The problem

Today, the transportation services between the hospitals and with outside units depends on road transport with dedicated vehicles and taxi, resulting in a service that is often slow, has varying capacity and unpredictable transport time due to traffic congestion and weather conditions.

The transportation service also represents a risk due to the lack of control and status of the transports in process.

One hospital, using own transport vehicles, drive yearly a distance of 13 times around equator to pick up biological material.

Two types of drones or UAVs

Airbus

Octocopter - short distances e.g. greater Oslo area - all electric <100km / hour

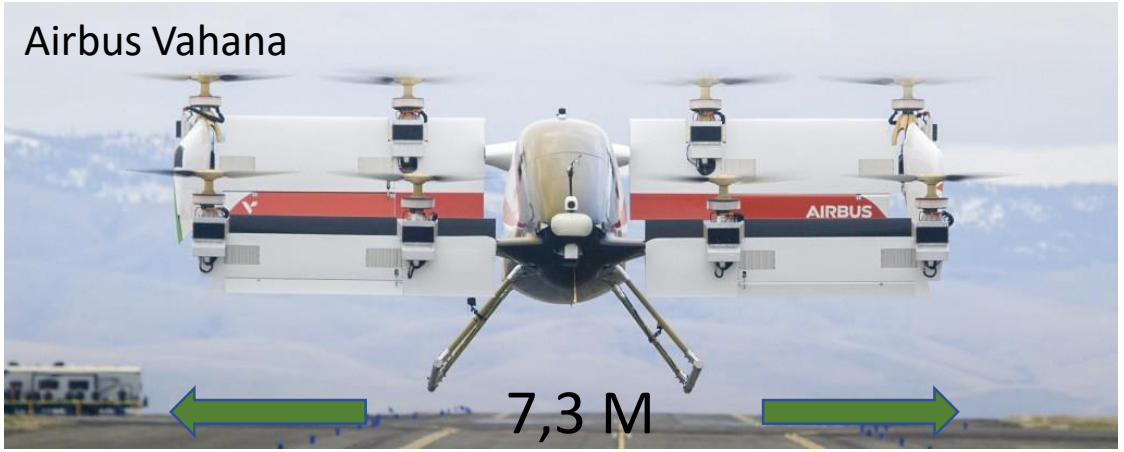
DHL (Deutsche Post)

eVTOL – long distances and increased speed - all electric >200km / hour

Transportation times using straight line airways assuming eVTOL transport (200km/h)

Route	Road distance / traveltime	Airway straight line
• **Bergen** – Stavanger	210km / 5 hours	160km / 48min
• **Tromsø** – Bodø	550km / 8 hours	323km / 96min
• **Oslo** – Kristiansand	327km / 4 hours	252km / 76min
• **Oslo** – Hamar	126km / 2 hours	100km / 30min

Airways must be agreed by Civil Aviation Authority, will never be a straight line



Norway has one of the most challenging geographical, road and weather conditions of any country

Should be considered an opportunity and not an hindrance

Todays program

- **09.40 – 10.00** Bente Heggedal, Head of Section for Unmanned Aviation, the Civil Aviation Authority: The Norwegian drone strategy

Part 1: *Medical potential and values for the health care sector*

- **10.00 – 10.20** Erik Fosse, Professor and head of The Intervention Centre, OUS: «Drones in medicine – value equation and pilot project»
- **10.20 – 10.40 :** Randi Lilleengen Beitdokken, Director Division Medical Services, Innlandet Hospital Trust: «New technology to support decentralised healthcare»
- **10.40 – 11.10: Coffee break**
- **11.10 – 11.30:** Thor Audun Saga, CEO Syklotronsenteret AS: «PET/CT scans outside main hospitals using drones»
- **11.30 – 11.50:** Karl Arne Johannessen, Associate prof. UIO and researcher The Intervention Centre, Oslo University Hospital: «How to achieve hospital and patient value through secure use of drones»
- **11.50 – 12.10:** Panel, questioning, sum-up part 1, facilitator Egil Utheim, Innovation mgr. Innlandet Hospital Trust
- **12.10 – 13.00:** Lunch

Part 2: *Drone related technologies*

- **13.00 – 13.45:** Leo JOAH, Airbus Skyways Program Lead: «Autonomy by Airbus – Aeronautical Unmanned Air Systems»
- **13.45 – 14.05:** Gunnar Inderberg, Vice President, head of value chain development, Posten: «Nation wide logistics to support use of drones»
- **14.05 – 14.35: Coffee break**
- **14.35 – 14.55:** Mandar Tabib, senior scientist Sintef Digital, Mathematics and Cybernetics dept.: «Use of hybrid analytics methods to decide on drone landing and take-off platforms in urban areas»
- **14.55 – 15.15:** Steffen Solberg, Technical Manager, KVS technologies: «Automatic inspection of Statnett critical infrastructure through use of drones»
- **15.15 – 15.35:** Panel, questions, facilitator Knut Korsell (OUS)