

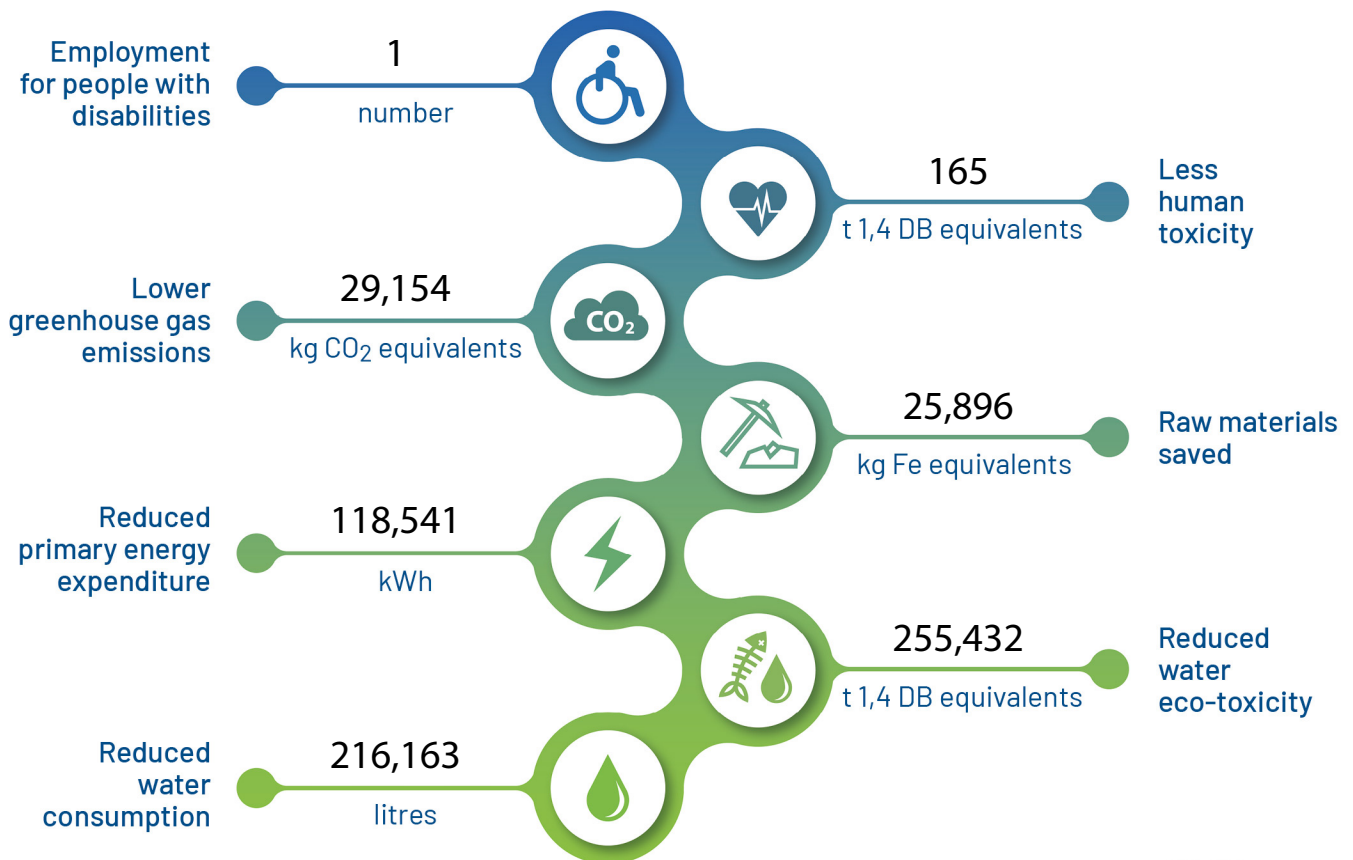
CERTIFICATE

of social/ecological impact with IT hardware

AfB gemeinnützige GmbH would like to thank
ZwickRoell GmbH & Co. KG

AfB gGmbH is Europe's largest non-profit IT company and specialist for extending the service life of used IT and mobile devices through professional data destruction, refurbishing and reselling. The officially recognized inclusion company employs around 650 people in five countries, approx. 49% of them are people with disabilities.

Within the scope of our partnership, from 01/01/2023 to 31/12/2023
 the following impacts were attained by the submitted devices to AfB:



Daniel Büchle, CEO
 Ettlingen, 29/01/2024

The environmental data refer to a life cycle assessment study (2021) by myclimate (except iron equivalents)

Contribution to circular economy through reuse

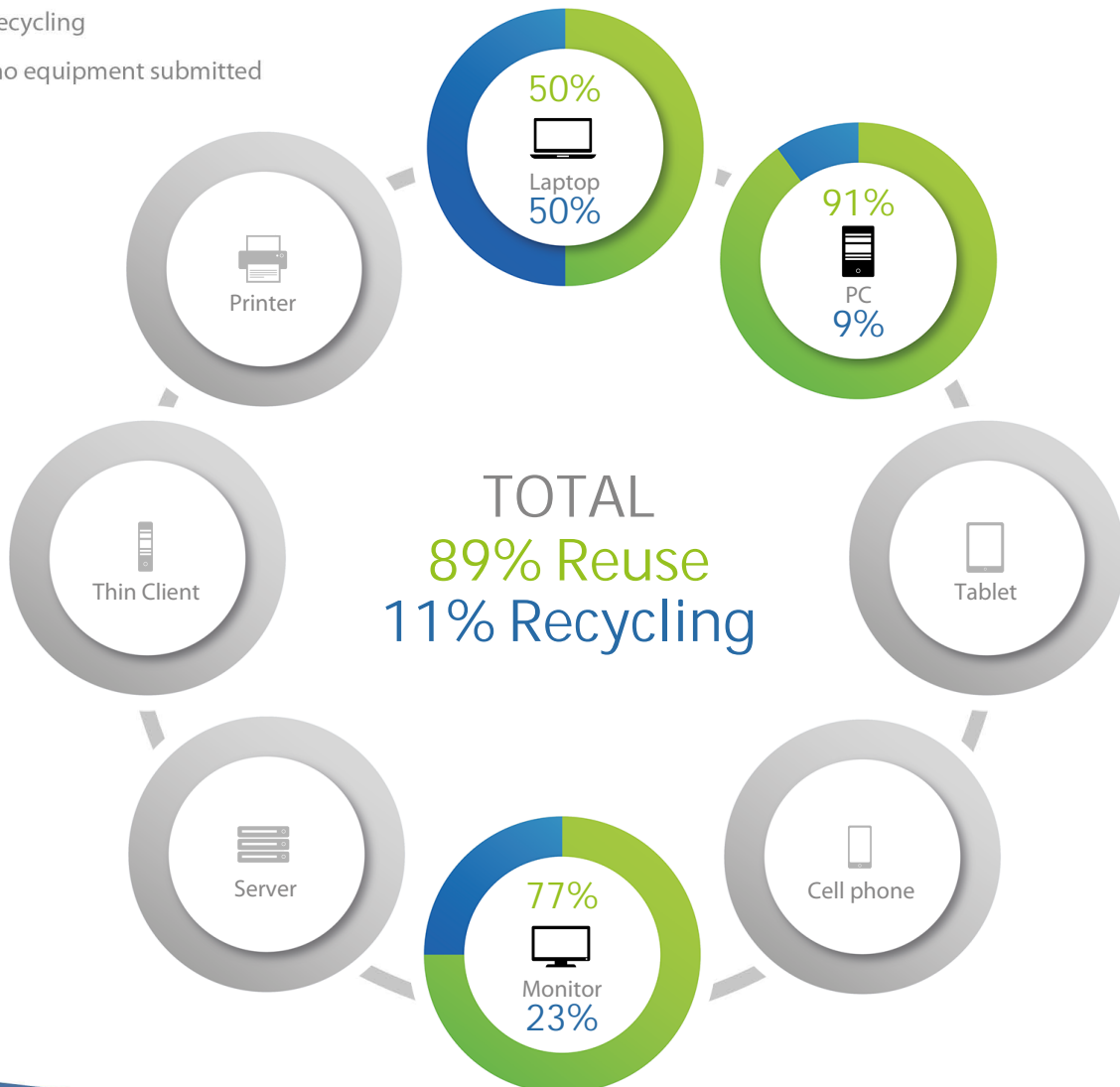
There is currently no sustainably produced IT hardware. The extraction of raw materials and production have considerable social and ecological implications. The best option from a sustainability viewpoint is extending the service life of IT and mobile equipment. In total 89% of the IT devices you submitted to Afb could be refurbished and remarketed through a certified process.

Reuse and recycling in our certified process:



Classification in reuse (remarketing) and recycling of the equipment you submitted

- reuse (remarketing)
- recycling
- no equipment submitted



Your impact in detail

Between January 1, 2023 and December 31, 2023 AfB made 2 collections from you and processed 221 IT and mobile equipment with a total weight of 2.1 tonnes. AfB was able to resell 89% of the equipment after data destruction, hardware testing, spare parts procurement, repair work, upgrading and cleaning.

Detailed composition

	Reusable devices after being refurbished			Devices forwarded to recycling			Total quantity	
	number	%	kg	number	%	kg	number	kg
Laptop	2	50 %	4	2	50 %	5	4	9
PC	171	91 %	1,721	16	9 %	186	187	1,908
Tablet	0	-	0	0	-	0	0	0
Cell phone	0	-	0	0	-	0	0	0
Monitor	23	77 %	149	7	23 %	47	30	195
Server	0	-	0	0	-	0	0	0
Thin Client	0	-	0	0	-	0	0	0
Printer	0	-	0	0	-	0	0	0
Misc.*	0	-	0	0	-	0	0	0
Total	196	89 %	1,874	25	11 %	238	221	2,112

Reduced emissions and saved resources through IT remarketing

	Human toxicity	Greenhouse gas emissions	Raw materials savings	Primary energy expenditure	Water consumption	Water eco-toxicity	
	t 1.4-DB equivalents	kg CO ₂ equivalents	kg Fe equivalents	kWh	litre	fresh water	sea water
Laptop	1	227	105	880	1,184	1	1,846
PC	142	24,235	24,966	99,304	179,307	123	191,454
Tablet	0	0	N/A	N/A	0	N/A	N/A
Cell phone	0	0	N/A	N/A	0	N/A	N/A
Monitor	21	4,692	826	18,358	35,672	15	61,992
Server	0	0	N/A	0	0	0	0
Printer	0	0	N/A	0	0	0	0
Total	165	29,154	25,896	118,541	216,163	140	255,292

* For example copiers, scanners, switches, beamers and plotters, but no loose data carriers and accessories.

N/A stands for „not available“. It means that there is not enough scientifically valid data available for a device type (e.g. tablet) in a specific impact category (e.g. raw materials savings). The definition of impact categories (e.g. human toxicity) can be found on the last page.

The partnership with AfB – A contribution to seven SDGs

The Agenda 2020 for sustainable development was passed in 2015 by all member states of the United Nations. As a result the UN has created the basis for generating economic progress within the framework of our ecological limits and social responsibilities. A total of 17 goals for sustainable development, the so-called Sustainable Development Goals (SDGs), form the core of the Agenda.

AfB has set itself the following interim goals by 2025 which we wish to attain together with dedicated partners like you, thus supporting the SDGs:



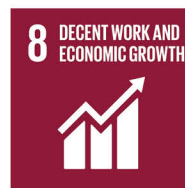
Through an IT partnership with AfB you make an important contribution to attaining 7 SDGs.



Equal opportunities is linked to access to good educational materials. AfB supports educational projects worldwide by providing IT devices.



By reusing IT devices the water consumption and the effect on the ecological water system due to the emission of toxic substances are reduced.



IT remarketing contributes to sustainable raw materials extraction and to the reduction of electronic waste dumps in the Global South.



By creating inclusive workplaces AfB promotes social and economic inclusion as well as the self-determination of people with disabilities.



AfB contributes to reducing resource consumption, emissions and electronic waste by reusing IT hardware.



Reuse and recycling of IT equipment lead to savings of emissions, raw materials and energy and thus contribute to climate protection.



The co-operation between AfB and IT partners considerably supports the attainment of social and ecological goals.

Terms and understanding



Work places for people with disabilities

Your used IT equipment contributes to creating and maintaining jobs for people with disabilities at AfB.

Human toxicity

Every day people are exposed to a number of environmental toxins. Human toxicity measures the effects on and damage to human health. This damage can be triggered by substances (e.g. nitrogen oxides) which enter into the air, soil and water.

1.4 dichlorobenzene equivalents (t 1.4-DB-equ.) are used to express the toxicity.



Greenhouse gas emissions (climate change)

The greenhouse gas emissions generated by human activity contribute to global warming and thus to climate change. The Global Warming Potential (GWP) is used as an indicator. In order to be able to make a comparison all greenhouse gas emissions are converted to CO₂ equivalents.

*A saving of 1,000 kg CO₂ equivalents corresponds to a 4,900 km trip with a mid class petrol run car.**

Saved resources

By reusing second hand IT equipment, less raw materials are extracted to produce new devices. The globally available metal and mineral reserves (e.g. palladium, iron) vary strongly which is why the consumption of a metal is set in relation to its availability.

In order to facilitate comparisons, all metals and minerals are expressed as iron equivalents (kg Fe equivalents). The basis is an eco balance study carried out by the Technical University Berlin from 2013.



Primary energy expenditure

Primary energy expenditure reflects the demand for primary energy resources (crude oil, coal, hydropower etc.) a product needs throughout its entire life cycle from manufacturing to disposal. Primary energies are needed to provide end use energy (electric power etc.).

*The indicator here is quantified in the unit kWh. A saving of 1,000 kWh corresponds to a third of the annual power requirements of a 2-person-household in a single family house.***

Water eco-toxicity

Water is a valuable resource for life on the planet, which, amongst other things, is at risk due to toxic substances. The eco-toxicity of fresh and sea water refers to the effects on the fresh and sea water eco systems. Toxic substances (e.g. heavy metals) enter into rivers, lakes or the sea through diverse routes such as through the air, water or soil.

1.4 dichlorobenzene equivalents (t 1.4-DB-equ.) are used to express the toxicity.



Water consumption

Water is required for many processing steps of a product. Water availability is at risk in many regions. Water consumption relates to the saved water quantity and can cover abstraction, use, pollution and evaporation.

A saving of 1,000 litres corresponds to 5 full bath tubs.

* https://www.tagesschau.de/multimedia/bilder/grafik-co2-101~_origin-47ca801f-6a31-4285-8b38-f4d7a5678a29.html, retrieved on 10/12/2020

** <https://www.co2online.de/energie-sparen/strom-sparen/strom-sparen-stromspartipps/stromverbrauch-im-haushalt/#c120941>, retrieved on 10/12/2020