

HOW TO TURN EV LOGISTICS AFTERMARKET CHALLENGES INTO OPPORTUNITIES? MIDDLE EAST & AFRICA

February 2022

Third Webinar to the EVTV Live series

1. Deep diving into the **EV (R)evolution**
2. Understand what **Aftermarket challenges** will the Electric Vehicles create
3. Highlight the **key implications** for the **MEA Region** its specific hurdles
4. Introduce EV Logistics **MEA Center of Excellence** solution to overcome challenges in the Region

YOUR EV LOGISTICS EXPERTS TODAY!



TOBY GROOM

Global EV Logistics Solution
Development Head



FABIO SACCHI

VP Global EV Logistics Business
& Commercial Development

GLOBAL EV MARKET DEVELOPMENT



Decarbonization is at the top of the agenda with sustainability driving new strategies and respective vehicle portfolios

Electrification Boosters



Government Policies,
Incentives & Subsidies



Consumers Behaviors
& Preferences



Decrease in
Battery Prices



29%
EV Sales CAGR

2020 - 2030



58%
EV Market Share of new sales

by 2040



290 million
charging points needed

by 2040

2020



2025



2030



2040



EV Market Shares: from 4.6% to 58%



32%
of passenger car fleet are EV

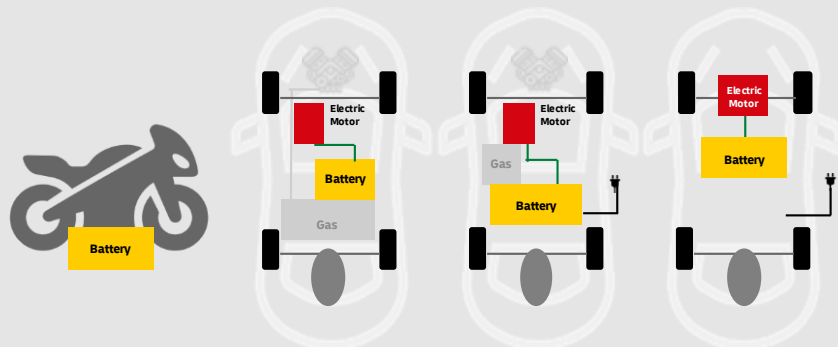
by 2040



Battery pack prices
fall to **\$61/kWh**

by 2030

EV logistics requirements vary according to the electric vehicle type and goes beyond the electrification of passenger vehicles



2-Wheels

E-bikes, Scooters
Motorbikes

MHEV

Mild Hybrid
Electric Vehicle

PHEV

Plug-In Hybrid
Electric Vehicle

BEV

Battery
Electric Vehicle

| | BATTERY CAPACITY | RANGE | BATTERY WEIGHT |
|--------------------------|------------------|--------------|----------------|
| (M)HEV / 2 WHEELS | 1 - 9 kWh | 2 - 5 km | 5 - 30 kg |
| PHEV | 9 - 40 kWh | 20 - 200 km | 100 - 250 kg |
| BEV | 40 - 100 kWh | 200 - 700 km | 250 - >800 kg |

2 wheelers & busses ahead in the electrification journey

2/3 Wheelers to reach
49% by 2030
& 98% by 2050

Buses to reach
63% by 2030
& 91% by 2050

Cars to reach
34% by 2030
& 88% by 2050

LCVs to reach
31% by 2030
& 78% by 2050

MCVs/HCVs to reach
12% by 2030
& 48% by 2050

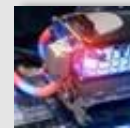
New sub-segments ecosystem



Battery



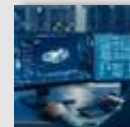
Inverter /
E-Motor



Thermal
Management



EV Tires



Smart
Cars



Charging
Management

Deep Dive in the Electric Vehicles Aftermarket Transformation

Key Facts

Coexistence of all powertrains for aftersales service in the near future



EV parts becoming **more technical & difficult to handle**



ICE parts will disappear, some will be revamped & **new EV parts will emerge**



Fast evolving ecosystem creating **risk of parts shortage & stock obsolescence**



New Challenges

Increased SKUs (stock keeping unit) to manage all platforms



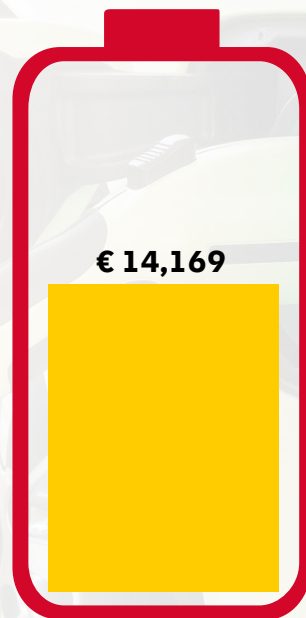
Need to **upscale** the logistics network around **new requirements**



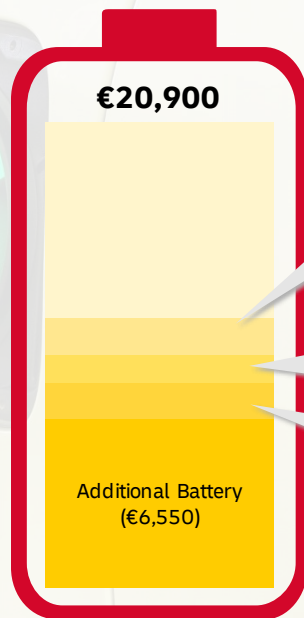
Restructuring the supply chain around new suppliers & new revenue streams



Increasing need for **AFR** **urgent shipments & more accurate inventory management**



ICE Components

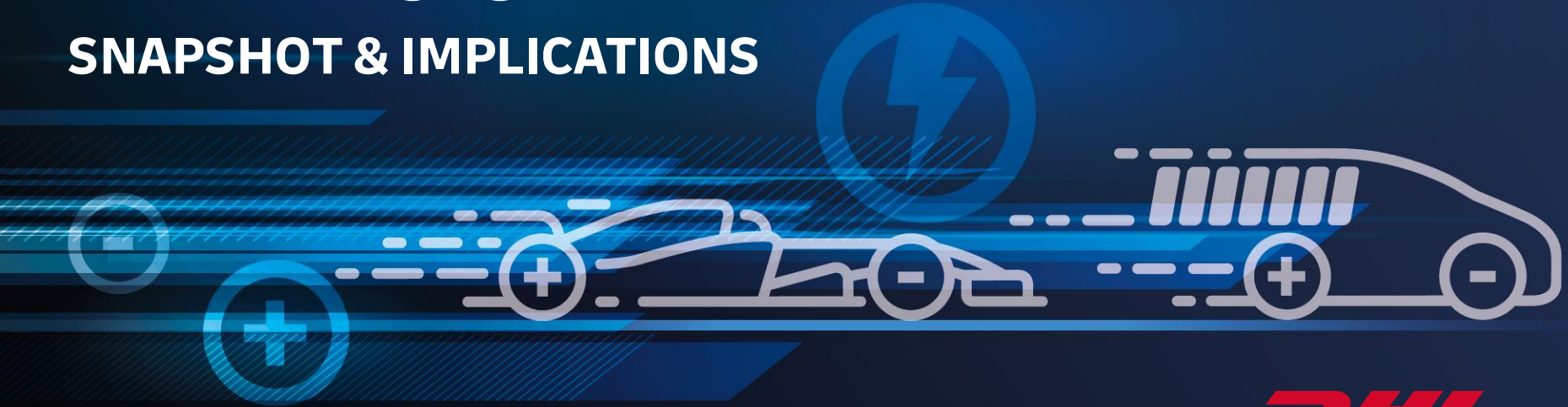


BEV Components

Source: Citi GPS: Global Perspectives & Solutions, 2021

MEA REGION EV MARKET

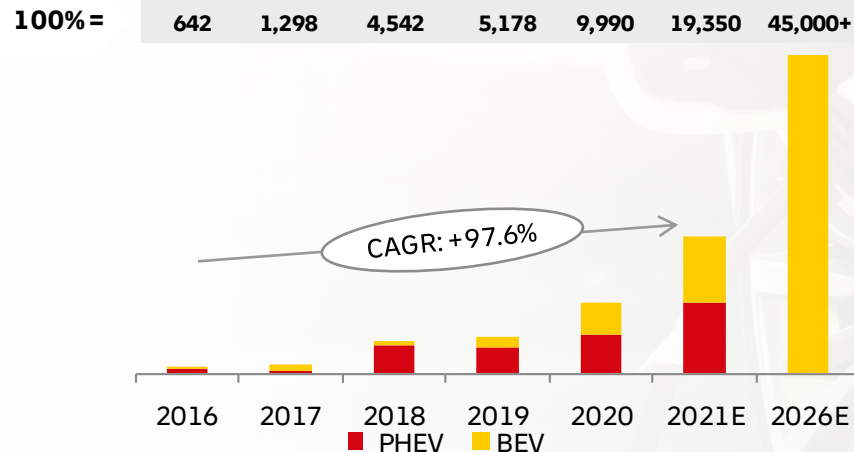
SNAPSHOT & IMPLICATIONS



MEA: A Key EV Market Importing Vehicles & related parts from all over the world

- **EVs are gaining popularity** in the Middle East
- **Customers & investors** are projected to continue to impact the sector

Sales of EV, units, MEA, 2016-2026E



Key insights on electric vehicle market: MEA, 2021E



19,350 Estimated sales in 2021



80 (35 BEVs and 45 PHEVs) Models for Sale



1.8% EV Penetration



~44,029 EV Car Parc

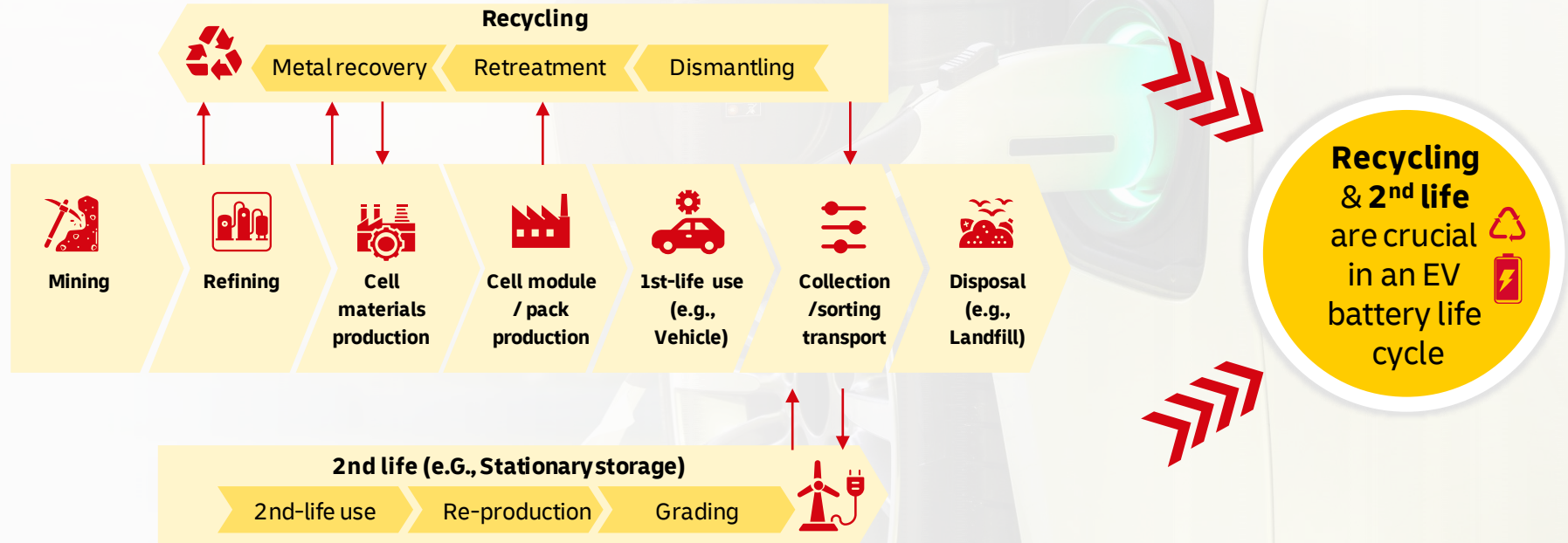


2,000+ AC & DC Charging Stations (400 incl. 50 DC in UAE)

Note: "Parc" is a European term for all registered vehicles within a defined geographic region; Source: Frost & Sullivan Analysis & DHL Forecast

EV batteries circular economy challenges

Exhibit 1: Three options for EV batteries at the end of their first life



Source: BCG analysis.

MEA: A Key EV Market Importing Vehicles & related parts from all over the world

MEA Traditional Auto-Mobility Market

- Standard aftersales network is managed through **local & international stored parts** accessible by different modes of transport
- Auto-Mobility aftermarket pattern is mostly based on a **local part scrap model**

EV Entering in the MEA Ecosystem

- EV Batteries **have highly regulated transportation**: service speed vs service consistency
- **Circular Economy** is key for EV batteries business: repairing, recycling, converting

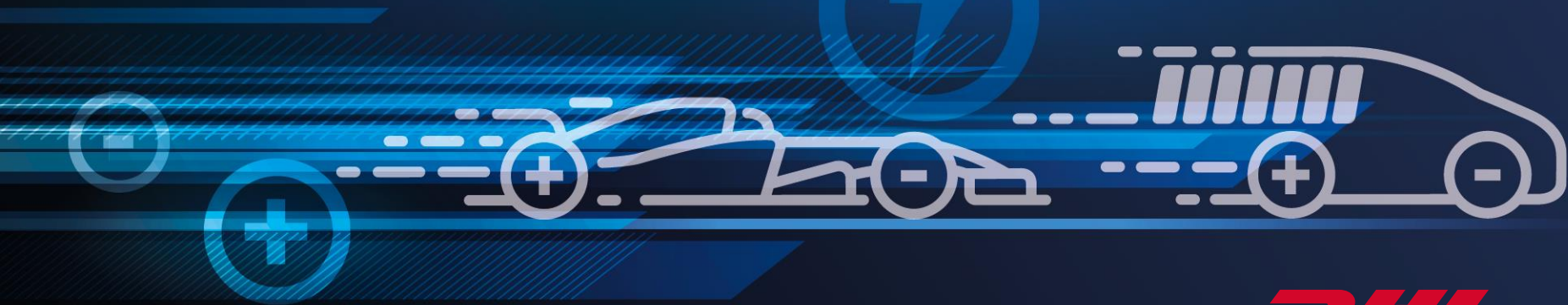


There is an urgent need for a **REVOLUTIONARY EV Battery Solution...**



DHL CENTER OF EXCELLENCE

THE SOLUTION TO EV REGIONAL CHALLENGES



DUBAI EV CENTRE OF EXCELLENCE



Pioneering EV battery warehouse & transport solutions in a complex, highly regulated **aftermarket sector**, without upfront investment

Dubai EV Centre of Excellence supporting a fully integrated end-to-end aftermarket logistic solutions

EV Logistics Centre of Excellence Dubai



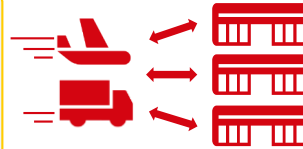
Operation



Global Inbound Replenishment to Dubai from suppliers



Warehousing and Value-added services in EV Logistics hub Dubai



Handling of outbound deliveries to regional dealers



Reverse Solution & Recycling

Value

- Fully integrated **inbound shipment flow**
- Ownership of **import processes** for all EV related Aftermarket services

- **Certified location** following regional **compliance & safety standards**
- Qualified DHL team managing all **warehousing activities** incl. EV related **value added**

- **Consistent & integrated** sustainable transport network
- **Compliant transportation** networks to provide optimized solutions

- **Reverse solution** enabling a circular logistics & insuring a **compliant management**
- Engagement to support sustainable **second / end of life solutions**

Key Takeaways

EV Ecosystem here to grow



- **EVs are gaining popularity** in the Middle East pushed by Customers & investors
- **Charging Stations development** will enable the local growth

EVs need Specific Solutions



- Understanding evolving **regulations**
- Ensuring **compliance & safety**
- Meeting customer **services standards**
- **Optimizing** the EV supply chain
- **Scaling & adapting** regional operations
- Enabling **sustainability**

DHL EV Innovative Solution



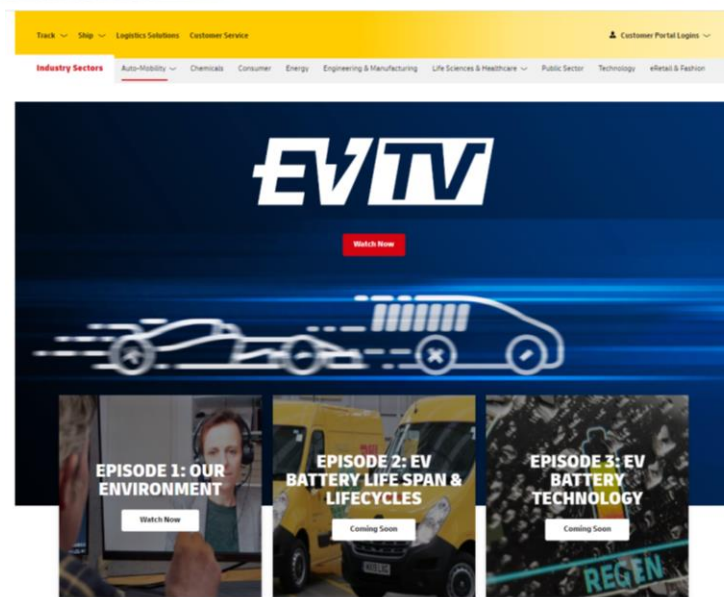
EV Logistics Centre of Excellence Dubai enabling:

- **Inbound Replenishment** to Dubai
- **Warehousing & Value-added** services
- **Outbound deliveries** to regional dealers
- **Reverse Solution & Recycling**

DHL EV TV

The Show About All Things EV

- Episode 3 out now
- A new episode released every month
- Watch the video show on **dhl.com/evtv** & Youtube
- Listen to the podcast on Spotify and co.





THANK YOU

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