Application of Wargaming to Aviation Security

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"Adversarial by nature, a Wargame is a representation of conflict activities not involving actual forces, using rules, data and procedures, in which the flow of events shapes, and is shaped by, the decisions made by the players during the course of those events." (Peter Perla)

NATO Wargame during Exercise. Noble Ledger 2014

About us:
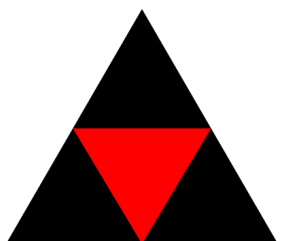
We **are not aviation security** specialists.

We are game designers and training experts in the field of security.

We will talk about (war)gaming.

Clients include:
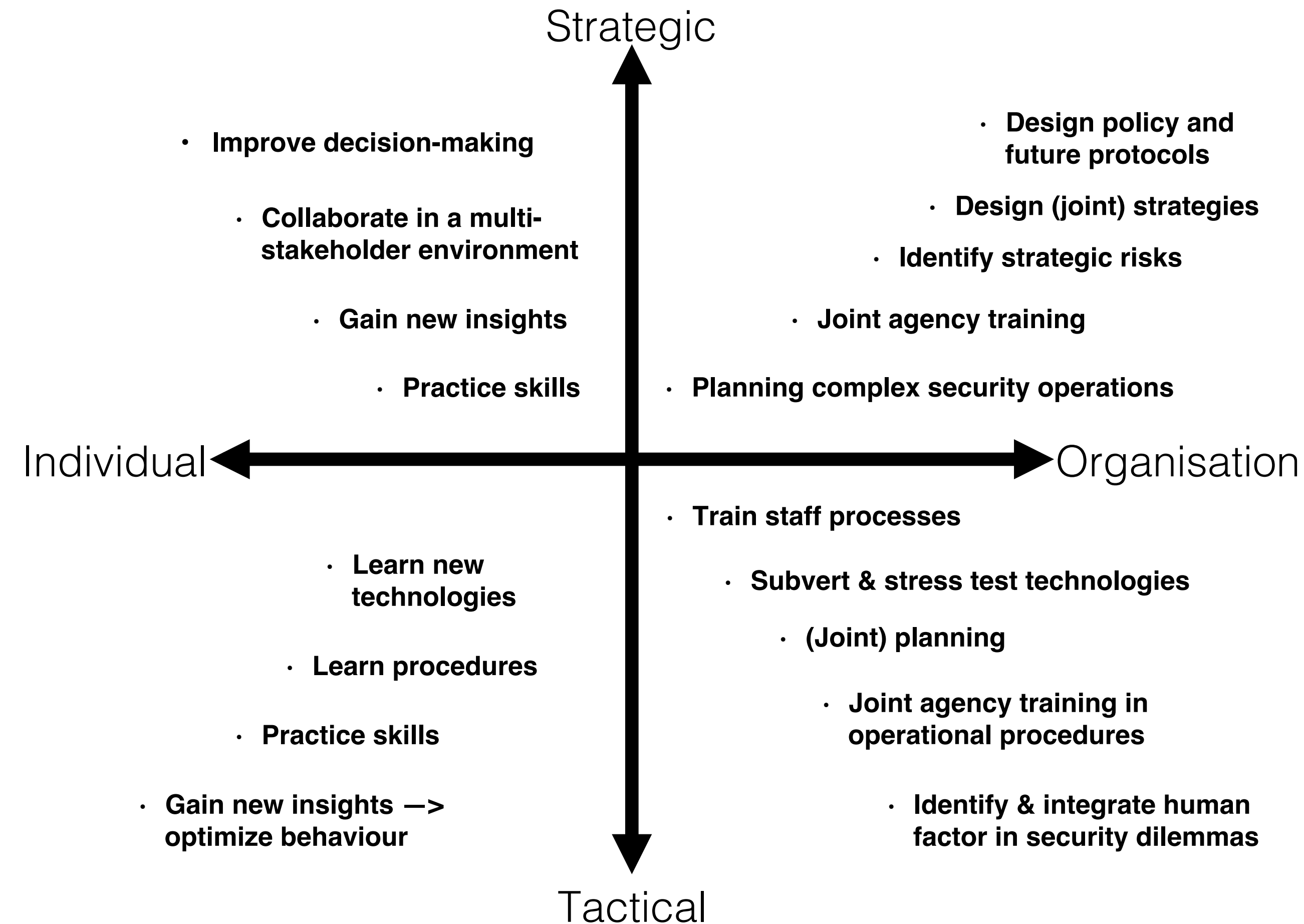
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What benefit could TSA obtain from wargaming?

- Wargames at all levels **educate**, **train** and **inform.**
- Applied in **various security contexts for different purposes** ranging from planning logistics to testing security protocols and designing business strategies.
- It provides an **opportunity to understand and take risks** in a structured learning environment, **without real world consequences.**
- Allowing organisations and individuals to **learn, improve & adjust** (organisation, team, individual).
- Gives insight into **human behaviour**.

So why should TSA - and you - care?

WARGAMING SAVES LIVES, MONEY and TIME.

Strategic

- Improve decision-making
- Design policy and future protocols
- Collaborate in a multi-stakeholder environment
- Design (joint) strategies
- Identify strategic risks
- Gain new insights
- Joint agency training
- Practice skills
- Planning complex security operations

Individual ← → Organisation

- Train staff processes
- Learn new technologies
- Subvert & stress test technologies
- (Joint) planning
- Learn procedures
- Joint agency training in operational procedures
- Practice skills
- Gain new insights —> optimize behaviour
- Identify & integrate human factor in security dilemmas

Tactical

IT IS <u>ACCEPTABLE TO FAIL</u> IN A TRAINING ENVIRONMENT.

IT IS <u>NOT ACCEPTABLE TO FAIL</u> IN AN OPERATIONAL ENVIRONMENT.

Conditions for a good wargame

What's expected from the training audience:

- Preparation.
- Open mind, **willingness to test** assumptions.
- Be **unbiased** and **objective**. Do not jump into conclusions.
- Dare to **play an intelligent enemy** (Red Teaming).
- **Strict adherence** to plans, assumptions and conditions determined prior to the start of wargame.
- Follow **instructions of facilitators.**
- **Allow** training **artificiality.**
- **Accept** positive – as well as negative – **outcomes.**

But most importantly…
ACCEPT RISK!!!

"War is the province of chance. In no other sphere of human activity must such a margin be left for this intruder. It increases the uncertainty of every circumstance and deranges the course of events".
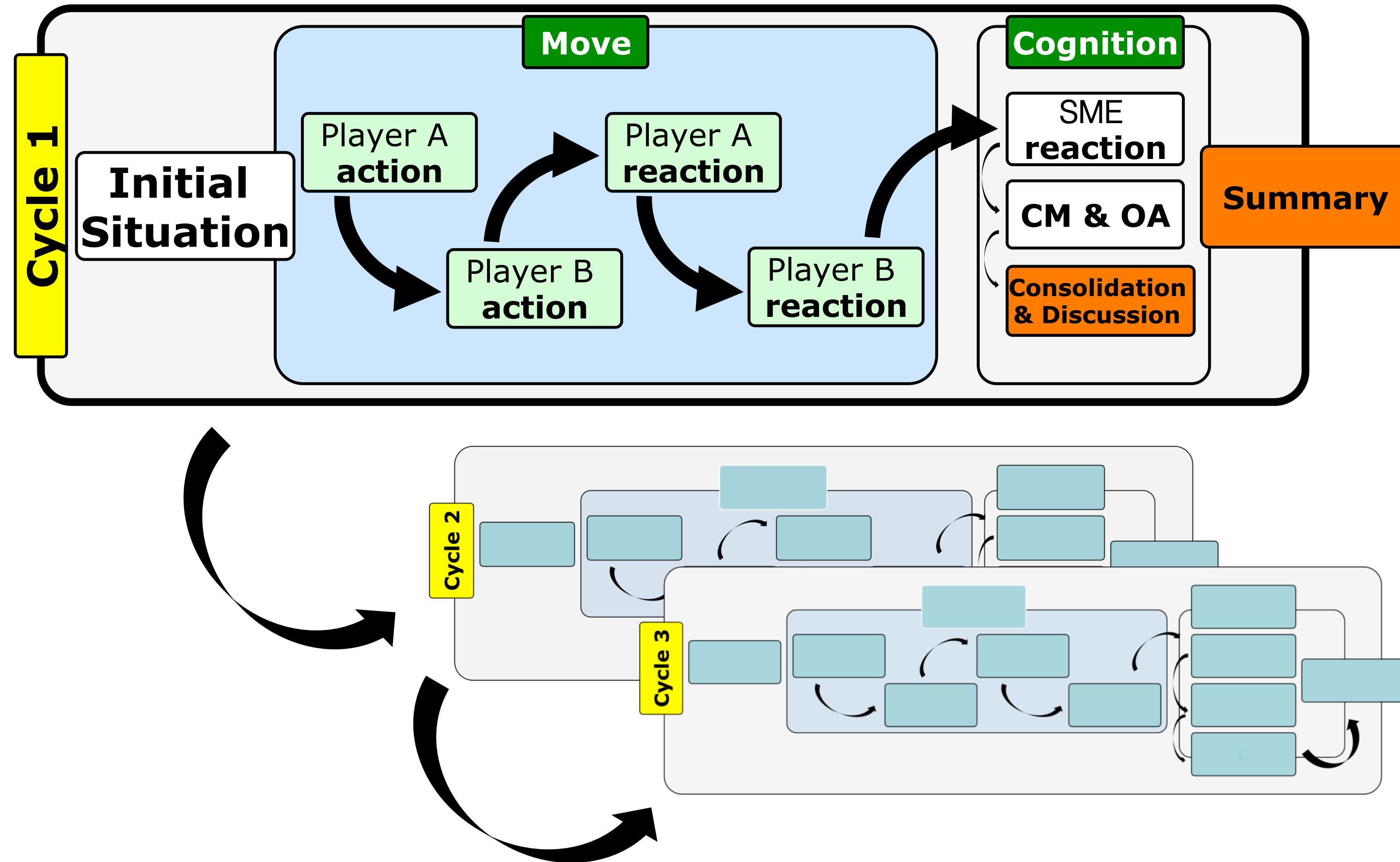
Clausewitz

Methodology

1. **TRAINING REQUIREMENT**
2. **OUTLINE INTENT**
3. **TRAINING OBJECTIVES**
4. **SELECTION OF SCENARIO**
5. **THEMES & STORYBOARDING**
6. **UPDATE SCENARIO THEMES**
7. **TABLE TOP GAME SCENARIO**

8. Finalise Scenario

Baseline context:
- Environment
- Themes

Products:
- Briefings
- Country books
- Geo-data
- Road to crisis
- Aide Memoire

Foundation of the Exercise

9. Determine Training progression

Narratives that support the training objectives:
- Based on objectives & themes of PTA & STA
- Overall picture
- Identify actors
- Create relationships
- Expand on themes

Set the scenes for training

10. MEL/MIL

Sequential events that enact the storyline:
- Based on objectives & themes of PTA & STA
- Specific training moments
- Detailed
- How, what, when & where

Key events & incidents

TRAINING

Process

Cycle 1

Initial Situation

Move
- Player A action
- Player A reaction
- Player B action
- Player B reaction

Cognition
- SME reaction
- CM & OA
- Consolidation & Discussion

Summary

Cycle 2

Cycle 3

Vignette (red teaming)

In teams create a simple **concept of an attack**.

You are: **A fanatical terrorist group**
Your intent: **To destroy confidence in aviation security**

Your capabilities: **4 people**
                      A bomb
                      2 guns
                      2 bladed weapons
                      4 mobile telephones

15 minutes. **Write down your concept in 5 bulletpoints (why, where, when, who, what). Determine your chances of success**

A fictitious airport

Chatham House rules apply.
Results will not be published.

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Debrief

- What would you consider as success?

- What are your chances of success?

- List three key assumptions you made in formulating your plan?

- Which insights did you gain?

- Was the process helpful?

Chatham House rules apply.
Results will not be published.

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Admiral Chester Nimitz – 1960

"War with Japan had been re-enacted in the game rooms at the Naval War College 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 toward the end of the war; we had not visualized these."

...actually the Naval War College had wargamed kamikaze attacks, but the officer in charge had ruled the idea to be crazy and hadn't passed on the results to the Admiral.

Uses of wargaming

Some of our experiences:

Military → at all levels, e.g. Combat Readiness Evaluation for NATO Response Force (NRF) 2015.

Civil Defence → crisis response e.g. attacks on Critical National Infrastructure (CNI).

Counter-Terrorism → training interagency decision-making.

Business → used to test business plans for financing.

Universities → show the linkages between military and political decision-making.

Governance → developing and testing resource strategies.

Wargaming in Aviation Security

We do not know of any significant structured adversarial wargaming system used at large scale to train and test aviation security.

We see opportunities for the application of wargaming in the following areas:

- Using gaming to train staff and test technology at security checkpoints.

- Gaming general onsite security using multiple threats.

- Designing games for management decision-making in aviation security.

- Team building ensuring that operators (teams) work effectively.

- Testing Concepts (CONOPS), plans and Courses of Action (COAs).

- Teaching your staff red-teaming (increased security through subversion).

Q&A

GS&A mission:

Preparing professionals to succeed with their mission.

Our non-dogmatic training solutions save lives, money and time in the areas of security, crisis response and civil military interaction.

Clients include: