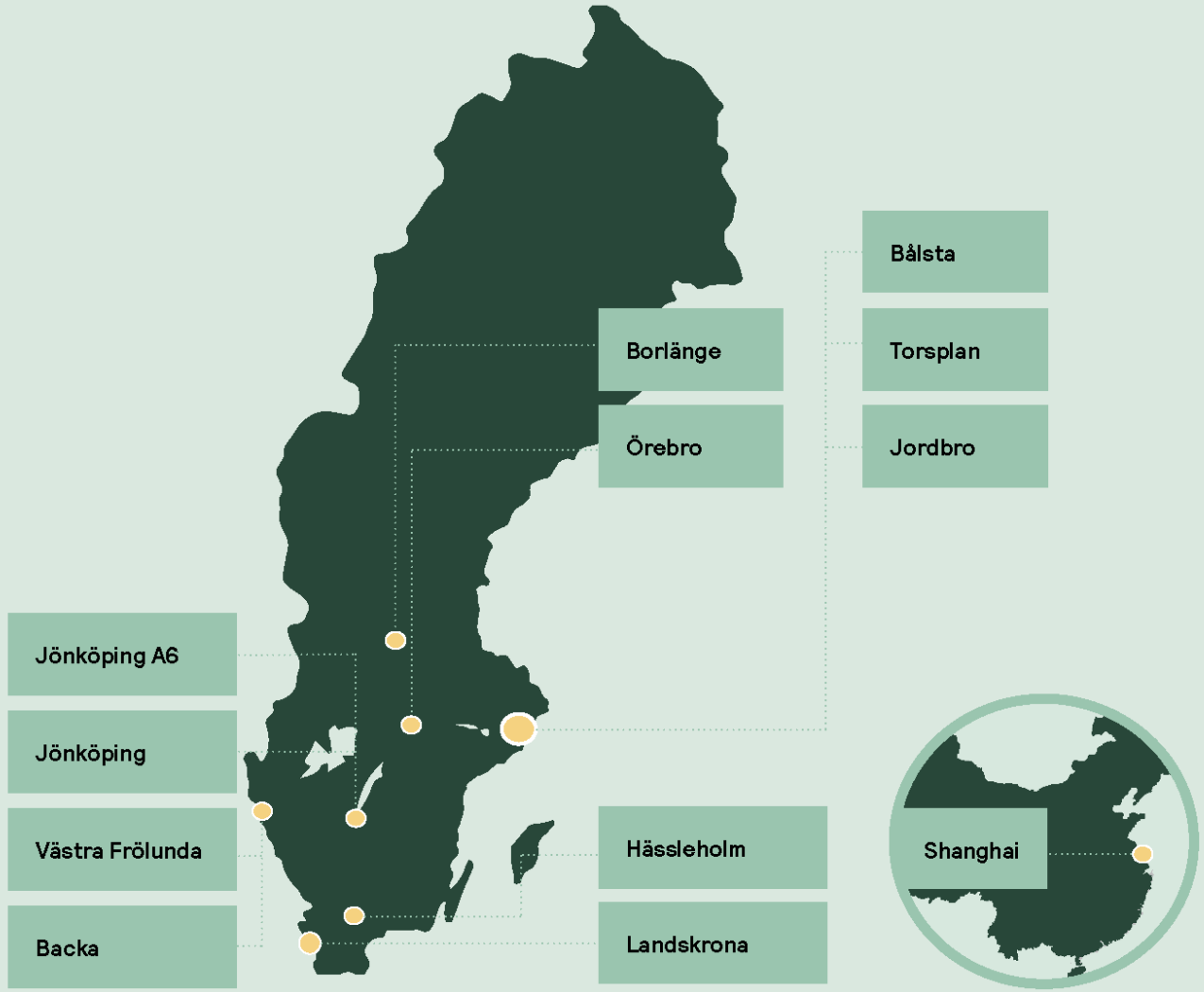
Dagab

- How Dagab is electrifying heavy transport in grocery logistics

Krister Kjellström
Head of Fleet - Dagab

Dagab

- Founded in 1974
- Part of the Axfood Group since 2000
- CEO – Hans Bax
- Nine logistics units in Sweden
- Support and purchasing office in Stockholm
- Support office in Jönköping
- Purchasing office in Shanghai
- Aprox 3 200 employes (Axfood 18 500)



Dagab in brief

Dagab is a strong partner to

We pick approx. 1.5-2 million parcels every day, that is around 18-20,000 Euro pallets.

We turn over our stocks 33 times a year (every 11 days)

200

Heavy trucks, 170 trailers and 55 light delivery trucks (Vans) in our own fossil-free vehicle fleet

We drive approx. 50% of our volumes with our own fleet

Delivers to more than 7,000 stores and customers across Sweden

We work 24/7 365 days a year

Our Vehicle Fleet

Dagab Electrification Today - Current Status:

- 37 Heavy Battery Electric Trucks
- 30 BEV Combinations with Drawbar Trailers
- 52 Electrified Refrigerated Drawbar Trailers
- Target: 50% of the truck fleet electrified by 2030

- **The Key to Profitability**
- Battery-electric trucks are expensive.
- Energy is cheap.
- Therefore: Utilization is Everything
- More kilometres means:
  - Better business case
  - Lower cost per km
  - Higher asset utilisation
  - Faster CO_2 reduction
- **The worst electric truck is the one standing still.**

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Our Vehicle Fleet

- Grocery logistics requires:
  - High payload
  - High vehicle utilization
  - Long operating hours
  - Low emissions
  - Cost efficiency

- **Can electric trucks handle real transport operations?**
- Our experience:
  - Daily grocery distribution with 24m & 25,25m - 64-ton combination
  - Up to 200,000 km per year annually
  - Two-shift operation
  - High level of service and high operational reliability
  - However, it has not been entirely trouble-free; we have primarily experienced issues with connecting the cooling units on battery-powered trucks E-PTO.

- **We are no longer testing - We are operating.**

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Our Vehicle Fleet

Charging Strategy

- To achieve high annual mileage:
  - Charging at our own terminals
  - Charging at loading docks and overnight
  - Public charging when needed – take the time to secure a good agreement.
  - Find "charging partners," for example through various projects.

- **To maximize utilisation, you cannot only charge at home.**
- We are continuously expanding our own charging infrastructure on our terminals.

Charging Management System (CMS)

- In partnership with Erinion/Synop, we are developing a Charging Management System (CMS) to optimize charging operations for our electric transport fleet.
- The system aims to increase vehicle utilization, reduce downtime, and maximize daily mileage through smarter charging planning and real-time operational support.

Status

- Pilot launched at one site
- Second site going live soon
- Foundation for future large-scale fleet electrification

Key Benefits

- Higher vehicle utilization
- More kilometers per vehicle per day
- Reduced charging downtime
- Optimized energy usage and operations

Our Vehicle Fleet

- We ran our heavy-duty trucks on the following fuels in December 2024:
  - 0,5% Ethanol
  - 2 % PHEV/HEV (HVO/RME)
  - 3% Diesel
  - 5 % BEV(El)
  - 5,5 % RME - FAME (Rape Seed Methyl Ester - Fatty Acid Methyl Esters)
  - 38 % Biogas (LBG 35 % - CBG 3 %)
  - 46 % HVO (Hydrotreated vegetable oil)

- In Januari 2025, our own fleet was 100% fossil-free - and now in September it looked like this:
  - 0% Diesel (Since 2024-12-31)
  - 0% Ethanol (Since 2025-11-01)
  - *0,0% RME**
  - 2% PHEV/HEV (HVO)
  - 18% BEV (El)
  - 30% HVO
  - 50% Biogas (LBG 47 % - CBG 3 %)

- * (we start to move from HVO to RME on vehicles that can run on RME)

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Dagab Electrification

- And one more important thing on our path towards fossil-free transport, namely trailers with battery-powered cooling units.

- Battery-powered cooling units are not only good for the environment but also for the working environment for our drivers and everyone who lives along the roads as the noise level is reduced to almost zero!

- This is our first trailer with a AddVolt battery-powered cooling unit from 2022 (Was on the Elmia Truck show in aug 2022)

- Today we have more than 50 trailers with battery-powered cooling units

Dagab Electrification - next step

MCS & Flexi satellite

- The vehicle combination is participating in a CLOSER project called E-CHARGE II.
- E-Charge II aims to conduct research and testing regarding the challenges that must be addressed to enable long-haul transport using battery-electric vehicles.

- This is our first MCS truck
- It is a Scania with both MCS and CCS sockets
- It has 624kWh batteries with 90% SOC
- CCS = 375kW and MCS = 750kW
- Range fully loaded 64t approx: 320-340 Km
- Will be put into traffic next week

- MCS & CCS charger
- A charger that combines both CCS+ with a capacity of 700 A = 560 kW* and with the new standard for truck charging MCS that enables a capacity of 1,500 A = 1,2 MW*
- This will be Kempower's first flexi charger in Sweden
- * At 800V

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Dagab Electrification - next step

- The E-trailer, developed by Volvo Penta and EKERI, is equipped with an e-axle, electric motor, and a 360 kWh battery pack powering both propulsion and the Thermo King refrigeration unit. Combined with a Volvo FH Aero BEV (540 kWh), this 25.25 m electric vehicle combination is expected to achieve a range of 400-420 km.

- The vehicle combination is participating in a CLOSER project called DHEELS.
- Designing and evaluating fossil-free, energy-efficient high-capacity logistics systems.

- A key advantage of this setup is its logistical flexibility. The trailer can be charged while the truck is out delivering goods, minimizing downtime and maximizing operational efficiency.

- A key challenge with electric trucks is weight. On a long-haul vehicle that normally carries around 14,000 kg, we lose approximately 2,000 kg of payload capacity, requiring more trucks to transport the same volume.

- We need to be allowed an additional 2,000 kg gross vehicle weight for 3-axle trucks. The E-trailer is one solution, as it enables smaller truck batteries while distributing weight across the entire combination.

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Our Vehicle Fleet

Conclusions

Our experience so far:

- ✅ Electric trucks work
- ✅ Electric trucks with drawbar trailers 24m/25,25m work
- ✅ 64-ton combinations work
- ✅ If possible, build your own charging infrastructure.
- ✅ But don't hesitate to charge externally, it's necessary to get the mileage up.
- ✅ High annual mileage is both possible and necessary to achieve a good TCO.
- ✅ E-trailers are very promising
- ✅ Electrified trailers deliver additional value
- ✅ MCS is the next step

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Our Vehicle Fleet

Final Message

- ***The future is not only electric.***
- ***The future is electric, long, heavy and highly utilized.***

Thank You

Krister Kjellström
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