

DEMO

TRENDS



NEWSLETTER
MARCH 2018

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Olaf Terpstra, development project manager at Camelot Real Estate: "We are very enthusiastic about the cooperation with DEMO and proud to contribute to a tool which will provide insight to market parties whether renovation with strongly improved energy performance is a sustainable and affordable choice."

Renovation and transformation of real estate with P2ENDURE

'Camelot Real Estate', a specialist in the Netherlands in vacancy management, is involved as a partner in the P2ENDURE project and supplies one of the renovation demonstration cases. An abandoned education building from the 1960s on the campus of the University of Twente is 'as we speak' being transformed into a student hotel. Olaf Terpstra, project development manager, tells us that "Camelot is always looking for improvement and innovative solutions and therefore joined the DEMO initiative". For him, P2Endure is, "an excellent opportunity to exchange knowledge with the aim to limit energy consumption in our large-scale transformation projects as much as possible and to quickly assess whether an investment is profitable."

Within the P2ENDURE project DEMO develops a software tool for asset management which provides comparing different management strategies. Standard daily maintenance based on condition assessments or a traditional renovation with the aim of improving the energy performance or deep renovation in 'Plug & Play' style in which the energy performance is guaranteed to improve with a very short construction

time and the use of smart, prefabricated products. With a comparison of lifetime costs and cash flow calculations, the best option can be determined in advance. This tool makes it possible for parties such as Camelot and other building managers to make a good assessment at an early stage of whether renovation and transformation is interesting and feasible. ■



DEMO Consultants is an expert in Real Estate Information Management. DEMO's core business comprises strategic and technical consulting, software development, and applied research.

The cycle of the winter games

There are not many people left to whom the climate change is passing unnoticed. Of course there are still individuals who simply deny or ignore this fact. They place it in the category of so called Fake News. At DEMO, we investigate the impact of this 'Fake News' on Real Estate and, until proven otherwise, we do assume that the climate change is a fact.



PyeongChang 2018



Change is not by definition negative. In fact, it is the fuel of evolution, the basis of our existence. However, the challenge lies in employing change for the good. But how do changes actually occur, how can you initiate them and how can you make use of them? This is a process we are very much involved in at DEMO: making changes so that we can contribute something. We consciously look at what is happening in the world around us to be able to respond accordingly and to make improvements every time. With a somewhat strange, fashionable word, we call it the 'innovation cycle'. A contradiction in terms in itself ... Because what is innovative about a regularly recurring series, such as winter, spring, summer and autumn? When something regularly recurs it seems by definition not very innovative. And yet there is a cycle at DEMO that brings innovation. Our research department is led by new ideas,

concepts and techniques, driven by current developments. These are developed and shaped in international research projects. We include the results of these studies in experimental software and in consultancy concepts. By applying this together with our clients, we can solve real practical issues in a creative and innovative way. Once the added value has been demonstrated, we repeat this on a larger scale in consultancy projects and turn it into user-friendly and robust software tools. When subsequently more routine arises and a progressive insight occurs, this is the reason to put forward new ideas, formulate research questions and write research proposals. Et voilà, the innovative circle is closed.

Sometimes this cycle can be forced and sometimes it cannot, creativity cannot always be controlled. That is why it is important to

create the conditions in which creativity for new ideas can arise. And so, in line with our motto 'work hard, play hard', we will join winter games with a DEMO team this month. As long as the climate allows us, each year we will spend a long weekend skiing together in the snowy Alps. This is where the most beautiful and the best innovative ideas flourish. ■

André van Delft



Fire safety of the existing housing stock

Last June, London was shocked by a huge fire. The Grenfell tower caught fire and that fire eventually caused dozens of casualties. Such disasters induce that fire safety among property owners is higher on the agenda, but what is the state of fire safety in Dutch real estate actually?

It is not impossible for a situation similar to London to occur in the Netherlands, but the regulations in the Netherlands ensure an acceptable minimum level of fire safety. In order to have and to keep the buildings fireproof, the regulations must of course be complied with. That is why it is crucial for real estate owners to include fire safety in their policy. Naturally, the available budget plays a major role and it is essential to prioritize well because tackling all issues is often not feasible.

To support real estate owners and managers, DEMO has developed 'Fire scan', a software tool for the systematic fire safety assessments of residential and other buildings. The Fire scan enables weighing of perceived

shortages, prioritization and standardization of fire safety measures. The Fire scan is conducted digitally - possibly supplemented with explanatory notes or visual material - after which the data can be analysed in the office. This way the fire safety risks are described and clear reports are generated. Thereafter improvement measures are suggested, such as adapting a residential entrance or applying fire sleeves to implement a fire partition. We also use the tool ourselves in our consultancy projects to generate reports on fire safety with work descriptions for solving the shortcomings. We conduct such fire safety research for various property owners and help them to ensure that the total fire safety of their building complies with legislation. ■



WoON Energy module 2018



The Ministry of the Interior and Kingdom Relations (in Dutch BZK) (and its predecessors) have been conducting large-scale surveys and housing inspections for more than 30 years. The outcomes of these investigations form an important cornerstone in the policy information for our government. DEMO is currently involved in such a large-scale research into the energy efficiency of residential buildings.

From 1983 to 2000, the technical building condition and the energy quality of the housing stock were described every five to six years with the Qualitative Home Registration (in Dutch KWR), based on a sampling method. Apart from this KWR study, the living situation and housing requirements of residents were also monitored via the Housing Requirements Survey (in Dutch WBO), also on a sample basis. Since 2006, both studies have been integrated into the 'Woononderzoek Nederland' (WoON), which has been conducted every three years since then. WoON is used for knowledge development in the field of housing and building, in the process of policy development and for answering of parliamentary questions. The basis of this research is the Housing Market module. In addition, it has various follow-up modules, such as the Energy module and the Movement module.

At the beginning of 2018, the Ministry commissioned the implementation of a new module: the module Energy 2018. The project is divided into two parts. The party that implements the first part takes care of the execution of approximately 5000 home surveys. With the data collected during these home surveys, it is possible to calculate a (slightly simplified) energy index (EI, a measure for the energy efficiency of buildings linked to the energy label) for houses. The second part of this research concerns the quality control, i.e. the carrying out of control surveys and the feedback of observed deviations to the executing party so that they are able to adjust inspection methods. The quality assurance of the WoON Energy Module 2018 will be executed by Arcadis and DEMO. DEMO develops the software to support the control surveys and contributes to setting up the substantive quality assurance process. ■

BIM of church in Obergum

DEMO cooperates with SOGK (Foundation of Old Groninger Churches) in the framework of the EU project INCEPTION. SOGK has designated the Sint Nicolaas chapel, also known as the church of Obergum, as a demonstration case.

Cultural heritage is under pressure in Groningen due to the earthquake problems in that area. Earthquakes can damage monumental objects and in the worst case, in heavier earthquakes than we have seen so far, even result in (partial) collapse. It is therefore important to have a good idea of the materialisation, construction method and condition of the building in order to be able to repair in a responsible manner in the event of damage. In addition, when strengthening against heavier earthquakes is necessary, it must also be obvious what the weak spots are so that the necessary measures can be carried out efficiently and without affecting cultural values.

A 'Point Cloud Scan' of the church was recently made by one of the partners in the INCEPTION consortium. A BIM was subsequently generated using this scan. This BIM will now be used for planned maintenance of the church and the preparation of a multi-year maintenance planning. RE Maintenance, DEMO's software tool for maintenance planning based on condition assessment (NEN 2767), is used for this. The data from the BIM is directly imported into the software tool and provides the basis for the maintenance planning.

The BIM also forms the basis for the processing of relevant information for damage repair and reinforcement. The knowledge that DEMO has gained in advising parties responsible for the claims in the earthquake area enables us to anticipate in these processes in the right way. ■



Bits & Bytes



DEMO strongly believes in the application of open standards and has therefore become a member of **BuildingSmart**. In addition to participating in BuildingSmart, DEMO is represented in various Norm Committees of NEN.



DEMO has started a collaboration with ICOP in Rotterdam, who are better known as the inventors of **Brieffbuilder**. Together, both companies are working on the integration of this tool for requirements management and the RE Suite.



The EU project **Enginergy** is currently in its final phase. Within this research project we develop a toolset to improve the energy efficiency of the built environment.

The exchange of data and the tools is facilitated on an online expert platform (for example the Internet of Things and building management systems).



Since recently, **Mechteld Petersen** employs her expertise in the field of marketing and product commercialization at DEMO. From her own company Boost, Mechteld works for us as a strategic consultant in Enginergy.



DEMO contributes as an expert in the field of **BIM** to the **NEN 2660 committee**.

This committee has recently been revived in order to align the methodology of decomposition of building components with all new technologies and to unambiguously confirm the norm NEN 2660.



On April 8, a six-person **DEMO team** will appear at the start of the **quarter marathon in Rotterdam**. We applaud our sportive colleagues in their personal achievements and milestones and are proud that our company has so many healthy, enthusiastic employees.



DEMO sponsors the Leeuwenbergh **Hague Open Golf Tournament**. The fourth edition of this event will take place on Saturday 7 and Sunday 8 July 2018.

Challenging and interesting vacancies

DEMO is innovative, international, creative, resourceful, ambitious and growing fast. We have various vacancies at different levels. On our research, software and consultancy departments, some interesting new projects are coming up. Are you interested or do you know someone in your network who is?

Research

Senior Researcher / Project Manager
European Researcher for the Built Environment

Software

Senior .NET Team Leader
Innovative .NET developer

Advies

Technical inspector / consultant

(Graduation) internship

At DEMO we offer an internship or graduation position at HBO or academic level.

We also welcome open applications.



Renovation Rijnstate Arnhem hospital pharmacy supported by DEMO software

As we already reported in our latest newsletter, the Rijnstate hospital in Arnhem has chosen DEMO software: the RE Suite Design Configurator & Decision Support Tool (DC & DST). The Design Configurator (DC) generates a Building Information Model (BIM) of multiple design variants using artificial intelligence. These design alternatives are then compared in the Decision Support Tool (DST). In this way, it is possible to determine, at a very early stage in the design process, which building alternative provides the most optimal energy performance at the lowest investment.

The DC & DST software is used in the tender process for the renovation and reconstruction of the hospital pharmacy of the Rijnstate hospital. In this tendering process, three combinations of market parties were asked

to make a proposition, using the DC & DST software. To support the participants with their proposition, we have organized training workshops to familiarize them with the software, where we have received very enthusiastic responses.

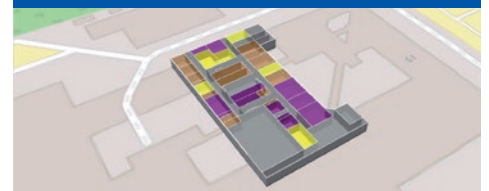
Now that the first phase of the tender is closed and a market combination has been chosen, we congratulate the tender consortium under the supervision of ClimaTech with the received contract! Now we're entering the next phase in which the plan of approach, with regard to the usage of the DC & DST, will be implemented.

We are very enthusiastic about the cooperation with (the team of) Willem-Jan Hanegraaf and Albert van der Beek from Rijnstate, but look forward even more to

the next phase; using the DC & DST to make structured and substantiated design decisions. We will support and advise both the tender consortium and Rijnstate. Onwards to a beautiful design! ■

Rijnstate has healthy ambitions. We have been pleased by the well thought-out and, at the same time very practical approach of DEMO and their software tools. It is good to have ambitions, but even better to be able to get started immediately.

*Willem-Jan Hanegraaf,
program manager renovation / head construction agency*



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