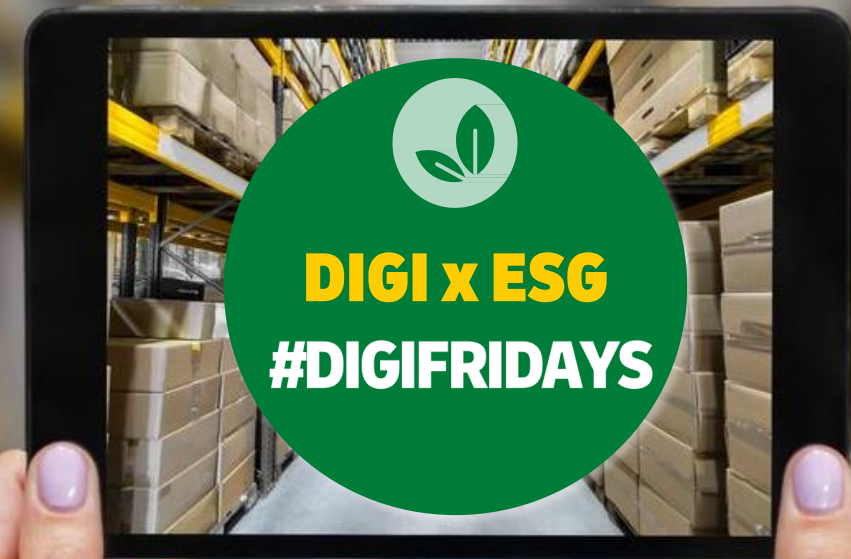


DIGITAL PATH TO SUSTAINABILITY

DIGI X ESG

#DIGIFRIDAYS



#DIGIFRIDAYS



DIGI x ESG

June 2nd

@15.00 CEST



DIGI x E-commerce

June 16th

@15.00 CEST



DIGI x Automation

June 9th

@15.00 CEST



DIGI x CX

June 23rd

@15.00 CEST





Digi x ESG
Digital Path to Sustainability

Yin Zou
EVP Corporate Development
DPDHL Group

DHL Express
Fuel Optimization Program

Guy Jaspers
Senior Director, Global Network Support
DHL Express

DHL Supply Chain
AI Solution Opticarton

Katharina Tomoff
SVP Environment, Social and Governance
DHL Supply Chain

DHL GoGreen Dashboard

Patric Puetz
Head of ESG Accounting & EU Taxonomy
DPDHL Group



DIGITAL PATH TO SUSTAINABILITY

DIGI X ESG

YIN ZOU

EVP CORPORATE DEVELOPMENT
DPDHL GROUP

JUNE 2023 – DEUTSCHE POST DHL GROUP INVESTOR RELATIONS



Charting the digital path to sustainability: leveraging digitalization for a sustainable future

2x

Global investments in **DIGITAL** transformation will **double** between 2021 and 2025.*

1/3

SUSTAINABLE investments total **over a third** of all assets in five of the world's biggest markets.*

*Source: Statista, 2022, GSIA 2021

Digitalization is shaping the logistics industry and powering our Group Strategy



STRATEGY 2025
**Delivering excellence
in a digital world**

Our Purpose:
Connecting People, Improving Lives

Our Vision:
We are THE logistics company for the world

Our Values:
Respect and Results



Our Mission:
Excellence. Simply delivered.
Along the three bottom-lines in a sustainable way
Enabled by **Common DNA**




Our Business Unit focus:
Strengthening the profitable core
Supported by **Group functions**

Powered by **Digitalization**



Our Group Digitalization Roadmap accelerates our digital journey and is closely linked to our sustainability efforts

 **Digitalization @ DPDHL** is the use of technology to optimize, innovate and scale our profitable core to enhance customer and employee experience and gain operational efficiency.



Digital technologies elevate the customer and employee experience while boosting operational efficiency – in a sustainable way

GROUP CENTERS OF EXCELLENCE:



Data Analytics



Data Solutions



API



IoT



Blockchain



Automation of Operations

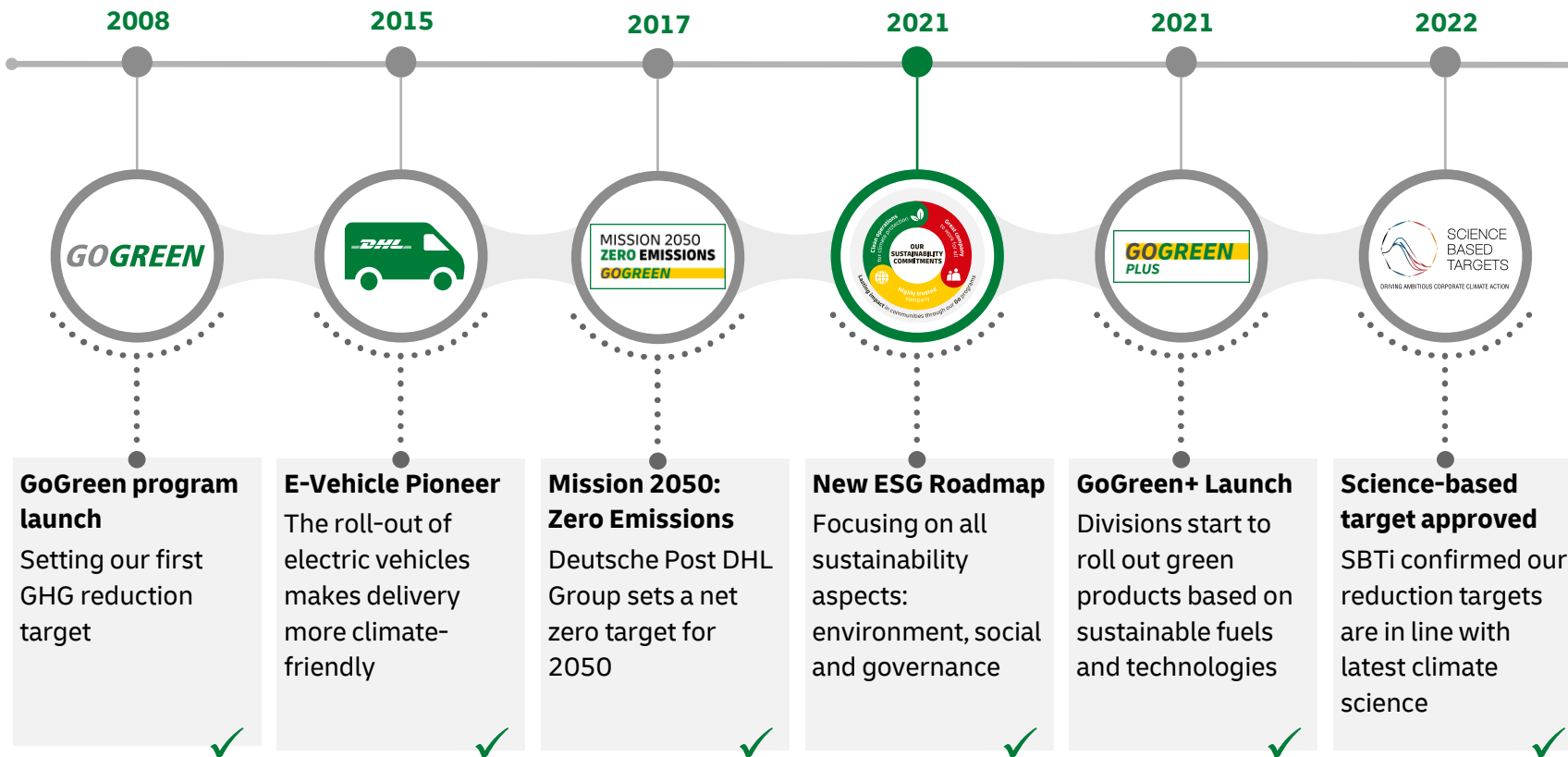


Digital disruption for a sustainable future: technology drives the environmental progress in logistics



DPDHL has been focused on environmental topics for many years

Selected ESG milestones at DPDHL Group



Our DPDHL Group ESG Roadmap defines a clear path forward towards cleaner and greener logistics



Clean operations for climate protection

Reduce emissions to **<29m tonnes CO2e** by 2030 (SBTi). No offsetting included.

- **>30%** share of **sustainable fuels** by 2030
- **60% e-vehicles** used in pick-ups and deliveries by 2030
- **All new, owned buildings** will be **climate neutral** by 2030



Great company to work for all

We provide a safe, non-discriminatory working environment where employees can develop as individuals.

- Approval rating of **>80%** in annual **Employee Opinion Survey (EOS)**
- Increase share of **women in middle and upper management** to **>30%** by 2025
- Reduce **Lost Time Injury Frequency Rate** to **<3.1** by 2025



Highly trusted company

We render our services in compliance with current legislation and in accordance with our own values

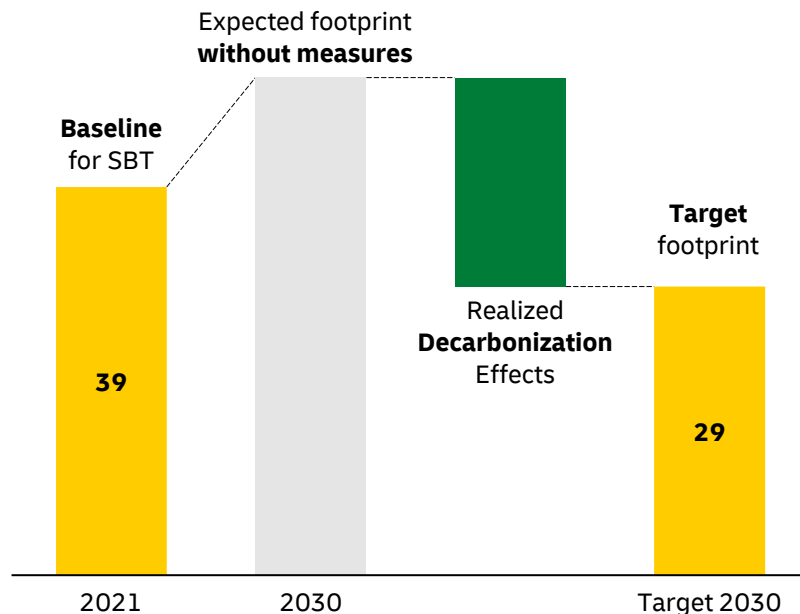
- **98%** valid **compliance training** certificates for management
- **Cybersecurity** rating of at least **710/900** points*

*The rating agency, BitSight announced that it would be making changes to its method which will have an impact on the rating scale and could influence our results

We set an ambitious target for decarbonization until 2030 and are committed to spend up to €7bn on decarbonization

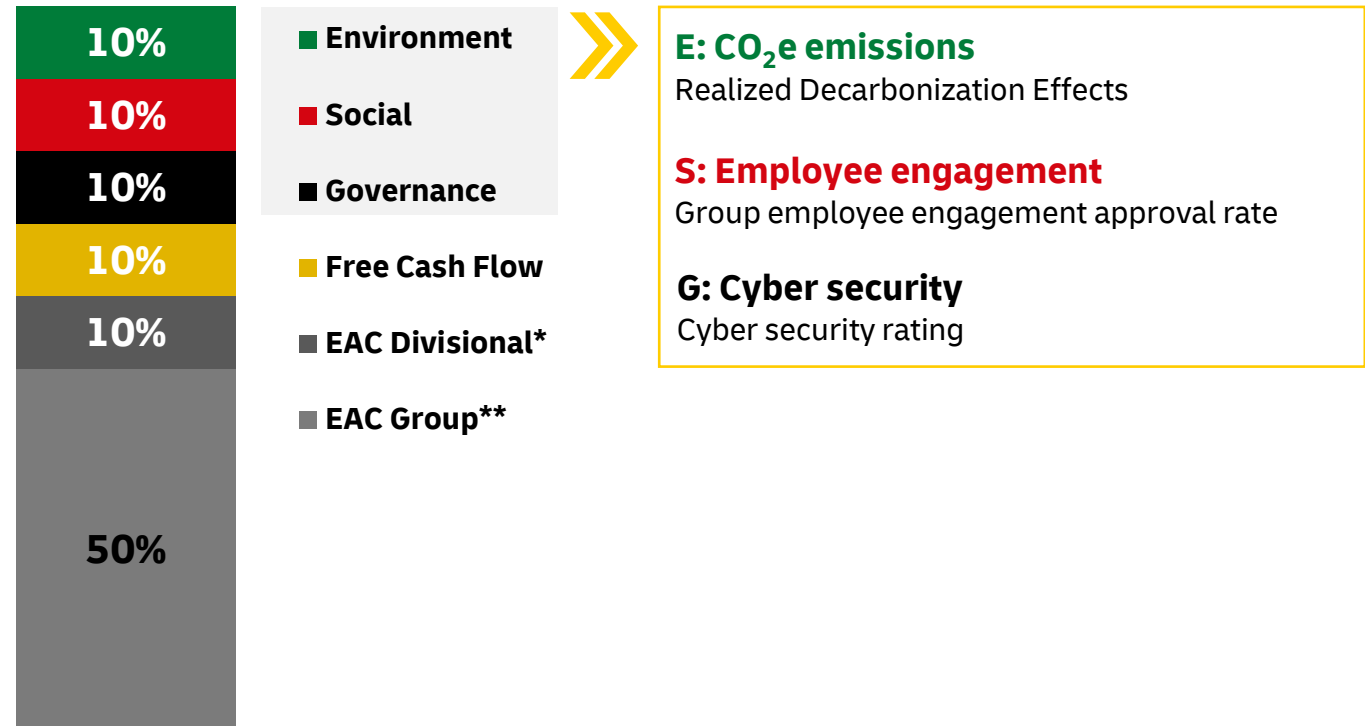
< 29 Mt CO₂e EMISSIONS

The Group's CO₂e emissions are to be reduced from 39 Mt in 2021 to below 29 Mt by 2030 in line with the requirements of the Science-based Targets initiative.



30% OF BOARD OF MANAGEMENT BONUS LINKED TO ESG TARGETS

Criteria for Annual Variable Pay for Board of Management



All customers benefit from this commitment through incremental emission reductions and we offer optional GoGreen Plus

GoGreen Plus

Offerings which allow customers to inset their carbon emissions associated with their shipments

Time-Definite-International DHL Express



- Insetting via Sustainable Aviation Fuel
- Flexible CO₂e reduction levels for contract customers
- Standard offering at 30% CO₂e reduction for smaller/ad-hoc customers

Air Freight DHL Global Forwarding



- Insetting via Sustainable Aviation Fuel
- Flexible CO₂e reduction levels

Ocean Freight DHL Global Forwarding



- Insetting via Sustainable Marine Fuel
- Less-Container-Loads: Default service, 100% CO₂e reduction levels
- Full-Container-Loads: flexible CO₂e reduction levels

Road Freight DHL Freight



- Insetting via Sustainable Fuel
- 100% CO₂e reduction levels
- Available for Less-Truck-Loads (EuroConnect, Eurapid), direct Full & Part-Truck-Loads (EuroLine)

Warehousing & Transport DHL Supply Chain



- Warehousing: >75% or 100% CO₂e reduction levels
- Transport: 50-70% CO₂e reduction levels (Sustainable Fuel) or 100% CO₂e reduction levels (eVs)

Transport DHL eCommerce Solutions



- Sustainable Fuel for pick up or line haul
- Up to 100% CO₂e reduction levels

Parcel Germany P&P Germany



- Insetting via e.g. sustainable fuel, heat pumps, electric vehicles
- 100% CO₂e reduction levels
- Rail transport

Mail Germany P&P Germany



- Insetting via e.g. sustainable fuel, heat pumps, electric vehicles
- 100% CO₂e reduction levels
- Available for Mail Communication, Dialogue Marketing and Press Service



LET'S EXPLORE THE DIGITAL PATH TO SUSTAINABILITY



DATA TURNED INTO CO₂e AVOIDANCE

COME FLY WITH US ON OUR JOURNEY TO
ZERO EMISSIONS

GUY JASPERS

SENIOR DIRECTOR, GLOBAL NETWORK SUPPORT
DHL EXPRESS



DIGI x ESG
#DIGIFRIDAYS

AVIATION IS AN INTEGRAL PART OF DHL EXPRESS BUSINESS



REPRESENTS **69%** OF DPDHL CO₂E

DHL Express approach to sustainable aviation

NEW AIRCRAFT TECHNOLOGY



**Aircraft
Advancements**

**Fleet
Renewal**

SUSTAINABLE AVIATION FUEL



Investment

**Market
Strength**

OPERATIONAL EFFICIENCIES



**Fuel
Optimization
Program (FOP)
POWERED BY
Comprehensive
Data Analytics
Platform**



STRATEGY 2025
Delivering excellence
in a digital world

Clean operations
for climate protection



MISSION 2050
ZERO EMISSIONS
GOGREEN

Capturing the fuel burn avoidance opportunity on every flight



Optimize aircraft loading to better center of gravity



Planned Payload Closer to Actual



Optimize flap settings at takeoff



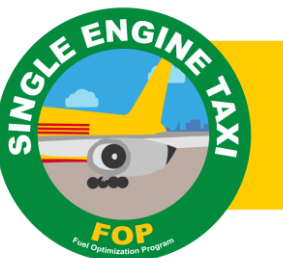
Optimize flap settings at landing



Fly economy mode, lower speeds



On landing approach apply continuous descent



Taxi in after landing with one engine instead of two



Eliminate Waiting Time At Stand



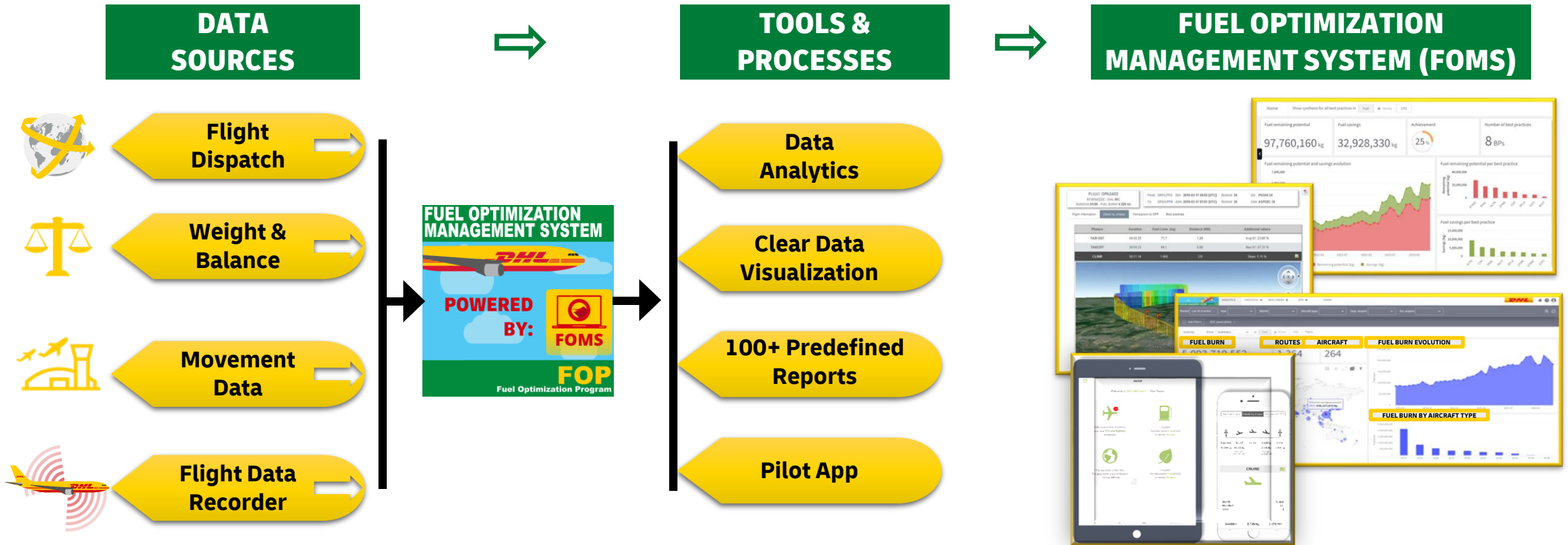
DEPLOYING SUSTAINABLE PROCESSES AND POLICIES TO IMPROVE AVIATION FUEL EFFICIENCY

8 Standard Operating Procedures (SOP)

600+ Flights Per Day

4,800 Opportunities Per Day For DHL Flight Crews to Perform FOP SOPs

Flight fuel burn value stream has been **fully digitized** enabling **immediate, mid- and long-term** fuel burn avoidance opportunity



GETTING FLIGHT FUEL BURN DATA INSIGHTS TO THE RIGHT PEOPLE AT THE RIGHT TIME HAS ENABLED SUBSTANTIAL MEASURABLE FUEL BURN AVOIDANCE RESULTS

A complex challenge with a simple easy-to-understand output FOMS does the heavy lifting



Taxi in after landing with one engine instead of two

APPLIED THRESHOLD

TAXI DURATION

AIRPORT

MARGIN

RUNWAY

ENGINE FUEL FLOW VALUES

MAX EOTI WEIGHT

RUNWAY CONTAMINATION

AC TYPE
ON

ACTUAL CONSUMPTION
CALCULATION

NOT APPLIED
SCENARIOS
SIMULATION

BEST APPLIED
SCENARIO SIMULATION

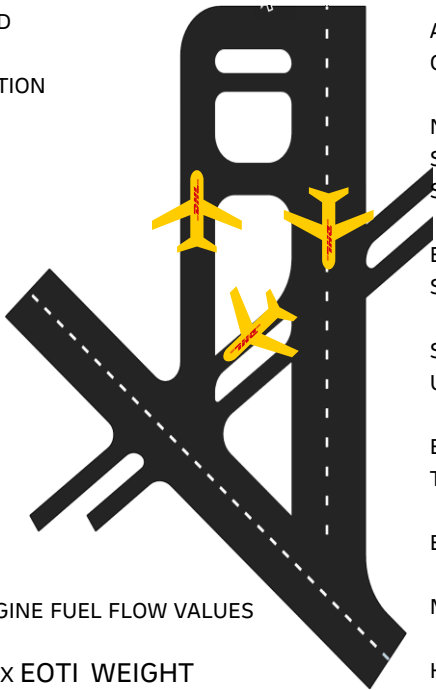
SINGLE / TWIN ENGINE
USE

ENGINE COOLDOWN
TIME

ENGINE TYPE

MINIMUM VISIBILITY

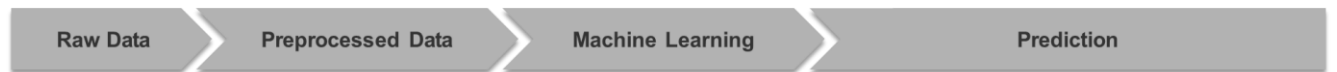
HISTORICAL FUEL FLOW



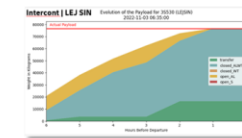
Planned Payload Closer to Actual



Payload prediction 6-1h before departure



Split into Certain and to be forecasted Volume

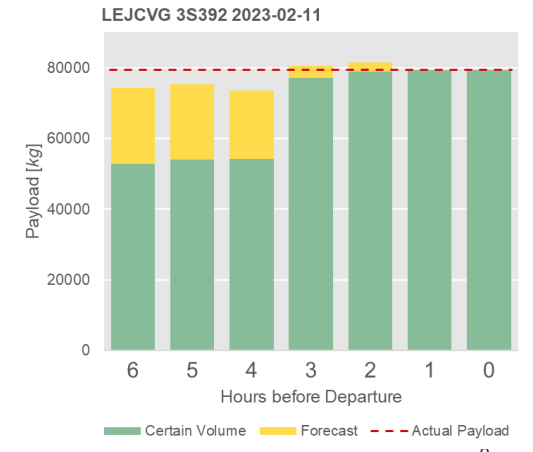


Features

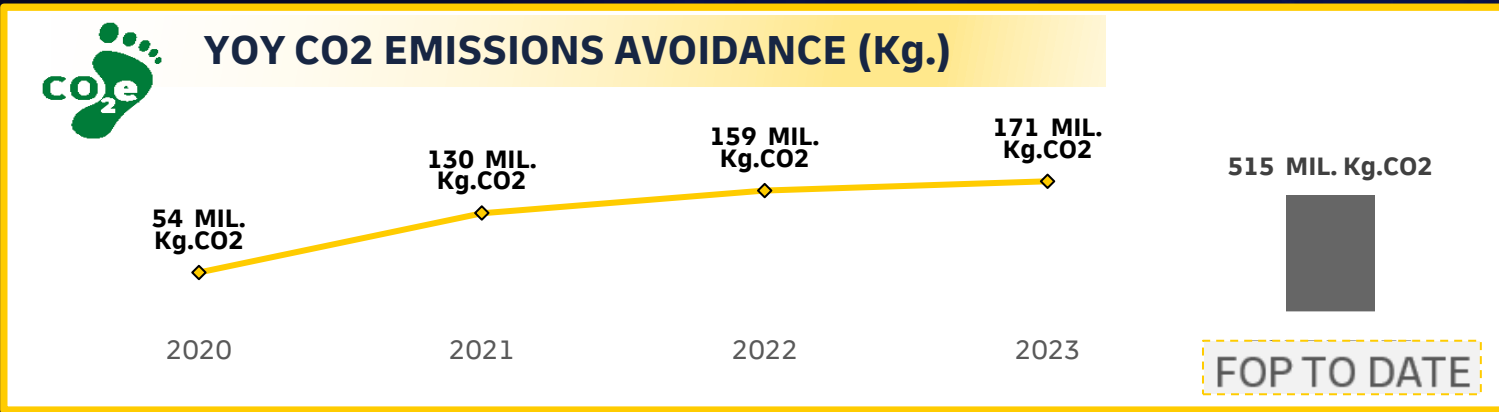
- Datetime
- Location
- Vehicle
- AHS
- OPMS
- NMIV

Target

- Remaining Payload



Impacts & Results: Avoidance up yoy in all FOP categories



Feedback from our partner airlines, major suppliers and pilots that have joined DHL from other airlines + FOP results to date are encouraging our drive to leading the aviation industry in Fuel Optimization

Digital Solutions Used to Achieve the Related Results

43 Mil. USG Avoided (actuals + 2023 forecast)

515 Mil. Kg. CO₂ Avoided YTD (actuals + 2023 forecast)

SUSTAINABLE PACKAGING SOLUTION

DHL SUPPLY CHAIN AI SOLUTION OPTICARTON

KATHARINA TOMOFF

SVP ENVIRONMENT, SOCIAL AND GOVERNANCE
DHL SUPPLY CHAIN



DIGI x ESG
#DIGIFRIDAYS

DHL SUPPLY CHAIN

We are the **#1** contract logistics provider managing supply chains to reduce complexity for our customers

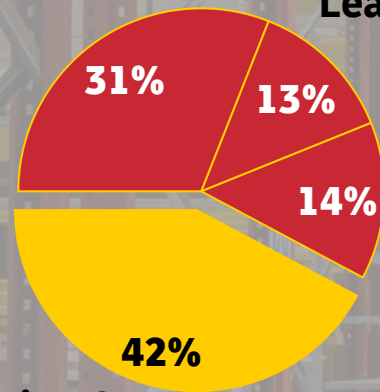
OUR PROFITABLE CORE

Service Portfolio Mix

Transport Solutions

Packaging

Lead Logistics Provider,
Service Logistics



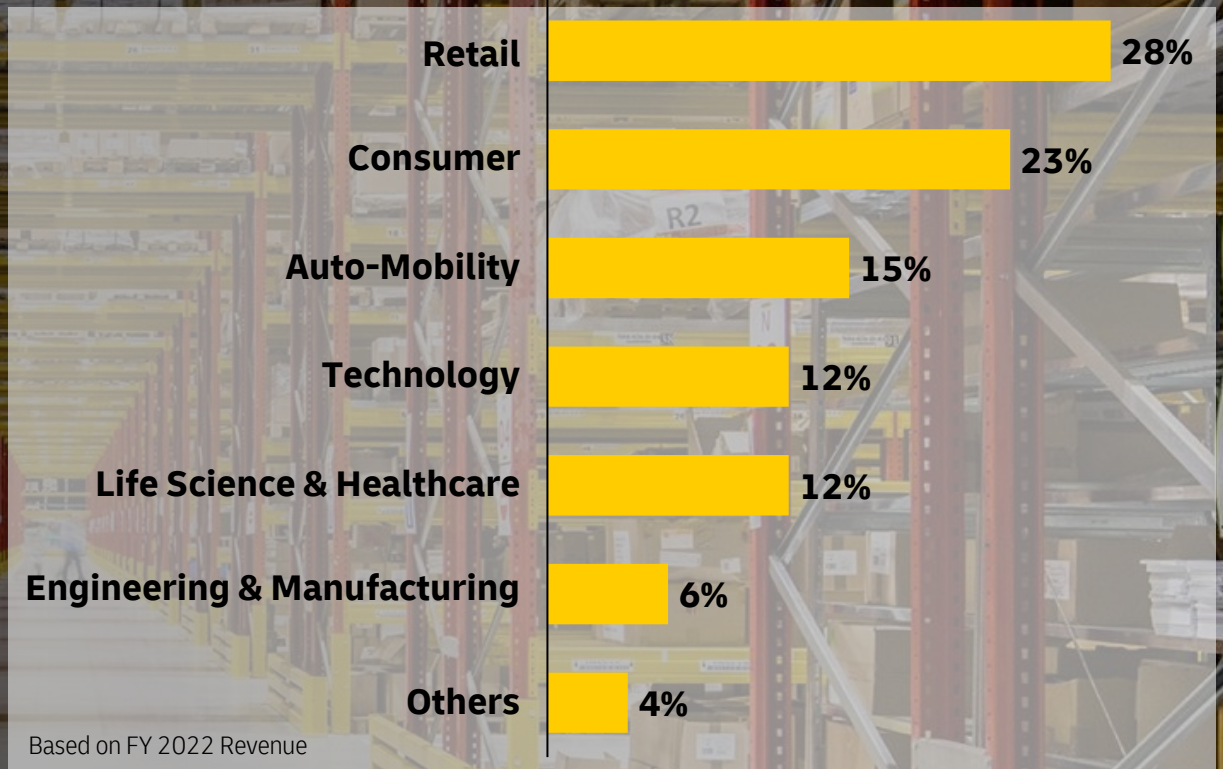
e-Commerce & returns

Warehousing & value-added services

Strategic Growth Solutions

Based on FY 2022 Revenue

REVENUE MIX BY VERTICALS



Based on FY 2022 Revenue



Environment

Clean operations for climate protection

Net-Zero Carbon Warehouses

All our owned or leased facilities will operate at Net Zero Carbon by 2025.

Reducing Transport Emissions

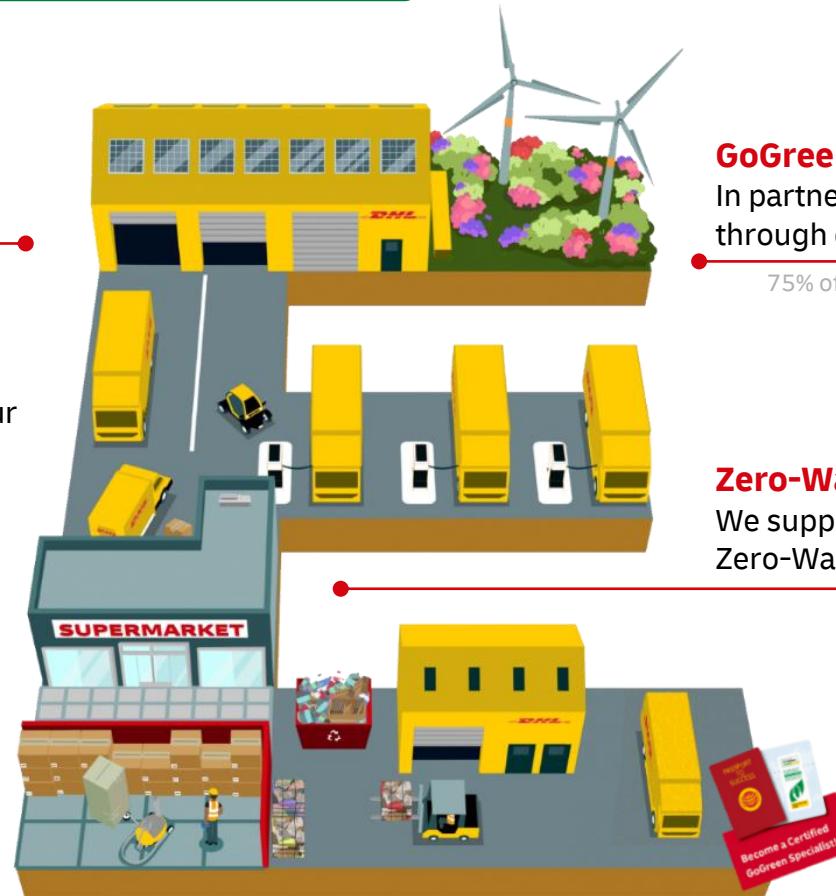
We drive increased efficiency and the use of cleaner fuels within our own fleet and with our subcontractors and are committed to the Science-Based Targets (SBTi).

By 2025, we will reduce our transport CO₂e emissions by 20% compared to a business-as-usual scenario¹.

Packaging

We support customers with sustainable and optimized packaging solutions.

75% of our operations will use sustainable packaging materials and practices.



GoGreen Solutions

In partnership with customers we design greener supply chains through our comprehensive portfolio of green solutions.

75% of new business sales will incorporate GoGreen Solutions.

Zero-Waste to Landfill

We support customers to achieve their Zero-Waste to Landfill (ZWL) goals.

Sustainability culture

Our people are Certified GoGreen Specialists, ready to drive down CO₂e, energy and waste.

80% of our people will be Certified GoGreen Specialists.

2025 ambitions, 1) Well-to-Wheel, Baseline year 2019, reduction goal for 2030 is 40% compared to a business-as-usual scenario

Sustainable Packaging – where do we want to go



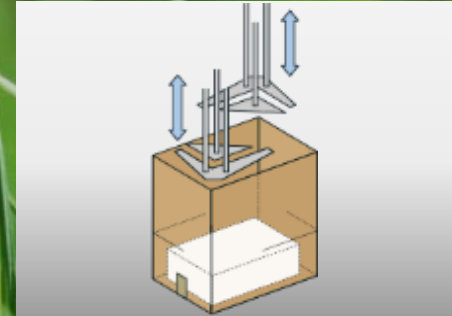
**Sustainable
packaging materials**



**Reusable and
Returnable packaging**



**Sustainable
Packaging Design**



**Automation and
optimization**



**Packaging
Innovations**

Customized Packaging



Customized Packaging

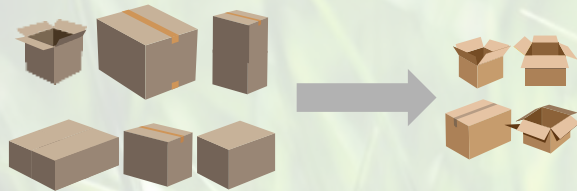
20 % less cardboard

60 % reduction in void fill

Carton Optimization with DHL *OPTICARTON*

Step 1

Carton optimization tool
assessing & optimizing
carton sizes



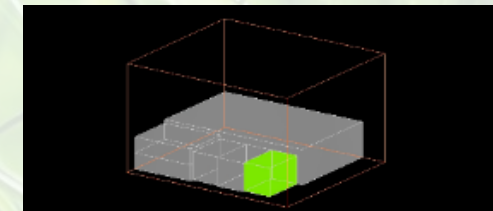
Step 2

Perform intelligent order
splitting with **splitting tool**



Step 3

Visual software for right
order in packing of the
cartons to optimize the size



Increasing carton optimization up to >90%

Carton Optimization

Based on historical data:

What are the dimensions of the optimal cartons to keep on-hand for packing parcel orders?



Size: **18" X 9" X 9"**
 Shipping Cost: **22Euro**
 Carton Utilization: **12%**



Size: **6" X 6" X 6"**
 Shipping Cost: **6.5 Euro**
 Carton Utilization: **83%**

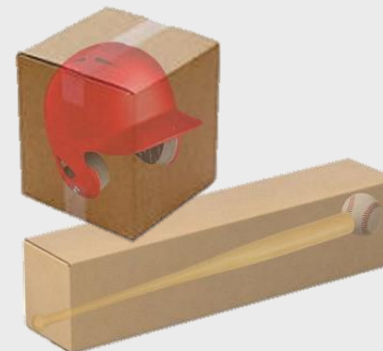
Order Splitting

Execution system used in real-time that answers:

Should this order be prepared as one or more parcel shipments? How to optimally pack it?

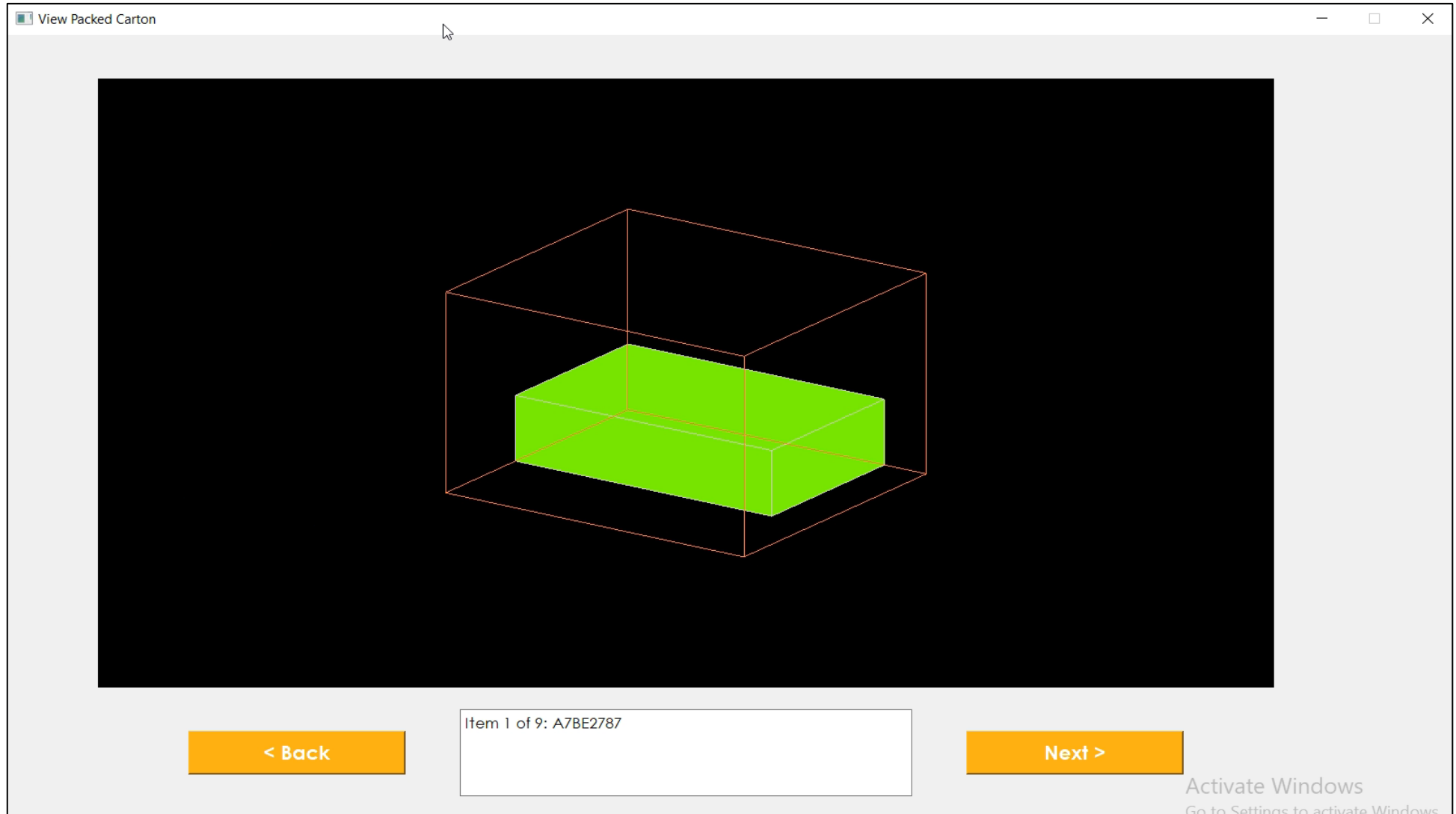


Size: **44" X 16" X 12"**
 Shipping Cost: **60 Euro**
 Carton Utilization: **27%**

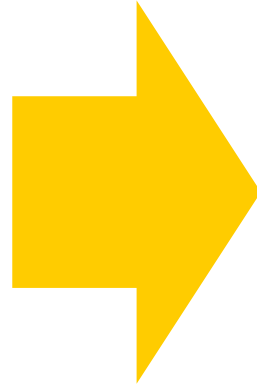


Size 1: **12" X 12" X 12"**
 Size 2: **44" X 4" X 4"**
 Shipping Cost: **45 Euro**
 Avg. Utilization: **92%**

Optimizing the box and the pallet... or Tetris for Pros



A tidy pallet doesn't need shrink wrap



80

% material cost saved

95

% reduction in carbon emissions

The result on the truck



As of today...

42 Projects

15% Average Carton
Utilization Increase

8% Average Shipping
Savings %

A GROWING TREND



DHL GOGREEN DASHBOARD

FIRST, SEAMLESS CROSS-DIVISIONAL
CARBON REPORTING SOLUTION

PATRIC PUETZ
HEAD OF ESG ACCOUNTING & EU TAXONOMY
DPDHL GROUP



DIGI x ESG
#DIGIFRIDAYS

Carbon emissions reporting in logistics

Non-exhaustive

We report customers' carbon emissions to...

Our customers want this reporting for...

- ... be compliant with **regulations and standards**
- ... enable our customers to meet **climate targets**
- ... strengthen our position in ESG offering & **vendor selection**
- ... inform our **finance stakeholders**
- ... decide on **management incentives**

- ... **hotspot analysis** for emissions
- ... transparent **company reporting**
- ... effective **operations and supplier management**
- ... strategic **supply chain optimization**
- ... **product marketing**
- ...

Building on each Division's carbon reporting solution, we are launching the new DHL GoGreen Dashboard



Divisional Solutions

- **On a Divisional level**, each business unit has their **own existing carbon calculation tools** to report emissions data to their **own customers**, e.g.:
 - CO₂ emissions report in myDHLi Analytics and Reports (DGF)
 - Other reporting formats



DHL GoGreen Dashboard

- **On a group level**, DPDHL streamlines and consolidates customer carbon emissions data **across all business units** in the new central **DHL GoGreen Dashboard**
- The tool offers **customers** a holistic, integrated view of their **overall emissions with DPDHL Group**



DPDHL developed its very first, seamless cross-divisional carbon reporting solution: The DHL GoGreen Dashboard

Automated monthly data update

What is DHL GoGreen Dashboard about?



Key Capabilities:

- **Automated** and **interactive** carbon reports for customers in dashboard view
- One-stop and efficient **consolidation** of **all DPDHL divisions' carbon reports**¹⁾



Key Features:

- **Multiple views & charts** to display key carbon emissions metrics
- **Customizable dashboard/report** via filters and slicers
- **Monthly automated update** of report²⁾
- Ability to **export** and **download** data



DHL GoGreen Dashboard provides customers carbon and reporting metrics in compliance with industry standards & frameworks

Emissions calculation and reporting standards



1. Basic foundation

- **ISO 14064-1**
- **Greenhouse Gas Protocol**
- **EU-ETS** (for aviation activities)



2. Transport-specific standards

- **GLEC Framework 2.0**
- **EN 16258** – to be withdrawn this year
- **(New) ISO 14083** – published in March 2023



DHL GoGreen Dashboard content



Energy Consumption
(Well-to-Wheel & Tank-to-Wheel)



Emissions Intensity



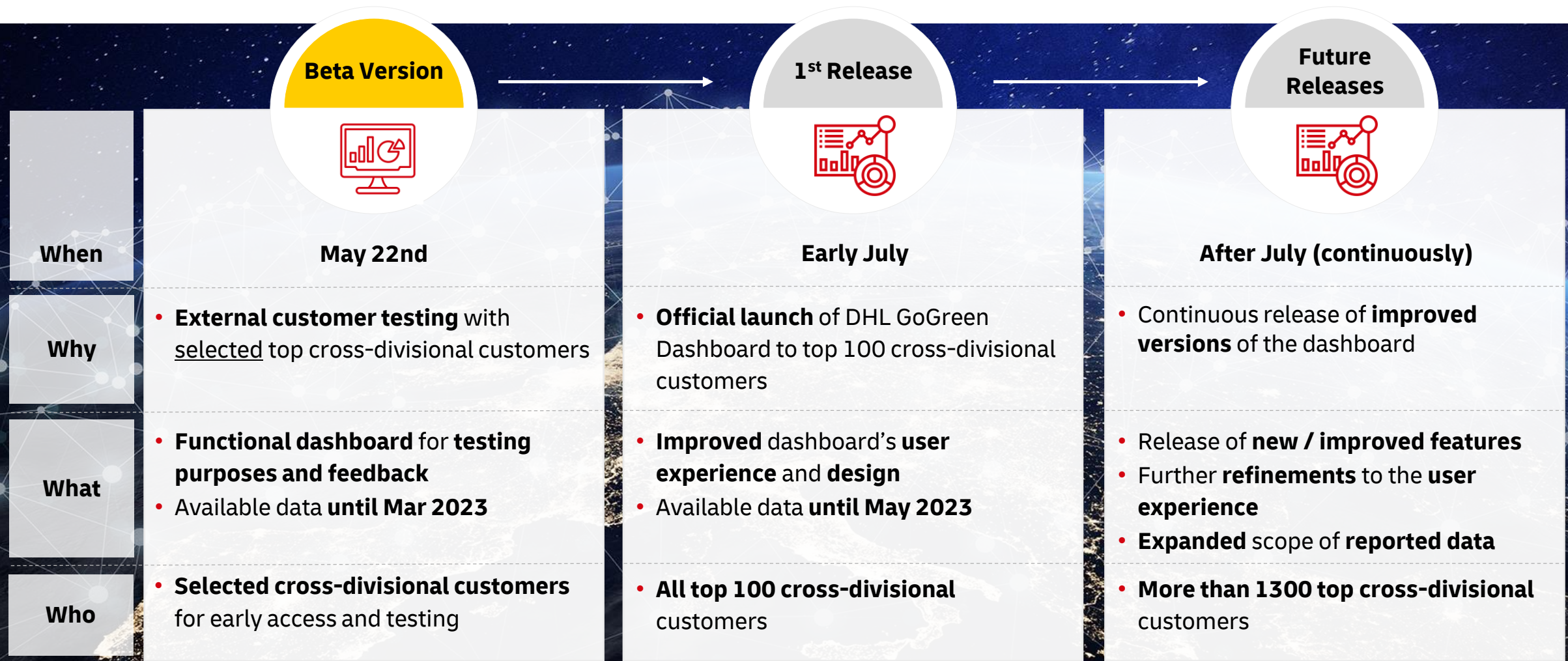
Absolute CO₂e Emissions



Input Data Types

Available with
detailed breakdown & multiple views

DHL GoGreen Dashboard Roadmap



DIGITAL PATH TO SUSTAINABILITY

DIGI X ESG

#DIGIFRIDAYS

