Oriol Lopez

Médecins Sans Frontières

Transforming Transportation

@WeRobotics

MSF Cargo UAVs - Last Mile Delivery

Oriol López – Medecins Sans Frontières

MEDECINS SANS FRONTIERES
国境なき医師団

MSF: Supply Constraints

- Isolated Places
- Difficult Transport
- Key for good treatment

Example: Papua New Guinea

- MSF + Ministry of Health - Tuberculosis
- Collect TB sputum samples

MEDECINS SANS FRONTIERES
国境なき医師団

Bringing TB Sputum samples is complicated

- Outreach Locations
- Difficult Access
- UAV regulation & Acceptance
- MSF + MoH project

- 2 Way trip – No Drop
- Quadcopter 15km range

MEDECINS SANS FRONTIERES
国境なき医師団

<2kg Opportunities

Blood

Vaccines

Anti Venom

Lab Samples

Oxytocin

MEDECINS SANS FRONTIERES
国境なき医師団

SO WE WANT TO USE DRONES

MEDECINS SANS FRONTIERES
国境なき医師団

Requirements: Operator

DHL

FedEx

ups

EMS

External Operator

REQUIREMENTS: CONTROL

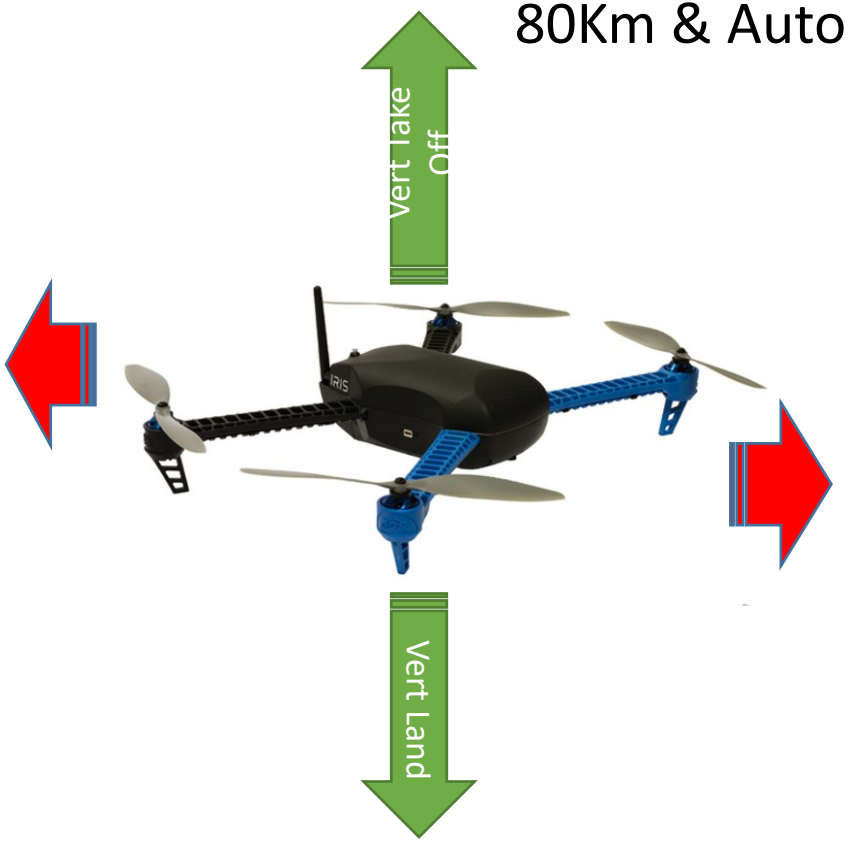
Automatic & Simple use

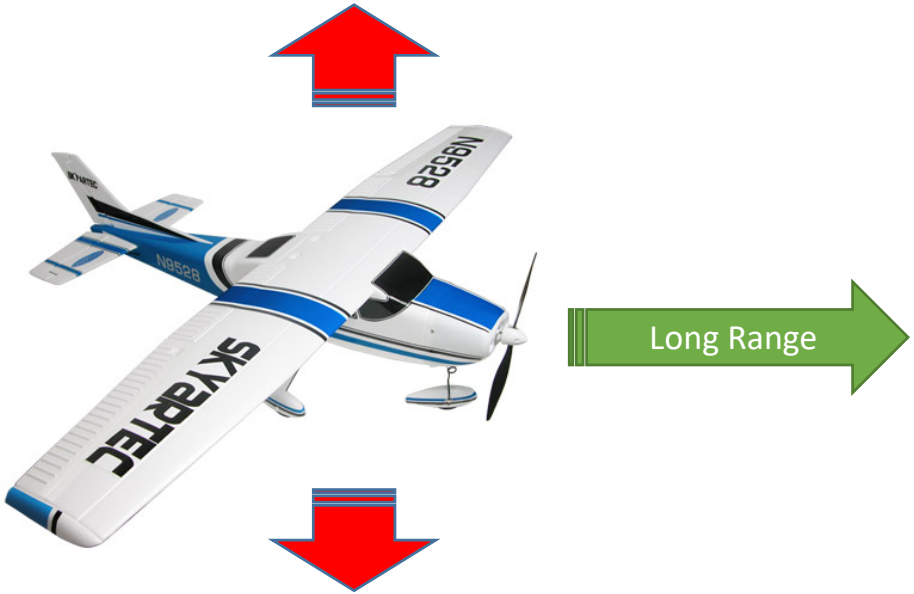
REQUIREMENTS: MAINTENANCE

Reliable & Easy Maintenance

REQUIREMENTS: RANGE VS CONTROL

80Km & Auto Take Off & Land

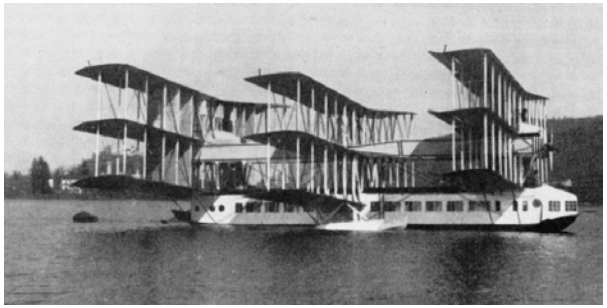


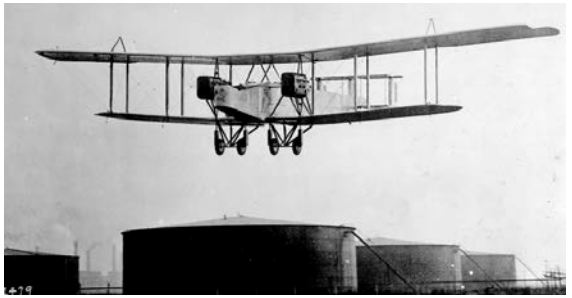


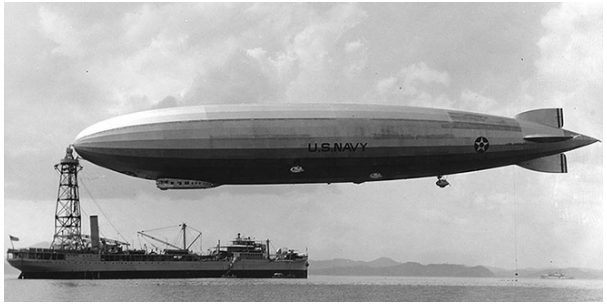
REQUIREMENTS: RANGE VS CONTROL

REQUIREMENTS: RANGE & CONTROL

Aviation 1917







UAV VTOL 2017

Complexity – Sustainability - Reliability

Concorde

1976 - 2003
Concorde failed to meet its original sales targets

Douglas DC-3

1935 - Today
Grass & dirt runways
First plane to obtain benefits commercial passengers

Complexity – Sustainability - Reliability

Space Shuttle

1981 – 2011
NASA: The most complex machine ever built: 2.5m parts, 370km wire...

Soyuz (R7 & Spacecraft)

Rocket: 1957 - Today
Spacecraft: 1967 - Today

The Challenge to Demonstrate Transport in Real Environment

PNG Flying Labs?

- Outreach Isolated communities
- First Test Matternet 2014
- SOP and Mission Plan
- Solid Regulation (CASA NZ)
- Permission CASA & Local Authorities
  - Operate in Aerodrome
  - Out of the Sight of View
- Multiple Interest:
  - NGOs, Gov, partners...
- No military conflict area