

# SUSTAINABILITY CHARTER



RENSON

Creating healthy spaces  
for a **sustainable world**

 **RENSON**<sup>®</sup>  
Creating healthy spaces

# CREATING HEALTHY SPACES FOR A **SUSTAINABLE** WORLD



## CIRCULAR ECONOMY FOR THE BUILDING INDUSTRY

- Improving the life cycle
- Facilitating adaptive usage
- Sharing data to avoid errors
- Optimization through data analysis

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## HEALTHY AND COMFORTABLE LIVING

- Meeting norms and standards
- An answer to changing needs and environments
- The input of internal & international experts
- Climate responsive product development

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## BEHIND THE SCENES

- People minded entrepreneurship
- Eco-friendly buildings and production area
- Maximal reuse, minimal waste

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## GUARDING THE EARTH THROUGH INNOVATION

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SUSTAINABLE  
DEVELOPMENT  
GOALS

# GLOBAL CHALLENGES

As Renson®, we want to make everyday life better. But for us, it even goes one step further. We don't just want everyone to live in harmony with nature, we also want to produce with respect for our ecological system. To strengthen this mission we support the UN's Sustainable Development Goals (SDG's). The SDG's are an action plan built around 17 main themes to make the world more sustainable by 2030. Three of them are of particular importance to our company.



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### GOOD HEALTH AND WELL-BEING

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Ensuring healthy lives and promoting the well-being for all at all ages is essential to sustainable development.

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### INDUSTRY, INNOVATION AND INFRASTRUCTURE

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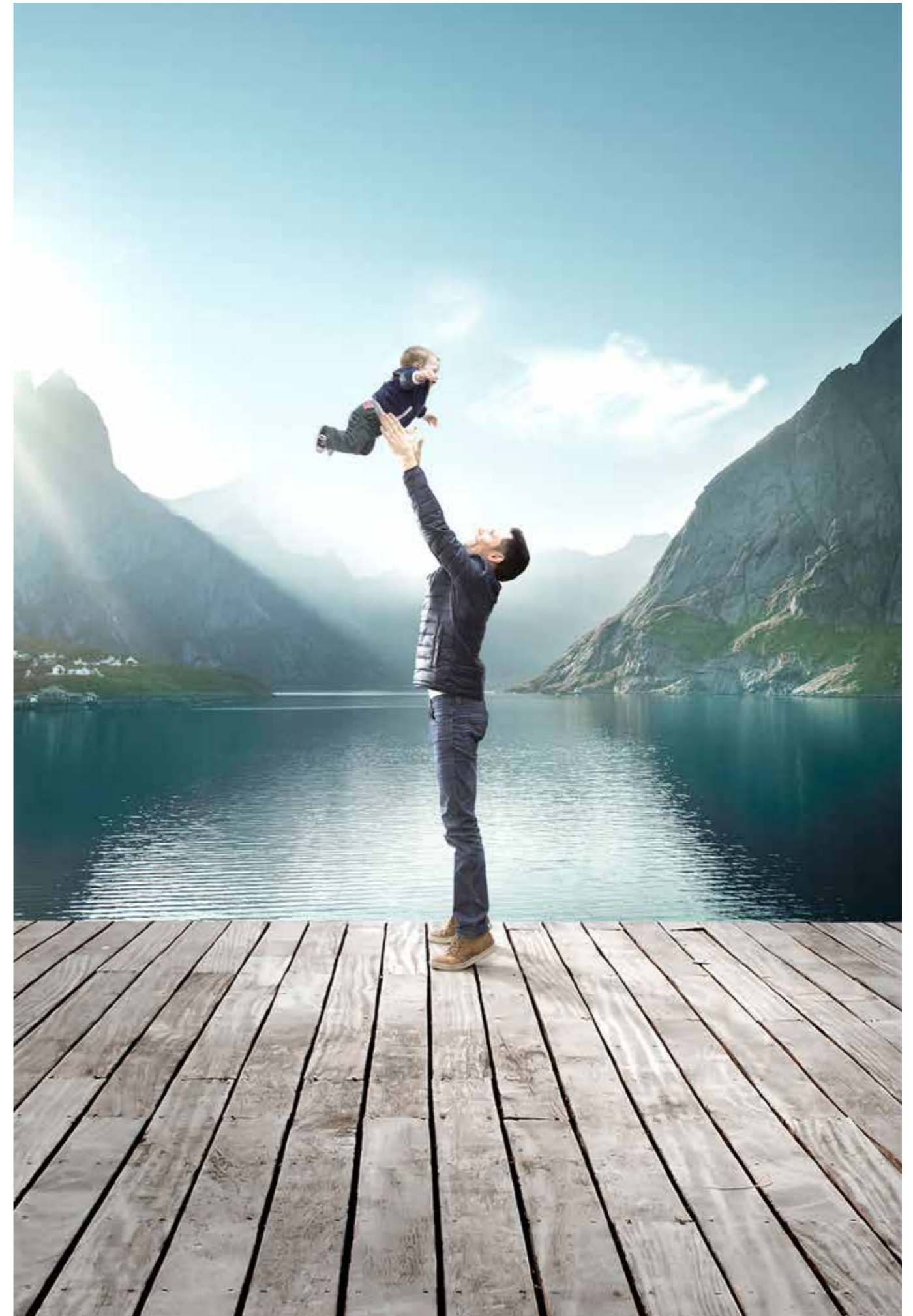
Investment in infrastructure and innovation are crucial drivers of economic growth and development. With over half the world population now living in cities, mass transport and renewable energy are becoming ever more important, as are the growth of new industries and information and communication technologies.

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### RESPONSIBLE CONSUMPTION AND PRODUCTION

### RESPONSIBLE CONSUMPTION AND PRODUCTION

Achieving economic growth and sustainable development requires that we urgently reduce our ecological footprint by changing the way we produce and consume goods and resources. The efficient management of our shared natural resources, and the way we dispose of toxic waste and pollutants, are important targets to achieve this goal.



# WHY WE DO, WHAT WE DO

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Renson® (re)connects humans to nature, in order to 'create healthy spaces'. It's our way to care about people and our magnificent planet. We offer sustainable total concepts that are ready to use in circular building projects, today and tomorrow. How? By using natural elements, such as daylight, fresh air and natural techniques, in an innovative way to make everyone feel comfortable and healthy. Indoors and outdoors. Since people are more and more digitally connected, connection to nature provides them balance.



VENTILATION



SUNPROTECTION



OUTDOOR



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## 72% MORE ENERGY TO AVOID OVERHEATING

Did you know that the energy used to cool buildings over the next 15 years in accordance with the EU will increase by 72%?

 **RENSON**  
ACTIVE IN OVER **72** COUNTRIES



### THE IMPORTANCE OF FRESH AIR

The best ventilation is natural ventilation. Not just for 5 or 15 minutes, but continuous ventilation.



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## WE NOW SPEND 90% OF OUR TIME INDOORS

Today, we spend on average 90% of our time indoors, while the indoor air quality can be 10 times worse than outdoors.

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## 1/3 EUROPEAN CHILDREN LIVE IN UNHEALTHY HOMES

Results show that 1 out of 3 European children, equal to over 26 million - or more than the entire population of Scandinavia, live in unhealthy homes

Source: Velux Healthy Homes Barometer



# HARMONY BETWEEN NATURE AND DESIGN

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To us the situation is clear. We must look for a new balance between fresh air, daylight and the right temperature.

**Creating an indoor experience that makes us feel good, that fits seamlessly with the outside, that almost feels like outside. That keeps us healthy, fit and active.**

Because we need to get in touch with nature again. In our way of life, work and how we relax. Breathing inside like we do outside and living outdoors to the fullest keeps us healthy, motivated and happy.

We use the assets of nature for your comfort by:

- Creating ventilation solutions using fresh outside air directly
- Combining nightcooling and sunprotection screens to prevent from overheating indoors
- Improving outdoor living comfort and possibilities, in every season and for all weather conditions



# CIRCULAR ECONOMY FOR THE BUILDING INDUSTRY

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In times when we are increasingly reaching the limits of our planet, circular building is no longer just a buzz word. It's a necessity to optimize the life cycle of building materials and the adaptive nature of the used products. Two things we value highly and focus on during the R&D of our new ventilation, sun protection and outdoor living solutions. Besides that, we increasingly focus on sharing and analyzing data to contribute to a circular economy.

# IMPROVING THE LIFE CYCLE

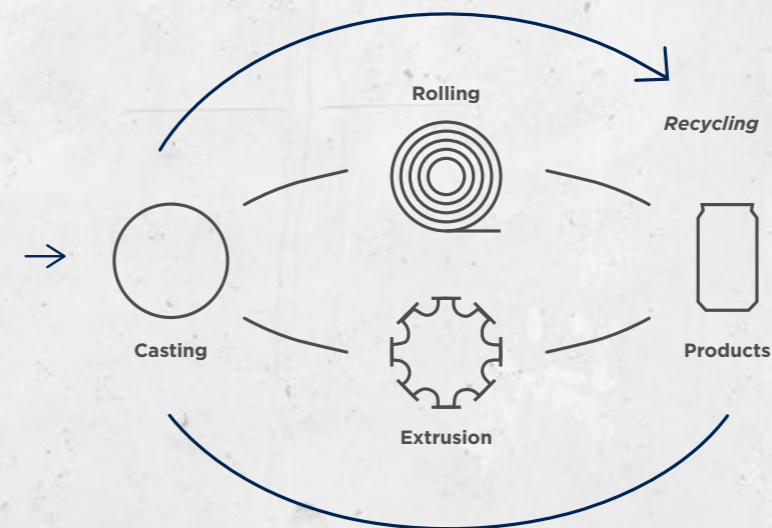
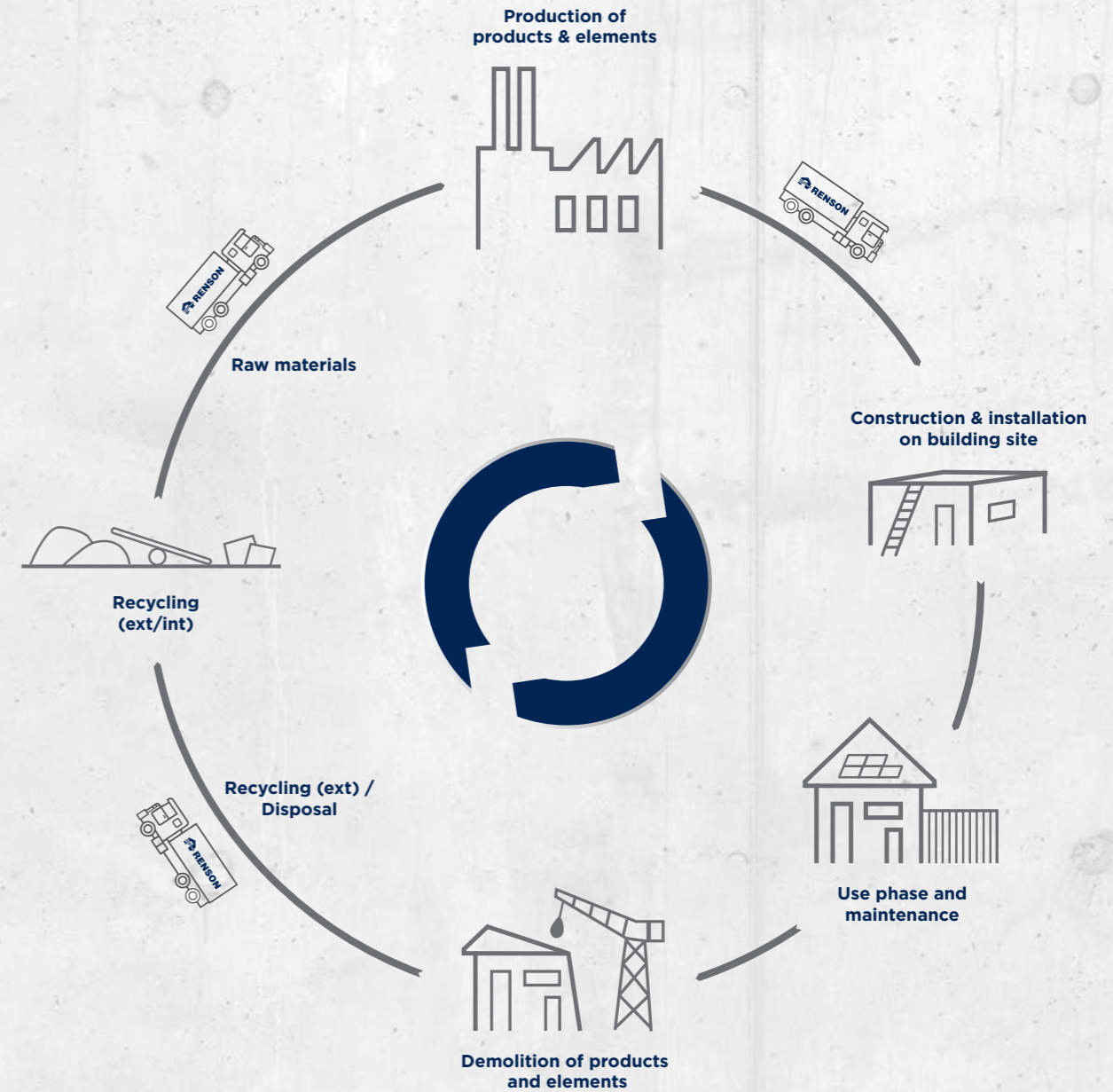
The life cycle of a building exceeds the actual use of this building. It also includes the design, construction, operation, demolition and waste treatment of all the construction materials. During our development trajectory we explicitly take this complete life cycle into account.

## THE LIFE CYCLE OF A BUILDING

Eco production, well thought out waste management and re-use are at the heart of our circular efforts. We make sure the building components we develop and manufacture at Renson® are maximally made of low-value by-products or waste materials. We use components, harmless to the environment or humans during their use, reuse or recycling. And we focus on a design and installation that makes our components easy to reach and recover without much effort or damage once they are in use.

## THE ALUMINUM LIFE CYCLE

Our biggest asset? Aluminum. It's the prime material for our products. It has a life cycle that few other metals can compete with. It is resistant to corrosion and can be recycled, over and over again. It can be reshaped and repurposed to meet the needs and challenges of different times and products, making it a first class circular building material.





# FACILITATING ADAPTIVE USAGE

Every element in a building should be able to evolve at any time in order to keep up with possible changing destinations of that building. That's why adaptiveness and flexibility is key for each of the products and concepts we develop. How do we make this happen? By approaching every new design from different angles, aiming for the best result. Take a look at these 5 examples:

## 1. TERRACE COVERINGS: DESIGNED FOR REPEATED DISASSEMBLY

Our terrace covers are probably the best example of how we develop each of our products to be able to repeatedly disassemble them or add extra features afterwards, always preferring clickable or screwable connections rather than glued ones. First the basic construction is installed. Afterwards extra add-ons can be added, an integrated Fixscreen for instance is seamlessly integrated in the existing structure.



## 2. FIXSCREEN TESTED INTENSIVELY FOR LONG EXPECTED SERVICE

Renson® Fixscreens are tested in a wind tunnel at really high wind speeds. Up till 200 km/h no irreparable damage occurs. By performing durability tests conform CE - certification and beyond - we can give the best product warranties on the market. On top of the official standards we perform additional tests of which experience learned us that they are a good indicator for delivering qualitative products.



## 3. INVISIVENT WINDOW VENT: MINIMUM CLEANING AND MAINTENANCE

The inner grill of the Invisivent air inlet can be removed. In that way the inner parts can be cleaned easily with a vacuum cleaner and/or a damp cloth. This shows how we go for minimal and easy cleaning or maintaining for our solutions. Luckily aluminum as well is just the right material to do so. A damp cloth, a non-abrasive cleaner and a good rinse with water afterwards.

#### 4. DURABLE LOUVRES FOR NATURAL VENTILATION

Renson® louvres are designed to match building elements and architecture. They fulfill technical demands, while also supporting a valuable overall design. That's how we contribute to durable construction projects with the help of natural elements. Renson® louvres come in many varieties, making them the ideal solution for night cooling or intensive natural ventilation. Robust detailing, burglary, water and insect resistance and perfect integration are key to make it work!



#### 5. HEALTHBOX 3.0: PLUG-AND-PLAY & MULTI-PURPOSE VENTILATION SYSTEM

Our Healthbox 3.0 ventilation system is a perfect example of a future-proof plug & play system, easy to use and to install thanks to the smart design. On top of that, this ventilation unit perfectly illustrates its multiple use since the selected/installed technology is not determining the future design/use.



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**CASE STUDY**

**Flexible in demountable house**

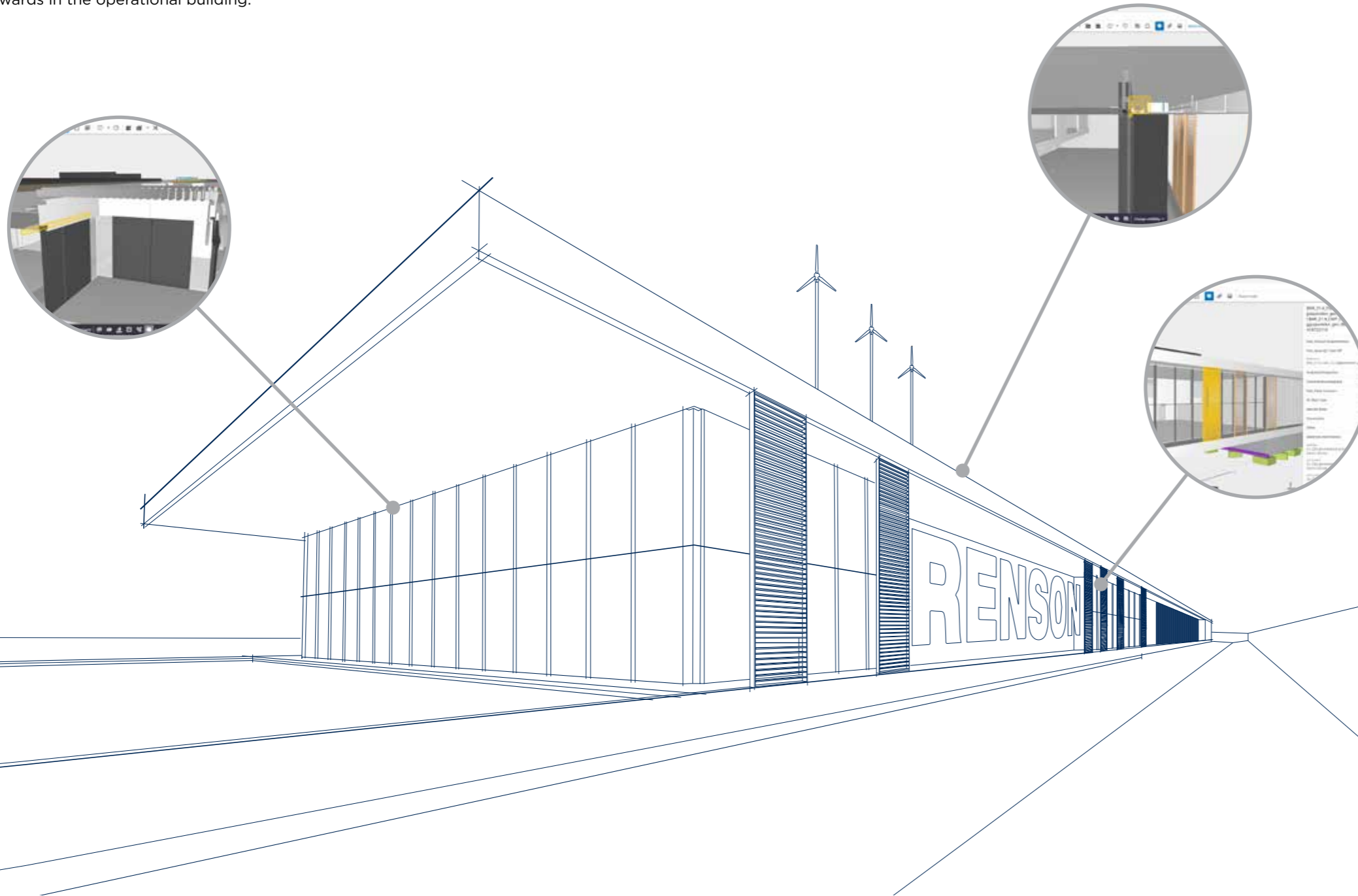
Erik Grootcholte is enthusiastic about his new home in Amsterdam (the Netherlands). And with him also the other residents of CiWoCo, which stands for 'Circulair Woonwerk Complex'. Prefabricated concrete casco's, a strict separation of construction and installations and free floor plans: CiWoCo's houses can be arranged and adapted very flexibly. And are therefore almost completely demountable.

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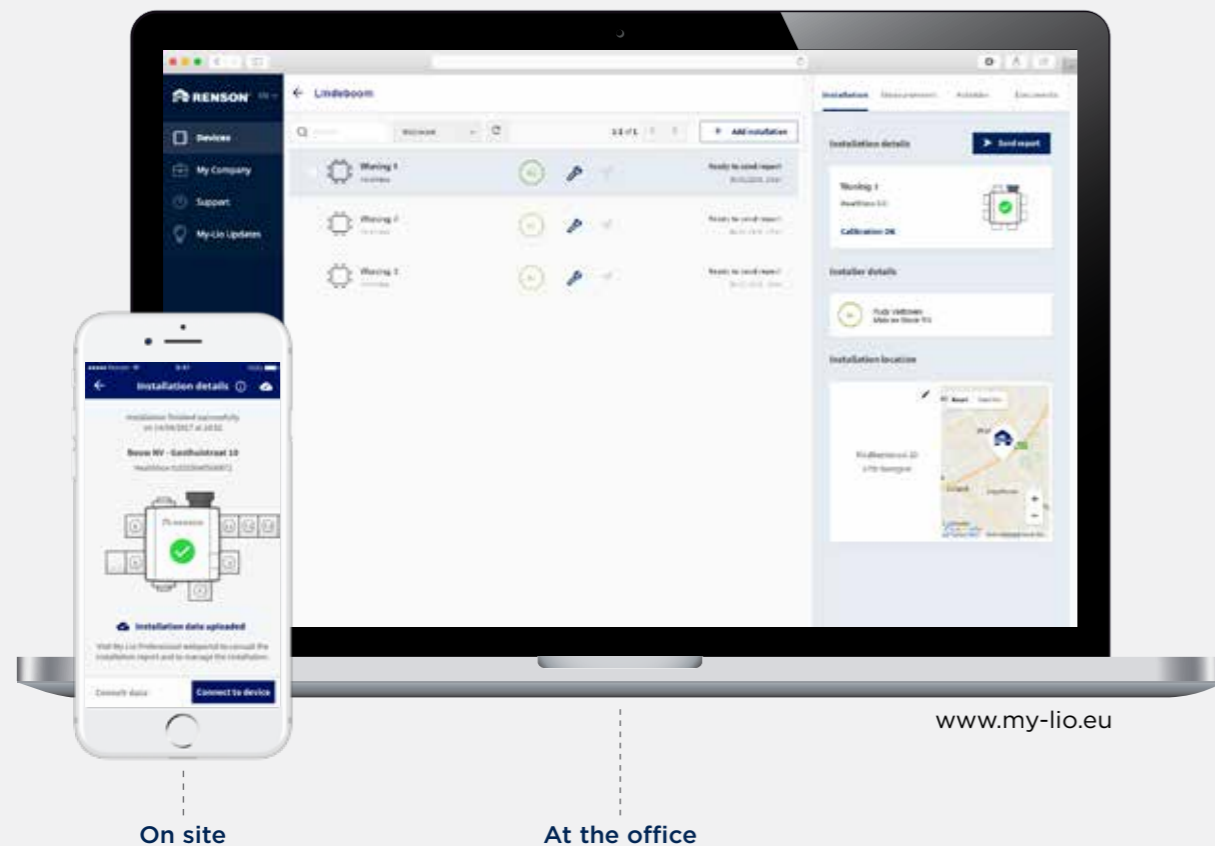
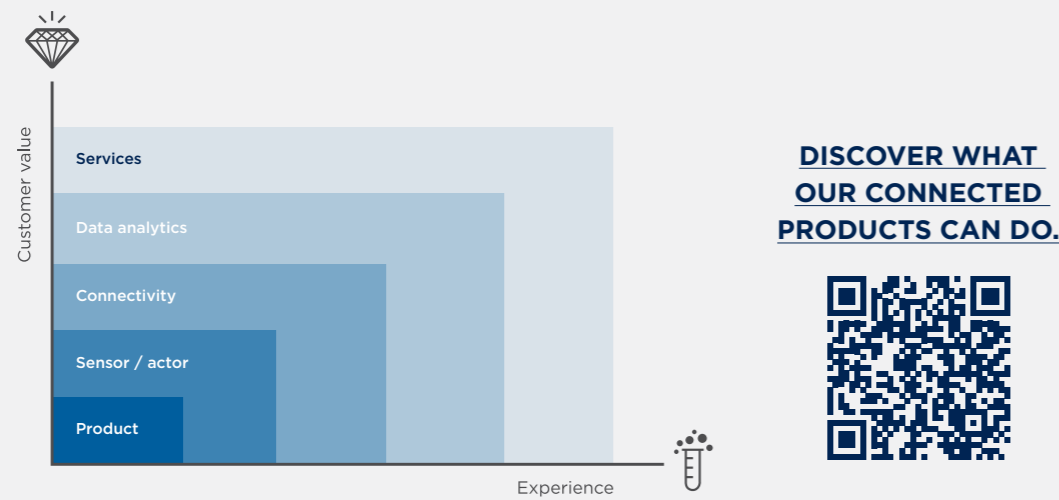
## SHARING DATA TO AVOID ERRORS

Renson® provides data through BIM to all stakeholders in the building industry. With BIM, users create digital representations of physical places and objects and share those designs for collaboration. This is how we contribute to use less materials because less mistakes will be made, so there will be less waste. On top of that, BIM aims for a more effective and productive building process. This reduces the energy consumption during construction and afterwards in the operational building.



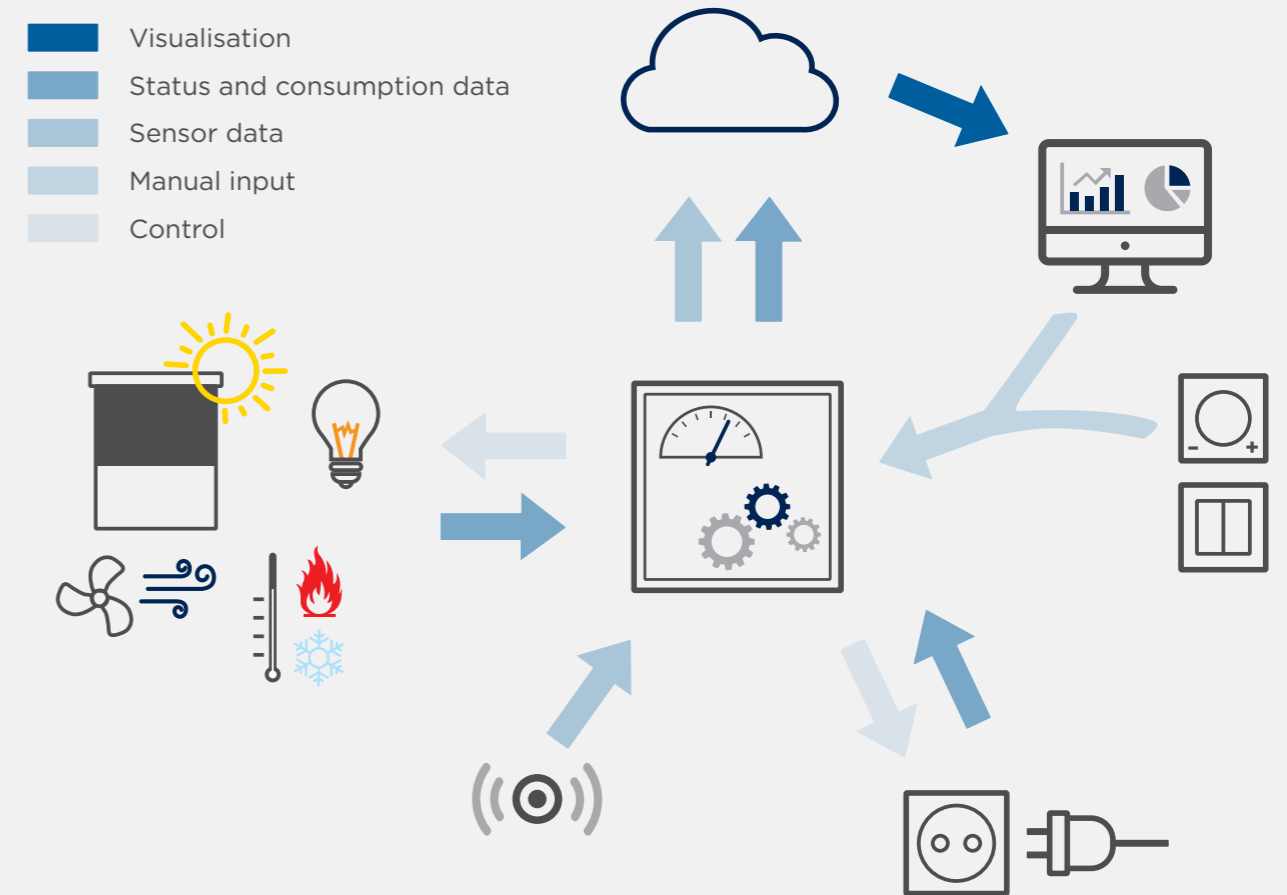
# OPTIMIZATION THROUGH DATA ANALYSIS

Instead of the current sales models, that are mainly based on the one time purchase of a product, we support a long term engagement of the user with our innovations. For over 10 years, Renson®'s baseline has been 'creating healthy spaces', meaning we are in it for the long run. We keep the total life cycle cost as low as possible by developing qualitative, low maintenance products. On top of that, Renson® is making its products connected in order to facilitate data gathering and analysis. This information is a catalyst in creating new business models and services that add value to the total life cycle of buildings.



## OpenMotics

**OpenMotics**, as a part of the Renson® group, not only monitors our own devices for healthy living but also other smart devices in buildings. It enables optimizing the energy consumption and comfort experience. Thus relieving pressure from our ecosystem and helping the residents or employees to upgrade their comfort level.



Renson®'s connected products enable a **lower energy consumption** and **better comfort** while sensibilizing people to realize healthy spaces

# HEALTHY AND COMFORTABLE LIVING

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A sustainable way of developing and producing building solutions should never be a reason for compromising on anyone's health and living comfort. On the contrary. By creating smart and innovative products we make the best possible use of what nature offers us to improve our indoor (and outdoor) places. Digging into renewable and inexhaustible elements like wind and sun, we use less energy and limited raw materials. It is how we lower our ecological footprint, yet still meet our goal: creating healthy spaces, for today and tomorrow.

Renson® builds on over a century of dedication. In doing so, we notice the everchanging needs of people, connected to their way of living. In short, there are 4 main principles for every R&D-process:

- Meeting international norms and standards.
- Providing an answer to changing needs and environments.
- Input of internal and international experts
- Climate responsive product development

**CURIOS TO KNOW MORE? LET'S DIG IN!**

HEALTHY AND COMFORTABLE LIVING

## MEETING NORMS AND STANDARDS

Every Renson® product is designed with close attention to the applicable European and international standards. We review every new product closely in our own testing lab. It's the only way we can assure that we meet, and exceed, these ISO- and CEN-standards.

Next to the ever changing standardization we keep a close eye on the European legislation. This has a huge and growing impact on the product portfolio of Renson®. Some of the most important legislations our products must comply with are the eco-design directive (2009/125/EC) and the energy performance of building directive (2010/31/EU).

HEALTHY AND COMFORTABLE LIVING

## AN ANSWER TO CHANGING NEEDS AND ENVIRONMENTS

At Renson®, innovation never stops. That makes sense in a world that is evolving at a high pace. Once upon a time - not even so long ago, when you consider the historical timeline - we all lived in and with nature. In the open air, enjoying the sunshine, wind and water. Being outside still gives us a sense of freedom and well-being. However, today we spend most of our time inside our homes, offices, schools, trains and busses.



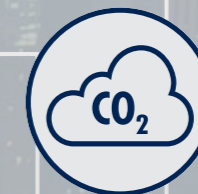
# WE NOW SPEND 90% OF OUR TIME INDOORS

Today, we spend on average 90% of our time indoors, while the indoor air quality can be 10 times worse than outdoors.

Besides that, it is clear that temperatures have risen due to climate change. We feel the effects of the sun more often. It becomes unbearably hot inside. We also measure high concentrations of CO<sub>2</sub> in our buildings, and the level of harmful substances in buildings is increasing. Because while the improved insulation is good for energy saving, it's less beneficial for our health inside our houses of the comfort is not good.



10 TIMES  
WORSE



HIGH CO<sub>2</sub>  
LEVELS



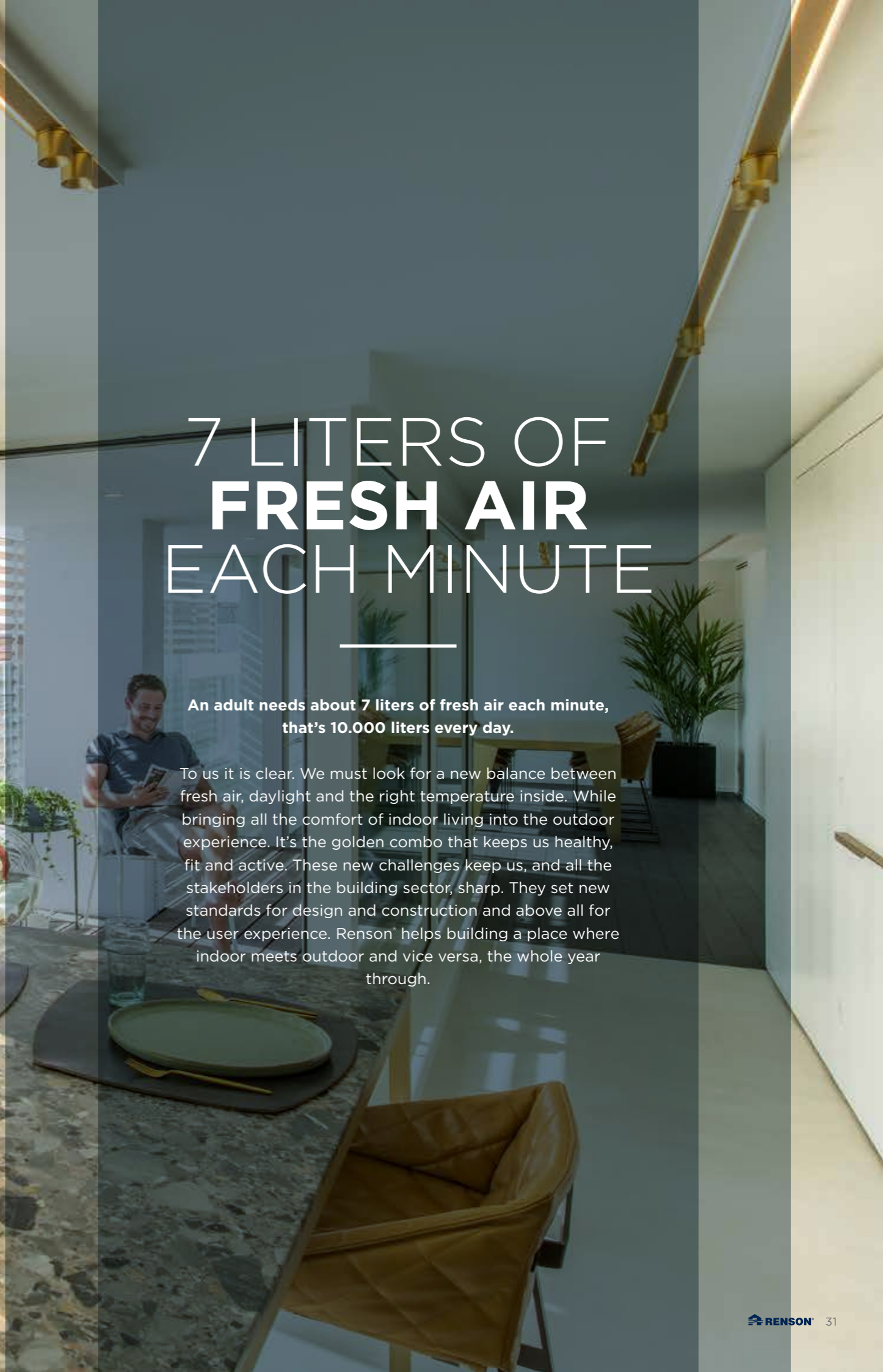
IMPROVING  
**HEALTH &  
WELL-BEING**



# 7 LITERS OF **FRESH AIR** EACH MINUTE

**An adult needs about 7 liters of fresh air each minute,  
that's 10.000 liters every day.**

To us it is clear. We must look for a new balance between fresh air, daylight and the right temperature inside. While bringing all the comfort of indoor living into the outdoor experience. It's the golden combo that keeps us healthy, fit and active. These new challenges keep us, and all the stakeholders in the building sector, sharp. They set new standards for design and construction and above all for the user experience. Renson® helps building a place where indoor meets outdoor and vice versa, the whole year through.







### CASE STUDY

#### Natural ventilation and blinds: the key to a healthy and comfortable indoor climate

“We were charmed by the cleverness of a C+ ventilation system which ventilates perfectly according to the amount of fresh air you need inside,” the residents of a newly built house in Ostend (Belgium) testify. “So you always have fresh air indoors, but at the same time you never take in more (colder) air than necessary. Moreover, with the sunprotection screens down all day in warm periods, the indoor temperature always remains pleasant”.



## HEALTHY AND COMFORTABLE LIVING


# THE INPUT OF INTERNAL & INTERNATIONAL EXPERTS

We highly value our in-house experts; they power the extensive R&D department at Renson®. They continuously put the latest trends into innovative solutions. In order to keep up with these trends, Renson® is close to the market. We do that by:

- Listening to clients and the challenges they are facing
- Having a good knowledge of the current product range on the market
- Following social networks to tap into (future) client expectations



Besides, Renson® has built a strong professional network throughout the years. We collaborate intensively with universities and (inter)national research institutes, and with other manufacturers worldwide. It is our way to make sure we are always up to date. By keeping up with the newest studies, technology and materials we offer innovative solutions with maximal efficiency and sustainability. And thanks to 'open innovation' we come up with solutions for crossroad markets.

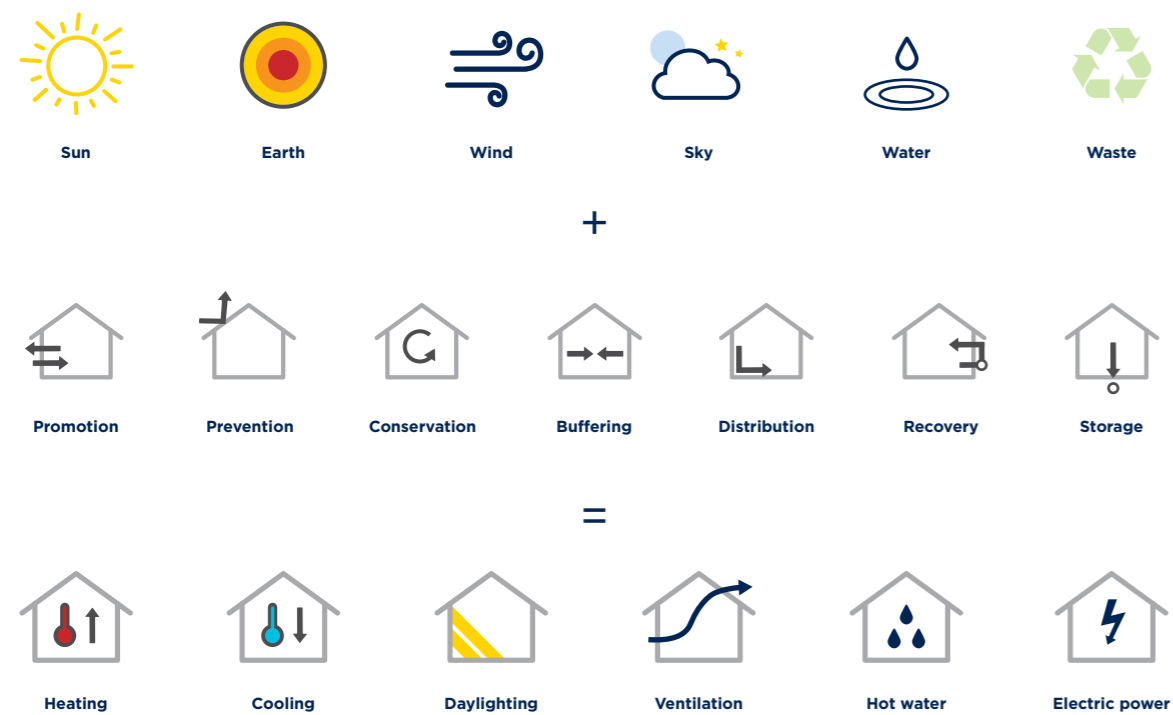


THE HEATING  
DEMAND  
**GRADUALLY  
SHIFTS**  
TOWARDS  
A COOLING  
DEMAND

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# CLIMATE RESPONSIVE PRODUCT DEVELOPMENT

Let it be clear: at Renson® there is no speed limit on innovation. However we always keep a climate responsive product development in mind. Renson® products are designed to maximally harvest natural energy sources to minimize the additional power needed. Without neglecting the health and comfort for the inhabitants of the buildings, of course.



We use natural energy sources and innovative techniques to create healthy spaces: bioclimatic architecture

For instance, let's zoom in on advanced ventilation systems. The heating demand in buildings gradually shifts towards a higher cooling demand due to the warm up of the climate. Therefore, passive measures as solar protection or renewable natural ventilative cooling solutions, as offered by Renson®, are crucial to limit cooling consumption and GHG emissions.



By now, it should be clear that we strive to develop products that contribute to a sustainable future, without compromising on comfort and health, indoors and outdoors. But as with every true passion, it intertwines our DNA and our whole workflow. Our social responsibility can be seen in our HR-policy, our patrimony and our waste management.

## BEHIND THE SCENES

# PEOPLE MINDED ENTREPRENEURSHIP

Entrepreneurship is what keeps us going at Renson®. Our people and their skills are the foundation of our innovative work. Our employees are proud to contribute to the creation of healthy spaces. That makes us happy. As a thank you, we try to offer them the best possible work environment. Everything to boost their well-being. Most of all, we like to give our people growing opportunities. They get the chance to develop their skills and their personality. This makes them experts in their job. It helps them withstand changing environments, without big adjustment issues. A solid base for a long career at Renson®.



## BEHIND THE SCENES

# ECO-FRIENDLY BUILDINGS AND PRODUCTION AREA

Practice what you preach. That's why we build our own sites according to the healthy building concept, a total concept based on natural and sustainable systems to provide ventilation, natural cooling and comfort. Renson® products are designed to maximally harvest natural energy sources to minimize the additional power needed. Smartly designed nightcooling, blades, sunprotection screens and passive ventilations are Rensons ways to do so.

We don't just talk the talk, we walk the walk and show you how it's done. At the Renson® HQ in Waregem and of course at our newbuilt Renson® Outdoor-site in Kruisem, both situated in Belgium. Here you get to experience the perks of our solutions in a real life environment.

The offices and production facilities in Waregem are CO<sub>2</sub>-neutral on the level of electricity use. The roofs are equipped with over 15.000m<sup>2</sup> solar panels with a total capacity of almost 3.325 kWp, the total annual electricity consumption of about 1.000 families. The integrated ventilation and sun protection systems deliver a good indoor air quality, a comfortable temperature and an energy-saving natural cooling of the offices and production areas. It's a prime example of our healthy building concept during already 20 years!



BEHIND THE SCENES

# A UNIQUE OUTDOOR EXPERIENCE CENTER

With our new site in Kruisem - Renson® Outdoor - we go the extra mile. This building is taking shape as a supersized garden pavilion, next to one of the main European motorways. With a green approach, both literally and figuratively: its 380-meter-long façade, constructed with natural elements and solutions from the Renson® outdoor living range, conceals a zero-energy-impact project. The building orientation and layout is tailored to minimize the energy demand. The remaining active heating and cooling are powered by Borehole Thermal Energy Storage (BTES), combined with a heat pump.

## 70% LESS ENERGY & CO<sub>2</sub>-EMISSIONS



The Renson® Headquarter is about 70% less energy and CO<sub>2</sub>-emissions than standard offices or production areas



## ZERO-ENERGY-IMPACT PROJECT



But there's more because behind that façade is a 'zero-energy-impact' project of 100,000 m<sup>2</sup>, with the most sustainable, cutting-edge heating and cooling technology. The site is even self-sustaining in terms of water and energy consumption, and is equipped with natural solutions for healthy, comfortable living and working.



## AUTOMATED HIGH-RISE 26M

The production flow from the automated high-rise (26 m high) and the aorta are the starting point for the design of the new production site. Customization is Renson®'s focus for the future: by making this operationally standardised, we can set ourselves even further apart from the competition. 'Standardization is customisation.'



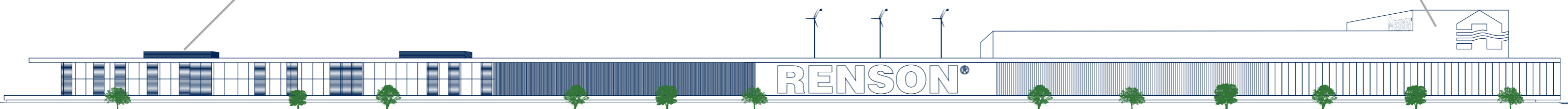
### LUC BINST (BINST ARCHITECTS):

"The motorways of tomorrow are the 'backbones' of new urban development, statements, landmarks, and line marks. The architecture of the Outdoor Experience Center fits into this picture perfectly as a 380-metre-long pavilion and billboard for Renson® along the E17 motorway."



380 METER LONG FAÇADE

AUTOMATED HIGH-RISE 26 M



## MAXIMAL REUSE, MINIMAL WASTE

When it comes to transport, we avoid unnecessary transport in and between sites. We use reusable container racks to transport semi-finished products to and from our site. We also have a worldwide partner network for local sales and fabrication of our end products.

By equipping our offices and production sites with state of the art machinery and technology we go for minimal residual waste. The remaining waste from our offices and from the production are collected separately, sorted and recycled as much as possible.

With water being a huge part of our production resources, we worked out a solution for minimal water waste. We have our own water treatment plant on site. It transforms waste water in surface discharge water, that is more clear than rainwater. In the new production facility in Kruisem we go even further by maximally reusing the production waste water. It is pumped to a neutralization reactor, which separates it into a concentrate and a distillate. The concentrate goes to the before mentioned water treatment plant, the distillate is collected in a water tank and reused in the production chain, for instance as rinse water.





# GUARDING THE EARTH THROUGH INNOVATION

In the next years, decades and centuries we'll keep monitoring our production and solutions. The world changes at a flying pace, as does our way of living. Renson® follows with innovative, circular products to add comfort and health to our houses and indoor climate. All this while respecting the environment and the challenges it presents.

**We keep creating healthy spaces in sustainable ways.  
Now and in the future.**

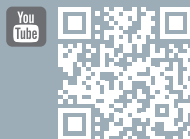
**GUARDING THE EARTH THROUGH  
INNOVATION, ARE YOU IN?**



With our ventilation, sun protection and outdoor solutions we enable Architects, Project Developers and Investors to design spaces that will soon feel just as pleasant as a refreshing walk through the forest. That is Renson's promise.

### Creating healthy spaces

Experience the future of Renson®:



Software & hardware platform for automating a house, building or community



Parcelbox



Offers a wide range of door hardware

For more information and online tools:  
[www.renson.eu](http://www.renson.eu)