

# Predictive Battlespace Awareness

Linking Intelligence, Surveillance and Reconnaissance  
Operations with Effects-Based Operations

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# Introduction

- Intelligence, surveillance and reconnaissance (ISR) operations are not postured to support effects-based operations (EBO)
  - ISR should **anticipate the adversary**
  - ISR should be focused on **tracking**, not discovery
- Efforts to produce a more anticipatory ISR environment may become the basis for ISR linkages to EBO
- Predictive Battlespace Awareness (PBA) is a methodology briefly defined in Air Force Pamphlet (AFPAM) 14-118 *Aerospace Intelligence Preparation of the Battlespace* that focuses ISR on anticipatory operations

# Definition of Effects-Based Operations

- ...[A]ctions taken against enemy systems designed to achieve specific effects that contribute directly to desired military and political objectives.  
— *Effects-Based Operations*, Air Combat Command White Paper, May 2002

- In achieving the [Joint Force Commander's] objectives, targeting is concerned with producing specific effects...The art of targeting seeks to achieve desired effects with the least risk, time, and expenditure.

— *Joint Publication 3-60, Joint Doctrine for Targeting*, 17 January 2002

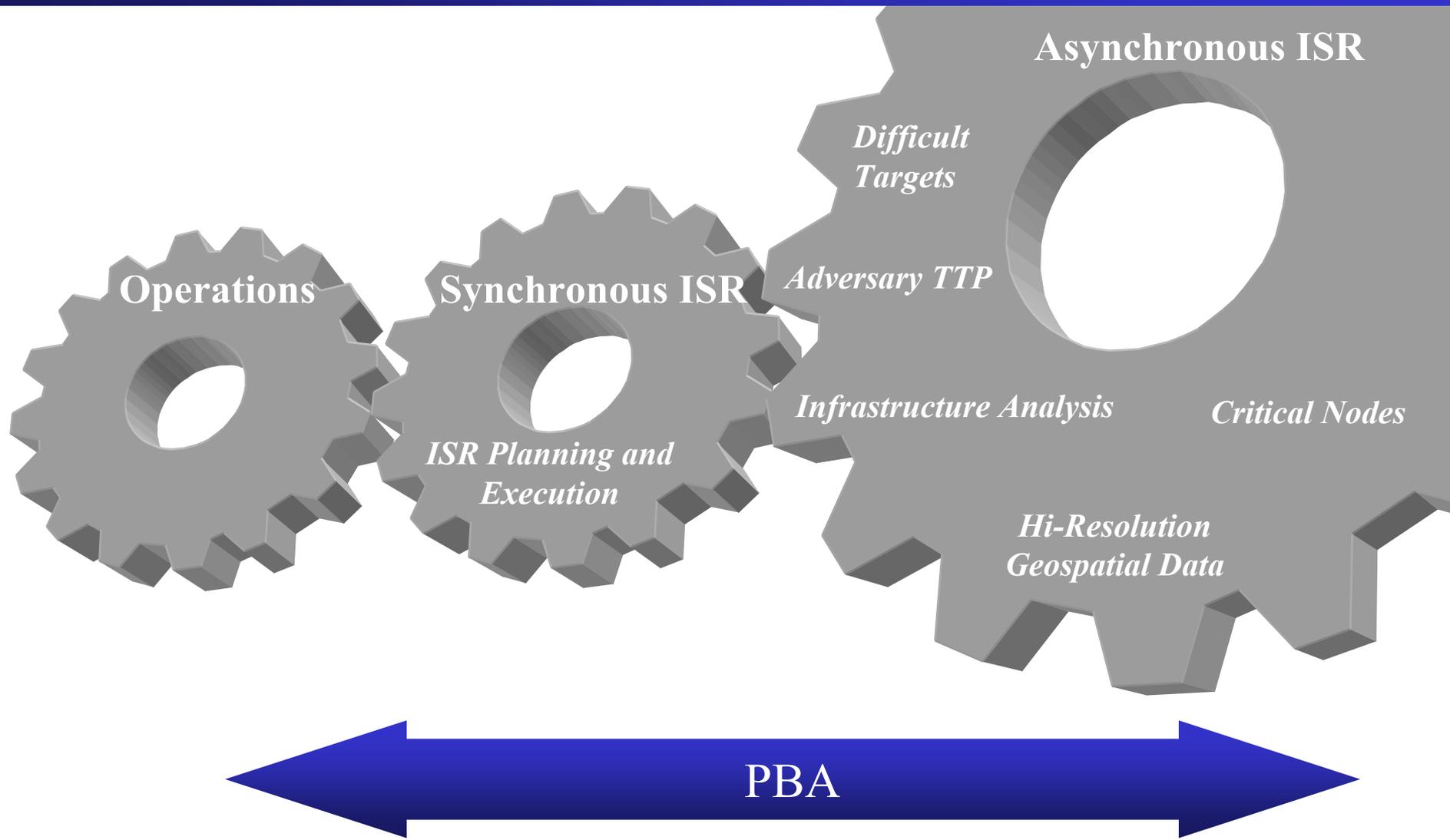
# Definition of PBA

- PBA is the state of awareness achieved and maintained by the commander allowing him to correctly anticipate future conditions, focus ISR assets, and shape the battlespace
  - A coherent framework that maximizes the capabilities of ISR assets across the spectrum of operations
  - Drive the adversary to the course of action preferred by the friendly commander
- A continuous process providing visualization, exploitation, collaboration, re-tasking, processing and dissemination of information to the appropriate level in an intensely dynamic environment

# Elements of PBA

- 4 Steps
  - Intelligence Preparation of the Battlespace
  - ISR Strategy and Planning
  - ISR Execution
  - Assessment
- PBA recognizes that some aspects of ISR can be synchronized to the tempo of operations *and some cannot*

# Synchronous vice Asynchronous ISR



# How PBA Works

Intelligence Preparation of the Battlespace (IPB)

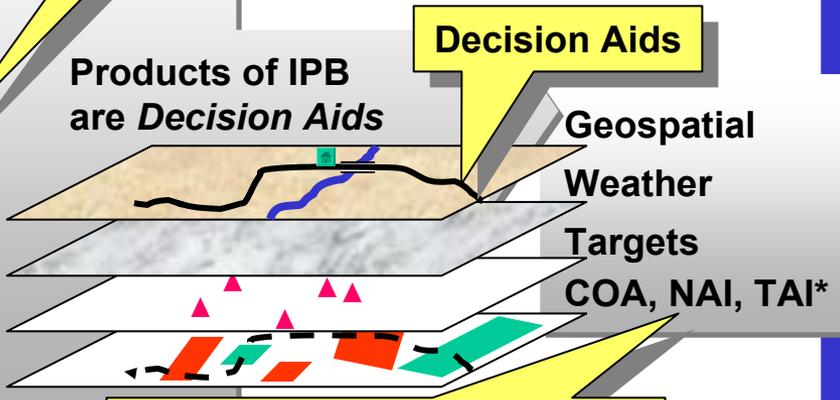
Define the Battlespace

Describe Battlespace Effects

Evaluate Adversary

Determine Adversary's COAs

Doctrine (behavior) *and* OB



**4 Elements of PBA**  
(1) IPB  
(2) ISR Strategy & Planning  
(3) ISR Execution  
(4) Assessment

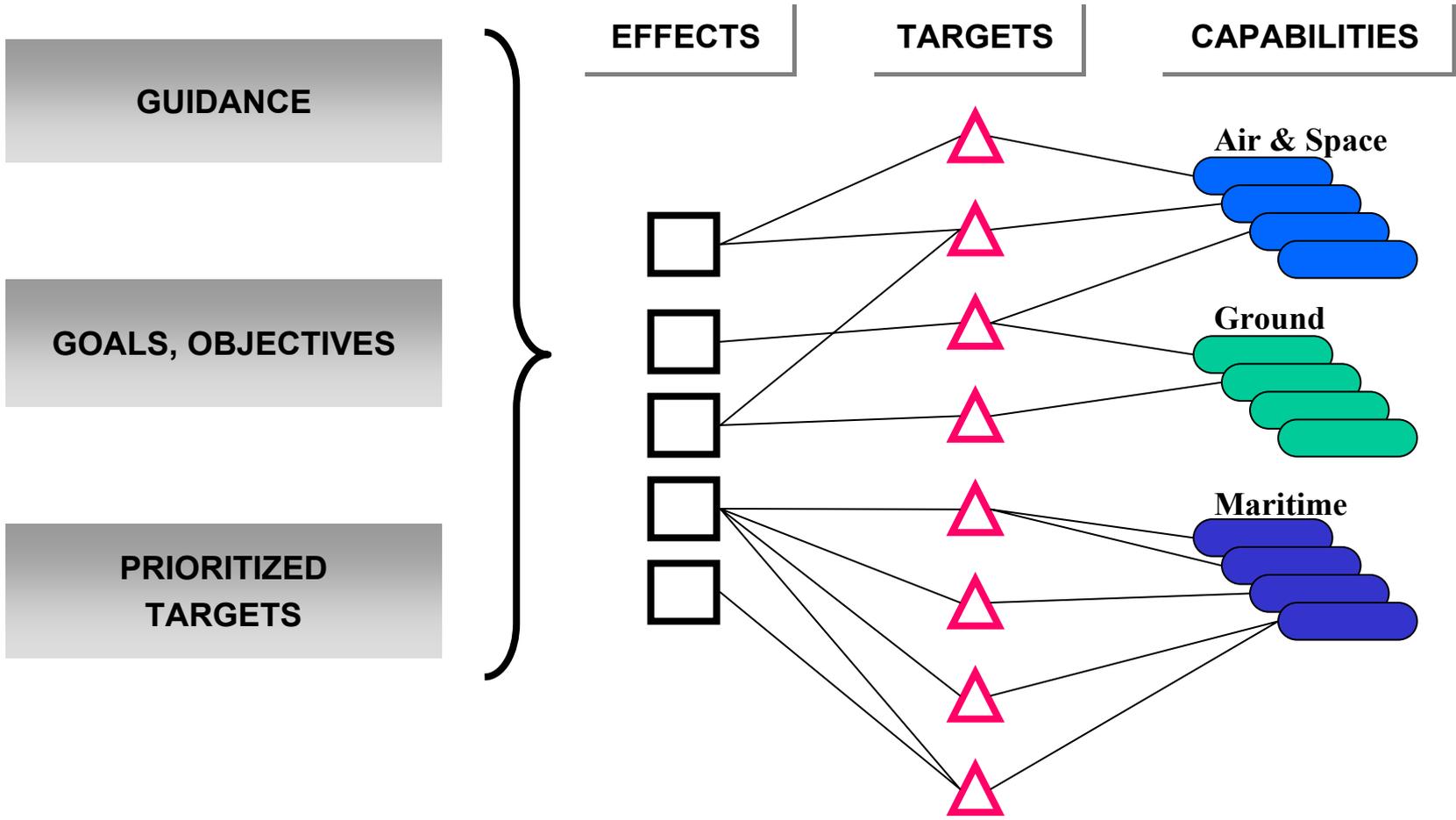


\*COA – Course of Action  
NAI – Named Area of Interest  
TAI – Targeted Area of Interest

## Problems Remedied:

- ISR becomes postured to support EBO
- ISR anticipatory, not reactive
- ISR remains synchronous *and* asynchronous with operations

# Effects Linked to Targets & Capabilities



# Conclusions

- Battlespace visualization requires synchronous and asynchronous analytical support
  - At all operational levels
  - Analytical efforts must run in advance of operations and decision making to be predictive
- Automated war gaming for objective COA analysis
  - Multiple COAs for analysis means insufficient time for traditional “paper” exercises
  - To anticipate the adversary the capability to rapidly analyze changing adversary options is a must
  - Focuses ISR for tracking, ***NOT*** discovery
- Doctrine & Training
  - We have carefully defined doctrine and implemented training based on how to fight DESERT SHIELD / STORM more effectively
  - We have to implement what we’ve learned about fighting asymmetrically

# How to Reach Us

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