



# Real Estate Innovations Overview

KPMG Real Estate Advisory



Third edition - revised May 2018

In collaboration  
with

**HOLLAND  
CONTECH &  
PROTECH**

# Introduction to this overview

In a constantly evolving world, even a traditional sector such as real estate changes and innovates. In our view, the future of real estate is directly linked with innovation. The startups of today are the potential industry leaders of tomorrow. Incumbent firms that not only want to survive, but also thrive, should constantly follow developments and trends of these innovations and startups as there are numerous lessons to be learned.

This is the third edition of KPMG's Real Estate Innovation Overview, but the first edition in collaboration with Holland ConTech & PropTech. As a result, the overview is enriched with the specific knowledge and network of Holland ConTech & PropTech. Therefore, this document provides examples and insights into the innovations and startups that might shape the future real estate landscape. Startups have been categorized by several innovation topics based on current market trends. A few examples include the Internet of Things, new ways of funding and the application of virtual reality and 3D mapping to take the real estate sector to the next level.

The information provided for each startup includes key information such as name, country of origin, founding year, key words and website details. The amount of FTE's shown is an indication of the phase in which the startup is currently in. Not all startups are 'live' or in full production yet, leaving room for innovations that might disrupt the sector at a later stage. Next to the general classification of startups into nine innovation topics key words are included to describe each startup using specific and recognizable characteristics. Besides key information we provide a short summary of the company and the respective product.

The purpose of this document is to provide insight into the current innovative developments in the real estate market. KPMG monitors these developments closely in order to update our clients on the latest trends and to support them in their own search for innovation. At the beginning of this booklet (section 1) we explain how we can be of assistance in the different phases of the innovation process. In case you are interested in receiving a hard copy of the document or have any questions, please use the button on the right.

This booklet 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 inform us about any other innovations or startups, additional information about innovations or startups or when your company likes to be included to help us enrich this list. This can be done by pressing the button on the right.

We hope this booklet will be a valuable read for you,

Sander Grünewald, KPMG's lead for Real Estate Advisory in The Netherlands

**Disclaimer: KPMG has no business interests in the innovations and startups 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).**



[Click here and we'll send you a hard copy](#)

[Click here to add or update a listed innovation](#)

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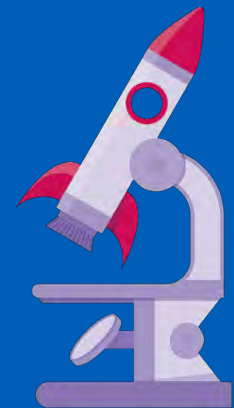


# Innovation Network

1

KPMG is actively involved in supporting their real estate clients in all aspects of the innovation process. KPMG recognized three major innovative interventions aimed at organising, accelerate & implement.

To stay on top of trends in the real estate and construction industry, KPMG has formed a strategic partnership with the Holland ConTech & PropTech platform.



# KPMG and innovation



**KPMG is actively involved in supporting their real estate clients in all aspects of the innovation process. Therefore, KPMG recognized three major innovative interventions aimed at organising, accelerate & implement. Through its Innovation Factory, KPMG provides its clients guidance in their innovation processes.**

## **Organising innovation with KPMG's Innovation Factory**

KPMG helps to develop and expand innovative capabilities by developing competences that fit your organization's challenges. By doing interactive workshops, trainings and providing guidance supporting creativity and execution, KPMG guarantees a robust and proven innovation method.

## **Accelerate innovation by supporting a digital platform**

We offer our clients digital solutions to speed up the innovation process. By using our award winning social software platform to support crowdsourcing and innovative project- and knowledge management within the organization we accelerate the innovation process.

## **Implement innovations throughout the organization**

An online platform alone doesn't do the trick. People should be invited and motivated to participate, so a communication campaign with the right messaging and tone of voice is needed. As our methodology has been described in detail and training materials are available it is easy to train your people in executing successful challenges and let them roll out innovations across the organization. Through the KPMG global network, you can get support from local consultants.

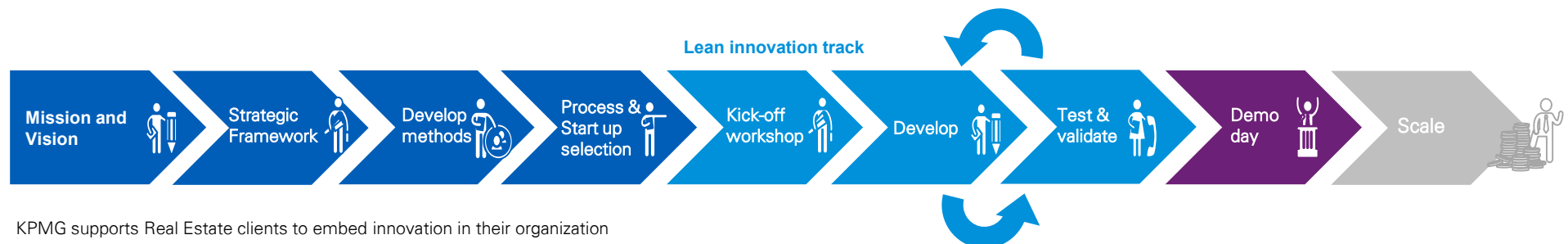
## **Innovation Management and Innovation Toolkit**

Many organizations find it hard to keep track of their innovation investments. Innovation Factory's funnel management and portfolio analysis helps you to keep track of your innovation investments. It provides a comprehensive overview of all innovation projects while the customizable reports let you define and keep track of any data item you like, e.g., investment needed, expected revenue and risk profile, and use this data to support portfolio management.

The Innovation Toolkit provides an online collaboration environment for innovation project teams to work together on innovation projects. It allows you to define which models and templates innovation teams have to develop in each phase of the innovation funnel. It helps teams to progress faster, while it helps innovation management to prescribe methodology and ensure quality.

## **Advantages for organizations**

- Include the organization and external parties in the innovation process;
- Idea generation and collaboration regardless geography, function and time;
- Create an innovative culture in the organization;
- Discover hidden knowledge and expertise, create knowledge networks;
- Manage and track the innovation process from a digital platform.



KPMG supports Real Estate clients to embed innovation in their organization



# Holland ConTech & PropTech

## Introduction Holland ConTech & PropTech

Founded in May 2015, Holland ConTech & PropTech (Construction & Property Technology) supports organizations that want to use technology, open innovation and digital transformation in order to generate increased profits and new business, creating future-proof organizations. Holland ConTech & PropTech is a Dutch ecosystem comprising over 60 corporate members & partners and more than 100 start-up & scale-up members. Our network is open to all leaders, first-movers and innovators from the construction, infrastructure and real estate sectors.

## The next step for real estate

This new ecosystem was started because the construction and real estate sector was lagging behind in the implementation of new technologies. At first, a lot of effort and energy was put in inspiring the industry, and showing the sector how other industries were changing rapidly by adding technology to their current business model. Nowadays you see that the 'why' question is being answered by many boardrooms and the 'how' questions comes up to take the next steps. This next step comprises the way in which companies can engage their employees to start adapting and using technology, but is also about working together with partners like start-ups, scale-ups and mature technology companies like Yardi, Apple and Autodesk.

## What does Hollands ConTech & PropTech do?

Holland ConTech & PropTech organizes over 80 events each year with a total of 2160 participants in 2017. Besides our own events we support and partner with a lot of events and the biggest trade fairs of the world; like PROVADA, MIPIM, Expo Real, InfraTech, Building Holland and the ING Real Estate Innovation Day 2018. For our members we organize CEO-diners, Boardroom meetings, Peer Group sessions, Mastermind meetups and off course our famous and energetic Matchmaking Meetups.

## The future of Real Estate

The industry is changing, although not fast due to its complexity. Big Data, Artificial Intelligence, Smart Mobility and new ways of connecting people will have a huge impact on the future of real estate. Besides, social innovations (smarter working, dynamic management and flexible organization ), mindset and culture will be big challenges for corporate organizations. Innovation starts with getting people to start using the technology for the better. So energy and readiness for action are the most important drives for success. The ones who excel in these soft topics, will be amongst the winners of the future. The technology is already out there and will create new opportunities even faster in the future.

Wouter Truffino

*Wouter is the founder and CEO and has been named 'The top 10 International PropTech Influencers 2017', named as one of the 50 Future Makers of the Netherlands and named one of the High Potentials in 2018 by leaders in Dutch Real Estate. Website: [www.contechproptech.nl](http://www.contechproptech.nl)*



# Strategic partnership KPMG and Holland ConTech & PropTech

## Introduction

Recently, KPMG and Holland ConTech & PropTech have formed a strategic partnership, resulting in a strong collaboration to stimulate the innovative capacity of the real estate and construction industry. This partnership aligns with the increasingly innovative nature of the sector and both parties' ambitions towards the further innovative and sustainable development of the real estate and construction industry.

KPMG Real Estate Advisory provides advisory services for both public and commercial real estate parties. Future challenges and opportunities facing the real estate industry like disrupting innovations, sustainability goals and the rise of data-analytics are addressed together with their clients.

Holland ConTech & PropTech is an ecosystem aimed at accelerating technological innovation and digital transformation by linking corporates with start-ups in the real estate and construction industry. The organization accompanies the best startups in the real estate industry in order to thrive and become industry leaders.

## Partnership benefits

Together KPMG and Holland ConTech & PropTech are on top of the latest and future trends in the real estate and construction industry, like the rise of big data, sustainability regulations and divergent technological innovations. This strategic partnership can help starting businesses to address these challenges and opportunities in order to either make their organizations future proof or become future industry leaders. It will lead to residual knowledge transfer between KPMG, Holland ConTech & PropTech and their networks of industry actors. Clients of KPMG will have the opportunity to get in touch and start doing business with startups and scaleups of Holland ConTech & PropTech's platform. The other way around, startups and scaleups of the Holland ConTech & PropTech platform can benefit from the access to the KPMG's client base and knowledge. Therefore, the partnership between Holland ConTech & PropTech and KPMG has great prospects for both parties thanks to potential residual benefits, due to synergies between the two organizations and their networks, and the further development of the industry thanks to the increase of more valuable and sustainable innovations.

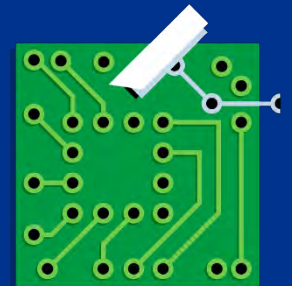




# Digitizing Processes

# 2

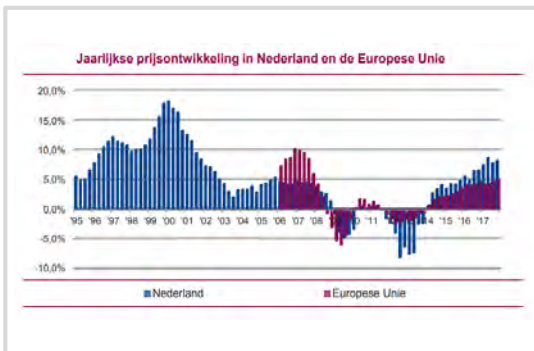
Big data is transforming commercial real estate into a more transparent industry. It becomes a partner for real estate brokers, lenders, investors and owners. Furthermore, it changes how buildings are designed, build and managed, and how stakeholders are interacting with one another. Thanks to innovations like blockchain technology and Internet of Things processes are getting increasingly more efficient and user friendly. Consequently, leading to higher quality, costs savings and improved customer satisfaction. These innovations are also applicable in the real estate industry and therefore offers great possibilities for actors involved.





## DESCRIPTION

**Calcasa** is an independent automated property valuation model provider. Calcasa developed the automated valuation model (AVM) which provides an estimation of the current open market and foreclosure value of properties based on comparable sales and hedonic regression techniques. Valuations of homes and portfolios can be delivered in a matter of seconds and are accessible via a variety of sources. Calcasa's AVM is acknowledged by international supervisors, like Moody's, Fitch Ratings and Standard & Poors.



COUNTRY

The Netherlands



FOUNDED

1996



EMPLOYEES

11 – 50



KEY WORDS

Automatic valuation, Sales, Regression technology



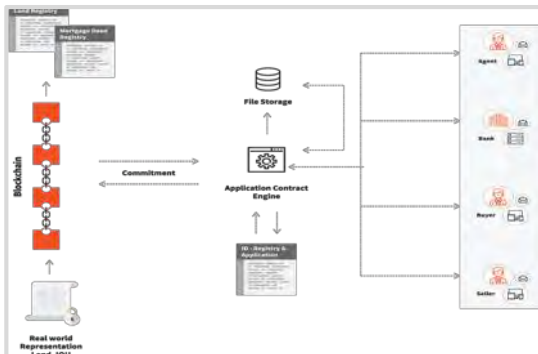
WEBSITE

[www.calcasa.nl](http://www.calcasa.nl)

## DESCRIPTION

By combining great blockchain experts, **ChromaWay** provides a platform for smart contracts and issuing and transferring assets through a blockchain. The company has partnered with LHV Bank—the largest of Estonia’s domestic banks—to create a blockchain-based payment platform.

ChromaWay uses blockchain technology for both smart asset transfer and the development of smart contracts. Smart contracts are technology-based protocols to enforce the terms or performances of a given financial agreement. Built on an open source platform, the product is meant to handle security, network problems and offers cloud-based tools.



COUNTRY

Sweden



FOUNDED

2014



EMPLOYEES

1 – 10



KEY WORDS

Blockchain, Smart contracts, Payment platform

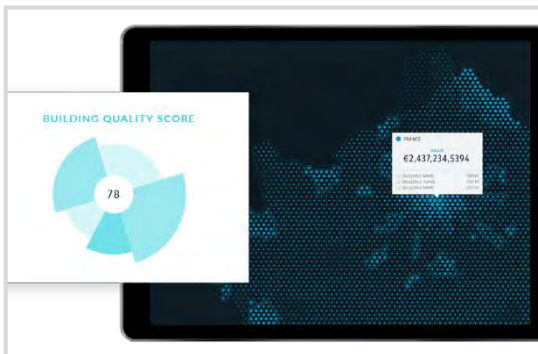


WEBSITE

[www.chromaway.com](http://www.chromaway.com)

## DESCRIPTION

**GeoPhy** is an independent provider of objective data and analysis for the real estate sector. GeoPhy offers AI-powered valuations for commercial real estate. The firm applies cutting-edge technology to an ever-growing amount of data from a range of sources. Geophy fuses these amounts of data, bringing structure to global real estate data. Users can check, monitor, structure, analyze and export the data as required. The quality score offers an objective and holistic international standard and enables users to make data-driven property decisions.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

51 – 200



KEY WORDS

Data analytics, Real estate, Property decisions based on data, AI



WEBSITE

[www.geophy.com](http://www.geophy.com)

## DESCRIPTION

**homeDNA** is an efficient and user-friendly online software system for new construction and renovation projects. The company offers a digital solution in the form of a unique, integral package from preparation up to and including the service phase for customer contact and build quality. An as-built home file with all the details per property and per customer and a personal housing file for the buyer / occupant form the life line in the system. homeDNA is compatible with other packages like Microsoft Dynamics AX, Wordpress and DigiOffice. Furthermore, the company is working on a BIM integration.



COUNTRY

The Netherlands



FOUNDED

2007



EMPLOYEES

11 – 50



KEY WORDS

Software, Construction, Renovation, Service



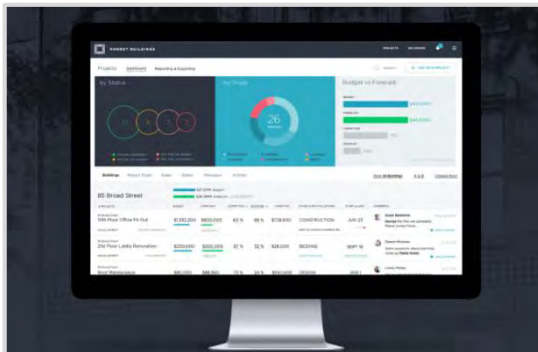
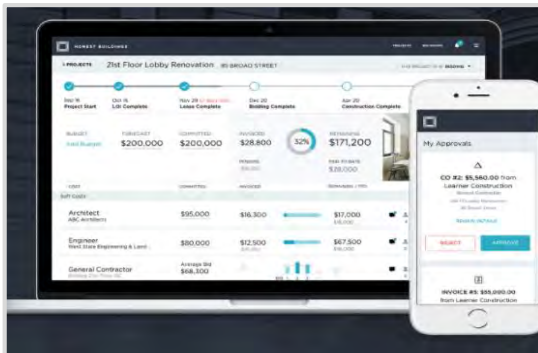
WEBSITE

[www.homedna.nl](http://www.homedna.nl)



## DESCRIPTION

**Honest Buildings** is an intuitive, data-driven project management and procurement platform specifically built for commercial real estate owners and managers. The platform must ensure that capital and construction projects are delivered on time and on budget. Founded in 2012 by Riggs Kubiak, the platform serves industry leaders which use Honest Buildings to centralize project data, increase transparency, automate bid management, and standardize reporting. Commercial and multifamily owners rely on the platform to manage over \$1.5 billion in total project value.



COUNTRY

United States



FOUNDED

2012



EMPLOYEES

51 – 200



KEY WORDS

Data, Automation project management,  
Procurement

WEBSITE

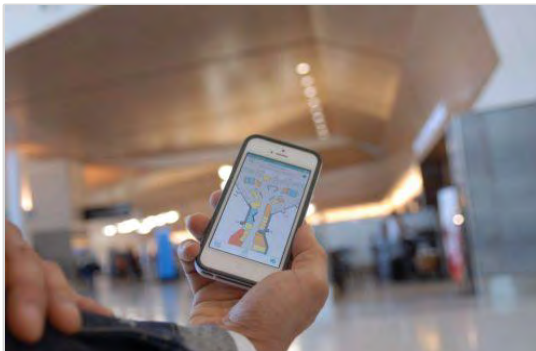
[www.honestbuildings.com](http://www.honestbuildings.com)



## DESCRIPTION

**indoo.rs** is a technology development company that creates state of the art indoor mapping, localization, and routing technology as well as SDK for application developers and device manufacturers. The indoo.rs solutions are developed by signal processing and navigation experts to offer highest accuracy and availability for both, iOS and Android.

Example use cases are tracking security guards or high value inventory, enabling building visitors to orient themselves immediately (especially important for people with impairments), providing retailers with valuable insights into customer behaviour or managing meeting room bookings. indoo.rs helps reduce stress while increasing efficiency, security, satisfaction and the ROI.



COUNTRY

Austria



FOUNDED

2010



EMPLOYEES

11 – 50



KEY WORDS

Technology, mapping, SDK, App & Device

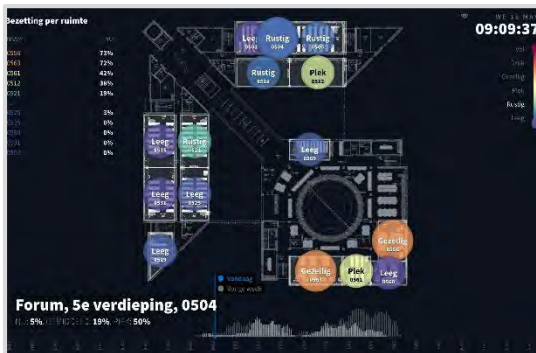


WEBSITE

[www.indoo.rs](http://www.indoo.rs)

## DESCRIPTION

**Lone Rooftop** is a technology company that offers a real-time occupancy platform for the next generation of data-driven facilities & Real Estate managers. This platform is called Position Intelligence Engine. PIE is a technology platform that makes buildings intelligent by using real-time data. Based on smart algorithms, PIE is able to calculate where and how many people are present in the building. PIE can quickly transform your building into an intelligent building by using data sources that are already present.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

11 – 50



KEY WORDS

Data-driven platform, Position intelligence engine



WEBSITE

[www.lonerooftop.com](http://www.lonerooftop.com)

## DESCRIPTION

**Mapiq** helps people to work smarter and to use the office more efficient. The app visualizes everything that the user needs in a smart 3D map. Thereafter, Mapiq's app executes the user's needs at any certain moment. The user of a room can therefore be exactly as flexible as that person wants. The building adapts effortlessly to the wishes of its users. More and more the office building will be adjusted to its users. The space where users are, takes on the color and shape that suits them best at that moment. In this way employees really get the best out of a building.


**COUNTRY**
**The Netherlands**

**FOUNDED**
**2009**

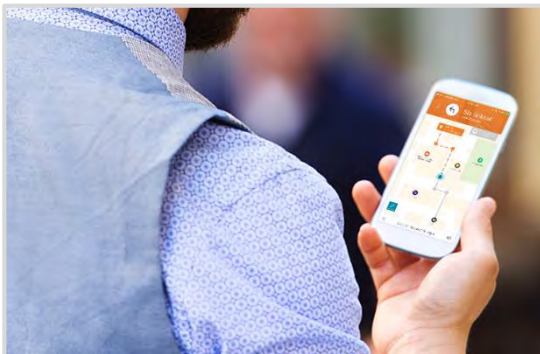
**EMPLOYEES**
**11 – 50**

**KEY WORDS**
**3D mapping, Smart offices**

**WEBSITE**
**[www.mapiq.net](http://www.mapiq.net)**

## DESCRIPTION

**Movin's** technology allows its users to navigate through buildings or find their assets (via apps). The technology allows users to highlight important Points of Interest, show nearest bathrooms, check out the restaurants daily special, search through destinations and more. Combined with their intuitive indoor maps, routing and positioning, no one will get lost at venues again. This indoor technology makes it possible to create smart buildings. These smart buildings feature optimized processes, reduced costs and increased safety.



COUNTRY

The Netherlands



FOUNDED

2012



EMPLOYEES

1 – 10



KEY WORDS

Navigation, Maps, Routing, Positioning

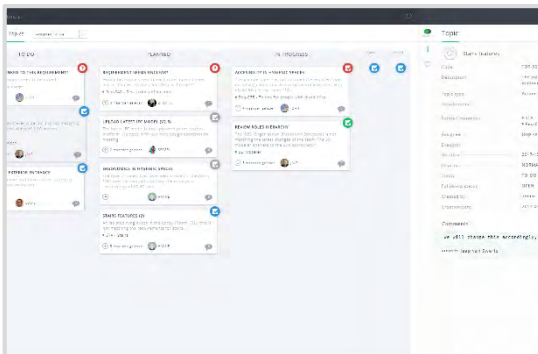
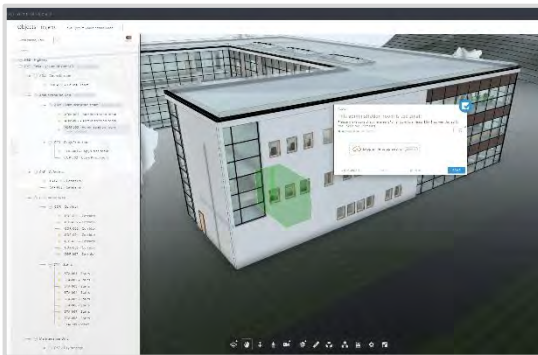


WEBSITE

[www.movin.io](http://www.movin.io)

## DESCRIPTION

**Neanex** provides collaboration software for all AECO professionals (architects, engineers, contractors and owners) in construction to improve project information, communication and workflow management throughout the project cycle. The company developed an open BIM integration platform - completely based on data instead of documents and files - that seamlessly communicates with any design software. The cloud-based software solution aims to significantly reduce failure costs by enabling zero-email and first-time-right projects.



COUNTRY

Belgium



FOUNDED

2014



EMPLOYEES

11 – 50



KEY WORDS

BIM, Software, Data, Cloud-based, Collaboration



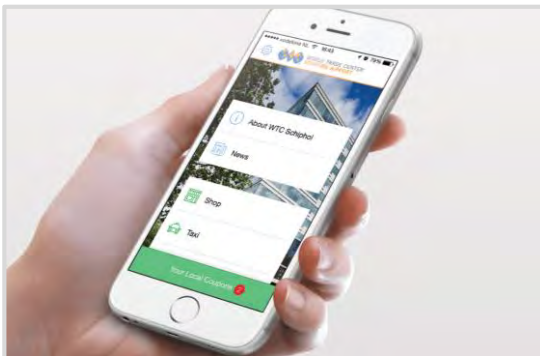
WEBSITE

[www.neanex.com](http://www.neanex.com)



## DESCRIPTION

**Office App** (OA) is an engagement app for offices. The app combines all the functionalities, facilities and services in one mobile app and let them work together through integrations and AI. Office App lets employees communicate better with one another, offer local shops online platform to communicate with their clients and provide smart office services. The company currently works with major corporate customers in the tech, finance and telecom industries, and top tier commercial real estate companies.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

1 – 10



KEY WORDS

Engagement app, Artificial intelligence



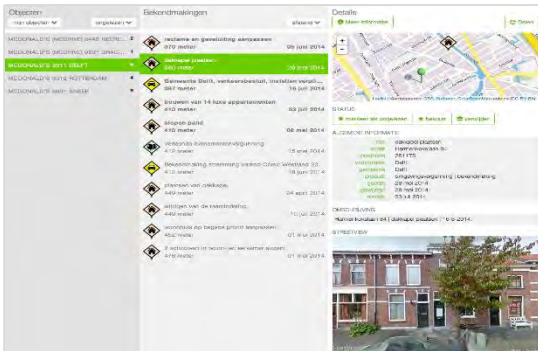
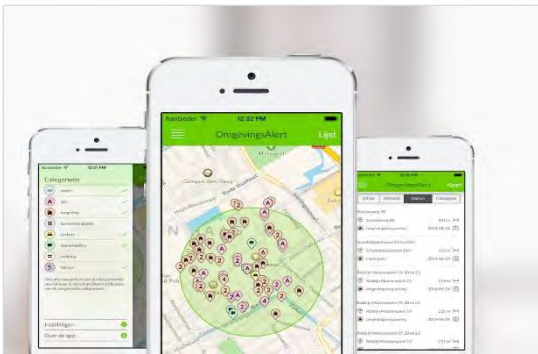
WEBSITE

[www.getofficeapp.com](http://www.getofficeapp.com)



**DESCRIPTION**


**OmgevingsAlert Pro** makes the environment management processes for the owners of real estate portfolios more efficient and real estate management more effective. Users will 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 your properties. OmgevingsAlert Pro is ideal for property managers, asset managers, appraisers and professionals in development, risk analysis and government functions.



 **COUNTRY** **The Netherlands**

 **FOUNDED** **2015**

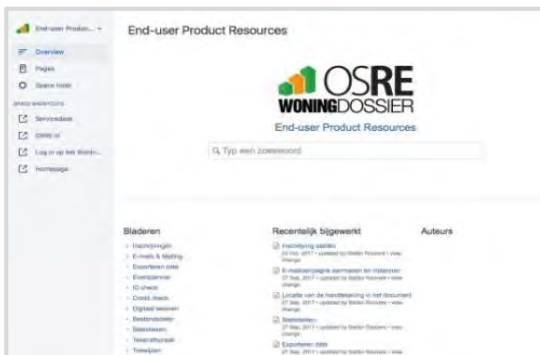
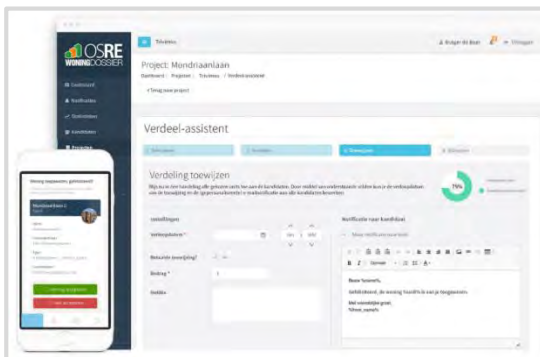
 **EMPLOYEES** **1 – 10**

 **KEY WORDS** **Environment management, Property value analysis**

 **WEBSITE** **[www.omgevingsalert.nl](http://www.omgevingsalert.nl)**

## DESCRIPTION

The **OSRE WoningDossier** makes the sale or rental of real estate more efficient. Thanks to useful functions and smart algorithms, the company automates real estate transactions from A to Z, ranging from finding and managing candidates to signing the contract. OSRE WoningDossier consists of one comprehensive user-friendly system where all the involved parties can work together. The system leads to faster transactions and generates more customer satisfaction due to the streamlined system.



COUNTRY

The Netherlands



FOUNDED

2012



EMPLOYEES

11 – 50



KEY WORDS

Transactions, Software, User-friendly, Automation

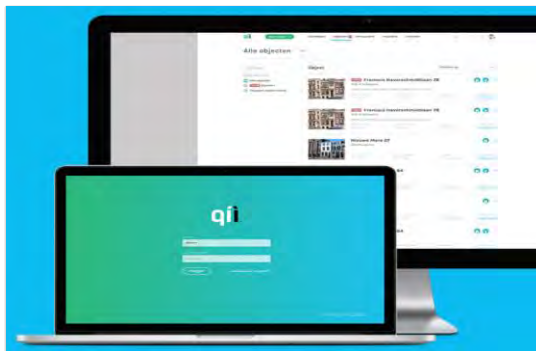


WEBSITE

[www.osrewoningdossier.nl](http://www.osrewoningdossier.nl)

## DESCRIPTION

The rental market offers many opportunities for innovative brokers who respond smartly to the needs of tenants and landlords. **Qii** offers multiple services to its customers to grab these opportunities. Through knowledge and advice provision, practical services and an online application that automates all rental processes, lots of time are saved and more security and income are achieved. With Qii, as an NVM broker, customers can take a lead over their competitors.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Automation, Rental processes, Online platform

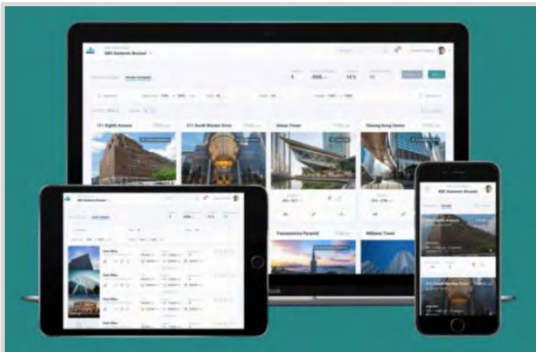


WEBSITE

[www.qii.nl](http://www.qii.nl)

## DESCRIPTION

**Rialto** is a intuitive leasing software, trusted by both institutional landlords and office operators across the world to streamline their leasing. From sharing vacant units with the market to sourcing new tenants, Rialto provides the tools you need to manage the leasing of both bigger commercial property portfolios or smaller flexible office locations. Automated marketing of your offices, transparent communication to all relevant leasing channels, organized tenant candidate profiles, structured leasing flow and a full leasing reporting suite gives your team the tools and information they need to drive better and more profitable leasing operations. Rialto is fully mobile responsive and available on desktop, tablet and mobile.



Customer	Unit Name	Operator	Space & Products	Size	Budget	Agency
Checkmate	Office Warehouse	Zipcar	Flat @ South Beach Flat @ Miami	300 sqft	1,500 USD	System
Checkmate	Office Warehouse	Zipcar	Flat @ South Beach Flat @ Miami	300 sqft	1,500 USD	System
Checkmate	Office Warehouse	Zipcar	Flat @ South Beach Flat @ Miami	300 sqft	1,500 USD	System
Checkmate	Office Warehouse	Zipcar	Flat @ South Beach Flat @ Miami	300 sqft	1,500 USD	System
Checkmate	Office Warehouse	Zipcar	Flat @ South Beach Flat @ Miami	300 sqft	1,500 USD	System



COUNTRY

United Kingdom



FOUNDED

2015



EMPLOYEES

11 – 50



KEY WORDS

Software, Sales & Marketing, Leasing operations, Automation



WEBSITE

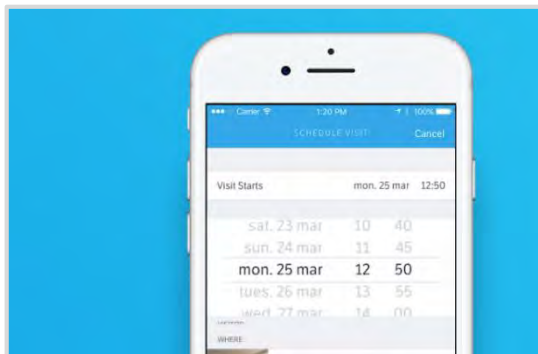
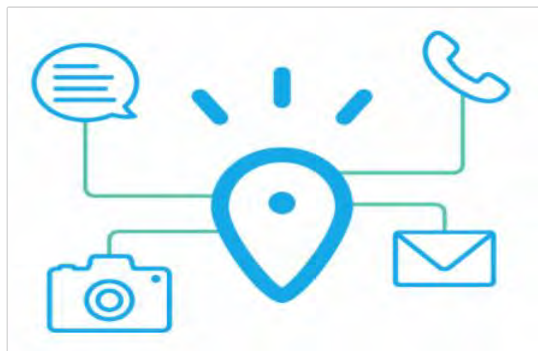
[www.getrialto.com](http://www.getrialto.com)



## DESCRIPTION

**SweepBright** helps making real estate brokers more effective by creating and managing real estate advertisements. Due to SweepBright, real estate professionals are provided with a faster and more efficient sales process. Their mobile application simplifies intake, matching and communication with buyers & sellers.

Sweepbright works together perfectly with third parties, evolving the sales process into a digital transaction by integrating several real estate systems such as DotLoop, WebMerge and DocuSign.



COUNTRY

United States



FOUNDED

2016



EMPLOYEES

11 – 50



KEY WORDS

Advertisement, Sales process, Transactions



WEBSITE

[www.sweepbright.com](http://www.sweepbright.com)

## DESCRIPTION

**Vastgoeddata** offers a service that provides Dutch real estate professionals with information about commercial properties retrieved from several databases. The information can be accessed through a clear database that links among others government, Cadastre, broker and credit provider data. The database contains information about all the commercial real estate in The Netherlands and 1.3 million end-users. By linking all data in one integrated system new insights and opportunities become available for real estate professionals.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

11 – 50



KEY WORDS

Data, Integrated system, Information service

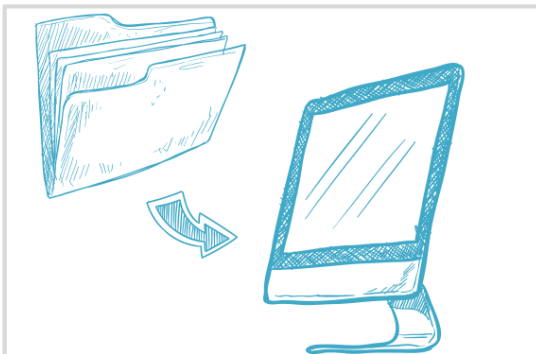
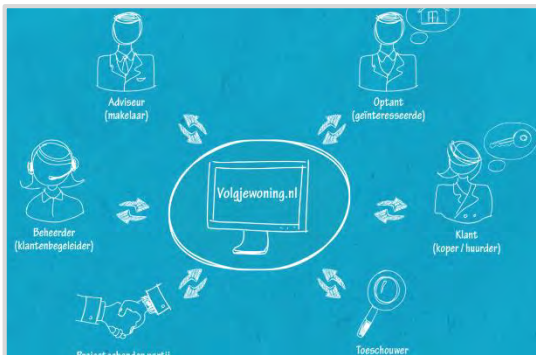


WEBSITE

[www.vastgoeddata.nl](http://www.vastgoeddata.nl)

## DESCRIPTION

**Volgjewoning.nl** offers buyers and tenants a personal building file. This contains important documents and the latest information such as offers, quotations and order confirmations. The software is linked to multiple platforms like Ondertekenen.nl, iDeal and Snagstream. Users of the software are automatically alerted to upcoming deadlines and updates regarding their projects. Consequently, the supervisor of the project can keep a good eye on the progress and all of the involved parties are aware of all relevant information.



COUNTRY

The Netherlands



FOUNDED

2012



EMPLOYEES

1 – 10



KEY WORDS

Online file, Software, Information platform

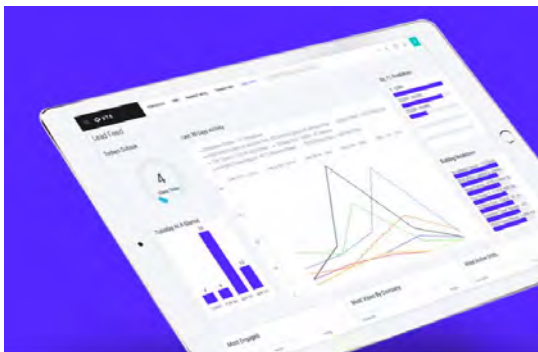
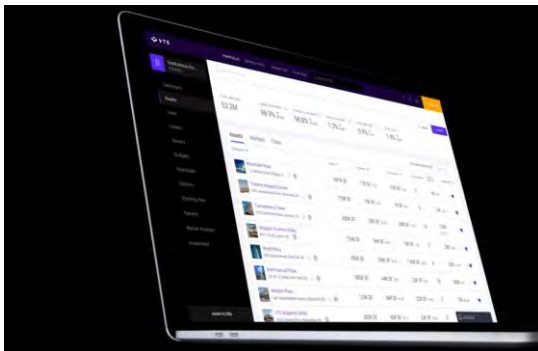


WEBSITE

[www.volgjewoning.nl](http://www.volgjewoning.nl)

## DESCRIPTION

**VTS** is a cloud-based leasing and portfolio management platform providing brokers and owners with real-time access to everything happening throughout their portfolio. The platform enables tracking and analytics across live, active deal flow. Users of VTS get their portfolio and team onto a single platform to interact with data, identify trends, highlight opportunities and quickly raise red flags when necessary. VTS centralizes all of the critical data and workflows of properties, empowering users to attract, convert and retain their most valuable assets or tenants.



**COUNTRY**

**United States**



**FOUNDED**

**2011**



**EMPLOYEES**

**51 – 200**



**KEY WORDS**

**Cloud-based leasing, Portfolio management,  
Information provider**



**WEBSITE**

**[www.vts.com](http://www.vts.com)**



# Flexible Workspace

# 3

The new workplace is flexible and on demand. This contrasts the traditional view of real estate being immobile. In the new workplace, real estate is transformed from being a fixed asset into a flexible service. Office spaces are available in any given district, city or country and can be booked for an hour, a week, 10 years or anything in between, while all necessary services are included.



## DESCRIPTION

**Deskbookers** offers a trusted platform where people around Europe can easily find and book unique and inspiring working spaces, online, via a mobile device or over the phone. Whether it's a meeting room for an hour, a flexworking space for a day or a coaching room for a fixed period of time, Deskbookers brings people together for a unique working experience. The locations on the Deskbookers website are available in every price category, in more than 1,500 cities in 4 countries. More than 25,000 customers have already used the platform, whose founders believe that in order to be successful you should choose the workspace that fits best with the activities of that moment.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

11 – 50



KEY WORDS

Booking platform, Flexible workspace



WEBSITE

[www.deskbookers.com](http://www.deskbookers.com)





## DESCRIPTION

**Het Nieuwe Kantoor** (Dutch for “the new office”) or HNK is an office provider that offers different workspace ranging from flexible workspaces to full-service offices. HNK offers work spaces, office, parking and other services to all kinds of tenants like freelancers or multinationals. Facilities can be booked whenever, wherever, and as long as the customer wishes. The concept of HNK replaces traditional long-term office rental contracts and offers tenants the flexibility to work at multiple locations across countries.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

51 – 200



KEY WORDS

Flexible workspace, Full-wervice, Membership



WEBSITE

[www.hnk.nl](http://www.hnk.nl)

## DESCRIPTION

**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 are a creative melting pot of very different companies. Therefore, the office is also a meeting point where unexpected ideas can start between different companies.



COUNTRY

The Netherlands



FOUNDED

2008



EMPLOYEES

51 – 200



KEY WORDS

Flexible workspace, Membership



WEBSITE

[www.spacesworks.com](http://www.spacesworks.com)



## DESCRIPTION

**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.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

11 – 50



KEY WORDS

Flexible workspace, Membership



WEBSITE

[www.tribes.nl](http://www.tribes.nl)

## DESCRIPTION

**WeWork** offers various working spaces varying 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 where organizations and people grow together. The company transforms buildings into dynamic environments for creativity, focus and linkage. WeWork offers businesses the possibility to redefine their workdays, with fresh office designs, an interesting community of entrepreneurs and benefits for everyone.



COUNTRY

United States



FOUNDED

2010



EMPLOYEES

1001 – 5000



KEY WORDS

Flexible workspace, Membership



WEBSITE

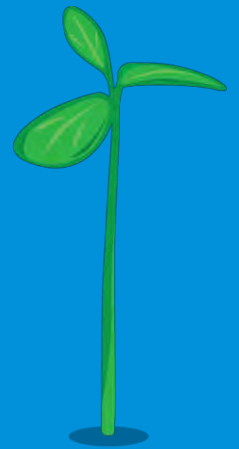
[www.wework.com](http://www.wework.com)



# Healthy Workplace

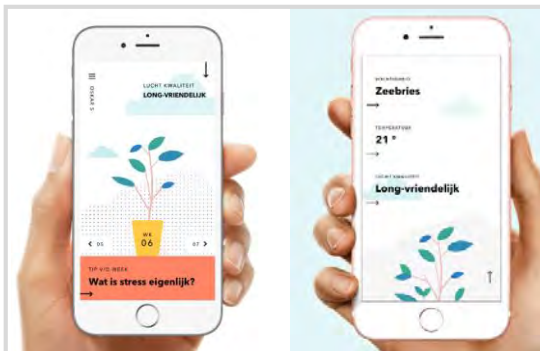
4

The future workplace is not only cost efficient and sustainable, it needs to be healthy as well. Nowadays, the indoor climate of real estate is gaining more importance and attention by tenants when considering new real estate locations. Smart technology innovations like air sensors and smart lightning improve the work floor environment. Due to these kind of innovations employee satisfaction and productivity may rise. Real estate owners should be aware of the opportunities a healthy workplace can offer for their own portfolio.



## DESCRIPTION

**Healthy Workers** is committed to putting together the workplace of the future. It helps create the best work environment for happy employees and successful companies. Employees spend a lot of time on the work floor and the work environment has a strong influence on their well-being. Improvements in the liveability of workspaces can have a huge positive impact on employees and companies, such as increased engagement, higher productivity, less absenteeism and attracting and retaining talent. Healthy Workers continuously monitors the work environment and enters into a dialogue with the employee. They dive into the physical work stressors that can affect health, well-being and productivity by looking at both environmental data and employee perception. Based on this, Healthy Workers offers companies insight in the impact of the physical work environment on i.e. employee well-being and proposes targeted interventions that meet the needs of people on the work floor. With impact-measurements Healthy Workers monitors the effect of workplace interventions. Doing so they can create a continuous loop of measurement, analysis and improvement, to optimize the work environment for companies and their employees.



COUNTRY

The Netherlands



FOUNDED

2016



EMPLOYEES

11 – 50



KEY WORDS

Employee well-being, Healthy working, Healthy workspace, Productivity



WEBSITE

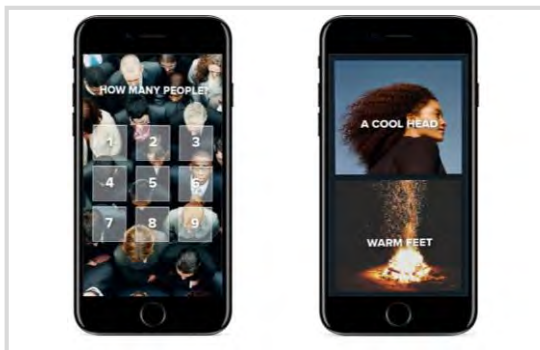
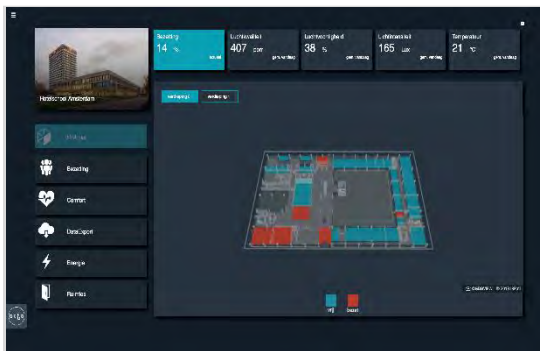
[www.healthyworkers.nl](http://www.healthyworkers.nl)










**DESCRIPTION**

**OCTO** is a smart building platform that focusses on shortening the to-do list of Facility Managers. OCTO collects, analyses and provides building data, using sensors, drones and Artificial Intelligence. Their analysis are used in a wide range of practices, for instance to prevent legionella, to detect which plant needs water, to monitor indoor climate and occupancy, and to track the WELL standard. These analysis are also presented to the building’s users, so they know exactly how the building is doing, and where a comfortable workspace is available.



 COUNTRY	The Netherlands
 FOUNDED	2015
 EMPLOYEES	1 – 10
 KEY WORDS	Internet of Things, Big Data analytics, Track building status, Healthy indoor climate, Livability
 WEBSITE	<a href="http://www.octo.nu">www.octo.nu</a>



## DESCRIPTION

**Perfect Place** is a technology and data driven startup with social impact. Their mission is to realize attractive living and working environments that contribute to better health and quality of life and fit the requirements of different target groups.

Perfect Place supports organizations involved in the development of residential and commercial real estate with relevant decision making information and analysis instruments to determine the attractiveness of the living environment of an area or a specific location for different target groups. Up-to-date, complete and nationwide data sets in a single platform save organizations time and money and enable them to make the best investment decisions and reduce the risk of investment and increase (social) return.



COUNTRY

The Netherlands



FOUNDED

2017



EMPLOYEES

1 – 10



KEY WORDS

Urban planning, Big data, Predictive modelling, Living environment, SaaS application



WEBSITE

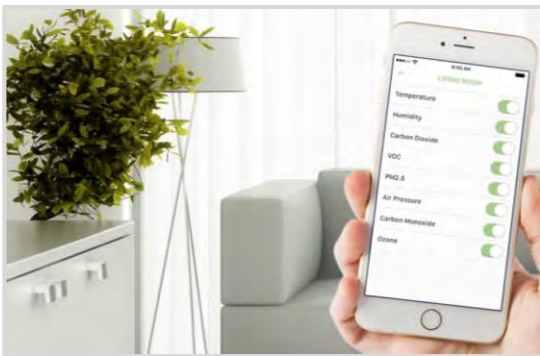
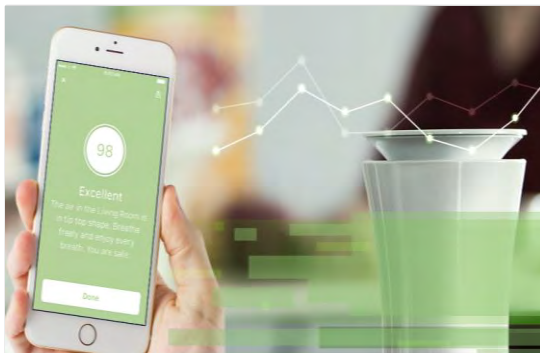
[www.perfectplace.nl](http://www.perfectplace.nl)




**DESCRIPTION**

**uHoo** is an indoor air sensor that monitors and analyzes the air you breathe and provides you with data, insights and solutions to create a healthier and safer home and workplace. All the data and insights are accessible via a mobile application and a management dashboard via your laptops.

uHoo can also remotely control standalone air purifiers, humidifiers and other appliances to clean the air if it detects something unhealthy. If you're away from your phone or laptop, uHoo can also give you visual alerts by changing the colors of your light if the you breathe is no longer healthy. uHoo can also directly integrate with your building management system to create a smarter office and smarter building for the health and wellbeing of its occupants.



 COUNTRY	Hong Kong
 FOUNDED	2014
 EMPLOYEES	1 – 10
 KEY WORDS	Indoor air quality, Health, Wellbeing, Air quality, Proptech
 WEBSITE	<a href="http://www.uhooair.com">www.uhooair.com</a>



# Innovative Constructions

5

Constructions technology has evolved over the last years. 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 has become less complex while offering cost savings due to efficiency and/or sustainability reasons at the same time.





**DESCRIPTION**

**Anker Stuy's** Ceramic Lightcoating is a luminous paint improving road safety while simultaneously being 100% energy-neutral. Ceramic Lightcoating is a uniquely modified coating which absorbs natural or artificial light during daytime. During night this light is emitted. Apart from its luminous capacity Ceramic Lightcoating is highly reflective and therefore perfectly suited for i.e. dangerous crossings. The specialized paint meets the requirements posed by the infrastructure industry and has a lifespan up to 15 years.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

51 – 200



KEY WORDS

Innovative paint, Safety, Absorbs light



WEBSITE

[www.ankerstuy.nl](http://www.ankerstuy.nl)

**DESCRIPTION**

The “**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 CO<sub>2</sub> 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.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

1 – 10



KEY WORDS

Construction, Smart building technique,  
Sustainable, Cost reducing



WEBSITE

[www.betonballon.nl](http://www.betonballon.nl)



## DESCRIPTION

**Chess Wise** is committed to a transition to sustainable, smart lighting systems for buildings, public lighting and industrial lighting. Their mission is to make wireless smart lighting the obvious choice for any LEDification project. Chess Wise envisages a shift to wireless solutions in the upcoming years. Making wired infrastructure redundant, while ensuring maximum system flexibility. Chess Wise develops and manufactures products, software and services using the wireless, full mesh network protocol MyriaMesh for Smart Building, Smart City and Smart Industry applications. With MyriaMesh Building Light Control (BLC) the company developed a professional wireless light control and light management system for commercial real estate. A smart building starts with smart lighting.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

11 – 50



KEY WORDS

Smart lighting, Light control components, Mesh networks, Wireless lighting, Light management, IoT



WEBSITE

[www.chess-wise.eu](http://www.chess-wise.eu)

**DESCRIPTION**

**CyBe** Construction B.V. has developed a disruptive 3D printing technology using concrete. The startup’s ultimate dream is to change the building industry by shifting from conventional construction methods to 3D concrete printing. This will deliver a faster and more effective construction process, with many other advantages such as sustainability, free form construction, lower cost of construction and ownership. CyBe’s concrete printing technology is applicable for architectural, structural, industrial and design construction.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

11 – 50



KEY WORDS

Concrete, Smart building technique, Lowering costs



WEBSITE

[www.cybe.eu](http://www.cybe.eu)

## DESCRIPTION

**Easypath** develops different kinds of innovative bicycle paths, of which Solarpath is the most innovative. Together with Spanish company OTEM2000, Easypath has developed prefab concrete bike lane elements with integrated solar panels. These panels meet safety requirements for pedestrians and cyclists. The energy generated can be used for the surrounding urban infrastructure, like street lighting, public facilities and homes. Ongoing research focusses on the Energypath, whereby energy is harvested through bike movements and footsteps.



COUNTRY

The Netherlands



FOUNDED

2006



EMPLOYEES

1 – 10



KEY WORDS

Bicycle paths, Solar panels, Smart use of concrete



WEBSITE

[www.easypath.nl](http://www.easypath.nl)

## DESCRIPTION

**ECOR** is an advanced sustainable building and design material designed to be 100% recycled and recyclable. It is completely 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. The benefits of ECOR are that the product lowers costs, has greater performance, embodies circularity and does not emit harmful VOCs.



COUNTRY

United States



FOUNDED

2006



EMPLOYEES

51 – 200



KEY WORDS

Building and design material, Recycled and recyclable, Packaging, Construction, Design



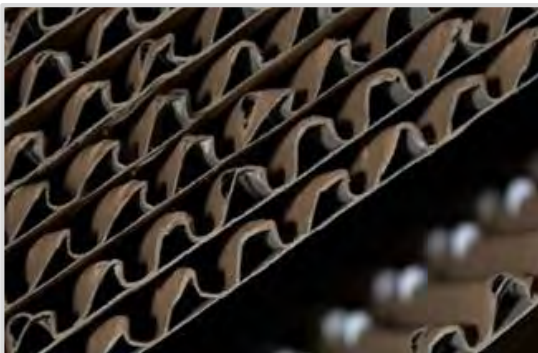
WEBSITE

[www.ecorglobal.com](http://www.ecorglobal.com)



## DESCRIPTION

**Fiction Factory** offers microhomes made of layered 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 3 times more sustainable than traditional construction technology. The Wikkelhouse building technology can be used for home, recreational or offices construction. Furthermore, the Wikkelhouse can be build permanently or just for a short period of time.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

11 – 50



KEY WORDS

Microhomes, Cardboard, Long life span, Eco-friendly

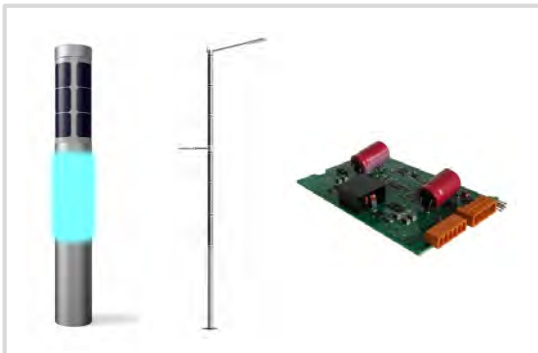


WEBSITE

[www.fictionfactory.nl](http://www.fictionfactory.nl)

**DESCRIPTION**

**FlexSol Solutions** is a Dutch high-tech company with unique expertise in solar technology. The company was founded around a unique technology for curving highly efficient mono-crystalline silicon solar cells. This innovative technology is applied in products such as ceramic roof tiles and the cylindrical solar modules of the Soluxio. This results in products that are not only very practical, but also aesthetically pleasing.



**COUNTRY**

**The Netherlands**



**FOUNDED**

**2013**



**EMPLOYEES**

**11 – 50**



**KEY WORDS**

**Solar cells, Renewable energy, Practical products**



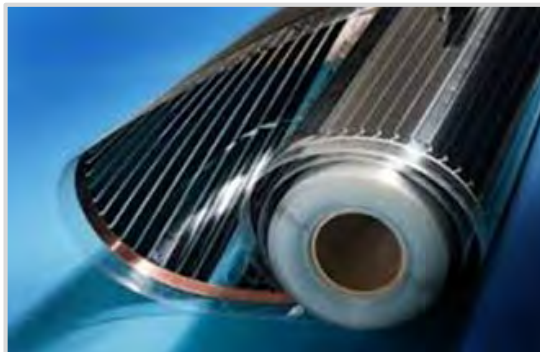
**WEBSITE**

**[www.flexsolutions.com](http://www.flexsolutions.com)**



## DESCRIPTION

**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 and beneficial than floor heating based on gas and/or oil. The system can easily be controlled from inside a property or from a distant location.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Innovative foil, Provides warmth, Recyclable, Sustainable

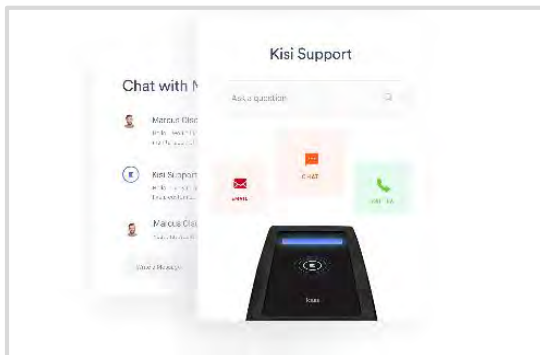


WEBSITE

[www.karbonik.nl](http://www.karbonik.nl)

## DESCRIPTION

**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 Kisi system provides an added layer of intelligence and enhanced experience at all access points of the facility. The system software streamlines access management for operations teams while generating sophisticated data visualizations and personnel tracking for advanced IT departments. For the end user, Kisi works in the background to detect their presence and timely unlock doors for them as they approach. Based in Brooklyn, New York, the company engineering campus is located in Stockholm, Sweden.



COUNTRY

United States



FOUNDED

2012



EMPLOYEES

11 – 50



KEY WORDS

Access Control, Access Management, Keyless Office Entry, Smart Office, Employee Productivity



WEBSITE

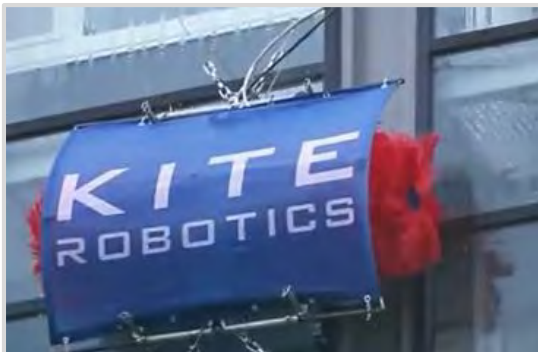
[www.getkisi.com](http://www.getkisi.com)



## DESCRIPTION

The **KITE Robotics** window cleaning robot is a safe, sustainable and cost saving solution for cleaning windows, window frames and paneling (horizontal & vertical). It can be installed on existing buildings, but often it is already included in the design of new buildings.

Customers save up to 100% cleaning costs and the pay back period is between 0 and 6 years, depending on the building type. Some customers earn directly from the start, while alternatives are more expensive. The robot cleans 5-10x faster and cleans windows and paneling. Due to its sustainability, BREEAM credits can be earned. The KITE Robotics foot print on the roof is very small compared to alternatives, which leaves more space to install solar panels.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

1 – 10



KEY WORDS

Robots, Window cleaning, Safety, Sustainable



WEBSITE

[www.kiterobotics.com](http://www.kiterobotics.com)

## DESCRIPTION

**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 domotics to care facilities. Novito provides buildings that can be built within one day, and it takes another two weeks to make it ready to use. Novito's buildings can be taken apart easily and rebuilt in a different location, making this product a sustainable solution. The company offers its services to divergent clients; housing corporations, healthcare organizations, real estate investors and home owners.



COUNTRY

The Netherlands



FOUNDED

1979



EMPLOYEES

1 – 10



KEY WORDS

Building system, Domotics, Sustainable



WEBSITE

[www.novito.nl](http://www.novito.nl)

**DESCRIPTION**

**View Inc.** is the first company to successfully advance the large-scale commercialization of dynamic glass. Situated at the intersection of human wellness, smart technology and energy efficiency, View manufactures View Dynamic Glass, a new generation of architectural glass that intelligently transitions through multiple tint states to control the sun’s energy, providing an enhanced occupant experience and optimum natural light and thermal comfort. View is shaping the future of occupant-focused building design from its headquarters in Silicon Valley and its high-volume manufacturing facilities in Olive Branch, Mississippi.



COUNTRY

United States



FOUNDED

2007



EMPLOYEES

501 – 1000



KEY WORDS

Dynamic glass, Energy efficient, Thermal comfort, Smart technology



WEBSITE

[www.viewglass.com](http://www.viewglass.com)



# Internet of Things

6

The rise of Internet of Things (IoT) offers great 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. In most cases, this is made possible by means of an app. 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.





## DESCRIPTION

**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. Homey enables its clients to automate their homes. 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 technologies.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

11 – 50



KEY WORDS

Connecting devices, Voice-controlling, Mobile application

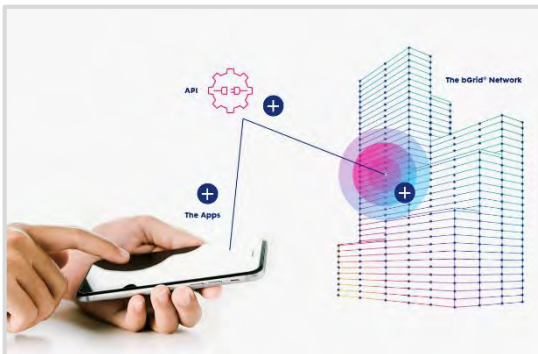







WEBSITE

[www.athom.com](http://www.athom.com)

**DESCRIPTION**

The **bGrid Smart Building Solution** is the final smart building solution you will ever need for your smart building. A network of bGrid Nodes senses everything that happens in the building and enables fast accurate positioning of people and assets. The bGrid Smart Building Solution is open enough to connect and communicate with everything in your building from the lighting and climate system to the coffee machines and even people through their smart devices. But bGrid does not stop there. It also enables controlling light, climate, blinds etc. based on the collected and analyzed data. bGrid works in cooperation with international technology partners and integrators, and executes projects for commercial real estate, education, airports, hospitals, laboratories and other buildings.



 COUNTRY	The Netherlands
 FOUNDED	2015
 EMPLOYEES	11 – 50
 KEY WORDS	Smart building solutions, Remote control and monitoring
 WEBSITE	<a href="http://www.bgridsolutions.com">www.bgridsolutions.com</a>

## DESCRIPTION

**ComfyLight** makes light bulbs that are able to learn how people move around at home and then simulates movements perfectly when people are out. The presence sensor detects unexpected movements in homes and alerts owners what is happening through an app. As a result, intruders are discouraged to enter a house, lowering home burglary. Comfylights have continuously variable dimming to ensure perfect light quality. When entering a room, ComfyLight automatically switches the light on and off again when leaving.



COUNTRY

**China**



FOUNDED

**2015**



EMPLOYEES

**1 – 10**



KEY WORDS

**Smart light bulb, Presence sensor, Mobile app**




WEBSITE

**[www.comfilight.com](http://www.comfilight.com)**

**DESCRIPTION**

**Crumbbase** provides objective insights of conversion, duration of stay or the effectiveness of staff policy and marketing for shops. With their real-time analysis solution, Crumbbase helps retailers to make better decisions and to improve the performance of their shops, based on objective visitor measurements. Crumbbase senses mobile phone Wi-Fi signals, captures and records these Wi-Fi signals, processes them and finally delivers an analytic report. The company offers analytic service for retailers, shopping centers and retail groups.



 COUNTRY	The Netherlands
 FOUNDED	2015
 EMPLOYEES	1 – 10
 KEY WORDS	Real-time analysis, Retail solutions, Visitor measurement, Wi-Fi signaling
 WEBSITE	<a href="http://www.crumbbase.nl">www.crumbbase.nl</a>

**DESCRIPTION**

**FocusCura** specializes in home healthcare innovations. The company helps people stay independent for longer and to remain in control. FocusCura develops healthcare innovations in two areas: “Virtual Homecare” and “Hospital to Home” Their products revolve around home monitoring, video care, medication support, alarms and giving nurses access to patients’ homes. One example, AccessSolutions gives patients the ability to determine who is allowed to enter their home without having to physically get up to open the door. This gives nurses rapid access to the homes if needed.



COUNTRY

The Netherlands



FOUNDED

2003



EMPLOYEES

51 – 200



KEY WORDS

Home healthcare innovations, Video care, Medication support, Home monitoring



WEBSITE

[www.focuscura.com](http://www.focuscura.com)

## DESCRIPTION

**Niles** is a smart home service which enables customers to operate an entire home with an app, transforming it into a smart home. The service connects smart lighting, heating, alarm systems to provide as much comfort and automation as requested by the customer. The system consists of a computer installed in the house, that connects existing smart home solutions into one integrated customized pack, allowing for expansion when needed. The smart home service of Niles leads to more comfort and safety and also energy reduction.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Smart home application, Connecting smart devices, Integration



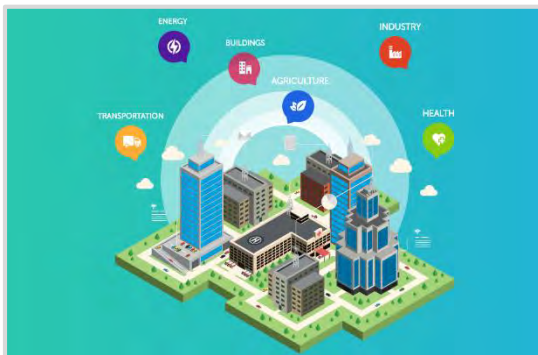
WEBSITE

[www.hello-niles.com](http://www.hello-niles.com)



## DESCRIPTION

**Nowi** is a startup developing WiFi powered sensors. The Nowi climate sensors are able to use the energy available in WiFi, 4G and GSM signals to power themselves. As a result they do not require impractical cables or frequent battery changes. The startup has emerged from the TU Delft and is part of the Yes!Delft incubator. They are focussing 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'.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

11 – 50



KEY WORDS

WiFi powered, Climate sensors, Plug and forget



WEBSITE

[www.nowi-energy.com](http://www.nowi-energy.com)

## DESCRIPTION

**Shiff** is an innovative software developer for the new energy world. Shiff's online platform EnergyShiff enables customers to become energy smart by means of social interaction, gamification and energy insights. The platform makes use of data from readily available energy meters, and offers guidance for users to become smart about energy usage. Shiff is a flexible platform both in functionality and looks. The company works for all kinds clients, ranging from small start ups to large energy network operators.



COUNTRY

The Netherlands



FOUNDED

2009



EMPLOYEES

1 – 10



KEY WORDS

Smart energy usage, Data driven platform



WEBSITE

[www.shiff.com](http://www.shiff.com)



**DESCRIPTION**

**Simaxx** is a software platform to improve building for everyone in the future. Owners, users and property managers will profit of more comfort, less maintenance and continuous monitoring. Simaxx gives insight in the performance of the buildings installations, day and night, seven days a week. Smart meters warn you of discrepancies in data and processes in the building control system and where necessary they make adjustments. Simaxx literally checks and tells you straight away how your building is feeling.



COUNTRY

The Netherlands



FOUNDED

2016



EMPLOYEES

11 – 50



KEY WORDS

Building installation monitor, Smart meter, Building control system

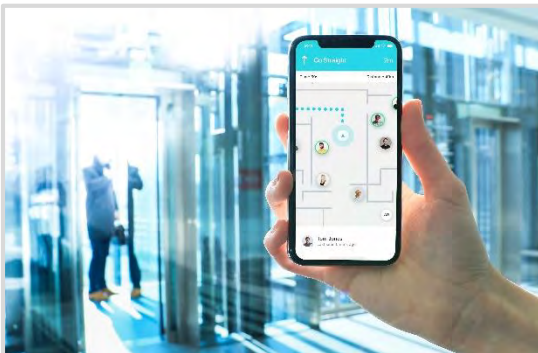


WEBSITE

[www.simaxx.com](http://www.simaxx.com)

## DESCRIPTION

**Spaceti** is the technology for digitising buildings based on the principles of indoor location. Spaceti provides complex “3in1” solutions for smart buildings, including occupancy & environment analytics, smart parking, and a solution for indoor navigation. Their mission is to radically redefine how people digitally interact with buildings, increase occupant well-being, and boost collaboration among employees while simultaneously providing an effective building management tool that reduces costs.



COUNTRY

Czech Republic



FOUNDED

2016



EMPLOYEES

11 – 50



KEY WORDS

Building digitization, IoT, Efficiency, Operational cost savings, Well-being, Facility management



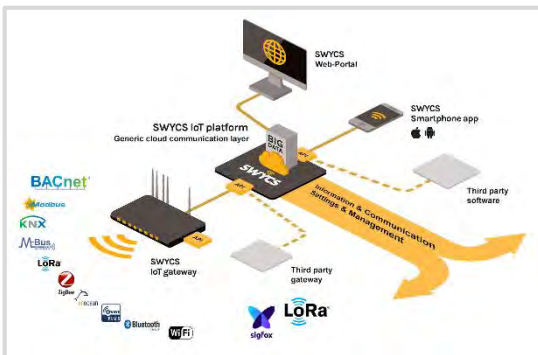
WEBSITE

[www.spaceti.com](http://www.spaceti.com)



**DESCRIPTION**

**SWYCS** is an universal, interoperable and vendor-neutral Internet of Things (IoT) platform. The SWYCS technology contains hardware and software and is based on open standards compliant with all relevant international IoT protocols. The system is completely API driven to integrate with third party software. SWYCS connects devices and installations to make building and home environments Smart. The integrated infrastructure offers an extremely effective and efficient plug&play platform controlled by a single App or web-portal.



 <p><b>COUNTRY</b></p>	<p><b>The Netherlands</b></p>
 <p><b>FOUNDED</b></p>	<p><b>2012</b></p>
 <p><b>EMPLOYEES</b></p>	<p><b>11 – 20</b></p>
 <p><b>KEY WORDS</b></p>	<p><b>Integrated platform, Environment monitoring and -management, Connecting equipment and systems</b></p>
 <p><b>WEBSITE</b></p>	<p><b><a href="http://www.swycs.com">www.swycs.com</a></b></p>

## DESCRIPTION

**Tado** is a smart thermostat for consumers' heating and cooling systems. Tado helps customers to save energy and heating/cooling costs. By combining the smart thermostat, the app and optional extension kits for radiators and hot water, the system can automatically detect when users are home, leave or are on their way home. Combined with using outside weather conditions information, Tado adapts the heating or cooling system accordingly. Tado can be applied to all kinds of thermostats, no matter what kind of manufacturer or age.



COUNTRY

Germany



FOUNDED

2011



EMPLOYEES

51 – 200



KEY WORDS

Smart thermostat, Automatic adaptation, Heating, Cooling



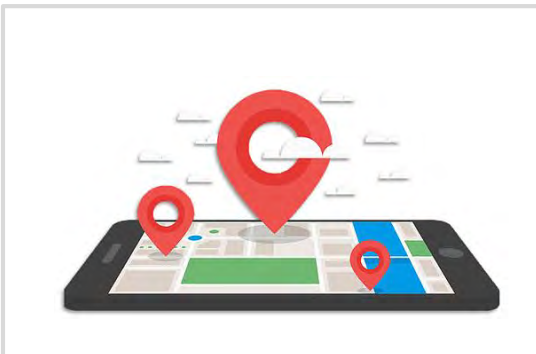
WEBSITE

[www.tado.com](http://www.tado.com)



**DESCRIPTION**

**Ween** specialized in real-time predictive planning for all living spaces. ween.ai is the world’s first AI-based solution that makes your smart devices autonomous. The company believes in the transition from Internet of Things to “Autonomy of Things”. Ween’s AI-based solution predicts in real-time the arrival of the occupant in order to constantly adapt the behavior of a place to its use. Therefore, the solutions can be applied to homes, mobility, facilities, cities and marketing purposes. Ween products is featured privacy by design, low energy consumption, multi-user, multi-location, background operation, on device, data generation and proprietary app.



COUNTRY

France



FOUNDED

2014



EMPLOYEES

1 – 10



KEY WORDS

Autonomous, Artificial Intelligence, Predictive planning



WEBSITE

[www.ween.ai](http://www.ween.ai)



# New Ways of Funding

# 7

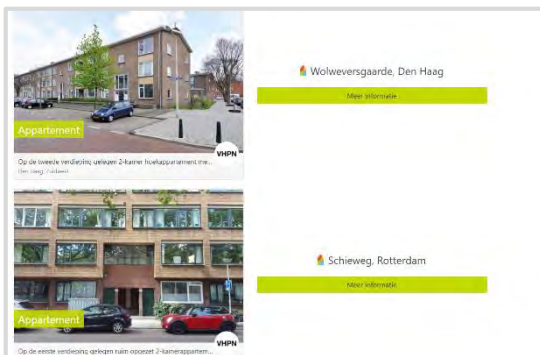
Traditionally, real estate was financed through specific funds with a minimum investment of several thousands of euros. Alternative funding methods result in a more accessible financing of (inter)national real estate projects. Alternative funding has been coined frequently in the context of banking. Applying this concept to real estate means that individuals, rather than solely institutional investors, are now able to participate in funding projects.



## DESCRIPTION

**Blandlord** offers consumers the possibility to partly take ownership in a real estate object. By dividing the 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, however most people are interested in investing in 1 - 3% of the current value of the property. The economic ownership of the properties is administrated in blockchain technology to provide openness to all parties involved.



COUNTRY

The Netherlands



FOUNDED

2016



EMPLOYEES

1 – 10



KEY WORDS

Ownership, Investment, Blockchain, Openness

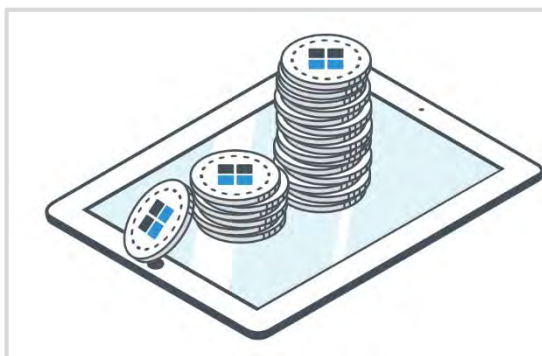


WEBSITE

[www.blandlord.com](http://www.blandlord.com)

## DESCRIPTION

Peer-to-peer blockchain networks revolutionize the over-the-counter trading space. Issuers of securities, such as real estate investment funds, use **Bloqhouse's** software to tokenize the assets in a legally compliant manner. Investors owning a token can trade directly, transparently and securely with other investors. The investor administration is managed by a smart contract on the blockchain. A smart contract enforces a transparent and trustworthy registration of investors as well as legally binding transactions between investors. Bloqhouse also offers know-your-customer (KYC) and investor on-boarding modules.



COUNTRY

The Netherlands



FOUNDED

2016



EMPLOYEES

1 – 10



KEY WORDS

Blockchain, Trading, Software, Smart contracts



WEBSITE

[www.bloqhouse.com](http://www.bloqhouse.com)

# BOUWAANDEEL

## DESCRIPTION

**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.

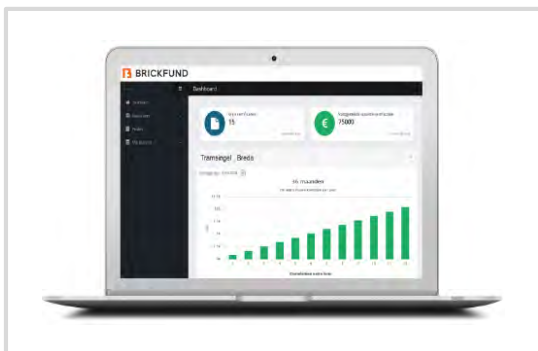
A key distinguishing factor of the platform compared to traditional traditional real estate funds is that investments are possible starting from EUR 200,-. Propositions up to EUR 300.000,- can be placed on the platform and the to be financed object always serves as collateral.



 COUNTRY	The Netherlands
 FOUNDED	2014
 EMPLOYEES	1 – 10
 KEY WORDS	Real Estate projects, Crowdfunding, Platform
 WEBSITE	<a href="http://www.bouwaandeel.com">www.bouwaandeel.com</a>

## DESCRIPTION

Brickfund offers a new method of investing in real estate. The company selects appealing properties for investments and offers a transparent platform. Investors receive personalised 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.-.



COUNTRY



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Real estate investment, Transparency, Personalised



WEBSITE

[www.brickfund.com](http://www.brickfund.com)



DESCRIPTION

**Cadre** is a technology-enabled investment platform that connects qualified individuals and institutions to fully vetted, compelling real estate investment opportunities. Cadre wants to transform the investing market by building the world's first digital exchange for alternative assets. The company combines their institutional experience with differentiated technology in order to empower their investors through direct access, low fees, and transparency. The company's innovative technology drives efficiency and powers insight for its participants.



	Cadre	Real Estate Funds	Public REITs	Private REITs	Direct Deals	Crowdfunding
Investment Expertise	✓	✓	✓	?	?	✗
Lower Fees	✓	✗	?	✗	✓	?
Transparency	✓	✗	✗	✗	?	?
Diversification	✓	✓	✓	?	✗	?
Efficient, Flexible Commitment	✓	✗	✓	?	✗	?



COUNTRY

United States



FOUNDED

2014



EMPLOYEES

11 – 50



KEY WORDS

Investment platform, Technology, Data, Transparency



WEBSITE

[www.cadre.com](http://www.cadre.com)

## DESCRIPTION

**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.



Risicoclassificatie	Punten totaal	Omschrijving	Vaste rente
A	21 - 23	Defensief	4% - 6%
B	18 - 20	Behoedzaam	6% - 7%
C	15 - 17	Gematigd offensief	7% - 8%
D	12 - 14	Speculatief	8% - 9%
E	7 - 11	Zeer speculatief	9% - 11%



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Crowdfunding platform, Diversified real estate Portfolio

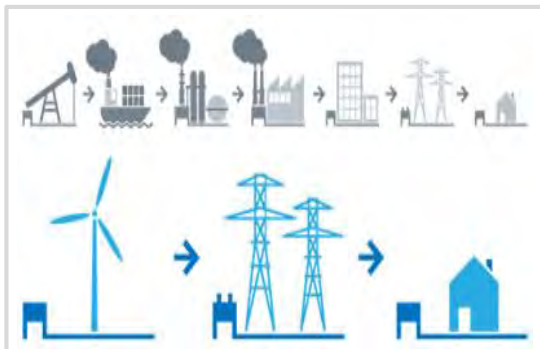


WEBSITE

[www.crowdestate.nl](http://www.crowdestate.nl)

## DESCRIPTION

**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.



COUNTRY

The Netherlands



FOUNDED

2010



EMPLOYEES

1 – 10



KEY WORDS

Wind turbine ownership, App, Real time



WEBSITE

[www.windcentrale.nl](http://www.windcentrale.nl)

**DESCRIPTION**

**Fundrise** offers a low-fee diversified real estate investment available directly to anyone online. The company makes the process of investing in the highest quality commercial real estate from around the country simple, efficient, and transparent. By combining technology with new federal regulations, Fundrise brings the once-unattainable world of private investments closer to customers. The platform allows its customers to invest directly in a real estate portfolio that its team identifies, acquires, and manages on behalf of the customer.



COUNTRY

United States



FOUNDED

2010



EMPLOYEES

11 – 50



KEY WORDS

Low-fee investment, Online, Investment processing

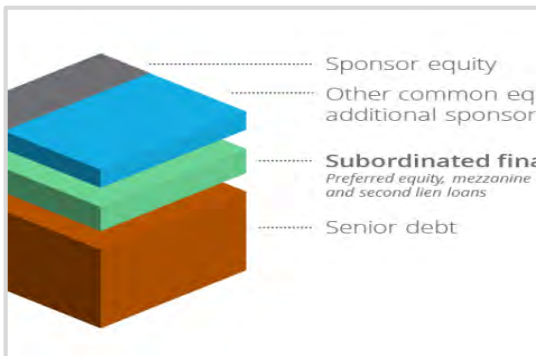







WEBSITE

[www.fundrise.com](http://www.fundrise.com)

**DESCRIPTION**

**RealtyShares** is an online investment platform that gives accredited investors the ability to purchase shares in private real estate investments for as little as \$5,000. RealtyShares screens each investment and offers a range of opportunities including both loans secured by single family homes and equity investments in commercial assets. The company connects its network of individual and institutional investors with pre-vetted real estate operators looking to raise capital for commercial and residential projects.



 COUNTRY	United States
 FOUNDED	2013
 EMPLOYEES	51 – 200
 KEY WORDS	Online investment platform, Loans, Equity investments
 WEBSITE	<a href="http://www.realtyshares.com">www.realtyshares.com</a>

## DESCRIPTION

With **SamenInGeld** you can invest in various real estate projects through loans starting from € 250, -. Investors pay 0.5% of the invested capital to SamenInGeld in the first year. In the following years investors pay € 0,25 of their invested capital. In addition investors pay € 0.25 for each transfer from their SamenInGeld e-Wallet to their private bank account. SamenInGeld is characterized by its 0 default rate for its real estate loans in their portfolios. Furthermore, investors acquire their mortgage right by the foundation Investeerdere SamenInGeld, increasing the certainty of their investment.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

1 – 10



KEY WORDS

Online investment platform



WEBSITE

[www.sameningeld.nl](http://www.sameningeld.nl)





# Platforms to Connect

8

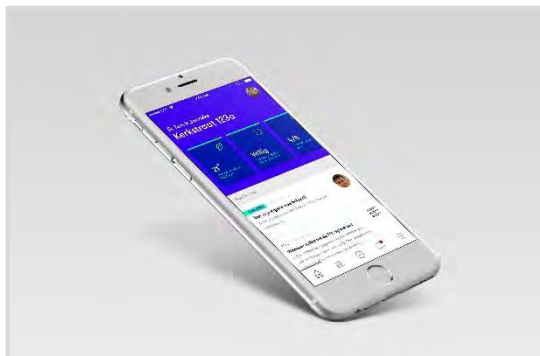
The rise of social media made it possible for people around the world to easily connect with each other. Thanks to multiple innovations the connectivity between stakeholders in the real estate industry has improved as well. Different platforms link buyers and sellers of both private as commercial real 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.



## DESCRIPTION

**Area of People** is a community service app designed for a better life in residential areas. With its app the company brings the best of two worlds together: the familiarity of a village and the facilities of a city. Area of People acts as a local gateway for residents to meet and help each other, and get easy access to relevant services.

Area of People helps real estate professionals to build and manage residential areas where multiple service partners are involved. As a partner the company works on achieving engaged and happy residents.



COUNTRY

The Netherlands



FOUNDED

2018



EMPLOYEES

1 – 10



KEY WORDS

Community, Efficiency, API, Software, Residential, App, Customer engagement

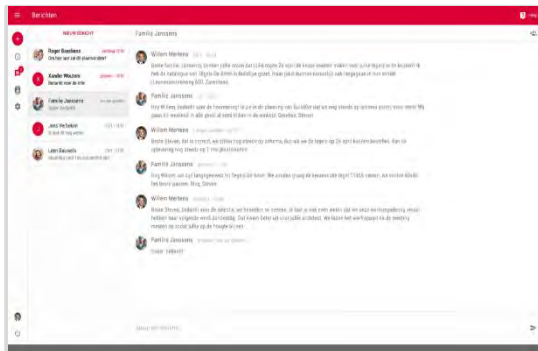


WEBSITE

[www.areaofpeople.com](http://www.areaofpeople.com)

## DESCRIPTION

The **BuildEye** digital platform allows construction companies and architects to compile information about their projects such as project planning and contact details of all stakeholders on a central location, the BuildEye website. Both customer and workforce can consult the latest information and communicate about the project via the BuildEye mobile app. Cost savings can be achieved thanks to clear communication between the different parties. Furthermore, customer satisfaction will increase leading to more positive references and consequently higher revenues.



COUNTRY

Belgium



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Online platform, Linking customers and workforce



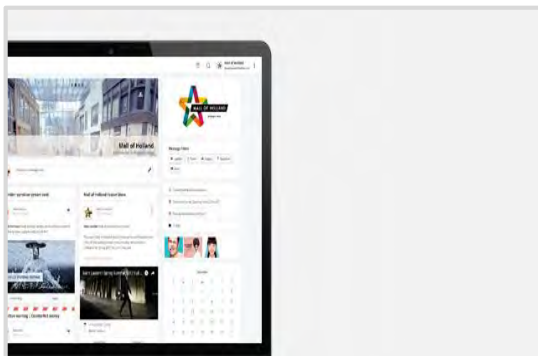
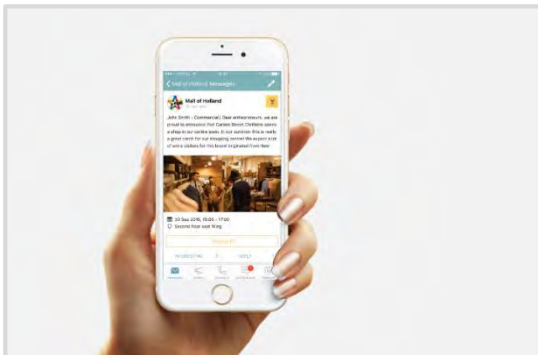
WEBSITE

[www.build-eye.com](http://www.build-eye.com)

## DESCRIPTION

**CHAINELS** is a business to business online communication service for retailers. By using the CHAINELS platform and app, companies can efficiently share information, i.e. on fake currency or burglars. CHAINELS offers solutions for retailers located in a certain shopping area, for mall retailers and mall property managers, and for park managers on business parks.

The company is currently active in 18 cities and connects over 6,000 companies. Current areas include i.e. 9 Straatjes, P.C. Hooft and Koopgoot.



COUNTRY

The Netherlands



FOUNDED

2012



EMPLOYEES

11 – 50



KEY WORDS

B2B communication platform, Retailers, Business parks

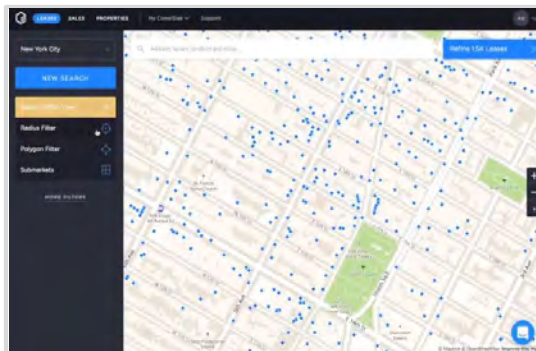
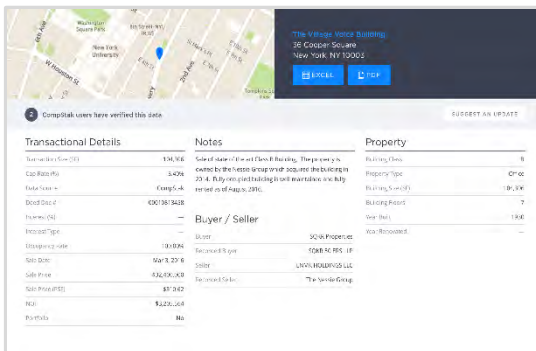







WEBSITE

[www.chainels.com](http://www.chainels.com)

DESCRIPTION

**CompStak** is a platform used by brokers, appraisers and researchers to trade transaction records. CompStak is free, anonymous and provides a complete record of lease transactions that have taken place. Information includes; tenant name, address, starting rent, square footage, broker names and landlord concessions. The platform is based on a 1-for-1 principle, in which users get information when they provide information. Currently the service is only available in certain parts of the United States.



	COUNTRY	United States
	FOUNDED	2011
	EMPLOYEES	11 – 50
	KEY WORDS	Online platform, Transaction, Leasing information
	WEBSITE	www.compstak.com

## DESCRIPTION

**Housing Anywhere** is Europe’s leading booking platform for student accommodation. Working closely together with over 120 universities worldwide, Housing Anywhere helps their students to easily find and securely book accommodation abroad - and connects those students with trusted landlords on its platform. In such a way, 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.



 COUNTRY

The Netherlands

 FOUNDED

2009

 EMPLOYEES

51 – 200

 KEY WORDS

Online booking platform, Student housing, Linking students and landlords

 WEBSITE

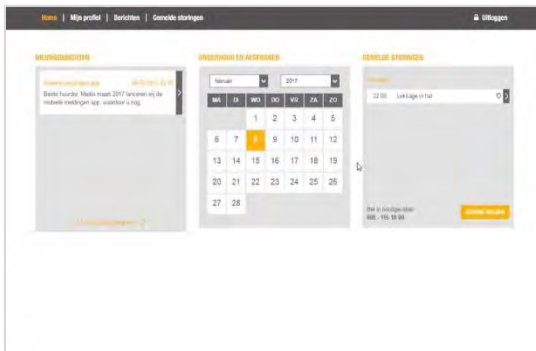
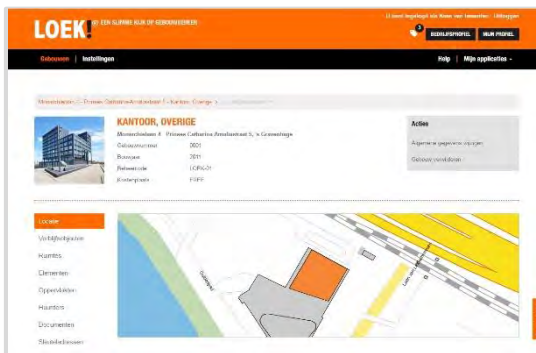
[www.housinganywhere.com](http://www.housinganywhere.com)





## DESCRIPTION

**LOEK!** is an online platform for managing and maintaining buildings, which brings together all stakeholders involved in one place. All the information is stored and accessible through one online file provided by a blockchain network of computers. The platform enables property managers, maintenance companies and tenants to cooperate and interact in an easy and quick manner. In this way, property maintenance can be made more efficient, smarter and easier for all users. Owners of the software can decide which information is included and visible for whom.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Online platform, Maintenance, Collaboration, Connecting stakeholders

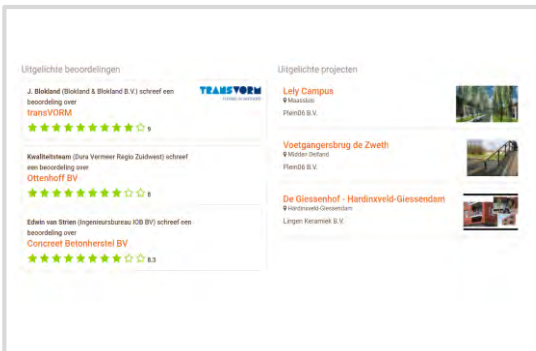







WEBSITE

[www.loekonline.nl](http://www.loekonline.nl)

**DESCRIPTION**

**Quantibus** is a platform that brings together construction professionals and homeowners. The platform lets homeowners find constructors based on several selected criteria. Furthermore, reviews and scores can be compared in an easy and comprehensive way, while construction professionals can improve on their services based on customer reviews. By this transparent manner, homeowner can find the right constructor and constructor receive active feedback which it can use to further develop their companies.

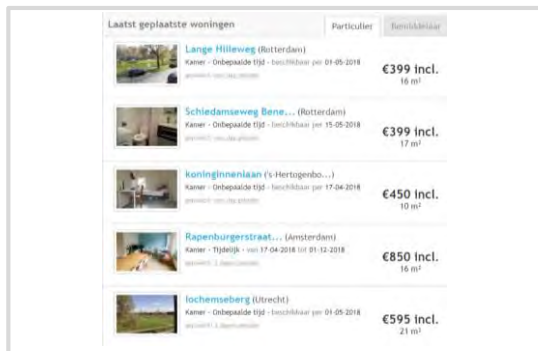
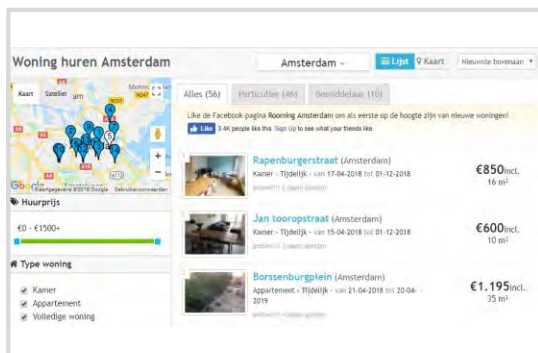


 COUNTRY	The Netherlands
 FOUNDED	2015
 EMPLOYEES	1 – 10
 KEY WORDS	Online platform, Linking construction prof. and homeowners, Ratings and reviews
 WEBSITE	<a href="http://www.quantibus.nl">www.quantibus.nl</a>



**DESCRIPTION**

**Rooming** markets itself as the Airbnb for long-term rentals. Via Rooming’s platform users can create a free account by signing in and use the site to message potential roommates and landlords. Rooming also shows users any connections they might have to people renting a room, making the search process more trustworthy. As a result, landlords and tenants know exactly who they are dealing with. Thanks to its dashboard landlords and tenants can manage their messages through just one place instead of multiple emails.



**COUNTRY**

**The Netherlands**



**FOUNDED**

**2013**



**EMPLOYEES**

**1 – 10**



**KEY WORDS**

**Housing platform, Linking roommates and landlords**








**WEBSITE**

**www.rooming.nl**

## DESCRIPTION

**Spacer** is the marketplace for storage and parking: “Join the fastest growing space sharing community. Spacer connects people who have spare storage space, from a garage to a driveway to a parking space, basement or attic. Need a shed? Spacer has got those too! Storage solutions come in all shapes and sizes, and are conveniently located in your local neighborhood. Save up to 50% off traditional self storage options. Got a boat, RV, car, furniture or maybe kids toys to store? Spacer has a local, convenient and affordable self storage unit near you. Your items are protected to the value of \$5,000 whilst in storage, for your peace of mind.”

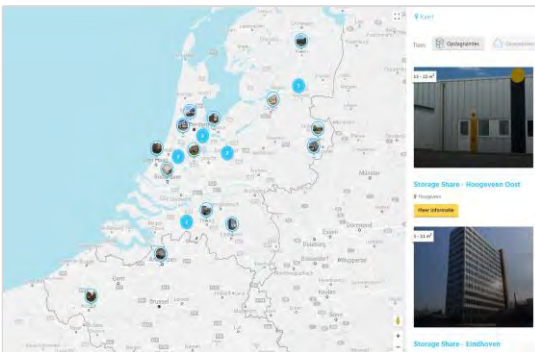


 <b>COUNTRY</b>	<b>United States</b>
 <b>FOUNDED</b>	<b>2015</b>
 <b>EMPLOYEES</b>	<b>11 – 50</b>
 <b>KEY WORDS</b>	<b>Online marketplace, Sharing community, Neighborhood storage</b>
 <b>WEBSITE</b>	<b>www.spacer.com</b>

**DESCRIPTION**

**Storage Share** is the marketplace where individuals and real estate owners can list their vacant space and rent it out to individuals or businesses looking for storage. Whether it be a garage, a spare room or a vacant office, Storage Share is the 'Airbnb' for temporary storage, providing an alternative to the expensive self-storage market.

By specifically targeting the storage market via the platform of Storage Share, real estate owners are able to attract a new type of renter for their vacant garages, offices or other type of real estate and thereby they can easily start making a return.



COUNTRY

The Netherlands



FOUNDED

2016



EMPLOYEES

1 – 10



KEY WORDS

Marketplace, Storage, Individual, Business

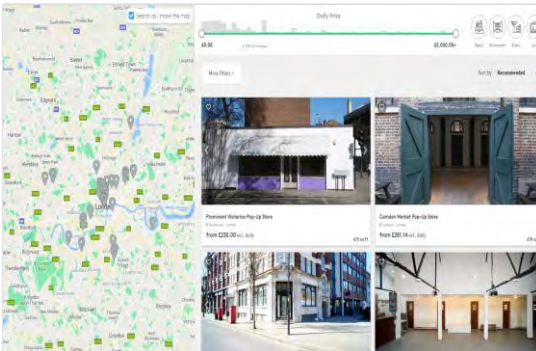


WEBSITE

[www.storage-share.nl](http://www.storage-share.nl)

## DESCRIPTION

**Storefront** is a technology platform that makes retail accessible to anyone in the world. They make it possible for brands to sell their idea anywhere; for space owners to activate their space with a click and for consumers to buy local; globally. Storefront's platform powers over 10,000 listings, which represent more than 30 million square feet of retail space. They offer greater access to spaces in leading retail cities around the world, including New York, Paris, London, Milan, Hong Kong, Amsterdam, Los Angeles and San Francisco. Since their launch in 2013, Storefront has helped thousands of brands all over the world, including Google, Samsung, L'Oréal, Everlane, Shopify, Indiegogo; open temporary retail stores. Their team consists of 80+ passionate thought leaders, based in their target markets.



COUNTRY

France



FOUNDED

2013



EMPLOYEES

51 – 200



KEY WORDS

Technology platform, Retail, Space owners



WEBSITE

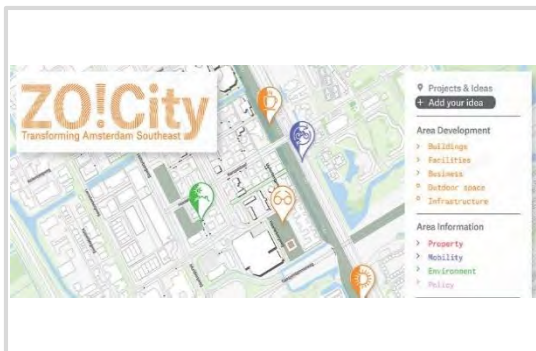
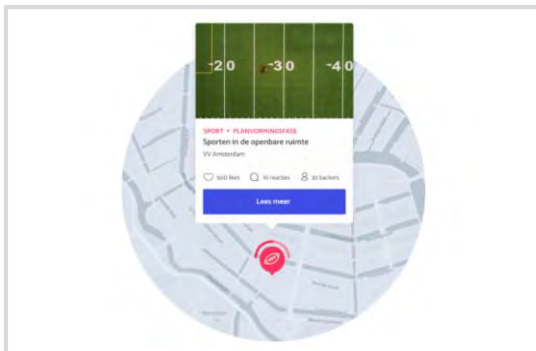
[www.thestorefront.com](http://www.thestorefront.com)





## DESCRIPTION

**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-organise through crowdfund capital. Transformcity is currently being implemented in two of Amsterdam’s largest transformation areas.



COUNTRY

The Netherlands



FOUNDED

2016



EMPLOYEES

1 – 10



KEY WORDS

Online platform, Urban development, Crowdfunding



WEBSITE

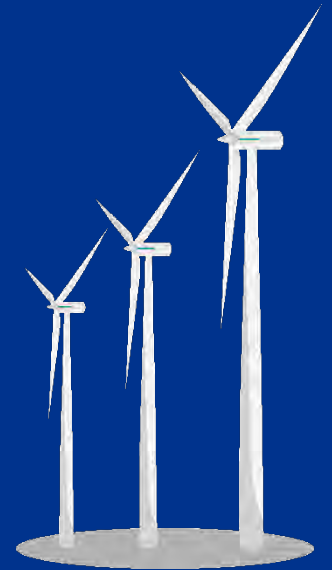
[www.transformcity.com](http://www.transformcity.com)



# Sustainable Innovations

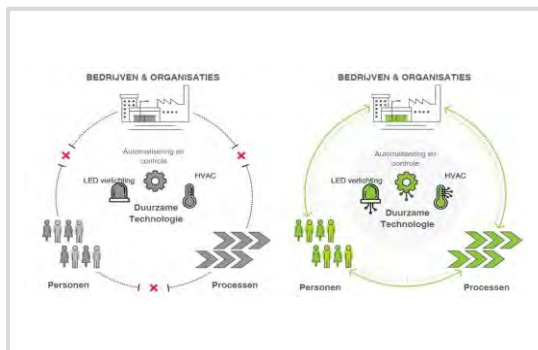
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Sustainable constructions have gained importance the last couple of years and this will increase even more the following years. Just like healthy workplaces, tenants demand sustainable buildings either for cost reduction or regulatory obligations. Multiple sustainable initiatives have evolved ranging from sustainable windows to energy saving management systems.



## DESCRIPTION

**Energetika NL** is specialized in energy efficiency solutions. They combine the newest sustainable technologies with an IoT platform in order to achieve the highest energy savings and at the same time, obtain exact analytics of people, machinery, products and processes. Their objective is deliver real-time and actionable insights while reducing energy costs for enterprise business. Energetika calls this ENERGY INTELLIGENCE. With their specialized solutions the organizations are achieving unprecedented levels of operational efficiency and productivity, translated in a competitive advantage.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Energy efficiency, IoT, Reduction, Operational efficiency



WEBSITE

[www.energetikanl.com](http://www.energetikanl.com)

## DESCRIPTION

**Enlighted** is an Internet of Things (IoT) solutions company that delivers the leading technology platform for smart buildings. With its sensor technology and scalable network to real-time data collection and high-value applications, Enlighted is redefining what a smart building can be. The company's mission is to help its customers reach long-range sustainability goals while saving money and increasing efficiency. With its first-in-class sensor and analytics platform, 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.



COUNTRY

United States



FOUNDED

2009



EMPLOYEES

51 – 200



KEY WORDS

Sensors, IoT, Energy reduction, Workspace comfort, Operational efficiency



WEBSITE

[www.enlightedinc.com](http://www.enlightedinc.com)

## DESCRIPTION

**GreenHome** (formerly Bleeve) helps hundreds of homeowners on a weekly basis to make their homes more sustainable. Do you want to insulate the floor, install solar panels on the roof or make your house completely natural gas free? GreenHome will help you step by step. From energy saving advice, an overview of all subsidies and to finding a reliable company. GreenHome tries to build the biggest independent platform to make homes more sustainable. The company also offers a warranty to €5000 next to the warranty of the constructor if the renovation is booked via GreenHome.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

11 – 50



KEY WORDS

Sustainable homes, Solutions, Energy reduction



WEBSITE

[www.greenhome.nl](http://www.greenhome.nl)

## DESCRIPTION

**hello energy** is a leading energy management tool that visualises energy and sustainability and activates users of buildings to deal with them smartly. This tool makes the sustainable achievements of real estate visible for everyone on any device; laptop, mobile or a screen in the lobby. Consequently, people are more aware of the energy reduction of real estate. Due to new regulations the pressure on companies to be transparent about their sustainable achievements rises. Therefore, hello energy offers its services to hotels and offices.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Energy reduction, Sustainability visualization



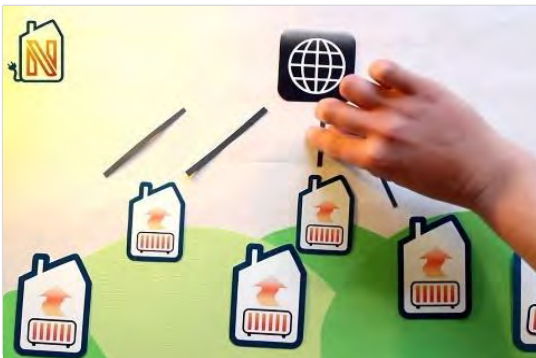
WEBSITE

[www.hello-energy.com](http://www.hello-energy.com)



## DESCRIPTION

**The Nerdalize Cloud** is a sustainable and affordable high-end compute platform (server) that heats buildings by using computer power. Servers are distributed over many homes meaning users do not have to pay for the overhead of a datacenter. This way, the server acts as a radiator. This reduces the heating bill for the consumer, the cost of computation for industry and academics and energy use for our society. This innovative set-up also drastically reduces the household's gas consumption whilst slashing the energy originally needed for server cooling.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

11 – 50



KEY WORDS

Sustainable heating, Reduction energy costs



WEBSITE

[www.nerdalize.com](http://www.nerdalize.com)

## DESCRIPTION

**Pavegen** has pioneered 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. The technology has evolved from a singular tile, which generates electricity from footsteps, to an entire array with three multi-functional component parts. These functionalities are called: data, floor and energy. The new Pavegen System, is poised to power the data-driven smart cities of tomorrow.



COUNTRY

United Kingdom



FOUNDED

2009



EMPLOYEES

11 – 50



KEY WORDS

Renewable energy, Tiles, API, Real-time data analytics

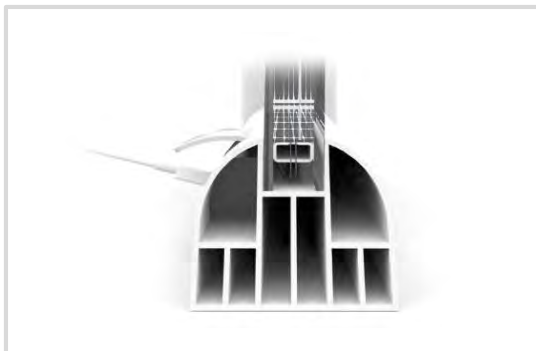


WEBSITE

[www.pavegen.com](http://www.pavegen.com)

**DESCRIPTION**

**Physee's** Power Window is a window converting direct and indirect (sun)light into electricity in a cost-effective way. Their window is fully transparent, colorless and electricity-generating. The electrical efficiency, transparency and insulation capacity can be varied to fit the specific demands of the customer. According to Physee a significant amount of the total energy demand of commercial buildings can be saved with its product (up to 50% for renovated buildings in combination with a thermal storage system, up to 100% for newly constructed commercial real estate). Power Window is already in production.


**COUNTRY**
**The Netherlands**

**FOUNDED**
**2014**

**EMPLOYEES**
**11 – 50**

**KEY WORDS**
**Renewable energy, Electrical efficiency**

**WEBSITE**
**[www.powerwindow.nl](http://www.powerwindow.nl)**

## DESCRIPTION

**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 methods makes sustainable building easier for housing corporations, municipalities and other construction partners. Renolution's methods is applicable to all sorts of buildings.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

11 – 50



KEY WORDS

Energy neutral house, Sustainable renovation and construction

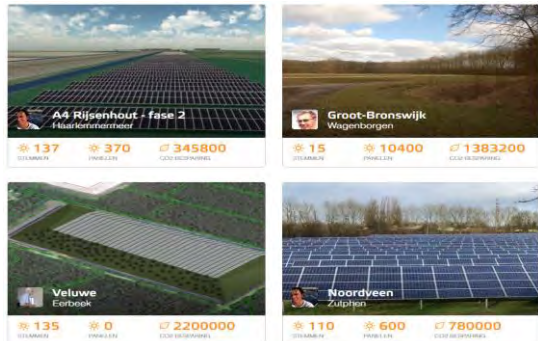


WEBSITE

[www.revolution.nl](http://www.revolution.nl)

## DESCRIPTION

**Solar Green Point** strives to generate solar energy via local networks. Local residents jointly build up a sustainable power supply. Local residents can purchase Sun Certificates, which means they invest in local solar parks. This makes them co-owners of the solar park and at the same time they save on their energy bills. People without a suitable roof can also invest in a solar park. Solar Green Point arranges everything for the certificate holders, such as the purchase of the solar panels and takes care of the installation of the solar power.



COUNTRY

The Netherlands



FOUNDED

2011



EMPLOYEES

1 – 10



KEY WORDS

Solar energy, Local, Solar panel ownership

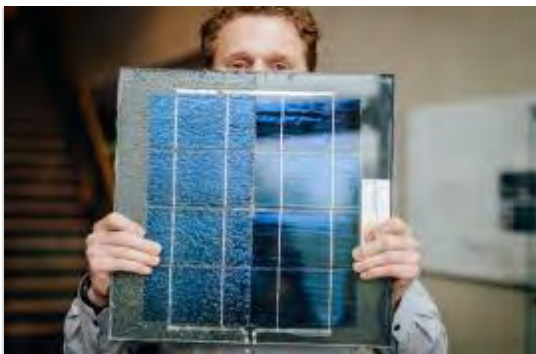


WEBSITE

[www.solargreenpoint.nl](http://www.solargreenpoint.nl)

## DESCRIPTION

**SolaRoad** is a pioneering innovation in the field of energy harvesting. SolaRoad converts sunlight on the road surface into electricity, transforming it into an inexhaustible source of green power. The electricity generated can be used for street lighting, traffic systems, households and electric vehicles. SolaRoad has emerged from a collaboration between TNO, province of Noord-Holland, road builder Ooms Civiel and technical service provider Dynniq. After successful pilots on cycling lanes, a new pilot will start to test the impact of heavy traffic on the surface.



COUNTRY

The Netherlands



FOUNDED

2009



EMPLOYEES

11 – 50



KEY WORDS

Energy production, Solar power



WEBSITE

[www.solaroad.nl](http://www.solaroad.nl)



## DESCRIPTION

**SolarSwing** focuses on building technologies which make use of solar power. The company develops management systems to achieve the optimal usage of solar heat, daylight and energy production in buildings. In this way energy is saved and comfort increases. One example of their products is SolarSwing Reflect. SolarSwing is specialized in solar tracking and solar control. Reflect is an interior shading system consisting of transparent vertical blinds that reflect direct sunlight while diffuse daylight is transmitted.



COUNTRY

The Netherlands



FOUNDED

2011



EMPLOYEES

1 – 10



KEY WORDS

Solar power, Energy production, Sustainable construction



WEBSITE

[www.solarswing.nl](http://www.solarswing.nl)

## DESCRIPTION

**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 150 kilometre radius of the factory. Combining various waste materials opens up a range of new possibilities for these bricks. The “WastedBasedBricks” are used by innovative architects, construction companies and real estate developers around the world. The bricks can be used for the exterior and interior of buildings.



COUNTRY

The Netherlands



FOUNDED

2012



EMPLOYEES

1 – 10



KEY WORDS

Sustainable construction, Circular building



WEBSITE

[www.stonecycling.com](http://www.stonecycling.com)

## DESCRIPTION

**Sustainable Buildings** provides an innovative IoT based energy management system to make buildings smart and sustainable. Advanced monitoring and Artificial Intelligence control are their specialty. The company offers tools to its customers to help them with the transition to energy-neutral real estate. Sustainable Buildings provides multiple services; Building diagnostics, Consumption monitoring, Production monitoring, Environment monitoring, Manual control and Automated control. Its Management Dashboard monitors multiple buildings via just one dashboard and shows real-time information about electricity and gas consumption, occupancy rate and humidity. Moreover, it offers advanced features such as Savings Planning, Occupancy Optimization, KPIs and Automated Notification, Savings Potential Discovery and many other features.



COUNTRY

The Netherlands



FOUNDED

2016



EMPLOYEES

11 – 50



KEY WORDS

Energy management system, AI, IoT, Smart buildings

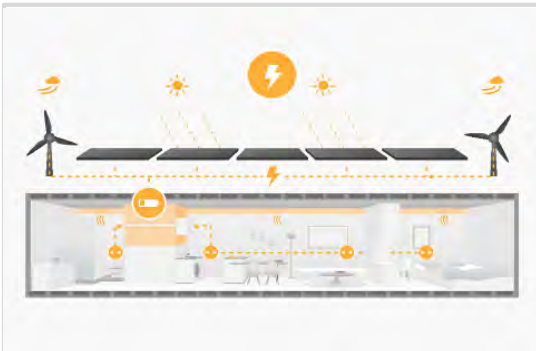


WEBSITE

[www.sustainablebuildings.nl](http://www.sustainablebuildings.nl)

## DESCRIPTION

**Sustainer Homes** builds off-grid, sustainable and self-sufficient homes. Using several different designs, the homes are completely independent from existing grid connections and the modular building technique makes these homes suitable for differing living standards. Sustainer Homes offers three different designs that their customers can choose: a modular model which can be extended, an organic model and a mobile model, of which the mobile model has a shipping container as a basis. Thanks to this modular way of building the CO<sub>2</sub> emission of buildings can be lowered in the future.




COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

11 – 50



KEY WORDS

Sustainable construction, Energy reduction



WEBSITE

[www.sustainerhomes.nl](http://www.sustainerhomes.nl)

**DESCRIPTION**

**Tvilight's** mission is to contribute to the creation of sustainable and connected cities. The company supports this mission by offering best-in-class sensor lighting solutions that allow cutting down the energy costs and creating a livable and safe environment for urban citizens. Tvilight produces for example intelligent solutions for the adaptive control of street lighting. Through a unique combination of physical products and control/management software, Tvilight offers end-to-end solutions for the control and management of street lighting. municipalities and businesses can save up to 80% of energy costs, reduce maintenance costs by up to 50% and significantly reduce CO<sub>2</sub> emissions.


**COUNTRY**
**The Netherlands**

**FOUNDED**
**2012**

**EMPLOYEES**
**11 – 50**

**KEY WORDS**
**Street lighting, Software, Energy reduction**

**WEBSITE**
**[www.tvilight.com](http://www.tvilight.com)**



## DESCRIPTION

**Wellsun** optimizes the use of sunlight and improves the energy self-sufficiency of buildings. Its product the Lumiduct enables a full glass façade to generate more energy than conventional solar panels and at the same time creates a perfect indoor building climate. The Lumiduct has multiple functionalities it can perform simultaneously; generate solar power, regulate daylight, communicate through an integrated LED media display and track the sun. The Lumiduct creates a significant higher BREEAM score compared to alternative solar panels.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

1 – 10



KEY WORDS

Energy saving, Solar power, Healthy workspace



WEBSITE

[www.wellsun.nl](http://www.wellsun.nl)

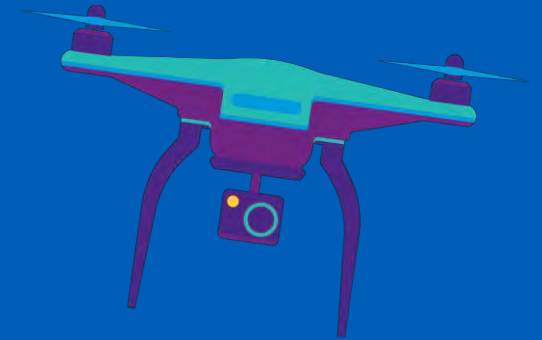




# VR & 3D Mapping

# 10

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. 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.





## DESCRIPTION

**BILDNG** analyzes the value of land. When managing a large real estate portfolio, the situation may exist that you do not have a clear overview of all your assets. With BILDNG's portfolio scan the company analyzes all your belongings and find lost ground. With its wind scan BILDNG tests the feasibility of a new wind project. By using data analysis and opportunity maps, BILDNG draws up a customized analysis for its customers. This increases the success rate of your project and saves you valuable time and energy for projects.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Real Estate portfolio, Data analysis, Opportunity maps



WEBSITE

[www.bildng.nl](http://www.bildng.nl)

## DESCRIPTION

**Bricks & Goggles** makes virtual reality useful for the real estate practice, by transforming construction designs into three dimensional images. This way, both potential clients and designers can walk around future developments as if they have already been built. Bricks & Goggles works with several devices: stand-alone smartphones, VR-devices using smartphones as a basis such as Google Cardboard and Oculus Rift. Due to processing power, Oculus Rift enables a completely unlimited experience, while smartphone VR apps enable visitors to look around on a predefined route.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Virtual Reality, 3D images, Construction designs



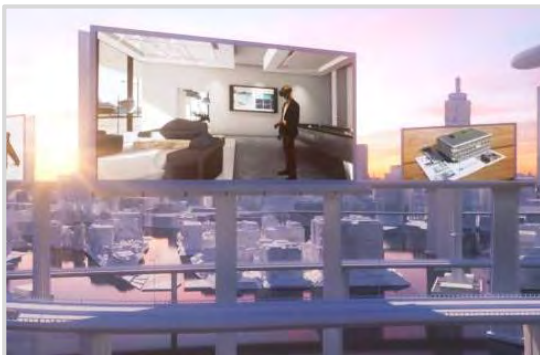
WEBSITE

[www.bricksandgoggles.com](http://www.bricksandgoggles.com)



## DESCRIPTION

**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. They see their job as to create reality; virtual reality, augmented reality, mixed reality, your own customised reality. 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.



COUNTRY

The Netherlands



FOUNDED

2011



EMPLOYEES

1 – 10



KEY WORDS

Virtual Reality, 360 photo/video, Digital experience



WEBSITE

[www.crozzroads.com](http://www.crozzroads.com)

## DESCRIPTION

**innobrix** is a leading online communication platform for the residential construction sector and consumers alike, transforming your BIM designs into interactive virtual homes and allowing residential construction professionals to optimally integrate the consumer in a newly improved construction process.



COUNTRY

The Netherlands



FOUNDED

2018



EMPLOYEES

11 – 50



KEY WORDS

Communication platform, Virtual reality, Building process, Augmented reality

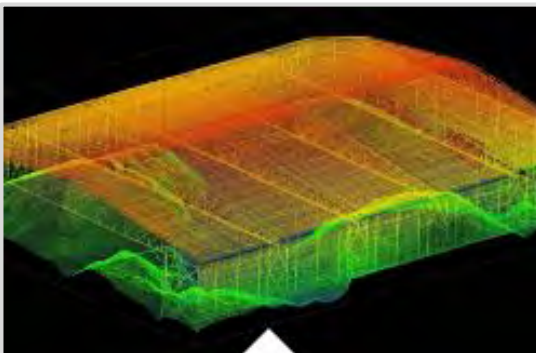


WEBSITE

[www.innobrix.nl](http://www.innobrix.nl)

## DESCRIPTION

In need for reliable 3D drawings or models of the existing situation? **Leap3D** provides a reliable as-built 3D BIM model. The company measures and models the existing situation in 3D so that you have an as-built 3D model of your building, factory, installation, ship or environment. Leap3D's strength lies in 3D laser scanning and modeling of existing situations (scan to BIM or scan2BIM) for the benefit of your projects. With this you realize a reduction in failure costs, reliable starting points and a shorter construction time.



COUNTRY

The Netherlands



FOUNDED

2013



EMPLOYEES

1 – 10



KEY WORDS

3D BIM model, As-built model, Shorter construction time

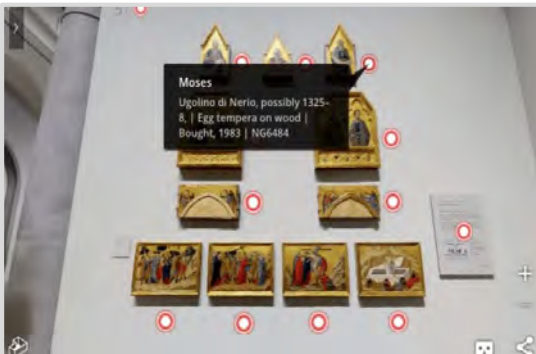


WEBSITE

[www.leap3d.eu](http://www.leap3d.eu)

## DESCRIPTION

**Matterport** has developed an end-to-end 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. Dollhouse view allows users to see a whole property at once while a switch to floorplan view provides a traditional top-down perspective.



COUNTRY

United States



FOUNDED

2011



EMPLOYEES

201 – 500



KEY WORDS

3D media platform, Real estate, Hospitality, Local scouting



WEBSITE

[www.matterport.com](http://www.matterport.com)



## DESCRIPTION

**Readaar** is in essence a Real Estate Radar. The startup specializes in datamining from aerial photographs, satellite imagery and LiDAR (Height information). For example, the company maps existing solar panels for grid operators and asbestos roofs for multiple governments. Among Readaar's customers are also insurance, construction, marketing and engineering companies. Readaar's methodology is often a cheaper and more efficient alternative for surveyors or inspectors of properties or large surfaces.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

11 – 50



KEY WORDS

Real Estate Radar, Datamining, Satellite imagery, LiDAR



WEBSITE

[www.readaar.com](http://www.readaar.com)

## DESCRIPTION

**Real5D** is an interactive 3D platform for viewing real estate. The company transforms 3D models into virtual spaces, giving clients an immersive space experience. Users of Real5D can personally show the virtual modelled space to clients, and can change the materials, textures according specific desires and make or close deals with clients. During the walk around in the virtual space - users can look around, speak and chat or invite clients to follow them in the model. In this way customers can get a realistic view of the property without being physically at the location.



COUNTRY

United States



FOUNDED

2012



EMPLOYEES

11 – 50



KEY WORDS

Virtual spaces, Interactive VR



WEBSITE

[www.real5d.com](http://www.real5d.com)

## DESCRIPTION

**Smart2VR** is the CMS platform to publish and distribute Virtual Reality content via your own VR app (iOS and Android), on your own website and on the Samsung Gear VR. Customers can share the experience in their own environment in order to share the experience with relations, family or friends.



COUNTRY

The Netherlands



FOUNDED

2014



EMPLOYEES

11 – 50



KEY WORDS

VR, Connectivity, App, Customer experience



WEBSITE

[www.smart2vr.com](http://www.smart2vr.com)

## DESCRIPTION

**Virtual Xperience** provides digital products and services enabling its users to explore and experience real estate in innovative and more efficient ways. Their first-person, interactive 3D renderings bring real estate professionals together with clients more frequently and efficiently to close more deals. Whether online or in the Oculus Rift, Virtual Xperience immerses users in new real estate experiences which are user-friendly, affordable, and challenge industry standards by delivering on the promise of virtual reality.



COUNTRY

United States



FOUNDED

2015



EMPLOYEES

11 – 50



KEY WORDS

Digital products and services, Interactive 3D renderings



WEBSITE

[www.virtual-xperience.com](http://www.virtual-xperience.com)

## DESCRIPTION

**ZXY-Builders** is a technology-based company that develops, integrates and operates small Unmanned Aerial Vehicles (UAVs or drones) for remote sensing applications. ZXY Cloud scans sites on a daily basis and sends the data to a secure cloud portal for immediate use. Their product can be used in construction, energy, utilities and governmental applications. ZXY-Builders believes that remote sensors will change the way companies monitor and maintain their industrial and construction complexes, infrastructure and water management systems. ZXY-Builders helps its clients to achieve their remote sensing goals in these different sectors.



COUNTRY

The Netherlands



FOUNDED

2015



EMPLOYEES

1 – 10



KEY WORDS

Drones, Gather data, Cloud portal, Smart Construction



WEBSITE

[www.zxy-builders.com](http://www.zxy-builders.com)









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