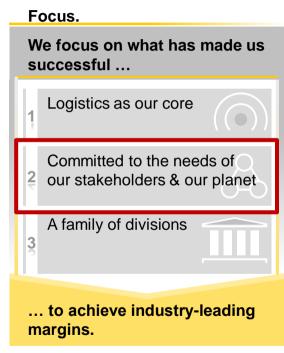
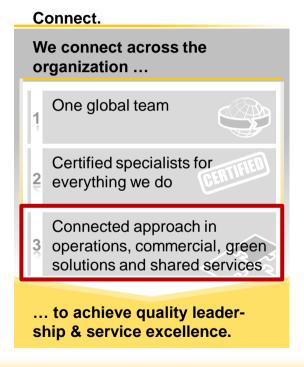
CIRCULAR BUSINESS MODEL IN SUPPLY CHAIN MANAGEMENT

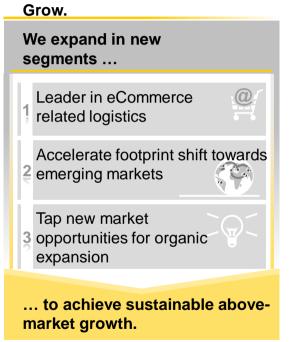
2016 SMU Logistics & Supply Chain Symposium

Katharina Tomoff Singapore, 7 March 2016

Corporate Responsibility is part of our Strategy 2020



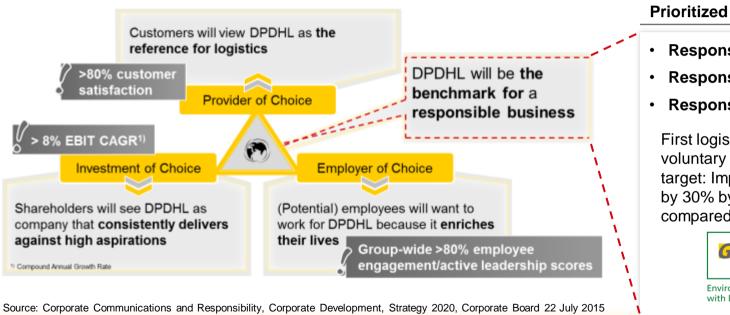




Source: Deutsche Post DHL Group, Strategy 2020

Become the benchmark for a responsible business

Material issues defined to become the benchmark for responsible business



Prioritized Issues

- **Responsibility: Governance**
- Responsibility: People
- **Responsibility: Environment**

First logistics company with a voluntary carbon efficiency target: Improve CO₂ efficiency by 30% by the year 2020, compared to our 2007 baseline.



Environmental protection with Deutsche Post DHL Group

eMobility for smart and clean urban delivery

Electric vehicles for short and start-stop intensive "Last Mile" driving cycles

- ~ 1,000 e-vehicles across all classes
- Globally across all regions
- Developing operational maturity



Deutsche Post DHL Group

Electric fleet for Shenzhen, China

BYD and DHL partnering to test and implement electric vehicles in China



- DHL Express China entering strategic partnership with BYD
- Testing and implementing electric vehicles for logistics
- 35 eVans for delivery in the southern Chinese city of Shenzhen
- 3.5-cubic-metre cargo space for loads up to 800kg
- Maximum speed 130kmph, overall range more than 200km
- Further planned activities of DHL Express and BYD include the testing of a lightweight electric truck
- For the supply of green energy, solar panels have been installed at the DHL Express Hub

Source: Deutsche Post DHL Group

Leveraging eMobility for customer solutions

GoGreen Regional shipments' surcharge is re-invested in electric mobility to reduce carbon dioxide, local emissions and noise on the regional level

GOGREEN CLIMATE NEUTRAL: CO₂ OFFSETTING



- » Last-Mile delivery with conventional diesel vehicles
- » Revenue from climate neutral GoGreen service is invested in international climate protection projects

GOGREEN REGIONAL: CO, REDUCTION



- » GoGreen Revenue is re-invested in local eMobility projects
- » Customers realize own contribution and feel motivated to engage further (rebound effect)

Source: Deutsche Post DHL Group

Circular Economy: Obligations and Opportunities





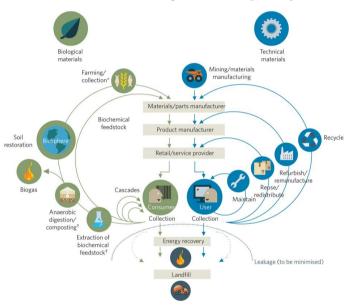


Recycling a Phone at EcoATM Is an Easy Route To Feeling Green

Source: DPDHL Group, external sources

Circular Economy: A new Paradigm?

Circular economy concept opens-up new opportunities for DPDHL Group



- U Industrial system that is restorative or **regenerative by design**, replacing the "end-of-life" concept
- U Extension of a product's life cycle by (re)utilizing materials after use phase or prolonging useful life
- Aiming for the elimination of waste through the superior design of materials, products, systems, and, within this, business models
- U Shifting towards the use of renewable energy
- U Harnessing supply chain capabilities to maximize closed loop resource use

Source: Ellen MacArthur Foundation "Towards the circular economy - Economic and business rationale for an accelerated transition" 2013

Return Solutions

Electroreturn, one of our first products that enable a Circular Economy



Provide Electroreturn envelopes to consumer

Pack the old device and post it (around 110,000 post boxes and more than 29,000 acceptance points)

Disposal through Deutsche Post's or the retailer's disposal service provider

Source: Deutsche Post Electroreturn

Logistics for a Circular Economy



Circular Economy: Our Approach

Our role as a logistics provider enabling a Circular Economy

- (1) Collaboration & Positioning
- Member of the Ellen MacArthur Foundation's CE100 since 2015
- · Network, trainings and events
- Position DPDHL Group's capabilities and identify customers for piloting solutions
- 4 Strategic development
- Develop "Circular Logistics" along our strategy
- Inside: make logistics circular and more sustainable
- Outside: tap market potential through offering circular logistics solutions





Circular Economy



2 Identifying requirements

- Evaluating return logistics requirements
- Academic paper with Cranfield University: Reverse Logistics Maturity Model
- DHL Trend Report on fair and responsible logistics, including CE

3 Solution design

- Identify customer requirements
- Position available return, recovery and producer responsibility services
- Identify new solutions/ expand existing solutions

Source: DPDHL Group, Shared Value

Case Study: Electronic Retailer

Electronic Retailer in Europe

- Leading Electronic Retailer three-digit number of stores
- DHL operates national transport and a Distribution Centre



Customer Challenge

- Provide outstanding value for money to its customers
- Enable cost-effective waste take-back from home delivery
- Minimize environmental impact
- Improve recycled % of total waste materials including > 40k tonnes of Electrical Waste
- Integrate waste management into the existing supply chain flows
- Aim to achieve Zero to Landfill

DHL Solution

- Developed on-site recycling solutions at regional Distribution Centres (DCs) to reduce general waste
- Utilised reuse, parts harvesting and recycling to maximise returns and minimise costs
- Developed waste network to manage more than 12 different waste types through waste hierarchy

Customer Benefits

- Reduced Waste costs by €150k at the RDCs
- Generated significant revenues through backhauling & consolidating waste materials and parts
- Reduced equivalent waste disposal costs
- Diverted large volumes from recycling to reuse and parts utilisation

Source: DHL Supply Chain

Case Study: Airline Catering

Airline Catering

- Short Haul 'Above the Wing'
- DHL Supply Chain operate Flight Assembly Centre
- 76,500+ flights serviced per year
- 14 million+ meals per year



Customer Challenge

Support environmental agenda:

- Improve environmental performance
- Minimise waste and harmful releases to the environment
- Set objectives and targets to make improvements
- Include environment in decisions
- Manage impact on communities

DHL Solution

- Solution design, equipment selection and installation management
- Support DHL site team in managing the processes
- Implement Food driers, reducing food waste volume by 70%
- Implement new technologies to create energy from waste material
- Minimise Landfill

Customer Benefits

- Zero to landfill achieved early
- Food waste transport costs reduced by 70%
- Access to expertise on waste
- Significant additional value and energy recovered from waste
- Substantial recycling revenue generated
- Landfill Tax charges avoided

Source: DHL Supply Chain

THANK YOU