Oriol Lopez
Médecins Sans Frontières
Transforming Transportation

@WeRobotics
MSF Cargo UAVs - Last Mile Delivery

Oriol López – Medecins Sans Frontières
MSF: Supply Constraints

• Isolated Places
• Difficult Transport
• Key for good treatment
Example: Papua New Guinea

• MSF + Ministry of Health - Tuberculosis
• Collect TB sputum samples
Bringing TB Sputum samples is complicated

- Outreach Locations
- Difficult Access
- UAV regulation & Acceptance
- MSF + MoH project
- 2 Way trip – No Drop
- Quadcopter 15km range
<2kg Opportunities

- Blood
- Vaccines
- Anti Venom
- Lab Samples
- Oxytocin
SO WE WANT TO USE DRONES
Requirements: 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