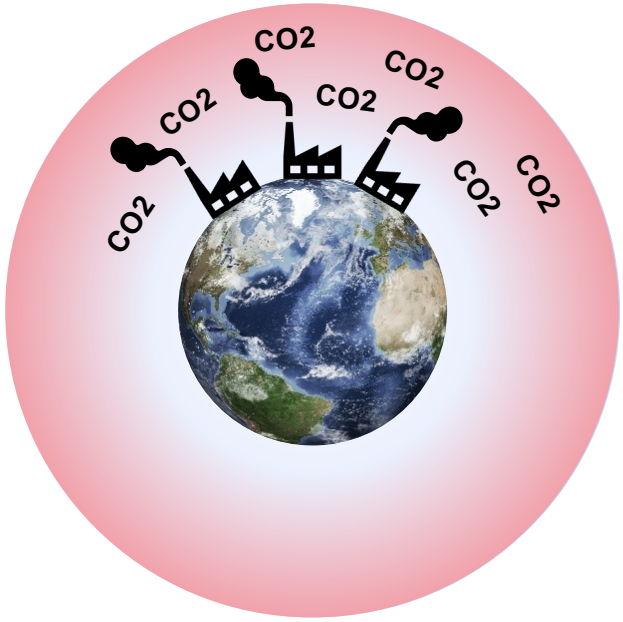
// FNT Sustainability Management Aspects: How to reduce environmental impact of IT infrastructure ops

// Today's simple agenda

- Sustainability and why you should care (on top of having a green heart)!
- Emission scopes: What are they?
- How FNT Solutions can help you successfully meet the challenges!

CH4
CO2 NF3 CO2EQ
N2O



GHG Protocol
1998

WORLD RESOURCES INSTITUTE

wbcsd

Kyoto Protocol
1997

CCF
Corporate Carbon Footprint

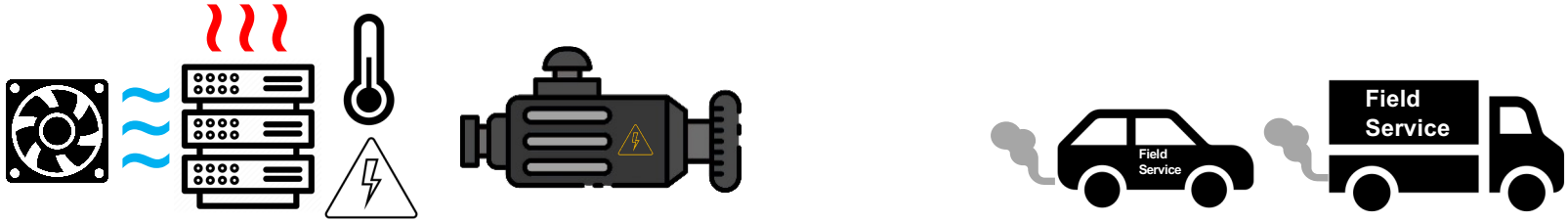
max 2°C/1.5°C

Paris Agreement (COP21)
2015

ESG
Compliance

// GHG Protocol Corporate Standard – Emission Scopes: What are they?

Scope1

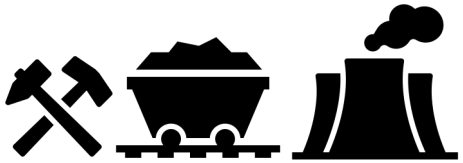
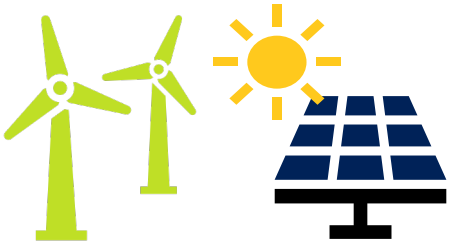


Scope2

Scope3

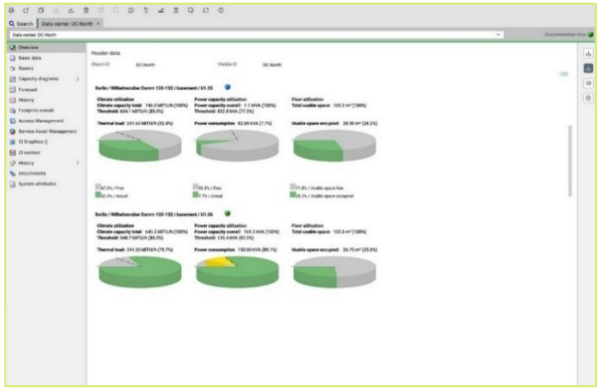
// How do FNT Solutions help you to successfully overcome the challenges!

Scope1 FNT DCIM & Monitoring — FNT Planning & Workorder Management

Scope2  vs 

Scope3 FNT Environmental Impact Management AddOn

// Scope 1 Support: FNT DCIM & Monitoring

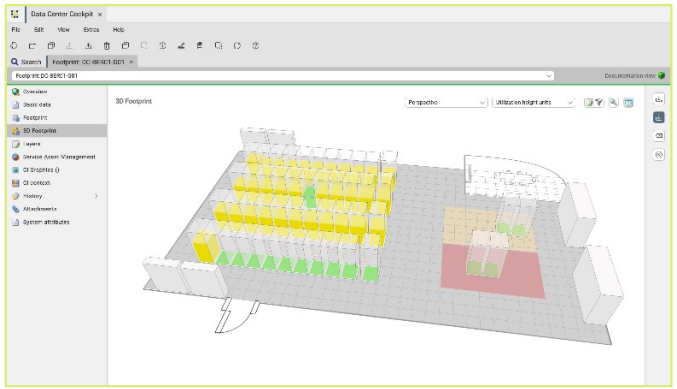


FNT Command overall total capacity management reportîng (strategic view)

- Climate capacity & reserves
- Power capacity & reserves
- Combine it with space & reserves

Enables infrastructure operators to

- reliably plan ahead mid- and long-term
- optimize investment
- support CO2E reduction measures

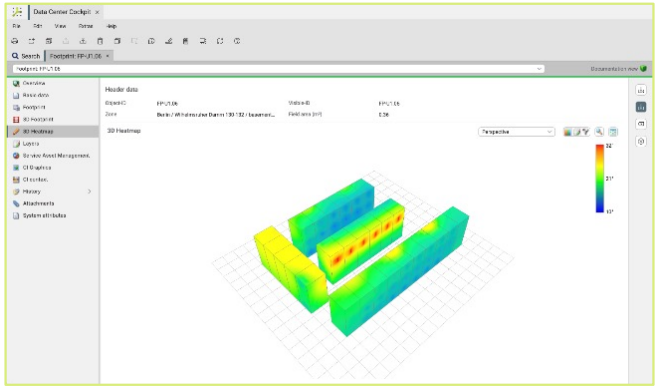


FNT Command capacity mangement process support (operational view)

- Locate capacity bottlenecks
- Identify options to resolve capacity deadlocks
- Find rackspace for rollout of new equipment

Enables infrastructure operators to

- optimize utilization
- avoid stranded capacity
- make planning and rollout processes of new devices faster & more reliable



FNT Command Heatmap for cooling management support

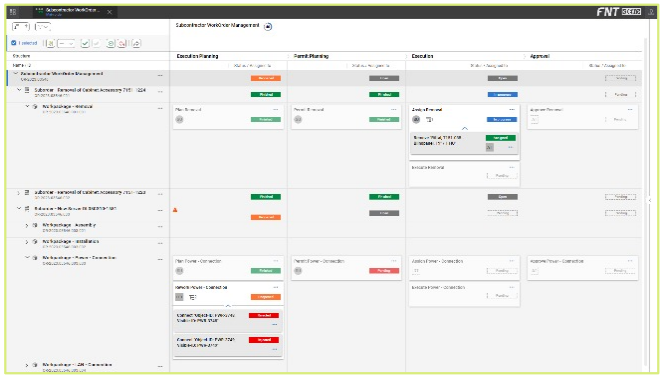
- Recognize hotspots visually
- Identify & resolve causes

Enables infrastructure operators to

- Control that overall cooling strategy works
- optimize thermal management
- improve PUE
- support CO2E reduction measures

▶ Reduce CO2E footprint operationally: Optimize energy consumption of equipment in lifecylce phase „use“

// Scope 1 Support: FNT Planning & Workorder Management

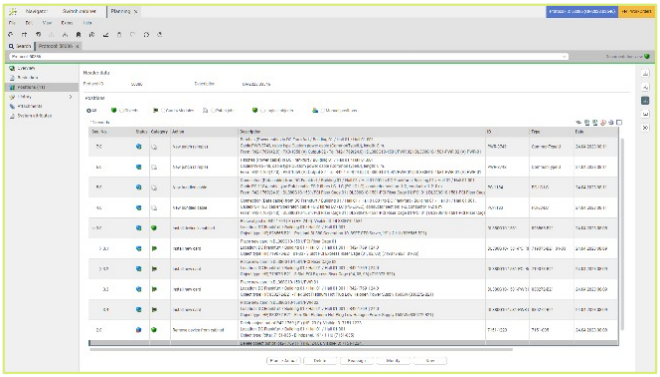


FNT Workorder Management (Phase-driven matrix overview)

- From request to planning to delivery
- From requirement to actual design
- Per silo/function but overarching orchestration

Enables infrastructure operators to

- collect assignements of workorder for the same trades at locations with regard to time criticality
- execute mass assignments to internal workforce teams or subcontractors

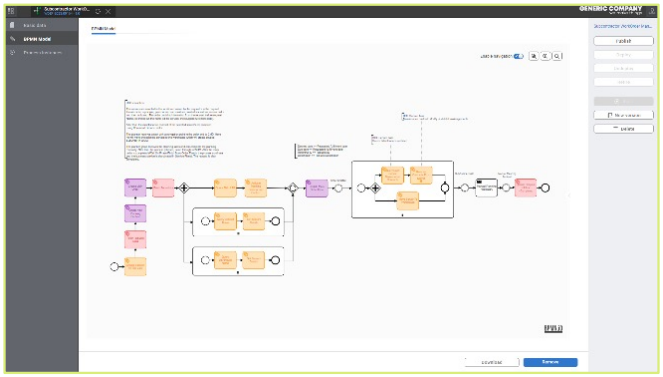


FNT Command Planning Protocol and Step-by-Step-Instructions

- created by enabling the planner to do detailed assisted planning in a digital twin of the infra
- containing all information to execute

Enables infrastructure operators to

- send technicians out perfectly prepared and with the required material on board
- reduce onsite visit repetition due to unclear instructions or divergence btw plan and reality



FNT Process Center Workflow Management

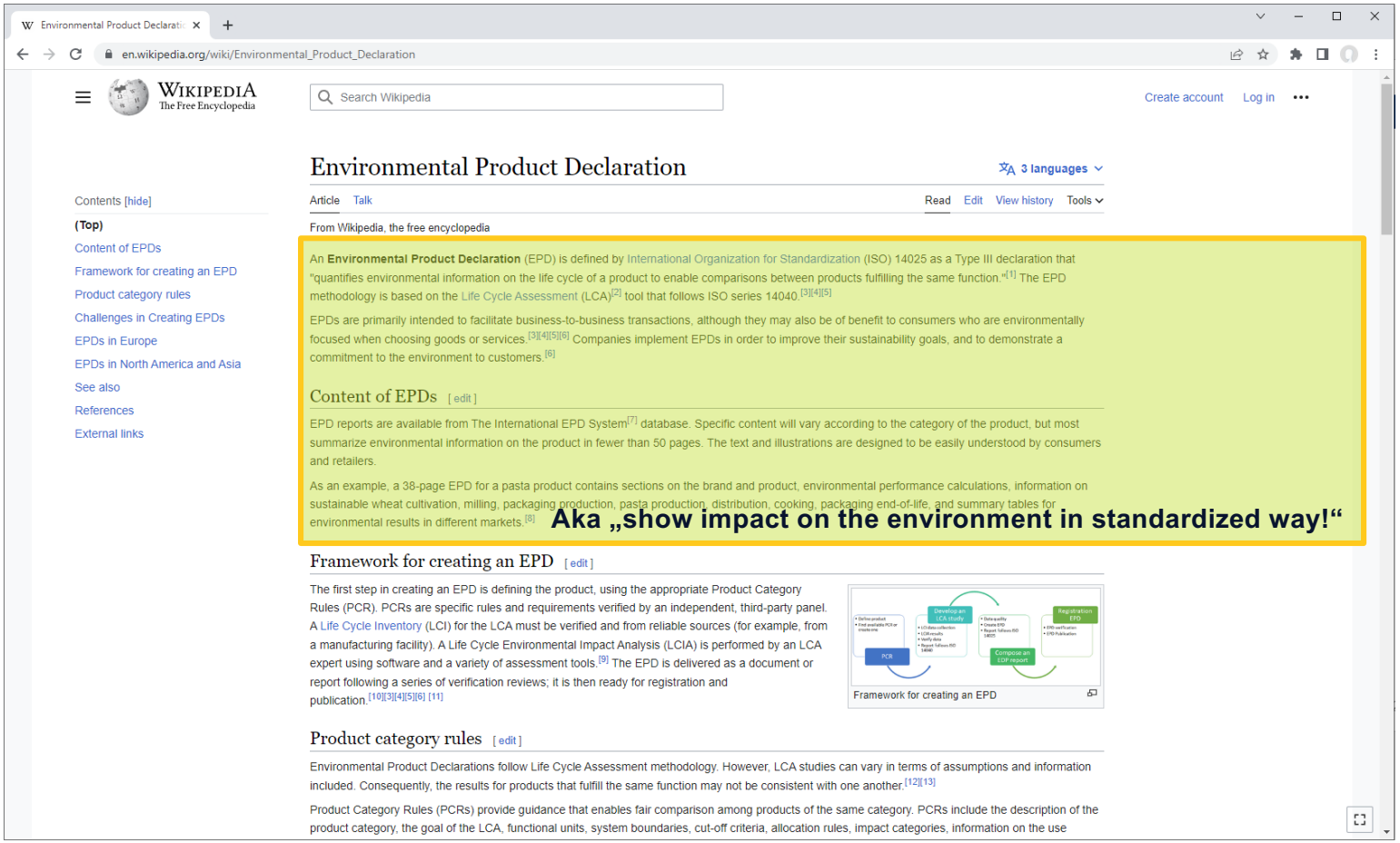
- Design & optimize workflow in workorder mgmt
- Insight into the status of all running workflow instances

Enables infrastructure operators to

- Automate work item assignment
- Accelerate processes
- Exert control over workflow execution

▶ Reduce CO2E footprint in services: Fewer onsite visits & more work per visit, reduced transport & truckload

// Scope 3: The Power of Norming – ISO Norm 14025 and the EDP



Environmental Product Declarati

en.wikipedia.org/wiki/Environmental_Product_Declaration

WIKIPEDIA
The Free Encyclopedia

Search Wikipedia

Create account Log in

Environmental Product Declaration

3 languages

Article Talk Read Edit View history Tools

From Wikipedia, the free encyclopedia

Contents [hide]

(Top)
Content of EPDs
Framework for creating an EPD
Product category rules
Challenges in Creating EPDs
EPDs in Europe
EPDs in North America and Asia
See also
References
External links

An **Environmental Product Declaration** (EPD) is defined by International Organization for Standardization (ISO) 14025 as a Type III declaration that "quantifies environmental information on the life cycle of a product to enable comparisons between products fulfilling the same function."[1] The EPD methodology is based on the Life Cycle Assessment (LCA)[2] tool that follows ISO series 14040.[3][4][5]

EPDs are primarily intended to facilitate business-to-business transactions, although they may also be of benefit to consumers who are environmentally focused when choosing goods or services.[3][4][5][6] Companies implement EPDs in order to improve their sustainability goals, and to demonstrate a commitment to the environment to customers.[6]

Content of EPDs [edit]

EPD reports are available from The International EPD System[7] database. Specific content will vary according to the category of the product, but most summarize environmental information on the product in fewer than 50 pages. The text and illustrations are designed to be easily understood by consumers and retailers.

As an example, a 38-page EPD for a pasta product contains sections on the brand and product, environmental performance calculations, information on sustainable wheat cultivation, milling, packaging production, pasta production, distribution, cooking, packaging end-of-life, and summary tables for environmental results in different markets.[8]

Aka „show impact on the environment in standardized way!“

Framework for creating an EPD [edit]

The first step in creating an EPD is defining the product, using the appropriate Product Category Rules (PCR). PCRs are specific rules and requirements verified by an independent, third-party panel. A Life Cycle Inventory (LCI) for the LCA must be verified and from reliable sources (for example, from a manufacturing facility). A Life Cycle Environmental Impact Analysis (LCIA) is performed by an LCA expert using software and a variety of assessment tools.[9] The EPD is delivered as a document or report following a series of verification reviews; it is then ready for registration and publication.[10][3][4][5][6] [11]

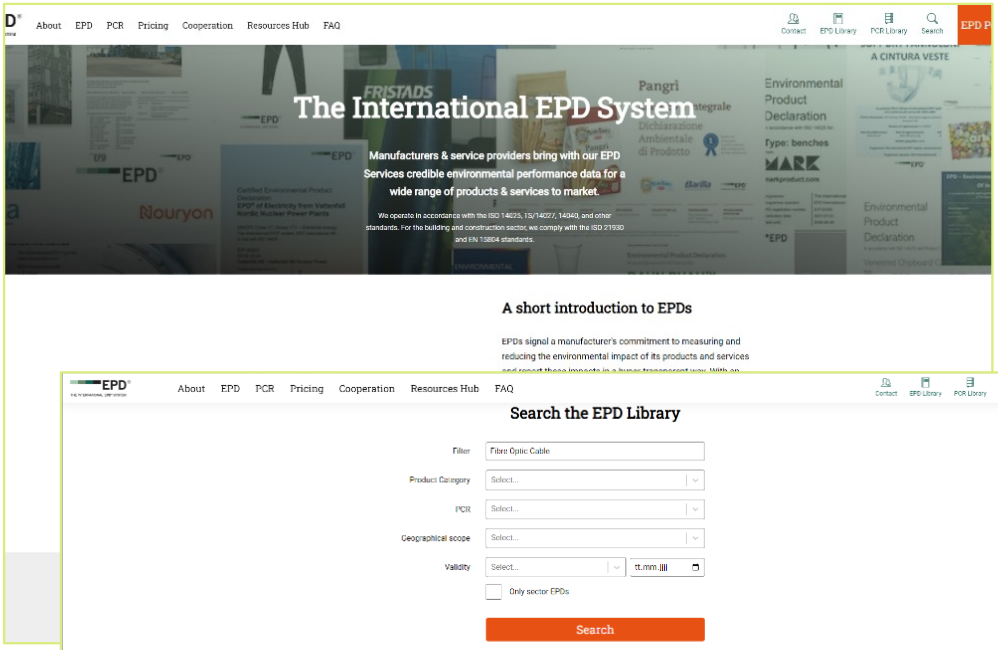
Framework for creating an EPD

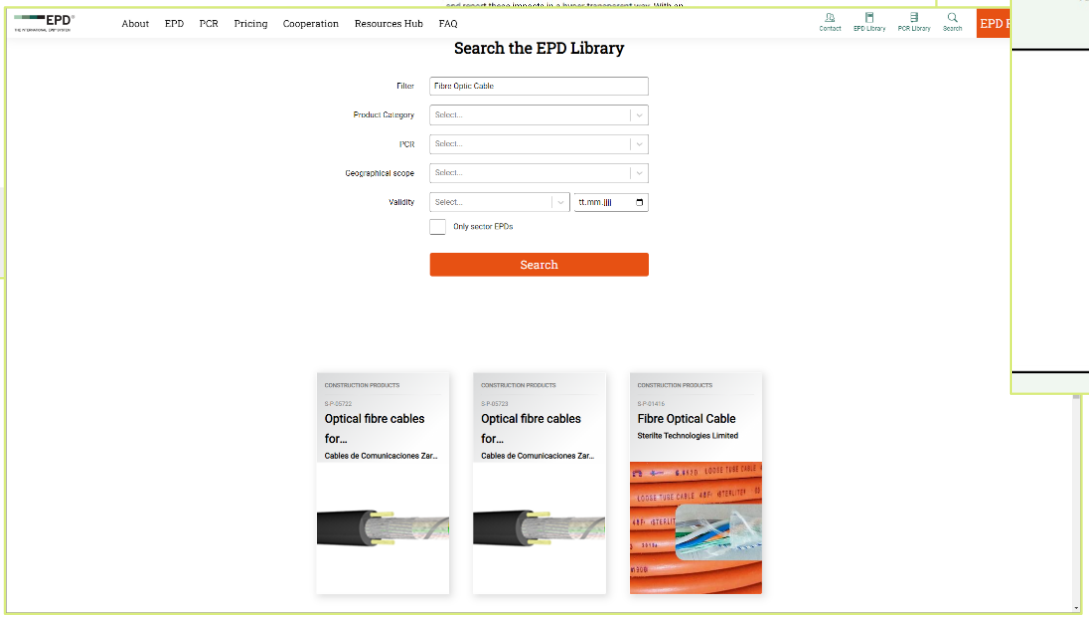
Product category rules [edit]

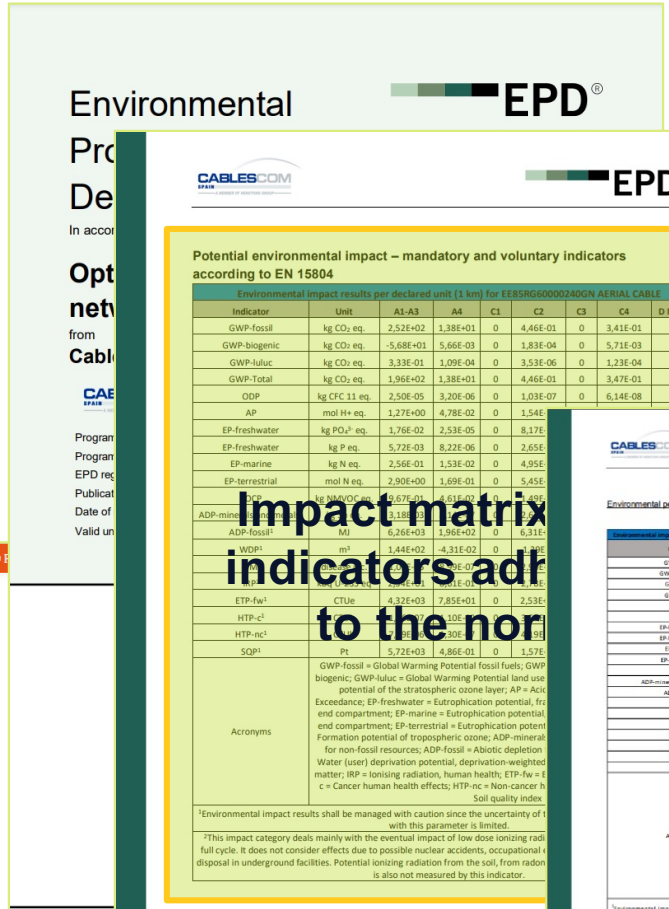
Environmental Product Declarations follow Life Cycle Assessment methodology. However, LCA studies can vary in terms of assumptions and information included. Consequently, the results for products that fulfill the same function may not be consistent with one another.[12][13]

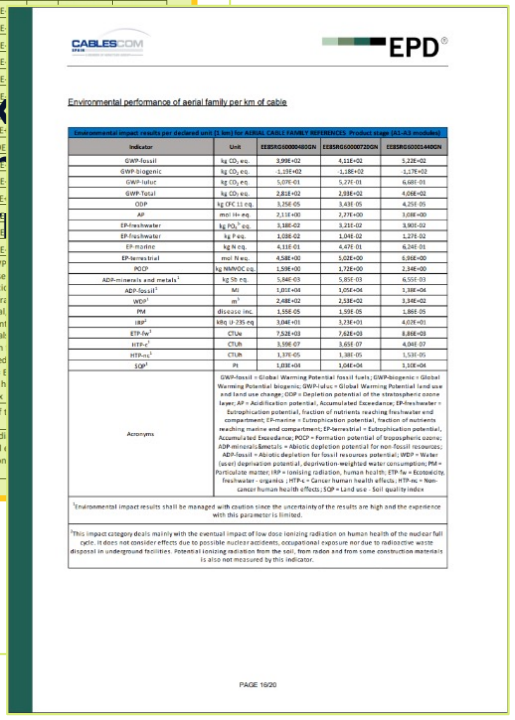
Product Category Rules (PCRs) provide guidance that enables fair comparison among products of the same category. PCRs include the description of the product category, the goal of the LCA, functional units, system boundaries, cut-off criteria, allocation rules, impact categories, information on the use

// Scope 3: International EPD System



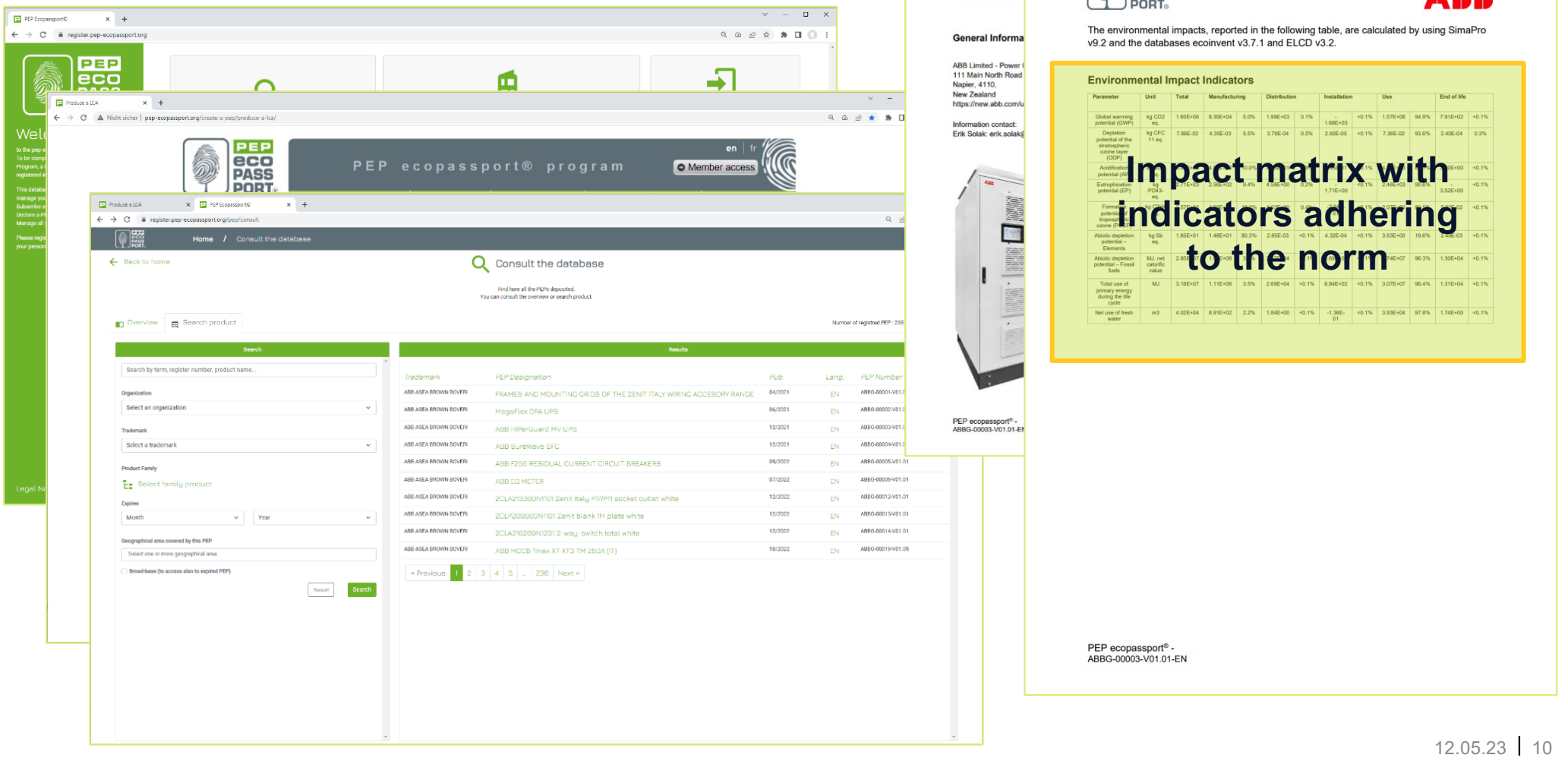






Impact matrix indicators adh to the nor

// Scope 3: Ecopassport



// Scope 3: ISO-Compulsory Environmental Impact Indicator Matrices everywhere!

ENVPEP2009014_V1 - Product Environmental Profile - Galaxy VS UPS 10-100kW with integrated batteries

Compulsory indicators	Galaxy VS UPS 10-100kW with integrated batteries - GVSUPS50KB4D						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	6.92E+01	6.92E+01	0*	0*	0*	0*
Contribution to the soil and water acidification	kg SO_2 eq	2.24E+02	7.84E+01	2.82E-01	0*	1.45E+02	2.66E-01
Contribution to water eutrophication	kg PO_4^{3-} eq	2.60E+01	1.70E+01	6.50E-02	1.01E-02	8.77E+00	7.71E-02
Contribution to global warming	kg CO_2 eq	8.33E+04	4.83E+04	6.18E+01	3.97E+01	3.48E+04	1.58E+02
Contribution to ozone layer depletion	kg CFC11 eq	3.92E-03	1.63E-03	0*	0*	2.27E-03	1.58E-05
Contribution to photochemical oxidation	kg C_2H_4 eq	1.01E+01	2.05E+00	2.01E-02	9.16E-03	7.98E+00	3.07E-02
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.27E+05	6.03E+02	0*	0*	1.26E+05	0*
Total Primary Energy	MJ	1.18E+06	4.84E+05	0*	0*	6.94E+05	0*

Impact matrix with indicators adhering to the norm

I. HPE ProLiant DL385 Gen10 Plus

PCF for Volkswagen AG for 4 years product lifetime	1x HPE ProLiant DL385 Gen10 Plus	
	Mean	Std deviation
Enclosure	18.78	5.58
Fan(s)	33.49	62.12
Power Supply Unit(s)	66.33	19.08
Mainboard	481.07	301.54
Solid State Drive(s)	20.05	13.16
Daughter-board(s)	242.04	271.62
Assembly	34.54	9.25
Transport	34.54	9.25
Use	11466.54	612.79
End of Life	17.82	9.25
Total (kgCO2e):	12387.79	1.4k

Impact matrix with indicators adhering to the norm (at least nearly)

legrand

Product Environmental Profile

Home Network - Wireless remote switch

PEP eco PASS PORT

SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	8,89E-01	kgCO_2 eq.	8,70E-01	98%	4,98E-03	< 1%	5,02E-03	< 1%	3,25E-03	< 1%	5,91E-03	< 1%
Ozone depletion	1,25E-07	kgCFC-11 eq.	1,21E-07	97%	1,01E-11	< 1%	3,53E-11	< 1%	3,42E-09	3%	1,51E-10	< 1%
Acidification of soils and water	1,92E-03	kgSO_2 eq.	1,81E-03	94%	2,24E-05	1%	2,43E-05	1%	3,89E-05	2%	2,25E-05	1%
Water eutrophication	1,48E-03	kg$(PO_4)^{3-}$ eq.	1,42E-03	96%	5,14E-06	< 1%	2,51E-05	2%	4,49E-06	< 1%	2,56E-05	2%
Photochemical ozone formation	2,14E-04	kgC_2H_4 eq.	2,07E-04	97%	1,59E-06	< 1%	1,72E-06	< 1%	2,21E-06	1%	1,76E-06	< 1%
Depletion of abiotic resources - elements	2,34E-04	kgSb eq.	2,34E-04	100%	1,99E-10	< 1%	2,20E-10	< 1%	6,64E-08	< 1%	3,81E-10	< 1%
Total use of primary energy	1,37E+01	MJ	1,34E+01	98%	7,04E-02	< 1%	6,87E-02	< 1%	3,56E-02	< 1%	6,45E-02	< 1%
Net use of fresh water	1,88E-02	m³	1,87E-02	100%	4,44E-07	< 1%	1,58E-06	< 1%	4,80E-05	< 1%	5,21E-06	< 1%
Depletion of abiotic resources - fossil fuels	1,19E+01	MJ	1,16E+01	98%	7,00E-02	< 1%	6,99E-02	< 1%	2,85E-02	< 1%	8,44E-02	< 1%
Water pollution	1,59E+02	m³	1,56E+02	98%	8,19E-01	< 1%	7,74E-01	< 1%	3,38E-01	< 1%	6,68E-01	< 1%
Air pollution	7,90E+01	m³	7,71E+01	98%	2,04E-01	< 1%	6,07E-01	< 1%	3,89E-01	< 1%	2,01E-01	< 1%

The values of the 27 impacts defined in the

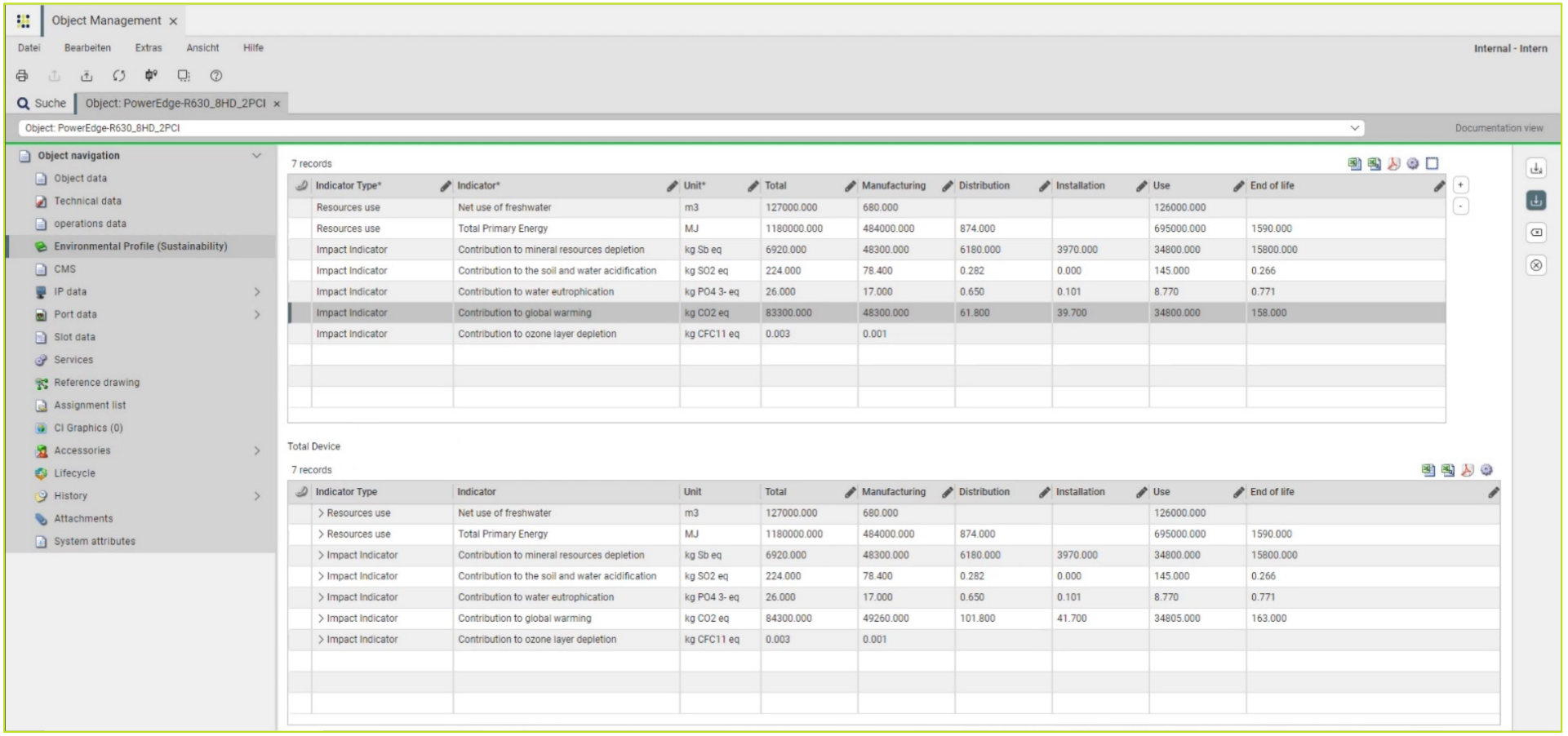
For products covered by the PEP other than the Reference product, the environmental impacts of each phase of the lifecycle are assimilated to the impacts of the Reference Product

Impact matrix with indicators adhering to the norm

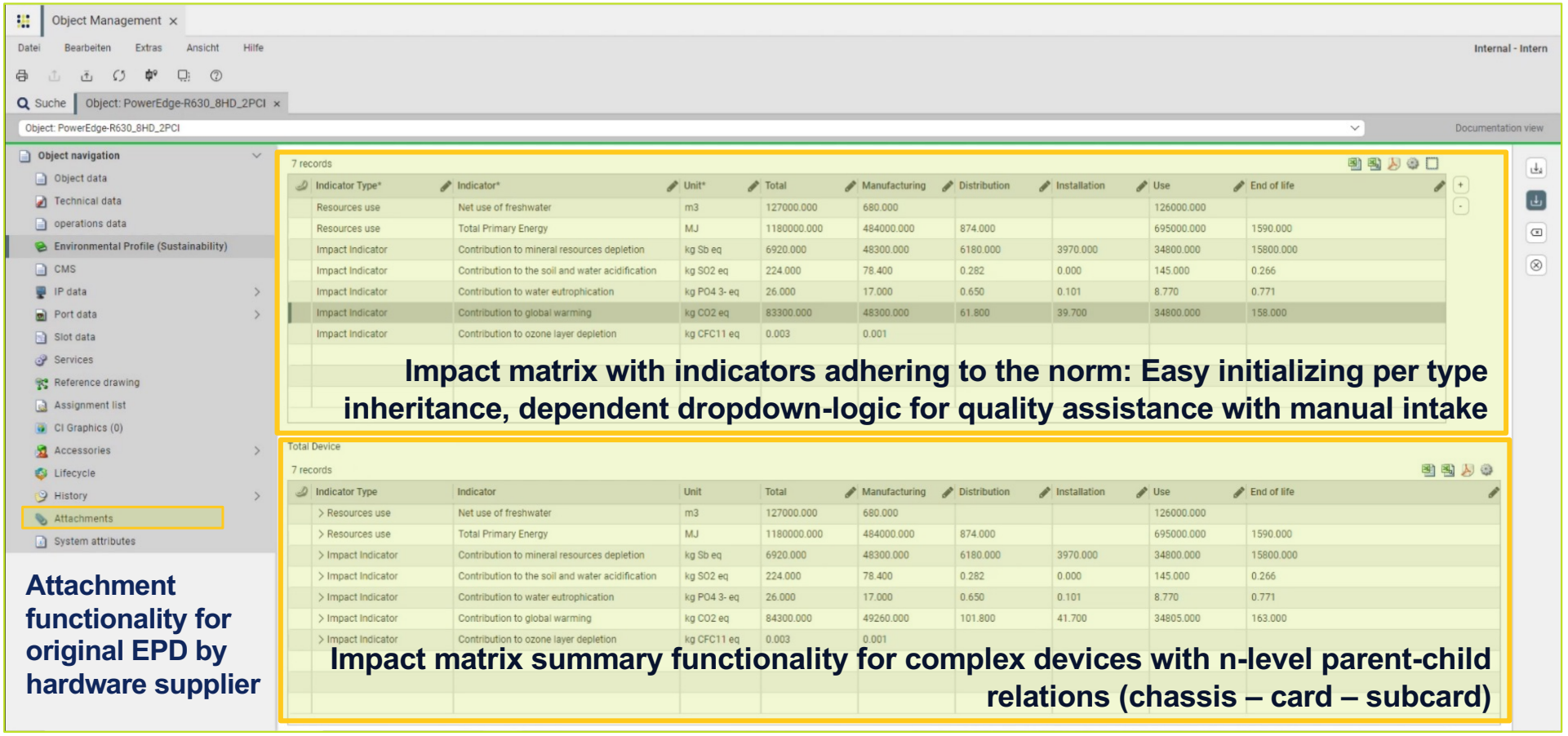
ABBG-00002-V01.01 -EN-

Impact matrix with indicators adhering to the norm

// Scope 3 Support: FNT Environmental Impact Management AddOn



// Scope 3 Support: FNT Environmental Impact Management AddOn



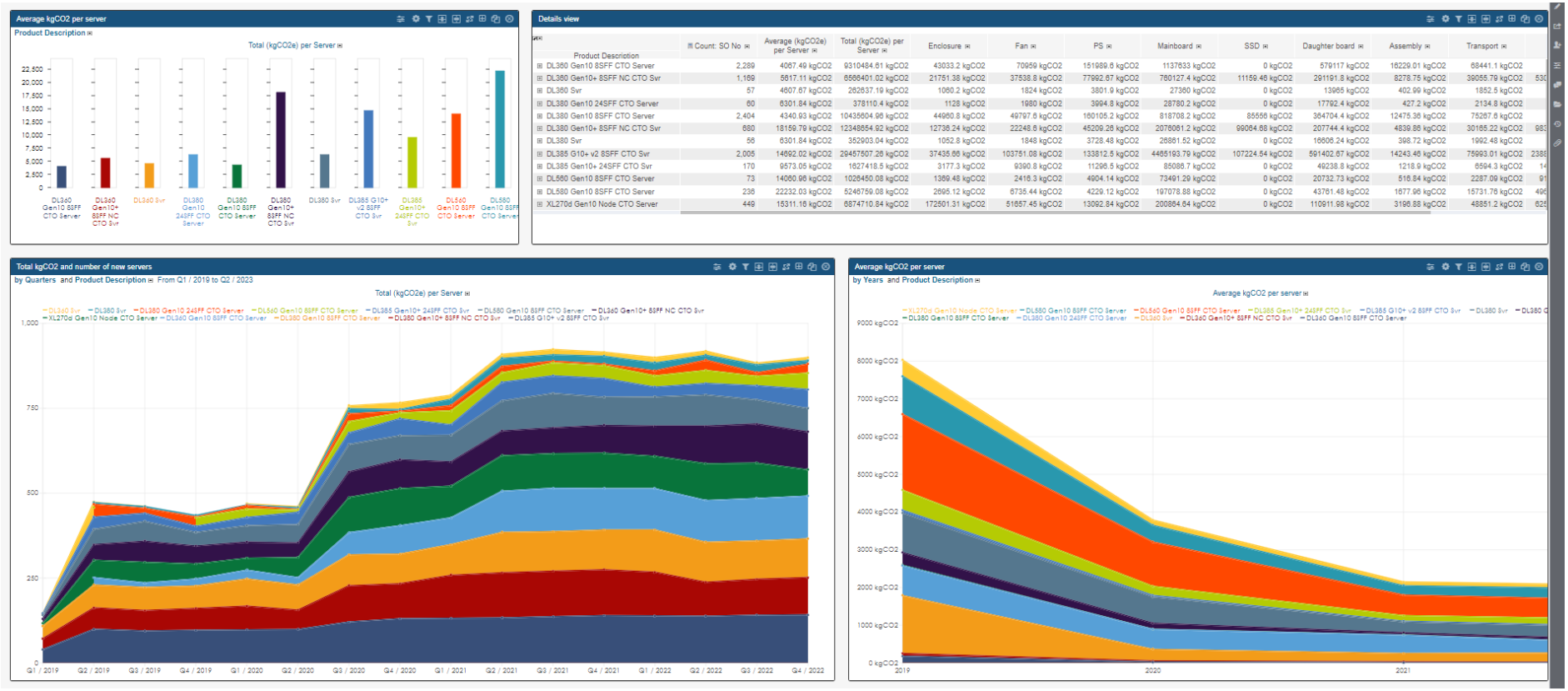
// Scope 3 Support: FNT Environmental Impact Management AddOn Dashboard

Top Level KPIs for easy quick-view on progress!

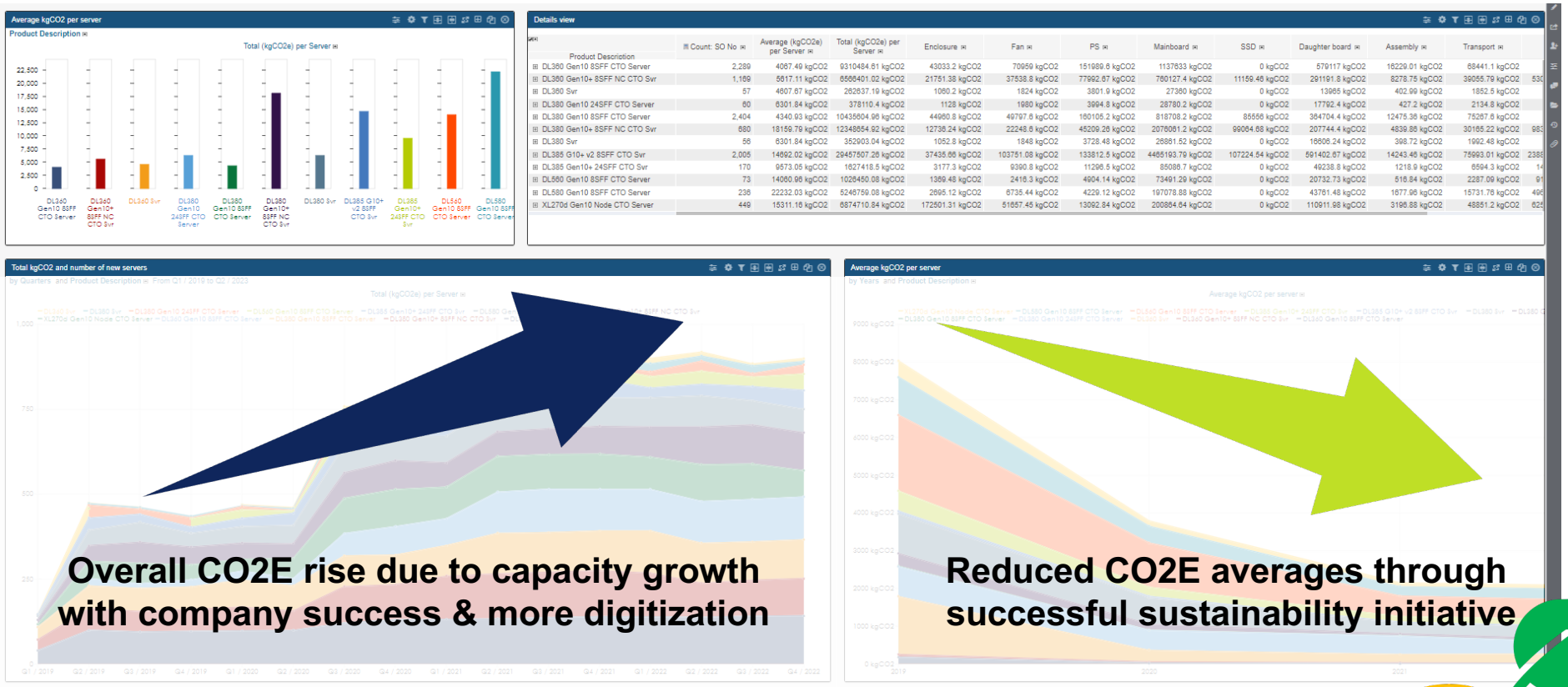
Comparative analysis and insights along every data dimension available in FNT Command (mandators/clients, regions, countries, datacenters, campus & building structures, manufacturers, product families, classes, types, funtions, areas of responsibility,…)

Proof of Progress in growth scenarios!

// Scope 3 Support: FNT Environmental Impact Management AddOn Dashboard



// Scope 3 Support: FNT Environmental Impact Management AddOn Dashboard



ESG
Compliance

// 3 key takeaways

- FNT Solutions help you to actually become truly more green in IT Infrastructure Operations in absolute numbers.

- FNT Solutions will contribute to your ESG compliance significantly, fast and with minimum extra effort.

- FNT Solutions enable you to save cost and support you in becoming eligible to tax exemption programs.

// Anything left on your mind about this?

// Thank you!
www.fntsoftware.com