



# Profitability Sustainability through Solar, Cutting-Edge Automation and BREEAM Standards

*Philippe Witsiers*  
*Director Business*  
*Development,*  
*Kloosterboer*

**Kloosterboer**



**21ST EUROPEAN  
COLD CHAIN CONFERENCE**  
14-16 MARCH 2018 | ANTWERP  
*Global Cold Chain Alliance*



# Kloosterboer

*Leading in temperature controlled logistics*

## Sustainability

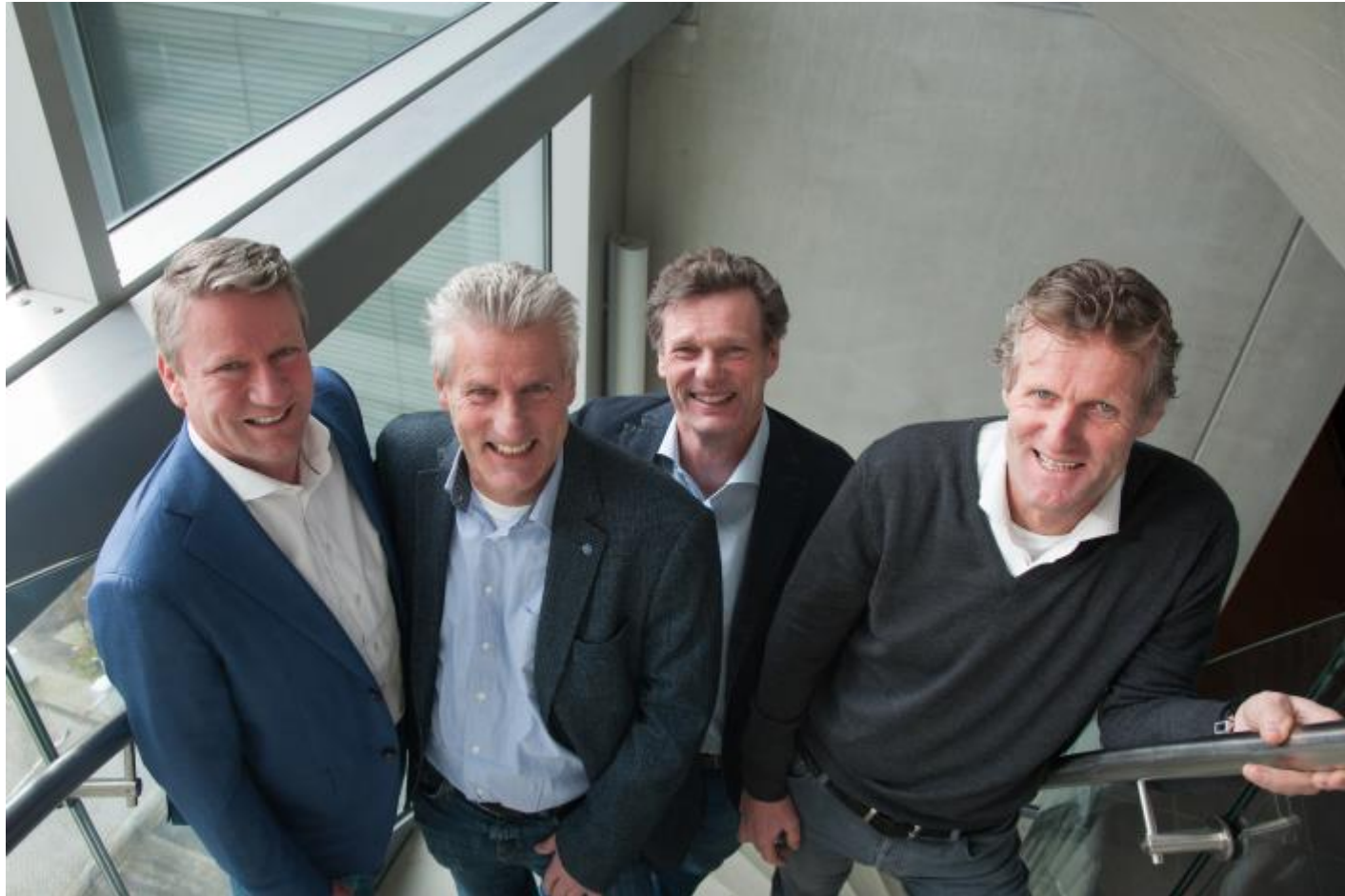
Global Cold Chain Alliance  
European Conference  
15 march 2018

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# Kloosterboer family



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# Sustainability: Definition

## Definition:

- ❄ « Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs ».



# United Nations development goals



**SUSTAINABLE DEVELOPMENT GOALS**

17 GOALS TO TRANSFORM OUR WORLD

<b>1</b> NO POVERTY 	<b>2</b> ZERO HUNGER 	<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>4</b> QUALITY EDUCATION 	<b>5</b> GENDER EQUALITY 	<b>6</b> CLEAN WATER AND SANITATION 
<b>7</b> AFFORDABLE AND CLEAN ENERGY 	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<b>10</b> REDUCED INEQUALITIES 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 
<b>13</b> CLIMATE ACTION 	<b>14</b> LIFE BELOW WATER 	<b>15</b> LIFE ON LAND 	<b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS 	<b>17</b> PARTNERSHIPS FOR THE GOALS 	 <b>SUSTAINABLE DEVELOPMENT GOALS</b>



# Value of People Development

WWW.SNOOPY.COM

"Sometimes the most ordinary things could be made extraordinary, simply by doing them with the right people."

Elizabeth Green



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# Planet: we take care for the environment



**Transportation**  
Modal shift  
Energy-efficient

**Development of best-in-class green warehouses**

Automated High Bay Cold stores: 37-45% reduction in energy consumption and carbon emissions

Sustainability important in investment decisions

Certifications (e.g. BREEAM)

Upgrading efficiency of existing warehouses

wind turbines on site

Use of solar panels





# Wind turbines

## GENERATED ENERGY TO BE USED FOR REFRIGERATION INSTALLATIONS

4 Wind turbines on site Vlissingen

Capacity per wind turbine:  
4,000 MWh per year; equal to  
consumption of 1,250 households

Savings per wind turbine:  
7,320 tonnes of CO<sub>2</sub> per year.  
Total saving over the lifespan approx.  
34,900 tonnes CO<sub>2</sub>



# Roof solar panels

GENERATED ENERGY TO BE USED FOR REFRIGERATION INSTALLATIONS

Capacity 430,000 Kwh per year; equal to consumption of 130 households

1800 solar panels in total, saving 140 tonnes of CO2 per year



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# 35% CO2 Saving in 5 Years



# What is BREEAM?

\* BREEAM scores consists of variable sustainability categories with each its own weighing:

- \* Management 12%      Transport 8%      Waste 7,5%
- \* Health 15%      Water 6%      Use of land and ecology 10%
- \* Energy 19%      Materials 12,5%      Pollution 10%

<10%	<b>UNCLASSIFIED</b>	-
>10%	<b>ACCEPTABLE</b>	★☆☆☆☆
>25%	<b>PASS</b>	★★☆☆☆
>40%	<b>GOOD</b>	★★★☆☆
>55%	<b>VERY GOOD</b>	★★★★☆
>70%	<b>EXCELLENT</b>	★★★★☆
>85%	<b>OUTSTANDING</b>	★★★★★



# BREEAM in practice

**Some of the sustainable measurements we implemented to obtain the BREEAM Award:**

- ❄ Rain water is stored in underground tank for toilet purposes
- ❄ Waterless urinal
- ❄ Extra windows, triple glass, skylights
- ❄ Detailed insight in energy usage of building
- ❄ Internal ventilation system
- ❄ Energy efficient lighting insight and outside (LED, DALI)
- ❄ Charging points electric vehicles at every Kloosterboer site





# Kloosterboer Velsen

Energy Neutral because of 2500 solar panels

BREEAM “outstanding” : 1st in Europe to receive highest BREEAM certification.

Expansion of 15,000m2 and adaptation of existing coldstore



# Kloosterboer Velsen

Winner of EZK Energy Award by Dutch Government



# Kloosterboer Cool Port

Underway for BREEAM “outstanding” as well.

Significant savings through ‘modal shift’ from road (trucks) to barge (water)

Simplifying the total supply chain

Less transport through consolidation.

Adjusted opening hours and working 2 shifts



5,000,000 KG CO2 REDUCTION PER ANNUM

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# Kloosterboer Lelystad

Set up direct connection with own wind turbine through which energy can be buffered

Research for driverless electronic truck transport between customer's site and Kloosterboer cold store.



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