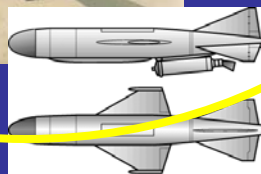


ABRAHAM OVERVIEW

Robert Daunfeldt



Battle Group "Force protection"



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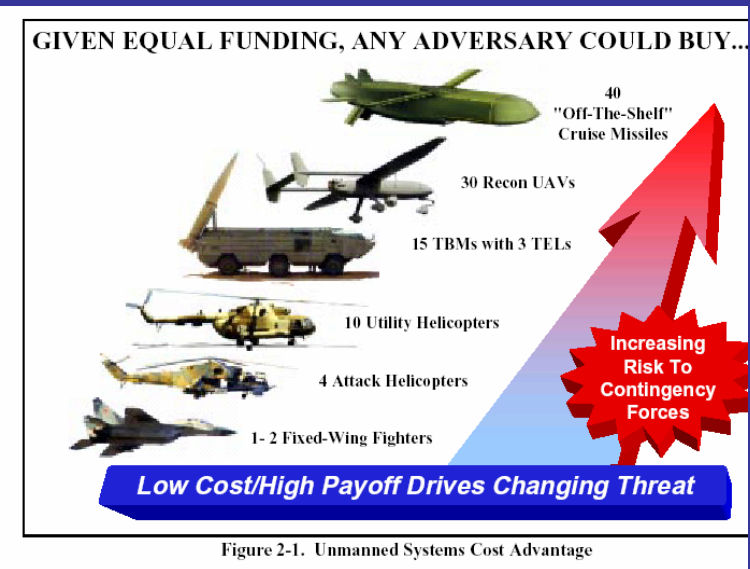
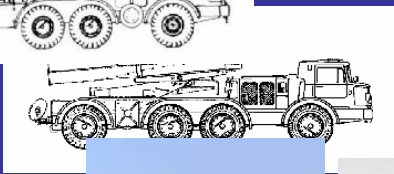
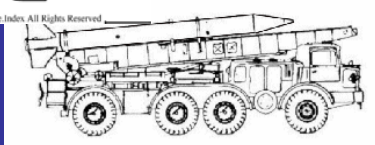


Figure 2-1. Unmanned Systems Cost Advantage

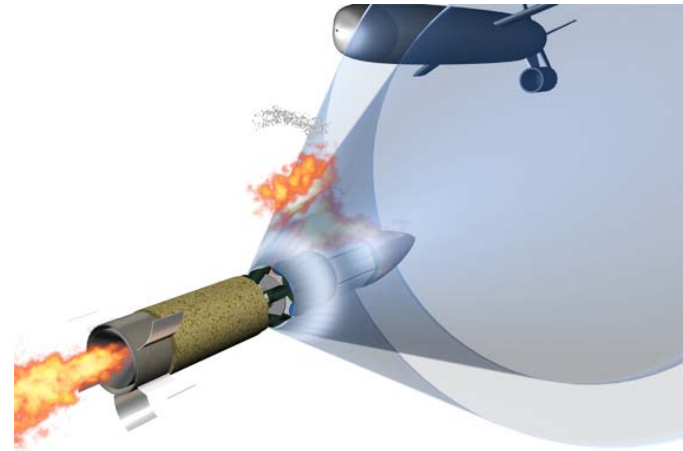
A DIFFERENT PROBLEM !



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ABRAHAM – Short Range Air Defence

Combating a large number of simultaneously incoming small targets, i.e. Cruise Missiles



- Unguided Rocket – Fire and forget
- High Velocity – Short time to reach target
- Directed Warhead – Large stand off
- High Rotation Rate – Pinpoint target

Launcher Concepts

- Lightweight Launcher Concepts
- Recoiless Launch
- Could use existing Mount
- Rocket Motor provide fly-out speed

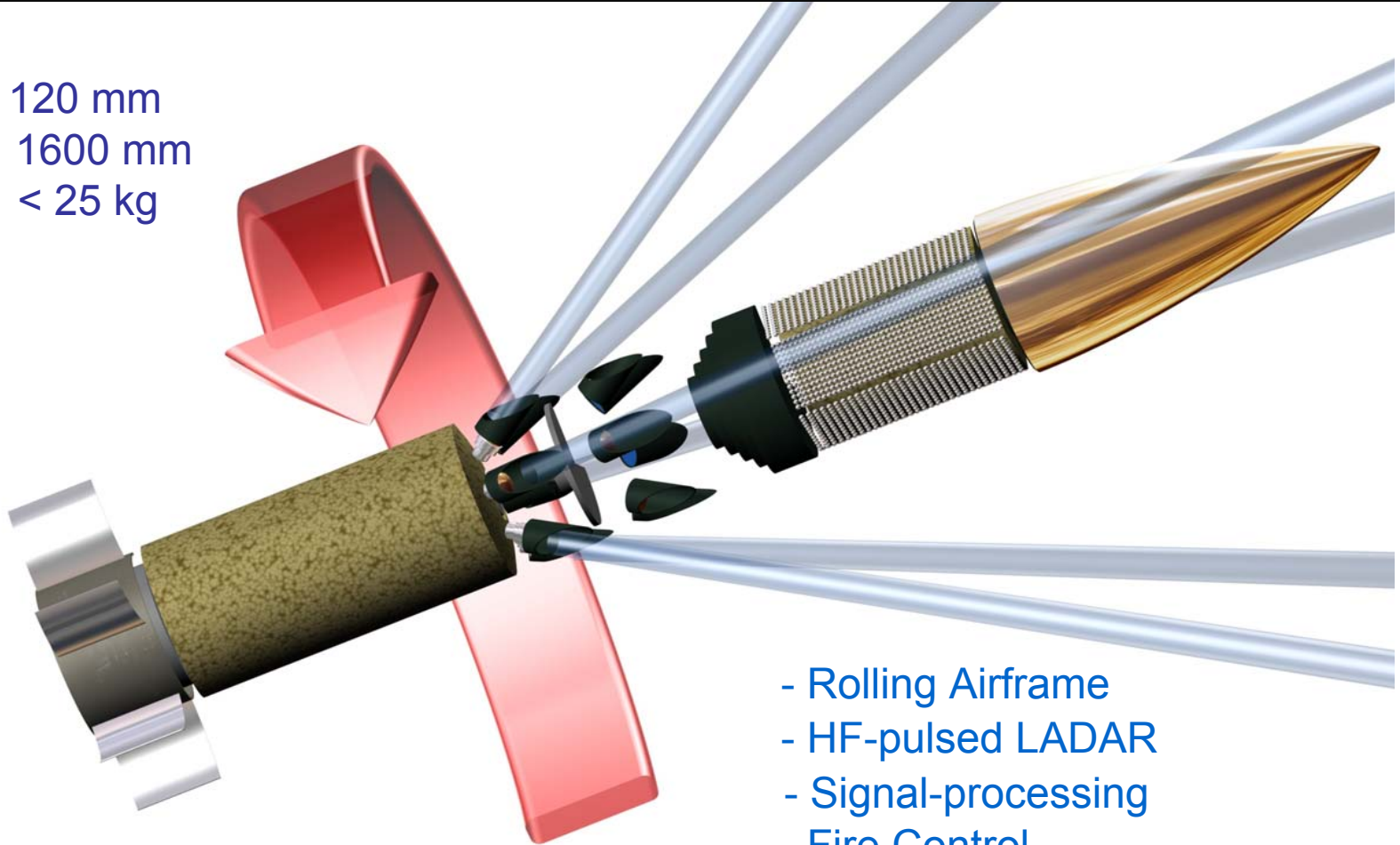


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Rocket Functionality

Calibre: 120 mm
Length: 1600 mm
Weight: < 25 kg

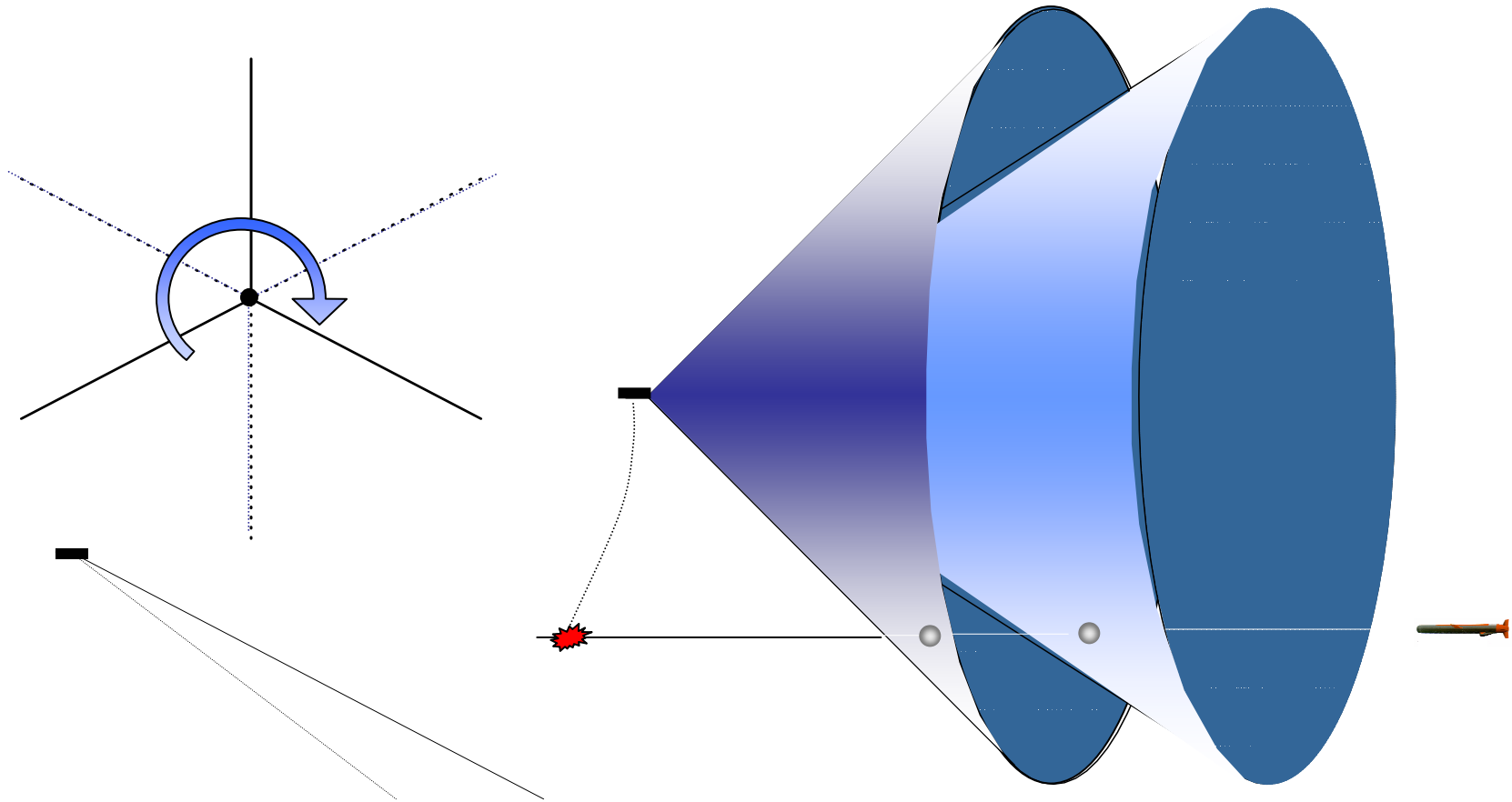


- Rolling Airframe
- HF-pulsed LADAR
- Signal-processing
- Fire Control
- Advanced Warhead

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TARGET ACQUISITION



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Air Threat

Saturation Attacks

100:s / km²

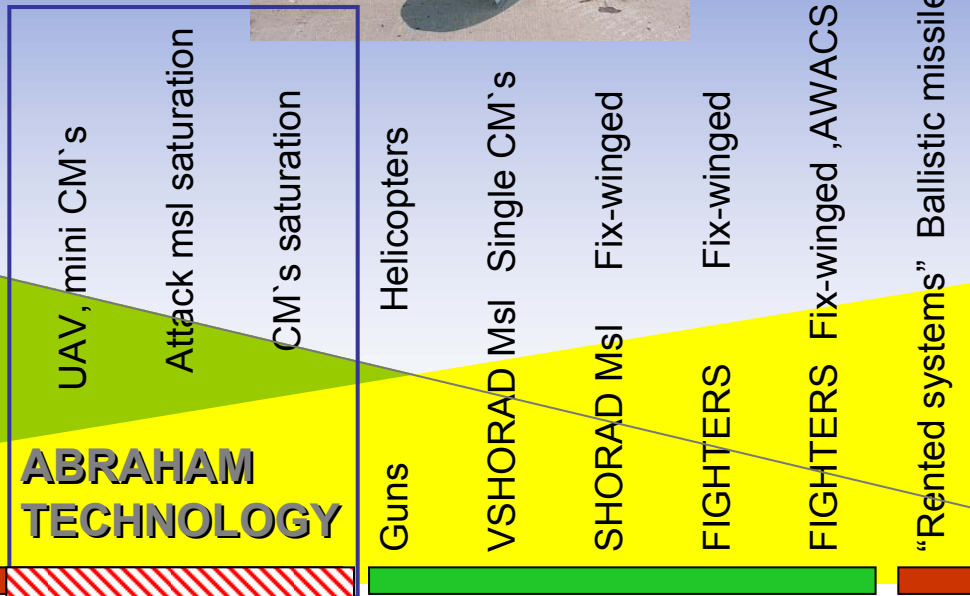


10:s / 10 km²



Passing/Attacking

10:s / world



Protection systems

Combat so that probability of own survival is maximized

Air-Defence Systems

Combat as soon as possible

SUCCESSFUL TESTS



RANGE

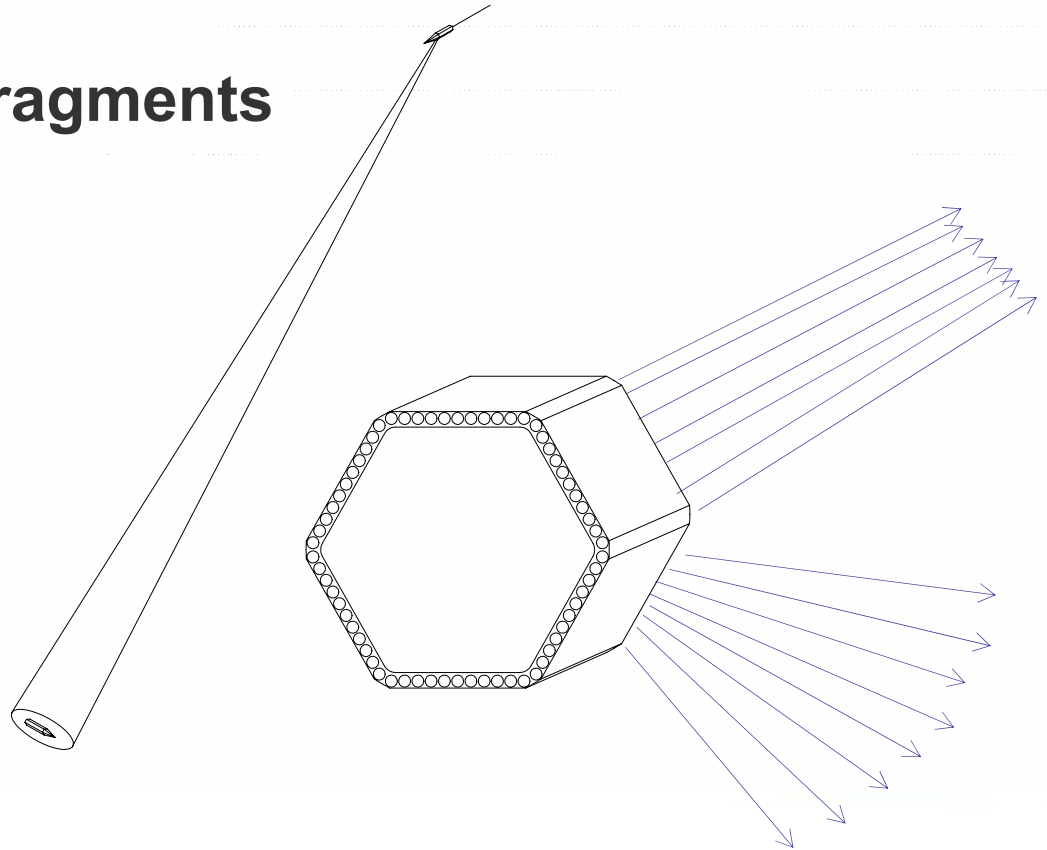
FOCUSING

ACCURACY

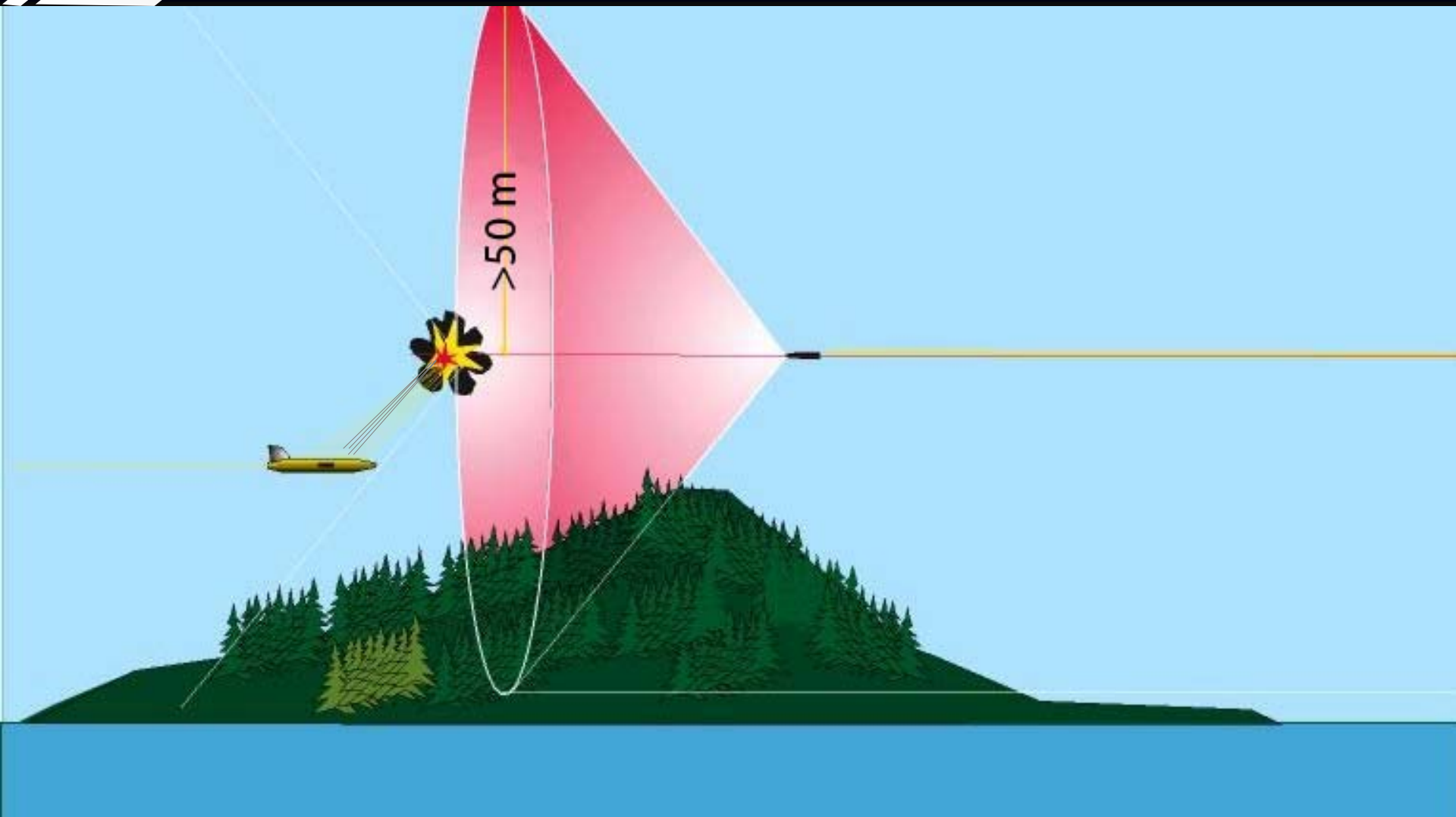
PENETRATION

ABRAHAM Warhead

- Airframe-integrated, 10 kg
- Tungsten Pre-Formed Fragments
- Long Range
- Short Range



Stand-Off Capability



SHORT RANGE MODE



LONG-RANGE MODE



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AFTER TEST

WITNESS-PLATES ~1000kg



20 mm Steel

30 mm STEEL at ~3m



AIR THREAT INCREASES

Saturation Attacks

100:s / km²



Passing/Attacking

10:s / 10 km²

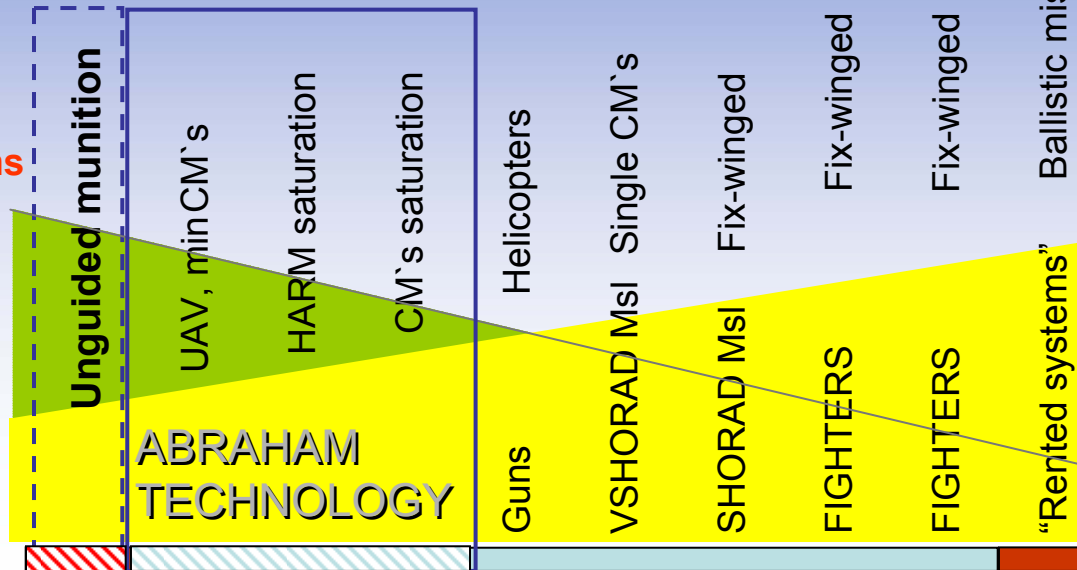


10:s / world

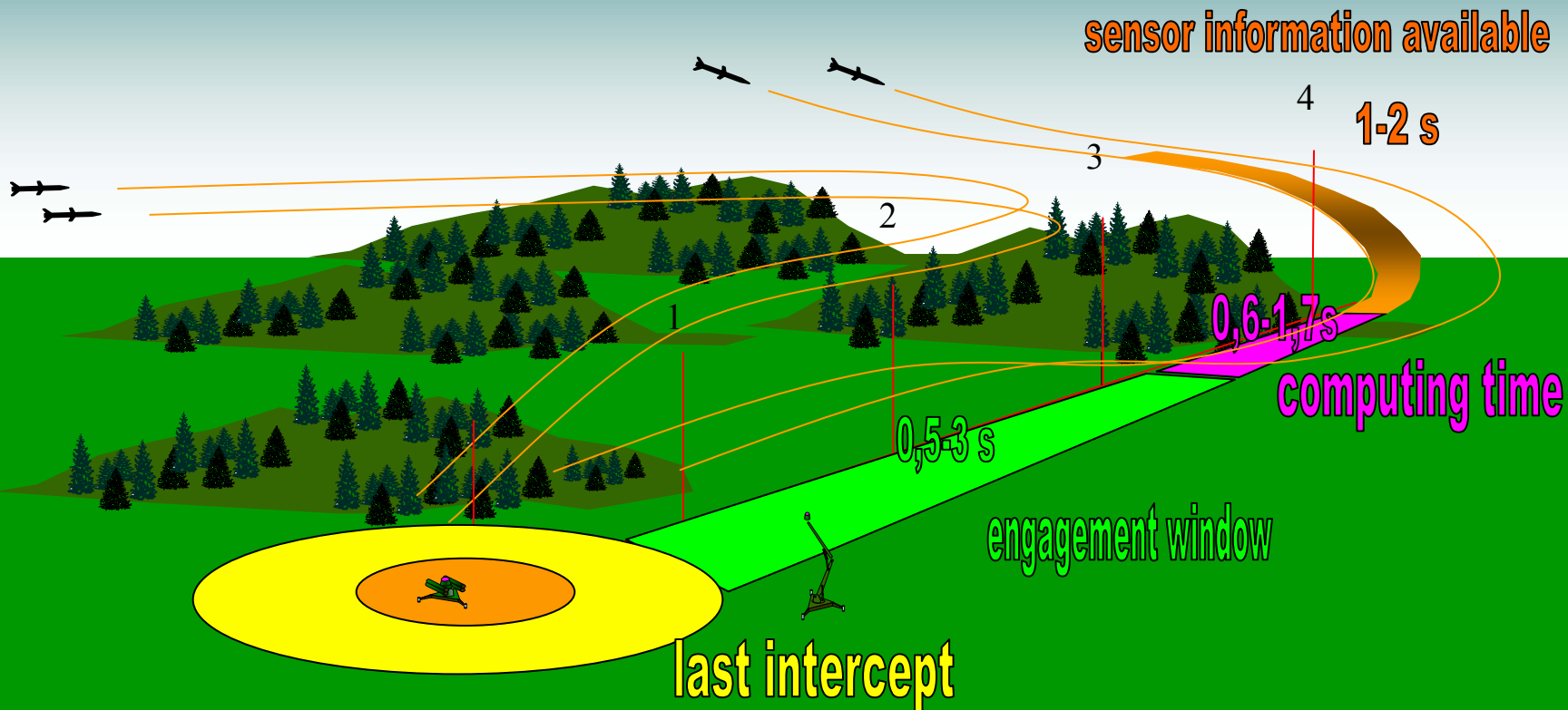


Protection systems
Combat so that probability of own survival is maximized

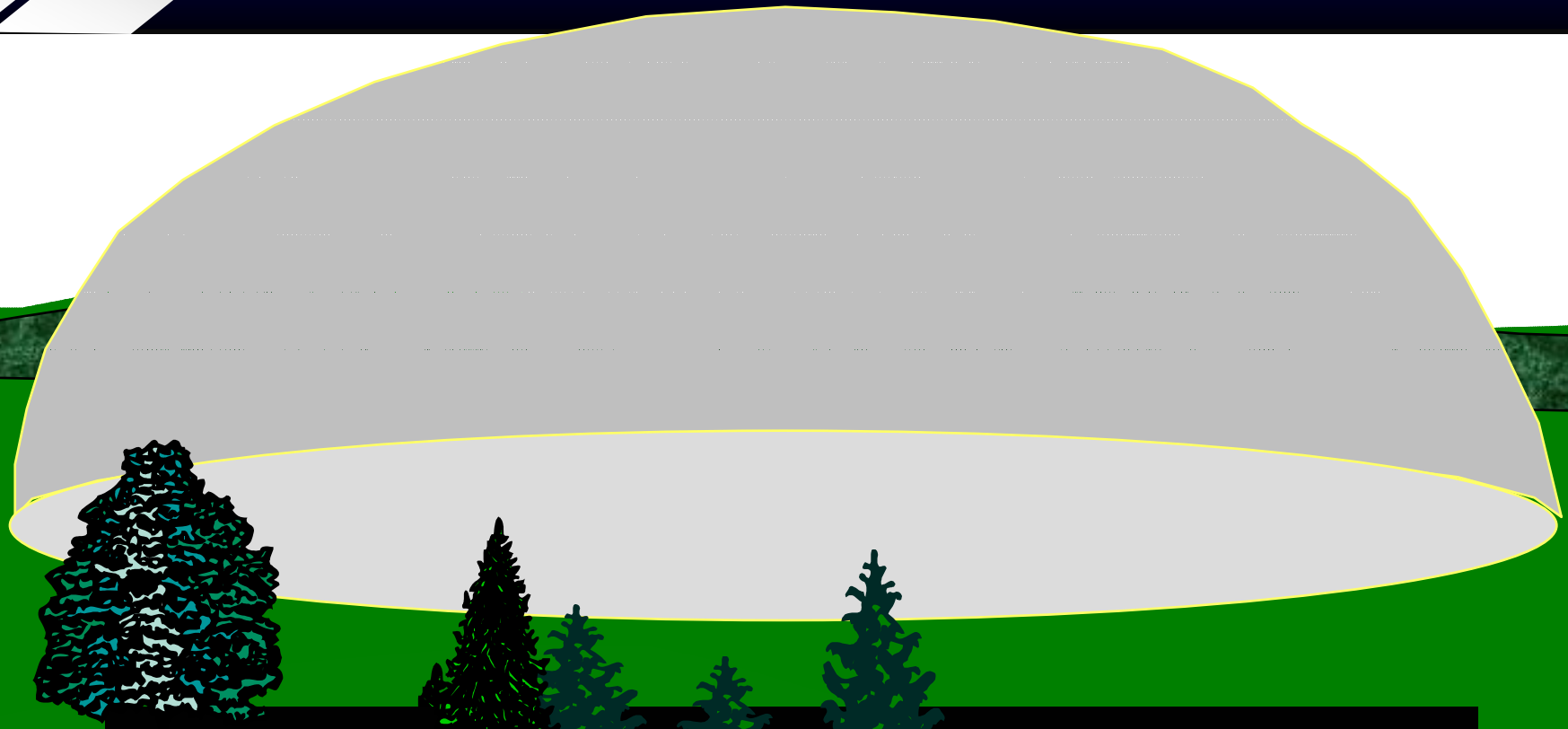
Air-Defence Systems
Combat as soon as possible



Engagement Planning



LEO BETWEEN PLATFORMS



DISTRIBUTED CLUSTER-INTELLIGENS

- DECISION SUPPORT IN A LIMITED AREA

- OPTIMISES & MANAGES SENSORS AND WEAPON IN A CLUSTER

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Window of opportunity

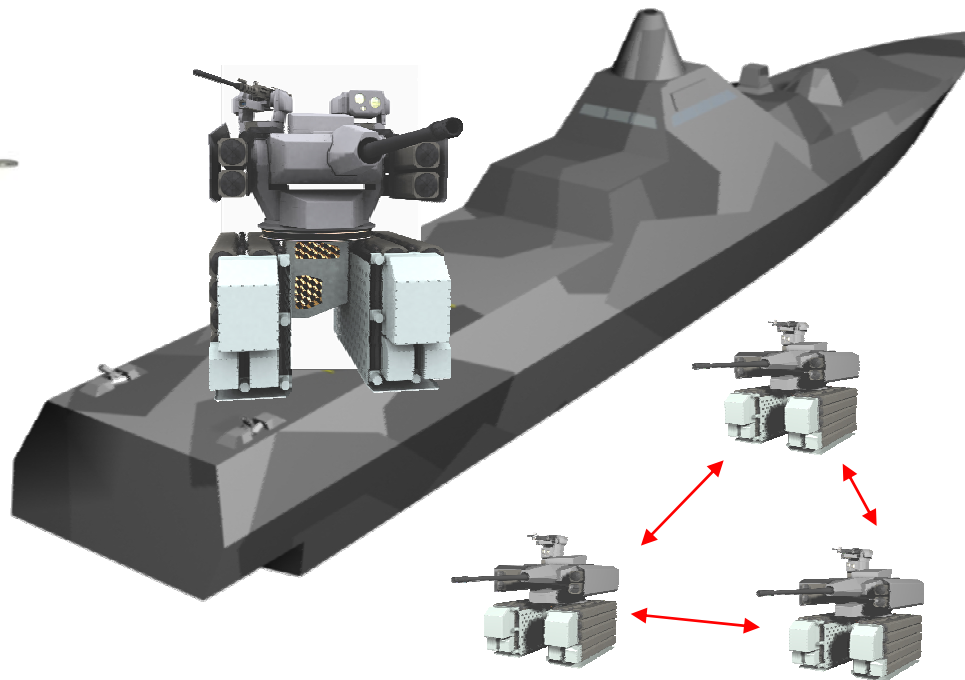


ABRAHAM Concepts

Land Platform



Naval Platform



In a Cluster

Air Platform



ABRAHAM

ABRAHAM RAP

SENSOR

ROCKET
MOTOR

WARHEAD

QUESTIONS?