INTERNAL FOOTPRINT
NOVEMBER 2021

CTOUCH®
The power to engage

INTRODUCTION

CTOUCH has set the goal to lower their CO2 emissions by 25% and increase their circularity by 25% in 2025. These goals have been operationalized through the development of a concrete improvement plan, in which CTOUCH focuses on four 'areas of sustainability': the production phase, use phase and end-of-Life phase of their products, and the Social Corporate Responsibility (CSR) of CTOUCH in general.

For each of these four areas of sustainability, the company has implemented one or more Key Performance Indicators (KPIs) by which CTOUCH aims to reduce CO2 emissions or to increase circularity.
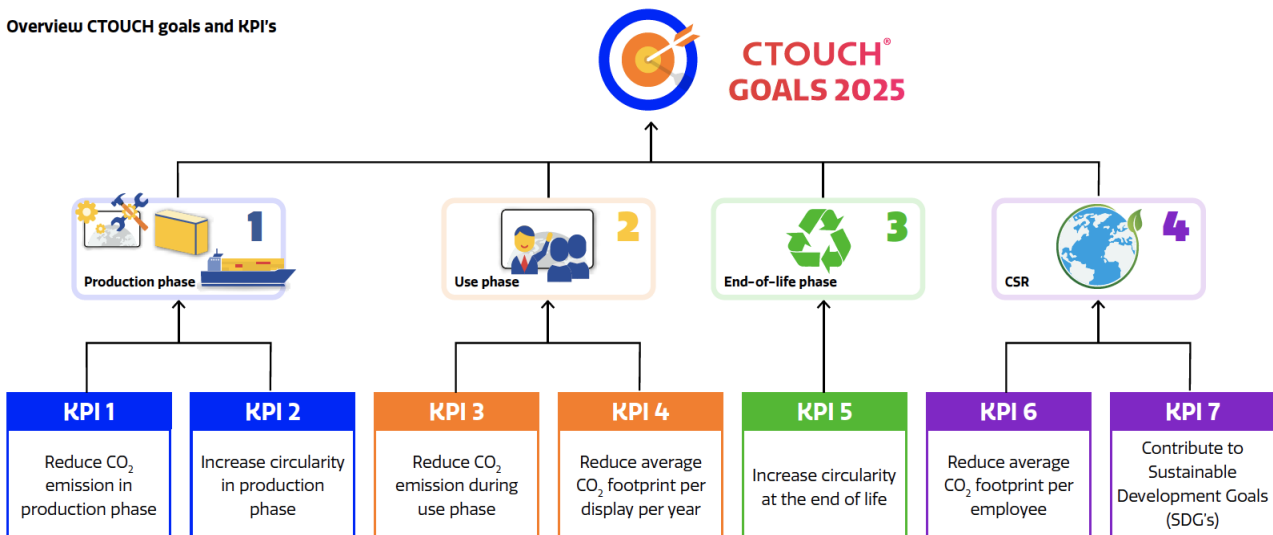

Figure 1: CTOUCH Sustainability GOALS 2025

This report is focused on the fourth area of sustainability, namely 'Corporate Social Responsibility'. In order to lead the way and set an example, CTOUCH takes responsibility for its own CO_2-impacts and strives to reduce these as much as possible. Therefore, KPI 6 is specifically focused on the average CO_2 footprint of CTOUCH employees. In this report, we strive to map out the average footprint of our employees as well as all emissions linked to our daily commute, office work and other emissions not directly related to our products.

Explainer: CO2 Equivalent Emissions

CO2 is one of many Greenhouse Gases (GHG). A GHG is any gas in the atmosphere which absorbs and re-emits heat, thereby keeping the planet warmer than it would normally be. These GHGs are naturally present in the Earth's atmosphere, but human activities (predominantly burning fossil fuels) increase their levels, leading to global warming.

Each of the GHGs has their own unique Global Warming Potential (GWP). This GWP is an indication of the amount of warming a certain gas brings to planet Earth over a certain period. CO2 has a GWP of 1, but another GHG, for example Methane (CH4) has a GWP of 25. There are a few more of these GHG's, and often they are also grouped together under common names.

In order to eventually calculate the average CO2 emissions per CTOUCH employee, the so-called CO2 equivalent (CO2eq) will be used. This CO2eq is a common unit used for describing different greenhouse gases in one common unit. It describes the amount of CO2 which would have to be emitted to have a similar global warming impact as a certain action that is performed. Using the CO2eq thus makes it possible to capture the GWP of different GHGs in one common unit.

EMISSION CATEGORIES

During this research into the average CO2eq emissions of our employees, we distinguished four distinct categories of emissions:

1. Travel
2. Food
3. Furniture
4. Power Consumption

For each of these categories, the methods used to calculate the CO2eq emissions for each of these categories are explained in more detail in **Appendix A.**

Emissions & footprint

1.   Travel

With regards to travel and transport, three categories of employee transport can be distinguished, namely:

- Daily commute of employees
- Distance travelled by service vans
- International Flights

Travel emissions from CTOUCH personnel, outside service personnel, service vans and flights were calculated as described in **Appendix A.**

Table 1: CO2 Equivalent Emissions for different travel methods.

	Regular workweek (kgCO2eq)	Working from home 1 Day/ week (kgCO2eq)	Working from home 2 days/ week (kgCO2eq)
Office personnel	42,300	33,600	23,900
Outside service	63,800	63,800	63,800
Service vans	41,600	41,600	41,600
Flights	36,000	36,000	36,000
Total CO2eq emissions	**183,700**	**175,000**	**165,300**

2.   Food

Next to travelling, also food production for consumption is relevant for CO2eq impacts. In the CTOUCH office environment, a fully catered lunch is offered daily to all staff. As such, data has been gathered regarding the average food consumed on a weekly basis according to the methods described in **Appendix A**.

According to the 'My Emissions Footprint Calculator', the amounts of food mentioned in Appendix A are equivalent to a total CO2eq footprint of **97.2 kgCO2e per week**, or (theoretically) **5,052 kgCO2e a year**.

According to the 'VeganSociety Footprint Calculator' the amounts of food mentioned in the table above are equivalent to a total CO2eq footprint of **105 kgCO2e per week**, or (theoretically) **5,458 kgCO2e a year**.

Explainer: Coffee at CTOUCH

In addition to the foods consumed, one of the most important ingredients of any office environment cannot be overlooked: coffee. CTOUCH opts for UTZ certified Redbeans Bronze coffee beans. The UTZ certification stands for sustainable farming, and the UTZ program addresses agricultural practices, social and living conditions, farm management and the environment. The UTZ certification therefore has added value because it ensures buyers that the coffee beans have been produced according to internationally recognized standards for responsible production.

Redbeans is the first climate neutral coffee of the Netherlands, which means that the CO_2 emissions are reduced from the bean to the customer. This is done by purchasing organically and reducing the consumption of energy and water in production. The last bit of remaining CO_2 emissions are offset by funding Gold Standard Certified Projects from WNF. The proceeds go to a wood-burning oven project in Africa. Certification of the coffee takes place through Climate Neutral Group.

Due to the climate neutrality of the coffee beans, no CO2eq emissions occur at the CTOUCH office because of coffee consumption.

3. Furniture

The CTOUCH office is equipped with many types of furniture. Different types of office chairs, designer chairs, large wooden desks, basic desks, storage cabinets and barstools. Data has been gathered regarding the amount of furniture present in the office by manually counting all equipment, resulting in a list of all office equipment.

Most CO2eq emissions tied to office furniture are related to the materials used to produce them, the production phase itself and transportation. Since the only emissions related to office equipment take place in the materials sourcing, production and transportation phases, low emissions in these phases combined with a long lifetime of the equipment are the most important elements when looking for a low average CO2eq footprint of the office equipment.

A list of the office furniture in the CTOUCH office was assembled, see **Appendix B**. The total of all office chairs adds up to an estimated footprint of **5,616 kgCO2e**. Moreover, a total of 274 pieces of furniture were counted. Assuming that 72 kg of CO2eq is the average for all furniture pieces, the total CO2eq emissions of the office add up to **19,728 kgCO2eq**. However, since no real values were found for different types of furniture, this value incorporates a large uncertainty.

The furniture footprint can be spread out over the full product lifetime. The furniture has been in the office since approximately 2018 and if it is assumed that the furniture will not be replaced until 2025, the total furniture emissions can be divided by its 10-year lifetime to calculate the average yearly emissions. This would then be equal to **1,973 kgCO2eq per year**.

As the furniture is already in the office, and the lowest CO2eq footprint is realized by extending its lifetime to the maximum, CTOUCH should make sure the furniture gets either repurposed to extend the lifetime even further. Subsequently, when redesigning the office or replacing furniture, sustainable and circular brands and products should be prioritized to minimize the CO2eq impact.

4.   Power Consumption

The last category of which data was collected during this study was the power consumption of the CTOUCH office. The CTOUCH office is a high-tech environment with a lot of video walls, displays and audio-visual products spread over the entire office. In order to calculate their power consumption, a list of all audio-visual products in the office was created according to the methods described in **Appendix A**.

Subsequently, the consumed power was calculated based on the average power consumption of each product. These products alone have an estimated power consumption of **65,390 kWh/year**, see **Appendix C**. In July 2021, the power consumption of all audio-visual products in the office was reduced to an estimated **34,822 kWh/year** by using timers which automatically turn on/off the displays outside of office hours, see **Appendix D**.

The measured power consumption of the CTOUCH office in 2020 was equivalent to 125,569 kWh. If the power consumption reduction established of the audio-visual equipment in July 2021 is taken into account, and all other consumption is the same as in 2020, this would be reduced to 110,285 kWh for 2021 and 95.001 kWh for 2022 (since the timers were installed medio 2021).

Explainer: Energy Neutral Office

The roof of the CTOUCH office is covered with solar panels. Together, these solar panels generate 600,000 kWh/year, of which 35-40% is attributed to CTOUCH. This corresponds to somewhere between 210,000 and 240,000 kWh/year of solar energy. As such, the office ends up being energy positive, as more energy is generated by the solar panels than used by CTOUCH. Moreover, the office is fully disconnected from the gas network, and heat and cold are generated through energy efficient heat pumps. In cold winter conditions (where the heat pumps generate insufficient heat), heat is purchased from the nearby biomass plant. All of this contributes to the office being labelled with energy label A. See **Appendix E** for details regarding the solar panel energy generation and the office building's energy label.

TOTAL CO2EQ FOOTPRINT OF CTOUCH

If the sum is taken from the CO2eq emissions for travel, food, furniture and power consumption, the total CO2eq internal emissions for CTOUCH adds up to **191,144 kgCO2eq/year**.

The implemented changes in 2021 regarding working from home and power consumption, will reduce this environmental CO2eq footprint to **182,439 kgCO2eq/year**.

> This is equal to emissions that occur during the production of **129 units of the 86" Riva**, and respectively **2,807 kgCO2eq/employee.**

CO2 COMPENSATION INITIATIVES

CTOUCH is already initiating projects to reduce the environmental footprint for production, transport and product use. Now, it has also measured the internal CO2eq footprint and has taken up initiatives to reduce this footprint and compensate for it by indulging in the following CO2 compensation initiatives.

- Planting trees with Trees For All trees
- Compensating the CO2 emissions of our flights. With some airlines and travel organisations, you can indicate at the time of booking that you want to compensate the CO2 emissions of your flight. You then pay an amount on top of the fare. The airline or travel organisation transfers this amount to a company that takes care of climate compensation. FlyGRN is a comparison site for flight tickets that automatically compensates the CO2 emissions of your flight (in full or in part). If the train is a good alternative, they also show that.
- Compensating internal CO2eq emissions with FairClimateFund

Appendix A: Elaborated data collection & analysis methods

1. Travel

With regards to travel and transport, three categories of employee transport can be distinguished, namely:

> Daily commute of employees
> Distance travelled by service vans
> International Flights

Daily commute of employees

In order to calculate the CO_2eq. emissions of the daily commute of our employees, a survey was created and distributed to all of our employees. For this survey, employees were asked to respond as if it was a 'regular' workweek in 2019, this had been chosen to be the base case against which we measure our emissions, since 2019 was the last year before the COVID-19 pandemic and most employees used to visit the office daily that year. This survey consisted of questions regarding the number of workdays of the employee, the address (postal code) in which the employee resides, the method of transport, as well as the type of engine in case of transport by car. The survey was answered by 51 employees.

With the gathered data, the daily commute distance from home to work was calculated for every employee. This was subsequently multiplied with the theoretical number of working days of the respective employee. This theoretical number of working days takes into account 29 vacation days, 4 national holidays and 5% absence due to illness yearly for full time employees. These calculations led to a theoretical number of **216** working days for fulltime employees. Lastly, the total number of kilometres travelled per employee on a yearly basis were multiplied with the emissions factor of their indicated method of transport. These emissions factors are reported in table 2.

Table 2: Emission factors of different transport modes

Emissiefactoren	KgCO2/km
Gasoline	0.202
Diesel	0.176
Bus avg.	0.071
Petrol (Small)	0.18
Electric (Mix)	0.078
Hybrid Diesel	0.168

This list covers Well to Wheel (WTW) emissions per mode of transport for each driven kilometre. Well to Wheel stands for the emissions tied to the energy production until its use. This means that the CO2 emissions made during extraction and production of fuel are also included, as well as the CO2 emissions of the fuel usage itself. This list does not take the production of the vehicle in account. Thus, to conclude, the formula for calculating the average CO2eq commute emission for a fulltime employee is as follows:

Commute Emissions= (#working days - 29 vacation days - 4 national holidays) * (0,95) * (km travelled daily) * (Emission Factor)

For non-fulltime employees, corrections were applied to incorporate a proportionate number of vacation days.

Distance travelled by service vans

CTOUCH operated two service vans in 2019 and three in 2020. From these service vans, the amount of tanked litres of diesel was collected. However, in some cases, the data was incomplete and several months were missing. If that was the case, the total number of litres was divided by the number of months that were present, multiplied by 12, to represent an estimation of the total litres of diesel required for an entire year. Subsequently, the number of litres tanked has been multiplied with the emission factor for diesel to obtain a CO2eq unit for each service van.

International flights

Data for all of the international flights of CTOUCH' employees in 2019 was collected. Subsequently, the distance travelled during these flights was calculated using the website: https://nl.distance.to/. Lastly, this travelled distance was multiplied by the relevant emission factor in order to retrieve a CO2eq unit for all of the flights completed by employees in 2019.

2. Food

Next to travelling, also food consumption is relevant for CO2eq impacts. In the CTOUCH office environment, a fully catered lunch is offered daily to all staff. As such, data has been gathered regarding the average food consumed on a weekly basis, including bread, meat and cheese. Unfortunately, there was no data available for 2019, and as therefore data from a sample week in 2021 has been used. It should therefore be taken into account that in this sample week, less people were present in the office due to COVID-19 restrictions in place.

Table 3: Average food consumed on a weekly basis

Type of food	Amount (grams)
Chicken filet	560
Gammon	700
Roastbeef	280
Grilled sausage	280
Roast mince	210
Raw ham	280
Filet American	420
Mstr & Zn Ham	150
Zns Hoeve 48+ Cheese block	2,000
AH cottage cheese	200
Mstr & Zn Bacon	200
Mstr & Zn Cervelaat	150
AH Butter	1,000
AH White Cheese	400
AH eggs	1,060
Bread	7,700

Subsequently, a CO2eq unit for all of the foods consumed on a weekly basis was calculated using the 'My emissions footprint calculator'.

3.   Furniture

The CTOUCH office is equipped with many types of furniture. Different types of office chairs, designer chairs, large wooden desks, basic desks, storage cabinets and barstools. Data has been gathered regarding the amount of furniture present in the office by manually counting all equipment, resulting in a list of all office equipment.

Most CO2eq emissions tied to office furniture are related to the materials used to produce them, the production phase itself and transportation. Since the only emissions related to office equipment take place in the materials sourcing, production and transportation phases, low emissions in these phases combined with a long lifetime of the equipment are the most important elements when looking for a low average CO2eq footprint of the office equipment.

In a 2011 study, the British Furniture Industry Research Association (FIRA) found that the average desk chair has an estimated average CO2eq footprint of 72kg. During this research, FIRA collaborated with multiple furniture brands and environmental specialists to calculate and compare samples of different types of chairs (and other furniture) from different suppliers (FIRA, 2011).

The same type of research was done using a sample of different desks and many other types of furniture. The results were very similar. Most of the CO2e footprint of the desk is contributed to the use of timber, board, metal and production and transportation.

4.   Power Consumption

The last category of which data was collected during this study was the power consumption of the CTOUCH office. The CTOUCH office is a high-tech environment with a lot of videowalls, displays and audio-visual products spread over the entire office. These displays and videowalls consume power, and therefore a list was established by counting all of the displays and other audio-visual products in the CTOUCH office. Subsequently, the power consumption of all these products was calculated by estimating the time they are active on a daily basis (in some cases, 24/7) and by multiplying that number by the average power consumption according to the products manual.

Lastly, the total power consumption of the CTOUCH office was requested from facility management in order to obtain insights into the total power consumed, including the power consumed by lighting and other appliances in the office.

Appendix B: Office equipment

Article	Amount	Link
Bureaustoel Senator Clipper	34	https://www.thesenatorgroup.com/en/catalog/senator/task-seating/clipper/cl740mf
Bureaustoel Koleksiyon Tola	25	https://koleksiyon.us/products/products/tola/
Barkruk Bogaerts 75 Zwart	6	https://bogaertslabel.com/nl/stapelbare-krukken-tafels/#block_08_block
Bartafel Bogaerts Zwart	4	https://bogaertslabel.com/nl/stapelbare-krukken-tafels/#block_08_block
Barkruk Satelliet Glasgow MS	17	https://www.satelliet.net/producten/indoor/barkrukken/p/glasgow-ms/
Elektronisch vestelbare bureau's dubbel	18	https://www.designkantoormeubilair.nl/elektrische-zit-sta-bureaucombinatie-odessa.html?gclid=CjwKCAjw-e2EBhAhEiwAJI5jg9krAwnw6JDQR_lwtkLCsocLlv8PVBl-uHI3tbAek3NqwIDf9Jb6wRoCwtcQAvD_BwE
Elektronisch verstelbare bureau's enkel	3	https://www.bol.com/nl/p/zit-sta-bureau-140x80-cm-elektrisch-verstelbaar-frame-zwart-blad-wit/9300000034103730/?bltgh=soUQumE8K0of7K28Nw5Hdw.4_50.53.ProductImage
Stoelen Jess Norman	8	https://www.jessdesign.com/collection/chairs-dining-sofa/norman/
Quick II Stahulp	14	https://www.demeubelmakelaar.nl/kantoormeubelen/bureaustoelen/koenig-neurath-quick-ii-zit-sta-kruk/
Satelliet Kantine Tafels Laag	6	https://www.satelliet.net/producten/indoor/tafels-onderstellen/p/flat-9470-tb/
Koleksiyon Helen Kantine	6	https://koleksiyon.us/products/products/helen/
Tussenwandje Bureau	17	https://www.bureaustoel24.nl/arw-akoestische-scheidingswand-grijs-gemeleerd.html?295=12413&310=12745&gclid=CjwKCAjw-e2EBhAhEiwAJI5jgzBCCx21fv77rwzTsjtNQj8CunlLKtyrtUfHaPfjOJsOaqDwtR7xERoC4sgQAvD_BwE
Bureaukasten onder bureau	33	https://www.ksh.nl/kantoor-meubilair/kasten-ladeblokken/ladeblokken/154/ladeblok-top-line-deluxe-3-laden?number=
Elektronisch verstelbaar bureau anders	1	
Stoelen Jess Norman	6	https://www.jessdesign.com/collection/chairs-dining-sofa/norman/
Bureaustoel Senator Clipper	5	https://www.thesenatorgroup.com/en/catalog/senator/task-seating/clipper/cl740mf

Article	Amount	Link
Bureaustoel anders (meerdere modellen)	8	
Elektronisch vestelbare bureau's dubbel	6	https://www.designkantoormeubilair.nl/elektrische-zit-sta-bureaucombinatie-odessa.html?gclid=CjwKCAjw-e2EBhAhEiwAJI5jg9krAwnw6JDQR_lwtkLCsocLlv8PVBl-uHI3tbAek3NqwIDf9Jb6wRoCwtcQAvD_BwE
Tussenwandje Bureau	5	https://www.bureaustoel24.nl/arw-akoestische-scheidingswand-grijs-gemeleerd.html?295=12413&310=12745&gclid=CjwKCAjw-e2EBhAhEiwAJI5jgzBCCx21fv77rwzTsjtNQj8CunlLKtyrtUfHaPfjOJsOaqDwtR7xERoC4sgQAvD_BwE
Bureaukasten onder bureau	3	https://www.ksh.nl/kantoor-meubilair/kasten-ladeblokken/ladeblokken/154/ladeblok-top-line-deluxe-3-laden?number=
Bureakasten onder bureau anders	6	(vergelijkbaar model)
Bureau hoog anders	1	
Elektronisch verstelbare bureau's enkel	1	https://www.bol.com/nl/p/zit-sta-bureau-140x80-cm-elektrisch-verstelbaar-frame-zwart-blad-wit/9300000034103730/?bltgh=soUQumE8K0of7K28Nw5Hdw.4_50.53.ProductImage
Bureaustoel anders (meerdere modellen)	3	https://loyalbrand.nl/shop/sayl/herman-miller-sayl-economy/?ppc_keyword=&gclid=CjwKCAjw-e2EBhAhEiwAJI5jgxq_MGIXc04MM310Y8fJf8mVxhuVN46nzHP2xBHUwWKVfm4NrA-GFxoC1VMQAvD_BwE https://www.ergoweb.nl/h%C3%A5g-capisco-8106?gclid=CjwKCAjw-e2EBhAhEiwAJI5jgzbB-KnKsjO0_moJXjGuSAwVk_X5_-eidKowfdP42as81NOBWwhgZxoC-ZwQAvD_BwE
Bankstel 2 x los + tussentafeltje	-	
Elektronisch verstelbare bureau's enkel	1	https://www.bol.com/nl/p/zit-sta-bureau-140x80-cm-elektrisch-verstelbaar-frame-zwart-blad-wit/9300000034103730/?bltgh=soUQumE8K0of7K28Nw5Hdw.4_50.53.ProductImage
Bureau anders	2	
Bureau anders	1	
Bureaustoel anders	1	
Vitra Aluminium Chairs	8	https://www.vitra.com/nl-nl/living/product/details/aluminium-chairs-ea-101-103-104

Article	Amount	Link
Vitra Bucket Seat	2	https://www.vitra.com/nl-nl/living/product/details/eames-fiberglass-armchair-dar
Elektronisch verstelbare bureau's enkel	2	
Bureaustoel anders	2	
Hoogte verstelbare statafels	2	
Kunstof Stoel anders	2	
Plastic Stoeltjes	15	

Appendix C: Power consumption base case

Displays are on 24/7

Product	Amount	Watts	Total (w)	Total kWh
Videowall Directie 24-7				
Christie UHD651-L	4	73	292	2,557.92
Matrox IPC5122 Pc	1	250	250	2,190
Led Koof Product eiland 24-7				
Christie LED Merit 1,9	6	60	360	3,153.6
Christie E600 Processor	1	30	30	262.8
Videowall Marketing 24-7				
Christie UHD751-L	4	218	872	7,638.72
Matrox IPC5122 Pc	1	250	250	2,190
Led Koof Marketing 24-7				
Christie LED Merit 1,9	16	60	960	8,409.6
Christie E600 Processor	1	30	30	262.8
Videowall Kantine 24-7				
Christie UHD751-L	3	218	654	5,729.04
Matrox IPC5122 Pc	1	250	250	2,190
Videowall Entrée 8:00 - 18:00				
Christie FHD553-X	12	195	2340	6,084
Matrox AVS540 PC	1	600	600	1,560
Dell Optiplex PC	1	65	65	169
Skytech SPL-700-EQ Audio Versterker	1	420 (?!)	420 (?!)	?
Audio speakers set Apart	1	?	?	?
Demoroom Sahara 24-7				
Christie FHD553-XE	4	195	780	6,832.8
Matrox AVS240	1	500	500	4,380
Matrox Extio 3 3408 Transmitter	2	45	90	788.4
Matrox IPC5122 Pc	2	250	500	4,380
LG 4 K desktop monitor	1	?	?	?
Dell Pc desk	1	65	65	569.4
Matrox Maevex 6150 Encoder	1	45	45	394.2
Matrox Monarch LCS	1	25	25	219
LG 4 K desktop monitor	1	?	?	?
Dell Pc desk	1	65	65	569.4
Matrox Extio 3 3408 Receiver	1	45	45	394.2
Christie UHD551-L	1	70	70	613.2

Product	Amount	Watts	Total (w)	Total kWh
Matrox ECA Nivo Decoder	1	30	30	262.8
8:00 - 18:00				
Christie UHD551-L	4	70	280	728
Userful Server	1	90	90	234
Etalage Magazijn 24-7				
Christie UHD551-L	3	70	210	1,839.6
Userful Server	1	90	90	788.4
			Total	**65,390.88**

Appendix D: Power consumption reduced

Realised changes in July 2021

Product	Amount	Watts	Total (w)	Total kWh
Videowall Directie 8 hrs				
Christie UHD651-L	4	73	292	1,065.8
Matrox IPC5122 Pc	1	250	250	912.5
Led Koof Product eiland 8 hrs				
Christie LED Merit 1,9	6	60	360	1,314
Christie E600 Processor	1	30	30	109.5
Videowall Marketing 8 hrs				
Christie UHD751-L	4	218	872	3,182.8
Matrox IPC5122 Pc	1	250	250	912.5
Led Koof Marketing 8 hrs				
Christie LED Merit 1,9	16	60	960	3,504
Christie E600 Processor	1	30	30	109.5
Videowall Kantine 8 hrs				
Christie UHD751-L	3	218	654	2,387.1
Matrox IPC5122 Pc	1	250	250	912.5
Videowall Entrée 8:00 - 18:00				
Christie FHD553-X	12	195	2340	8,541
Matrox AVS540 PC	1	600	600	1,560
Dell Optiplex PC	1	65	65	169
Skytech SPL-700-EQ Audio Versterker	1	420 (?!)	420 (?!)	?
Audio speakers set Apart	1	?	?	?
Demoroom Sahara 24-7				
Christie FHD553-XE	4	195	780	2,847
Matrox AVS240	1	500	500	1,825
Matrox Extio 3 3408 Transmitter	2	45	90	328.5
Matrox IPC5122 Pc	2	250	500	1,825
LG 4 K desktop monitor	1	?	?	?
Dell Pc desk	1	65	65	237.25
Matrox Maevex 6150 Encoder	1	45	45	164.25
Matrox Monarch LCS	1	25	25	91.25
LG 4 K desktop monitor	1	?	?	?
Dell Pc desk	1	65	65	237.25
Matrox Extio 3 3408 Receiver	1	45	45	164.25

Product	Amount	Watts	Total (w)	Total kWh
Christie UHD551-L	1	70	70	255.5
Matrox ECA Nivo Decoder	1	30	30	109.5
8:00 - 18:00				
Christie UHD551-L	4	70	280	728
Userful Server	1	90	90	234
Etalage Magazijn 24-7				
Christie UHD551-L	3	70	210	766.5
Userful Server	1	90	90	328.5
			Total	**34,821.95**

Appendix E: Solar energy generation & office building energy label

CTOUCH TQ1:

Meternummer	Periode	verbruik
34535124 Totaal	01-01-2019 – 31-12-2019	36,976 kwh
05252022 Verlichting	01-01-2019 – 31-12-2019	5,315 kwh

Bruto productie PV panelen TQ:

Meternummer	Periode	Opwek
871687910000212602GENS	01-01-2019 – 31-12-2019	452,866.12 kwh
871687910000434134GENS	01-01-2019 – 31-12-2019	154,481.40 kwh

Energielabel gebouw

Afgegeven conform de Regeling energieprestatie gebouwen.

Veel besparingsmogelijkheden

G F E D C B A
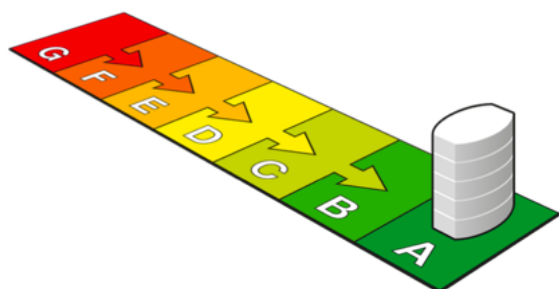
A
(zie toelichting in bijlage)

Dit gebouw

Weinig besparingsmogelijkheden

Labelklasse maakt vergelijking met gebouwen met overeenkomstige samenstelling mogelijk.

TQ 1 t/m 4
Kantoorfunctie   (zie de bijlage voor de samenstelling)

Gebruiksoppervlak	**Naam adviseur**	**Adviesbedrijf**
14804.9 m²	ir. S. ter Mors	Van Hout
Opnamedatum	**Examennummer**	**Inschrijfnummer**
12-09-2018	5462	2153605
Energielabel geldig tot	**Handtekening**	**KvK-nummer**
12-09-2028		17035373
Afmeldnummer		
602702586		

Straat (zie bijlage)
Achtseweg Zuid
Nummer/toevoeging
151-155
Postcode
5651GW
Woonplaats
Eindhoven
Volgnummer gebouw

vanhout
adviseurs en installateurs

Energielabel op basis van een ander representatief gebouw of gebouwdeel? nee
Adres representatief gebouw of gebouwdeel:

EPBD

Standaard energiegebruik voor dit gebouw

Energiegebruik per vierkante meter maakt vergelijking met andere gebouwen mogelijk.

- Het standaard energiegebruik van dit gebouw is de hoeveelheid energie die jaarlijks nodig is voor verwarming, gebouwkoeling, de productie van warm tapwater, ventilatie en verlichting (exclusief apparatuur die geen deel uitmaakt van de klimaat- en verlichtingsinstallaties).
- Bij de berekening wordt uitgegaan van het gemiddelde Nederlandse klimaat, een gemiddelde bezettingsgraad van het gebouw en een gemiddeld gebruikersgedrag.
- Het standaard energiegebruik per jaar wordt uitgedrukt in de eenheid 'megajoules' per vierkante meter gebruiksoppervlakte (MJ/m²), dit wordt uitgesplitst naar elektriciteit (kWh/m²), gas (m³/m²) en warmte (GJ/m²).
- De CO₂-emissie per jaar als gevolg van het standaard energiegebruik wordt uitgedrukt in kilogram per vierkante meter gebruiksoppervlakte (kg/m²).

270,0 MJ/m²
(megajoules)

19,8 kg/m²
(CO₂-emissie)

16,0 kWh/m² (elektriciteit)
0 m³/m² (gas)
0,1 GJ/m² (warmte)