

A satellite view of Earth from space, showing a blue ocean and green landmasses. The text is overlaid on this background.

Systems Engineering and War Gaming

Synergistic, if done right

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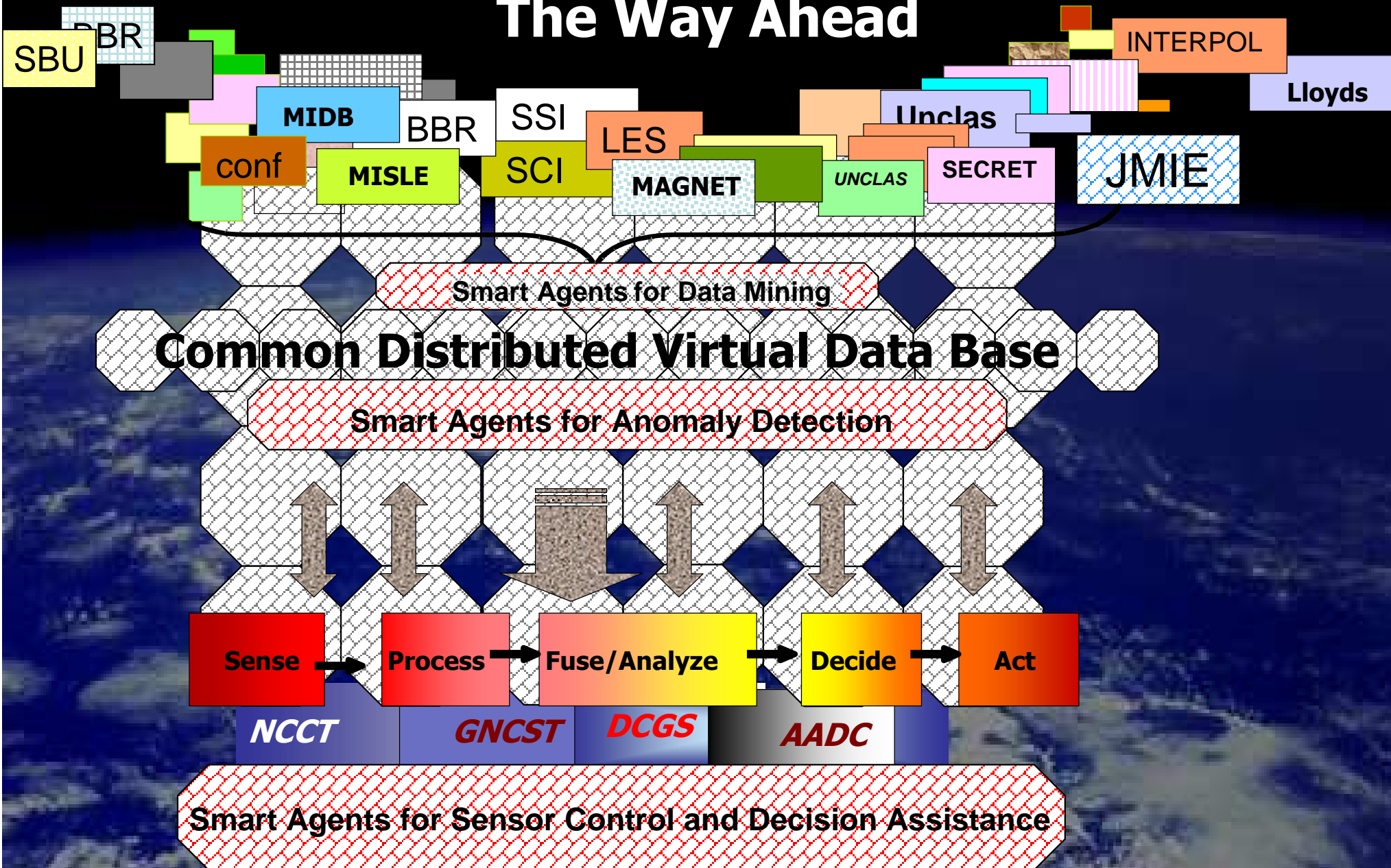
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MARITIME SECURITY Paradigm for Safety, Law Enforcement and DEFENSE



Horizontal Fusion/Integration The Way Ahead



From the Bottom Up -

Understanding

USER DEFINED OPERATIONAL PICTURE

Common User Definable Interface

Collaborative Information Environment

Data Mining / Fusion / Pattern Recognition / Etc.

DATA CONDITIONERS

DOD

DHS

OGA

CIVIL

COMM'L

INT'L

DATA

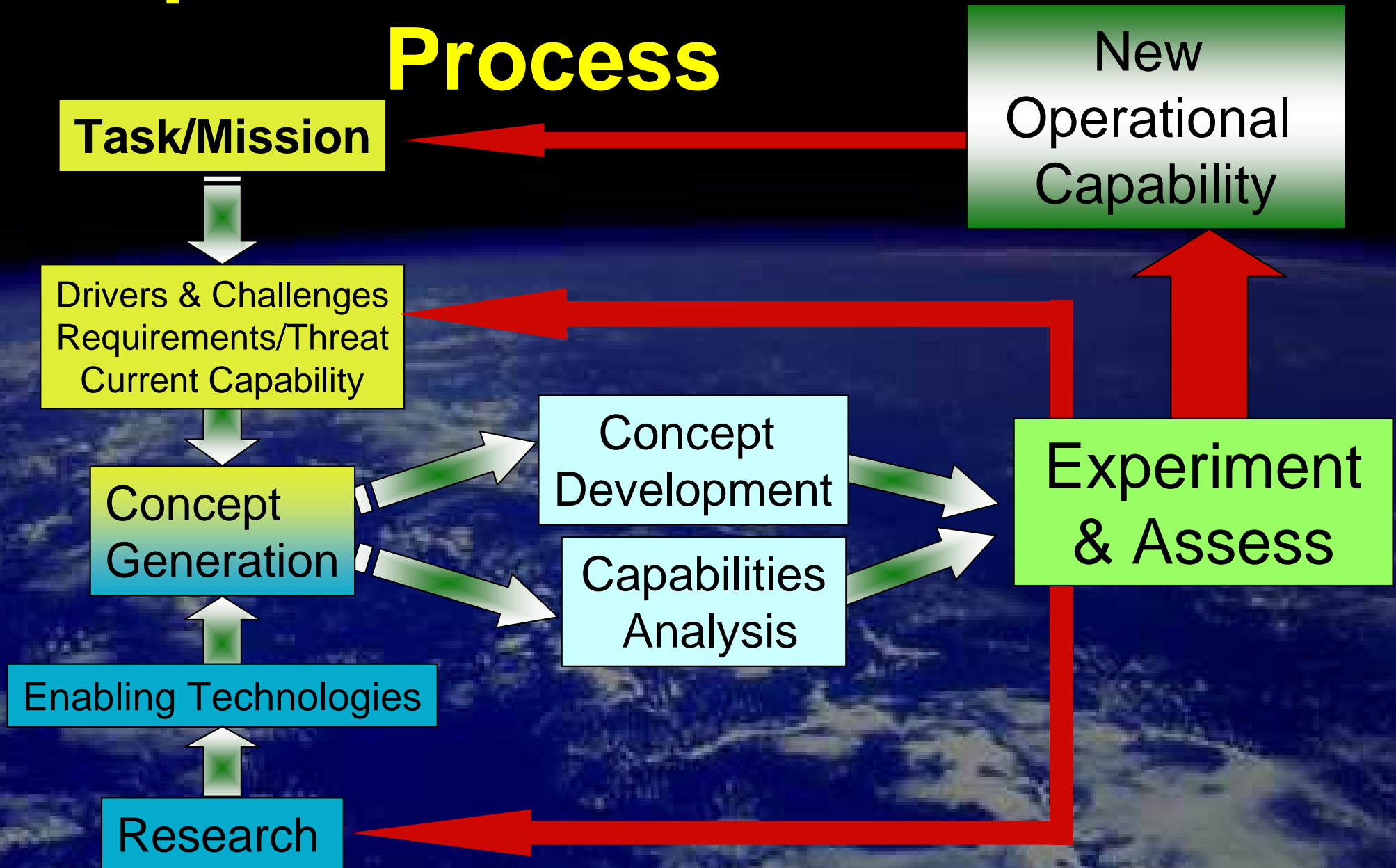
Smart Push

Smart Pull

Similar & Synergistic

- Mutually complementary
 - Structured Examination & “Buy-in”
- Both Require Large Preparation
 - Effort Involved Often Unrecognized
 - Crucial to the Outcome
- Leadership is Critical
- WALEX Process
 - Mix of the Both

Operational Research Process

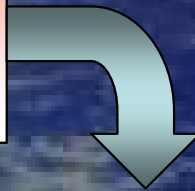


WALEX Process



Objectives Definition

Determine
Desired Product



Identify
Important
Issues to be
Examined

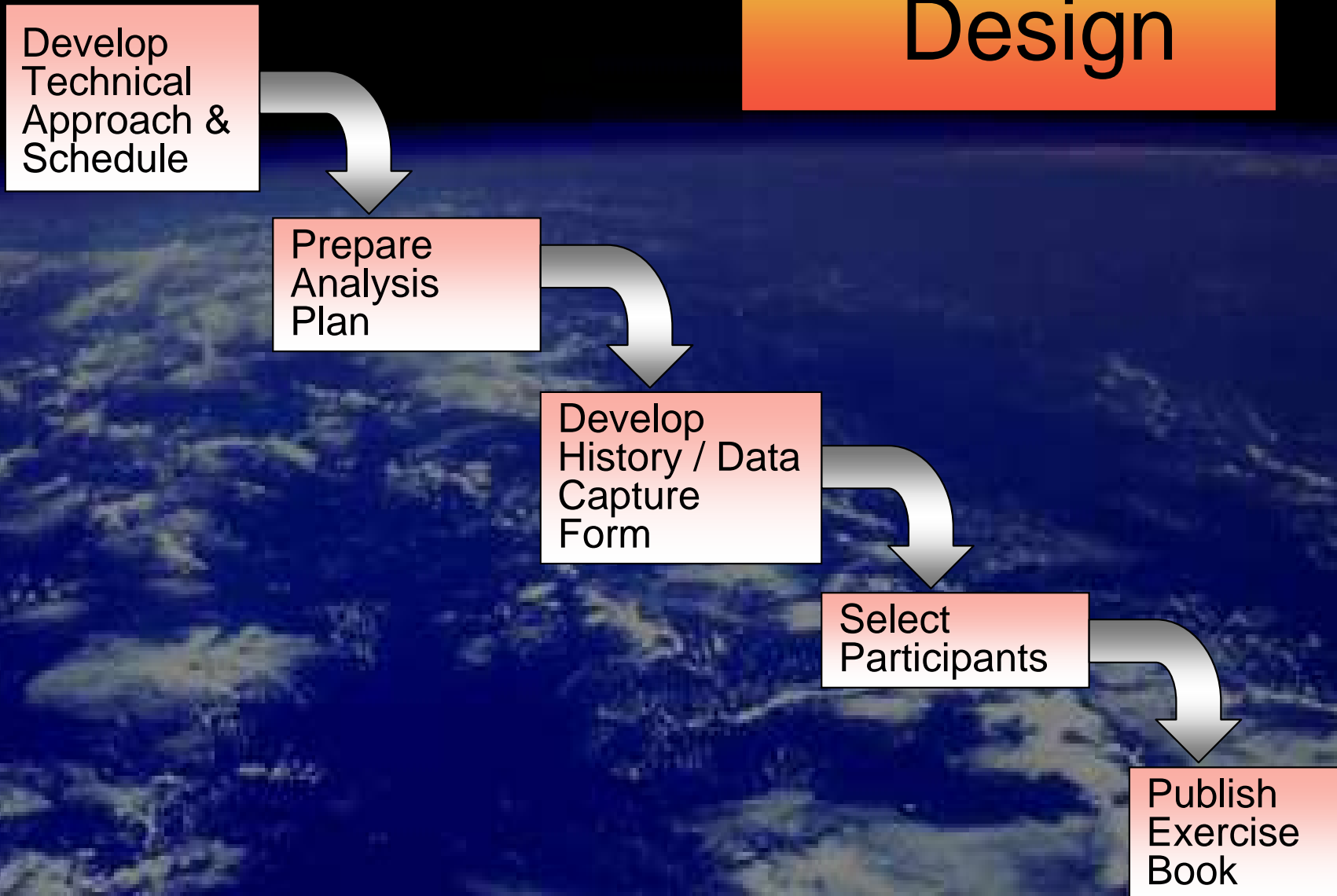


Determine
Exercise Role

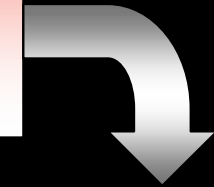
Exercise Preparation



Exercise Design



Present
Objectives &
Technical
Approach



Brief
Scenario



Examine Key
Interactions &
Events



Identify
Critical Issues



Provide
Decision
Analysis
of Issues

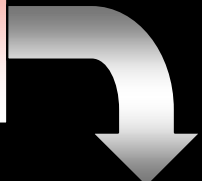


Record
Exercise
History

Warfare Analysis Exercise

Analysis & Reporting

Publish Exercise History



Analysis Exercise Results



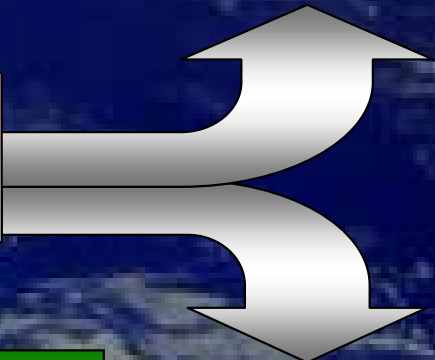
Resolve Issues



Publish Analysis Results



Acquire System(s)?



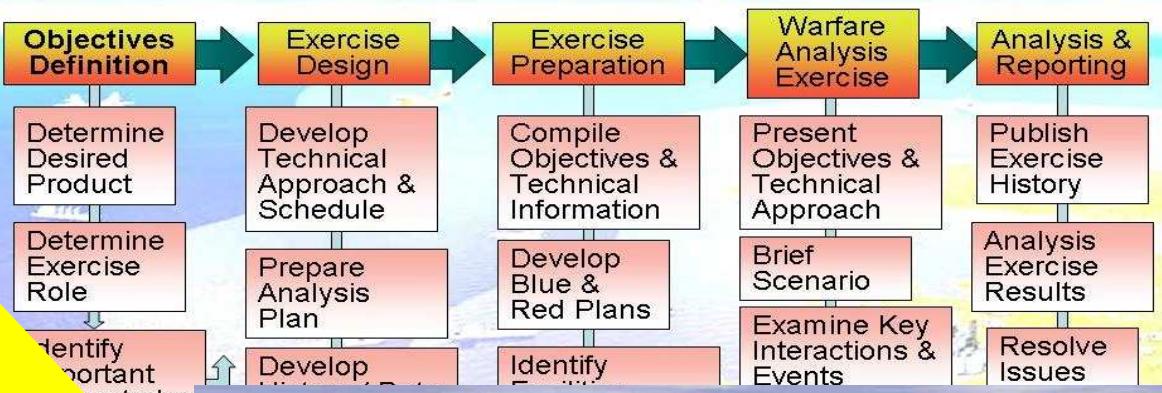
Limited Objective Experiment?

Next WALEX Objectives Definition ?

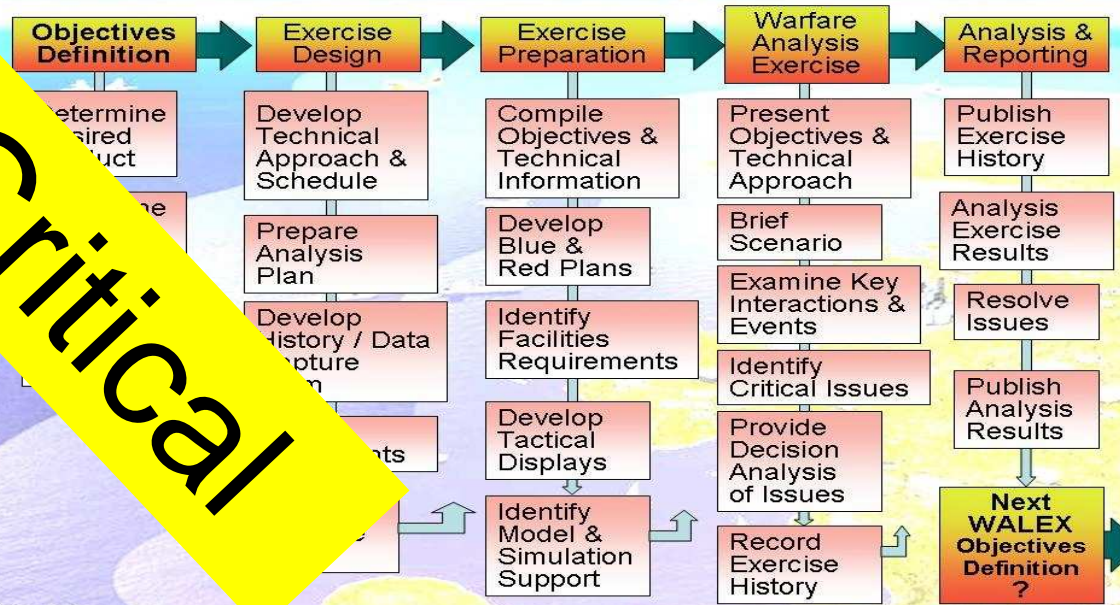
WALEX Process



WALEX Process



WALEX Process



Iteration is Critical

Multi-Levels often Crucial

- Multi-Levels of Security
 - SCI – S – SBU – BBR- ?
- Multi-Levels of Experience
 - Combat – Law Enforcement – IT - Business
- Multi-levels of Mission Tasking
 - USN/USAF/USA – DOJ – DHS – DOT – DOC
- Multi-levels of Responsibility/Rank

Iterations

- **First**
 - Workers/Technologists
(0-4/-5s – GS-13/-14s)
- **Second**
 - Managers
0-6s – GS-15s
- **Third**
 - Decision Makers
Flags – SESs
- **Fourth (?)**
 - Policy Makers
Assistant - Deputy **Secretaries**

An aerial photograph of a dense forest with a winding river or stream cutting through it. The text is overlaid on this image.

Facility Important

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Facilitator Critical,

Second

only to preparation

*

True in War Gaming
& Systems Engineering