ELECTRIFYING HEAVY DUTY VEHICLES

ANDREAS FOLLÉR, HEAD OF SUSTAINABILITY
Electric trucks on avg. cheapest long haul solution from mid-20s
— with already earlier adoption for urban application and buses

Example: Europe long-haulage – relative total operating economy in 2030

- Diesel (ICE)
- Fully electric (BEV)
- Fuel cell electric (FCEV)
SUBSTANTIAL GHG REDUCTION

ICEV (B7)
- Use 93%
- Recovery 0.5%
- Production 6%
- Maintenance 0.5%

BEV (EU baseline)
- Use 78%
- Recovery 1%
- Production 20%
- Maintenance 1%

BEV (EU wind)
- Use 8%
- Production 85%
- Recovery 3%
- Maintenance 4%
ELECTRIFICATION – SOONER THAN YOU THINK

- **50%**
  - CO₂ reduction from our operations by 2025 (2015)
  - Tonnes CO₂e

- **20%**
  - CO₂ reduction from our products by 2025 (2015)
  - CO₂e/km WTW

*Our target is for electric solutions to make up 10 percent of our total vehicle sales volume by 2025 and 50 percent by 2030.
APPLICATION ADOPTION - FIRST WAVE

URBAN DISTRIBUTION

SKIPLOADER

AIRPORT VEHICLE

HOOKLIFT / CITY TIPPER

REFUSE COLLECTOR

MIXER
FULL ECOSYSTEM REQUIRED ALTHOUGH DEPOT CHARGING COVERS 50-85%

Charging split across applications (% energy charged)

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<thead>
<tr>
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<th>2035</th>
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<tbody>
<tr>
<td>Depot</td>
<td>50–55%</td>
<td>10–15%</td>
<td>30–35%</td>
</tr>
<tr>
<td>Destination</td>
<td>~60%</td>
<td>~20%</td>
<td>~20%</td>
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<tr>
<td>Urban</td>
<td>~75–85%</td>
<td>~10%</td>
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Required installed charging capacity in Europe 2035*

- 90 GW
- 15 GW
- 10 GW

*Industry report 2021