

# Introduction to Wargaming pre-reading

# What is a Wargame?

Different people will give you different answers. Sometimes **wildly** different answers.

Wargames can deliver huge benefits in learning, insights, and understanding that are hard to deliver in other ways.

To avoid disappointment, everyone involved must understand what a Wargame is, and what it is meant to be used for.



# A Definition of a Wargame

*How important is it that we have a definition of a Wargame?*

"Wargaming" is used in very many different ways. It means very different things to different people and the term carries with it a lot of "emotional baggage" depending on the experiences of those involved. Attempting to find a grand all-purpose definition that encompasses all of Wargaming is essentially fruitless. In many cases people cannot even agree if the term is "War Gaming" or "Wargaming".

*Perhaps it is sufficient for someone to merely acknowledge "I am a Wargamer".*

We would disagree in the case of professional Wargaming. It is vital that those involved understand what Wargaming is and what it is trying to achieve – in the particular instance under study.

It may be that you will need to work with whoever is sponsoring your Wargame to agree a definition of a Wargame – and it might be slightly different each time!

# A Definition of a Wargame (in this case)

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.

(Based on Peter Perla's definition 2008)

- Adversarial by nature...
- a representation of conflict...
- using rules, data and procedures...
- shapes, and is shaped by, the decisions made by the players...



# Introduction – A little history

Kriegsspiel (from the German word for Wargame), was a system used for training officers in the Prussian army.

The first set of rules was created in 1812 and named "*Instructions for the Representation of Tactical Maneuvers under the Guise of a Wargame*".

Produced by Lieutenant Georg Leopold von Reisswitz and his son Georg Heinrich Rudolf von Reisswitz of the Prussian Army.

The game was adversarial, used dice, a constant ground scale, real terrain features, limited intelligence and an experienced umpire.



In 1824 it was demonstrated to Von Muffling, Chief of the Prussian General Staff. Von Muffling became more and more interested until finally he exclaimed:

***"This is not a game, this is a war exercise! I must recommend it to the whole army!"***

In 1828 von Moltke became a keen player, and later as Chief of Staff of the IV Army Corps at Magdeburg used the game as a training exercise for young officers. It is evident from the book "Moltke's Tactical Problems", edited by the Prussian General Staff in 1894, that he used the Kriegsspiel format when setting out the problems.



# How do we get better at something?

- **Practice.**

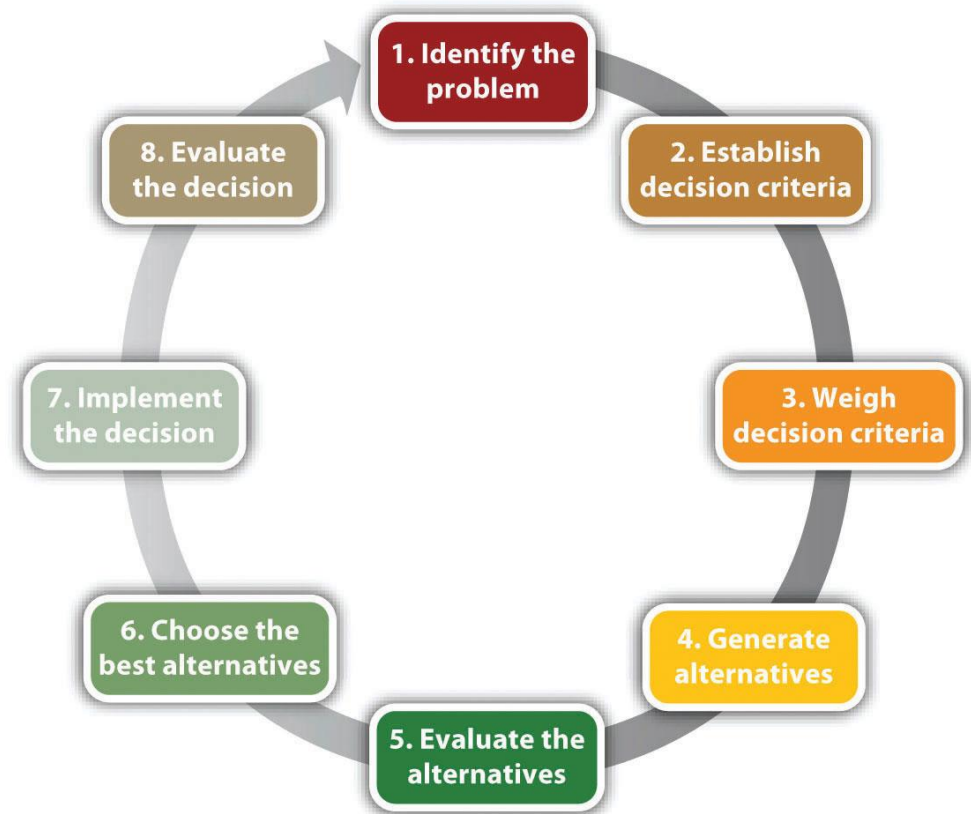
- The paper “*The Role of Deliberate Practice in the Acquisition of Expert Performance*” (Ericsson, Krampe and Tesch-Römer, 1993), found that that intense practice is more important than innate talent.
- This finding was popularised in the successful book, “*Outliers*” (Gladwell, 2008), giving rise to the popular trope that 10,000 hours of practice can turn anyone into an expert. While this has been challenged recently in specific detail (Hambrick et al., 2014), in general it is obviously true.
- So – if we want to excel in the Art of War, we need to train; and if we want our training to be effective, we need to ***practice***. Lots of ***practice***.

# Why Wargame?

- In order to *practice* decision making.

- Against *opposition*.

- To *gain insights*.





# 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 decided the idea to be so unlikely that he didn't pass on the results to the Admiral.

# History – important takeaways

- **The Wargame will achieve more if there is buy-in at a high level.**
  - Especially if they understand how it works and what it is for.
- **Wargaming is effective in training Leaders.**
  - Essentially it is about decision making in a structured context.
- **Wargaming is powered by feedback loops.**
  - You can immediately see the consequences of your decisions.
  - This feedback against an active adversary generates insights you couldn't get on your own.
- **Active adversaries challenge assumptions.**
  - Always remember – the enemy has a plan...  
"But the Germans, General, the Germans?"<sup>1</sup>
- **Wargames can have unexpected outcomes and unintended consequences.**
  - This is a feature – not a bug.
  - Do not take it personally if the results are not what you wanted.
  - You learn more by trying and failing (safely) than always being allowed to win...

1: Maj Gen Stanisław Sosabowski, Operation Market Garden, 1944

# Why Wargame?

We can use Wargames for a variety of reasons – but this is "Wargaming for Professionals" so we will leave out the purely recreational.

Wargames can **educate, train** and **inform**.

They provide:

- A greater understanding of the conflict.
- A "fitness programme for leadership thinking<sup>1</sup>", practicing the conceptual element of fighting power.
- An opportunity to understand and take risks in a safe environment.
- Encouragement for better decision makers and decision making.
- A chance to practice key skills as individuals and teams.
- An opportunity for genuine insights that no single individual, however expert, can achieve.
- The chance to test a plan and the assumptions behind it.

1. Maj Gen Skeates – Army Wargaming Symposium - 2014

<https://www.usnwc.edu/getattachment/413220cd-a209-4447-bac2-af6cdaeabd4f/Why-Wargaming-Works>

# Why Wargame?

They provide:

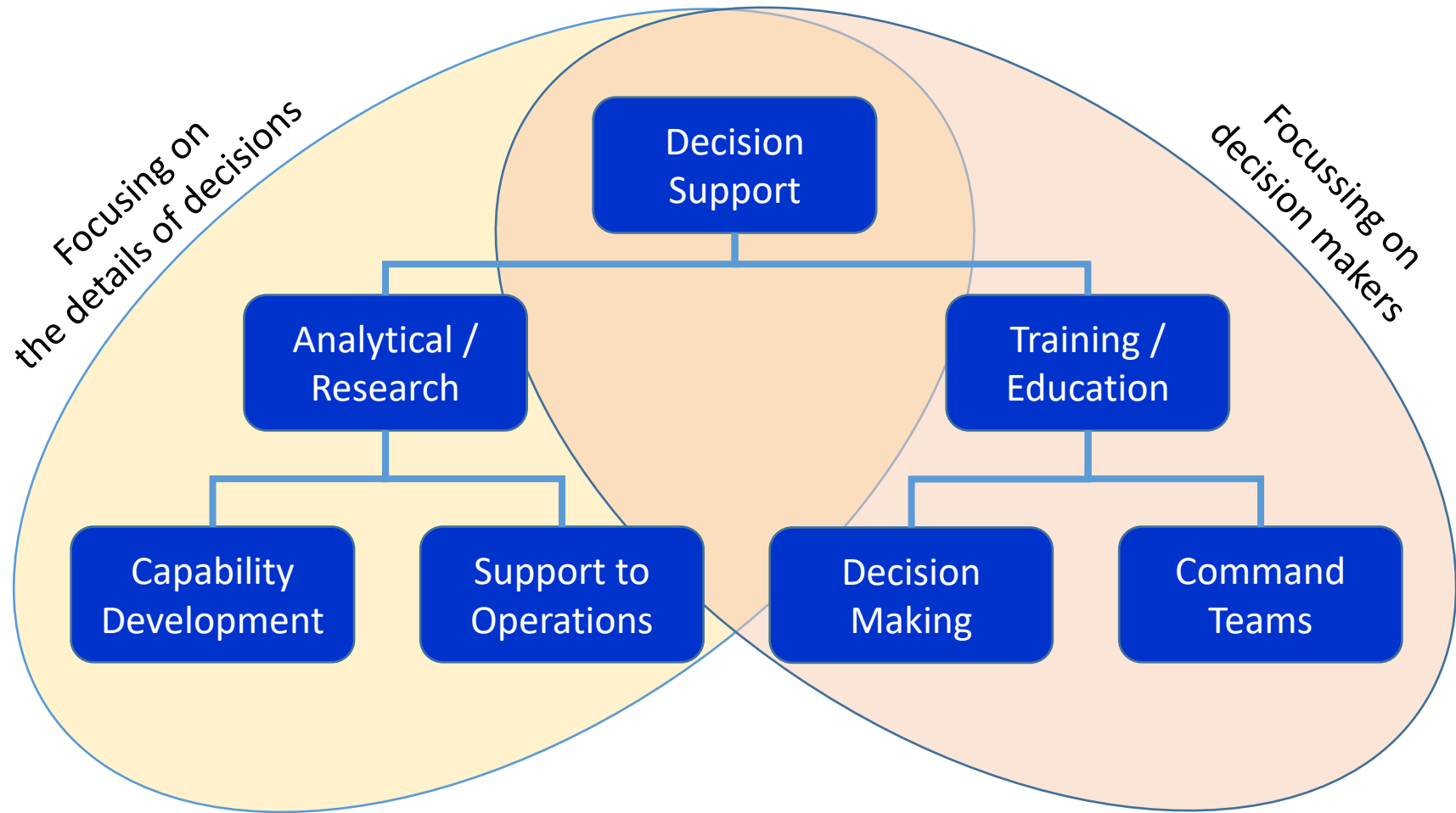
- Exposure to conflict at all levels, past present and future.
- The friction inherent in all complex operations.
- An adaptive thinking opponent.
- The chance to explore innovation.
- The opportunity to experiment.
- The prospect of developing plans and organisations – and testing them.

Players face a challenging environment.

Players face the consequences of their own actions.



# Wargaming Applications



Wargaming is an art, not a science

# Are these Wargames?

- **Bunch of Guys Sitting Around a Table (BOGSAT):** This is an unstructured discussion about a plan or situation and the potential issues associated with it.
- **Rehearsal of Concept (ROC) Drill:** This is where all the key leaders involved walk through a plan in order to check all elements are understood and synchronised / deconflicted properly.
- **Tactical Exercise Without Troops (TEWT):** This is a planning Exercise, conducted on the real terrain but without the actual forces present.
- **Staff Ride:** This is similar to a TEWT but usually of a historical conflict, reviewing the physical challenges and tactical issues.
- **Red Teaming:** This is a technique for planning or operations that uses an independent team (the "Red Team") to challenge assumptions from an adversarial point of view.
- **Course of Action Wargame:** This is normally a phase in the military decision making process where the commander rehearses his assumptions against agreed enemy courses of action.

# Are these Wargames?

- **An Army Live Training Exercise:** This is where actual forces deploy on the ground and demonstrate their ability to execute a plan, often but not always, against a scripted enemy. This includes:
  - **Deployment Exercises.**
  - **Readiness Exercises.**
  - **Live Firing Exercises.**
- **An Army Virtual Training Exercise:** This is where an element of actual forces demonstrate their ability to execute a plan in a 3D computer virtual environment. Normally there will be enemy forces, but the Exercise is planned in such a way that the participants are tested but without being defeated.
- **An Army Constructive Simulation Exercise:** This is where the Command element for actual forces demonstrate their ability to plan (and sometimes execute that plan) against a pre-determined enemy in a computer simulation. This is normally a map based game using aggregated forces (counters representing Units or Formations).

# Features of Wargaming

- **Wargames are hard to repeat analytically .**
  - Players make different decisions each time, needing complex qualitative methods to analyse successfully.
- **Wargames do not predict the future.**
  - They let you practice one possible future.
- **Wargames generate insights.**
  - They don't tell you "how many to buy" – but they might give you an insight into to what sort of thing to buy, or even more importantly – what **not** to buy.
- **Wargames are dependent on the players.**
  - If the process is to add value, it has to have willing participants. A few people lacking commitment in key positions can limit buy-in and affect credibility.
- **Manual Wargames can be very inexpensive and fast to set up.**
  - Sometimes it can be a great help to take a high level "quick look" at a situation before you invest time and effort in something that could be the wrong thing. Just don't expect lots of robust analytical data from it.



# Features of Wargames

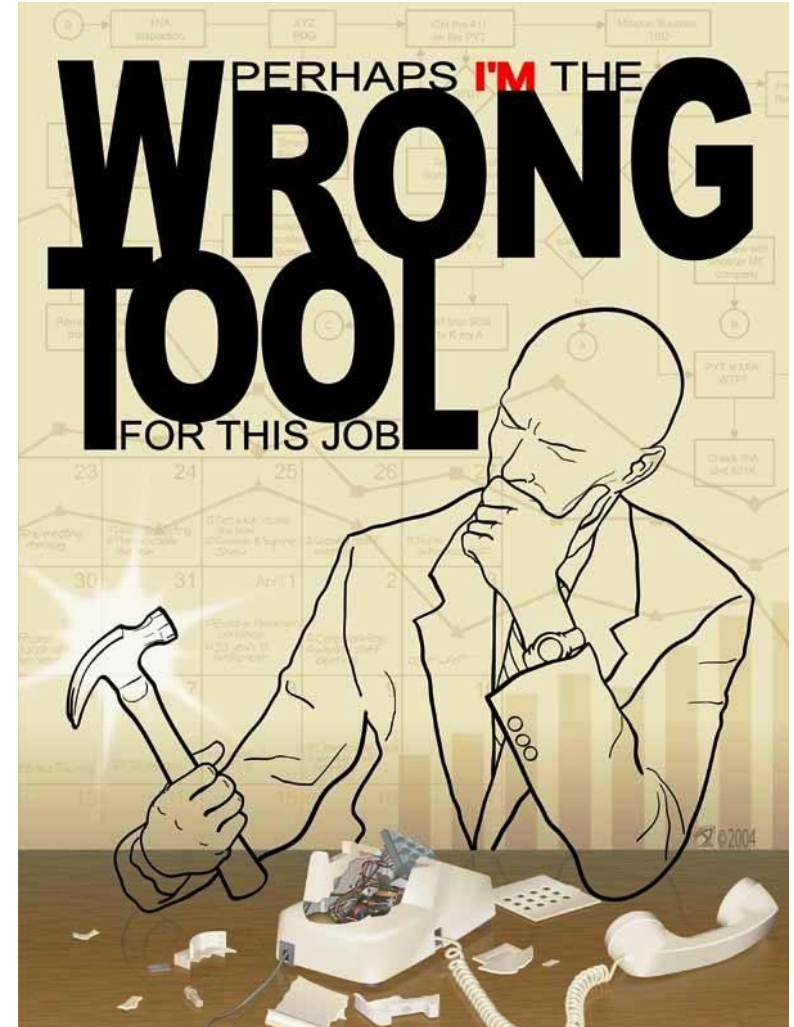
**Wargames are a dynamic synthesis of factors and not merely a model.**

- Complex models are time consuming and expensive.
- Increasing the complexity of models does not necessarily increase their accuracy:
  - **Occam's Razor:** Among competing hypotheses, the one with the fewest assumptions should be selected. Over detailed models (with unnecessary detail) are more likely to obscure insights than illuminate them.
  - **Overfitting:** This generally occurs when a model is excessively complex, such as having too many parameters relative to the number of observations. A model which has been overfit will generally have poor predictive performance, as it can exaggerate minor fluctuations in the data.

# If all you have is a hammer...

...every problem looks like a nail.

- Just because you have an approved model that worked last time does not mean it will work under different circumstances.
- Wargamers (and everyone else) instinctively reach for the last thing that worked rather than take time to work out what may be best.
- Given the fact that Wargamers have to spend time defending their own existence, they can get defensive about what they do, and this can exacerbate the situation.



# Features of Wargaming

Please tick what you want:

☐

**Good**

☐

**Fast**

☐

**Cheap**

How many do you think you can have?

See [https://en.wikipedia.org/wiki/Project\\_management\\_triangle](https://en.wikipedia.org/wiki/Project_management_triangle)

# Ex Agile Warrior 11 – Insight #10

- *"Wargaming is a powerful tool which is currently not well understood and therefore somewhat neglected."*
- The wargame includes four essential elements:
  - It must be genuinely adversarial.
  - It must be Umpired.
  - It must involve a deliberate element of uncontrollable chance.
  - Scenarios should be fought through as often as time permits.





# Pareto Principle



- Wargaming can be an efficient way to maximise results with reduced effort.

See: [https://en.wikipedia.org/wiki/Pareto\\_principle](https://en.wikipedia.org/wiki/Pareto_principle)

# Wargame Perceptions

Perceptions and emotional baggage:

Wargames have to be hugely complicated.



**NO** – they can be really simple (try [Guerrilla Chequers by Brian Train](#)).



# Wargame Perceptions

Perceptions and emotional baggage:

Wargames are only played by Nerds.



What some might do in their spare time is irrelevant to professional wargaming.

Any use of dice makes it purely a game of chance.



Dice equate to Risk. If there is no risk it isn't a Wargame (or a War).

# Why Wargame?

- Because they produce innovation and original thought:



DEPUTY SECRETARY OF DEFENSE  
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FEB 09 2015

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS  
CHAIRMAN OF THE JOINT CHIEFS OF STAFF  
UNDER SECRETARIES OF DEFENSE  
VICE CHAIRMAN OF THE JOINT CHIEFS OF STAFF  
CHIEFS OF THE MILITARY SERVICES  
CHIEF OF THE NATIONAL GUARD BUREAU  
COMMANDERS OF THE COMBATANT COMMANDS  
DIRECTOR, COST ASSESSMENT AND PROGRAM EVALUATION  
DIRECTOR OF THE DEFENSE INTELLIGENCE AGENCY  
DIRECTOR, NET ASSESSMENT

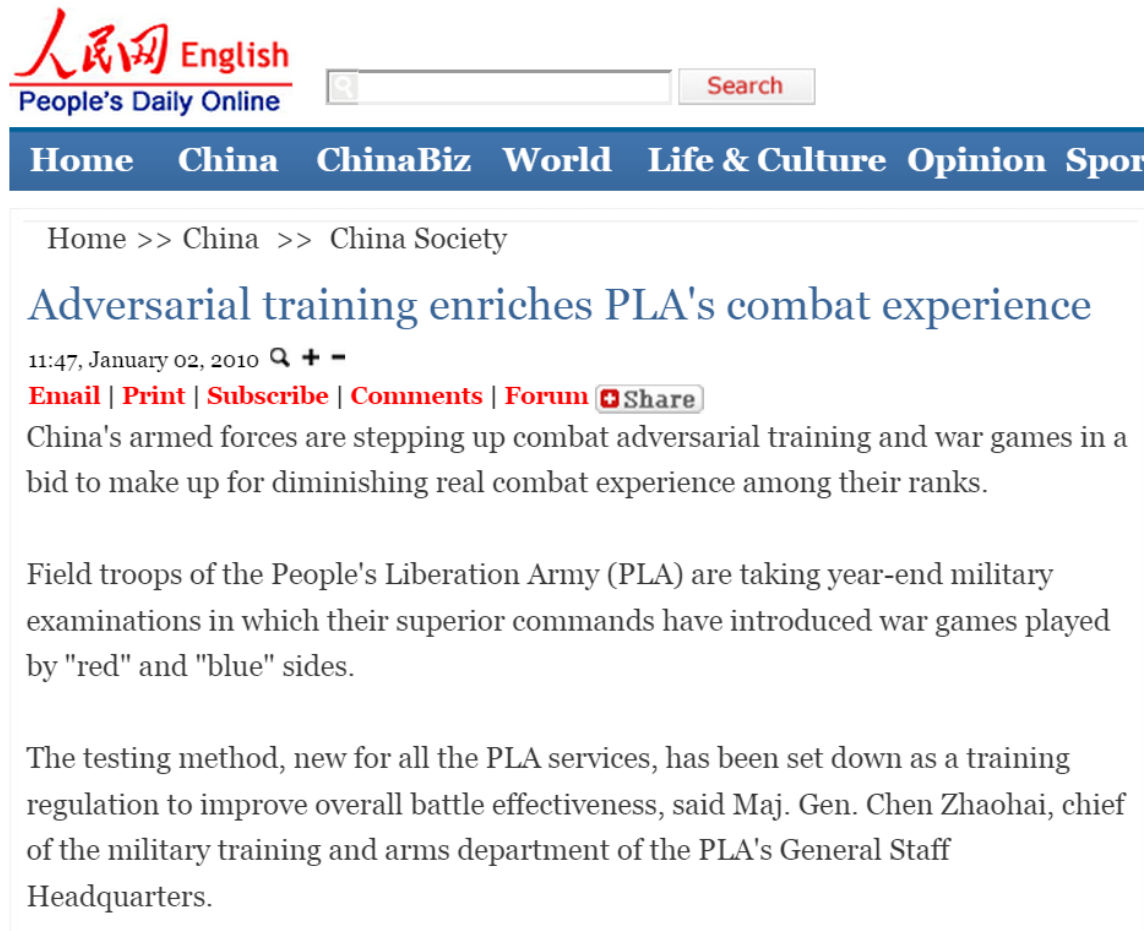
SUBJECT: Wargaming and Innovation

I am concerned that the Department's ability to test concepts, capabilities, and plans using simulation and other techniques—otherwise known as wargaming—has atrophied. To most effectively pursue an innovative third offset strategy, avoid operational and technological surprise, and make the best use of our limited resources, we need to reinvigorate, institutionalize, and systematize wargaming across the Department. Reinvigorated wargaming across the defense enterprise fits within the Defense Innovation Initiative, which aims to bolster the credibility of U.S. security guarantees at home and abroad through innovative and agile thinking and actions.



# Why Wargame?

- Because our potential adversaries think it works:



The screenshot shows the English version of the People's Daily Online website. The header includes the site's logo and name, a search bar, and a navigation menu with links to Home, China, ChinaBiz, World, Life & Culture, Opinion, and Sports. The main content area displays a news article with the following details:

- Breadcrumb: Home >> China >> China Society
- Title: Adversarial training enriches PLA's combat experience
- Date and Time: 11:47, January 02, 2010
- Interaction Links: Email, Print, Subscribe, Comments, Forum, and a Share button.
- Lead Paragraph: China's armed forces are stepping up combat adversarial training and war games in a bid to make up for diminishing real combat experience among their ranks.
- Body Paragraph 1: Field troops of the People's Liberation Army (PLA) are taking year-end military examinations in which their superior commands have introduced war games played by "red" and "blue" sides.
- Body Paragraph 2: The testing method, new for all the PLA services, has been set down as a training regulation to improve overall battle effectiveness, said Maj. Gen. Chen Zhaohai, chief of the military training and arms department of the PLA's General Staff Headquarters.

# Pre-Reading Takeaways

- If you are considering using a Wargame, get buy-in from the top.
- Understand what the Wargame is for and why.
- A proper opposition generates an action / reaction feedback loop that produces insights vastly more powerful (and accurate) than a single opinion, however well informed.
- Well implemented Wargames are really useful for education, insight, understanding and training.
- Poorly executed Wargames not only miss the point, but put people off and can generate false lessons..
- Wargames carry emotional baggage.
- Complexity doesn't equal accuracy.
- Understand the difference between random chance and managing risk.
- Good Wargames can save lives.