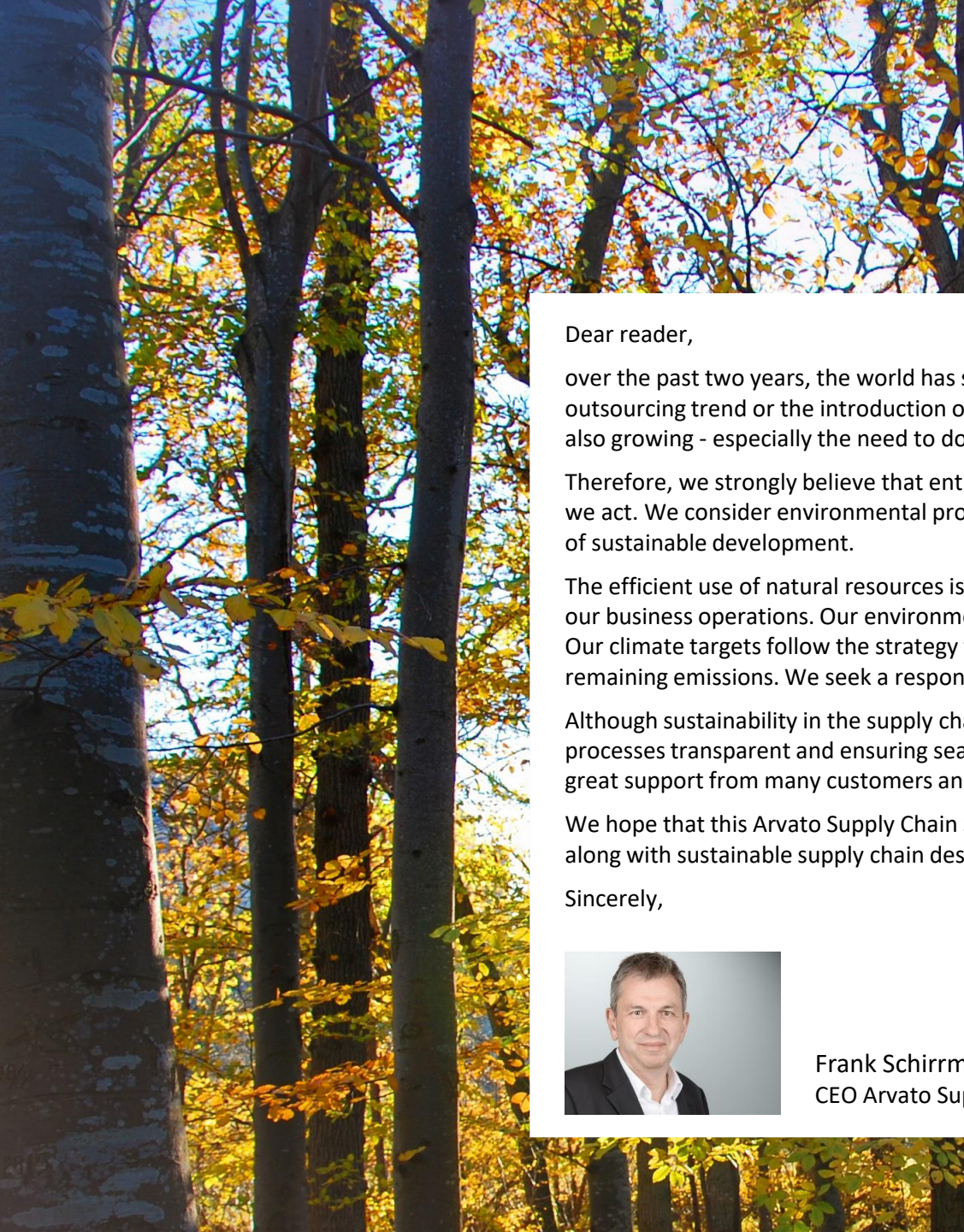# Sustainability@Arvato Supply Chain Solutions

CLIMATE REPORT 2021

arvato
BERTELSMANN
Supply Chain Solutions

Dear reader,

over the past two years, the world has seen changes in our daily lives accelerate, such as a shift from physical retail to e-commerce, a higher outsourcing trend or the introduction of new technologies. Despite the opportunities presented in this environment of change, the challenges are also growing - especially the need to do justice to the environment and establishing sustainability in the corporate strategy.

Therefore, we strongly believe that entrepreneurial success is measured not only by economic figures, but also by how sustainably and responsibly we act. We consider environmental protection to be an integral part of our corporate responsibility. Hence, our activities are driven by the principle of sustainable development.

The efficient use of natural resources is at the heart of our environmental management. We strive to minimize environmental impacts resulting from our business operations. Our environmental management approach goes beyond compliance and is intended to ensure continuous improvement. Our climate targets follow the strategy to prioritize measures that lead to the avoidance and reduction of emissions over the compensation of remaining emissions. We seek a responsible use of natural resources in our service offering and environmentally conscious sourcing of materials.

Although sustainability in the supply chain is a major challenge due to its complexity and the many players involved, for us it is a matter of making processes transparent and ensuring seamless collaboration across the stages of the supply chain. We are delighted that we have already received great support from many customers and trust that even more will join us in sustainably reducing emissions in the supply chain.

We hope that this Arvato Supply Chain Solutions Climate Report will give you insightful perspectives on the challenges and opportunities that come along with sustainable supply chain design and are looking forward to your feedback and ideas.

Sincerely,

Frank Schirrmeister
CEO Arvato Supply Chain Solutions

Andreas Barth
President Industry Vertical TECH &
Arvato SCS Group Head of CR and Sustainability

Executive Summary

Strategy

- Environmental sustainability is part of the **Arvato SCS Corporate Responsibility program**, which has been confirmed with the latest materiality assessment (stakeholder dialogue) in 2021.

- Since 2018, we have been collecting consumption data on site level and company level in our **Environmental Management Tool** 'green.screen' to achieve transparency across all relevant emission reporting scopes[1,2,3]. The data quality is constantly reviewed to meet industry standard reporting approaches.

- In 2021, Arvato Supply Chain Solutions defined **climate targets** which support our parent company Bertelsmann's **climate neutrality strategy**.

- On company level, the **Arvato SCS CR Council** discusses measures, analyzes results and takes necessary steps to align the topic development with the strategy.
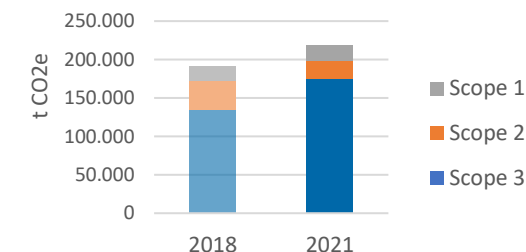
Targets

		Status 2021
1.	100% **green electricity** worldwide as of January 2023	68 %
2.	Scope 1&2[1,2]: **50% absolute reduction** until 2030 (base line 2018)	- 20 %
3.	Scope 1-3[1,2,3]: **50% relative reduction** per package until 2030 (base line 2018)	- 8 %
4.	**100% offsetting** of remaining unavoidable emissions as of 2030 (excluding Scope 3 service-related emissions[3])	

1) Scope 1: Emissions from operations that are owned or controlled by Arvato SCS
2) Scope 2: Emissions from the generation of purchased or acquired electricity, heating, or cooling consumed by Arvato SCS
3) Scope 3: All indirect emissions (not included in scope 2) that occur in the value chain of Arvato SCS. For a full list of Scope 3 indirect emission sources considered for this report please refer to the Appendix.

Key Findings

- While **Scope 1** emissions[1] increased compared to 2018 mainly because of a rise in heating demand, **Scope 2** emissions[2] were substantially reduced as a result of our efforts to purchase globally electricity from renewable sources only.

- Indirect **Scope 3** emissions[3] experienced a sharp increase in 2021, mainly due to a boom of ecommerce activity as a result of COVID-19 induced changes to shopping habits. Therefore, transportation volumes as well packaging material usage increased. At the same time, the effect was lessened as a part of our employees were working from home and business travel was reduced to a minimum.

Scope[1,2,3]	2018	2021	Delta
1	18.600	20.100	+ 8 %
2	36.800	23.800	- 35 %
3	135.200	174.700	+ 29 %
Total	190.600	218.600	+ 15 %

Outlook

- In 2022, we will focus on **achieving Target 1** (renewable electricity worldwide).

- We will continue to invest in photovoltaic systems to increase the share of **self-produced electricity** at our warehouse sites.

- We will seek to **foster collaboration** with our suppliers, landlords, and other partners to increase transparency over supply chain emissions for our customers.

Agenda

INTRODUCTION

About Arvato Supply Chain Solutions

Who we are

Arvato Supply Chain Solutions is the leading international provider of order-to-cash solutions for end-customer-oriented industries. Global market leaders, Fortune 500 companies and well-known brands rely on us just as much as young start-ups or expanding SMEs. Worldwide we develop innovative, customized solutions in the areas of supply chain management and e-commerce for our customers. We focus on end-customer-oriented industries such as Fashion, Beauty & Lifestyle, Tech, Healthcare, Telecommunications, Automotive, Banks & Insurances, Publisher. We develop solutions for every industry along the order-to-cash cycle.

What we do

Our portfolio is accordingly diversified: Besides traditional logistics services such as warehousing, picking, transport management, and comprehensive value-added services, we develop and operate complex global supply chains, e-commerce and IT platforms, omnichannel solutions, and digital distribution models. We use the latest IT solutions and technologies. Depending on the requirements, we develop individual, tailor-made solutions.

How we do it

For our more than 17,000 employees this is both a daily challenge and motivation because our united vision is to be the most client-oriented international supply-chain company with the strongest focus on people and technology. We help our customers to develop their business, to grow their brand and thus to take them to the next level. Our passion for managing and transforming complex processes throughout the supply chain, our significant market knowledge and our IT know-how are the basis for our success and our customers' success.

Our global footprint
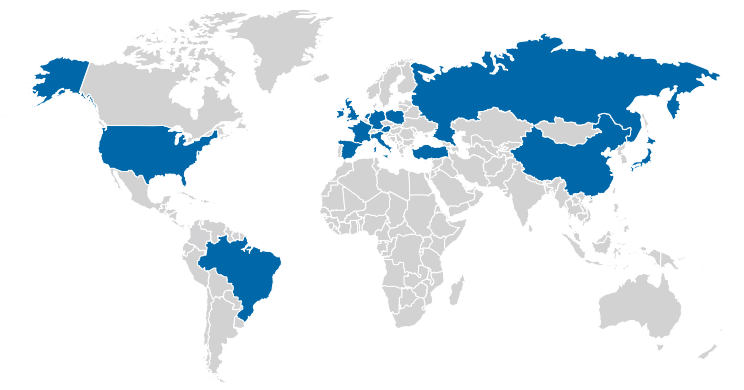
SCS AT A GLANCE

> 200 m.
Outbound packages and returns worldwide

17,000
employees

> 2,2 m.
sqm footprint worldwide

> 500
satisfied customers

INTRODUCTION

Stakeholder Dialogue

How do we determine topics of relevance?

As part of so-called Corporate Responsibility (CR) relevance analyses, our parent company Bertelsmann regularly determines which CR topics should be primarily focused on.

This process is used to identify the CR priorities that are necessary for understanding the business performance, the business results, the Group's position and the impact of its activities on employees, society and the environment.

What was the outcome of the last dialogue?

The results of the 2020 relevance analysis showed that five CR topics are of prime importance to the Arvato Supply Chain Solutions stakeholders: "Climate Change", "Learning", "Fair Working Conditions", "Diversity, Equity & Inclusion", and "Health, Well-being & Safety". If you are interested to learn more about the different Corporate Responsibility topics relevant for Bertelsmann, please visit this link.

This report focuses on the topic of "Climate Change".

How is the dialogue organized?

The last stakeholder dialogue was organized in 2020. A total of more than 100 selected stakeholders shared their views on CR at Arvato Supply Chain Solutions.

External and internal stakeholders were surveyed on pre-selected non-financial topics: The external stakeholders assessed the impact of Bertelsmann's business activities on non-financial topics, while the internal stakeholders evaluated their business relevance.
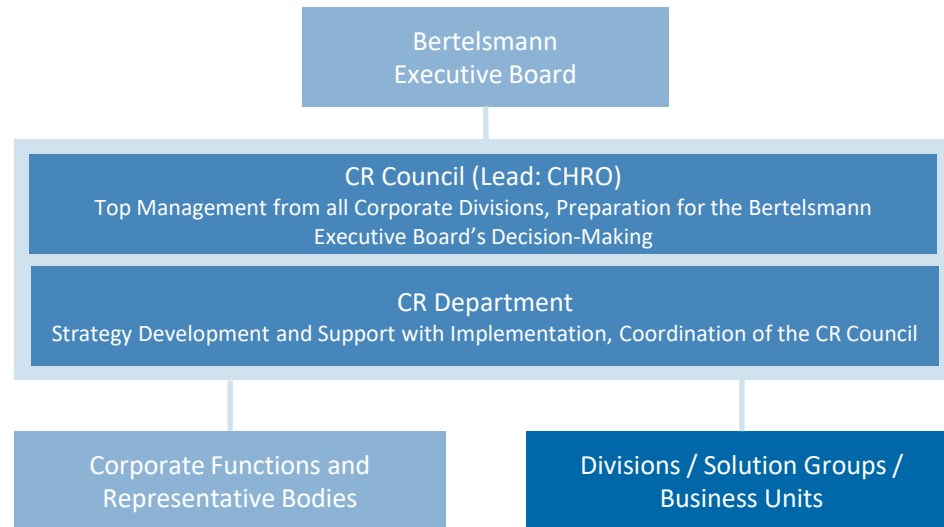
Who takes part in the stakeholder dialogue?

To combine an internal with an external view, we addressed top executives and experts from the divisions as well as business partners, potential employees, bankers, CR experts, journalists and politicians.

INTRODUCTION

Anchoring Sustainability in the Organization

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┌─────────────────────────────┐
│   Bertelsmann               │
│   Executive Board           │
└─────────────────────────────┘
┌───────────────────────────────────────────────────┐
│ CR Council (Lead: CHRO)                            │
│ Top Management from all Corporate Divisions,       │
│ Preparation for the Bertelsmann                    │
│ Executive Board's Decision-Making                  │
├───────────────────────────────────────────────────┤
│ CR Department                                      │
│ Strategy Development and Support with              │
│ Implementation, Coordination of the CR Council     │
└───────────────────────────────────────────────────┘
┌──────────────────────┐    ┌──────────────────────┐
│ Corporate Functions  │    │ Divisions / Solution │
│ and Representative    │    │ Groups /             │
│ Bodies               │    │ Business Units       │
└──────────────────────┘    └──────────────────────┘
```

Sustainability as part of Corporate Responsibility @ Bertelsmann

As a fully consolidated subsidiary of Bertelsmann SE, Arvato Supply Chain Solutions SE operates in a decentralized corporate structure that has grown over decades. However, decentralized action does not mean the abandonment of a planned and targeted approach.

Executives from the Bertelsmann divisions meet regularly in the **Bertelsmann Corporate Responsibility Council** under the leadership of the Chief Human Resources Officer. The council discusses the further development of group-wide CR priorities that flank the corporate strategy, the anchoring of corporate responsibility in the divisions and the cross-divisional coordination of CR activities. Find more details here. Arvato Supply Chain Solutions SE is represented by Andreas Barth, President Industry Vertical TECH and Arvato SCS Group Head of CR and Sustainability.

Sustainability as part of Corporate Responsibility @ Arvato Supply Chain Solutions

The **Arvato Supply Chain Solutions Corporate Responsibility Council** takes steps to cover our focus CR topics and provide a structured and conceptional approach across all business units. The council members meet at least eight times per year to discuss measures, analyze results and take necessary steps to align the CR topic development with the strategy.

The CR Council is chaired by Andreas Barth, President Industry Vertical TECH and Arvato SCS Group Head of CR & Sustainability and consists of representatives of our CR topics. Members of the **Building & Environment team** represent the topic of sustainability in the CR Council.

The Building & Environment team works closely together with **Green Leads** on Industry and Country level, to develop our strategy and implement our operational topics.

Moreover, an SCS-wide **Global Green Community** with more than 70 participants connects the sustainability team with quality managers, project leads and site directors worldwide. Thereby, our sustainability program is implemented on a local level.

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            ▲
           ╱ ╲
          ╱   ╲  Arvato SCS CR Council
         ╱  ↕  ╲
        ╱       ╲  Building & Environment Team
       ╱    ↕    ╲
      ╱           ╲  Industry / Country Green Leads
     ╱      ↕      ╲
    ╱_____╲  Arvato SCS Global Green Community
```

METHODOLOGY

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Supply Chain Solutions

METHODOLOGY

Environmental Management Platform

What is green.screen?

- green.screen is an IT platform for improving the local energy and environmental data management and has been in place since the financial year 2019.
- The software is the basis for our annual environmental data collection as well as monthly data analysis: We record consumption, operating and environmental measured values in high temporal resolution and timeliness, and evaluate and visualize the data.
- It supports energy data audits and energy management system certifications.
- The results of the annual environmental data collection are part of the Bertelsmann Annual Report (link). The auditor KPMG has conducted the 2021 audit of our Scope 1&2 emissions on a reasonable assurance base.

How does green.screen work?

- The annual environmental data is collected at site level, company level or group level depending on the data type and entered into green.screen by defined data providers.
- Consumption data (e.g., electricity, heat, material) are multiplied with specific, (country) individual CO_2-factors to calculate CO_2 emissions. Other data types are evaluated outside of green.screen and are only added to the system after the calculation has been done.
- Prior to the release of the consolidated annual Arvato SCS data, our Reporting Lead checks and approves the data.
- Dashboards at all organizational levels visualize the daily, monthly and yearly collected environmental data and carbon emissions trends and help steer actions at local level.

How does it help us to achieve our targets?

- Reliable data is the backbone to take measures for achieving our climate targets. Therefore, we continuously strive to improve our data base which means that from time to time, we add new data types and emission sources. This makes data comparison across different years more difficult but helps us to understand underlying effects more precisely.
- green.screen creates transparency in energy consumption and associated CO_2 emissions and forms the basis for a systematic energy efficiency analysis in accordance with DIN EN 50001 and DIN EN 16247-1.

METHODOLOGY

Reporting Approach

This report presents the development of relevant environmental indicators for Arvato Supply Chain Solutions for the **financial year 2021** including (among others) the following types: energy consumption, business travel, commuting, paper, packaging, distribution and waste. Please see the Appendix for a full overview.

To report on Scope 3 emissions that result from transportation as well as the usage of packaging material, we have defined the reporting boundaries as follows: We include in our calculations only downstream transport activities and package material use that **Arvato SCS is organizing, purchasing, and managing for our customers on their behalf**. Thereby, we exclude transport activities and package material use which is directly organized, purchased, and managed by our customers to avoid double emission accounting.

The data forms part of **Bertelsmann's annual environmental data collection** which is reported online on the Bertelsmann homepage. The Bertelsmann reporting follows the international **standards of the Global Reporting Initiative (GRI)** ("Core Option"), the world's leading framework for sustainability reporting by international companies and organizations.

The data in this report represent a share in the consolidated Bertelsmann environmental report and cover Arvato Supply Chain Solutions´ sites with more than **2 million square meters** of logistics space in **more than 15 countries** worldwide.

STRATEGY

Bertelsmann Climate Targets

Climate Neutral by 2030

On corporate level, our parent company Bertelsmann aims at a reduction of greenhouse gas (GHG) emissions by 50 % by 2030 compared to 2018. The remaining emissions will be offset with voluntary climate protection measures. Please find further details on the program here.

The reduction target was validated by the Science Based Targets Initiative (SBTi) in March 2021. The SBTi confirmed that Bertelsmann's climate target is ambitious and in line with the 1.5° C target of the Paris Climate Agreement.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION
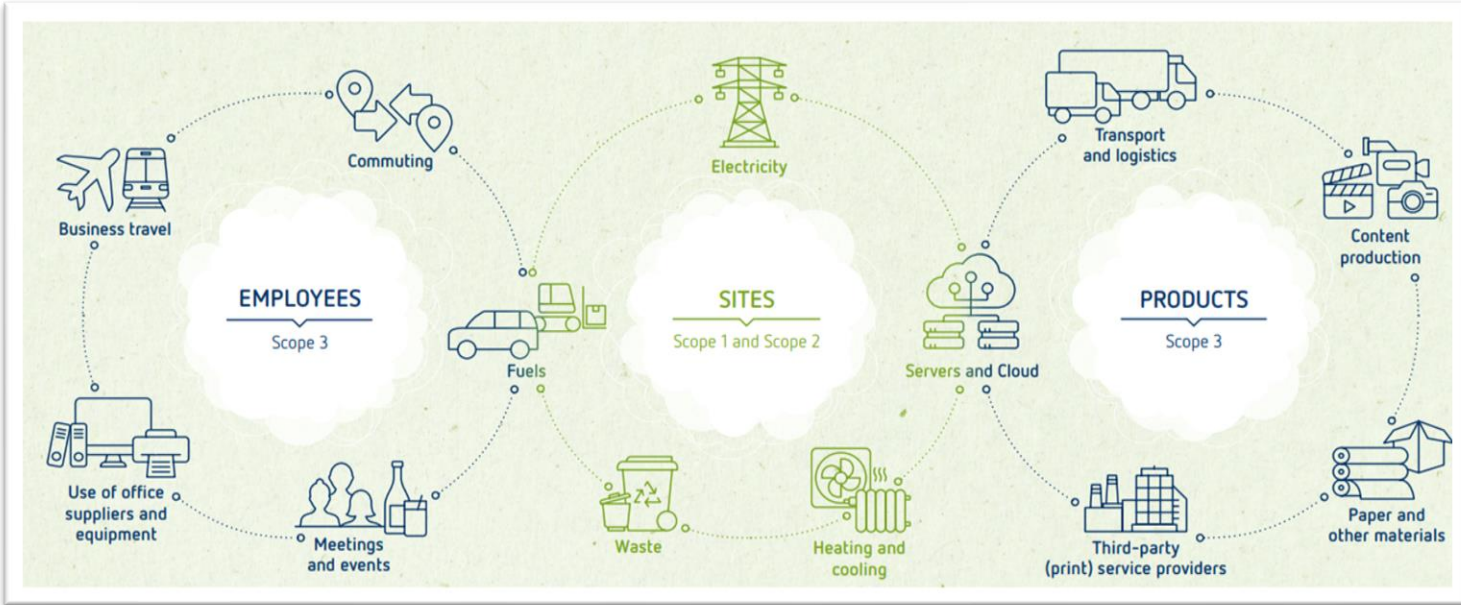
Why do we use the term "CO2e" instead of "CO2"?

"CO2e, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO2 that would create the same amount of warming. That way, a carbon footprint consisting of lots of different greenhouse gases can be expressed as a single number. [...] Standard ratios are used to convert the various gases into equivalent amounts of CO2."

Source: The Guardian (2011): What are CO2e and global warming potential (GWP)?, online available https://www.theguardian.com/environment/2011/apr/27/co2e-global-warming-potential (accessed 12th May 2022).

← The Bertelsmann approach on how to cluster corporate emissions.

STRATEGY

Arvato SCS Ambition Level

We at Arvato Supply Chain Solutions have a clear orientation towards growth and are planning to increase our global footprint both in terms of space and employees until 2030.

To account for future growth, we are not only looking at absolute emissions, but also pursue the goal to minimize the negative impact per parcel.

1 — 100% **green electricity worldwide** as of January 2023

2 — **Scope 1&2**[1,2]**:** 50% absolute reduction until 2030 *(base line 2018)*

3 — **Scope 1-3**[1,2,3]**:** 50% relative reduction per package until 2030 *(base line 2018)*

4 — 100% **offsetting** of remaining unavoidable emissions as of 2030 *(excl. Scope 3 service-related emissions*[3]*)*

[1] Scope 1: Emissions from operations that are owned or controlled by Arvato SCS
[2] Scope 2: Emissions from the generation of purchased or acquired electricity, heating, or cooling consumed by Arvato SCS
[3] Scope 3: All indirect emissions (not included in scope 2) that occur in the value chain of Arvato SCS. For a full list of Scope 3 indirect emission sources considered for this report please refer to the Appendix.

STRATEGY

Scope Model explained

Arvato SCS emission lens	Scope	Emission type	Definition	Examples
Site related emissions	Scope 1	Direct emissions	Emissions from operations that are owned or controlled by the reporting company	Emissions from power generation, fossil fuel combustion in owned boilers, furnaces, vehicles, etc.
	Scope 2	Indirect emissions	Emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company	Use of purchased electricity, steam, heating, or cooling
Employee-/Service-related emissions	Scope 3		All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions	Production/Service provision/transportation of products, use of sold products

We cluster all relevant **Scope 1** and **Scope 2** emissions as well as a specific **selection of Scope 3** emissions into **site-related emissions**.
Further **Scope 3** emissions are clustered into **employee related emissions** respectively **service related emissions**.

STRATEGY

Employee Engagement

We like to include our employees in activities that increase environmental awareness and also help to share sustainability knowledge in an easy-going way. Some local initiatives are featured here:

VEGETABLES FROM LOFTY HEIGHTS

Our colleagues in Hong Kong had great fun creating their own rooftop garden. Growing fruits and vegetables in a safe and organic environment resulted in a bountiful harvest to share with family and friends.

STRYKÓW/PL WINS BE GREEN DAY CAMPAIGN 2021

During the latest "be green day campaign", where all Bertelsmann employees were encouraged to share personal commitments on sustainable actions (e.g., commuting to work by bike for a week, going vegetarian for a month, etc.), the Arvato SCS site in Stryków/Poland collected with >300 commitments more than any other site worldwide – congratulations!

OUR 150.000 MOST BUSY EMPLOYEES

Near our Irish site in Swords, 150.000 bees have been settled by the site's employees to increase the native Irish bee population and the diversity of local wildlife. These "beesy workers" have already produced over 350 jars of honey which has won several awards. Our main goal however is to increase the native Irish bee population, because a third of the Irish bee species are at risk of extinction. As a member of the *All Ireland Pollinator Plan,* we together with farmers, local authorities, schools, gardeners and businesses, are creating an Ireland where pollinating insects can survive and thrive. We are also members of the *Native Irish Honey Bee Society*.

PERFORMANCE

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PERFORMANCE

Highlights 2021

Definition of SCS Climate Targets

Anchoring of Sustainability targets in our strategy

Publishing our climate ambition level on our website

‚green.screen' data base enhanced with further categories

In 2021, >15,000 MWh of new photovoltaic systems were installed/approved. This capacity could power 4.000 average three person households

Virtual roadshow to educate employees on sustainability

Further roll-out of additional monthly consumption data collection to support more granular energy efficiency analyses

In Poland, we have carried out energy audits at all logistics centers

We have begun to install EV chargers at various European and Asian sites

>65% of global energy consumption covered by green energy

First US site to switch to a renewable energy contract – find details here

Installation of automatic packing machines for fashion customers in the US and in Germany, reducing packaging waste and transport emissions – find details here

PERFORMANCE

Key KPI Development 2021

1 — 100% **green electricity worldwide** as of January 2023

2 — **Scope 1&2**[1,2]**:** 50% absolute reduction until 2030 *(base line 2018)*
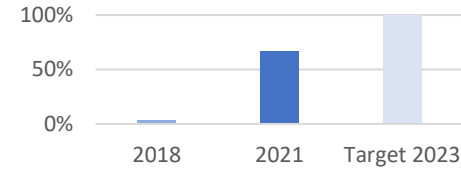
3 — **Scope 1-3**[1,2,3]**:** 50% relative reduction per package until 2030 *(base line 2018)*

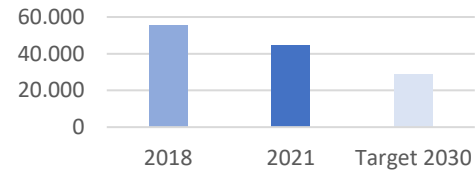**4** — 100% **offsetting** of remaining unavoidable emissions as of 2030 *(excl. Scope 3 service-related emissions[3])*

Renew. Electricity (% of grid electricity)

Scope 1&2 (t CO2e)

Scope 1-3 (kg CO2e / parcel)

Offset volume (t CO2e)

Status 2021
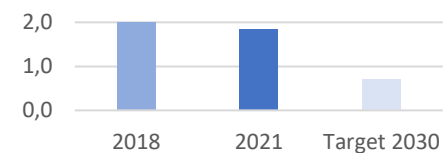
In 2021, 68% of our global electricity consumption was covered by renewable sources (wind, solar, hydro).

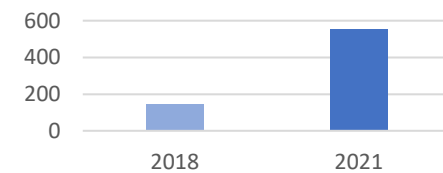Compared to 2018, we have achieved a reduction of 20%.

Compared to 2018, we have achieved a reduction of 8%.

We have started offsetting initiatives ahead of schedule, amounting to more than 500 t CO2e being offset through voluntary carbon credits in 2021.

1) Scope 1: Emissions from operations that are owned or controlled by Arvato SCS
2) Scope 2: Emissions from the generation of purchased or acquired electricity, heating, or cooling consumed by Arvato SCS
3) Scope 3: All indirect emissions (not included in scope 2) that occur in the value chain of Arvato SCS. For a full list of Scope 3 indirect emission sources considered for this report please refer to the Appendix.

PERFORMANCE
Overall emissions development

TRENDS & CHALLENGES

Since 2018, the base year of our emission calculations, the largest share of emissions can be attributed to (indirect) Scope 3 emissions. In 2021, the percentage of Scope 3 emissions has risen to 80%. As long as we achieve further reductions at our direct emission sources, this effect will continue.

At the same time, the absolute (direct and indirect) Scope 1 & 2 emissions in tons of CO_2e have been reduced, while an increase in package volume has contributed to an increase of our (indirect) Scope 3 emissions.

KEY DRIVERS OF EMISSION DEVELOPMENT

Scope 1[1]

The increase in Scope 1 is partly attributable to an increase in **absolute heat-related emissions**. Please find details [here](#).

Scope 2[2]

As more and more Arvato SCS warehouse and office locations have begun to procure 100% renewable electricity, we have seen a sharp decrease in **electricity-related emissions**. Please find details [here](#).

Scope 3[3]

With the **boom of ecommerce** during the COVID-19 pandemic, the global parcel volume has seen substantial increases. Part of our reported Scope 3 emissions can be attributed to this trend. At the same time, we have used the pandemic times to take a look at our employee **mobility and travel**. Please find details [here](#).

2021

2018

■ Scope 3   ■ Scope 2   ■ Scope 1
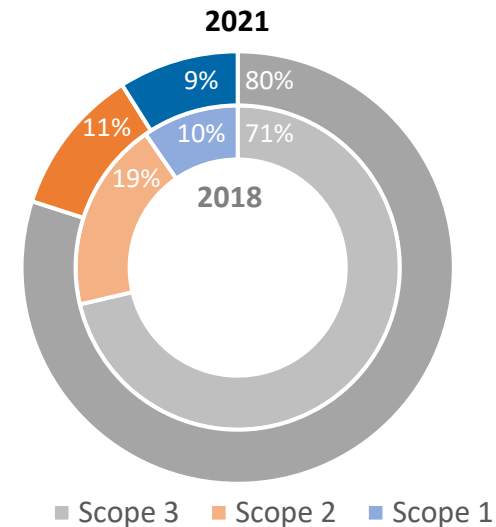
Arvato SCS Overall Emissions (in t CO2e)

Scope[1,2,3]	2018	2021	Δ
1	18.600	20.000	+8 %
2	36.800	24.600	- 35 %
3	135.200	174.600	+ 29 %
Total	**190.600**	**219.200**	**+ 15 %**

1) Scope 1: Emissions from operations that are owned or controlled by Arvato SCS
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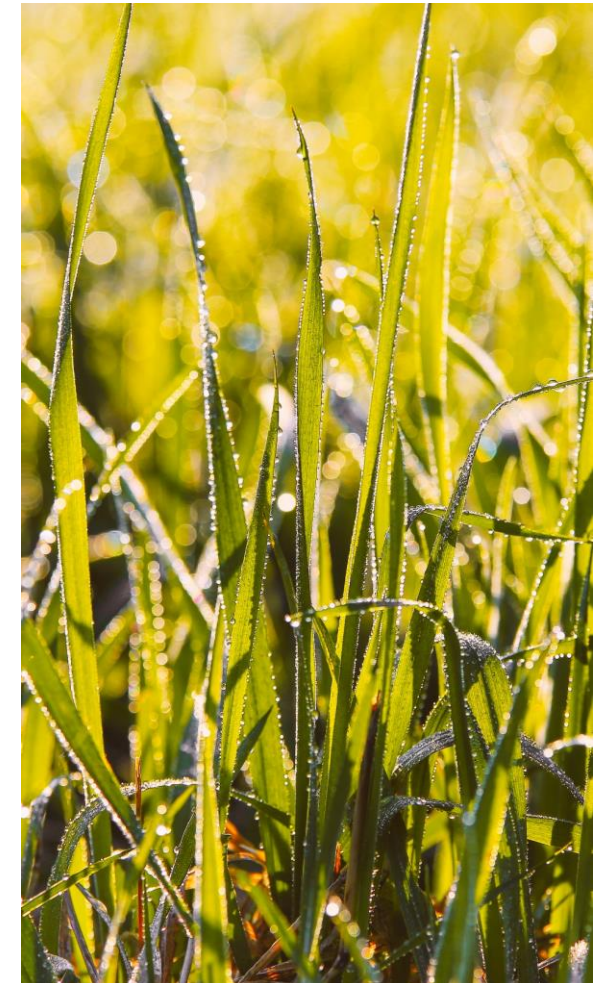
PERFORMANCE

SITE RELATED - Heating

HOW DO WE HEAT OUR BUILDINGS?

In Europe and the US, we use **different methods to heat our offices and warehouses**: electricity-powered heat pumps, gas heating, or oil heating. Our facilities in Asia and Brazil as well as some cold storages (warehouses that only serve as storage to cushion large volumes, e.g. during high season) do not need any heating equipment. We differentiate between directly purchased heat transfer media (Scope 1) and district heating which is provided by the landlord (Scope 2).

HOW HAVE THE HEAT-RELATED EMISSIONS DEVELOPED?

The reported increase of heating related emissions can be explained twofold. On the first hand, we have adjusted the corresponding **calculation factor** to reflect the emissions more conservatively. This change alone accounts for ca. 3.000 additional tonnes of CO_2e in 2021.

Secondly, our customers' businesses are growing as is our customer base, which has increased the need for heating. While climate-neutral heating options become more and more available especially in European countries, we are facing **challenges in other countries**.

HOW DO WE PLAN TO REDUCE OUR HEAT-RELATED EMISSIONS?

Energy efficiency and energy efficient business conduct is the foundation for all measures. We are constantly striving to **reduce energy consumption**, e.g. by smartly channelling heating energy into the areas where people are working, instead of heating the whole building.

Also, we are looking into **climate neutral heating concepts** like electrical heat pumps. These are already installed in a number of facilities that we own. Moreover, we are looking to reduce the heating-related emissions in our leased sites, together with our landlords. We acknowledge that we jointly need to find and implement future-proof solutions.

	2018	2021
Scope 1[1] Stationary Fuels (t CO2e)	14.800	16.500
Scope 2[2] Heat (t CO2e)	10.100	12.700
TOTAL heat related emissions (t CO2e)	**24.900**	**29.200**

1) Scope 1: Emissions from operations that are owned or controlled by Arvato SCS
2) Scope 2: Emissions from the generation of purchased or acquired electricity, heating, or cooling consumed by Arvato SCS

PERFORMANCE

SITE RELATED - Electricity

	2018	2021
Green Electricity (% of grid electricity)	3%	67%
Self-generated green electricity (% of total energy consumption)	2%	3%
Scope 2[1] Electricity emissions (t CO2e)	26.700	11.000

1) Scope 2: Emissions from the generation of purchased or acquired electricity, heating, or cooling consumed by Arvato SCS

RENEWABLE ELECTRICITY: OUR KEY MILESTONE

One of our key milestones is the **global switch to 100% renewable energy** as of 2023. For us, renewable energy may only come from the following sources: **solar, wind, or water**. We do not consider energy from atomic sources or from natural gas as being renewable. Preferably, we look for **local options** to directly source renewable energy with the local providers. Only in case there is no supply available, we use alternative options, for instance **renewable energy certificates** (RECs) from neighbouring countries, until local options become available.

As of 2021, **two thirds** of our global electricity demand has been covered by renewable energy sources. Compared to previous year, we have saved more than 10.000 tons CO2e. The greatest positive impact was achieved in **Poland** (-4.200 t) and **Germany** (-3.800 t).

ENERGY EFFICIENCY AS AN ANSWER TO INCREASING DEMAND

Electricity will become the currency of the future, as the global demand is on the rise. Therefore, it is important to analyse the energy consumption and to identify potential to **reduce the energy demand**. Measures that we have been taking include the exchange of light bulbs with energy efficient **LEDs**, installing **motion sensors** and switching off electric devices if not in use.

GENERATING OUR OWN ELECTRICITY ON SITE

As the global demand for electricity is increasing, becoming part of the transition to sustainable electricity is the next logical step. Many logistics sites offer **large roof areas** that can potentially be used as space for photovoltaic systems. Unfortunately however, not all warehouse sites are constructed in a way to bear the **additional weight** on the roof. Therefore, we analyse our global sites if they can support a PV system installation. Moreover, we are working **together with our landlords** to find solutions for leased buildings. Find more information on **our biggest PV-system so far** in Heijen/NL here.

Even the smallest roof offers chances for PV – here our site Tuen Mun in Hong Kong.

The PV system implemented in Heijen (the Netherlands) creates an output of more than 10.000 megawatt hours (MWh) which could cover the needs of around 3,300 households.

PERFORMANCE

EMPLOYEE RELATED – Employee Mobility & Business Travel

SUSTAINABLE EMPLOYEE MOBILITY AS A CHALLENGE

For us, sustainable employee mobility is a challenge due to the fact that most of our warehouse sites are **located outside of city centres**. Hence for the most part, there is unfortunately only very limited public transport available. However, with the COVID-19 pandemic, a large portion of our employees started **working from home** in full time, which is also reflected in the employee commuting emissions. Still, the majority of our workforce needs to be on site to ship out our customers' products in time.

In some countries, our employees also have the option to **lease bikes**, for themselves and their close relatives. Our yearly global corporate challenge '**FitForWork'** highlights our intent to incentivize more and more employees to change their commuting habit.

To allow easy **charging of electric vehicles** at our sites both for employees as well as visitors, we are in the process of installing EV charge points. We already have such EV chargers at selected sites in the Netherlands, Germany, France, UK, Italy, Spain, Poland, and the US.

BUSINESS TRAVEL IN TIMES OF THE PANDEMIC & REBOUND EFFECTS

Due to the COVID-19 pandemic, our **travel intensity** was reduced tremendously over the past two years. In 2022, we expect that travelling will increase again, since being close to our customers is the core of our client relationship and we do not want to change this approach. The question for us is: how do we align the need for travelling while effectively cutting CO2e emissions?

The answer is, we need to find ways to allow our employees to take the 'greener' decision when booking travel options and hotel stays. The **corporate Travel Policy** has therefore been updated and alongside, we have created our 'Green Travel Guidelines' to illustrate the effect different means of transport have on the creation of emissions. Moreover, our booking tool now show hotels with a focus on sustainability during the search process.

	2018	2021
Scope 3[1] Business Travel (t CO2e)	4.700	900
Scope 3[1] Employee Commuting (t CO2e)	20.300	9.100

[1] Scope 3: All indirect emissions (not included in scope 2) that occur in the value chain of Arvato SCS. For a full list of Scope 3 indirect emission sources considered for this report please refer to the Appendix.

APPENDIX

APPENDIX

Overview on CO2e emission data

Site related emissions	unit	2018	2021
Scope 1 Stationary Fuels	t CO2e	14.800	16.500
Scope 1 Refrigerant Losses	t CO2e	700	400
Scope 2 Electricity	t CO2e	26.700	11.000
Scope 2 Heat	t CO2e	10.100	12.700
Total Scope 1+2 Site related	**t CO2e**	**52.300**	**40.600**
Total Scope 3 Site related	**t CO2e**	**9.700**	**9.200**
Total Scope 1,2 & 3 Site related	**t CO2e**	**62.000**	**49.800**
Employee related emissions	**unit**	**2018**	**2021**
Scope 1 Mobile Fuels	t CO2e	3.100	3.200
Total Scope 3 Employee related	**t CO2e**	**28.200**	**14.700**
thereof Scope 3 Business Travel (t CO2e)	*t CO2e*	*4.700*	*900*
thereof Scope 3 Employee Commuting (t CO2e)	*t CO2e*	*20.300*	*9.100*
Total Scope 1 & 3 Employee related	**t CO2e**	**31.300**	**17.900**
Service related emissions	**unit**	**2018**	**2021**
Total Scope 3 Service related	**t CO2e**	**97.300**	**150.800**
Total Emissions	**t CO2e**	**190.600**	**218.600**

APPENDIX

Overview on emission source scope

Scope	Emission Cluster	Emission Source	Explanation
1	Site-related	Stationary Fuels	Natural gas/biogas/liquefied gas/wood/coal/diesel input that was used at the location itself to produce heat for that location.
1	Site-related	Refrigerant Losses	Total amount of refrigerant losses that are determined during maintenance and service work via the refill quantities. Refrigerants are usually used in cooling and air conditioning systems or in heat pumps.
1	Employee-related	Mobile Fuels	Amount of petrol, and diesel consumed by the company's own vehicles with focus on purchased and/or leased vehicles (such as those used by field sales representatives, managers, etc.) or vans and trucks.
2	Site-related	Electricity	Electricity consumed that was either purchased from the grid or generated by our own photovoltaic systems.
2	Site-related	Heat	Amount of heat energy consumed that was procured from a third-party local/district heating system or provided by a landlord.
3	Site-related	Waste	Amount of waste that is intended for reuse/recycling/composting, energy recovery, or incineration.
3	Site-related	Energy related emissions	Emissions from the upstream chain of a) energy generation as well as from distribution losses of the electricity grid; b) natural gas and district heating; and c) heating oil and other fuels.
3	Employee-related	Business Travel	Total amount of kilometers travelled by employees by airplane, train, rental car, as well as the number of nights spent in standard hotels as part of business trips.
3	Employee-related	Commuting	Total distance travelled by all employees by car, public service, ride sharing, or emissions free for the daily journey to work.
3	Employee-related	IT Devices	Number of notebooks/laptops, desktop PCs, monitors, and mobile phones/tables purchased during the reporting period.
3	Employee-related	Office Paper	All amounts of paper that were used in the context of office work (e.g., printer paper, stationary, paper for company or marketing brochures). We do not report paper here that was used by publishing houses, print shops, or logistic units to produce printed products for customers such as books, magazines, or packaging.
3	Service-related	Transportation	Downstream transportation services managed by Arvato SCS on behalf of our customers.
3	Service-related	Packaging materials	Material that was used for packaging (cardboard, paper, foils, plastics, and pallets) and procured by Arvato SCS on behalf of our customers.
3	Service-related	Third-party print service providers	The amount and origin of paper purchased and received from customers, production materials (such as printing plates, ink, etc.), packaging materials (such as foils, pallets, etc.), and transportation services for our printing facility.
3	Service-related	Warehouse Services	External rented warehouse space from third companies as well as short-time rented warehouses.

Contact

Publisher

Arvato Supply Chain Solutions
Reinhard-Mohn-Str. 22
33333 Guetersloh
Germany
begreen@arvato-scs.com
www.arvato-supply-chain.com

Responsible

Andreas Barth
President Industry Vertical TECH &
SCS Group Head of Sustainability

Project Leads & Authors

Melanie Engler
Senior Expert Sustainability

Miriam Bartsch
Senior Expert Sustainability