



# Phoenix Evac

A Semi Autonomous Battlefield Casualty Evacuation

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JOHNS HOPKINS

WHITING SCHOOL  
of ENGINEERING

## The Problem



Soldier Critically Injured in Combat Zone



Alert sent to Basestation



Evacuation Delayed

Survival Depends on the first 60 minutes

**Golden Hour**

**25-35%**

of preventable battlefield deaths

**40 - 60%**

of casualty locations are unreachable

**2 - 4 hrs delay**

in medical evacuation

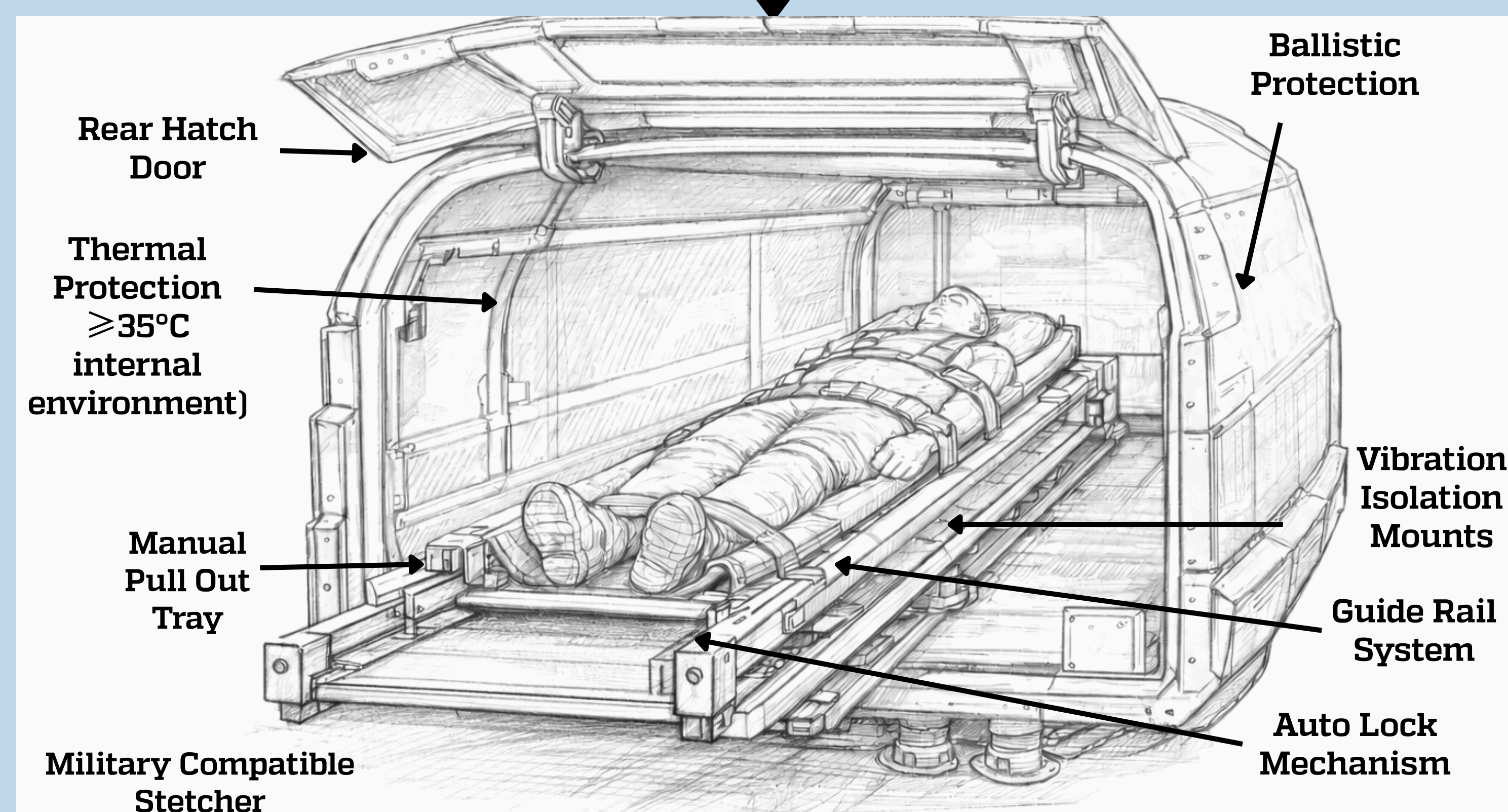
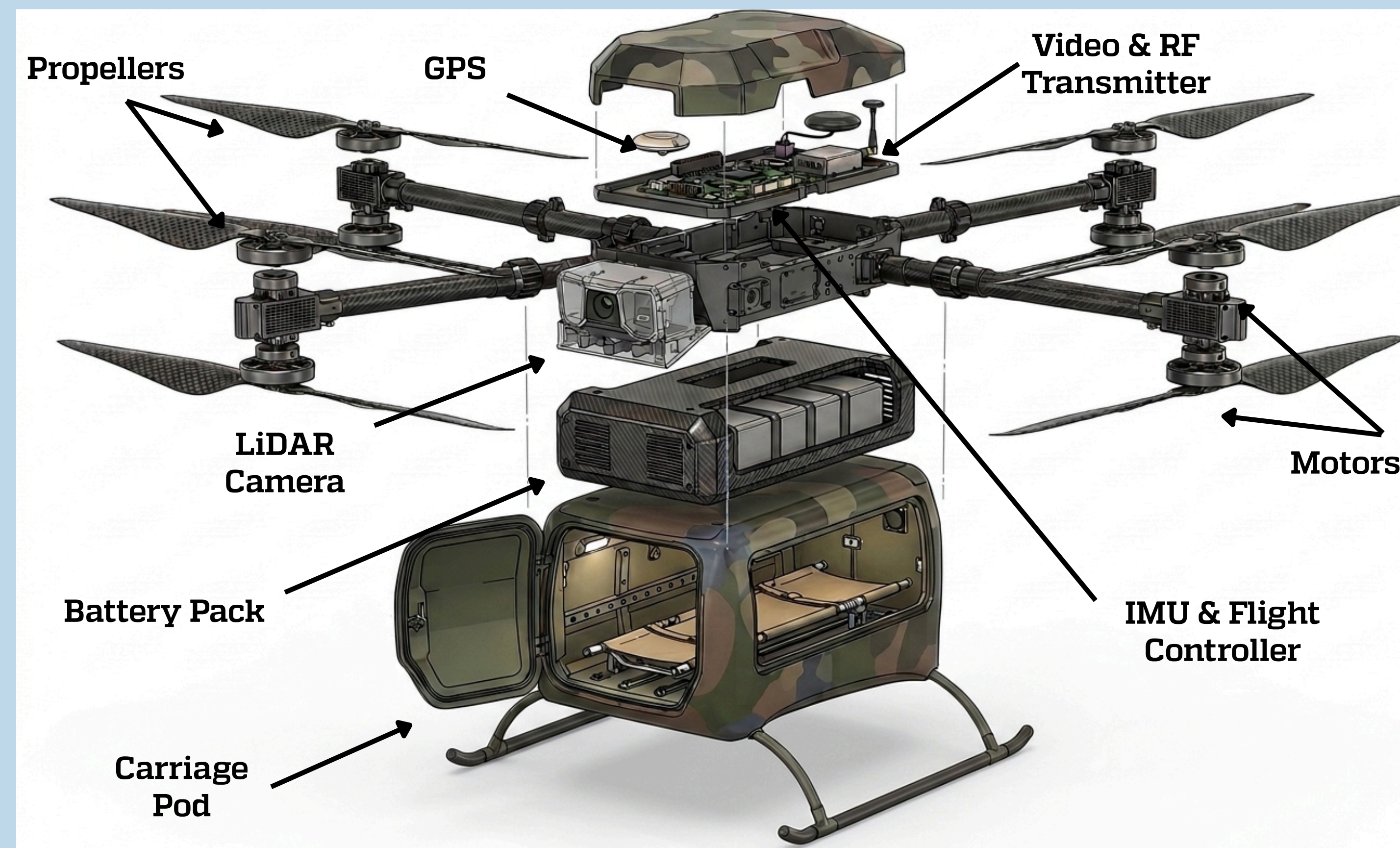
## Existing Solutions

- Helicopter – grounded by threat / weather
- Ground vehicle – terrain blocked
- Manual evacuation – slow and risky

## Solution

### A Semi Autonomous Drone Casualty Evacuation System

High Speed , Terrain Independent, Safer transport, Reduced Medic Exposure



## Specifications

150 Kg Payload Capacity

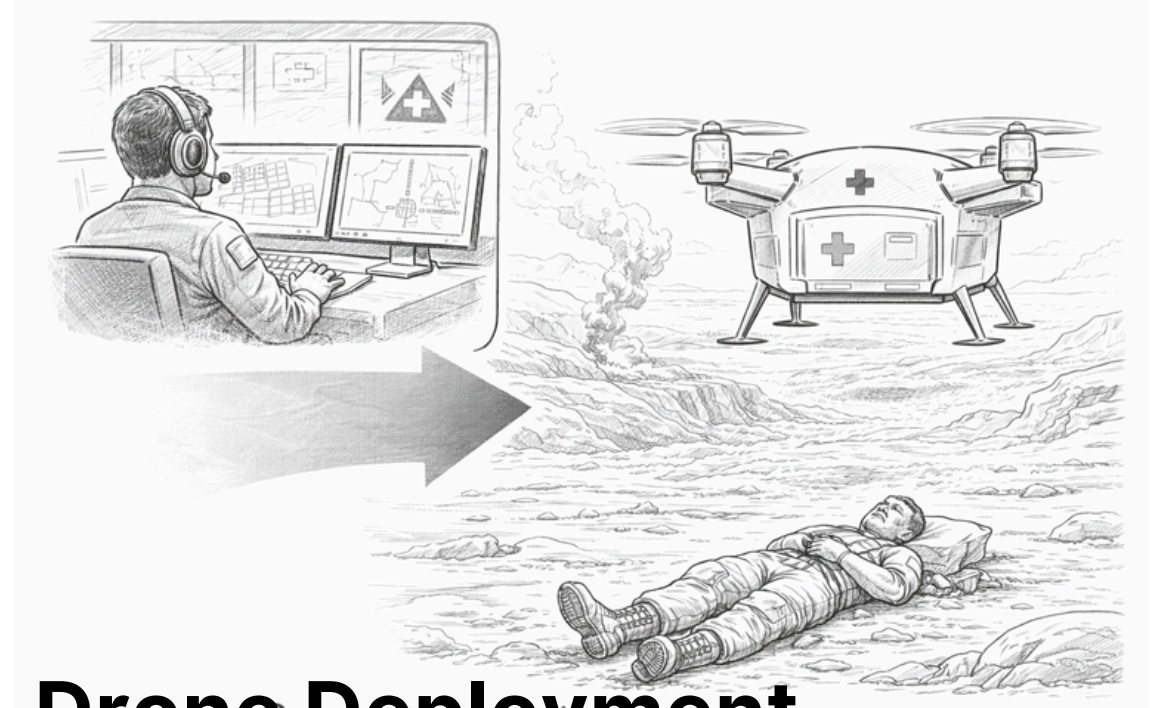
60 Km Range

55-60 Minute Evacuation

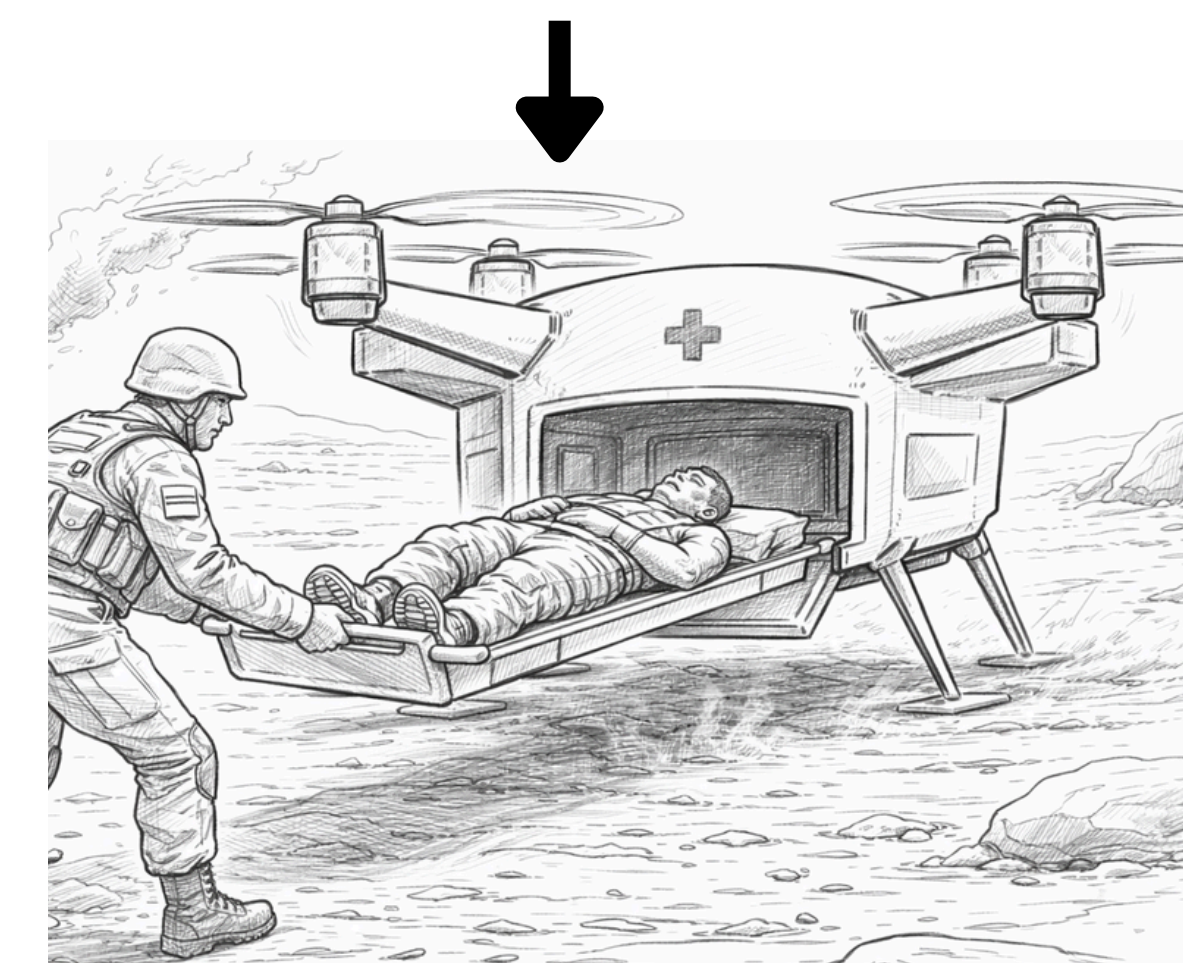
Jam Resistant Navigation

Military Compatible Stretcher

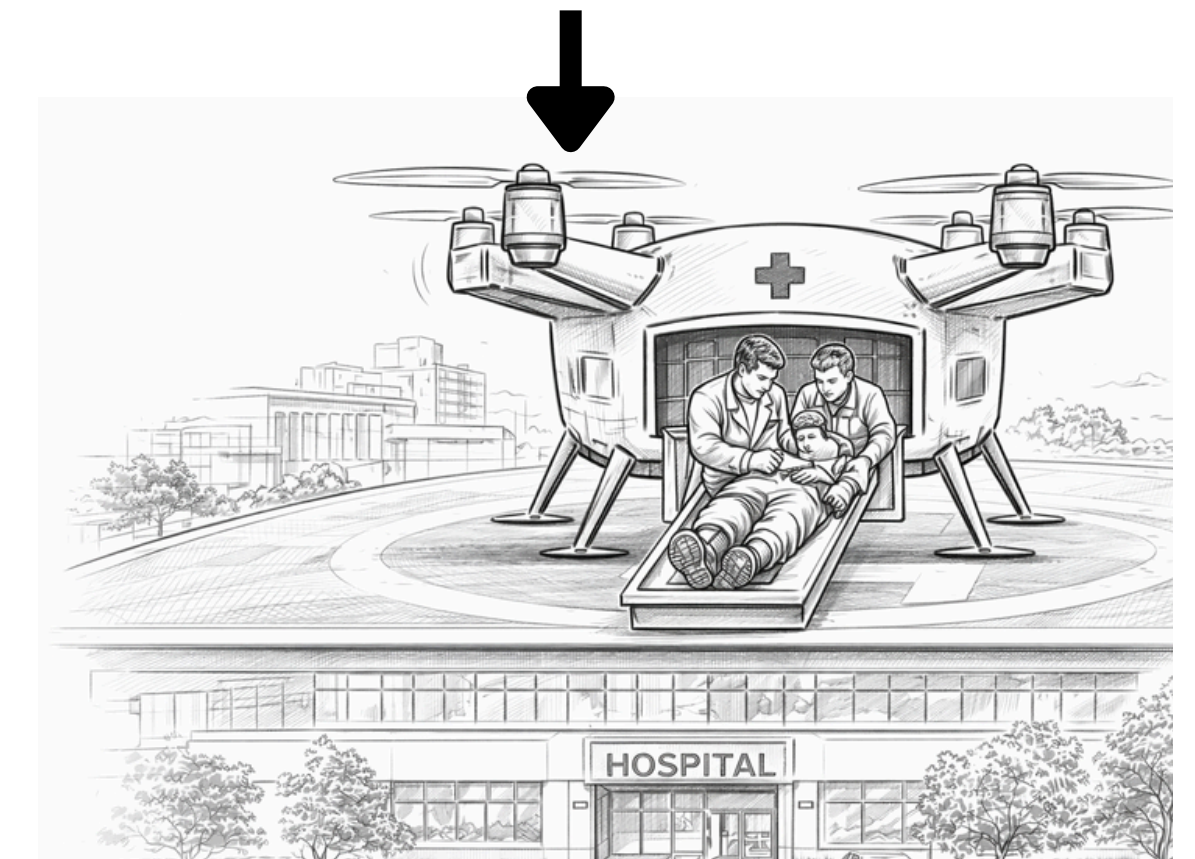
## How it works



Drone Deployment



Rapid Loading (< 4 minutes)



Fast and Safe Evacuation Golden Hour is Achieved

## Impact

Designed to achieve the golden hour evacuation in environments where no current system can operate

**20-30**

Additional Survivors per 100 casualties