Irregular Warfare Analysis Workshop
WG 5: Thinking Models

Military Operations Research Society

Working Group Out Brief

3-6 February 09

Chairs: LTC Scott Smith, USSOCOM
Dr Bob Sheldon, MCCDC

robert.sheldon.ctr@usmc.mil
703-432-8320

Agenda

- Working Group Purpose/Charges
- Participants
- Schedule / Briefs received
- Findings
- Way Forward
- Key Take-Aways

Working Group Purpose/Charges

Purpose: Frame the context of the IW problem properly, break down IW operations into its natural components, and investigate the subject through discourse and the application of systems thinking.

- **Charge to WG5**
  - **How should we be thinking about Irregular Warfare?**
  - **Can using a systemic approach better frame the problems, and lead us to a new set of solutions?**

Participants

- Maj John Bancroft, MCCDC
- Mr Edd Bitinas, Northrop-Grumman
- Mr Ernest Boehner, TRAC
- Mr Thomas Botte, Lockheed Martin
- Mr Curtis Bottom, TRAC
- Mr John Byrnes, AFRL
- Dr James Chrissis, AFIT
- Mr Richard Cotman, Foxhole Technology
- Mr Les Craig, JHU/APL
- Mr. Gus Dearolph, USSOCOM
- Dr Philip Eles, Department of National Defence (Canada)
- Mr Dennis Gettman, TRAC-WSMR
- LTC Eric Hansen, JIEDDO
- Mr Thomas Hughes, Infoscitex Corp
- Mr Jack Jackson, TRAC-Monterey
- Mr Kemp Littlefield, Northrop-Grumman
- Dr Corey Lofdahl**,** BAE Systems
- Ms Deborah Lott**,** CAA
- Mr. Brett Marvin, Sentia Group
- Dr William McDaniel, JHU/APL
- LTC Jeff McDougall, USAOTC
- MAJ Fernando Miguel, TRAC-WSMR
- Maj David Mills, USSOCOM/J-10
- Mr Kelly Musick, JFCOM/JCOA
- Dr Catherine Norman, CNA
- Mr Joseph Nowak, TRAC-FLVN
- Mr Clinton Null, Lockheed Martin
- Mr Gregory Opas, GMU
- Mr Tony Quattromani, ManTech
- Ms Patricia Rossmaier, MCCDC OAD
- Mr Bruce Simpson, SRA
- Mr David Terrazas, Mitre
- Mr Steve Upton, NPS
- Ms Maria Vedder, TRAC-MTRY
- Mr Kevin Ward, BAH
- Mr Bob Wiebe, Boeing
- Mr Paul Works, TRAC-FLVN,
- Mr John Yanaros, Lockheed Martin
- LTC Reb Yancey, USSOCOM

WG-5 Agenda - Wednesday

- **Wednesday, 4 Feb 09**
  - **1040-1130 WG-5 Overview & Introductions – Bob Sheldon & LTC Scott Smith**
  - **1130-1300 LUNCH**
  - **1300-1430**
    - **SOCOM IW challenges – LTC Scott Smith**
    - **OZ Wargame Integration Toolkit – Dr Debbie Duong, OSD PA&E SAC**
  - **1430-1445 BREAK**
  - **1445-1630**
    - **IW Decomposition Analytic Strategy – LTC Russ Schott, Mr Paul Works, TRAC**
    - **Systemic Operational Design (SOD) exercise - LTC Scott Smith, LTC Reb Yancey**

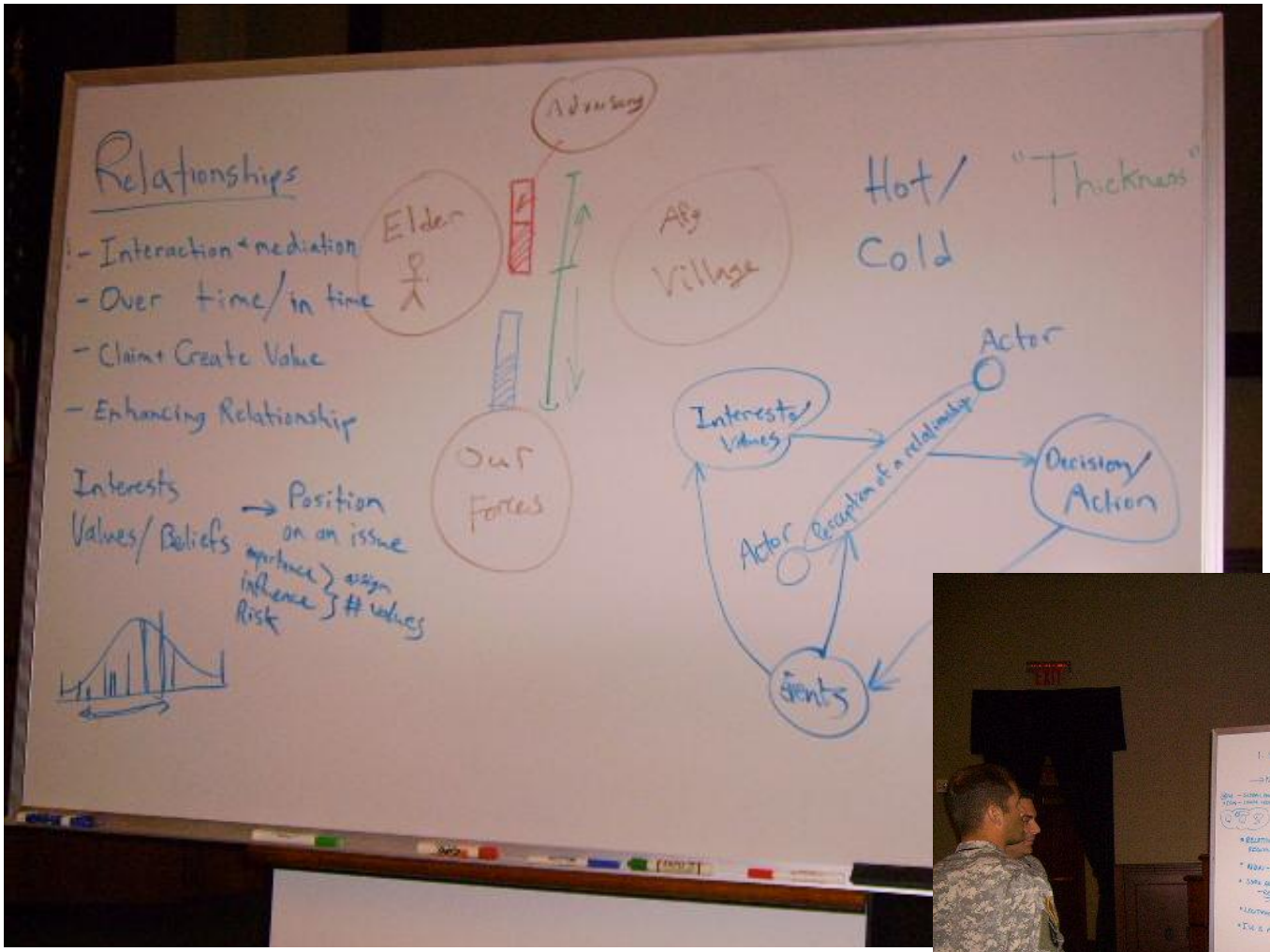
WG-5 Agenda – Thursday, Friday

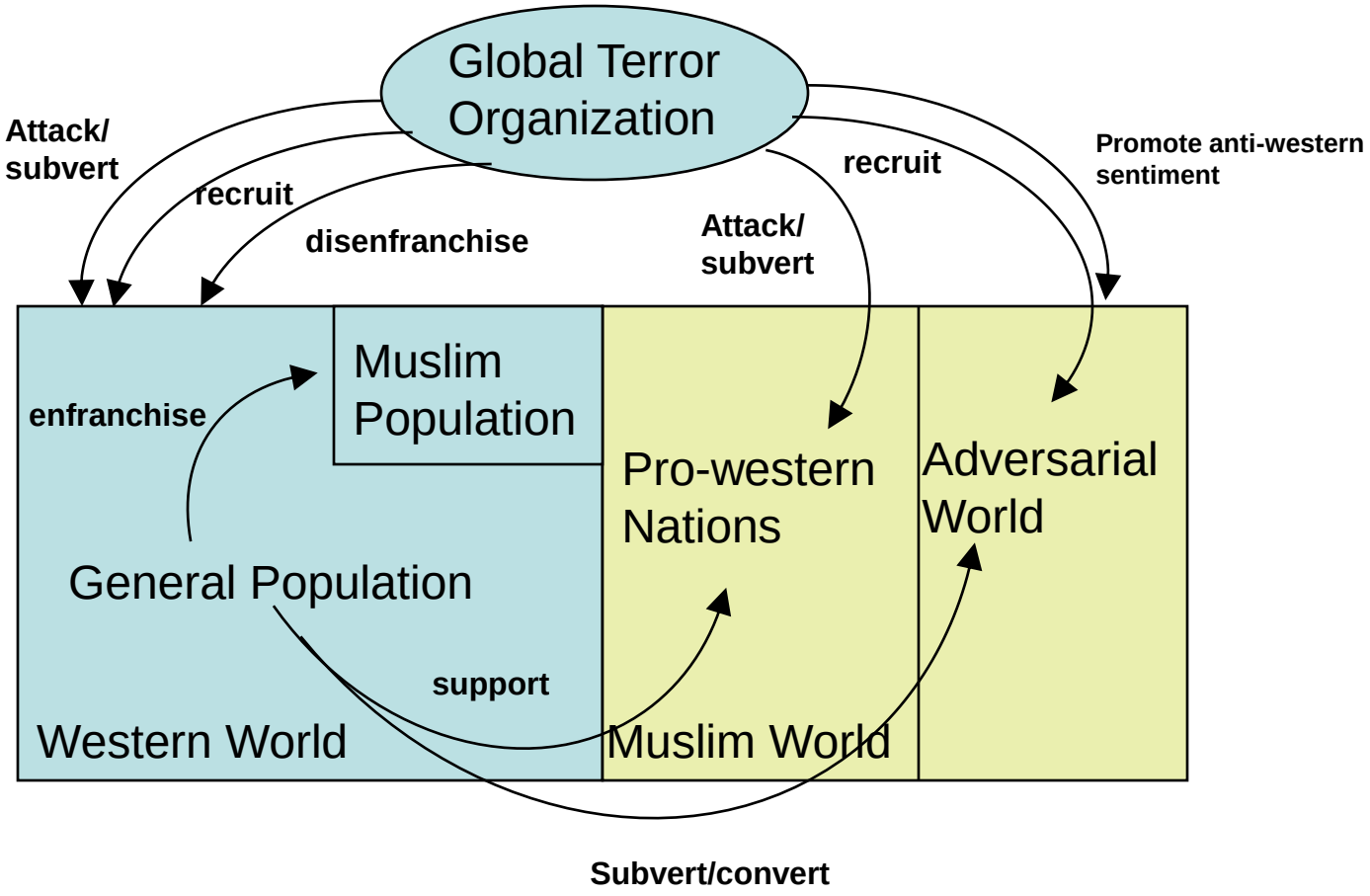
- **Thursday, 5 Feb 09**
  - **0800-1000 SOD exercise, cont.**
  - **1000-1015 BREAK**
  - **1015-1200 SOD exercise, cont.**
  - **1200-1300 LUNCH**
  - **1300-1430 SOD exercise, cont.**
  - **1430-1445 BREAK**
  - **1445-1630 SOD exercise, cont.**
- **Friday, 6 Feb 09**
  - **0800-1045 Build/scrub WG-5 outbrief**

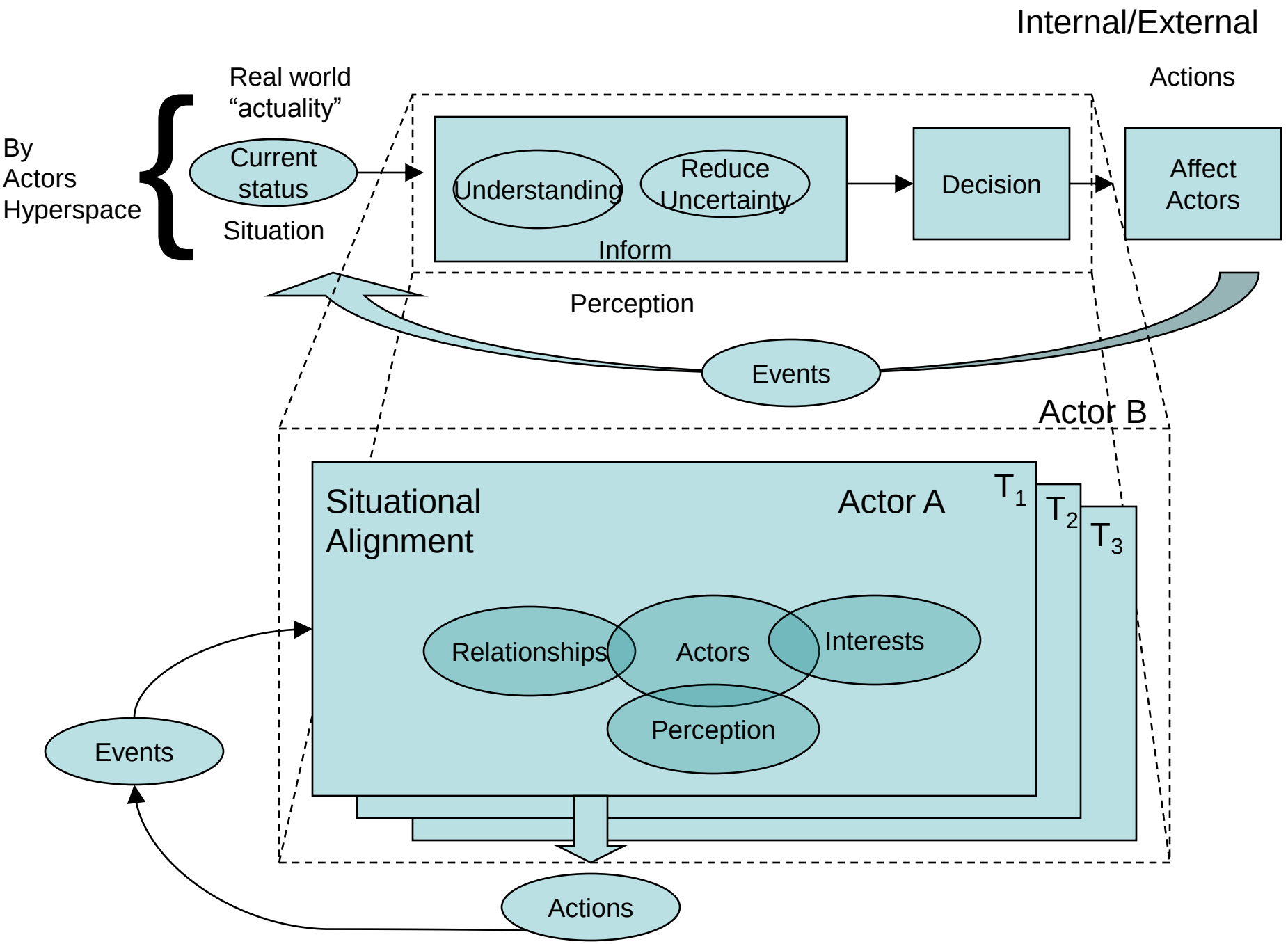
Findings

- Many ways to see/represent IW – different languages/logic
- Lack of common terms/understanding about IW
- IW analysis at strategic/operational/tactical may require different cognitive models/techniques/representations
- Modeling is difficult – must learn to think differently
- Focus on uncovering indirect opportunities
- Need tools to improve research capabilities that enhance thought and shared understanding
- Need decision makers to shape/provide guidance:
  - frame problem
  - *visualization* – make the whiteboard a “group thinking pad”
  - acquire a depth of understanding
- The SOD process:
  - requires continuous learning
  - provides insight, not answers
  - expect some risks
  - Identifies what we know and don’t know about the problem

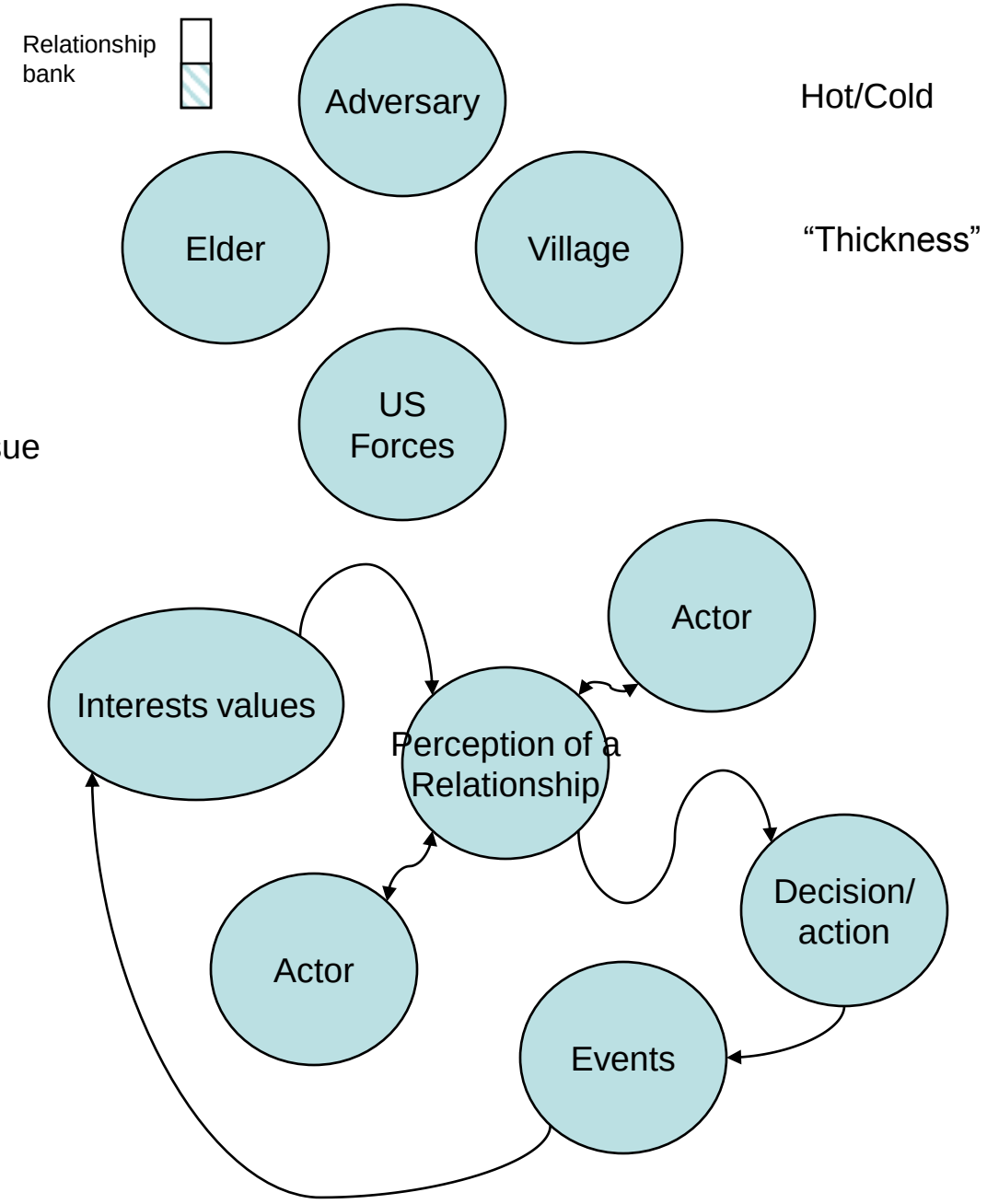
SOD provides problem context and is complementary to other methods


Relationships
- Interaction + mediation
- Over time/in time
- Claim Create Value
- Enhancing Relationship
Interests
Values/ Beliefs
Position
on an issue
Risk
Elder
Ag
Village
Our
Forces
Hot/
Cold
"Thickness"
Actor
Interests/
Values
Decision/
Action
Actor
Perception of a relationship
Events


Global Terror Organization
Attack/ subvert
recruit
disenfranchise
recruit
Attack/ subvert
Promote anti-western sentiment
Muslim Population
enfranchise
General Population
Pro-western Nations
Adversarial World
support
Western World
Muslim World
Subvert/convert

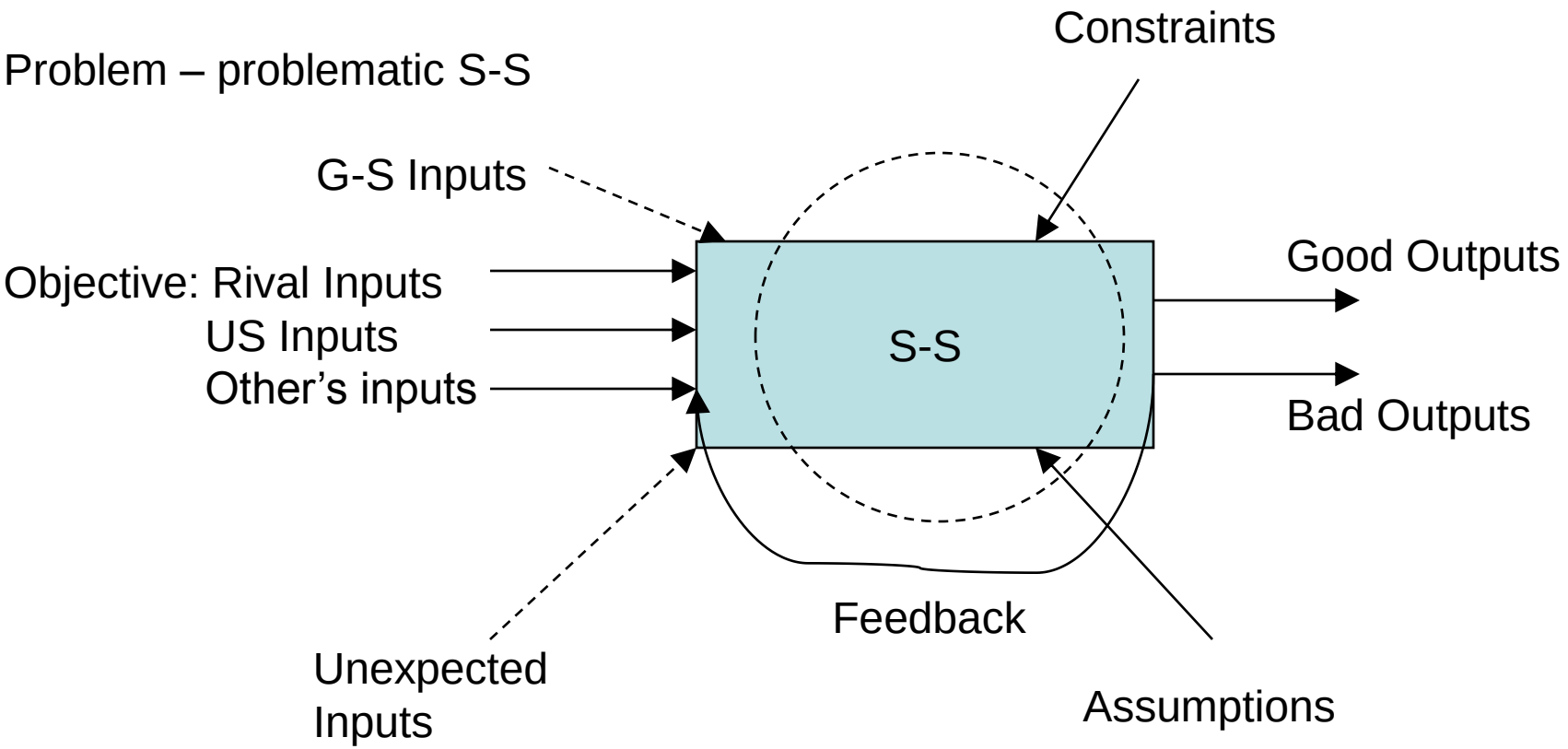

Internal/External
Real world
“actuality”
Actions
By
Actors
Hyperspace
Current
status
Situation
Understanding
Reduce
Uncertainty
Inform
Decision
Affect
Actors
Perception
Events
Actor B
Situational
Alignment
Actor A
T1
T2
T3
Relationships
Actors
Interests
Perception
Events
Actions

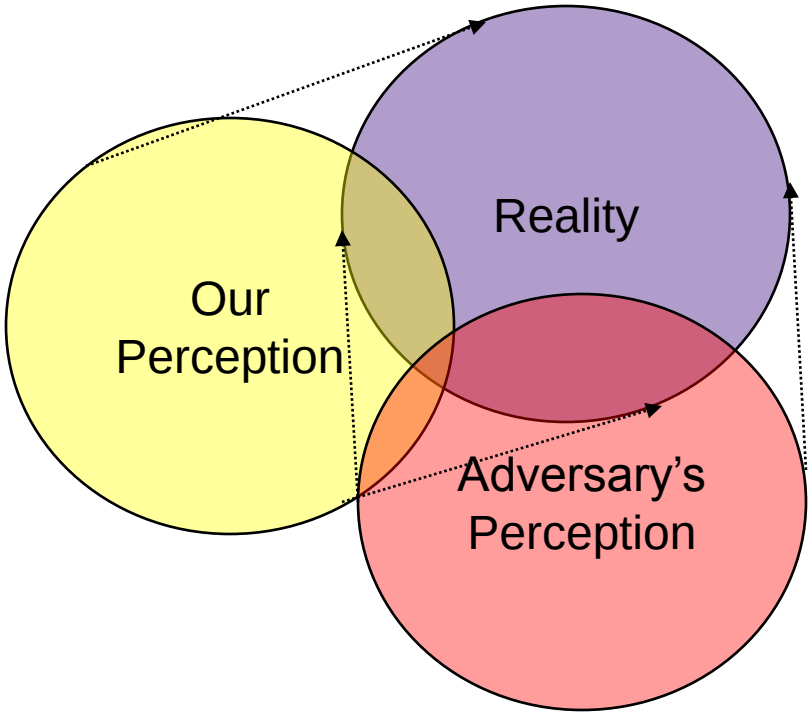
Relationships
Interaction and mediation
Over time/in time
Client create value
Enhancing relationships



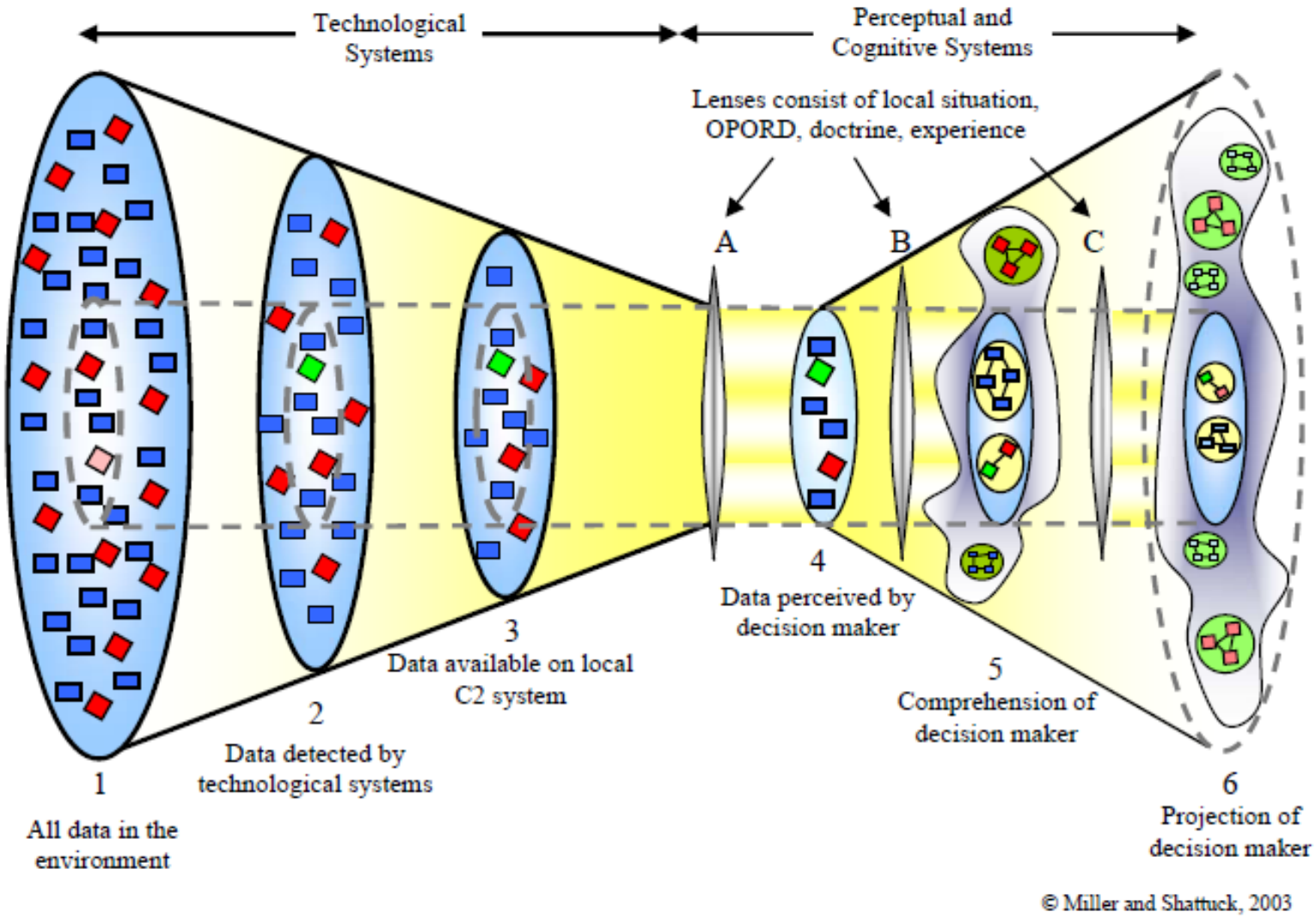
1 Don’t Boil The Ocean – subsystem
2 Understand S-S
3 Understand SS-Global System Links

Problem – problematic S-S

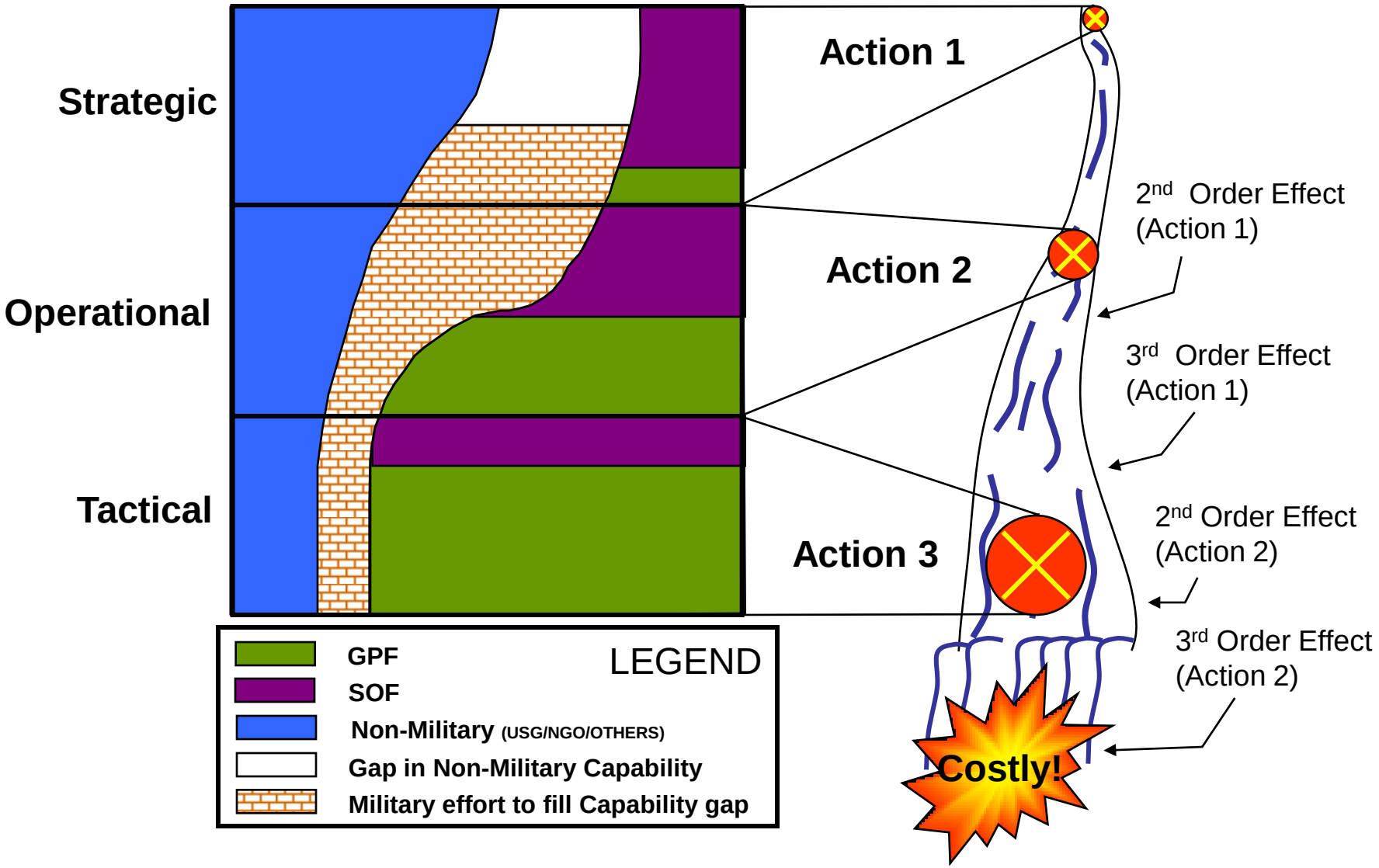



Reality
Our
Perception
Adversary's
Perception

Dynamic Model of Situated Cognition



The Whole of Government Dilemma



Way Forward

- **We've only scratched the surface**
- **Continue SOD exercise**
- **Establish a Community of Interest (COI)**
- **Take advantage of USSOCOM J-10 bi-weekly VTC**
- **Explore collaboration site**

Key WG-5 Take-Aways

- 3 key ideas from SOD that are critical in all IW analysis
  - Need to revisit/reframe the problem statement

"It often occurs that the major contribution of the operations research worker is to decide what is the real problem." -- Morse and Kimball

    - "Problem Definition is an Iterative Process" Dr Roy Rice, FS, MORS Tutorial on "Step #1 of the Scientific Method: *Defining the Problem*"
  - Need to revisit assumptions
  - Discourse with SMEs, leaders is essential to SOD and good analysis

Bottom line: you cannot analyze IW in a single-pass linear process

Backups

Understanding partners

Security requirements

Synergistic effects -> CION Requirements
Range of actions
Persuade population – assume central to struggle

Perception
Action

Counter Force/interests

Other interests

Coerce
Negotiate

Definition of strategy

Relevant to our interests

Cultural context

Norms/standards

All are not persuaded/coerced/negotiated with

IW-global engagement
COIN – lower level actions

Relationships define regional dynamics
Non-linear effects
some are more important to influence than others
-relevant population

Dynamic

Ordering of events

How is this defined?
Technologies effecting resources

Legitimacy perception - fragmentation of the population
IW is a bottom up fight
Scaleable concept

Changes based On situation – no template

Group **Attributes** ← **Influence/affect these**

IW is a strategic concept

disrupt	**build**	**support**
deter	**partner**	**counter**
	capability	**ideology**

shape thinking
not black and white
pragmatic

Global engagement – similar to containment
Learn
Act at low level to manage situations

Problem solving is highly overrated … *problem creation* is far more interesting. **Chuck Close**

WG-5 TOR

- **A "visual thinking pad" (dry erase board) is used to enable thinking and to capture the group's rationalization. This is really a cognitive exercise, hopefully resulting in a group synthesis. The group should ask itself, *How are we thinking about this problem?* and then ask, *How should we be thinking about this problem?* A mental model (a representation of the group's thinking and learning) is then captured to enable thinking- and hopefully is a useful representation to enable/capture insight.**