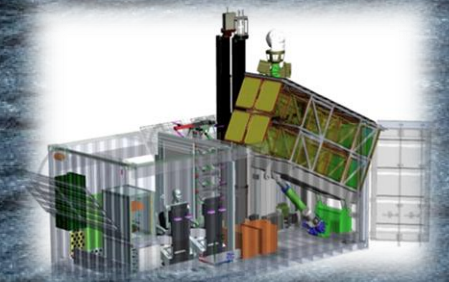
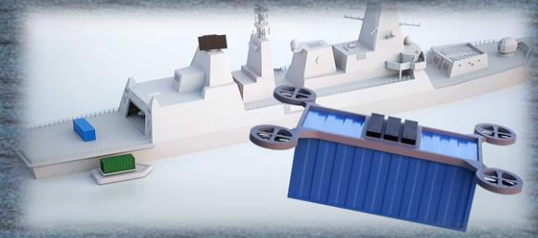


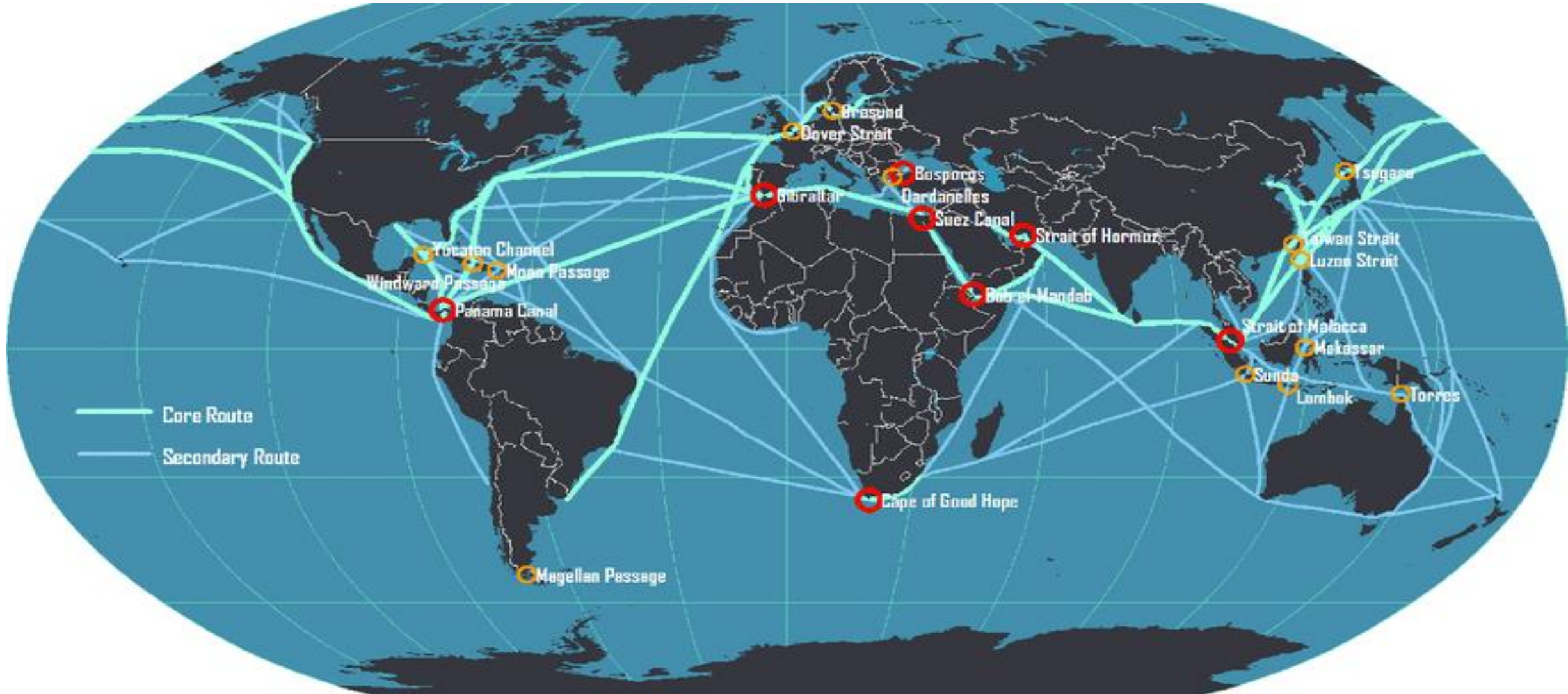
# Asymmetric Warfare: Capability through Modularity

Malcolm McKenzie – UK Maritime Director  
Oren Gutter – Senior Naval Advisor





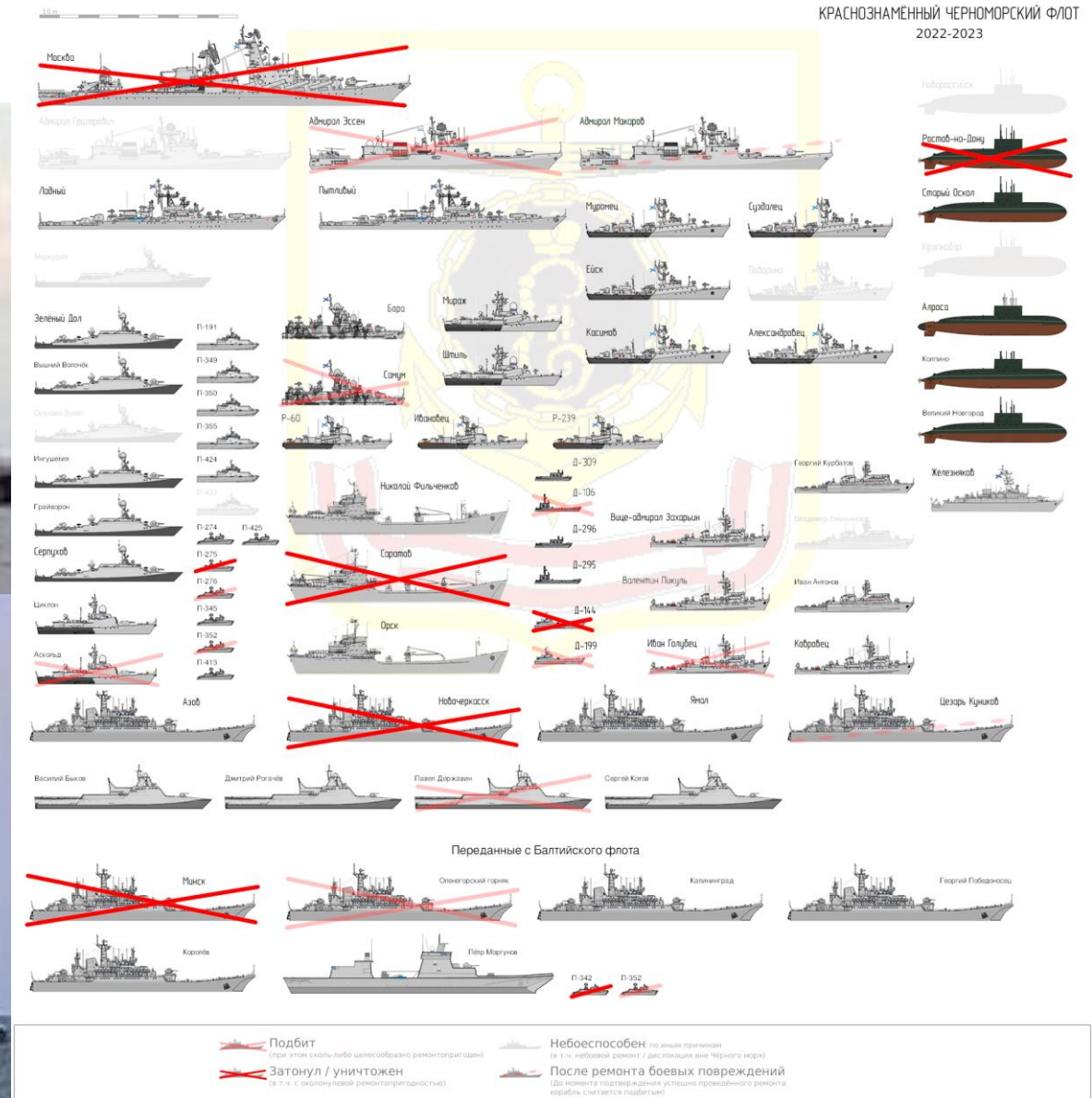
# Global Maritime Commons







# Russian Losses



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# One Way Attack



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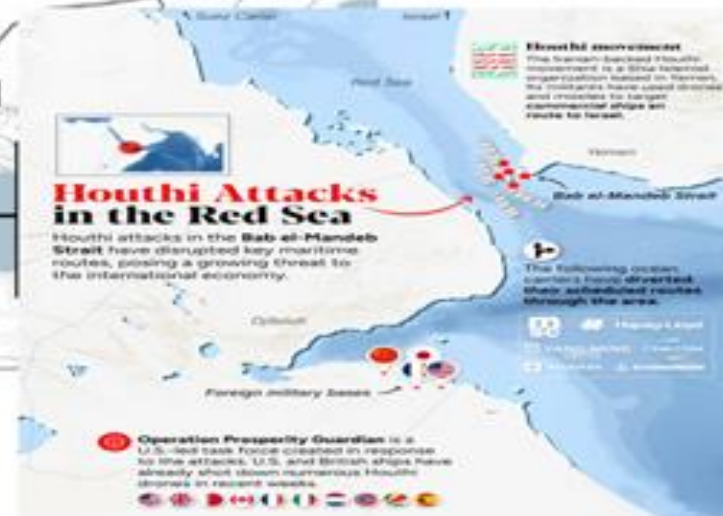


**Vessels re-routing**

Attacks by Yemen's Houthi militants on ships in the Red Sea are disrupting maritime trade through the Suez Canal, with some vessels re-routing to a much longer East-West route via the southern tip of Africa.



**Around the southern tip of Africa**  
Around 15,800 nautical miles  
in a 30-day trip









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# IAI Naval Solutions



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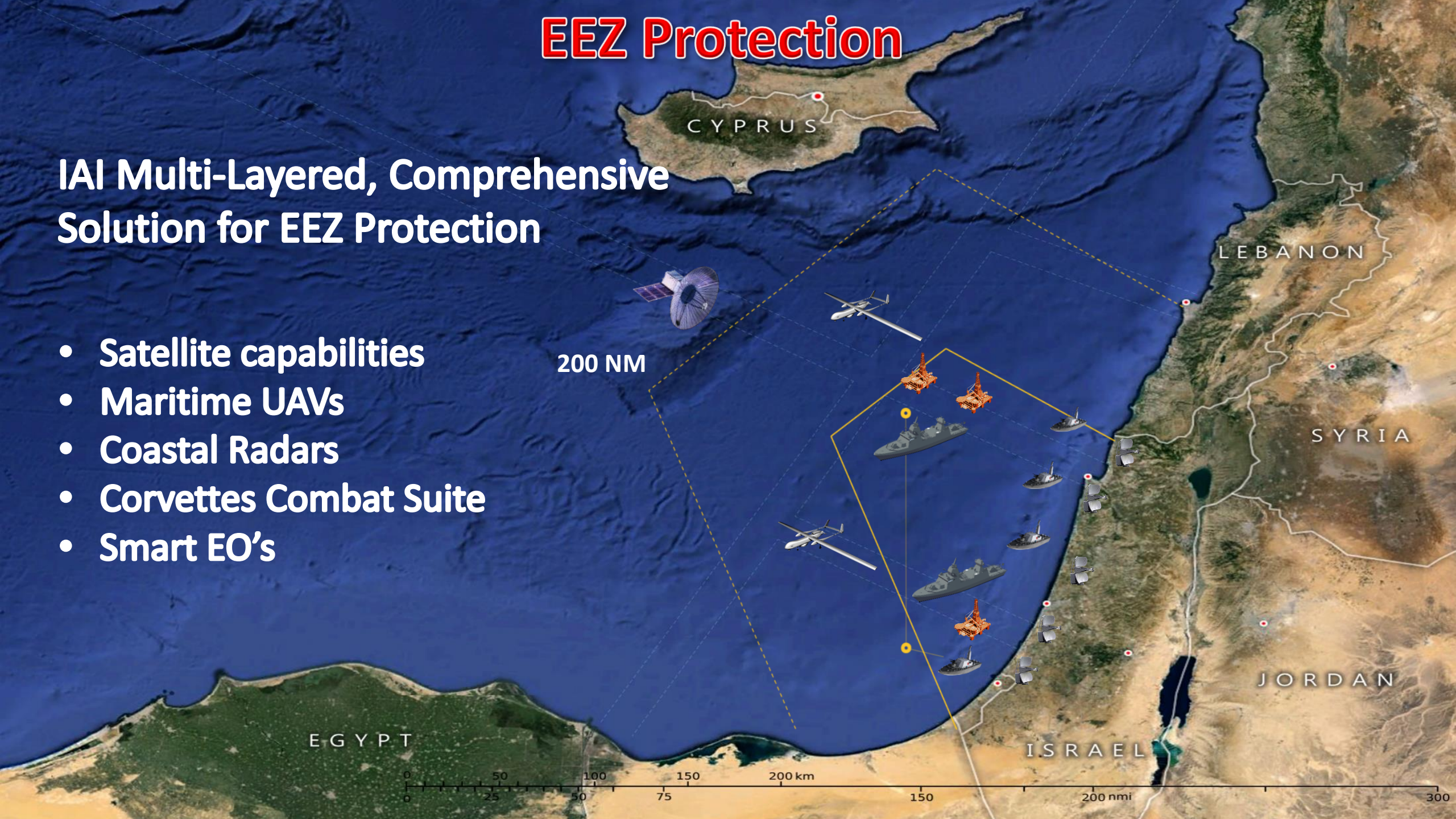
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# EEZ Protection

## IAI Multi-Layered, Comprehensive Solution for EEZ Protection

- Satellite capabilities
- Maritime UAVs
- Coastal Radars
- Corvettes Combat Suite
- Smart EO's





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# Asymmetric Challenges

Lessons from latest conflicts



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# Constant Threats Across Maritime Borders

## The Multi vessel Threat



Credit: Channel 13 News

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# The Asymmetric Challenge

**Massive, low-end but effective threats causes:**

- **In the Tactical Level** - Operational scenarios where weapon systems are saturated and overwhelmed
- **In the Strategic Level** - Non Perseverance and Non Sustainable “Economy of Battle”

## The Solution

- Automated Detection systems embedded with AI Algorithms
- Time Critical Lethal weapons – “Improved Lethality”
- Scattered, Modular and deployable capabilities
- Unmanned Capabilities

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# Automated Detection



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## Improved Lethality



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# The Naval Missions

Naval Warfare



ASM

“The gray zone”



Light Missiles

Maritime Security



Naval Guns

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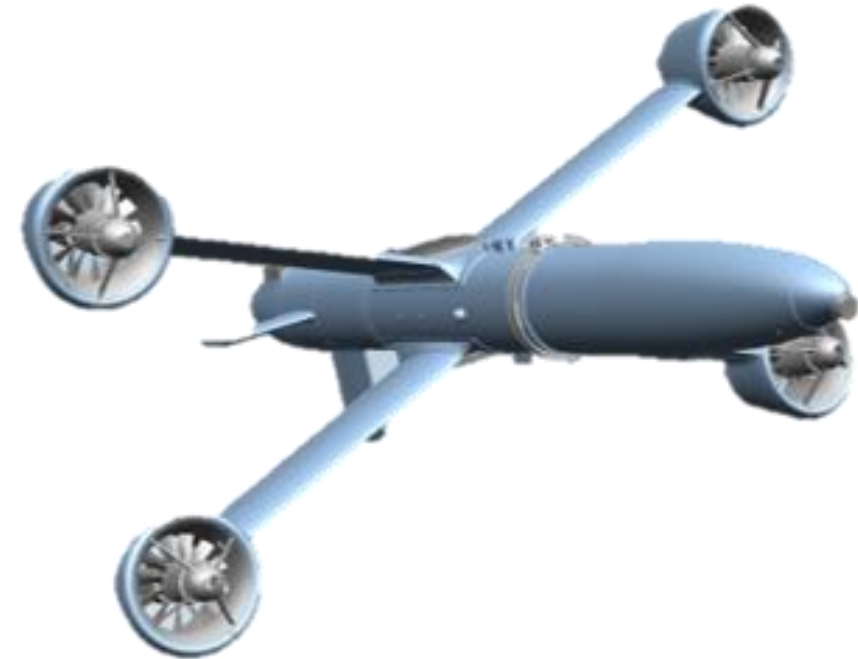
# LAHAT - LAser Homing ATtack System

- Semi Active Laser Homing
- Range - Naval launched up to 10Km
- Warhead
  - Anti Armor shaped charge
  - Combined, Penetration + Fragmentation
- Accuracy - Circular error probability (CEP) of 1M
- Designation Modes
  - Direct (LOS) - Designation by the firing platform
  - Indirect (BLOS) - Designation by another Platform



# POINT - BLANK

Specification	Parameter
Up to 10km	Range
0 (hovering) – 80 m/s	Speed
Up to 20 min.	Endurance
1m (CEP)	Accuracy
Up to 2 kg	Warhead
Impact/Proximity	Fuse
1m total length / 0.8m wingspan	Dimensions
6.8kg	Weight







# ISR and One Way Attack AR & EO/IR Seekers

## HARPY

Since 1980's



Full autonomous  
AR capability

## HAROP

Since 2000's



Man In The Loop  
EO/IR capability

## ***MINI HARPY***

Triple purpose



# GFCS

Delivering a better cost ratio  
through maximising gun lethality



# GFCS

Delivering a better cost ratio  
through maximising gun lethality

- Modern & Multi-Guns Fire Control System(GFCS)
- Provides firing solution to ship's guns against both surface and aerial targets with no need for Fire Control Radar (FCR)
- Supply accurate hits at the full kinematic range of the integrated guns
- Designed to enable maximum weapon engagement capability and optimize gunfire solutions
- Flexibility - Supports a variety of Gun configurations and ammunition types





# Modular and Flexible effector solutions

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# Operational Philosophy

## CHALLENGES

-  Fast changing and new challenges in the naval arena
-  Limited capabilities of existing vessels
-  Long force build-up process
-  Need for Increased fire power
-  Expansion of deck area
-  Access to Advanced capabilities

## GOALS

-  Modularity
-  TTM



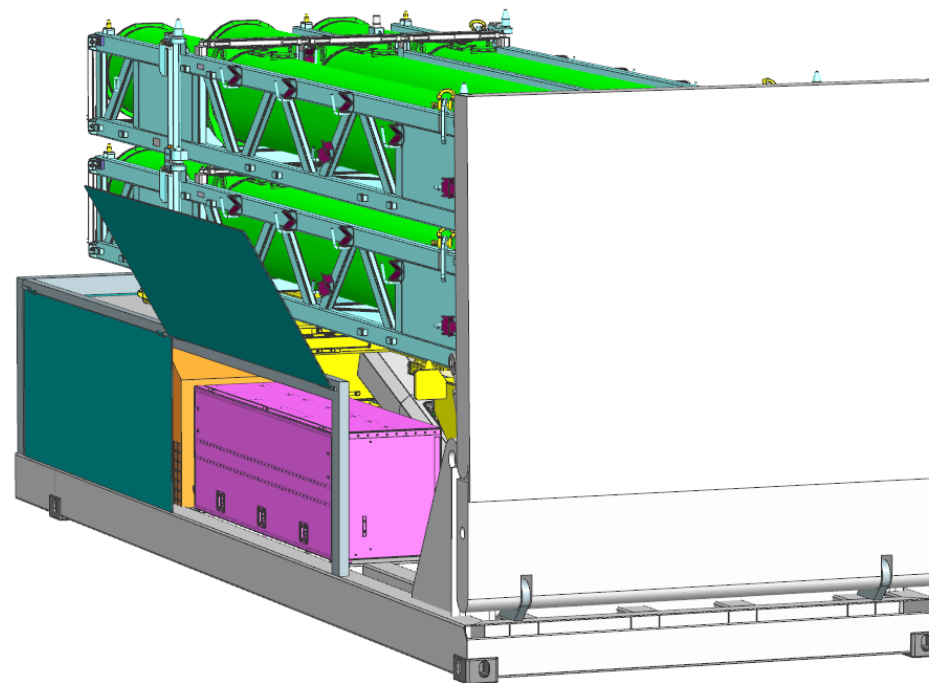
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# Deployable AD Launcher

Deployable launcher with unique design which allows the expansion of a NAVAL force defense capability by deploying additional AD systems with launchers on other naval vessels

Designed to be a 'Plug and Fight' addition to combat ships defence capabilities

- Minimum preparation
- No complex integration needed between the AD launcher and the launching vessel/platform (Twist Locks only, power and communication)







# Modular Fast Deployable Solutions

Enhanced Own ship Capability

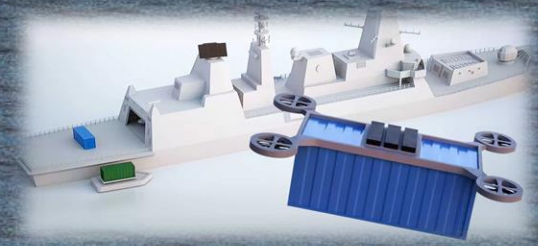
## Summary





# Asymmetric Warfare: Capability through Modularity

# Thank You



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