



An Introduction to Course of Action Wargaming

Graham Longley-Brown

Napoleon:

'If I always appear prepared, it is because before entering an undertaking, I have meditated long and have foreseen what might occur. It is not genius that reveals to me suddenly and secretly what I should do in circumstances unexpected by others; it is thought and preparation.'



Introduction

- 'Everything in war(gaming) is simple, but doing the simplest thing is difficult.'

Clausewitz-ish

- 'What a wargame can do is show which interactions are important. Simple study will not reveal them – there are just too many. *Banging the rocks together* gives all the factors full play.'

Larry Bond, co-author of *Red Storm Rising*



Why COA Wargame?

- Done properly, and better than your opponent,
it saves lives
- COA Wargaming is second only in importance to the Mission Analysis in any military decision making process. If MA asks 'why?', the COA Wargame asks 'what if?'
- ...and hence gives your plan the best chance of surviving contact



Why COA Wargame?

The Battle of Midway 4 - 7 June 1942

- Result?
- Did the Japanese COA Wargame it?
- Did the US COA Wargame it?





Why COA Wargame?

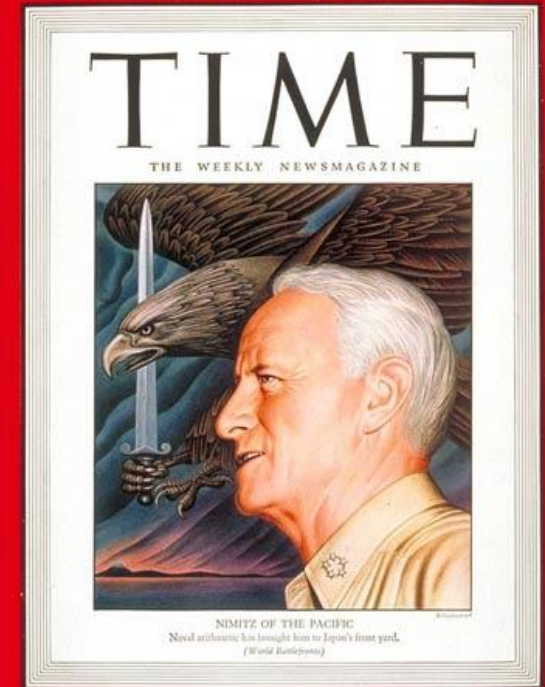
In a speech to the US Naval War College in 1950:

“The war with Japan had been re-enacted in the game room here by so many people and in so many different ways that nothing that happened during the war was a surprise – absolutely nothing except the Kamikaze tactics towards the end of the war; we had not visualised those.”

History of War Games



The Pringle Hall Game Board





Why COA Wargame?

- Done properly, and better than your opponent,
it saves lives



Introduction to COA Wargaming

Aim. Introduce what you need to know about COA Wargaming

1. Why COA Wargame?
2. What is COA Wargaming?
3. When might you do it?
4. How do you do it? Practical tips



Introduction to COA Wargaming

Aim. Introduce what you need to know about COA Wargaming

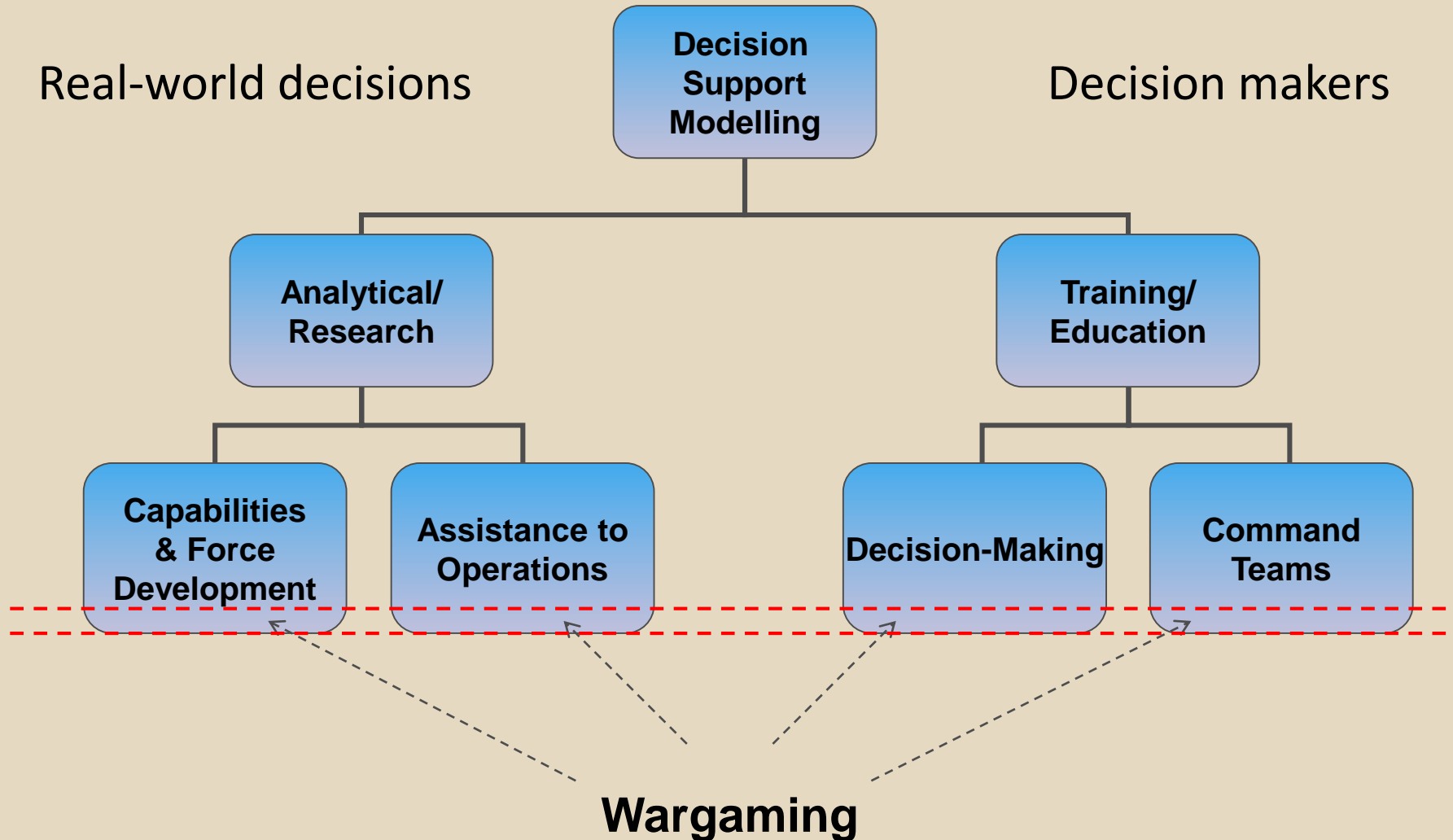
1. Why COA Wargame?
2. What is COA Wargaming?
3. When might you do it?
4. How do you do it? Practical tips



What is COA Wargaming?

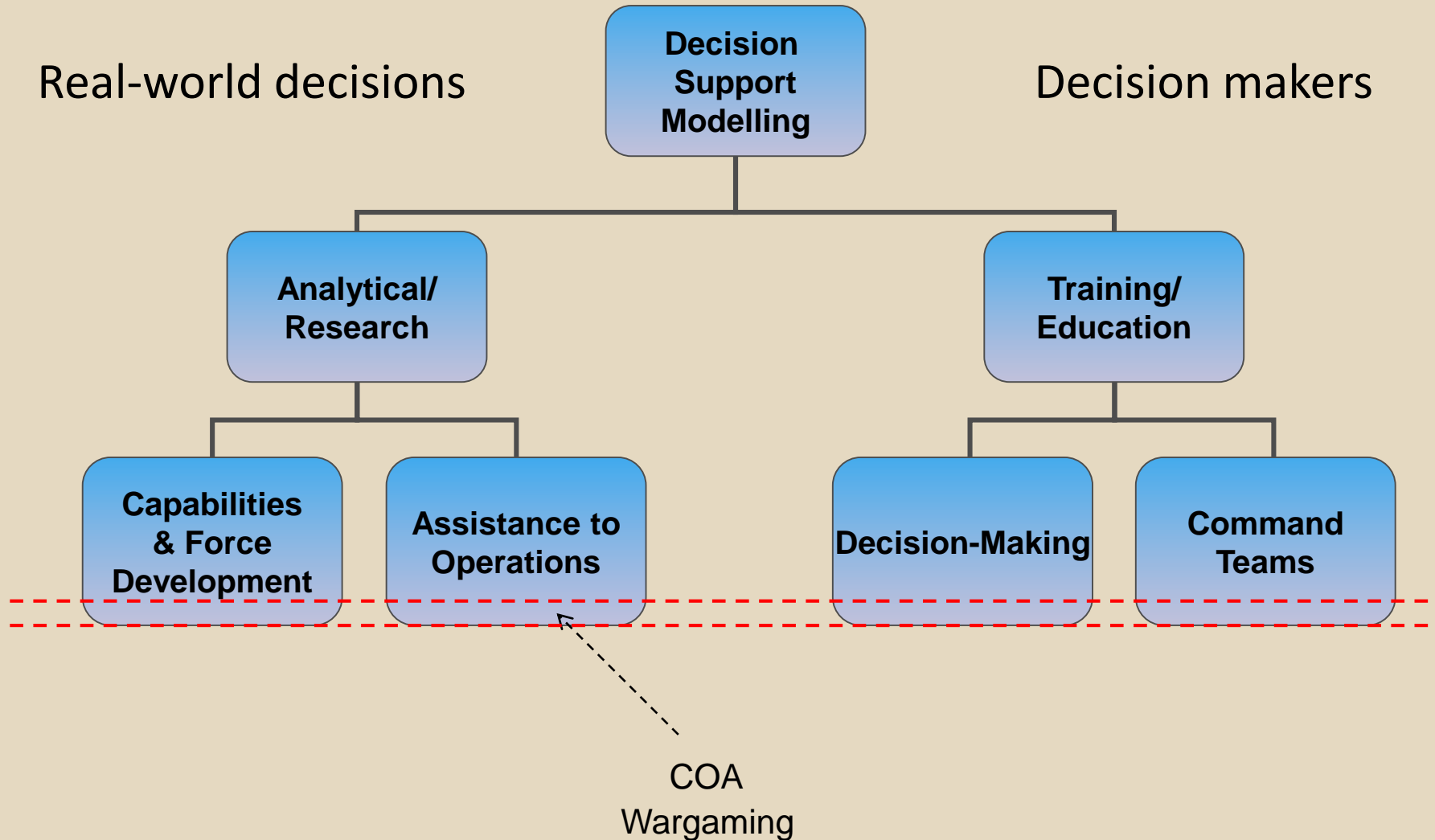
- COA Wargaming in context

What is COA Wargaming?





What is COA Wargaming?





What is COA Wargaming?

Tool	What	Why	Who (illustrative)	When
COA Wargaming	A systematic method of analysing a plan to visualise the ebb and flow of an operation or campaign	To identify risks and areas of weakness in a forming plan 'What if'-ing	Chief Controller (e.g. COS, Bn 2ic) Blue Team Red Cell Staff branches SMEs (OA) (Commander) (Red Team)	During any or all of: 1. COA development 2. COA evaluation 3. COA refinement
ROC Drill	A visual, sequenced rehearsal of a plan	To enhance understanding of a formed plan Rehearsing	Commander Chief Controller Staff branches Unit/sub-unit commanders SMEs	After orders have been delivered
Red-teaming	The provision of honest, constructive and objective criticism to improve a commander's decision-making	To challenge assumptions and fully explore alternative outcomes to reduce threats and increase opportunities	An independently constituted group of SMEs with appropriate skills for the project under consideration	Throughout the estimate/7 Questions process



What is COA Wargaming?

- Definition: A systematic method of analysing a plan to **visualise** the ebb and flow of an operation or campaign
- Purpose: To identify **risks** and **areas of weakness** in a **forming** plan
- ...a **visualisation** technique with a **structured discussion** among SMEs to elicit their views and **inform (your) military judgement**



What is COA Wargaming?

- Key characteristics:
 - It must be **adversarial** (and oppositional)
 - It is always **time pressured**



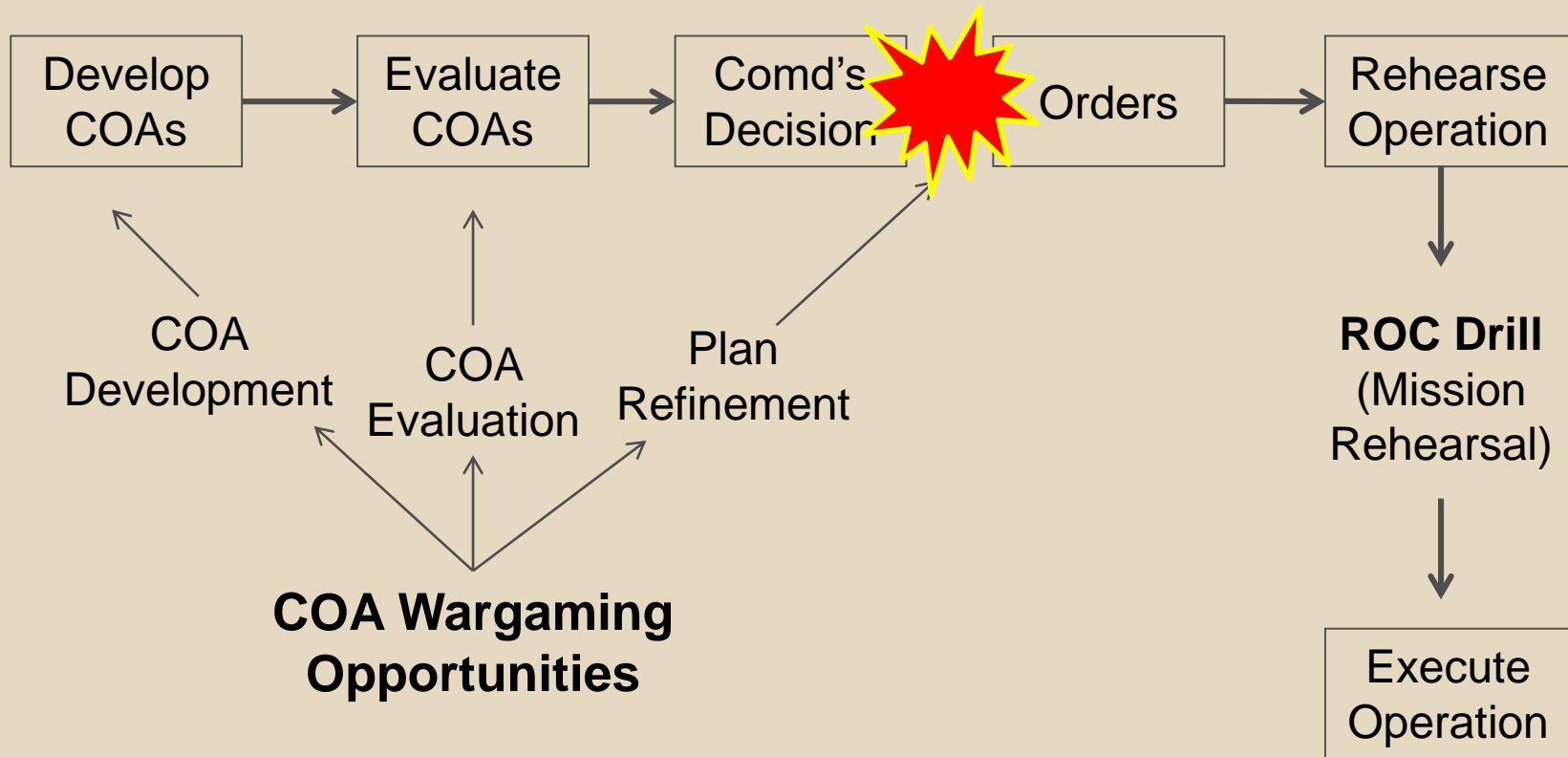
Introduction to COA Wargaming

Aim. Introduce what you need to know about COA Wargaming

1. Why COA Wargame?
2. What is COA Wargaming?
3. When might you do it?
4. How do you do it? Practical tips



When might you COA Wargame?





Introduction to COA Wargaming

Aim. Introduce what you need to know about COA Wargaming

1. Why COA Wargame?
2. What is COA Wargaming?
3. When might you do it?
4. How do you do it? Practical tips



How do you do it?

1. Who
2. Inputs and outputs
3. Methods
4. Turn mechanics
5. Recording
6. Determining outputs
7. Dos and don'ts (Summary)



How do you do it?

Who

- Chief Controller (e.g. Bn 2ic, COS)
- Blue Cell (Ops Offr, G3, J3/5)
- Staff branches
- SMEs and stakeholders
- Red Cell (IO, G2, J2)
- (Red *Team*)
- (Operational Analysis Cell)
- (Commander)



How do you do it?

Inputs and Outputs

Inputs	Outputs
Draft: ConOps, DSO, DSM, synch matrix, overlays, taskorgs etc	Decisions to mitigate identified risks and issues
Staff- and OA-provided answers to Comd's Info Requirements e.g. time & space calculations, likely combat outcomes, CSS usage etc	Working order of the plan identified factors in more detail
Enemy intentions	Amendments to the plan

CONPLANS



How do you do it?

Methods

- Another characteristic: COA Wargaming is **command-led**
- COA Wargame by phases
- COA Wargame by Decisive Conditions (DCs) and Supporting Effects (SEs)
- COA Wargame by segments of the battlespace

Or... Belt – Box – Avenue in Depth?

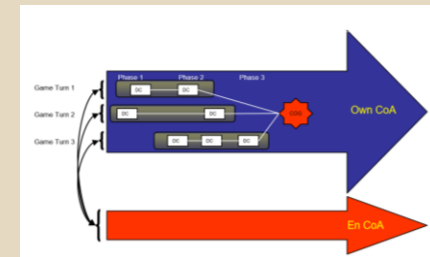
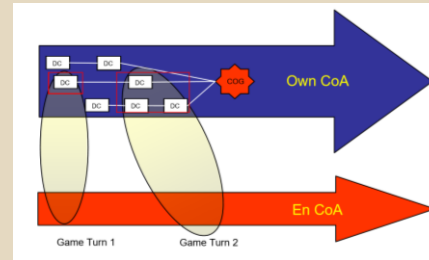
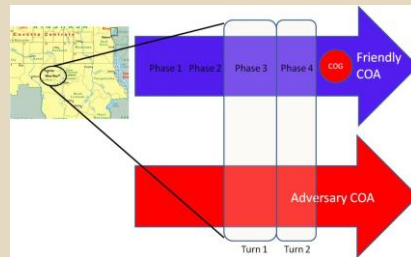
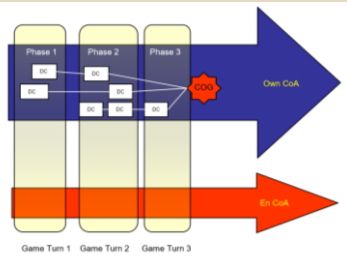


How do you do it?

By phases

By segments
of the
battlespace

By Decisive
Conditions and
Supporting
Effects



Or... Belt

Box

Avenue in Depth

It really doesn't matter!



How do you do it?

Methods

- Another characteristic: COA Wargaming is **command-led**

...so the commander's top risks and areas of concern *become the wargame turns*



How do you do it?

Mechanics. For each turn:

- Action
- Reaction
- ***Frictions and oppositional factors***
- Counteraction (= **consideration**)
- Consequence Management
- Consolidation and Recording



(Commander)



Controller



Blue, Green
Cell, Staff
Branches
(OA)



Scribe



Red Cell



Red Team



White Cell



Black,
Orange,
Brown Cells
etc

Each turn:

1. Action
2. Reaction
3. Counteraction
(consideration)
4. Consequence Management
5. Consolidation and
Recording

+

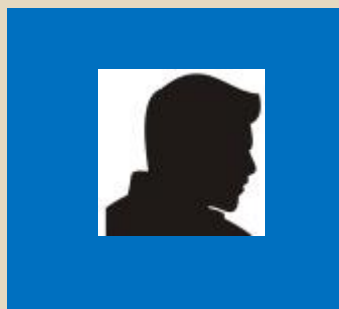
Ser (a)	Event or Activity (b)	Person Responsible (c)	Remarks (d)
Preliminaries			
1.	Initial brief: <ul style="list-style-type: none">• Aim• Attendance: role and function• Mechanics• Wargame turns and timings• Inputs available• Recording• Higher Commander's guidance• Key estimate outcomes• Key assumptions	COS/2ic and/or Ops Offr	
2.	Adversary review	IO/Red Cell ¹	Intent, SOM, ME, Endstate, TASKORG, laydown
3.	Armed Non-State Actor (ANSA) and Organised Crime (OC) reviews	IO/Red, Orange ² and Black ³ Cells	As required
4.	Humanitarian, POLAD and CULAD reviews	White Cell	As required
5.	Wider planning context	Ops Offr, Green Cell	As required
6.	Friendly Forces review	Ops Offr, Green Cell	Intent, SOM, ME, Endstate, Taskorg, laydown
7.	Joint Effects review	Joint Effects/BC	As required
8.	ISTAR review	OC ISTAR	As required
9.	Manoeuvre review	BGE	As required
10.	CSS review	BGLO	As required
11.	Comms plan review	RSO	As required
For Each Turn			
12.	Friendly Forces (or Adversary) Action ⁴	Ops Offr plus SMEs ser s 7-11; or IO/Red Cell	Starting situation then Intent and SOM to the required level of detail
13.	Adversary ⁵ (or Friendly Forces) Reaction		
14.	Frictions and oppositional factors		
Short break for OA and COS/2ic consideration			
15.	Adjudication of Outcomes	OA (if present) or COS/2ic judgement	Best case, worst case and most likely outcomes, then selected outcome
16.	Friendly Forces Counteraction (Consideration)	CO's key risks then Ops Offr	Knowing the possible outcomes, what would Blue do differently?
17.	'What if' considerations	COS/2ic	Examine alternatives
18.	Consequence Management (CM)	Relevant SME(s)	Brainstorm possible unintended consequences
19.	Cognition Phase	Chief Controller/ Scribe	Confirm understanding, consolidation and recording of outcomes
Repeat ser s 12-19 as necessary			
After final turn			
20.	Recording confirmation	Scribe	Summarise key findings
21.	COA Wargame summary	COS/2ic	Summarise key outputs and provide D&G as required



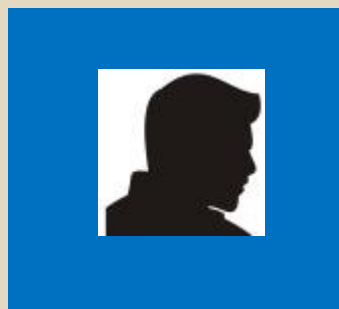
'Action' Sequence

6.	Friendly Forces review	Ops Offr, Green Cell	Intent, SOM, ME, Endstate, <u>Taskorg</u> , laydown
7.	Joint Effects review	Joint Effects/BC	As required
8.	ISTAR review	OC ISTAR	As required
9.	Manoeuvre review	BGE	As required
10.	CSS review	BGLO	As required
11.	Comms plan review	RSO	As required
For Each Turn			
12.	Friendly Forces (or Adversary) Action ⁴	Ops Offr plus SMEs <u>sers</u> 7-11; or IO/Red Cell	Starting situation then Intent
13.	Adversary ⁵ (or Friendly Forces) Reaction		
14.	Frictions and oppositional factors	Red Team ¹ and all players	Challenge assumptions as necessary
Short break for OA and COS/2ic consideration			
15.	Adjudication of Outcomes	OA (if present) or COS/2ic judgement	Best case, worst case and most likely outcomes, then selected outcome
16.	Friendly Forces Counteraction (Consideration)	CO's key risks then Ops Offr	Knowing the possible outcomes, what would Blue do differently?
17.	'What if' considerations	COS/2ic	Examine alternatives
18.	Consequence Management (CM)	Relevant SME(s)	Brainstorm possible unintended consequences
19.	Cognition Phase	Chief Controller/	Confirm understanding,

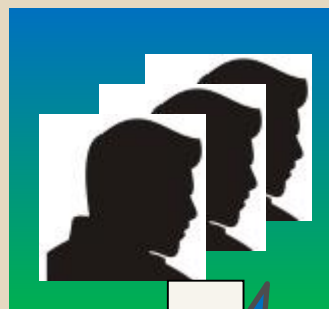
Don't be afraid to repeat as required



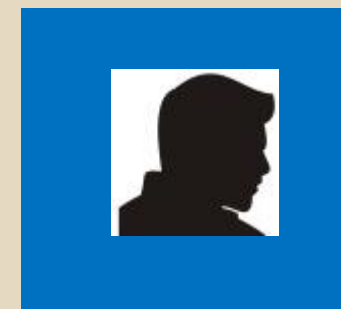
(Commander)



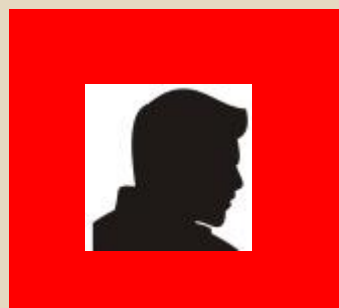
Controller



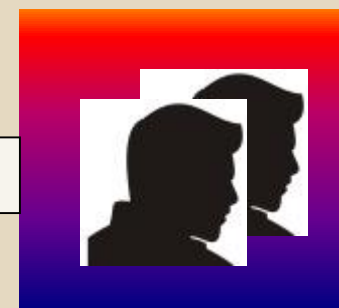
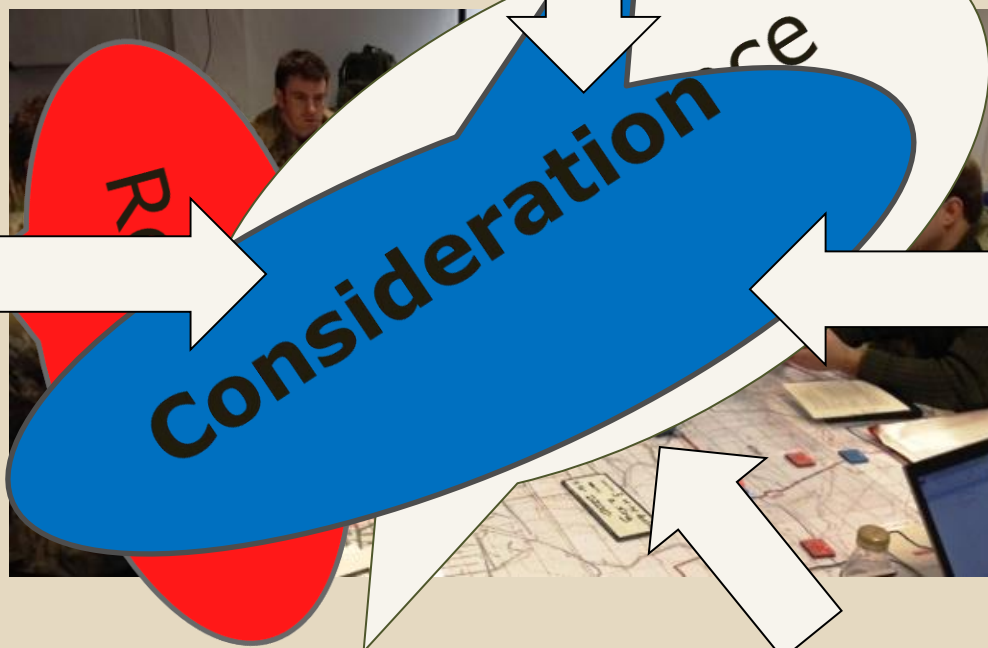
Blue, Green
Cell, Staff
Branches
(OA)



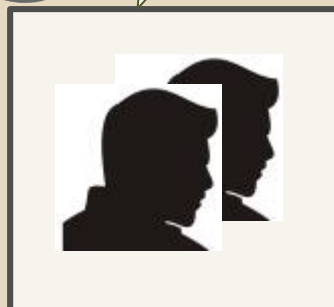
Scribe



Red Cell



Red Team



White Cell



Black,
Orange,
Brown Cells
etc

Each turn:

1. Action
2. Reaction
3. Counteraction
(consideration)
4. Consequence Management
5. Consolidation and
Recording



(Commander)



Controller



Blue, Green
Cell, Staff
Branches
(OA)



Scribe



Red Cell



Red Team

Sorry Sir,
that's
bollocks!



White Cell



Black,
Orange,
Brown Cells
etc

Each turn:

1. Action
2. Reaction
3. Counteraction
(consideration)
4. Consequence Management
5. Consolidation and
Recording



How do you do it?

Recording

Ser	Action	Reaction	Outcomes	CM	Counteracti on	Risks/ Conclusions
(a)	(b)	(c)	(d)	(e)	(f)	(g)

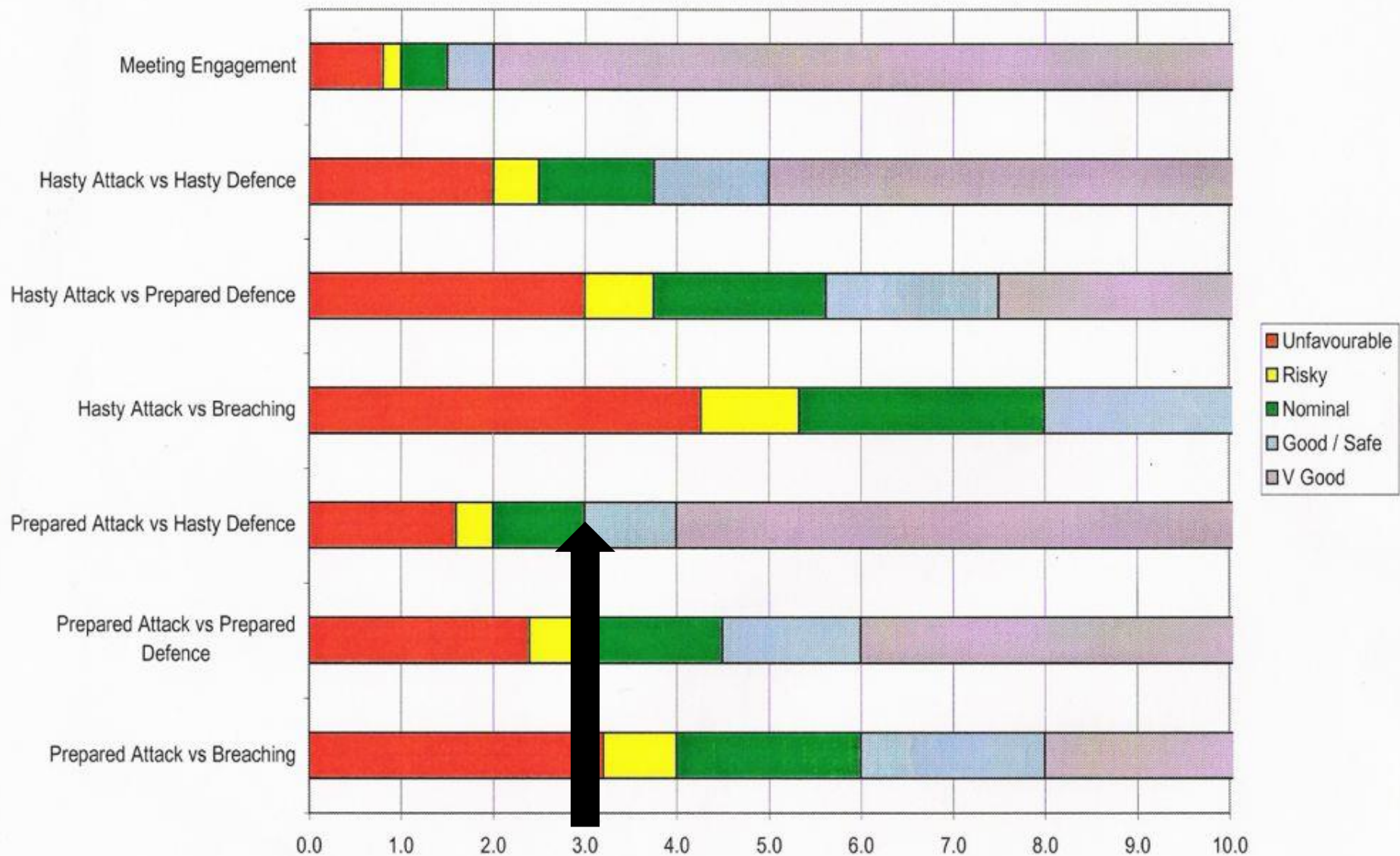


How do you do it?

Determining outcomes

- IT?
- Army SOHB: force equivalency ratios, casualty estimator etc
- Operational Analysis
- Military Judgement

Force Ratio Risk Levels





How do you do it?

Dos and don'ts



How do you do it?

Do	Do Not
Ensure the process is command-led. Focus on the commander's prioritised concerns with the plan; these become the wargame turns	Forget the aim of COA Wargaming: to stress-test the plan to identify risks and areas of weakness
Prepare thoroughly, explain and then follow the procedures (Sequence of Events <i>not</i> in doctrine)	Worry about what you call the technique used (belt, box, by phase, by DC etc)
Ensure the Red Cell is empowered and plays to win using all capabilities: they should tend towards their most dangerous COA, but with no surprises	Confuse a COA Wargame for a Rehearsal of Concept (ROC) Drill
Manage time ruthlessly	Try to resolve all risks and issues immediately unless critical to the plan
Red Team: challenge all assumptions	Confuse the Red Cell (enemy) with the Red Team (challenging assumptions)
Use OA if available	Manage risks at the wrong level or get sucked into the 'tactical weeds'
Record all conclusions and decisions taken	(Necessarily) allow the plan author to participate: he can overawe participants
Practise, practise, practise!	Omit Consequence Management



Questions?



Practical Exercise: Goose Green

- Hands-on **Demo** of 1 x turn





Practical Exercise: Goose Green

- Hands-on **Demo** of 1 x turn
- It is 26 May 1982
- You are the J3/5 Plans Branch, part of the 2-star (Combined Joint) Task Force HQ
- KISS:
 - Simplified (e.g. 2-down)
 - Slower than reality
 - Follow actual plan
 - Red Cell (Tom), Red Team (Jim), OA (Jeremy)