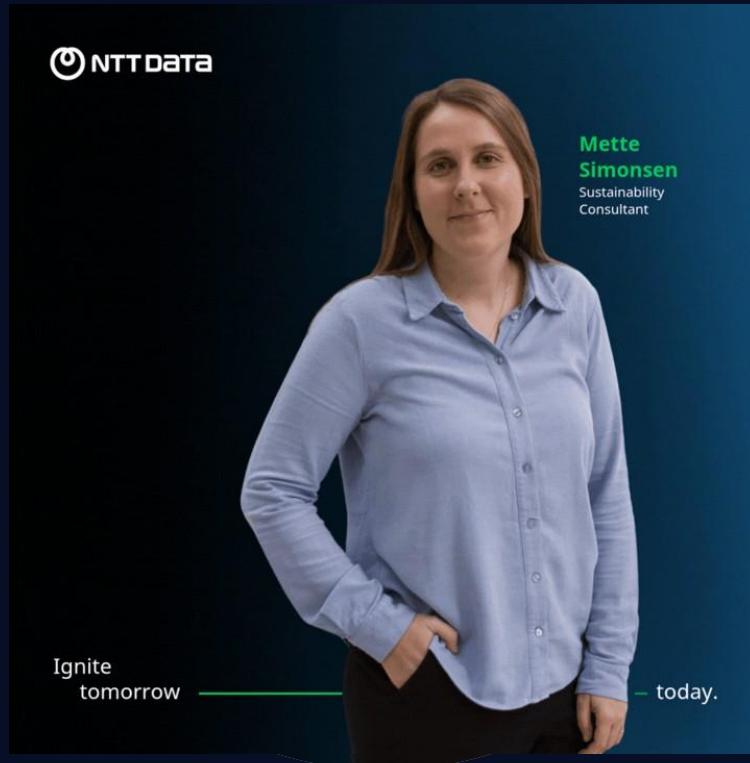


Taking the Next Steps in Sustainability

Insights from NTT Data Business Solutions
14 April 2026
SAPSA IMPULS Göteborg

Who am I ?



Mette Simonsen

Sustainability Expert

Based at NTT DATA Copenhagen

*Sustainability advisory, project management and support on the implementation of our sustainability projects across the entire **Nordic region**.*

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Agenda

01

NTT Data's Approach to Sustainability

02

EUDR

Experiences from implementation of SAP Green
Token & Responsible Design & Production

03

**PPWR & Extended Producer
Responsibility**

Experiences from implementation of Responsible
Design & Production

04

Q&A



1

NTT Data's Approach to Sustainability

Introduction to NTT Data



Facts & Figures Nordics

Local

Largest SAP partner in the Nordics – feets on the ground

550+

Employees in the Nordic countries

128M

Revenue (EUR 2022)

We Transform.
SAP® Solutions
Into Value

1



Top SAP Reseller in the Nordics

380+

Customers in the Nordics

20+



Years of experience in the Nordics

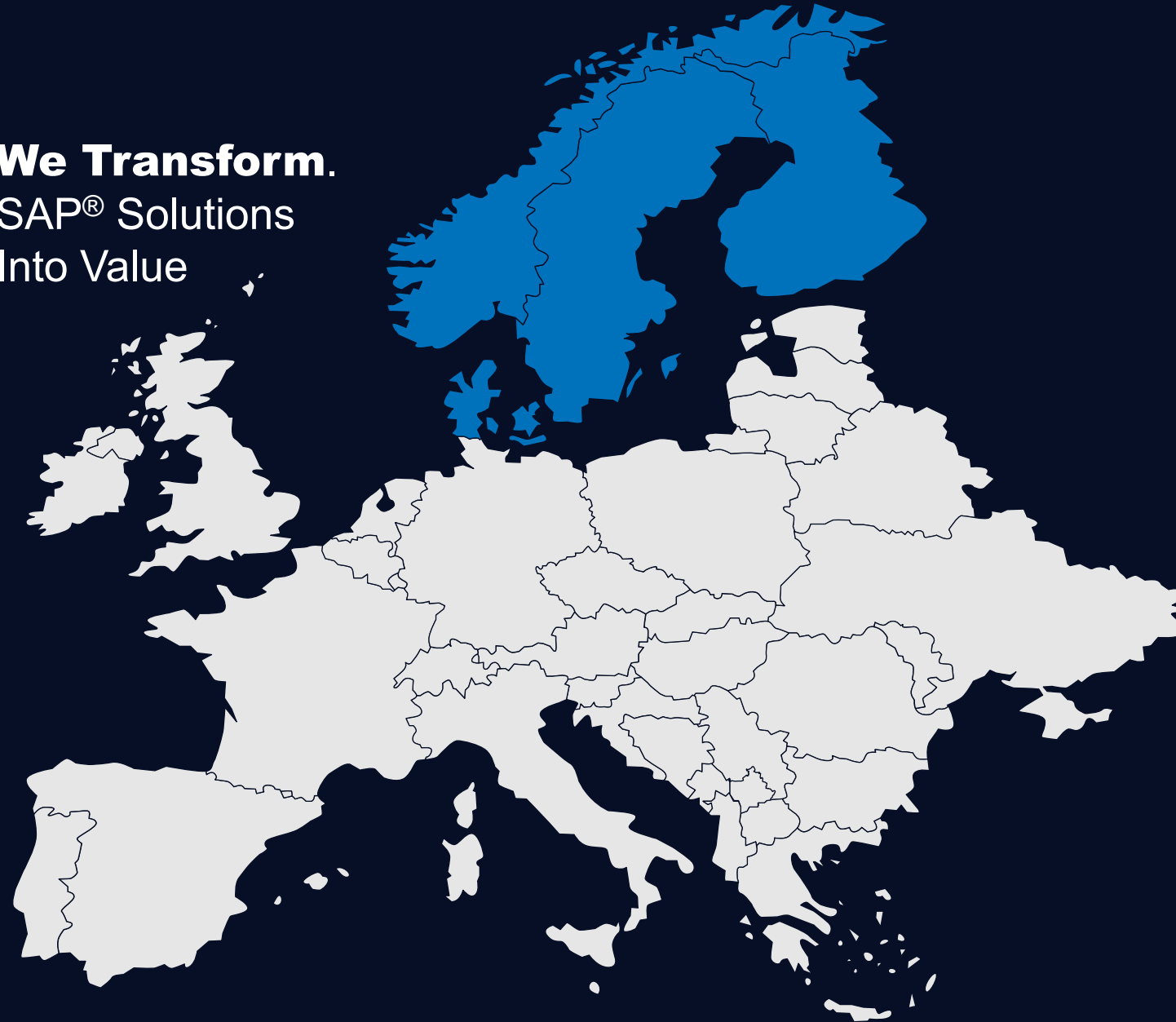
S/4HANA

Local experience with S/4HANA implementations and conversions

18

We are a full-service partner with 18 Nordic line-of-business

**NTT DATA
BUSINESS
SOLUTIONS
KEY FACTS**



NTT DATA Nordics Inhouse Sustainability Expertise

Our Sustainability Expertise Makes Your Start Unique!

25+



PROJECTS
EXECUTED IN
NORDICS

20+



EXPERTS WITHIN
NORDICS

1,500+



PROJECT
EXECUTED
ACROSS THE NTT
DATA INC. GROUP

400+



EXPERTS WITHIN
THE NTT DATA INC.
GROUP

Sustainability Experts

Dedicated sustainability resources with broad knowledge on sustainability topics hereunder:

- CSRD and EU-taxonomy reporting
- EUDR
- Extended Producer Responsibility & PPWR
- Corporate Carbon Footprint (CCF)
- Product Carbon Footprint (PCF) and LCA

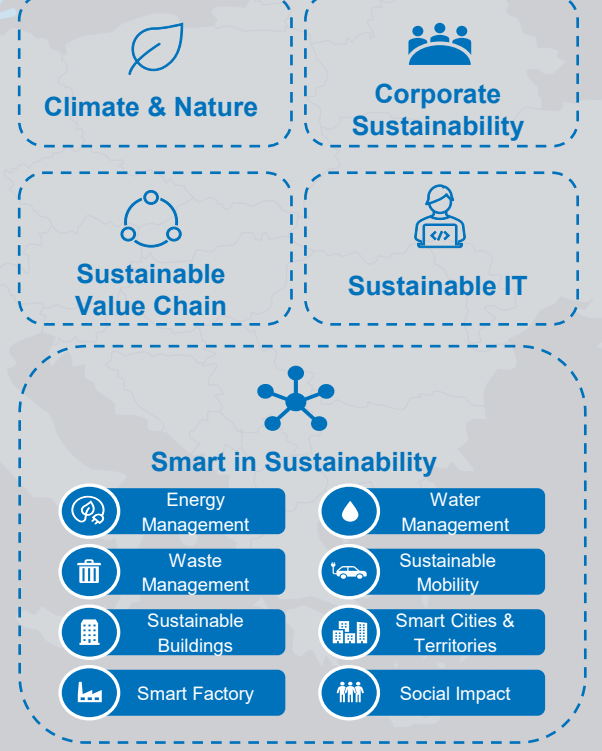
Sustainability Data Architects / System Experts

Dedicated data specialists / system experts with expertise covering

- Handling data from raw data to consolidated, reported data in a sustainability context
- Using SAP Sustainability Control Tower, SAP Responsible Design & Production, SAP Green Token, SAP Sustainability Footprint Management SAP BW warehouse, SAP Datasphere, SAP Analytics Cloud, osapiens.

Center of Excellence

Resources from international colleagues for support, best practices and resources



Global Regulatory & Standards Landscape | Overview

~ 600 Standards / Frameworks
 ~ 6.400 Regulations
 ~ 36.000 Obligations



SB253 & SB-261
 The Climate Corporate Data Accountability Act requires companies in California to report their Scope 1, 2, and 3 GHG emissions. And Climate risk and mitigation.

EUDR
 Traceability to ensure products do not contribute to deforestation or forest degradation worldwide

ESPR & DPP
 Products designed according to circular and ecodesign requirements

PPWR
 Requirements for packaging design & recyclability for packaging placed on the EU market. Includes harmonization of EPR.

EU Taxonomy
 Determining sustainable activity

EU Supply Chain Act
 Companies suppliers must be evaluated with regard to ecological and social issues

EPR
 Extended Producer Responsibility. Regulatory mechanism to promote sustainable waste management and resource conservation. The EU, Japan, South Korea, Taiwan, Australia etc. all have various EPR regulations.

CSDDD
 Requires companies to establish due diligence strategies regarding human rights and environmental issues

CSRD & ESRS
 Companies subject to the CSRD have to report according to European Sustainability Reporting Standards (ESRS).

SBTi
 Science-based targets give companies a clearly-defined path to reduce greenhouse gas emissions in line with limiting global warming to 1.5°C

SDGs
 UN Sustainable Development Goals. A set of 17 global goals adopted by all United Nations Member States.

GRI
 Global best practice for how organizations communicate and demonstrate accountability for their impacts on the environment, economy and people

ISSB, IFRS
 Comprehensive global baseline of sustainability disclosures focused on the needs of investors and the financial markets. Often used as "bridge" between EU CSRD and non-EU markets

Regulatory Framework
 Voluntary Framework / Standard /
 Global Goals

Portfolio | Sustainability

Sustainability Areas



Corporate ESG



Product Compliance

Topics




ESG Reporting



Carbon Accounting



EUDR



**PPWR & Extended
Producer Responsibility**



DPP

Solutions

SAP Sustainability Control Tower



SAP Sustainability Footprint Management



+ SAP Sustainability Data Exchange

SAP Business Data Cloud



osapiens HUB for CSRD



SAP Green Token



osapiens HUB for EUDR



SAP Responsible Design & Production



+ SAP Sustainability Data Exchange
+ SAP IPD
+ SAP S/4HANA Product Compliance

osapiens HUB for PPWR



osapiens HUB for DPP



SAP's Approach to DPP Compliance

- SAP positions Digital Product Passports as a pan-SAP, ERP-centric approach that builds on existing S/4HANA, Business Network, and sustainability solutions

Product Compliance

Sustainability Journey

RESTRICTED



Product Compliance



EUDR

The EUDR is an EU regulation that prohibits the import and sale of products linked to post-2020 deforestation unless companies prove they are deforestation-free and legally produced.



PPWR & Extended Producer Responsibility

The PPWR is an EU-wide framework aimed at reducing packaging waste and its environmental impact by increasing circularity and requiring all packaging to be recyclable, minimizing unnecessary packaging, and promoting reuse, recycled content, and clearer labelling across the entire packaging lifecycle



DPP

The EU Digital Product Passport (DPP) is a mandatory digital identity for products that will store key sustainability, material, and lifecycle data to enable traceability, circularity, and regulatory compliance across EU value chains.

Denmark | Retail Industry | 2024-2025

Customer Case

SAP Green Token

SAP Green Token is a software-as-a-service cloud solution that supports traceability and transparency of material sustainability facts with segregation or mass balancing, and tokenization for trust and compliance with recognized standards.

SAP Responsible Design & Production

SAP Responsible Design and Production is a software as a service cloud solution that enables continuous delivery of regulatory obligations and supports action towards circularity.

RDP is SAP's solution for calculating extended producer responsibility (EPR) obligations, plastic taxes, and corporate commitments to optimize material choices.

Implementation of Solution for Compliance of EUDR and Extended Producer Responsibility

About the Customer

- Large retailer which designs its own products
- Imports its own products → but has no production
- Has MANY product codes
- Operates over 280 stores across 16 countries.

Business need

EUDR

- IT-system that can help with compliance of the **EUDR** ensuring traceability throughout the entire supply chain, before goods are marketed or exported to/from the EU.
 - Collect information (geolocation coordinates, quantity, country of production, harvest period etc.)
 - Issue due diligence statements to EU-traces.
 - Risk Assessment and Risk Mitigation

Outcome

Regulatory compliance with the **EUDR** fostering enhanced transparency and trust across the supply chain while continuously proving the sustainability of materials.

- ✓ Integration with existing SAP landscape.
- ✓ Efficient gathering of EUDR data from suppliers via customized supplier platform.
- ✓ Simplified tasks through automation improving efficiency and accuracy.
- ✓ Automated creation and submission of the due diligence statement to the EU-traces.

Extended Producer Responsibility

- IT-system that can help with compliance on **extended producer responsibility for packaging** material the company puts on the market.
 - Collect and manage packaging data on:
 - » Packaging Material, Weight, Packaging Type, Waste Type, Recycled Content, Recyclability
 - Generate EPR reports that meet the specific requirements of each national waste management scheme.
 - » Grüner Punkt (DE), Citeo (FR), Afvalfonds verpakkingen (NL), **Producentansvar för förpackningar (SE)**, Producentansvar (DK)

Staying compliant with the current packaging requirements of national **EPR laws** and ensuring further scaling as a growing number of reports for national EPR requirements become relevant.

- ✓ Integration with existing SAP landscape.
- ✓ BOM configuration on packaging products such as packaging elements and packaging compositions
- ✓ Simplified tasks through automation improving efficiency and accuracy.
- ✓ Configuration to generate customized reports that meet the specific requirements of each waste management scheme.

02

EUDR & SAP Green Token *EU Deforestation Regulation*



EUDR - EU Deforestation Regulation

The issue:

Global deforestation has severe impact on climate, nature, environment, and biodiversity. It can destroy habitats, is a major source of CO2 emissions, and significantly affects indigenous and local communities.

The Regulation in Short:

The [EUDR](#) aims to address the EU's contribution to global deforestation. It bans the selling of goods into EU unless it can prove:

1. it doesn't contribute to deforestation
2. the product is produced in accordance with legislation of the relevant country of production.

What does this mean for companies?

Companies must issue a [due diligence statement](#) and ensure traceability in the supply before goods can be marketed in the EU or exported from the EU.

1. Collect information (geolocation coordinates, quantity, country of production, harvest period etc.) Art. 9.
2. Risk assessment (Assess and verify the information collected) Art. 10.
3. Risk mitigation (e.g. requiring additional information, independent surveys and audits) Art. 11.

'Deforestation' is defined as the conversion of forest to agricultural use, whether human-induced or not, which includes situations caused by natural disasters.

Commodities and Products Affected



Wood



Soy



Rubber



Palm Oil



Coffee



Cattle

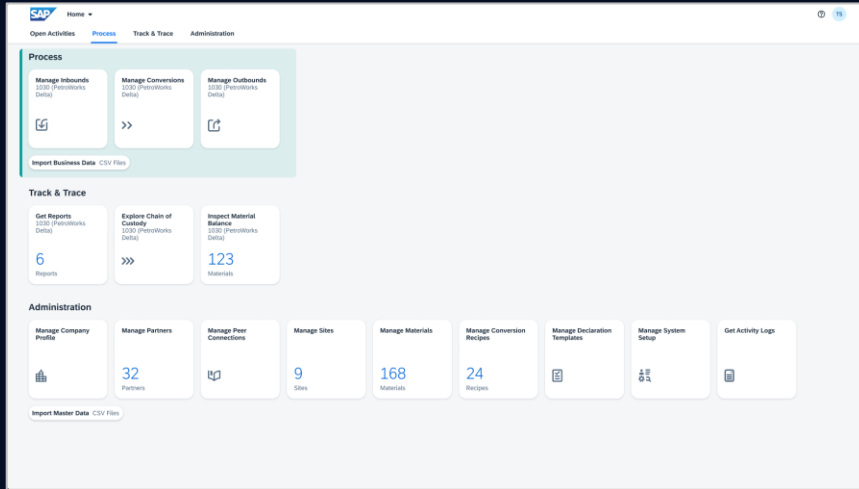


Cocoa



Products derived from these commodities

SAP Green Token | Overview



End-to-end material traceability

Green Token tracks raw materials through segregation or mass-balance and tokenization, enabling transparent chain-of-custody across complex supply chains

Automated sustainability documentation

It generates and manages sustainability declarations and proof-of-sustainability, reducing manual data work and supporting consistent compliance processes.

Flexible, scalable integration

The solution integrates with SAP and non-SAP systems via APIs or CSV uploads and can run fully standalone without onboarding supply-chain partners.

EUDR compliance enablement

Green Token supports EUDR by capturing required supplier and product data, processing DDS information, and managing EUDR-relevant inbound, conversion, and outbound flows.

Inbounds Overview:

- Count: 5 Material(s)
- Inbound Status: 428 Inbounds
 - Outstanding 150 (35%)
 - Completed 150 (35%)
 - Missing Data 2 (2%)
 - Cancelled 64 (15%)
 - Deleted 64 (15%)

Inbounds Table (428):

Inbound ID	Inbound Status	Material	Quantity	Declaration	Supplier
CO-98765	Completed	Lids	35.00 MT	ISCC PLUS 029333LD.pdf	Delta NL
CO-76543	Completed	Lids	35.00 MT	ISCC PLUS 029212LD.pdf	Delta NL
CO-54321	Missing Data	Lids	63.00 MT		Delta NL
CO-67890	Completed	Lids	105.00 MT	ISCC PLUS 029484LD.pdf	Delta NL
CO-23456	Outstanding	Lids	42.00 MT		Delta NL
CO-45678	Outstanding	Lids	140.00 MT		Delta NL
CO-65432	Outstanding	Lids	63.00 MT		Delta NL

CO-67890 Detail View:

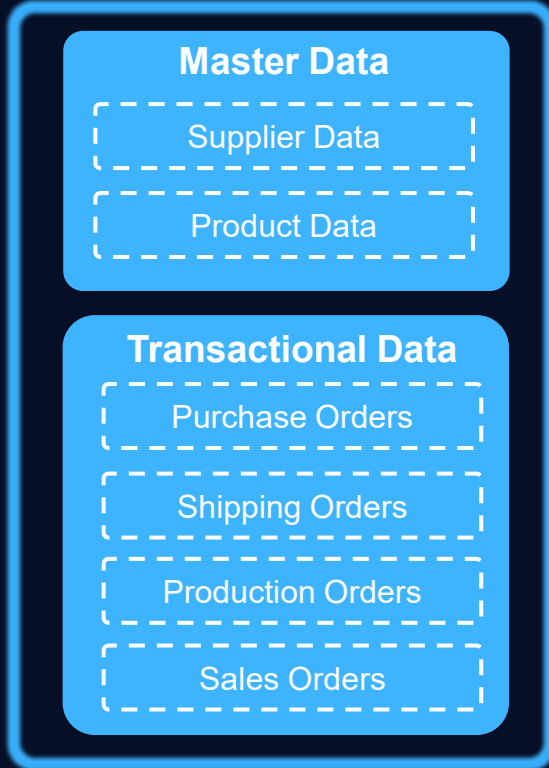
- Inbound:** Material: Lids, Status: Completed, Supplier: Delta NL.
- Quantity (Certified/Conventional):** 105.00 MT (99.75 MT / 5.25 MT)
- Certified:** 99.75 MT (95%)
- Conventional:** 5.25 MT (5%)
- Material:** Declaration ID: ISCC PLUS 029484LD, Raw Material Category: Bio-Circular, Raw Material Type: POME, Raw Material Origin: Malaysia, Type of Recycling Operations: Chemical, Feedback Source: Post-Industrial.

High-level Overview

Green Token

ERP System

Acting as a trigger for follow on processes

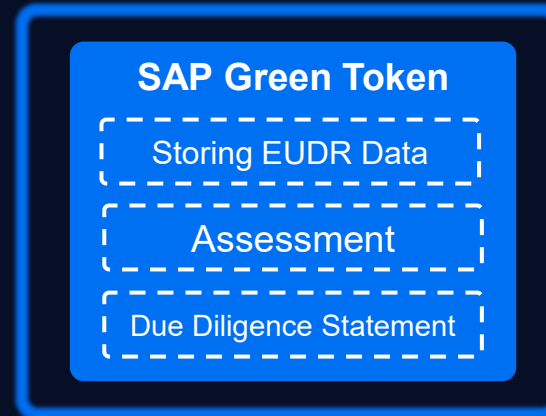
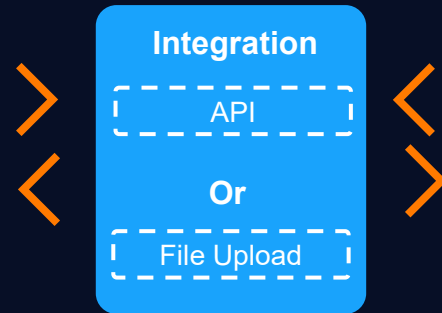


Supplier Portal

Enhancing ERP standard flows. Supporting suppliers with data entry in correct format for GT



Solution



DDS (indicated by a dashed box)

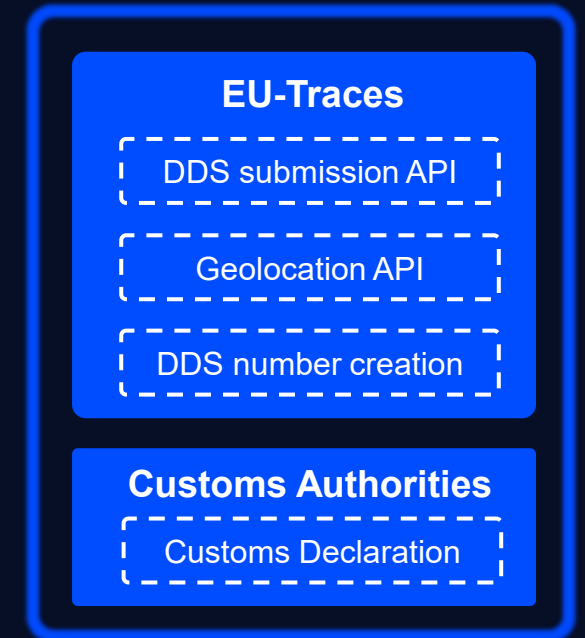
Customer

Sharing data to downstream customers



Authorities

Managing contact with customer EU TRACES account



EUDR

Challenges

Challenges

Efficiently collecting the data.

- With this regulation companies are obliged to share a lot of data that is not the companies' data but the data of suppliers.

Ensure traceability

- It is challenging to manage the operational aspects of the regulation and to manage the data with full traceability.

Administrative Burden and Costs

- Compliance involves significant investment in technology, data collection, and reporting systems.

Lack of guidance and Regulatory Instability

- Proposal on delay and simplification creating uncertainty and making long-term planning difficult.

Opportunities

It is highly suggested to use an IT-solution to manage the operational aspects of the regulation.

An IT-solution can help with:

- Efficiently gather EUDR Data from suppliers.
- Simplify tasks through automation and improve efficiency and accuracy.
- Automated creation and submission of the due diligence statement to the EU
- Continuous proof of sustainability for materials.
- Enhance transparency and trust across the supply chain.

03

PPWR & SAP Responsible Design & Production

Packaging and packaging-waste regulation



Packaging and Packaging Waste Regulation

PPWR

The issue:

A constant increase in the generation of waste due to packaging is contributing to climate challenges, resource depletion, environmental degradation, recycling challenges, and higher costs for waste management.

The Regulation in Short:

The PPWR aims to reduce the environmental impact of waste and to encourage efficient use of resources through reuse, recycling, and other forms of recovery.

- The regulation includes several acts covering:

Article 5
Requirements for
Substances in Packaging

Article 6
Recyclable Packaging

Article 7
Minimum Recycled Content
in Plastic Packaging

Article 8
Biobased Feedstock in
Plastic Packaging

Article 9
Compostable Packaging

Article 10 & 24
Packaging Minimisation

Article 11
Reusable Packaging

Article 12
Labelling of Packaging

Articles 38 & 39
Conformity Assessments
and Statements

The purpose of the PPWR:



Reduce the amount
of packaging



Increase circularity,
reuse and recycling



Encourage companies to
re-design their packaging

PPWR Timeline

High Level Overview



- PPWR has a phased implementation running from 2025 - 2040
- Implementation & delegation acts* will be continuously updated from EU defining the specific requirements and guidelines.

* *Delegated acts = modify or expand parts of the law.*
Implementing acts = ensure the law is applied consistently across the EU.

2027-29:

- Prepare for 2030 requirements
- Design for Recyclability (D4R)
- EU-wide labels introduced
- Empty space ratios
- Deposit Return Schemes (DRS)
- Harmonization of EPR incl eco-modulation

2030

- Packaging must be recyclable
- Recycled content targets apply (esp. plastics)
- Reuse targets
- Reduction targets of 5% apply

*based on 2018 levels in each member state

Businesses need to start *now* to get data required for PPWR

Action points

2026

What we should do now

Substances of concern (Art 5)

- Ensure PFAS restrictions for all food-contact packaging.
- Ensure heavy-metal limits for all packaging and components.
- Update relevant technical documentation and supplier declarations accordingly.

EU Declaration of Conformity DoC (Art 38 & 39)

- Carry out conformity assessment procedures, establish technical documentation, and prepare a Declaration of Conformity (DoC)

National EPR obligations

- Producers are responsible. They have to bear the costs for the collection and disposal of the packaging waste they put on each national markets.

After 2026

What we should start preparing for

Formulation of packaging requirements for technical documentation

- Compostability (February 2028)
- Labelling (Art. 12 PPWR, August 2028)
- Recyclability (2030)
- Minimum recycled content for plastics (2030)
- Minimisation of packaging (2030)

Reduction of packaging and packaging waste

- Refill obligation (end distributors only, 2027)
- Empty space ratio (“deceptive packaging”, 2030)
- Reusability (2030)
- Requirements for packaging formats (2030)

Harmonization of extended producer responsibility

- Financial contributions: cost payment systems (2027)

Extended Producer Responsibility on Packaging

What does this mean for companies?

One key element of the PPWR is extended producer responsibility

- Producers of packaging are responsible for the collection and disposal of packaging waste and also have to bear the costs.
- The regulation mandates Member States to establish systems for returning, collecting, reusing, or recovering used packaging to meet EU recycling targets.
- EPR is already Implemented by national law in most countries. Member States, usually delegate the responsibility to producers/importers via EPR/Collective schemes. **Practices currently differ from country to country.**

Reporting and packaging fees

- Companies are obliged to report and declare on the packaging materials they place on each national market.
- The specific requirements and reporting formats can vary but generally consists of:

- Packaging Material
- Packaging Type, Primary, Secondary, Tertiary
- Recyclability
- Weight
- Waste Type B2C, B2B, Sorting fragments
- Recycled Content

- The companies will pay material-specific fees for the packing based on the reported packaging and fees negotiated by the specific EPR-scheme.

Consequences:

- Non-compliance can lead to financial penalties, legal actions, and reputational damage.

PPWR impact on the national EPR schemes

- **EU-wide harmonization:** National EPR schemes must follow standardized definitions, data formats, and obligations set by the PPWR
- **Mandatory eco-modulation:** Fees must reflect packaging recyclability, reusability, and recycled content, replacing flat or inconsistent national fees, from 2030
- **Unified reporting:** Producers submit data in harmonized formats to national registers aligned with EU-level requirements
- **Performance-based compliance:** EPR schemes must integrate recyclability grades and recycled-content targets into fee and audit logic, from 2030
- **Expanded scope:** EPRs must also cover reuse targets and packaging minimization, requiring more detailed packaging data

* Be aware that currently EPR Responsibility varies from country to country.

Supply Chain Overview – EPR roles and responsibilities



Supply Chain Overview – DoC roles and responsibilities

China



Chinese Factory

Supplier under PPWR

Germany



German Manufacturer

Import product from non-EU country **in its own name / brand.**
Put in warehouse

Manufacturer under PPWR

Create and store DoC

Denmark



Danish Retailer

Shall act with due care to ensure that the packaging is in conformity

Provide info and documentation they have access to upon request

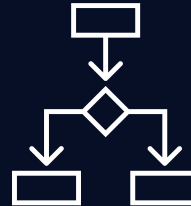


Danish end-consumer

No PPWR obligations

Building the Data Foundation for PPWR

How to get started



PPWR Obligations and Strategy

Identify your position in the supply chain and map your obligations for each scenario. Determine your PPWR and EPR strategy – do you want to be proactive or just compliant?

Supply Chain Position

This step is relevant if your obligations vary across products or transactions. Determine how you can identify your supply chain position. Be aware that you can have different roles across PPWR and EPR requirements.

Data Requirements

Define the data requirements for each scenario and design processes for collecting and storing, as well as extracting and analyzing the data to create documentation for and reporting on EPR & PPWR.

Packaging BOM of a Bottle

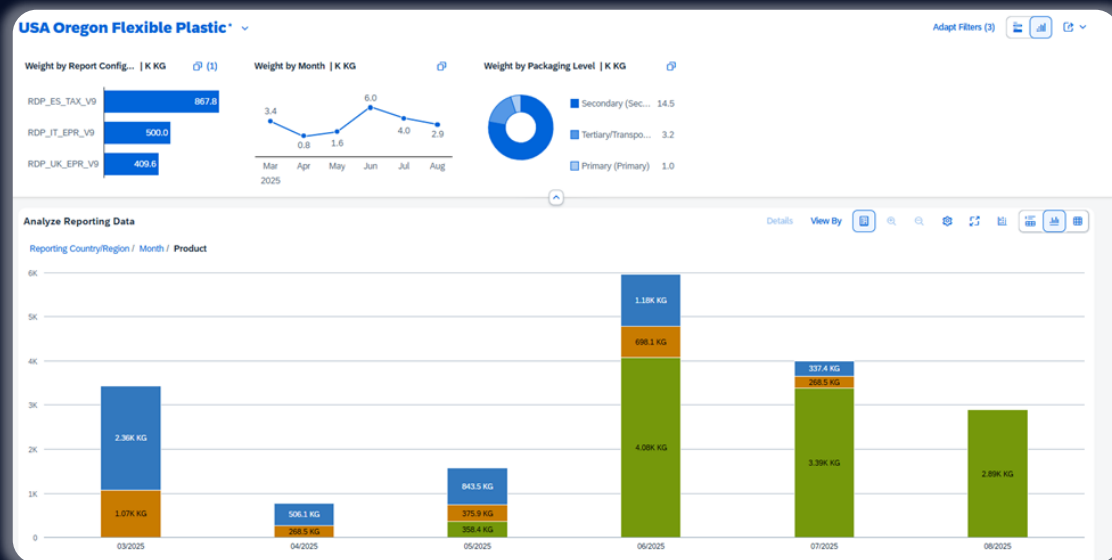
Example of data requirements



Element	Packaging level	Basic fraction	Weight	Flexibility	Deposit	Separability	Transparency	Color	Recycled content (%)	Density	Laminated	Print (%)	Barrier	Recyclability*	SoC*
Bottle	Primary	Plastic (PET or HDPE)	35 gram	Rigid	No	Main	Transparent	Clear	20%	~0.95 g/cm ³	No	40%	N/A	A	X
-Cap	Primary	Plastic (PP)	3 gram	Rigid	No	Sub - separable	Opaque	White	40%	~0.90 g/cm ³	No	0%	N/A	B	X
-Labels	Primary	Plastic film or paper	1 gram	Flexible	No	Sub - NOT separable	Opaque	Printed multi-color	90%	~0.90 g/cm ³	Yes	100%	N/A	C	X
-Seal	Primary	Plastic or foil	2 gram	Flexible	No	Sub - separable	Opaque	Silver	0%	~0.90 g/cm ³	Yes	0%	N/A	A	X
Inner carton	Secondary	Cardboard	200 gram	Rigid	No	Main	N/A	Brown	60–100% typical	N/A	No	0%	N/A	A	X
Tape	Tertiary	Plastic (PP/PVC)	10 gram	Flexible	No	Main	Transparent	Clear / brown	0%	~0.90 g/cm ³	No	0%	N/A	C	X
Outer carton	Tertiary	Cardboard	200 gram	Rigid	No	Main	N/A	Brown	60–100% typical	N/A	No	0%	N/A	B	X

*implementing acts to come

SAP Responsible Design & Production | Overview



Holistically Manage Packaging Obligations:

SAP Responsible Design and Production helps producers manage their **Extended Producer Responsibility (EPR)** & **PPWR** obligations so they can control and eliminate the costs of the downstream waste system and make design changes to eliminate waste.

Manage Complex Product And Packaging Data:

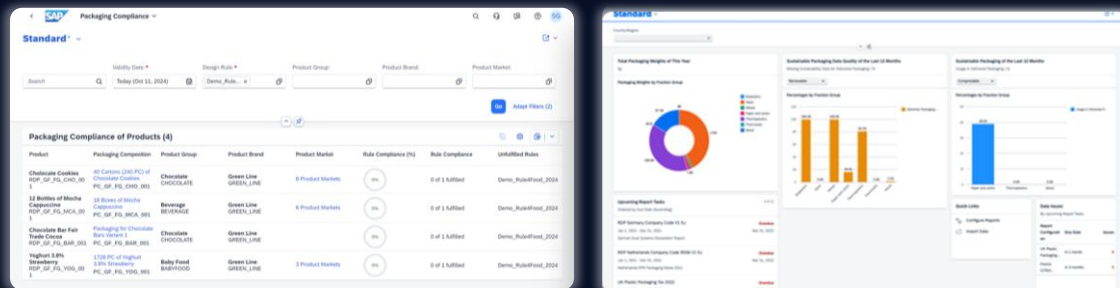
Leverage existing data from the ERP system to pull packaging data into one central hub and maintain packaging compositions using multiple categorizations.

Improve Reporting Efficiency and Reduce Costs:

Automate calculations of fees and streamline preparation of national EPR declarations. Use design rules for recyclability and recycled content to reduce fees through eco-modulation. RDP covers a wide set of national EPR declarations and can be extended with custom reporting.

Create More Sustainable Packaging:

Use data insights to explore material choices and design improvements that can support your organization's packaging sustainability goals and circularity strategies.



High Level Overview

SAP Responsible Design & Production for Extended Producer Responsibility



EPR on Packaging

Challenges that were addressed in the customer case:



Large Amounts of Data

Large amounts of product data from many suppliers every year. The different supplier countries each have their own rules for packaging registration and reporting.



Compressed Workload

Often the majority of the workload is in compressed to one period e.g. Q1. Many are doing the reporting manually using Excel or Power-BI reports. Reporting is a very resource-intensive process.



Data Quality

Insufficient data collection. Packaging data needs to be granular on component level. Not enough data is collected to, for example, take advantage of potential discounts from environmentally modulated fees. It is difficult to keep up with all the new products.

”

Med RDP vil vi få et **bedre overblik** over vores emballagedata, så vi kan bruge ressourcer på at **minimere vores emballage** og dermed **omkostningerne** i de forskellige lande.

With RDP, we will gain better insight into our packaging data, allowing us to use resources to minimize our packaging and thereby reduce costs in the different countries.

Statement from Customer

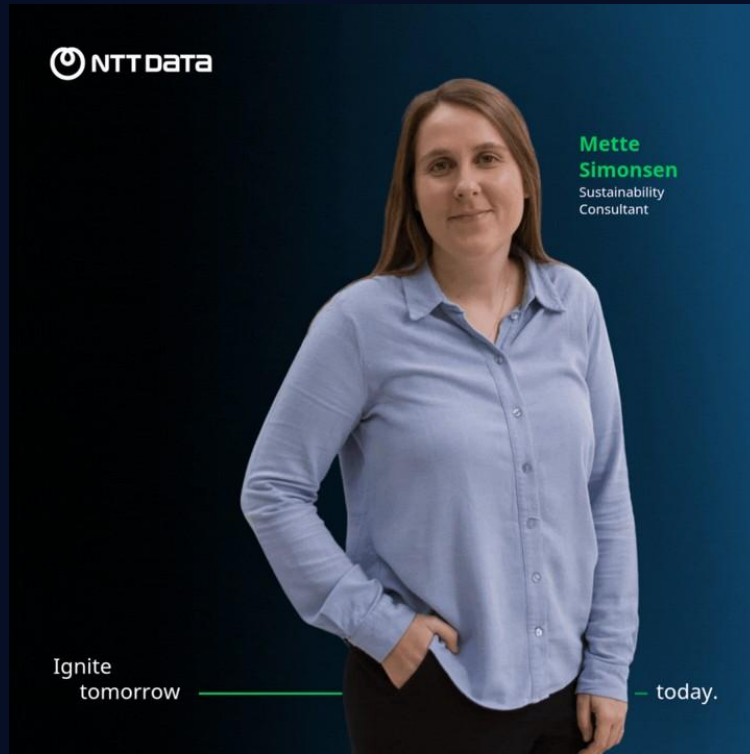
Packaging Specialist - Sustainability & Product Compliance



Q&A

And a note from the focus group

Reach out to me!



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