

# CO<sub>2</sub> Performance Ladder Progress Report

**VenhoevenCS**  
architecture+urbanism

**Year**  
**Period**

**2020**  
**Q1 – Q4**

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# CO<sub>2</sub> management system

*Continuous improvement* of insight and CO2 reduction measures regarding:

1. Our operations
2. Our projects
3. In our value chain

Additional requirements for

1. Communication – letting other know what you do
2. Participation - influencing

# Scope Definitions

## Scope 1

### **Direct emissions inside the company**

use of gas for heating the office

## Scope 2

### **Indirect emissions inside the company**

through purchased energy e.g. electricity use in the office and mobility for business activities

## Scope 3

### **Indirect emissions in the value chain**

*Upstream*

commuter mobility, use of paper, mobility by suppliers (e.g. cleaning, waste, all kinds of deliveries) and

*Downstream*

emissions made by subcontractors

## Scope 3

### **Value chain analysis and initiative**

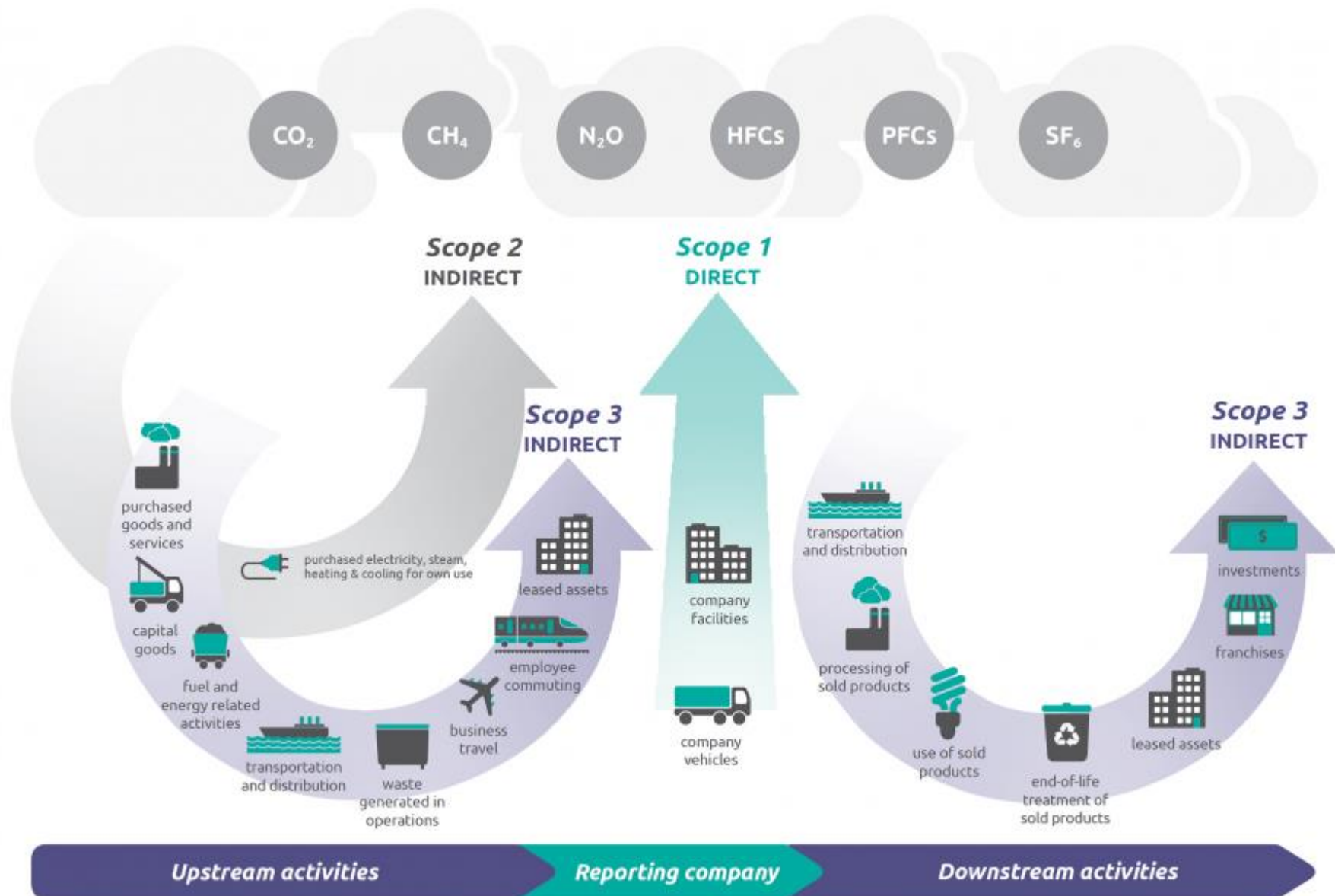
*Analysis*

the analysis of CO<sub>2</sub> emissions in one of the value chains we are active in

*Initiative*

a planned approach to realize a pre-determined reduction objective in the values chain on the basis of the analysis, together with the partners in the value chain

# Scope Definitions



# Value chain initiative

This year, we have created a new chain analysis and set goals for the next 6 years.

## Shadow costs of building elements

We have the ambition to design with shadow costs. We would like to show our clients and project partners the CO<sub>2</sub> repercussions of choices that are made regarding the material of building elements.

2020	2021	2022	2023	2024	2025	
0%	25%	50%	50%	75%	90%	of projects*)
1	1	1	2	2	3	primary building elements**)

\*) With a project, we mean a Dutch architectural project that will be built (no studies or urban planning)

\*\*\*) With primary building elements, we mean supporting structure, floors, walls, roofs, foundation, installations, finishings, etc.

# Goals

## Our CO<sub>2</sub> reduction goals

### ***A. General***

20% reduction of emissions for scope 1 -3 (operations and projects) in 2025 as compared to 2015, calculated as kg CO<sub>2</sub> per FTE

### ***B. Scope 1***

60% reduction of emissions through use of gas for heating our office in 2020 as compared to 2015, calculated as kg CO<sub>2</sub> per FTE

# Goals

## Our CO<sub>2</sub> reduction goals

### ***C. Scope 2***

- 100% reduction of emissions through use of electricity in our office in 2017 as compared to 2015, calculated as kg CO<sub>2</sub> per FTE
- 25% reduction of emissions through travel (by car and public transport) in our projects in 2025 as compared to 2015, calculated as kg CO<sub>2</sub> per FTE

### ***D. Scope 3***

- In 2025, 90% of our Dutch building projects will have a paragraph in the design text stating the shadow costs of 3 primary building elements, including a clarification of CO<sub>2</sub> reduction possibilities



# Progress General Reduction

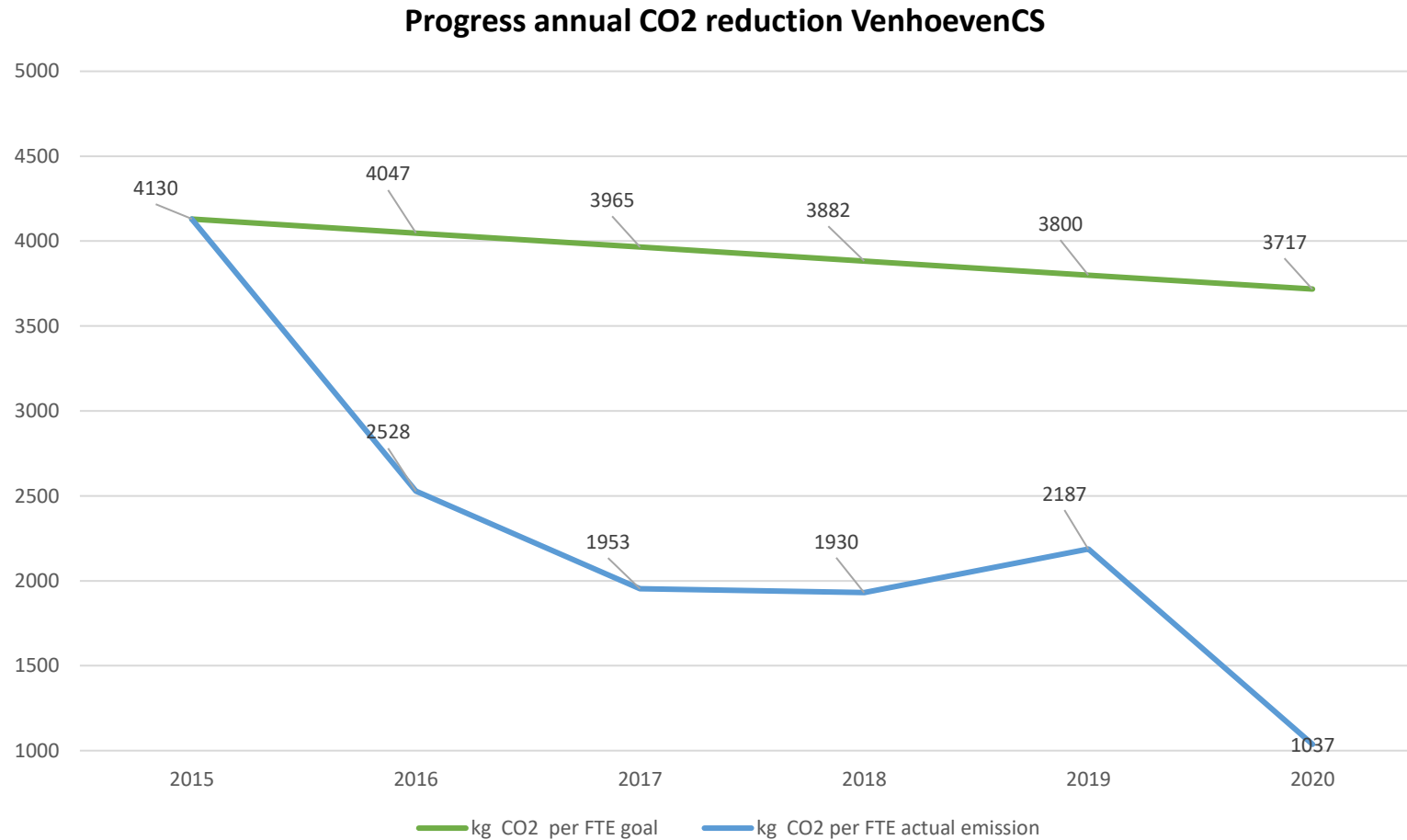
## A. General Reduction CO<sub>2</sub> of 20% (2015-2025)

	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2025</i>	
Goal	4130	4047	3965	3882	3800	3717	3304	kg CO <sub>2</sub> per FTE
Realized	4130	2528	1953	1930	2187	<b>1037</b>		kg CO <sub>2</sub> per FTE

Dutch benchmarks vary widely per type of organization. An organization that works

- mostly local and whose employees do not visit many relations, averages 1.000 kgCO<sub>2</sub> per FTE
- national and whose employees visit relations regularly, averages 4.000 kgCO<sub>2</sub> per FTE
- internationally and whose employees visit international relations regularly, or has a branch abroad, averages 12.000 kgCO<sub>2</sub> per FTE

# Progress General Reduction



# Progress Scope 1

## B. Scope 1: Reduction CO<sub>2</sub> through gas-use with 60% (2015-2020)

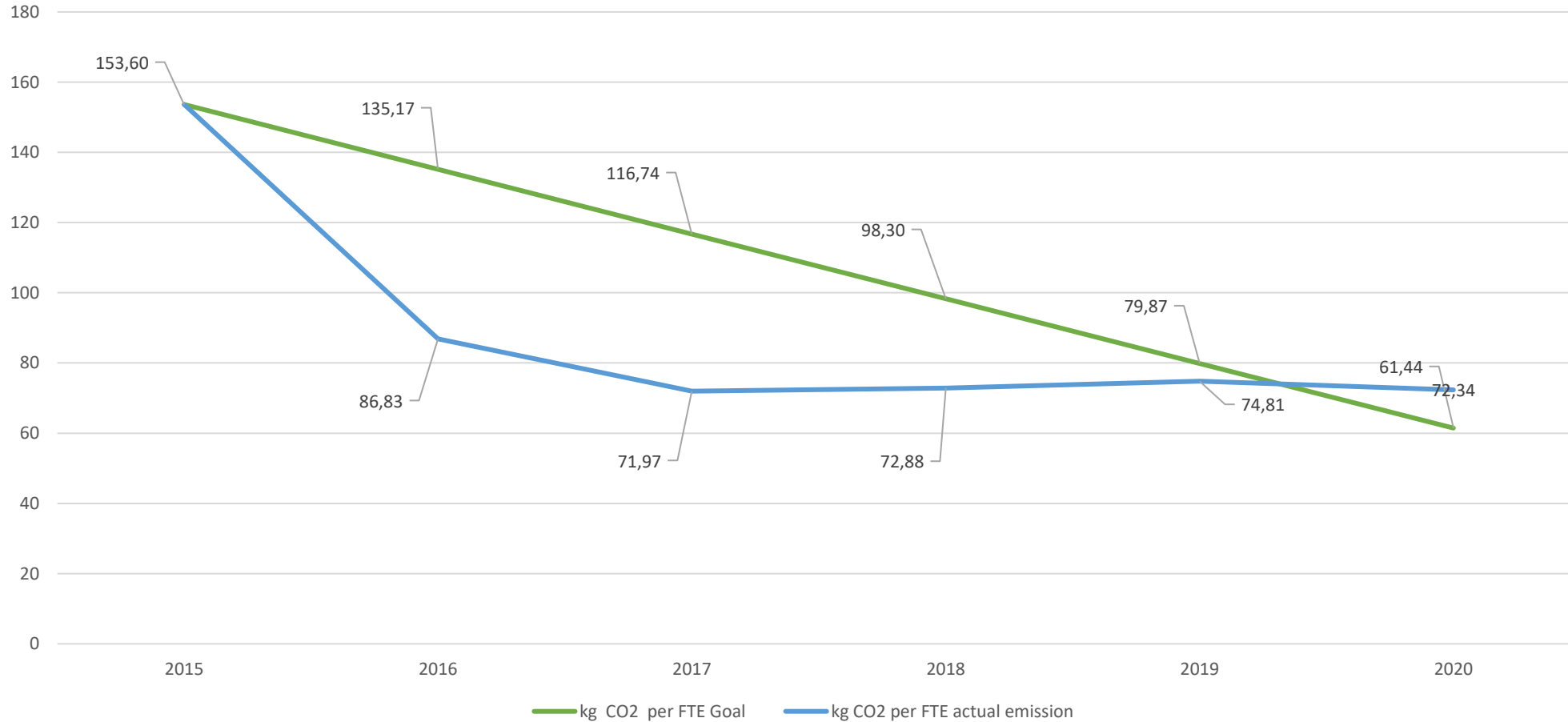
	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	
Goal	153.6	135.2	116.7	98.30	79.87	61.40	kg CO <sub>2</sub> per FTE
Realized	153.6	86.80	71.9	72.88	74.80	<b>72.34</b>	kg CO <sub>2</sub> per FTE

Because of the corona-crisis, less people (<50%) were in the office. That meant less warmth by human bodies. We think that may be the reason why we used up more gas.

*We switched to green (forest compensated) gas in May 2017*

# Progress Scope 1

Progress scope 1 | VenhoevenCS



# Progress Scope 2

## C. Scope 2

### Reduction CO<sub>2</sub> through electricity use 100% (2015-2017)

	2015	2016	2017	2018	2019	2020	
Goal	659.0	329.5	0	0	0	0	kg CO <sub>2</sub> per FTE
Realized	659.0	565.5	193.3	0	0	0	kg CO <sub>2</sub> per FTE

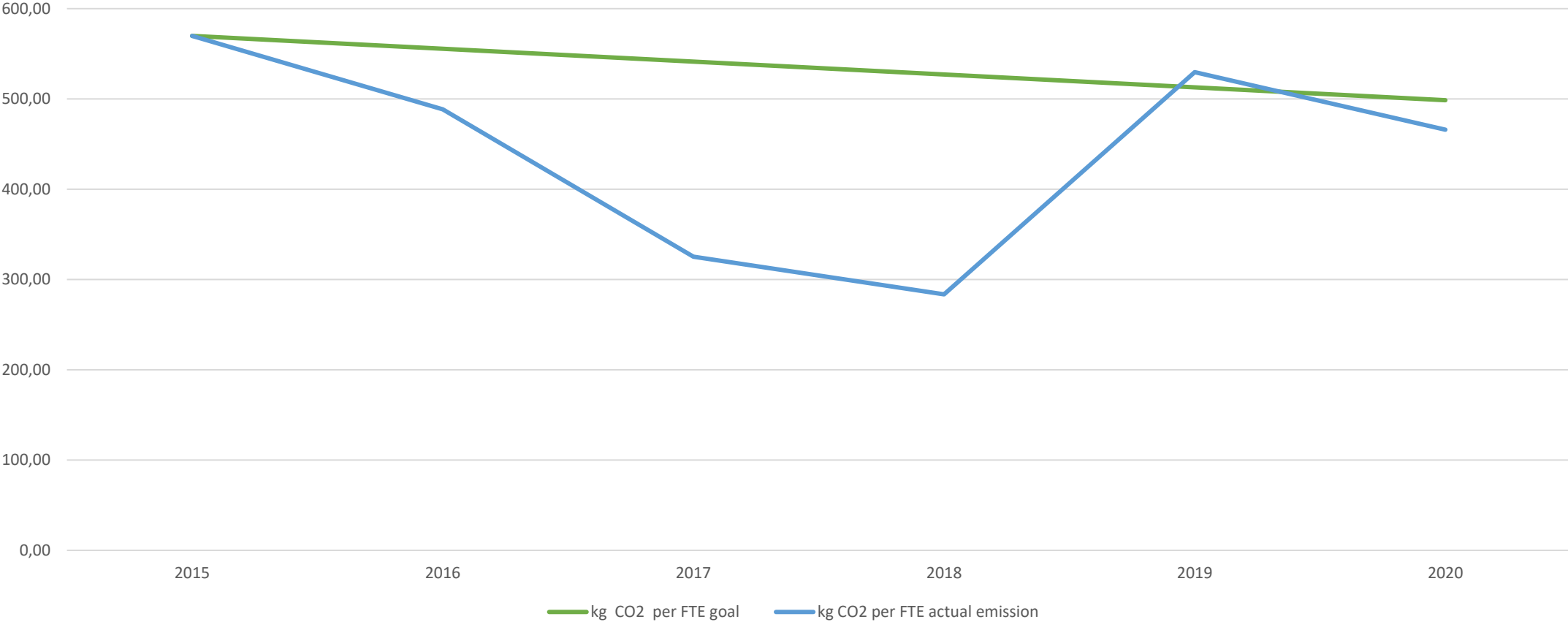
*We switched to 100% certified Dutch wind energy in May 2017*

### Reduction CO<sub>2</sub> 25% through travel in our operations/projects (2015-2025) excl. flights

	2015	2016	2017	2018	2019	2020	2025	
Goal	570.0	555.8	541.5	527.5	513	499	427.5	kg CO <sub>2</sub> per FTE
Realized	570.0	488.5	325.3	283.6	529.9	466.1		kg CO <sub>2</sub> per FTE

# Progress Scope 2

Progress scope 2 | travel operations/projects (excl flights)



# Progress Scope 3

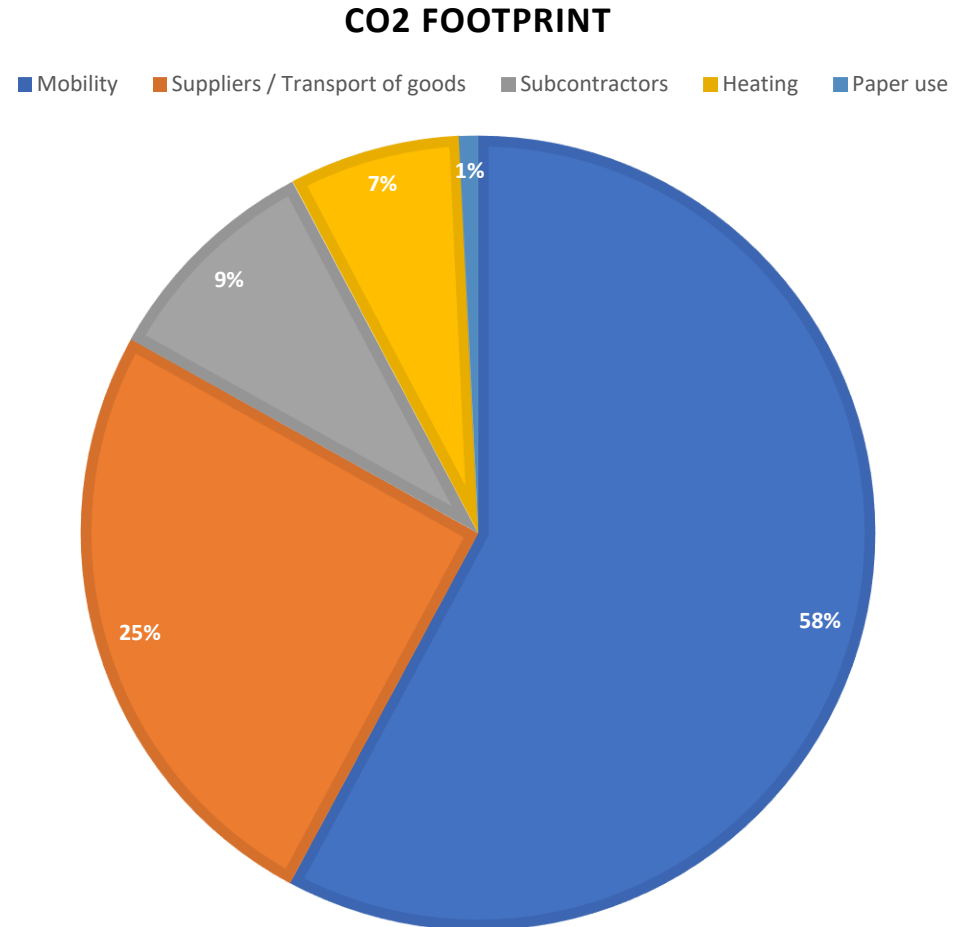
## D. Scope 3

The implementation of the Value Chain Initiative has not yet begun. It has now been incorporated in the *R&D Group Sustainable Buildings* .

For 2020-2021 we will need to create a template factsheet for the supporting structure (*draagconstructie*). The factsheet will state hard data regarding embodied carbon for the various types of supporting structure (concrete, steel, wood), in order to nudge the client towards the 'right' choice.

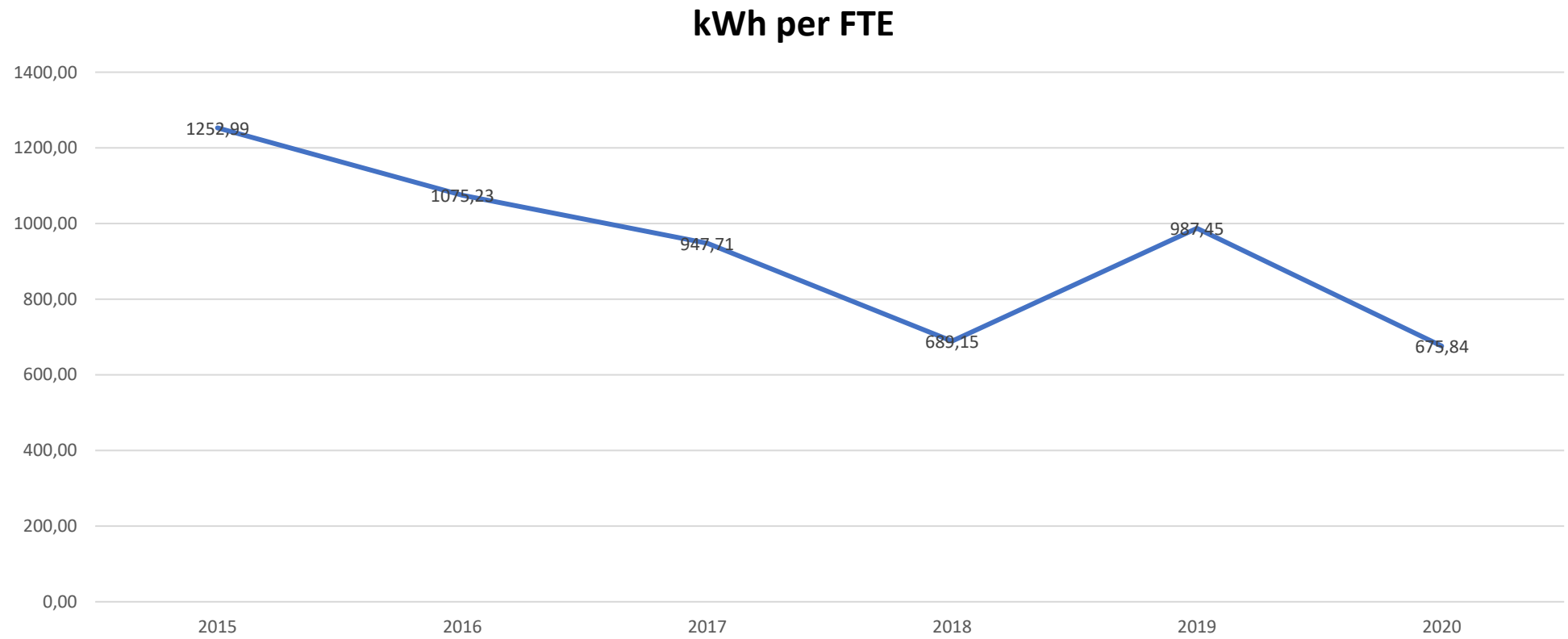
# CO<sub>2</sub> Footprint 2020

**44.577 kg**  
[2019: 71.269]





# Electricity use



# Conclusion & remarks

The Covid-19 crisis has had a huge impact. Since many colleagues have worked from home since March 2020, it is impossible to draw any conclusions about our performance.

But... in 2021 we will:

1. Do a deep analysis with an external expert of the goals / results of the last 4 years and will set new goals for 2021 – 2025;
2. Review our calculation methods;
3. Implement the new handbook for CO<sub>2</sub> performance ladder;
4. Carry out a pilot with the new chain analysis tool (Environmental Impact Tool);
5. Create a nicer, more attractive reporting (infographic) for communicating our goals and results.

# VenhoevenCS

architecture+urbanism

## Colophon

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