DIGITAL PATH TO SUSTAINABILITY
DIGI X ESG
#DIGIFRIDAYS
#DIGIFRIDAYS

**DIGI x ESG**
June 2\textsuperscript{nd} @15.00 CEST

**DIGI x E-commerce**
June 16\textsuperscript{th} @15.00 CEST

**DIGI x Automation**
June 9\textsuperscript{th} @15.00 CEST

**DIGI x CX**
June 23\textsuperscript{rd} @15.00 CEST
<table>
<thead>
<tr>
<th>Topic</th>
<th>Name</th>
<th>Title and Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digi x ESG Digital Path to Sustainability</td>
<td>Yin Zou</td>
<td>EVP Corporate Development, DPDHL Group</td>
</tr>
<tr>
<td>DHL Express Fuel Optimization Program</td>
<td>Guy Jaspers</td>
<td>Senior Director, Global Network Support, DHL Express</td>
</tr>
<tr>
<td>DHL Supply Chain AI Solution Opticarton</td>
<td>Katharina Tomoff</td>
<td>SVP Environment, Social and Governance, DHL Supply Chain</td>
</tr>
<tr>
<td>DHL GoGreen Dashboard</td>
<td>Patric Puetz</td>
<td>Head of ESG Accounting &amp; EU Taxonomy, DPDHL Group</td>
</tr>
</tbody>
</table>
DIGITAL PATH TO SUSTAINABILITY

DIGI x ESG

YIN ZOU
EVP CORPORATE DEVELOPMENT
DPDHL GROUP
Charting the digital path to sustainability: leveraging digitalization for a sustainable future

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

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
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.

**WHY**

Customer Experience  
Employee Experience  
Operational Efficiency

**WHO**

Divisions & Functions execute dedicated digitalization roadmaps  
Group Centers of Excellence exploit key technologies across the Group  
enabled by digital talent

**HOW**

Know. Own. Use Your Data.

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

- **2008**: GoGreen program launch
  - Setting our first GHG reduction target

- **2015**: E-Vehicle Pioneer
  - The roll-out of electric vehicles makes delivery more climate-friendly

- **2017**: Mission 2050: Zero Emissions
  - Deutsche Post DHL Group sets a net zero target for 2050

- **2021**: New ESG Roadmap
  - Focusing on all sustainability aspects: environment, social and governance

- **2021**: GoGreen+ Launch
  - Divisions start to roll out green products based on sustainable fuels and technologies

- **2022**: Science-based target approved
  - SBTi confirmed our reduction targets are in line with latest climate science

DigiFridays | Deutsche Post DHL Group Investor Relations | June 2023
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.
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

<table>
<thead>
<tr>
<th>Service</th>
<th>Offerings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time-Definite-International</strong></td>
<td>• Insetting via Sustainable Aviation Fuel</td>
</tr>
<tr>
<td><strong>DHL Express</strong></td>
<td>• Flexible CO₂e reduction levels for contract customers</td>
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<td></td>
<td>• Standard offering at 30% CO₂e reduction for smaller/ad-hoc customers</td>
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<tr>
<td><strong>Air Freight</strong></td>
<td>• Insetting via Sustainable Aviation Fuel</td>
</tr>
<tr>
<td><strong>DHL Global Forwarding</strong></td>
<td>• Flexible CO₂e reduction levels</td>
</tr>
<tr>
<td><strong>Ocean Freight</strong></td>
<td>• Insetting via Sustainable Marine Fuel</td>
</tr>
<tr>
<td><strong>DHL Global Forwarding</strong></td>
<td>• Less-Container-Loads: Default service, 100% CO₂e reduction levels</td>
</tr>
<tr>
<td></td>
<td>• Full-Container-Loads: flexible CO₂e reduction levels</td>
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<tr>
<td><strong>Road Freight</strong></td>
<td>• Insetting via Sustainable Fuel</td>
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<tr>
<td><strong>DHL Freight</strong></td>
<td>• 100% CO₂e reduction levels</td>
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<tr>
<td></td>
<td>• Available for Less-Truck-Loads (EuroConnect, Eurapid), direct Full &amp; Part-Truck-Loads (EuroLine)</td>
</tr>
<tr>
<td><strong>Warehousing &amp; Transport</strong></td>
<td>• Warehousing: &gt;75% or 100% CO₂e reduction levels</td>
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<tr>
<td><strong>DHL Supply Chain</strong></td>
<td>• Transport: 50–70% CO₂e reduction levels (Sustainable Fuel) or 100% CO₂e reduction levels (eVs)</td>
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<tr>
<td><strong>Transport</strong></td>
<td>• Sustainable Fuel for pick up or line haul</td>
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<tr>
<td><strong>DHL eCommerce Solutions</strong></td>
<td>• Up to 100% CO₂e reduction levels</td>
</tr>
<tr>
<td><strong>Parcel Germany</strong></td>
<td>• Insetting via e.g. sustainable fuel, heat pumps, electric vehicles</td>
</tr>
<tr>
<td><strong>P&amp;P Germany</strong></td>
<td>• 100% CO₂e reduction levels</td>
</tr>
<tr>
<td></td>
<td>• Rail transport</td>
</tr>
<tr>
<td><strong>Mail Germany</strong></td>
<td>• Insetting via e.g. sustainable fuel, heat pumps, electric vehicles</td>
</tr>
<tr>
<td><strong>P&amp;P Germany</strong></td>
<td>• 100% CO₂e reduction levels</td>
</tr>
<tr>
<td></td>
<td>• Available for Mail Communication, Dialogue Marketing and Press Service</td>
</tr>
</tbody>
</table>
LET'S EXPLORE
THE DIGITAL PATH TO SUSTAINABILITY
DATA TURNED INTO CO$_2$e AVOIDANCE

COME FLY WITH US ON OUR JOURNEY TO ZERO EMISSIONS

GUY JASPERS
SENIOR DIRECTOR, GLOBAL NETWORK SUPPORT
DHL EXPRESS
AVIATION IS AN INTEGRAL PART OF DHL EXPRESS BUSINESS

REPRESENTS 69% OF DPDHL CO₂ E
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

Clean operations for climate protection
Capturing the fuel burn avoidance opportunity on every flight

Optimize aircraft loading to better center of gravity

Optimize flap settings at takeoff

Fly economy mode, lower speeds

Taxi in after landing with one engine instead of two

Planned Payload Closer to Actual

Optimize flap settings at landing

On landing approach apply continuous descent

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.

**DATA SOURCES**
- Flight Dispatch
- Weight & Balance
- Movement Data
- Flight Data Recorder

**TOOLS & PROCESSES**
- Data Analytics
- Clear Data Visualization
- 100+ Predefined Reports
- Pilot App

**FUEL OPTIMIZATION MANAGEMENT SYSTEM (FOMS)**

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**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

Planned Payload Closer to Actual

Payload prediction 6-1h before departure

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

Target
- Remaining Payload

Raw Data | Preprocessed Data | Machine Learning | Prediction

Split into Certain and to be forecasted Volume

LEJCGV 3S392 2023-02-11

Planned Payload

DigiFridays | Deutsche Post DHL Group Investor Relations | June 2023
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.
SUSTAINABLE PACKAGING SOLUTION

DHL SUPPLY CHAIN AI SOLUTION

OPTICARTON

KATHARINA TOMOFF
SVP ENVIRONMENT, SOCIAL AND GOVERNANCE
DHL SUPPLY CHAIN
DHL SUPPLY CHAIN

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

OUR PROFITABLE CORE

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 CO$_2$e emissions by 20% compared to a business-as-usual scenario.$^1$

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 CO$_2$e, 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:** 22 Euro
  - **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:** 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

JUNE 2023 – DEUTSCHE POST DHL GROUP INVESTOR RELATIONS
Carbon emissions reporting in logistics

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

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

Key Features:
• Multiple views & charts to display key carbon emissions metrics
• Customizable dashboard/report via filters and slicers
• Monthly automated update of report
• 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

**Beta Version**

When: May 22nd

- **Why**
  - External customer testing with selected top cross-divisional customers
  - Functional dashboard for testing purposes and feedback
  - Available data until Mar 2023

- **What**
  - Selected cross-divisional customers for early access and testing

- **Who**

**1st Release**

When: Early July

- **Why**
  - Official launch of DHL GoGreen Dashboard to top 100 cross-divisional customers

- **What**
  - Improved dashboard's user experience and design
  - Available data until May 2023

- **Who**

**Future Releases**

After July (continuously)

- **Why**
  - Continuous release of improved versions of the dashboard

- **What**
  - Release of new / improved features
  - Further refinements to the user experience
  - Expanded scope of reported data

- **Who**

More than 1300 top cross-divisional customers