, it can be integrated by using Rest API and can work together with your firm's existing software and management





**三 2014 ஜூஜ 21-50** 

Property and facilities management



Agent matching





Mutlubiev is a marketplace for online cleaning services. With technology and precise processes, they want to provide house cleaning services, at any time through trusted professionals Currently Mutlubiev operates in 4 different cities and 2 different countries.

www.mutlubiev.com



Kiraplus offers tenant scoring solutions to landlords, realtors and property managers so they can instantly identify whether tenants are financially responsible and reliable.

www.kiraplus.com



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Mobility





ParkKolay is a mobile application that on the one hand directs people looking for a car park to suitable car parks, while on the other hand provides digital returns for companies that operate car parks within a global network, especially by e-invoice, online collection, performance and inventory management.



www.parkkolay.com









Property and facilities management



Transaction administration





**Inventally** provides inspection services for a smooth tenant-landlord relationship. Herewith, the landlord is assured that the tenant treats the landlord's asset as it if were his own home and the tenant is assured that the landlord will provide a real home to the tenant. Reports are conducted in Arabic for binding legal protection in cases of tenancy disputes in the UAE.



www.inventally.com









Construction



Collaboration software





Yovza is an affordable multi-sided subscription based organized construction marketplace bringing all the key project stakeholders under a single platform helping them manage their day to day work flow saving up to 70% of their time and cost.











Transactions and leasing



Real estate investment platforms (e.g. crowdfunding)





**Property Monitor** is UAE's real estate data platform offered by RICS accredited property professionals. Their data and intelligence service is aimed at increasing transparency in the UAE marketplace - Dubai and Abu Dhabi. Agencies, developers, consultancies and banks can access real-time data and expert intelligence in order to make more informed decisions, based on actual transactions, values and trends.

www.propertymonitor.ae



2011 ္ဂိုဂို္ဂ္ဂ 101-200 🛞



Transactions and leasing







Appear Here has developed a website for booking international short-term commercial spaces to be used for a broad diversity of business activities like promotional sales, testing new products, roadshows and many more. For landlords it forms an opportunity to rent out commercial space per week, month or quarter and increase average renting prices.



www.appearhere.co.uk



**三 2012 パーパ 21-50** 





Property and facilities management



Property portfolio management tools





Arthur Online is a cloud-based property management solution supported by a suite of dedicated apps. It gives property managers control over their portfolios from anywhere; by bringing agents, tenants, owners and contractors together on one platform. Arthur Online gives users access to online property management tools in one integrated bundle. Through automation and systemization, Arthur Online saves time for its clients daily.



www.arthuronline.co.uk



2015 ္ဂိပိုဂ္ဂ 5-10





Property and facilities management



Tenant services (e.g. wellbeing solutions)





Built-ID reduces the barriers to community engagement with visually engaging consultation tools, enabling the community to feel a sense of ownership and positive investment in a development scheme. They educate and guide local residents via clear timelines and digestible fact and give the community the opportunity to vote, with their input having an actionable impact on the decision-making process.





BRICKVEST









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**Brickvest** is a global real estate solution platform for investors and deal sponsors. With Brickvest, investors can access real estate investment & debt financing opportunities in global markets from 850+ institutional quality sponsors around the globe and build their own Real Estate portfolio.

www.brickvest.com

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🔀 2016 ္ဂိုပို္င္ဂ 11-20

Transactions and leasing



Rental and sales platforms







Canopy aims to address aligning incentives across the rental value chain through its core solution,

RentPassportTM. This is an online passport to improve credit, which will lay the foundations to a data driven platform aimed at helping millions of tenants achieve their financial goals.



www.canopy.rent



Transactions and leasing



Collaboration software





Classic folios developed Spaciable, an online property platform that provides users with access to all relevant information needed to utilize a property, whether that be for purchase, sale, or rental, by combining plot-specific data with supporting features. Spaciable also provides services for users like property professionals and residents by connecting them with agents and



www.classicfolios.com

#### FLATSNAPP

🔀 2016 ္ဂိုမို္င္က 5-10





Transactions and leasing



Rental and sales platforms





**Flatsnapp** is an Al-powered, data-driven platform that delivers faster, more price friendly rental transactions with a high focus on customer service for busy landlords and tenants. Their solution allows its clients to find and rent properties in a customer friendly manner.











Transactions and leasing



Rental and sales platforms





**Flatfair** is a London-based payment technology startup solving an affordability problem for tenants. Flatfair maintains an innovative payment technology, in which landlords can offer tenants the option to pay an affordable membership fee instead of an expensive deposit and then charge them directly for any lawful claims at the end of their tenancy. After partnering with some of the largest property firms, Flatfair has become a fast-growing deposit alternative.

www.flatfair.co.uk



🔀 2013 ္ဂုိပို္င္ဂ 51-100



Transactions and leasing



Co-working spaces





**HubbleHQ** operates a website that lists available office space from co-working centers, serviced office providers and companies with spare space. They also provide payment and administrative services to the providers.



www.hubblehq.com









Investing and financing



Property information platforms





Infabode aims to reduce the amount of time people spent trying to access key information from the real estate industry. They work with a network of content partners to provide a one-stop shop for real estate industry research and insights. Infabode provides a platform that enables their users to analyze global industry sectors, while also increasing the reach of their content providers' information to a highly targeted audience.



www.infabode.com

## **JustPark**







Property and facilities management



Mobility





JustPark operates an online and mobile booking service through which drivers are able to book to park in empty private parking spaces.











Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**IPSX** operates a stock exchange dedicated to trading stakes in companies which own single commercial property assets. The company operates two markets. IPSX Prime admits to trading issuers owning underlying single commercial real estate assets or multiple assets which are, or proposed to be, securitized and traded on the Exchange. IPSX Wholesale is for professional investors and designed to provide real estate owners with a UK market capable of accepting different corporate structures.

www.ipsx.com

## **LOCALE°**

2005 ္ဂိုိ္ဂ္ဂ 21-50

Kinadom



Property and facilities management



Property portfolio management tools





Locale provides technology that connects buildings, and creates healthier and more efficient places to live & work. Locale's property management software facilitates successful building management by instant communication and visibility over everything, from facilities booking and building maintenance, to deliveries and signing in visitors. It also helps occupiers stay in the loop with their local community through lifestyle services, wellbeing incentives, sustainability workshops and offers & promotions that support local businesses.



www.locale.co.uk









Investing and financing



Real estate investment platforms (e.g. crowdfunding)





Native Finance is a digital brokerage for Real Estate finance operating across the capital stack. Native finance supports clients to structure, and negotiate funding for acquisition and development. The business provides clients access to an extensive network spanning 300+ institutional funders, rigorous analysis based on proprietary data and processes, and an execution team with extensive experience.



www.nativefinance.co.uk









Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





**OneDome** is a technology company that aims to change the way people search for and buy and sell their homes, by making the process straightforward, streamlined and transparent. OneDome is changing the process offering to an end to end digital property transactional platform. OneDome's technology enables customers to search for properties, connect and communicate with property professionals, and transact on a secure digital platform.













Transactions and leasing



Rental and sales platforms





**Nested** operates an online estate agency that specializes in minimizing the exchange time and the number of offers falling through. The company aims to give home sellers the freedom to move on their own timeline, support from trusted agents and technology that makes the industry transparent.

www.nested.com



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Kinadom



Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





Purplebricks is a estate agent and offers customer a fairer, more transparent and convenient way to buy, sell, or let. They combine the personal touch of local property experts with cutting edge technology and a central support team that puts customers in control of their sale.



www.purplebricks.co.uk









Transactions and leasing



Rental and sales platforms





**StreetDots** develops an app that allows street-food traders to book trading locations with landowners who are also signed up to the app. Currently, there are over 2,700 vetted traders active on the platform and there is a strong focus on tenant experience.



www.streetdots.co.uk

#### **PLUM GUIDE**



🔀 2015 ္စိုပိုင္မွိ 101- 200 🤀 United Kingdom





Transactions and leasing



Rental and sales platforms





The Plum Guide develops a website that allows users to book holiday homes, from a selection of homes tested and approved by the company's in-house hospitality experts. Founded in 2015, the company primarily offers UKbased holiday homes, at the moment.











Investing and financing



Real estate investment platforms (e.g. crowdfunding)





**StrideUp** operates an online platform through which prospective homeowners can reduce the initial cost of buying a property by sharing it with selected investors. With StrideUp, customers buy the portion of the home they can afford today and when they are ready, they can buy the rest.

www.strideup.co



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🔀 2015 ္ဂိုပို္င္ဂ 21-50





Transactions and leasing



Rental and sales platforms





VenueScanner creates a simple and smart self-service for hosts and organizers. Event organizers search their venues ranging from churches and warehouses to hotels and meeting centres. Customers then enquire and book online. Venue hosts use the software to market their space to event organizers and to manage enquiries.



www.venuescanner.com

## **VESTA**

🔀 2017 ္ဂိုမို္င္က 11-20









Transactions and leasing



Tech-enabled brokers (e.g. mortgage search and comparison)





Vesta is an online marketplace for buying and selling investment property. They support sellers (individuals, developers, landlords, institutions etc) to sell properties with tenants in place to an investor audience who value income. Properties can be anything from individual units (homes, apartments) as well as blocks (broken or unbroken), health maintenance organizations ("HMOs"), portfolios, purpose built student accommodation ("PBSA"), rental retirement homes and off-plan properties with a rent guarantee.



www.vestaproperty.com



#### **Archistar**

2010 ని<sup>ద్</sup>ద్ది 51- 100 **(જ)** Australia



Design & planning



Property information platforms





**Archistar.ai** is a world-first property technology platform for property developers, architects, home builders and real estate agents. The platform brings together property data, planning rules and regulations, and a generative design engine powered by Artificial Intelligence. As a result, property professionals can complete timeconsuming property research, feasibility assessment and building design work within minutes, and understand what they can and should build.















Tech-enabled brokers (e.g. mortgage search and comparison)





**ActivePipe** is a nurturing and conversion platform built for the Real Estate and Mortgage Broker industries. ActivePipe combines marketing automation and predictive algorithms so agents and brokers know who to call, when to call and why.

www.activepipe.com

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## **Bricks+Agent**

🔀 2016 ္ဂပို္င္က 51-100





Property and facilities management



Property information platforms





Bricks + Agent offers a platform that assists property and facility managers in dealing with maintenance, inspections, smart digital locks, bots and automation. The platform connects stakeholders for maintenance and inspections to the same ecosystem to ensure tasks are handled with the principles of mobility, transparency and visibility. Users can include the property or facility manager, the contractor, as well as the owner and tenants if applicable.



www.bricksandagent.com



🔀 2017 ్దర్గ్లో 11-20





Property and facilities management



**Building automation** 





Cognian Technologies' Syncromesh, is a wireless canopy that enables building owners to quickly and cost-effectively add a range of building management solutions that improve the comfort of its occupancy, lowers a building's carbon footprint and reduce energy costs regardless of the buildings size, location or age.



www.cognian.com













Property and facilities management Property portfolio management tools





**FMClarity** is one of Australias FM software providers built by Australian facilities and property management professionals. FMClarity simplifies FM and asset lifecycle workflows, streamlines organizational processes and delivers powerful insights with efficiency and transparency. The platform harnesses industry principles which become a single source of truth for transparency and engagement across organizations.



## **EQUIEM**











Property and facilities management



Tenant services (e.g. wellbeing solutions)





**Equiem** is pioneer of tenant experience technology with 10+ years experience, and is the most widely adopted platform in commercial real estate with 175.000+ users across 9,000+ companies and 5

www.getequiem.com

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## inst^rent









Transactions and leasing



Rental and sales platforms





**Instarent** has developed a technology solution for end to end self-managing properties by offering tools for landlords and tenants. The online/mobile platform captures, manages and facilitates the entire rental management ecosystem by offering access to tenants, landlords and tradesmen.



www.instarent.com.au







Property and facilities management



Mobility





**Liftango** powers on-demand shared transport systems across the world. By guiding global organizations on how to plan, launch and scale their share mobility programs, Liftango reduces the spend on unnecessary parking infrastructure and help provide a path to a sustainable and climate-positive



www.liftango.com











Transactions and leasing



Rental and sales platforms





Openn Negotiation is a sales process and digital platform that combines the ease of private treaty, the transparency of auction and leading technology to ensure optimal sales outcomes for sellers and buyers, facilitated by the Agent.



www.openn.com.au















Smart buildings





Local Measure is a platform for the hospitality, tourism, retail and entertainment industries. The software platform allows businesses to receive real-time customer intelligence whenever customers are on-premise, helping them to identify, understand and

www.localmeasure.com

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**三 2016 ペラッ 51-100** 



Property and facilities management



Smart cities and infrastructure





PAM is providing smarter navigation for iconic venues and precincts around the globe. Their software uses real-time centralized smart navigation to transform large venues into smart precincts that become more pleasurable, productive and profitable. PAM is a cloud based platform that scales to suit the needs of any complex environment and can be accessed on any device at any time through a secure network.



www.pam.co



🔀 2004 📯 201-500 🐿 Australia





Construction



Safety & security





SafetyCulture is a global technology company which supports businesses to do their work every day. Its adaptive, mobile-first platform helps to enhance operations and foster high performing, safer workplaces. Its flagship products, iAuditor, and EdApp enable frontline teams to perform checks, train staff, report issues, capture data and communicate fluidly. Their products integrate to help organizations build immunity to risk.



www.safetyculture.com

# scrted

🔀 2017 ္ကမို္င္က 5-10





Property and facilities management



Property information platforms





**Sorted Services** is a platform to source and manage household services. The company simplifies property management and provides ongoing analysis of rent, electricity, broadband and more in a central application. This allows for optimization of spending and have all data smart, simple and sorted.



Select Residential Property







Transactions and leasing



Property information platforms





**Select Residential Property** delivers focused of the prediction of future capital growth on the back of their proprietary technologies measuring the demand and supply. Offering direct consumer application and business application solutions, the company is focused on product solutions for multiple markets and targeted channels down to suburb level insights by house or unit markets.

www.selectresidentialproperty.com.au

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Mobility





**Spacer** is a web and phone based app connecting consumers to thousands of available storage and parking options across Australia and USA. As an open marketplace, the platform enables property managers and real estate owners to list unutilized storage and carparks for free, and generate incremental revenue from otherwise idle or latent assets.



www.spacer.com.au









Construction



Technical planning





**TCPinpoint** is a cloud based collaboration and management tool for the property industry. TCPinpoint simplifies the process and reduces costs for the property industry through collaboration and connection. The platform creates access to project documents and tasks to support projects and the delivery in retail and commercial property industry.



www.tcpinpoint.com









Property and facilities management



Property portfolio management tools





Yabonza keeps tenants connected to their home with transparency and communication, using their technology platform, while allowing owners to maximize the value on their asset through income, property optimization and opportunities to capitalize on the market.















Property and facilities management



Mobility





UbiPark app, launched in 2014, allows motorists to search, navigate, access & pay for parking powered by their smartphone. Combining on-street & offstreet parking data, UbiPark has improved parking experience, creating a complete windows-up solution.

www.ubipark.com

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Tenant services (e.g. wellbeing solutions)





**OYO** is a hospitality company which supports the enabling of standardization of services, amenities and in-room experience. Through the use of its proprietary apps for the inventory management, room-service, revenue management and customer relationship management.



www.oyorooms.com







Transactions and leasing



Real estate investment platforms (e.g. crowdfunding)





Property Share is an online marketplace that allows users to directly own completed real estate with other like-minded owners. It provides to own a specific fraction of a property while earning returns similar to purchasing the entire property through a simple process to view curated property offerings and providing customers the option to buy and sell fractions.



www.propertyshare.in









Transactions and leasing



Property information platforms





Estie develops and provides commercial office information platform. Tenants can find office spaces by offers from agents, that are assisted by space recommend Al algorithm. For landlords, asset managers and brokers, they can gain access to exhaustive market data collected from numerous sources supported by rent estimation calculated via ML technology to scale their business.







Հ 2009 ԷᢆԻՐ 101-200 ● Japan



Property and facilities management



Mobility





**Akippa** is a parking sharing service born from the troubles of everyday life. Customers can make a reservation online and park in a vacant space such as a monthly parking lot or a private home garage, vacant lot, or commercial facility where no contract is made, and anyone can easily share the parking lot.

www.akippa.com

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Nokisaki helps small merchants find physical spaces for pop up shops, vegetable stands and food trucks. Nokisaki connects these small merchants, who need just a little bit of space, with commercial landlords who have a little bit of free space and are looking for some additional foot traffic.



www.nokisaki.com

## **Z**weispace









Design & planning



Property information platforms





**Zweispace** has launched various solutions like the AutoCalc, an Al Architect for residential property developer that calculates the building plan revenue of a plot of land. Namazu is a big-data based Al Earthquake PML Measurer for property investors and home owners and an Integrated blockchain-based app utility token platform with various financial instruments for property stakeholders.



www.en.zweispace.co.jp









Construction



Collaboration software





**Hubble** accelerates the construction industry towards an autonomous selfbuilding future by digitizing, optimizing, and automating work processes across the entire building lifecycle and unifying all project stakeholders on a single integrated platform for better collaboration and data sharing.











Construction



Collaboration software





**Conqa** aims to simplify the process of quality assurance (QA) for construction contractors. They connect the site worker to an engaging QA process, and the entire project team to its live outputs. In doing so, the process can be streamlined as well as made more engaging for both parties involved.

www.conqahq.com

KPMG

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### LEAN STATION







Construction



Technical planning





**Lean Station** is working towards improving the performance of construction projects through streamlining processes and in expanding capabilities of people. They approach these areas with the Integrated Lean Project Delivery (ILPD) a Lean + Digital approach for ensuring the transformation is sustainable and can be scalable across the organization. The proprietary product suite of Lean PlanDo enables time and cost efficiencies in these capital projects.



www.leanstation.com





Singapore



Transactions and leasing



Rental and sales platforms





**MOGUL.sg** is a Property Portal that provides a smart way to search houses. using 3D Maps and keywords that fit specifics lifestyles: be it the MRT or a 24-hour Supermarket Nearby, or even units in high floors. The portal is based on a Al-backed algorithm which enables estate agents to sell properties more efficiently.



mogul.sg











Property and facilities management



Property portfolio management tools





**Qornerstone** offers a cloud-based platform for property management. The platform integrates various PropTech modules like digital payments, cloudhosted databases, mobile apps, financial accounting and ERP software to comprehensively meet the needs of building owners, property managers and individual tenants and/or residents.



www.qornerstone.com















Transactions and leasing



Rental and sales platforms





**Ohmyhome's** mission is to make housing transactions simple, fast and affordable. By constantly advancing their technology, they aim to revolutionize property transactions through simplifying and improving the user experience of clients. Home transactions are now affordable as clients can choose either DIY for free or choose to pay for only the services they need. Ohmyhome's has created a One-Stop Solution for all housing needs: DIY, Agents, Mortgage, Legal and 24/7 Platform.



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Design & planning



Property portfolio management tools





**Really** provides property management software that combines project management, E-tendering and a just and fair open marketplace solution. The integrated tool bridges the gap between real estate project management approaches and new technological innovation by support real estate professionals.



www.really.sg









Property and facilities management



Mobility





Parking Cloud, a cloud-based smart parking solution company, provides IParking service which is cloud-based online real-time parking solution to all stakeholders relating to parking. IParking Zone is operated over 2,800 domestically and offers a large vehiclemounted in-car payment service in Korea. Mobile settlement and location services using QR Code or NFC through the application service for users both drivers and parking lot managers is also



smartparking.iparking.co.kr

ВREWARE



South Korea



Transactions and leasing



Property information platforms





Reware has an online warehouse database providing 190,000 trucking companies with tools such as ware house search, price, status information. With its logistics information platform encompassing 1,300 warehouse information it can search and manage warehouses via online.



🚰 피터팬의 좋은방 구하기

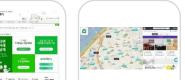


🔀 2013 ္ဂိမို္ဂို 21-50 🕡 South Korea



Rental and sales platforms





Peterpan helps users conduct real estate transaction safely and conveniently without burden of paying commission fees. It wants to establish P2P transaction platform for anyone who want to sell, buy, rent housing, and

www.duse.co.kr

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# **(sweetspot)**







Transactions and leasing



Property information platforms





SweetSpot operates from short-term pop-up stores to multi brand stores through retail space platform service. Based on the pop-up store platform, the company is expanding its retail business fields such as flea markets, planning events and multi brand stores. By launching the Retail Lease Management service, the service is extended to the role of a long-term rental consulting and intermediary platform in the retail field, covering the overall area of retail business.



www.sweetspot.co.kr







# 8. Sustainable innovations

Sustainable innovations have gained importance the last couple of years as consumers and hence investors are increasingly prioritizing sustainability, something which is expected to increase more the coming years. Sustainable innovations are not limited to only sustainable construction but also include intelligence systems through collection and usage of data and IoT, all reducing or giving insight in how to reduce, one's footprint and costs.















Predictive maintenance





**Newatt** is an application that strives to reduce its customers' energy consumption. The system is based on an integration of Internet of Things (IoT) technologies that measure the consumption of stores and/or equipment in real-time. Using Newatt will give users insight into their energy consumption and the possibilities to estimate costs of energy, as well as to implement predictive maintenance of equipment.



www.newatt.com.br







( Canada



Property and facilities management



Energy efficiency





Argentum develops building management software, wireless multisensor networks, and DC (direct current) power distribution systems for smart buildings. Their technologies make spaces more comfortable for tenants, increase energy performance for buildings, and make it easier to view and control all systems on a single software platform.



www.argentum.ai











Construction



New materials





Carbon Upcycling Technologies is a clean-tech company that is changing how the world views CO2 from a costly waste to a profitable commodity. With their propriety technology that manufactures CO2-enriched nanomaterials, they are adding performance and value to industries like concrete, polymers and adhesives, energy storage, solar PV, and more.



www.carbonupcycling.com

#### BRAINBOX AL













Property and facilities management



**HVAC** 





BrainBox AI utilizes self-adapting artificial intelligence technology to proactively optimize the energy consumption of buildings. Using deep learning, cloud-based computing, and their proprietary process, the solution autonomously optimizes existing Heating, Ventilation, and Air Conditioning (HVAC) control systems for

www.brainboxai.com

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2007 నిగ్గా 51-100





Construction



New materials





CarbonCure manufactures a carbon dioxide (CO<sub>2</sub>) removal technology that introduces captured CO2 into fresh concrete to reduce its carbon footprint. Once injected, the CO<sub>2</sub> undergoes a mineralization process and becomes permanently embedded, while improving the concrete's performance and increasing its compressive strength. This results in economic and climate benefits for concrete producers.



www.carboncure.com











Property and facilities management



Predictive maintenance





Eddy Solutions provides Intelligent Leak Protection that reduces the risk of water damage with comprehensive LoRaWAN-connected products and services that include sensors, shutoffs, analytics, and a proprietary real-time App/Dashboard. Their system empowers property owners with tools and data to both mitigate acute water damage risks and prevent future loss



www.eddysolutions.com









Design & planning



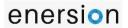
Energy efficiency





MyHEAT acquires thermal data for entire cities and reveals the energy escaping from every building. The MyHEAT Customer Engagement Platform informs, educates, and motivates people to act on reducing waste energy and greenhouse gas emissions.





🛚 2016 స్టర్లో 5-10









Design & planning



**HVAC** 





**Enersion** provides a net-zero emission tri-generation that generates cooling, heating and electricity with more than 70% energy cost reduction. Their cooling technology utilizes nano-porous materials to directly convert heat into cooling without the need for electricity. Integrating their technology with solar photovoltaic-thermal panels or CHP units they can generate electricity onsite and utilize the otherwise wasted heat for cooling in the summer and heating in the winter.

www.enersion.com

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Energy efficiency





Parity is a software for buildings that automatically manages their energy and tracks their savings. Parity installs a 'brain' in a building to adapt its energy use to the demands of its resident and use AI to optimize building operations and provide customers with data on the state of their mechanical systems and energy use.



www.paritygo.com













Property and facilities management



Water efficiency





Reed is a suite of connected, affordable, and scalable smart plumbing products designed for commercial properties. Their products empower building owners to save money, conserve water, and seamlessly eliminate catastrophic leaks by offering among others. a water management platform, flood sensors and cloud connectivity.



www.reedwater.io

#### aurora







Design & planning



Technical planning





Aurora Solar offers a cloud-based software. This software enables solar PV engineering design, provides a workflow management functionality and a utility rate database, and facilitates sales and customer acquisition for solar installers and financiers.



www.aurorasolar.com



















**Aguanta** develops innovative products that help combat climate change, with specific focus on the energy usage and inefficiencies inherent in water heating and plumbing systems. The company has invented a new and sustainable approach to solar water heating. The Aquanta system leverages technology that was developed for their Ohm solar hot water monitoring system.

www.enersion.com













Energy efficiency





Energetika NL is specialized in energy efficiency solutions. The company combines the newest sustainable technologies with an IoT platform in order to achieve energy savings and at the same time obtain exact analytics of people, machinery, products and processes. Their objective is to deliver real-time and actionable insights while reducing energy costs for enterprise business, so-called 'Energy Intelligence'. With their specialized solutions, Energetika's clients can achieve improved operational efficiency and productivity.



www.energetikanl.com











Property and facilities management



Energy efficiency





Radiator Labs addresses two critical problems in steam heated buildings: energy waste and tenant comfort. The Radiator Labs system features the Cozy™, a wireless, low-cost, and easily installed retrofit that drops on top of radiators. The Cozy™ provides roomlevel temperature control for management and tenants via web and mobile apps and offers savings of up to 45% in heating costs.



www.radiatorlabs.com











Property and facilities management



Energy efficiency





**Enervalis** develops software that provides sustainable energy solutions for electric vehicles, buildings, and microgrids. The platform monitors available energy sources and users and can predict future demand and supply of energy through weather forecasting, input from users, AI, and big data. Using this information, it then distributes the energy.



www.enervalis.com

















Energy efficiency





**DeltaQ** is a technology company with a solution that learns to predict the behavior of a building (in context of comfort and energy use) and leverages these predictions to automatically steer the energy systems. DeltaQ improves comfort while maximizing energy and CO2 savings and allows operational teams to turn their attention to added value work instead of repetitive tasks and constant finetuning.



www.deltaq.io

KPMG

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Energy efficiency





**Noven** designs, invests & operates solutions that enable reduction in the energy bills and the ecological footprint of larger buildings, and thus hereby help fight climate change by reducing the financial costs for its clients. It provides a solution for existing buildings with cogeneration units, and solutions for new buildings with energy as a service.



www.noven.be









Belgium



Property and facilities management



Water efficiency





Shayp's technology assesses water leaks in real-time and dispatches maintenance efficiently to drive down costs. Shayp is a fully integrated end-toend service that helps building managers, homeowners and insurers eliminate leaks and related damages. Shavp keeps properties safe and water bills under control.



www.shayp.com













Construction



Energy efficiency





R8 Technologies' Digital Operator is an artificially intelligent add-on software for your existing Building Automation System (BAS, BMS). R8 Digital Operator integrates remotely and securely as with all common and modern Building Automation Systems and other management platforms without any additional hardware.















Property and facilities management



Energy efficiency





WeSmart is a platform which helps to achieve more efficient energy management. The platform connects to sensors which collect data. Thereby, customers can get real time access to their consumption. Smart alerts and energy managers help to optimize energy usage.

www.wesmart.com

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**HVAC** 





Kapacity cloud-based AI tool connects real estate heat pump- and AC systems as part of a smart electricity grid. The cloud-based AI tool optimizes and controls the user energy systems based on indoor air conditions, heating and cooling demand, weather forecasts and electricity prices.



www.kapacity.io







Finland



Property and facilities management



Energy efficiency





Mount Kelvin manufactures and distributes remotely updateable cloudbased room controls for hotel rooms.



www.mountkelvin.com











Construction



Energy efficiency





**3M** has created the Thinsulat Climate Control Window Film that helps to keep the warmth in during the winter and the cool conditioned air in during the summer. It helps reduce cold/hot spots, improving overall comfort throughout your space. The foil is transparent and let's natural light come through well increasing efficiency, single pane windows become nearly as insulating as double pane ones.

















Design & planning



Property information platforms









**Solen** uses technology to calculate and detects the natural luminosity and direct sunlight of a property, for each day of the year, at any time. Today, Solen supports its customers in the choice of their future housing, whether existing or



www.solen.co

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Netherlands



Property and facilities management



Mobility





**Amber** provides a service that will make eco-friendly driving attractive and easy. Amber's service uses the concept of the sharing-economy, while only utilizing 100% electric cars. The goal is to minimize unnecessary usage of parking spaces and/or unnecessary stand-still of cars. All of this is achieved by using the app to order, unlock, start and park the car. They make sure that the cars get regular maintenance as well.



www.driveamber.com









Property and facilities management



Offsite construction (e.g. prefabricated components)





Cittamap provides easy access to data and insights on the built environment for energy transition, climate risks, and urban livability for the real estate and infrastructure sector. The data platform brings together more than 135 different information points that saves time, and allows data driven decisions towards climate neutrality. Supporting the user with the right information at the right time using satellite data, and social data along with open data processed and analyzed using automated data pipelines will ensure up-to date data.



www.cittamap.com











Property and facilities management



Energy efficiency





**Enappgy** aims to improve energy efficiency by integrating technology and a flexible and scalable software platform. The energy cost reduction can be achieved by technologies on three levels; smart lighting, smart energy, smart building.













Property and facilities management



Energy efficiency





**EARN-E** offers a low budget energy monitor which provides real-time information and a clear overview to more efficiently manage the gas and electricity usage of households and organizations in order to reduce carbon emissions and realize monetary savings.

www.earn-e.com



🔀 2014 ္ဂိုပို္င္ဂ 11-20



Sourcing: materials, products and technology



Offsite construction (e.g. prefabricated components)





Finch Buildings envisions a world in which buildings contribute to solving the climate problem. With Finch Buildings, sustainable living should become available to everyone. Reducing the amount of CO2 in the atmosphere. thereby contributing to the restoration of the planet's balance.



www.finchbuildings.com

# FlexSol Solutions

🔀 2013 ္ဂိုပို္ဂ္ဂ 11-20

The Netherlands



Construction



Offsite construction (e.g. prefabricated components)





FlexSol is a high-tech company with unique expertise in curved solar technology. The innovative technology is applied in smart & sustainable products such as roof tiles and the Soluxio solar pole products. This results in products that are not only useful and climate-friendly, but also aesthetically pleasing. These features make FlexSol innovative in the off-grid solar market.



www.flexsolsolutions.com









Property and facilities management



Water efficiency





**Hydraloop** collects, cleans and re-uses the water from showers, baths, washing machines, handbasins and air conditioning units. Hydraloop water is clean, clear, safe, and disinfected. It can be re-used for toilet flushing, washing machines, garden irrigation and topping up swimming pools. Hydraloop offers turn-key products and solutions for projects of any size. Hydraloop, aims to drastically reduce the world-wide water consumption, and give water a second life.







Construction

components)





Offsite construction (e.g. prefabricated







**GreenHome** (formerly Bleeve) helps homeowners on a weekly basis to make their homes more sustainable. GreenHome helps customers step by step with energy saving advice, an overview of subsidies and finding a reliable construction company. GreenHome aims to build the biggest independent platform to make homes more sustainable. The company also offers warranties on top of the constructor's warranty of the constructor if the renovation is booked via GreenHome.



www.greenhome.nl









Construction



Offsite construction (e.g. prefabricated components)





**IBIS Power** provides innovative renewable energy solutions. Their flagship product "PowerNEST" is their solution to generate six times more energy on the limited roof space of highrise buildings than current solar applications.



www.ibispower.eu









Property and facilities management



Energy efficiency





iWell has developed Cube, a battery system that stores clean energy. generated by wind or solar power, and delivers the energy when needed. Delivering the required energy with adequate speed to relieve the main energy network during peak load periods, reducing the cost of energy usage while simultaneously making it more sustainable. Multiple Cubes can be connected to increase the impact of relieve on the main energy network.



www.iwell.nl









Sourcing: materials, products and technology



Robotics & automation





Kite Robotics aims to facilitate building owners, architects and facility managers with increasing safety, while reducing costs and effort to clean large façades. They have developed a solution: a completely autonomous robots that can clean windows and facades in dangerous places (e.g. tall buildings). These robots do a fast job of cleaning windows, without putting personnel in dangerous positions.



www.kiterobotics.com









Construction



Offsite construction (e.g. prefabricated components)





**Kindow** provides intelligent sun- and daylight control for office and utility buildings. Kindow provides motorized exterior shading to improve comfort and energy efficiency and offers direct integration with other smart building

www.kindowblinds.com



🔀 2017 ္ကမို္င္က 11-20



Sourcing: materials, products and

technology Offsite construction (e.g. prefabricated



components)



Madaster is the cadaster for materials. Raw materials are scarce but limited and must therefore be well documented so that they remain unlimited. With the help of the material passport, materials get an identity, which means that they can never disappear in anonymity as waste. Madaster acts as a library and generator for material passports.



www.madaster.com





The Netherlands



Property and facilities management



Offsite construction (e.g. prefabricated components)





ParknCharge invests in the charging infrastructure for electric cars. The company places charging stations to meet the current demand. Besides investing, ParknCharge takes care of installation, management and maintenance, customer services and



www.parkncharge.nl









Construction



Offsite construction (e.g. prefabricated components)





Renolution provides a method transforming existing houses into energy neutral houses by making use of roof and facade elements that will be consolidated with a light steel frame. Residents do not have to leave their home during renovations. Renolution gives advice on cost reduction and renovates houses into energy neutral houses. This method makes sustainable building easier for housing corporations, municipalities and other construction partners. Renolution's methods is applicable to all sorts of buildings.



www.renolution.nl











Construction



Offsite construction (e.g. prefabricated components)





PHYSEE has created SmartSkin - a smart, sustainable and connected facade, consisting of electricity and data generating windows (SmartWindows) and a intelligent grid connection (EESY). Their SmartWindows have BIPV panels integrated solar cells and smart sensors, simultaneously generating clean electricity and gathering climate data. The end result is a facade of connected SmartWindows and facade elements, saving up to 25% energy for heating and cooling and increasing the comfort experience of users.

www.physee.eu

### **StoneCycling**<sup>®</sup>



Netherlands



Construction



Recycling solutions





### StoneCycling produces

"WastedBasedBricks" which are bricks that give a building a unique and sustainable look and feel by composing them of different waste components. Waste material is collected in a 150kilometer radius of the factory. Combining various waste materials opens up a range of new possibilities for these bricks. The bricks can be used for the exterior and interior of buildings.



www.stonecycling.com

### studio selarix

🔀 2018 ္ဂိုပို္ဂ္ဂ 5-10





Sourcing: materials, products and technology



Building design





Studio Solarix designs and develops sustainable design facade panels that generate solar energy through integrated solar panels. The solar panels become tactile and can communicate with their environment through integrated LED lighting.



www.studio-solarix.com





Netherlands



Design & planning



Building design





Sustainer Homes has developed a building system that allows architects and clients to design their own customized, radically sustainable home. Thanks to the circular, modular and completely digitalized design and production process, the company has made the realization of a customizable dream house easy.



www.sustainerhomes.nl





🔀 2016 ပို့ပိုင္ပို 11-20 😄 The Netherlands



Property and facilities management



Energy efficiency





Sustainable Buildings provides an innovative IoT-based energy management system to make buildings smart and sustainable. The company offers tools to its customers to help them with the transition to energyneutral real estate. Sustainable Buildings provides multiple services: building diagnostics, consumption monitoring, production monitoring, environment monitoring, manual control and automated control. The management dashboard shows real-time information about electricity and gas consumption, occupancy rate and humidity. Moreover, it offers features such as savings planning, occupancy optimization and savings potential discovery.



www.sustainablebuildings.nl













Construction



Energy efficiency





Airofill innovative wall insulation, in combination with other measures in the housing shell, will make a significant contribution to the 2050 target, limiting the net heat demand (electrical) and reducing CO<sub>2</sub> emissions. This will enable lower operating costs of the home ownership in the medium and long term, the materials used require little maintenance and implementation is simple.



www.airofill.nl/innovative-wall







Construction



Smart cities and infrastructure





The Urban Jungle Project involves lightweight and self-sustaining green innovations for placement in urban



www.theurbanjungleproject.com











Property and facilities management



Energy efficiency





Tieluk has developed a hydrogen generator suitable for heating the built environment and delivering process heat to the industry. The generator produces hydrogen, which is directly combined in the heating system, resulting in wide applicability and reducing the energy usage, carbon emissions, and nitrogen emissions by 20-50%.











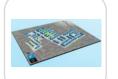


Design & planning



Energy efficiency





TheEarlybirds developed the NESTmodel providing insights in the 'behavior' of a single (complex) building regarding the transition to a natural gas free situation, where the COLONYmodel provides similar insights in the 'behavior' of a neighborhood. BIM models are used to represent the household energy usage, and an algorithm calculates year-by-year changes. The models then calculate future scenarios, set up from different perspectives (stakeholders), which are illustrated by an interactive 3D model. The models seek for the optimal combination of both heat technologies and investment for improvements of the buildings' envelope.



www.theearlybirds.nl

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Sustainable Innovations



2009 ္ဂိုပို္ဂ္ဂ 21-50

The Netherlands

Property and facilities management



Energy efficiency





Triple Solar invented a PVT heat pump panel. The front of the PVT heat pump panel is similar to a solar panel and has solar cells to generate electricity. The backside is a heat exchanger that supplies the energy source for the heat pump. The heat exchanger-collector collects energy form the ambient temperature and additionally from daylight and sunlight. With this system it is possible to provide a home with heat, hot tap water and electricity in a sustainable way. Fossil free. In all seasons, 24 hours a day.



www.triplesolar.eu



🔀 2012 ္ဂိုမို္ဂ္ဂ 11-20



Construction



Smart cities and infrastructure





Tvilight's mission is to contribute to the creation of sustainable and connected cities. The company supports this mission by offering sensor lighting solutions that allow cutting down the energy costs and creating a liveable and safe environment for urban citizens. Through a combination of physical products and control/management software, Tvilight offers end-to-end solutions for the control and management of street lighting, thereby reducing energy and maintenance costs as well as significantly reducing CO2



www.tvilight.com









Energy efficiency





Wellsun has developed the Lumiduct, a dynamic, multi-functional solar shading system. It generates energy and improves the indoor climate of the building. In this way, the energy demand of glass architecture can be cut in half. Through the implementation of LEDs in the solar panels, the facade can also be used as a media screen.





**三 2018 ஜීਊ** 5-10





Design & planning



Energy efficiency





Wallvision's product ZigZagSolar harvests solar energy, blocks heat and unwanted radiation and has an unrestricted view through the window. It thereby fights climate change, air pollution, grid congestion and high cost for electricity. It harvests up to 100% more solar energy in winter than solar modules on flat roofs.

www.zigzagsolar.com

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Sustainable Innovations





🔀 2013 ္ကိုိ္က္ကို 21-50





Property and facilities management



Energy efficiency





Reengen tracks the real time condition of energy assets, monitors energy performance of facilities and obtains data driven notifications from anywhere and anytime. With their expertise in industrial IoT, cloud technologies and big data analytics, Reengen saves energy, reduces carbon footprint and enhances operational efficiency.



www.reengen.com









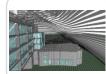


Design & planning



BIM and Digital Twin





**IES** technology is proven for its energy and carbon reduction capabilities and is utilized globally. Supported by integrated consulting services, IES technology is used to uncover hidden cost, energy and carbon savings that support smarter energy-efficient choices across the entire built environment. After more than 25 years facilitating the energy efficient design of individual buildings, IES is now using its Digital Twin technology to tackle the built environment at scale – from citizens up to companies, campuses, communities, cities and even whole countries.



www.iesve.com









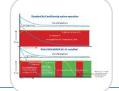


Construction



Energy efficiency





Anvita Engineering provides energyoptimization and clean technology solutions to customers in the Asia-Pacific region, in particular related to airconditioning, refrigeration, solar and food-waste-to-energy solutions. Having years of pan-Asia experience, they provide value-added support to customers in this fast-growing region of the world.



www.anvitaengineering.com











Construction



Energy efficiency





Pavegen has developed a flooring tile that converts the wasted kinetic energy from footsteps into renewable electricity. Each tile is equipped with a wireless application program interface (API) that transmits real-time movement data analytics, whilst directly producing power when and where it is needed. Pavegen is also able to connect to a range of mobile devices and building management systems. The company is shifting to become a permanent and commercial smart-flooring solution.



www.pavegen.com

KPMG

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Sustainable Innovations

### PanUnited







Construction



New materials





Pan-United's Circular Economy model ties product and process innovation with waste management to minimize resource consumption. Pan-United does advanced research and development to create highly specialized, sustainable concrete solutions. It uses recycled materials and CO2-injection technology in its concrete to reduce embodied carbon in new buildings. By incorporating deep domain knowledge and the latest technologies in artificial intelligence and big data, Pan-United has fully digitalized and optimized the entire end-to-end supply chain for ready-mix concrete.



www.panunited.com.sg











Property and facilities management



Energy efficiency





BeeBryte helps commercial and industrial buildings lower energy consumption, generate savings, and reduce their CO2 emissions at no upfront cost. They have developed an Al-based energy optimization software that predictively drives existing cooling and refrigeration systems (without any equipment replacement) to generate up to 40 % savings.



www.beebryte.com



# 9. VR & 3D Mapping

Virtual reality and 3D mapping replicates an environment using computer and/ or drone technology. The ultimate goal of virtual reality is to create a user experience as real as possible. In the Real Estate sector, virtual reality and 3D mapping opportunities arise in the field of brokerage for example. Designers and developers can also benefit from virtual reality and 3D mapping because it assists them with translating design into reality. Due to current restrictions on or fear of physical meetings, VR might be the perfect solution. In addition, drones can map existing Real Estate and its environment which is then translated into 3D virtual reality or into valuable data about the property.





🔀 2013 ္ဂိုင္နီ္ဂ 101-200 🚺 Canada



Construction



BIM and Digital Twin





BIM One Inc. is a firm specialized in project management and technologies implementation related to building information modeling (BIM). BIM One inc. provides BIM consulting and implementation services, technology strategies and custom software solutions.



www.bimone.com



🔀 2013 ္ဂိုိ္င္ဂ 51-100







Design & planning



Indoor mapping





Planitar Inc. is the maker of iGUIDE®, a proprietary camera and software platform for capturing and delivering immersive 3D virtual tours and extensive property data. iGUIDE® is an efficient system to map interior spaces and features accurate floor plans, measurements, and reliable property square footage. By integrating floor plans and visual data, iGUIDE® provides an intuitive and practical way to digitally navigate and explore built environments.



www.goiguide.com



🔀 2017 ္ကို္ကို္င္က 5-10







Design & planning



BIM and Digital Twin





**Kavtek** is an XR (extended reality) platform for residential and commercial industries. Kavtekk provides solutions for project conception, design, and completion. Aiming to support clients innovating by integrating 3D & augmented reality on the XR platform.















Design & planning



Building design





**Invent Dev** is a tech company that enables house builders to showcase the floor plans for the building virtually with the help of 3D picture renderings, flythrough videos 360 degree tours and virtual reality, enabling them to sell homes faster. The firm also offers those services to those looking to improve their homes through Invent Showrooms.

www.inventdev.com



🔀 2017 ္ဂိုပို္င္ဂ 5-10



Transactions and leasing



BIM and Digital Twin





KnoGeo helps customers tell compelling, data-driven stories that sell clients, decision makers, and stakeholders. Their easy-to-use platform requires no GIS expertise, and dynamically connects market, property, and unit information into a cloud-based 3D platform that turns data into actionable insights..



www.knogeo.com











Design & planning



Indoor mapping





**Mappedin** is a platform for indoor spatial data management, digitizing venues, and building indoor mapping experiences. Built for scale, their flexible platform and enterprise grade tools enable us to work with leading operators and developers around the



www.mappedin.com









Design & planning



Building design





Yulio is a Virtual Reality Software for architecture and interior design. The company is changing the design and architectural industries by transforming flat, outdated designs into immersive visual reality experiences.





🔀 2016 ္ဂိုမို္င္က 11-20







Design & planning



Virtual viewing





Stambol Studios offers a

virtual/augmented reality (VR/AR) studio that specializes in hyper-realistic immersive experiences. The company provides architectural visualization services, allowing potential clients to judge their homes before construction.

www.stambol.com



🔀 2014 ္ဂိုပို္င္ဂ 21-50







Design & planning



Virtual viewing





Archisketch automates all the laborious works from measuring, modeling to planning so customers can start interior designing their own space on Archisketch's platform. Designed to bring interior-design-game up a notch, Archisketch allows anybody to interior design without breaking the bank. Paired with their free cloud-based proprietary software, Archisketch measures and generate professional 2D & 3D floor plans and 3D visualizations, VR, of your space.



www.archisketch.com









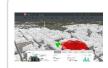


Design & planning



BIM and Digital Twin





Cityzenith has developed the Smart World Pro platform, which was created for the people responsible for designing, construction, and management of complex and large-scale building projects, properties and real estate portfolios or cities. Users leverage their digital twin solutions to easily aggregate, guery, visualize and analyze all their data in a single 3D dashboard crafted to suit their needs.



www.cityzenith.com

### Matterport







Design & planning



Virtual viewing





Matterport has developed an end-toend 3D media platform that allows anyone to create, edit, and share 3D models of real-world spaces. Users include professionals in a variety of sectors, including real estate, hospitality, architecture, engineering, construction and location scouting. Matterport spaces are easy to share as anyone with a computer or mobile device can have the open house experience from anywhere.



### GeoCV







Transactions and leasing



Virtual viewing





GeoCV captures spaces in 3D using a phone. GeoCV Virtual Open House is a cutting-edge 3D+360° virtual tour for existing spaces. Users understand layout from a realistic 3D scan, smoothly walk through the space via high-quality 360° panoramas, and see a floor plan with accurate dimensions extracted from the scan.

www.geocv.com



ဩ 2017 ခိုပိုဂ္ဂို 21-50 **⊜** United States





Construction



Virtual viewing





OnSiteIQ is a visual documentation service for construction projects. It enables clients to explore 360-degree imagery — from any device — to monitor building progress, pinpoint issues, and collaborate with teammates.



www.onsiteiq.io









Construction



Virtual viewing





**OpenSpace** is a construction tech company using artificial intelligence to create 360° photo representations of job sites. Builders attach an off-the-shelf 360° camera to their hardhat and walk the site as normal. The company's 'Vision Engine' automatically maps the images to the drawings.



www.openspace.ai

### CUBICASA









Transactions and leasing



Indoor mapping





Cubicasa offers a mobile app for scanning and branding real estate floor plans The company offers floor plans and the generated data is being used for real estate marketing, mortgage appraisals, valuation, and insurance use cases. The application works by scanning the indoor space by using the mobile device's camera through a mobile app.













Design & planning



BIM and Digital Twin





Handaz aims to bridge the gap between technology and the Architecture, Engineering and Construction industry, by providing the option to transform 2D CAD drawings into 3D BIM models. Their ultimate aim is to facilitate increased productivity and quality, while reducing time and cost of the overall

www.handaz.com











Design & planning



BIM and Digital Twin





GBuilder offers software to combine building data models (BIM), a visual web-based interface, and a dynamic 3D/VR/R world into a seamless whole. Together, this is a BIM powered real estate project management software with configurator, visualizations, and defect management.



www.gbuilder.com

### **IMMERSAL**







Finland



Property and facilities management



Virtual viewing





**Immersal** develops and markets a technological solution that creates AR experiences that merge digital and physical realities for consumers, industrial use, ad campaigns, and more, by mapping real-world spaces with a mobile device and augmenting them with digital content. In short, the Immersal AR Cloud SDK is a tool for programmers enabling them to develop AR in any app.



www.immersal.com











Design & planning



Indoor mapping





**Proximi.io** enables software developers to kick start their location-aware application projects and helps them to deliver context-aware content to their customers. The solution combines all existing location technologies (e.g. iBeacons, Wi-Fi, IndoorAtlas, cellular, GPS, and custom IoT devices) under one user-friendly platform, making it possible for users to reach out to clients wherever they are.















Design & planning



Indoor mapping





IndoorAtlas enables indoor navigation, by employing technology that uses natural anomalies in the geomagnetic field to pinpoint locations indoors. Customers include developers who want to build indoor location-based applications, such as search, wayfinding, and proximity marketing.

www.indooratlas.com



🔀 2015 ္ဂိုပိုဂ္ဂိ 1-4

Finland

Design & planning



BIM and Digital Twin





Sova3d develops 3D map web applications for collaborative town planning, building permission handling, and construction project visualization, by combining 3D BIM information with 3D City Information.



www.sova3d.fi



🔀 2013 ္ဂိုိ္ဂ္ဂိ 11-20



Finland



Design & planning



Indoor mapping





Steerpath offers indoor maps, navigation, and positioning technology to mobile application vendors, across industries and venue types.



www.steerpath.com

### umbra

2006 ္ဂိုပို္ဂ္ဂ 21-50





Design & planning



BIM and Digital Twin





Umbra empowers 3D graphics designers and engineers to create, optimize, share, and view their designs in real-time on virtually any device. As the established gaming industry standard in graphics optimization for more than a decade, Umbra is now redefining rapid visualization for all industry ecosystems utilizing complex 3D models.



www.umbra3d.com

### **Tridify**



Finland



Design & planning



BIM and Digital Twin





**Tridify** provides computer software that automates the delivery of architectural 3D BIM & CAD models to Unity, by enabling users to process BIM to IFC and publish their BIM models to the

www.tridify.com

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VR & 3D mapping



🔀 2017 ္ဂိုပို္ဂ္ဂ 1-4





Property and facilities management



Indoor mapping





VimAl enables indoor augmented intelligence and visual positioning via computer vision and machine learning techniques. Services include modeling indoor environments from videos, indoor scene understanding, indoor localization and navigation, and AR. In short, computer vision based indoor positioning for navigation and wide-area



www.vim.ai





France



Transactions and leasing



Virtual viewing





Exalt3D is a company specializing in 3D for real estate. The company will offer solutions for virtual visits, home-staging or digital models and BIM. In short, the services of the startup will encompass all services of 3D representation that in real estate. The startup relies notably on the cloud to facilitate the transfer and sharing of documents.



www.exalt3d.com











BIM and Digital Twin





**WIZZCAD** supports construction stakeholders through their digital transformation in order to help them build high-quality projects, in complete safety while meeting deadlines and budgets.

The BIM-Native WIZZCAD SaaS solution makes it possible to digitalize workflows throughout the life cycle of buildings, public works and infrastructure via a single collaborative platform to manage the design, execution and operations of construction projects, in 2D or 3D.











Investing and financing



BIM and Digital Twin





**Sitowie** offers an SaaS that generates 3D models of assets. Aiming to better define maintenance of buildings, reduce investment budgets, increase asset profitability and lifespan through risk anticipation due to ageing.

www.tridify.com

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VR & 3D mapping





🔀 2013 ္ဂပို္ဂ္ဂ 11-20





Transactions and leasing



Virtual viewing





Beyond Visual enhances client experience by creating photo-realistic 3D contents. They deliver a presentation tool to premium property developers to showcase and sell new build properties at the pre-completion stage. Clients can explore and experience the development and its surrounding area, such as a balcony view, without having to actually go there. Moreover, database integration enables live, up-to-date searching and filtering of available units based on price, size, floor plan etc.



www.beyond-visual.com





Luxembourg



Property and facilities management



BIM and Digital Twin





**BIM-Y** is a web platform to assess the quality of as-built documentation for existing buildings and during the construction phase to simplify the handover process and to manage this documentation during exploitation & maintenance and demolition phases.



www.bim-y.com











Property and facilities management



Virtual viewing





Ninsar develops various products in AR and PropTech, including indoor navigation in AR, personal AR-guide for autonomous interactive and personalized tours, 360degrees 3D tours, digital twin for buildings and property management tools. Their goal is to make customer's experience more fun, interactive yet at the same time giving new opportunities for offline retailers to attract customers utilizing benefits of digitalization.





















BIM and Digital Twin





Biganto specialize in software and hardware development and innovative technologies in real estate. Through the use of a high-definition laser scan, it automatically builds a 3d model and allows freely and seamlessly virtual move through the interior or exterior of a space.

www.biganto.com





Design & planning



BIM and Digital Twin





VR Concept develops software for VR environment applications to solve industrial challenges. The company provides users with the easy VR application for collaboration and visualization of CAD models, which can be scalable by big manufacturers.



www.vrconcept.net









Transactions and leasing



Virtual viewing





**2cyourhome** uses photo styling, 360 degree views, artist impressions, and virtual home presentations for marketing-end purposes. Allowing realestate agents, project developers, and investors to better convey the opportunity and value of properties, resulting in a more successful sale.



www.2cyourhome.com









Design & planning



Offsite construction (e.g. prefabricated components)





**Innobrix** is an online communication and configuration platform for the residential construction sector and consumers alike, transforming BIM designs into interactive virtual homes and allowing residential construction professionals to optimally integrate the consumer in a newly improved digital construction process. This way, Innobrix creates an optimal 'what you see is really what you get' customer experience which reduces communication errors, failure factors, costs and constructional waste.



www.innobrix.net

### CROZZROADS









Design & planning



Offsite construction (e.g. prefabricated components)





**Crozzroads** is specialized in virtual reality, augmented reality and mixed reality. Furthermore, they can also create 360 real photo/videos, artist's impressions, presentation tools, artistic projects, 3D projects, animations, games and online gaming. Crozzroads separates things, checks under the hood, and reassemble them in exciting new ways to build amazing new things. Crozzroads enhances your digital experience and to help you visualize your unique ideas and bring your dreams to life.

www.crozzroads.com

### leap3d







Design & planning



Offsite construction (e.g. prefabricated components)





**Leap3d** captures the actual situation of objects and environments to the millimeter. Using various methods, such as 3D laser scanning, 3D (BIM) modeling, 3D visualization and 3D analysis. They are active in construction, civil, industry and maritime branch. For transformations, renovations, inspections or retrofit projects, they aim to provide qualitative results to help customers work more efficient and effective.



www.leap3d.nl

### smart2vr







Design & planning



Virtual viewing





**Smart2VR** is a CMS platform to publish and distribute your Virtual Reality content quick and easy in your own branded VR app (iOS and Android), on your website and on the Samsung Gear VR. Upload and manage your VR content (images and videos), personalize your VR app easily and quickly by adding your own logo, color scheme and contact information and share your VR experience with your customers and relations.



www.smart2vr.com

### **U** OVERSTRUCT







Design & planning



Virtual viewing





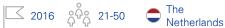
Overstruct is a PC software to create architectural virtual reality walkthroughs automatically and easily, from existing 3D project files. Overstruct uses your existing project files, configuration and exports high quality simulations working even on mobile and web platform.



www.overstruct.com









Transactions and leasing



Virtual viewing





Vero provides a full range of visualization, marketing and IT services for real estate companies. From still images for all project stakeholders to sophisticated digital strategies designed to capture and convert wider audiences.

www.vero.digital









Property and facilities management



BIM and Digital Twin





Fracture Reality is a HoloLens focused partner providing bespoke building visualizations as well as tailored solutions with a focus on visualizing CAD data for buildings, cities, large facilities and developments. Their focus is to use expressive, collaborative tools offering live visualizations of client data, presented in aesthetically refined ways on a variety of concurrent displays (HoloLens/VR/ Phone/Tablet/Projector).



www.fracturereality.io











Transactions and leasing



Virtual viewing





**Inspace** is a provider of property visualization technology/services where they envision a world where people can virtually walk through any existing or conceptual space. Inspace is realizing this vision through three divisions: Stack/Studio/XR. The Inspace Stack is a platform for commercial landlords and agents to host a 3D digital twin of their building, hosting virtual inspections at scale and display real-time data. Use cases for Stack include capturing leasing enquiries, enabling asset sales and building management.



www.inspacestack.com













BIM and Digital Twin





Willow is a global technology company that creates digital twins; virtual representations of built assets for the real estate and infrastructure sectors. Willow's platform WillowTwin™, aggregates spatial, static and live data into a single source of truth for built assets, to support data-driven decision making across entire real estate portfolios or infrastructure networks. Through data-led decision making, users can grow their profits, reduce their expenses and better manage risk.



www.willowinc.com

### trendspek











Property and facilities management



BIM and Digital Twin





Trendspek significantly reduces the cost and time taken to manage highvalue assets, while simultaneously minimizing an organizations exposure to safety and corporate risk. They do this by providing true-to-life 3D digital models, enabling clients to make guick yet fully-informed decisions based on data. With an exact digital twin of their asset, an organization can work with every detail remotely, safely and

www.trendspek.com

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VR & 3D mapping





Construction



**Drones** 





Skylark Drones' aims to plan and monitor infrastructure construction, by generating high resolution survey maps for accurate land acquisition analyses and detailed project reporting using 4-K videography for near real-time project monitoring. Examples of projects include large scale road infrastructure changes that require accurate planning and monitoring. Their drone solutions address this need by offering authentic real time information.



www.skylarkdrones.com











Design & planning



BIM and Digital Twin





**Snaptrude** is an Al-enabled rapid modelling platform for real estate. Snaptrude is a solution by Skylark Technologies which solves the design problem by automating digital designing with its intelligence enabled modelling and design platform. This platform applies an architects' Building Information Modeling (BIM) approach from the concept design stage onwards. Snaptrude automatically transforms hand sketches into an accurate 2D drawing and provides the technical support for conversion of 2D drawings to a 3D model.



www.snaptrude.com

### buildmedia







Design & planning



Virtual viewing





Buildmedia's Realspace is an interactive experience-suite that significantly improves the off-plan home buying experience & speeds up the sales cycle.

Incorporating internationally walkthroughs & centralizing all collateral, Realspace makes selling & buying offplan memorable.

Realspace allows homebuyers to explore every aspect of their future home, experiencing the real-scale and accurate views from all floor levels.



www.buildmedia.com



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Transactions and leasing



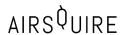
Virtual viewing





**Spacely** offers cloud software that allows customers to easily create, edit and manage VR web contents using photos taken with a 360 degree camera. The company's solution is frequently used within the real estate industry for advertisement purposes of sale and rental of properties.

www.spacely.co.jp











Construction



Virtual viewing





Airsquire build a virtual "google street view" of construction sites that help project teams cost-effectively visualize and manage progress. The 360° site progress enables project managers to virtual fly-through and access timely site data to make smart decisions. The 360° site progress is also documented over time so project teams have objective progress documentation to resolve disputes and claim milestones faster.



www.airsquire.ai



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Singapore



Design & planning



Virtual viewing





Elementals Studio has developed a Property Showroom platform to connect property buyers, sellers and designers using augmented reality and 3D. This allows for optimization in every interaction with prospective clients, with the capability to provide limitless information about property features. Accessible through any mobile device, its features include viewing of the entire real estate, augmenting the design of actual physical properties using AR and touring in 3D.



www.elementalsweb.com







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Design & planning



Virtual viewing





Picture Perfect Productions create digital content and 360 virtual and augmented reality conceptualization. They create immersive and interactive solutions in the areas of safety, military, construction, travel and tourism.



www.pictureperfectproductions.as











Property and facilities management



Virtual viewing





Graffiquo offers a real 3D digital representation of physical assets on large expanses of land using photogrammetry, feature recognition (or machine learning), business applications and virtual reality engine technologies for data capture, mining and physical representation. Graffiquo's solution collects data from the internet of things (IoT) sensors, equipment, and business systems, and show them on this virtual replica in real time, providing stakeholders on-the-run easy access for visualization and analytics.

www.graffiquo.com







Design & planning







**Silver Wings** XR is a 3D visualization company that develops immersive and interactive experiences to benefit the business of their clients. Consulting and collaborating with their clients to offer fully customizable solutions that are platform and hardware agnostic, across Virtual Reality, Augmented Reality, Holographics, Mixed/Simulated/Spatial and Extended Realities.



www.silverwingsxr.com





Singapore



Transactions and leasing



Virtual viewing





Silversea Media is a multinational technology company specializing in providing interactive and immersive media (3D/4D/VR/AR) solutions to create the true-to-life experience and fuel outof-the-box imagination for businesses to embark on their digital transformation



www.silversea-media.com









Design & planning



BIM and Digital Twin





**VOUSE** is a cross-technology consultancy that provides specialized services in constructing architectural digital twins for purposes such as architectural & urban rapid prototyping (design & functional validation), simulations and virtual training. With a focus in user-centric design and a full range of technical expertise from data processing to AR/VR development, Vouse supports its clients in end-to-end services for cross-device/platform interactive application design, development and deployment to aid organizational needs from marketing, facility management to process digitization.



www.vouse.co







Transactions and leasing



Virtual viewing





Singapore

Vostok VR launched special set of immersive solutions for Real Estate industry: VR experience for inshowroom showcase. AR to wow customers during face-to-face meeting and interactive Web version to provide easy access to property preview for customers overseas. The whole experience is connected via Multiuser platform which allows real estate agents and customers communicate and interact in a single virtual environment, thus simplifying sales amid COVID-19.

www.vostokvr.com

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VR & 3D mapping



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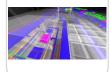


Design & planning



BIM and Digital Twin





VRcollab enables stakeholders of all skill levels to coordinate and actively participate in BIM coordination and Technical meetings in real time from anywhere in the world.



www.vrcollab.com





Singapore



Property and facilities management



BIM and Digital Twin





WaveScan is a Singapore based deeptech startup company specializing in the R&D of disruptive beamforming electromagnetics based smart scanner systems and advanced Al algorithms. The proprietary technology is capable of high-resolution 4D imaging for nondestructive testing (NDT) applications. They provide an end-to-end Al-enabled addressing the specific needs of the built environment sector. At WaveScan, they envision safer, productive & livable cities by creating a predictive maintenance ecosystem through datadriven standardization of inspection



www.wavescan.sg

### **ARCHISKETCH**

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Design & planning



Indoor mapping





Archidraw offers services based on VR and AR. The service offers usercustomized interiors that are completed constructed by AI, securing at least 90% of 3D/VR floor plans of flats, after which the 3D drawing data can be received as high-quality image rendering shots. Moreover, field measurements are made through a 3D space scanner which converts the measurements directly into 2D/3D drawings.



www.archisketch.com



/ ANGELSWING





South Korea



**Drones** 

Construction





AngelSwing virtualizes construction sites using drone and provides a platform that can be effectively utilized for the management. With Reality Capture, aim to solve the productivity problem of the construction industry for digital transformation. The main services are automatic processing of drone data, 2D/3D orthogonal views and 3D viewers, drawing superimposition (.pdf, .dxf), earthwork volume calculation (basic, in dates and plan heights), and cross section topographic 3D view

www.angelswing.io





South Korea

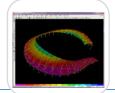


Design & planning



Technical planning





ChangSoft converts 2D drawings into data set which serves as a base to generate 3D information models. The company has a special feature that automatically places every rebar with a high level of details and precision. Also, other essential information such as error reports, timeline, and quantity take-offs containing information of concrete volumes, rebars and formwork is automatically generated in the form of visuals or documents with few clicks.



www.chang-soft.com









Design & planning



Virtual viewing





Cupix has developed a 3D virtual tour solution that gives users an easy way to capture an indoor scene and create a true-to-life virtual experience. By uploading 360 degree photos or videos the company's software automatically maps the captured images into a 3D space. Thereafter they offer a solution for 3D tours through properties.



www.cupix.com









Transactions and leasing



Virtual viewing





Zipview offers a VR real estate marketplace that help its clients to find a home. By offering real estate VR tours including detailed information about the property like price trends, the company aims to support clients select properties for physical viewing. Thereafter the company guides clients in the process of purchasing property and takes care of transparent and quick payments, as well as post-migration defects.









South Korea



Indoor mapping

Design & planning





**Urbanbase** offers an AR solution for mobile devices to make virtual reality available for interior planning and design. Urbanbase owns a spatial data platform with patented technology that reproduces the floor plan of the building in 3D. The company's service is mainly used by real estate and furniture companies to provide floor plans.

www.urbanbase.com



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VR & 3D mapping





# D. KPMG Global Real Estate Network

Our KPMG Global Real Estate Network has provided a vision on critical topics that should be on the Real Estate agenda by answering the following questions for the readers of this publication:

- What is your key take-away for our clients in terms of adopting innovation in their business models?
- How do you think that innovation in the Real Estate and Construction sector can and will contribute to a sustainable society (ESG)?
- What do you expect to be a key trend(s) in innovation in Real Estate and Construction post COVID-19 in your respective country/region?







Sander Grünewald
Partner, KPMG Netherlands
Global Head of Real Estate Advisory
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"Our clients business models are, due to all (market and technological) developments, under a continuous pressure to adapt. Embracing innovation is key to build renewed business models and our innovation overview shows there is a lot out there to explore!"



Andy Pyle
Partner, KPMG UK
Head of Real Estate
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"For me, PropTech is part of a much broader trend, that of the digitalization and modernization of the Real Estate sector. PropTech companies, by challenging the status quo, help the Real Estate industry to become more innovative, digital and customer-focused, all of which are essential in the 21st century."



Kim Kan
Director, KPMG China
Director, Global Asset Management and
Real Estate
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"As companies strive to achieve Net-Zero targets, they will need to consider not only their energy consumption, but also the embodied carbon in the buildings they occupy. Therefore, there is a need for innovation to help reduce the carbon footprint during the construction phase of future assets."



Régis Chemouny, FRICS Partner, KPMG France Head of EMA Real Estate +33 (0)1 55 68 68 18 rchemouny@kpmg.fr

"Innovation and ESG are interconnected; ESG needs Innovation to change our ways of thinking and acting and Innovation needs ESG impact to convince people and bring legitimacy."



Pál Dános, MRICS
Director, KPMG Hungary
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"Innovation is not only a "must", but rather a desirable and promising opportunity to improve business performance and to ensure the future presence of the company on the market. Covid-19 made the global market more reachable for many companies through easy "digital routes". The lesson learnt was to be brave enough to explore foreign markets and to be visible in the global market. This was a positive impact of the Covid-19 to the companies and helped them to introduce innovations."



**Teemu Haataja**Director, KPMG Finland
Sector Head of Real Estate & Construction +358 207 603 525
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"Digital innovation, new production methods and alliance or other contract models that involve co-operation of multiple partners can be great chances to take leaps in productivity and risk management. However, the devil is in the details including capable and conscious implementation."



Sarit Nethanel
Partner, KPMG Israel
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"Innovation in a business model should be considered an holistic approach throughout the operations, systems and values of the organization. This should take place both internally and externally, e.g. customers and service providers. Today, innovation is the key for competitive, industry leading companies and their productivity in the operation."



Tay Hong Beng
Partner, KPMG Singapore
Head of Real Estate
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"Innovation without full adoption remains the biggest obstacle for true transformation for our clients. We have noticed clear intentions from our clients to drive innovation for growth and cost efficiency but also thinking very hard about using innovation to elevate themselves to the global landscape."



Robert Betz
Partner, KPMG Germany
Financial Services, Real Estate
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"To adopt new technologies it is important to have the roll-out to the whole enterprise and/or portfolio in mind. Every technology will work for a single process or a building but the ability to roll-out and integrate data will determine the long term success."



Saqib Jawed
Partner, KPMG Canada
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"Both consumers and investors are increasingly prioritizing sustainability, and this is something which is expected to increase in the future. The sector is using sustainable construction techniques and intelligence systems learning through collection and usage of data, all giving insight in how to reduce, one's footprint and costs."



Amanda Price
Partner, KPMG Australia
Head of High Growth Ventures
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"We see flexible workplace solutions and the rise in remote work as a key emergent trend post-COVID-19. With changing employee expectations, economic pressures and volatility, greater collaboration is needed between landlords and tenants. We expect tenancy and facility management solutions to create value by delivering analytics and cost-efficiencies across the tenancy life-cycle."



Svetlana Fonareva
Partner, KPMG Russia
Head of Real Estate and Construction
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"Digitalization as a process should not be limited only to the implementation and use of advanced IT solutions. To be a success, digitalization should be built in the general context of corporate governance and culture. Technologies should only be implemented where mature processes are in place in accounting and operating systems. There is no unique or best solution available on the market – tastes differ among corporations –the selection of an approach and solutions itself has become one of the biggest challenges."



Philip Marra
Partner, KPMG USA
National Audit Leader – US BCRE
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"I expect that Data Strategies for data governance, data capture, and data analysis for decision making will become of an ever increasing part of successful real estate companies and will require the adoption of new innovative tools."



Laurens van Ryckeghem Senior Advisor, KPMG Belgium Real Estate Sector Lead +32 38 21 17 00 lvanryckeghem@kpmg.com

"I strongly believe that the sector shifts towards a community based industry. Additionally, new cost-efficient innovations in planning and materials could transform buildings to products that are not only for the happy few."



Pierre Kreemer
Partner, KPMG Luxembourg
Head of Real Estate & Infrastructure
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"We see the industry starting to discuss the potential of existing buildings, while prior there used to be more focus on new developments. The biggest resource and energy consumption potential lies in existing structures, it is not efficient or environmental friendly to tear down old ones and build new, but most of the times assessment based on new constructions only starts after demolition existing structures. The circular economy and circular approach is, fortunately, getting more traction."



Christophoros Anayiotos
Partner, KPMG Cyprus
Board member, Head of Deal Advisory
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"Going forward, a key trend of innovation in Real Estate and Construction post Covid-19 in Cyprus, although a small market, will be the further digitization of the sector. Whether this relates to data transparency, virtual tours / reality, online transactions, capital deployment or robotics in construction."



Naoko Chida
Director, KPMG Japan
Industrial Manufacturing
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"There is a continuous need to improve sophistication of major operations in the industries, such as information management, credibility and evaluation and sales transactions. Recently, the absence of face-to-face contact and non-contact operation businesses or companies will be expected to drive digital transformation more rapidly."



Hee-Joon Ryu
Senior Manager, KPMG South Korea
Real Estate Advisory
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"The untact culture has prompted the use of VR, robot, drones in the residential sales, construction, and interior design market.

COVID-19 has definitely accelerated the technology adaptation in real estate, a very conservative industry, and we anticipate the transition to continue post COVID-19.

# Editor's Perspective



Tim Winters
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"As innovation is changing our daily lives at a faster pace than ever before, its position as a key ingredient for business success is spreading to all parts of the value chain. The wide array of incorporated innovations underpins this and the many possible solutions it can provide.

Innovation does not only seek to disrupt existing solutions or business models but also offers the opportunity to complement or even re-invent, thereby providing the ability to constantly meet the needs of today's society.

Last year has resulted in extra momentum for incorporation of innovation in the Real Estate sector and we're pleased to share this overview with you and show the endless possibilities innovation can bring!"



Laurens Bergsma
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"Technological advancements and innovations are accelerating, providing organizations with the means to seize opportunities, while addressing the challenges faced by the Real Estate and Construction sector.

In my opinion, one of the most important challenges is related to the impact the sector has on our environment. Therefore, it is exciting to see so many creative solutions driving towards, and contributing to, a more sustainable future!

The impact and widespread integration of innovations is increasing, and we would like to invite you, to discover how innovations can benefit your organization!"





# E. Innovation's overview & Appendix

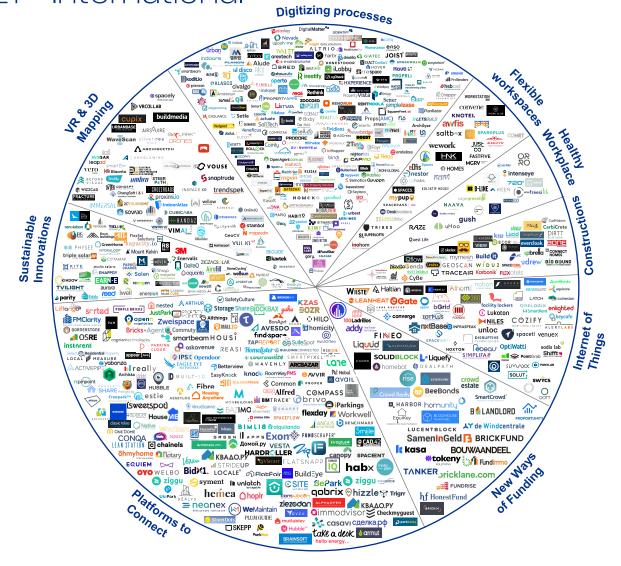




## RFIO 2021 - International









### In collaboration with:

## REIO 2021 - Value Chain Cascade















ARCHISKETCH buildmedia

# Global PropTech









www.globalproptech.online













Global PropTech is the first global innovation platform for the construction and Real Estate sector. The platform includes Global PropTech Online, Global PropTech Leaders and Global PropTech Channel. Global PropTech was founded by Wouter Truffino in 2018.

### What does Global PropTech do?

Global PropTech brings together innovative corporate Real Estate and the very best PropTech companies on a global scale to facilitate joining forces and cooperation in creating a better built environment by embracing technology. The platform focusses on developing insights, sharing knowledge between different countries/ territories and matchmaking through three key formats:

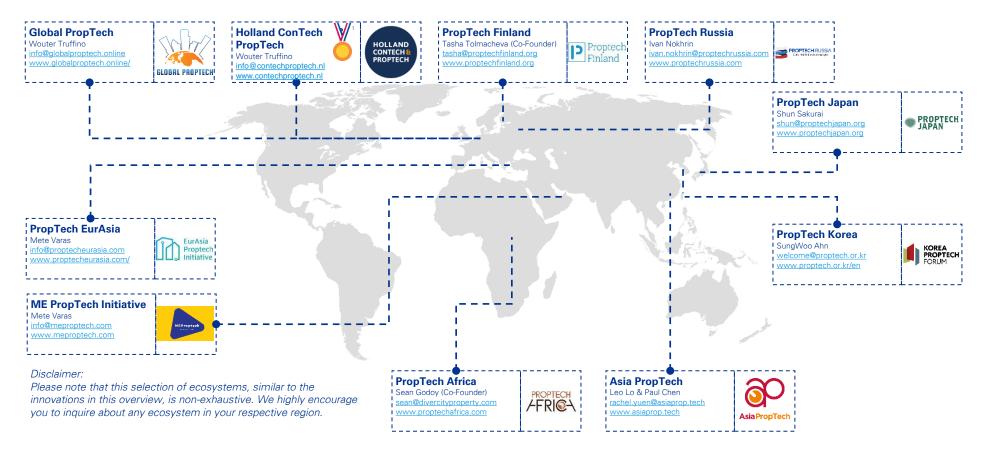
- Global PropTech Online: a quarterly online conference offering cutting edge PropTech innovation insights, products, and services. From behind their computer, Real Estate professionals from all over the globe can attend top keynotes and interactive round tables. PropTech thought leaders and influencers share insides and the best start-ups and scale-ups get a chance to promote their product or solution to a global market.
- Global PropTech Leaders: a highly exclusive network for corporate Real Estate leaders to share knowledge on how the Real Estate industry is being renewed through PropTech. The first Global PropTech Leaders event took place on 13 March 2019 at the MIPIM in Cannes. Since then we organized fiscal events in New York, Helsinki, Munich and Dubai.
- Global PropTech Channel: a video streaming channel aiming to inspire global Real Estate professionals through content created at Online and Leaders events such as keynotes. Go to http://bit.ly/proptechyoutube.

Some of our partners and members: KPMG, MIPIM, Prologis, EDGE, Spacewell, Yardi, WeWork, VTS, UbiqiSense, RYSTA, Hige Rise Ventures, Cviker, Toolbox Group, Haltian, Cycling Score, Disruptive Technologies, Mapiq, Spaceti, Physee, CubiCasa, PlanRadar, BuildingMinds, Smartpixel.tv, Smart Building Certification and EstateGuru.



# PropTech Ecosystems around the globe

This overview gives an in-depth insight into relevant innovations worldwide in the Real Estate and Construction market. What should be noted however, is that there are many PropTech Ecosystems around the globe that support these innovations. These PropTech Ecosystems are valuable to the market and provide innovations a platform to thrive, connect and succeed.



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