



NORDLUFT

Concept development of drone-based reed harvesting

Baltic Reed Seminar
Elof Winroth, 7e feb





Drones for data collection vs drones for physical work



» Pains today

- Terrain makes all alternatives slow and expensive
- Ground based machines have limited access
- Need of both trucks and spreading machines
- Spreading over smaller forest areas currently impossible

» Short time to market

- Less safety concerns for using drones
- Current demand

» Climate positive applications

- Bioash recirculation
- Fertilizing
- Seedling last-mile transportation
- Seeding
- Fire fighting
- Herbicides spraying
- Etc..



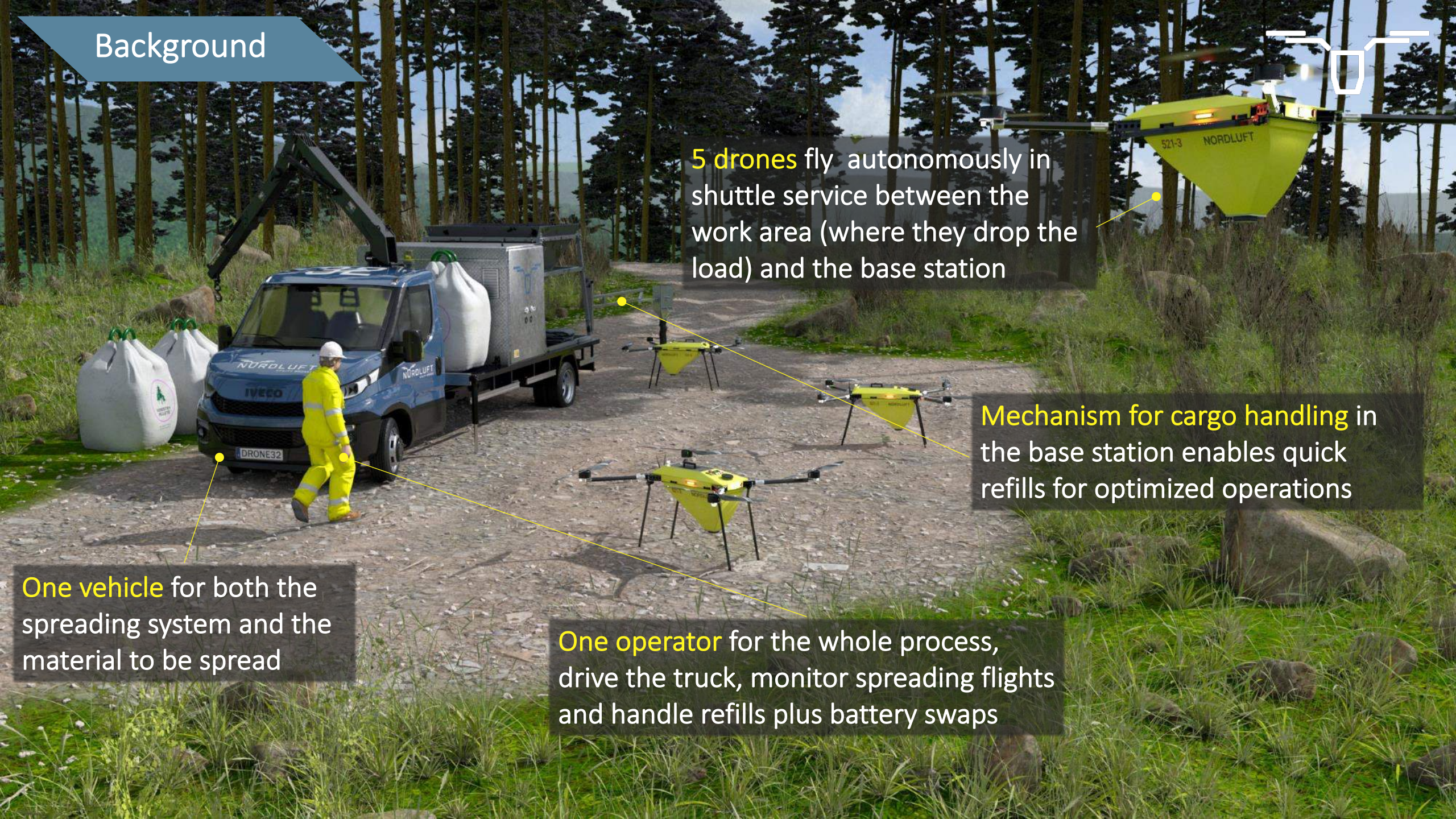
Background

5 drones fly autonomously in shuttle service between the work area (where they drop the load) and the base station

Mechanism for cargo handling in the base station enables quick refills for optimized operations

One vehicle for both the spreading system and the material to be spread

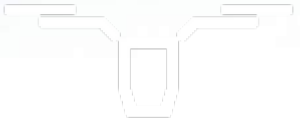
One operator for the whole process, drive the truck, monitor spreading flights and handle refills plus battery swaps



Background







Reed harvesting today





- » Labour intensive
- » Either for use on solid ground, or floating on water
- » Manual/semi-manual way of collecting the material
- » Big expensive machines, difficult to transport

There must be something better??!!

Nordluft and Initiativ Utö agreed to partner up, with support from RE:SOURCE

Drone based reed harvesting technology



INITIATIV
UTÖ

RE:
SOURCE

Initial idea



+



X 5

+



= up to 4 tons of
reed per hour