



TRANSFORMERS MAGAZINE'S
INDUSTRY NAVIGATOR

INVESTMENTS, ARTIFICIAL INTELLIGENCE
AND SUSTAINABILITY
CONFERENCE 2024

The building blocks towards a green business

Božena Odobašić

11TH JUNE 2024

KONČAR
D&ST





Topics

- ☐ About us
- ☐ Project requests
- ☐ Collaboration
- ☐ Verification statements
- ☐ Circularity
- ☐ ESG
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- ☐ Connecting the blocks
- ☐ Cleaner manufacturing
- ☐ Plans for the future







About us

- ❑ Founded in 1921 as Elektra, Inc, Zagreb, Croatia
- ❑ Established in 1991 as joint-stock company, KONČAR Group member
- ❑ Transformers delivered in more than 100 countries
- ❑ Export 91%
- ❑ Turnover in 2023: 325 mil EUR
- ❑ Employees: 766
- ❑ 100% owner of Power Engineering Transformatory Sp. z o.o. (PET) in Poland, and 51% in FEROKOTAO d.o.o. in Croatia

Medium power transformers

up to 160 MVA, 170 kV



Distribution transformers

up to 8 MVA, 36 kV



Special transformers

(earthing, traction, converter, reactors...)



Dry-type transformers

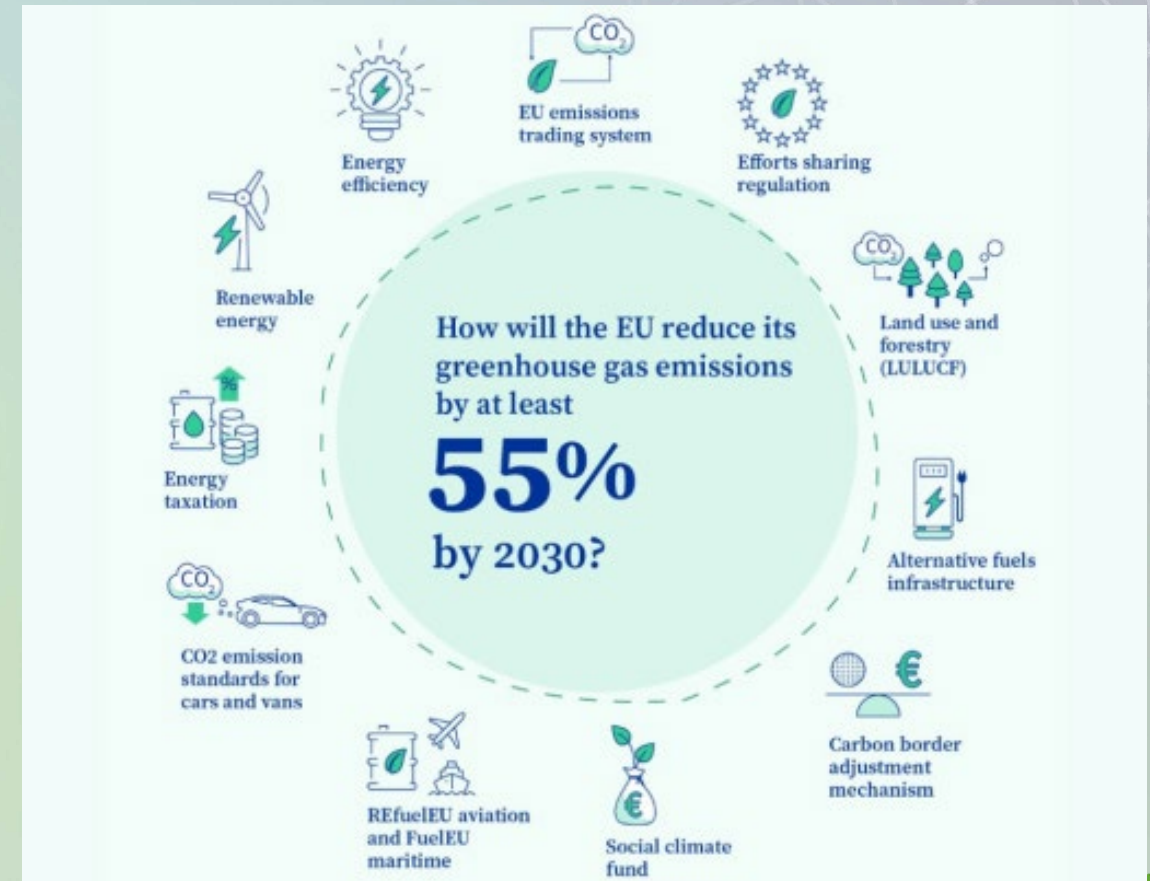
up to 5 MVA, 24 kV





About us

- ❑ Demand for green products and sustainable practices driven largely by the European market
- ❑ 2021 Paris agreement goals for the EU:
 - Cutting GHG emissions by 55% with 1990 as base year by 2030
 - Carbon neutrality by 2050
- ❑ Electrification as part of the decarbonization efforts
- ❑ DSOs & TSOs striving to green and digital power grids and transformers must fit these trends





RMP?



EPD?

CFP?





Project requests

❑ CFP (Carbon Footprint of Product)

CFP FOR KONČAR MEDIUM POWER TRANSFORMER

Commissioned by Končar D&ST



CFP FOR KONČAR DISTRIBUTION TRANSFORMERS

DT2541, DT2658, DT2870, DT2542, DT2858-1, DT2857, DT2850, DT2539 & DT2540

Commissioned by Končar D&ST



❑ EPD (Environmental Product Declaration)

KONCAR DISTRIBUTION AND SPECIAL TRANSFORMERS



ENVIRONMENTAL PRODUCT DECLARATION

400 kVA Distribution transformers, DT2858-1 (110061) and DT2857 (110081),
produced in Končar D&ST, Josipa Mirovića 8,
10090 Zagreb, Croatia

in accordance with ISO 14025 and EN 50693

Program Operator	EPDItaly
Publisher	EPDItaly
Declaration Number	
Registration Number	EPDITALY0372
Issue Date	xx/10/2022
Valid to	xx/10/2027



www.EPDItaly.it



KONČAR DISTRIBUTION AND SPECIAL TRANSFORMERS



ENVIRONMENTAL PRODUCT DECLARATION

40 MVA Oil Immersed Medium Power Transformers, ET 1455 and ET 1455/1
produced in Končar D&ST, Josipa Mirovića 8,
10090 Zagreb, Croatia

in accordance with ISO 14025 and EN 50693

Program Operator	EPDItaly
Publisher	EPDItaly
Declaration Number	
Registration Number	EPDITALY0372
Issue Date	xx/02/2023
Valid to	xx/02/2028



www.EPDItaly.it





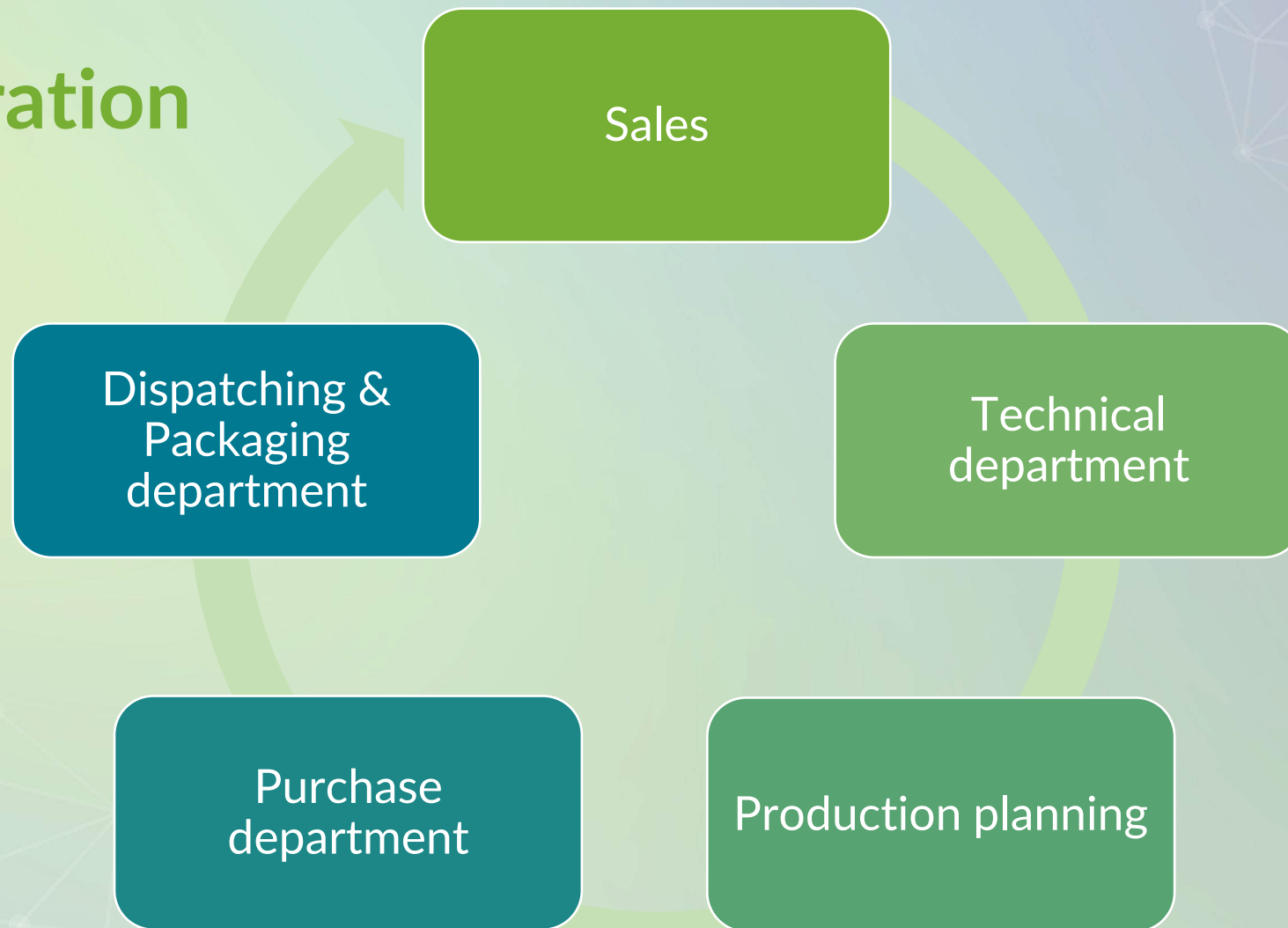
Project requests

- ❑ RMP (Raw Material Passport)
 - ❑ Insight into the raw materials used in a product
 - ❑ Increases transparency of the supply chain
 - ❑ Based on (largely) real-data collected from suppliers
 - ❑ Allows the customer to have better insight into the product, sourcing of the raw materials





Collaboration





Verification statements

This is a translation of Validation Statement N. IT22/99002774
VALIDATION STATEMENT OF EPD

It states that the Environmental Product Declaration
(rev. 1 of 29.09.2022) operated by

KONČAR D&ST
Registered office
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

In conformity with

**REGULATIONS OF THE EPDItaly PROGRAMME v.5.2
and PCR EPDItaly 007 v.2 and PCR EPDItaly 018 v.3.5**

is valid for the following product (CPC 48121 "Electrical Transformers")

400 kVA Distribution transformers:
✓ DT2858-1 (110061)
✓ DT2857 (110081)

Manufacture site
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

This certificate is valid from 30/09/2022 until 29/09/2027
and remains valid subject to satisfactory surveillance audit
Re-certification audit 29/09/2027
Issue n.1, certified since 30/09/2022

Updated information about any changes in the status of the certification may be obtained by sending a fax
to the number shown on the certificate

Authorized by
Paola Santarelli

SGS ITALIA S.p.A.
Via Caldera, 21 20153 MILANO - Italy
t + 39 02 73 93 1 f + 39 02 70 10 94 89 www.sgs.com

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Translation of the Verification Statement n.IT22/ 99003876.1

SGS Italia S.p.A. declares that the Carbon Footprint of Product calculated by

Končar D&ST
Headquarter:
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

In the final CFP Study Report named:
FP for KONČAR distribution transformers: DT2541, DT2858, DT2870, DT2842, DT2858-1, DT2857, DT2859, DT2539 & DT2540* Final Report 28 November 2022

is compliant with:

ISO 14067:2018

PCR used:
PCR EPDItaly018 - Power transformers, revision 3.5, 13-12-2021

For the following declared unit:
single unit of oil immersed distribution transformer operating for 35 years

For the following products
400 kVA transformer, reference code: DT2858-1 (110061), DT2857 (110081)

Production site:
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

400 kVA transformer, reference code: DT2858-1 (110061)	268036,6 kgCO ₂ e/DU
400 kVA transformer, reference code: DT2857 (110081)	267605,6 kgCO ₂ e/DU

from 01/01/2021 to 31/12/2021
system boundary: cradle to grave

Rev. n.0 of 23/12/2022

Updated information about any changes in the status of the certification may be obtained by sending a fax to the number shown on the certificate

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This is a translation of Validation Statement N. IT23/99005006
VALIDATION STATEMENT OF EPD

It states that the Environmental Product Declaration
(rev. 6 of 10.02.2023) operated by

KONČAR D&ST
Registered office
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

In conformity with

**REGULATIONS OF THE EPDItaly PROGRAMME v.5.2
and PCR EPDItaly 007 v.3 and PCR EPDItaly 018 v.3.5**

is valid for the following product (CPC 48121 "Electrical Transformers"):

40 MVA Oil Immersed Medium Power Transformers:
✓ ET1415 (465043)
✓ ET1455/1 (465044)

Manufacture site
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

This certificate is valid from 15/02/2023 14/02/2028
and remains valid subject to satisfactory surveillance audit
Re-certification audit 08/02/2028
Issue n.0, certified since 15/02/2023

Updated information about any changes in the status of the certification may be obtained by sending a fax
to the number shown on the certificate

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Translation of the Verification Statement n.IT23/99004562

SGS Italia S.p.A. declares that the partial Carbon Footprint of Product calculated by

Koncar DS&T
Headquarter:
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

In the final CFP Study Report named:
CFP Study Report of 40 MVA Oil Immersed Medium Power Transformers, ET 1455 and 1455/1 produced in Končar D&ST, Josipa Mokrovića 8, 10090 Zagreb, Croatia* version 01/02/2023

is compliant with:

ISO 14067:2018

For the following declared unit:
single piece of Koncar 40 MVA Oil Immersed medium power transformer, with primary voltage 110 kV and weight of 55380,1 kg

For the following products
40 MVA Oil Immersed Medium Power Transformers, ET 1455 and ET 1455/1

Production site:
J. Mokrovića 8, p.p. 100; HR-10090 Zagreb, Croatia

40 MVA Oil Immersed Medium Power Transformers (ET 1455 - 465043)	228244,2 kgCO ₂ e/DU
40 MVA Oil Immersed Medium Power Transformers (ET 1455/1 - 465044)	228244,2 kgCO ₂ e/DU

from 01/01/2021 to 31/12/2021
system boundary: cradle to gate

Rev. n.0 of 03/02/2023

Updated information about any changes in the status of the certification may be obtained by sending a fax to the number shown on the certificate

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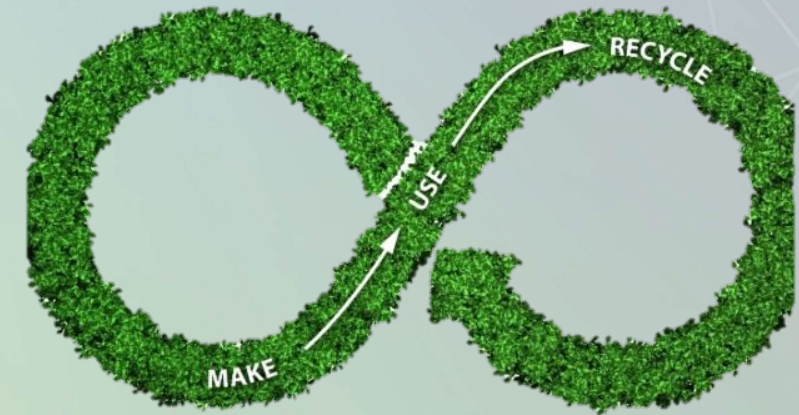
SGS ITALIA S.p.A.
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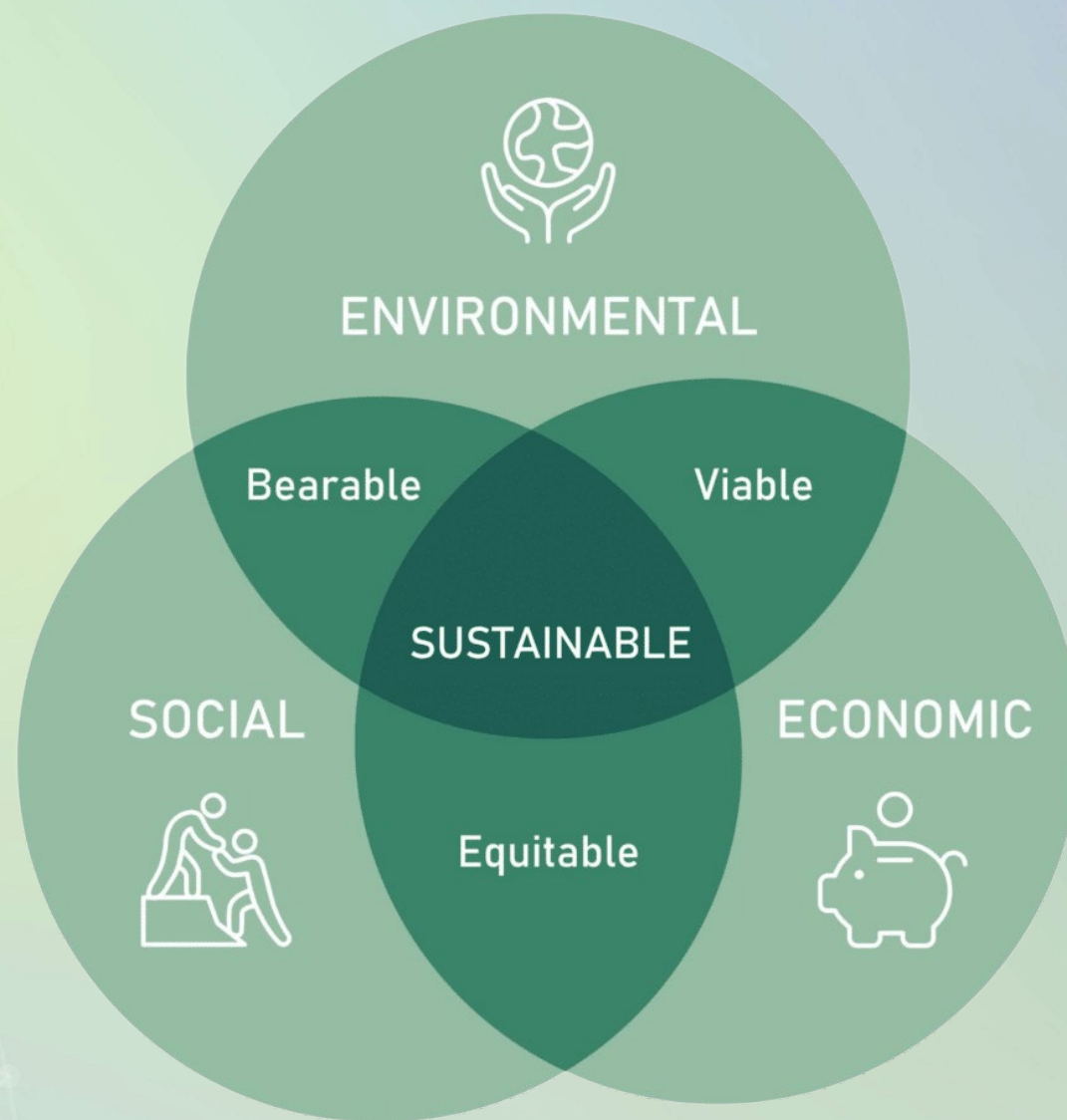
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Circularity

- ❑ Circular economy is a model that replaces the linear one
- ❑ British economists Turner and Pearce noticed the lack of desire for sustainable development among the traditional businessmen
- ❑ The basis of this philosophy is that waste does not exist; everything can be used again in another way or be broken down into substances that can become part of the life cycle







KONČAR
D&ST



- ☐ Increasingly strict regulation
- ☐ Expansion of existing rules
- ☐ Driving market trends
- ☐ Increasing transparency
- ☐ Complying with customer demands
- ☐ Keeping up with market trends
- ☐ Putting pressure along the supply chain
- ☐ Adopting or creating trends faster than legislation is being rolled out





2019

- ◆ Issued first CFP verification for distribution transformers



2021 & 2022

- ◆ Issued Sustainability reports
- ◆ CFP calculations for both DT and MPT



2023

- ◆ Issued Sustainability report for 2022
- ◆ ESG strategy planning



2024

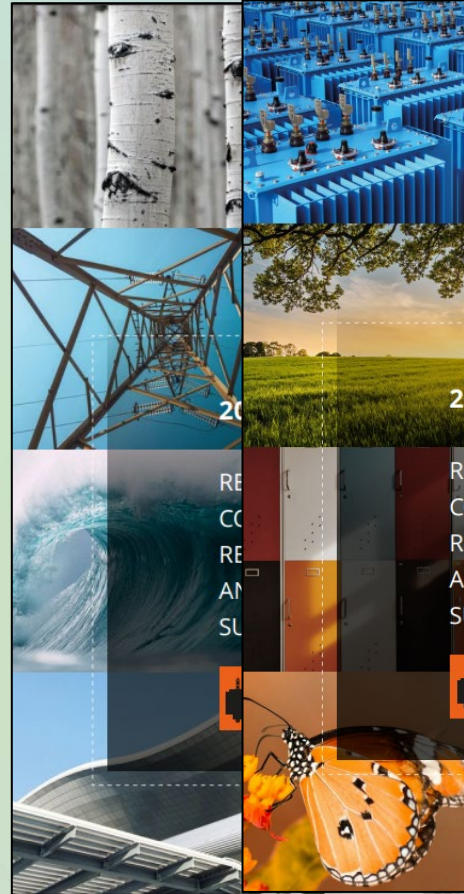
- ◆ Preparation of the Sustainability report for 2023
- ◆ Establishment of ESG strategy and goals





Reporting requirements

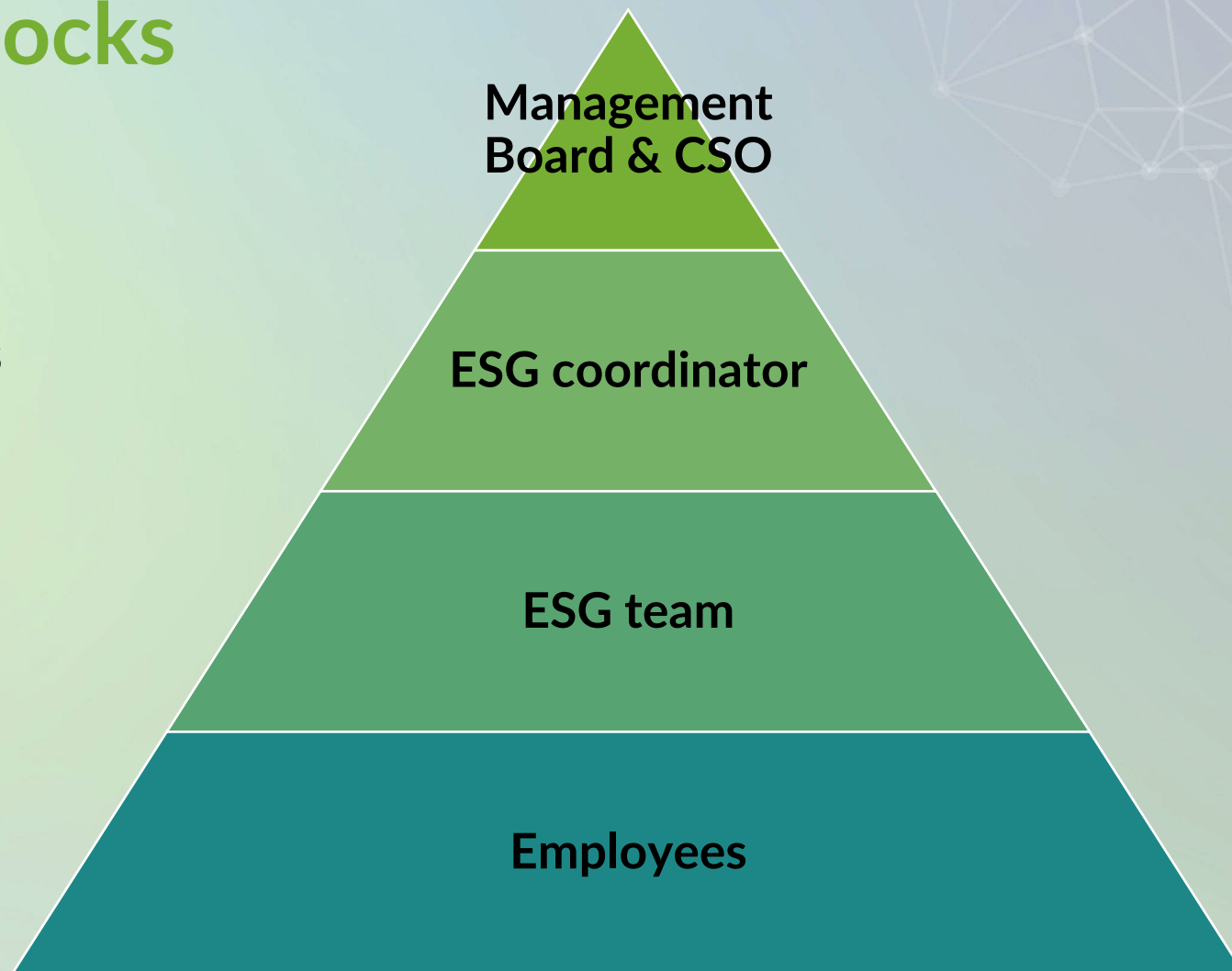
- ❑ Corporate Social Responsibility (CSR) „the responsibility of enterprises for their impacts on society”
- ❑ 2020 the first large wave of considerations on the topic of „green growth”
- ❑ Corporate Sustainability Reporting Directive (CSRD)





Connecting the blocks

- ☐ ESG Strategy
- ☐ Calculating GHG emissions
- ☐ EU Taxonomy
- ☐ Continued education





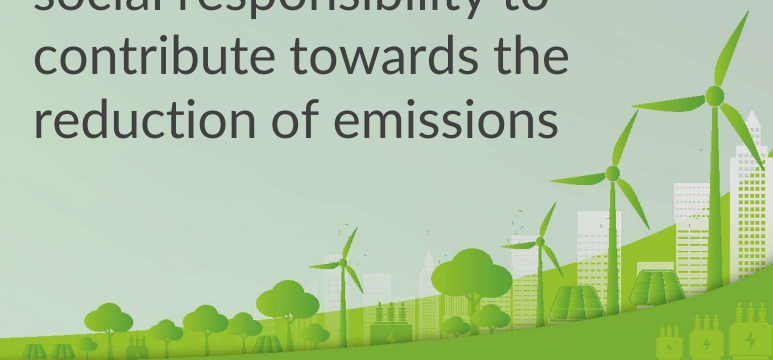
Cleaner manufacturing



- ❑ Electricity at production site in Zagreb 100% from renewable sources



- ❑ 1.1 MW photovoltaic plant
- ❑ Covering ~30% electricity needs
- ❑ Part of our corporate social responsibility to contribute towards the reduction of emissions





Plans for the future

- ❑ Continued collaboration and exchange of knowledge with end customers
- ❑ Further development of our ESG Strategy
- ❑ Investing time and human resources in quality products and work environment
- ❑ Setting an example in decarbonization





Thank you!

