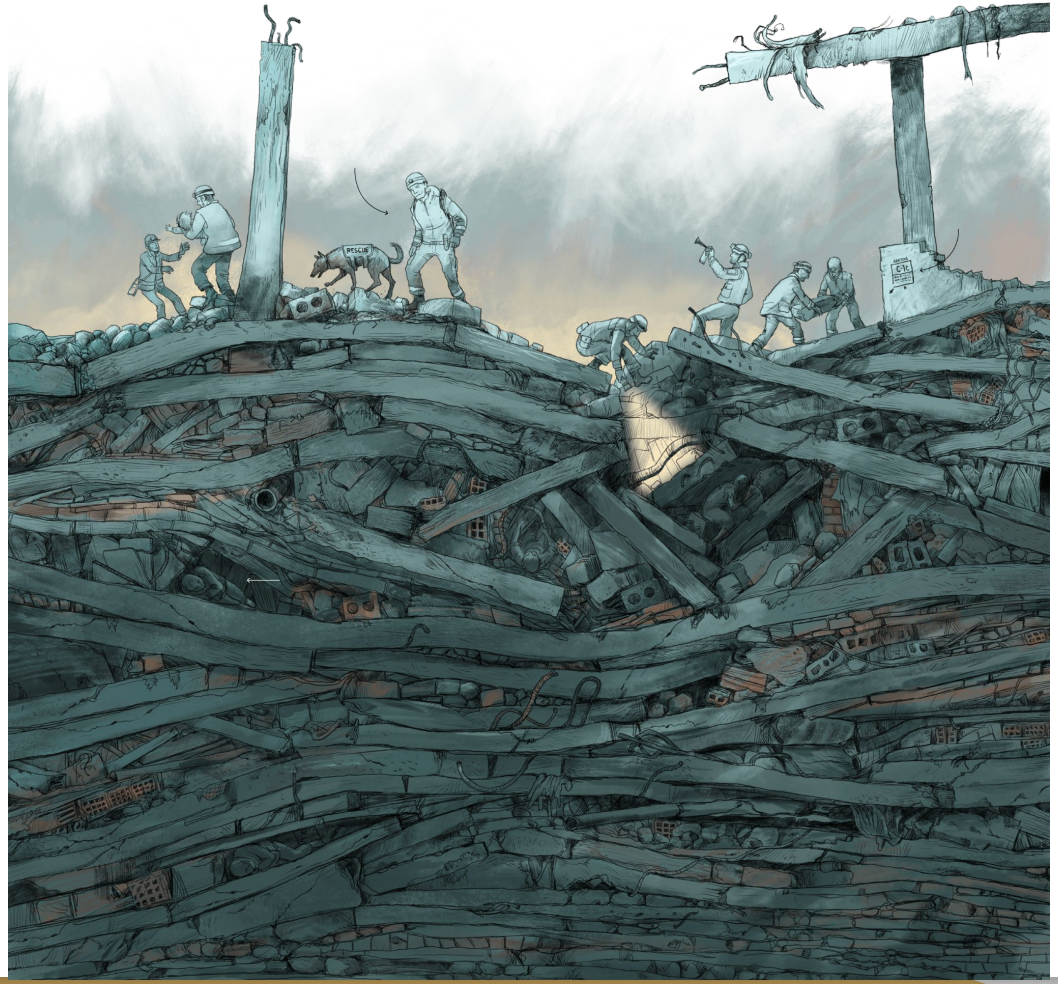
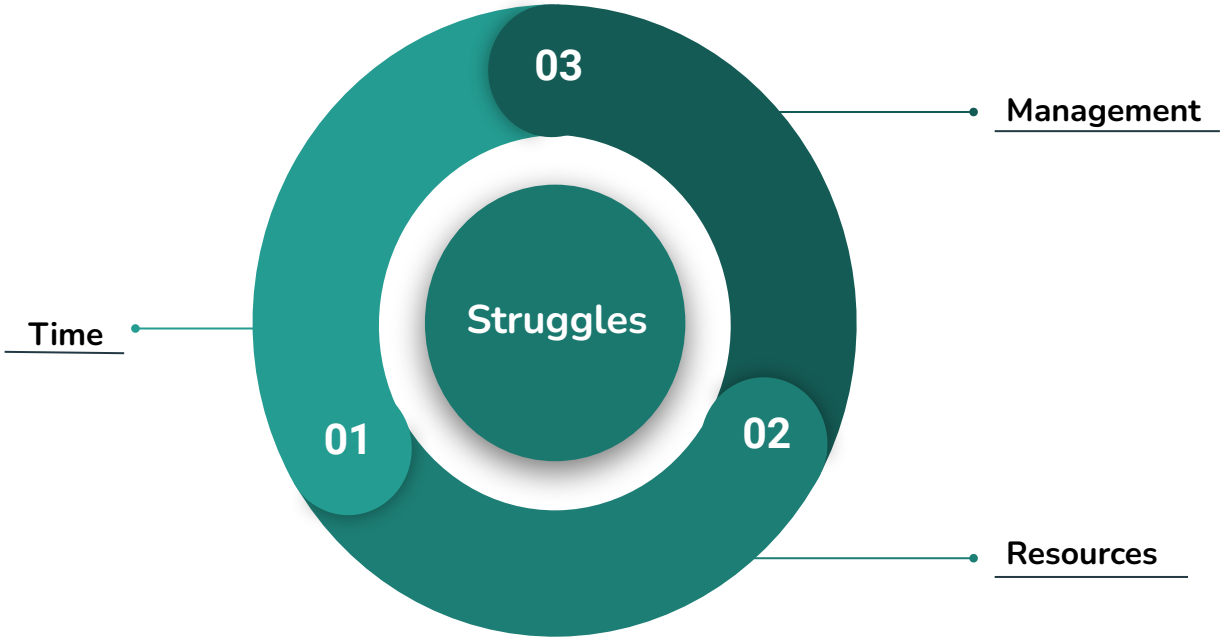
RDrone –
Rescue Drone with Life Radars

Searching for life in the rubble


RESCUE


03
Management
Struggles
Time
01
02
Resources

Solution

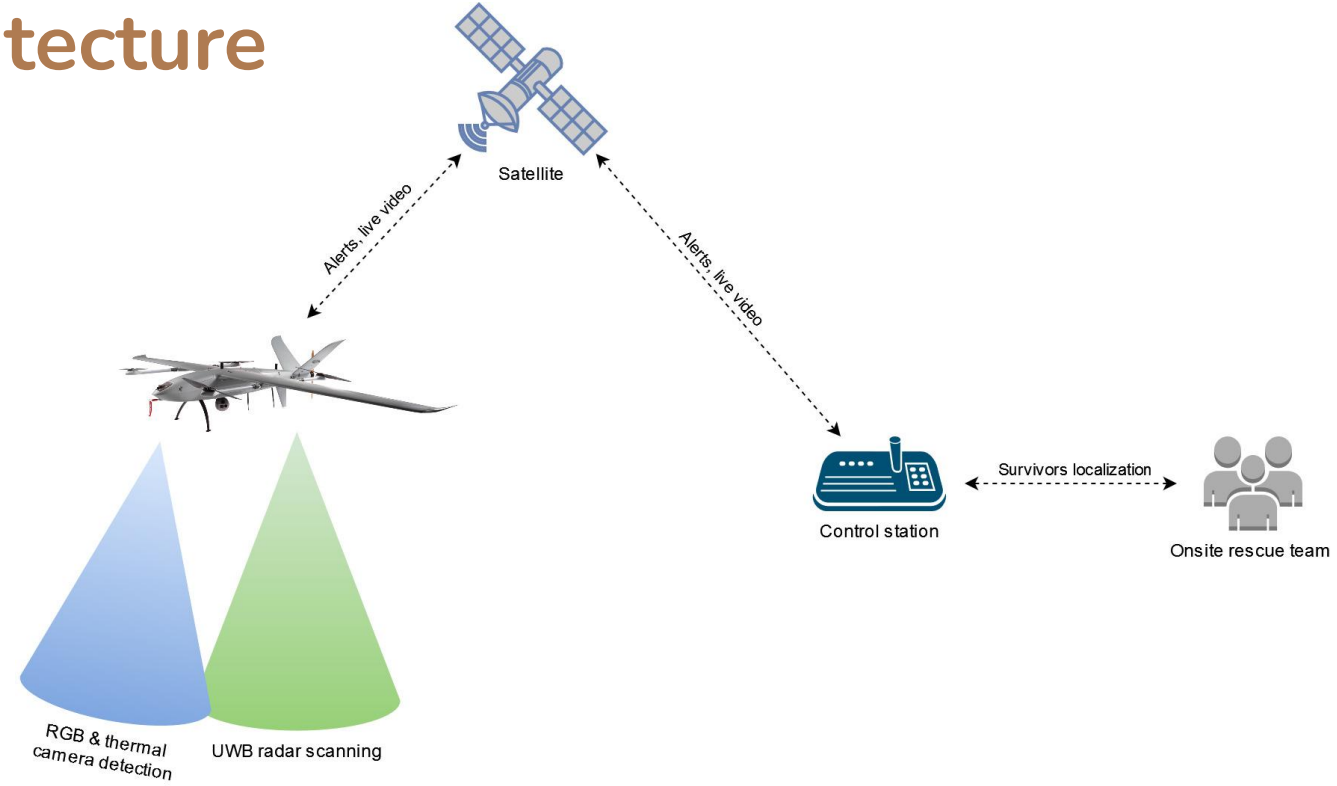
rapid surface and debris scanning

survivors detection

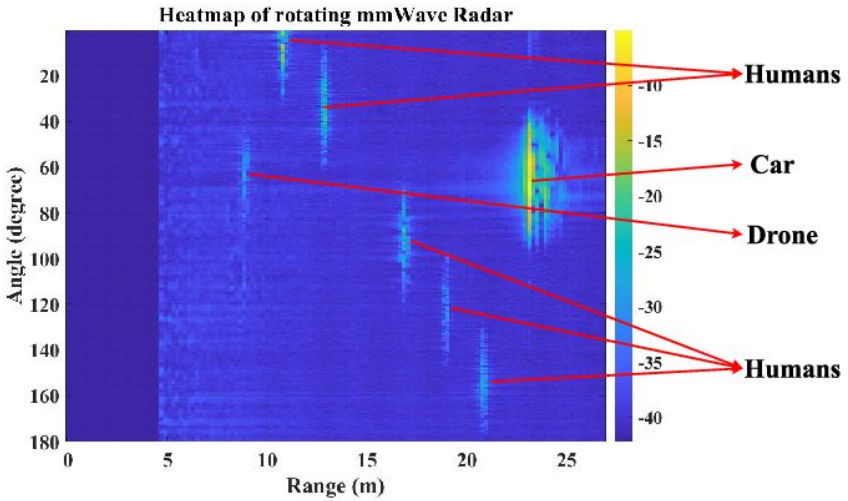
landscape surveillance

GPS navigation

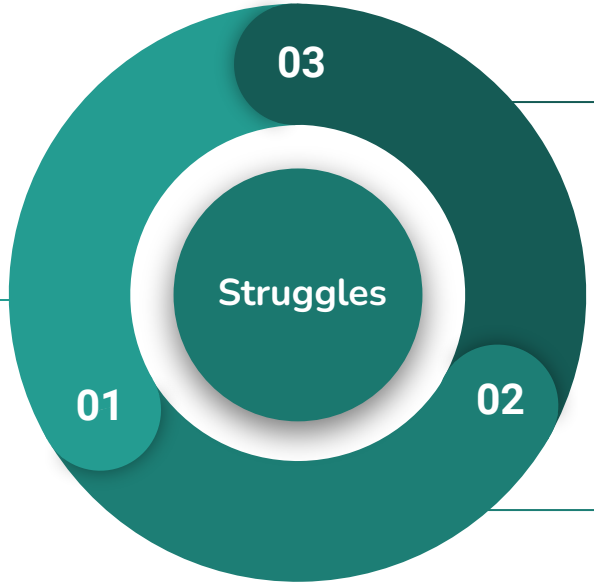
Architecture



Machine Learning and Signal processing



User impact



Management

Accurate informations and survivors localization

Time

Faster reconnaissance

Resources

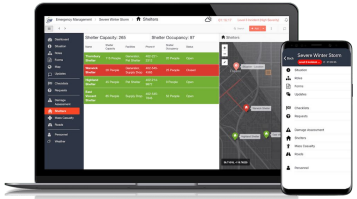
Increased teams safety and possibilities

Future possibilities

RDrone

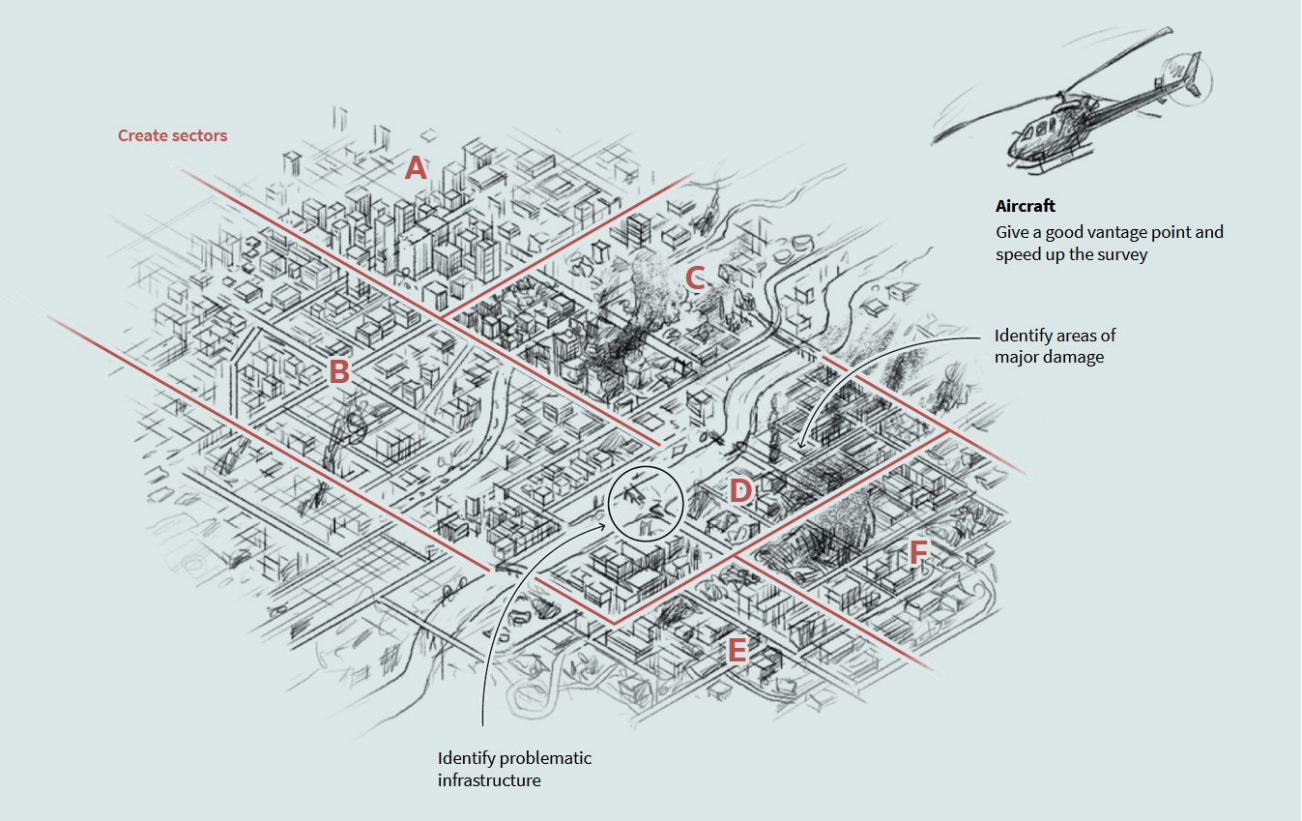
Rubble escape equipment drone

Disaster Zone Management App

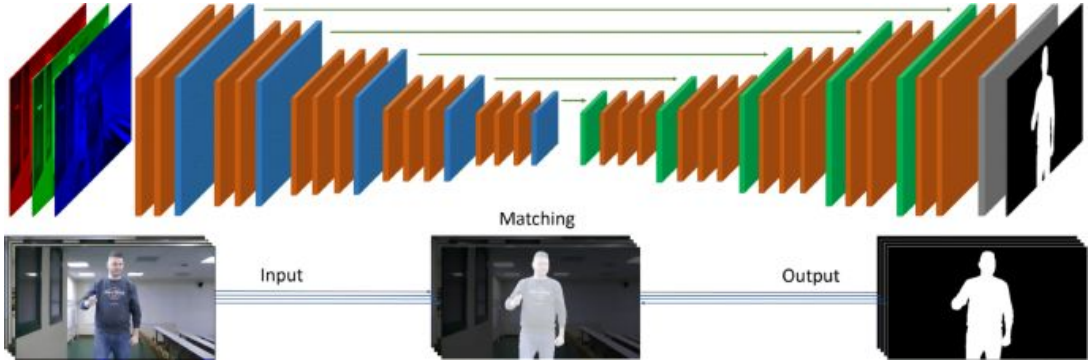


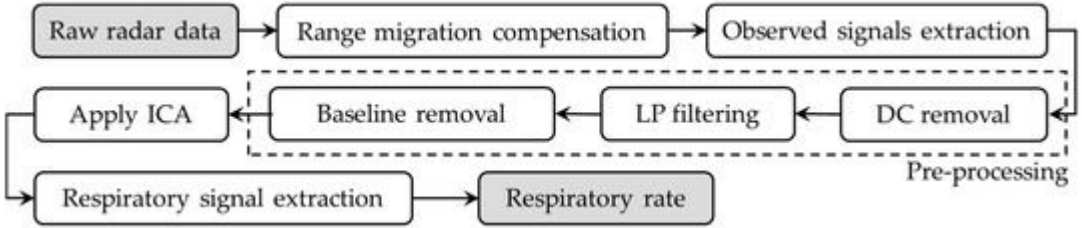
Automated medical care drone

RDrone – empowering emergency units

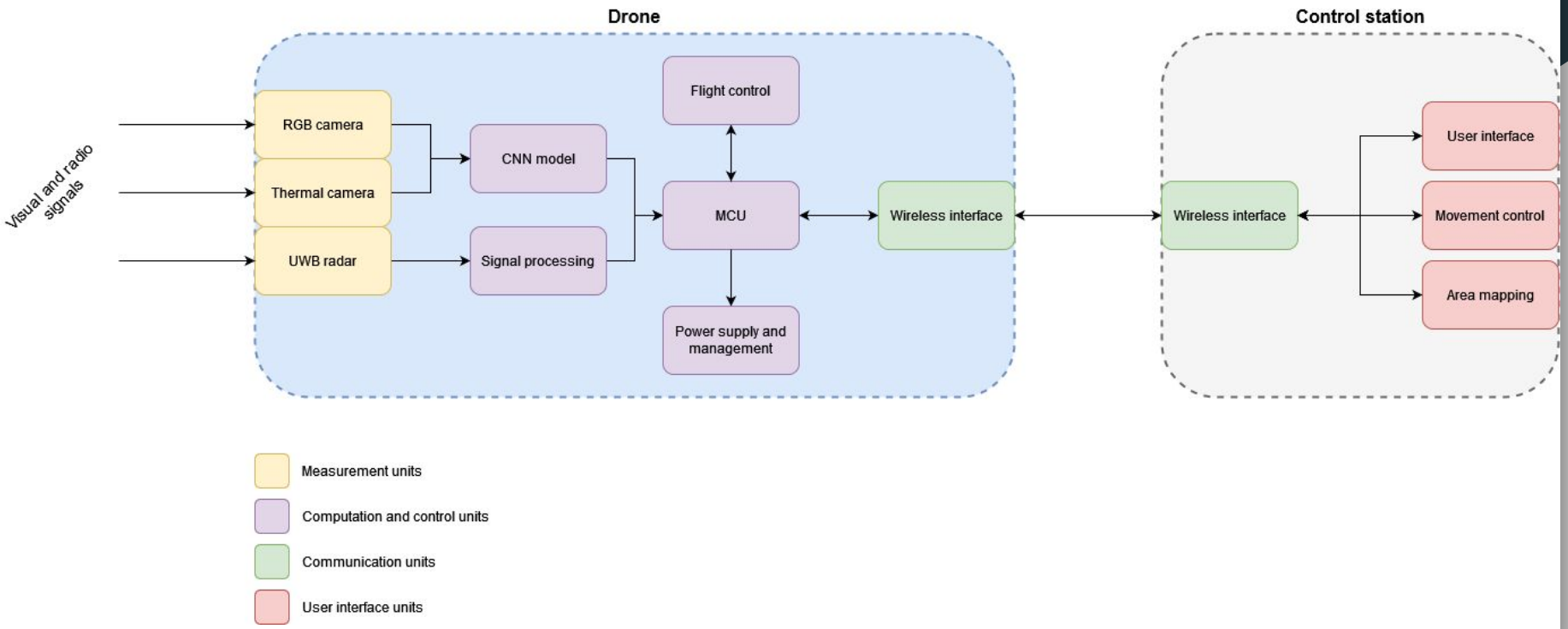

Create sectors
A
B
C
D
E
F
Aircraft
Give a good vantage point and speed up the survey
Identify areas of major damage
Identify problematic infrastructure

Algorithms


Matching
Input
Output


Raw radar data
Range migration compensation
Observed signals extraction
Apply ICA
Baseline removal
LP filtering
DC removal
Pre-processing
Respiratory signal extraction
Respiratory rate

Architecture



Control station