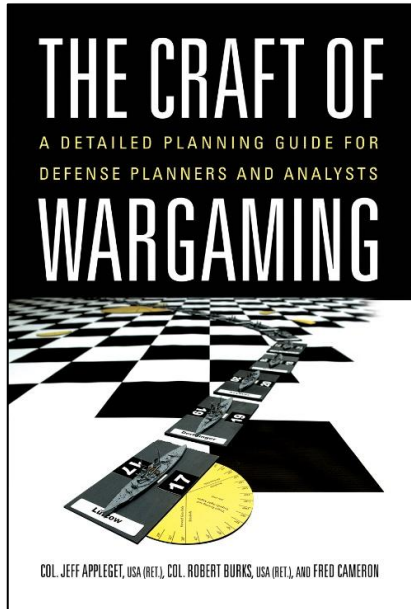


Jeff Appleget, PhD
Colonel, U.S. Army (retired)
Operations Research Department
U. S. Naval Postgraduate School

The Craft of Wargaming



Naval Institute Press
2020

- We consider wargaming a craft, a combination of both art and science.
 - Wargaming is not a pure science; you can't learn everything you need to know from reading published materials (textbooks, research reports, etc.).
 - Wargaming is not exclusively an art—you cannot become a wargaming 'artist' simply through experience and studying the examples provided by other artists.
- Wargaming is a craft: in order to be a good craftsman, you must learn about your craft and practice your craft, that is, gain experience and knowledge by doing. Two prongs:
 - Education
 - Hands on experience

With education and experience, almost anyone can make a significant contribution to designing, developing, and conducting a wargame.

Students spend over half of the course designing, developing, conducting and analyzing wargames for Navy, other DoD, or defense partner sponsors.



Taiwan Wargame - 2019

**DoD Capstone Sponsors: 23 Navy, 13 Joint, 7 Int'l, 7 Marine Corps, 6 Army, 2 Industry.
Wargames (129 total): 47 Navy, 32 Marine Corps, 17 Int'l, 18 Joint, 12 Army, 3 Industry.**



NPS Wargaming Mobile Education Team (MET) Workshops Delivered and Projected (2025-2026)



- Basic Analytic Wargaming workshop
- Non-standard Wargaming workshop

North America

Lockheed Martin (Sunnyvale, 2012)

U. S. Space Force (C. Springs, 2021, 2025)

STRATCOM (Omaha, 2014)

TRAC (WSMR, 2018)

NAVAIR (China Lake, 2017, 2019)

NSMWDC (San Diego, 2019)

NSMWDC (San Diego, 2021 [2])

MARFORPAC (Camp Smith, 2019)

NATO JWC (Stavanger, 2020, 2021, 2023)

Nordic Tri-Lateral (2019, 2022, 2023)

NATO SOF HQ (Mons, 2019)

NATO School (O-gau, 2022, 2023, 2024)

Spanish Joint Forces (Madrid, 2022, 2024)

USA Futures Cmd (Picatinny, 2021)

DTRA (Ft Belvoir, 2021)

MCWL (Quantico, 2018, 2019)

MCCDC (Quantico, 2016, 2022)

II MEF (Camp Lejeune, 2022, 2023)

CENTCOM (Tampa, 2015, 2017[2])

FOI Swedish DRA (Stockholm, 2018)

Hybrid Centre of Excellence (Helsinki, 2021, 2022, 2023, 2024, 2025)

USAREUR-AF Wiesbaden (2021, 2023, 2024, 2025)

Slovene Armed Forces (Maribor, 2023, 2024, 2025, 2026)

6th Fleet/NAVEUR-AF (Naples, 2023, 2024)

AFRICOM (Stuttgart, 2018)

Europe

USNFK (Busan, 2024)

Taiwan (Taipei, 2019)

Indonesian Navy (Surabaya, 2015)

ADF Joint Exp (Canberra, 2017-2021)

DST-Group (Adelaide, 2016)

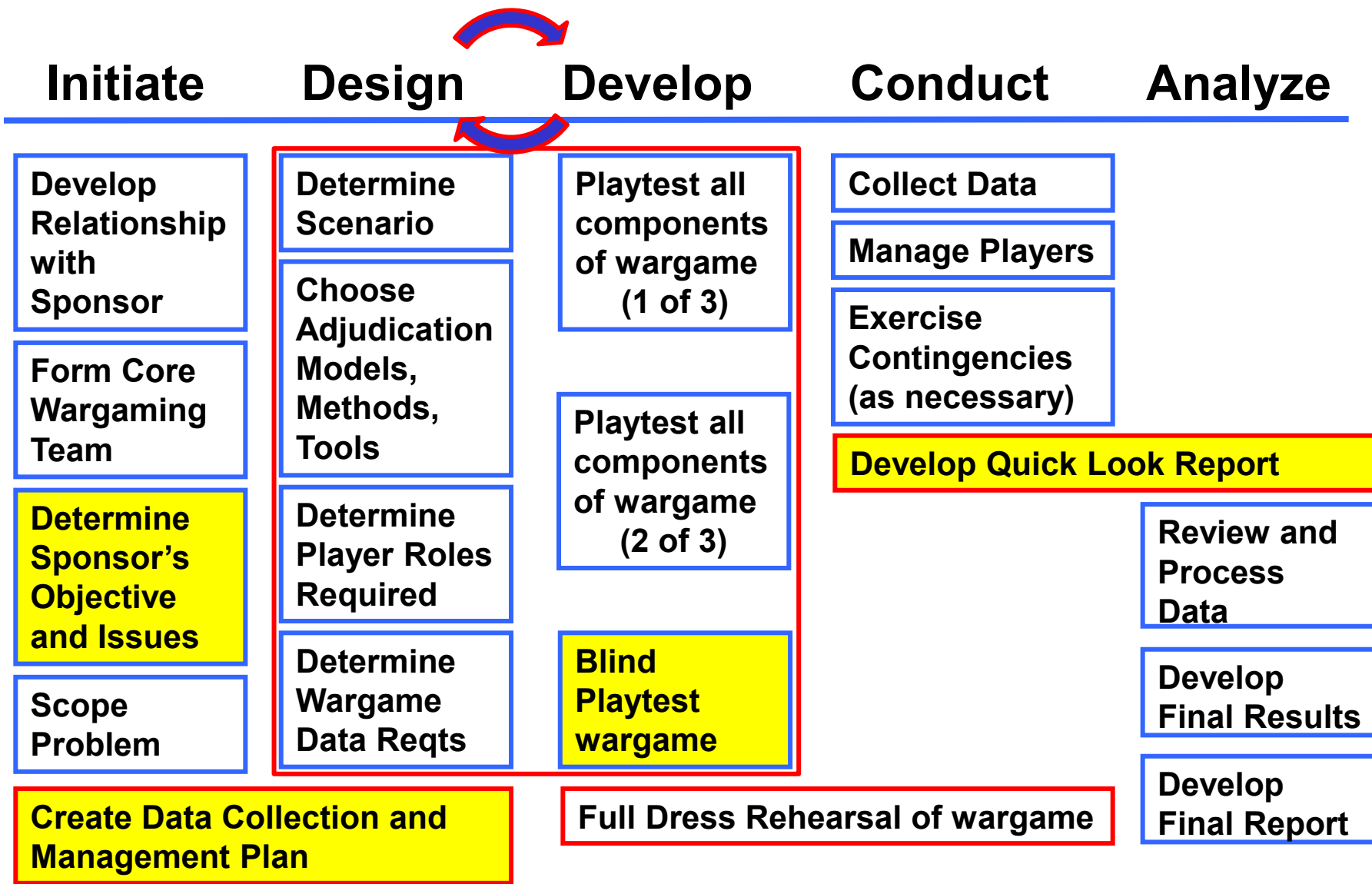
DTA (Auckland, 2013)

Oceania and East Asia



Five Phases of Wargame Creation

(Major tasks, not all inclusive)





Determine Sponsor's Objective and Issues: Unified Quest 2005



Sponsor Objectives:

- The Unified Quest wargame objectives are **to explore the application of future Joint, interagency and multinational concepts.**
- More specifically, wargame planners are asking, “How well do the projected 2015 concepts and capabilities enable the combined and Joint force to defeat adaptive, networked adversaries who have catastrophic weapons and a strategy of protracted, asymmetric operations employing all forms of traditional and irregular warfare?”



Determine Sponsor's Objective and Issues: Three Sponsor Interactions



- **First: Clarify**
 - Make sure you understand the sponsor's problem
- **Second: Confirm**
 - Restate the problem in words that the wargaming team understands
 - Define all acronyms, buzzwords and jargon that are open to interpretation
 - Verify sponsor-provided constraints and assumptions
- **Third: Scope**

Once the sponsor and the wargaming team agree on the wargame's *scoped* objective and key issues, a 'Sponsor Proposal Agreement' is signed by both the sponsor and the wargaming team.



Unpacking Sponsor Issues: Looking for **'and'**, **'or'**, commas and slashes.



How can SAPSOC work with and through coalition partners and the interagency to secure advantages in phase zero or the "Contact Layer" in the Philippines and South China Sea while setting conditions **to deter major conventional warfare or dominate in the "Blunt layer?"**

Key Issues:

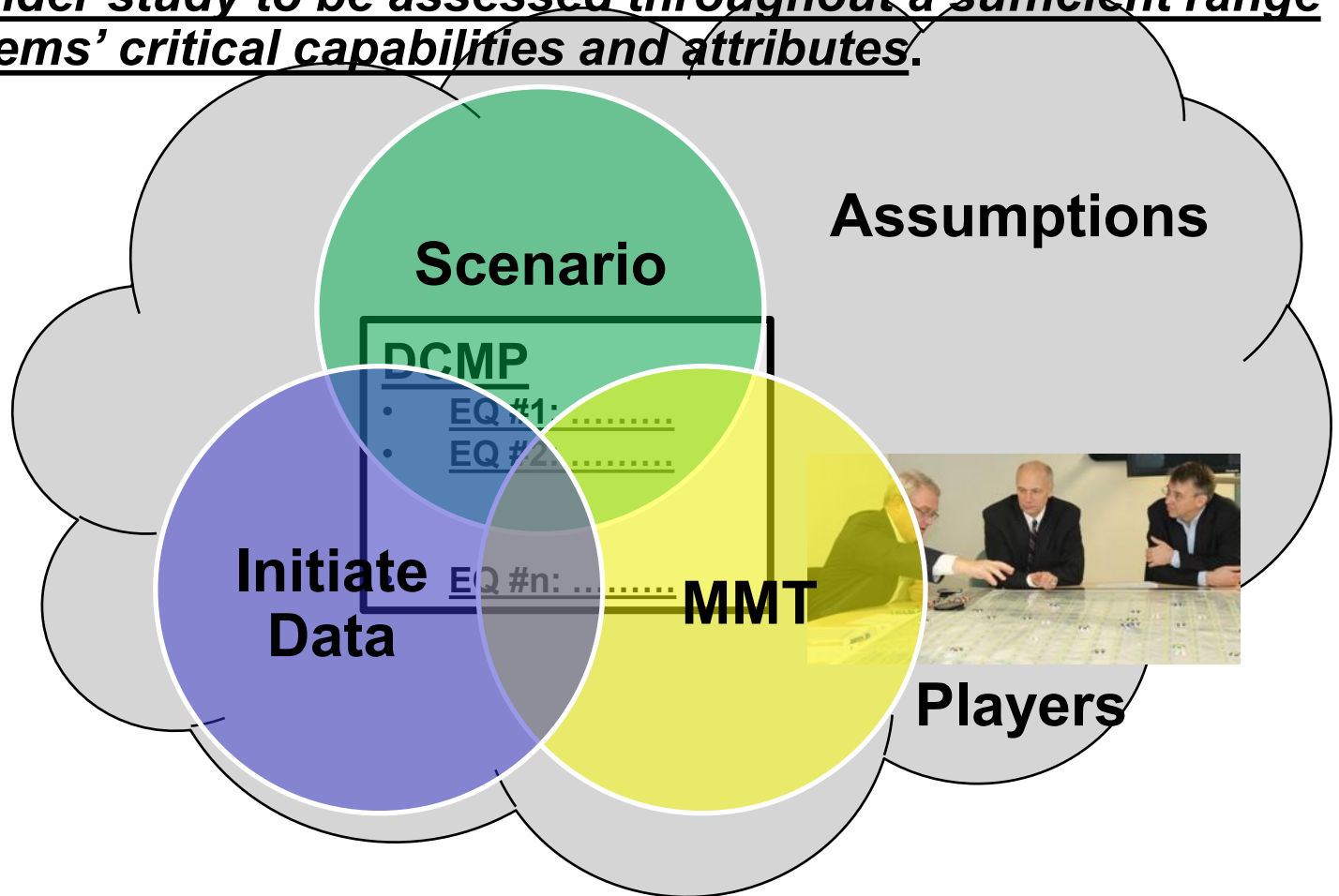
- Who are the key **existing and future** coalition **allies and partners** and how should **SAPSOC and SOF** work with these partners to secure advantage in the **Philippines and South China Sea**?
- Identify nested authorities to enable effective **collaboration/synchronization/integration**.
- What C4I **adjustments and improvements** need to be made to enhance **unity of vision and effort**?
- Identify **opportunities or risks** of indirect approaches to **deter or increase** the risk of major conventional war.

Decomposing or distilling each Key Issue into its Essential Questions allows the wargaming team to:

- 1) thoroughly understand what the sponsor is asking from the wargame and**
- 2) create the foundation of the wargaming design plan**

Create the Data Collection and Management Plan (DCMP): Measurement Space

- **Measurement space** is a function of the scenario, MMTs, and data used in an analytic study. The objectives of the study can only be met if the measurement space **allows enough latitude to permit the systems under study to be assessed throughout a sufficient range of the systems' critical capabilities and attributes.**



Blind Playtest: Exposing your wargame to outside scrutiny

- The wargaming team has designed and developed the wargame multiple times, adjusting the game and adding detail only where required.
- The wargaming team begins to believe their wargame is really good, maybe even great! They have created something beautiful...



The blind playtest is a playtest of the wargame with players who have had no exposure to the wargame.

Attempt to get players with the same credentials as the players who will play the actual wargame!



Quick Look Report: Confirming Top-Level takeaways with the Wargame's Players

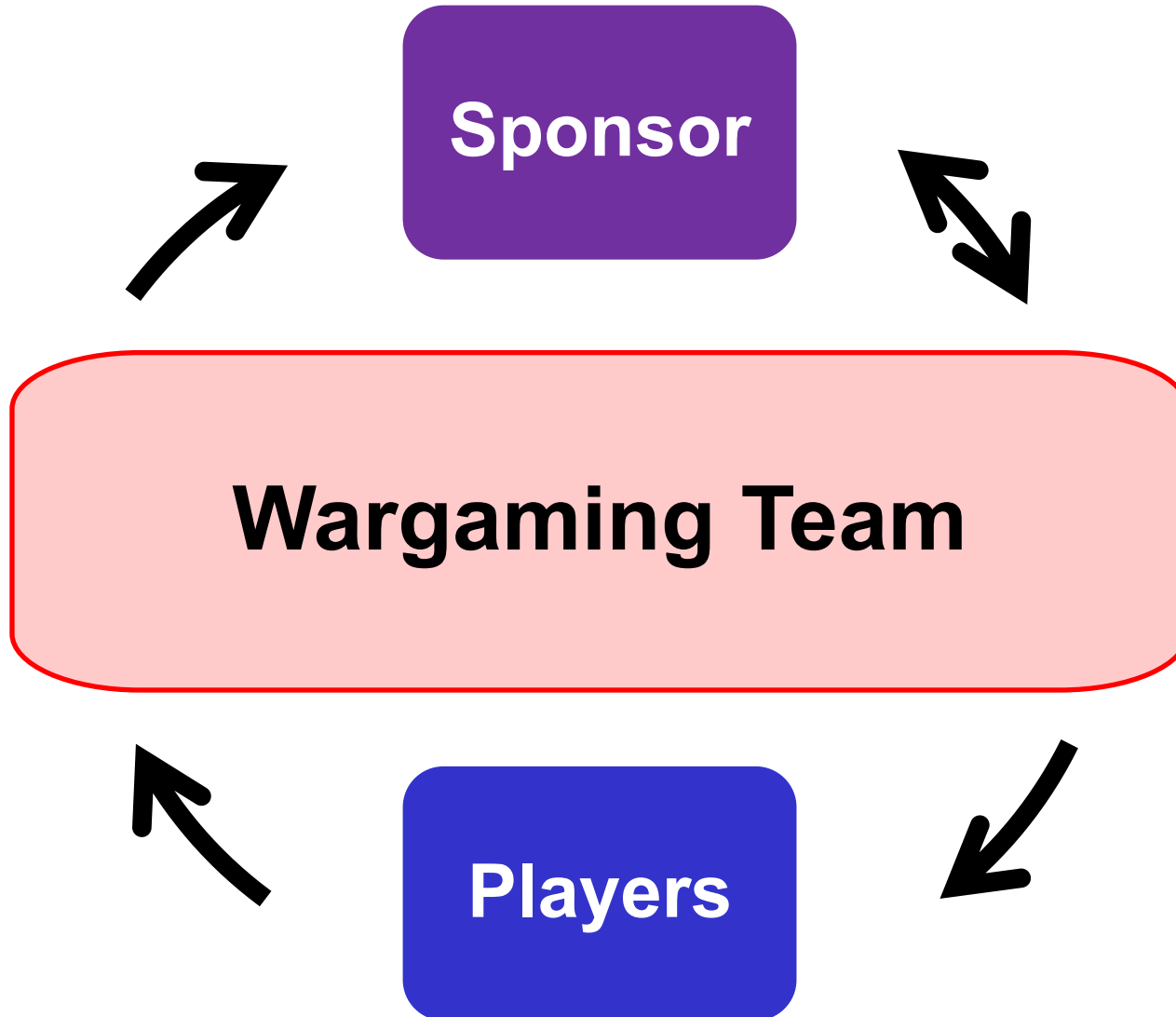


- Conducted upon conclusion of game, but before players depart.
- Primary purpose is to confirm top-level insights that you have identified from emerging wargame results with the players that produced the results.
- Recommend these be facilitated.
- For multi-day wargames, you may do a quick-look report each day.



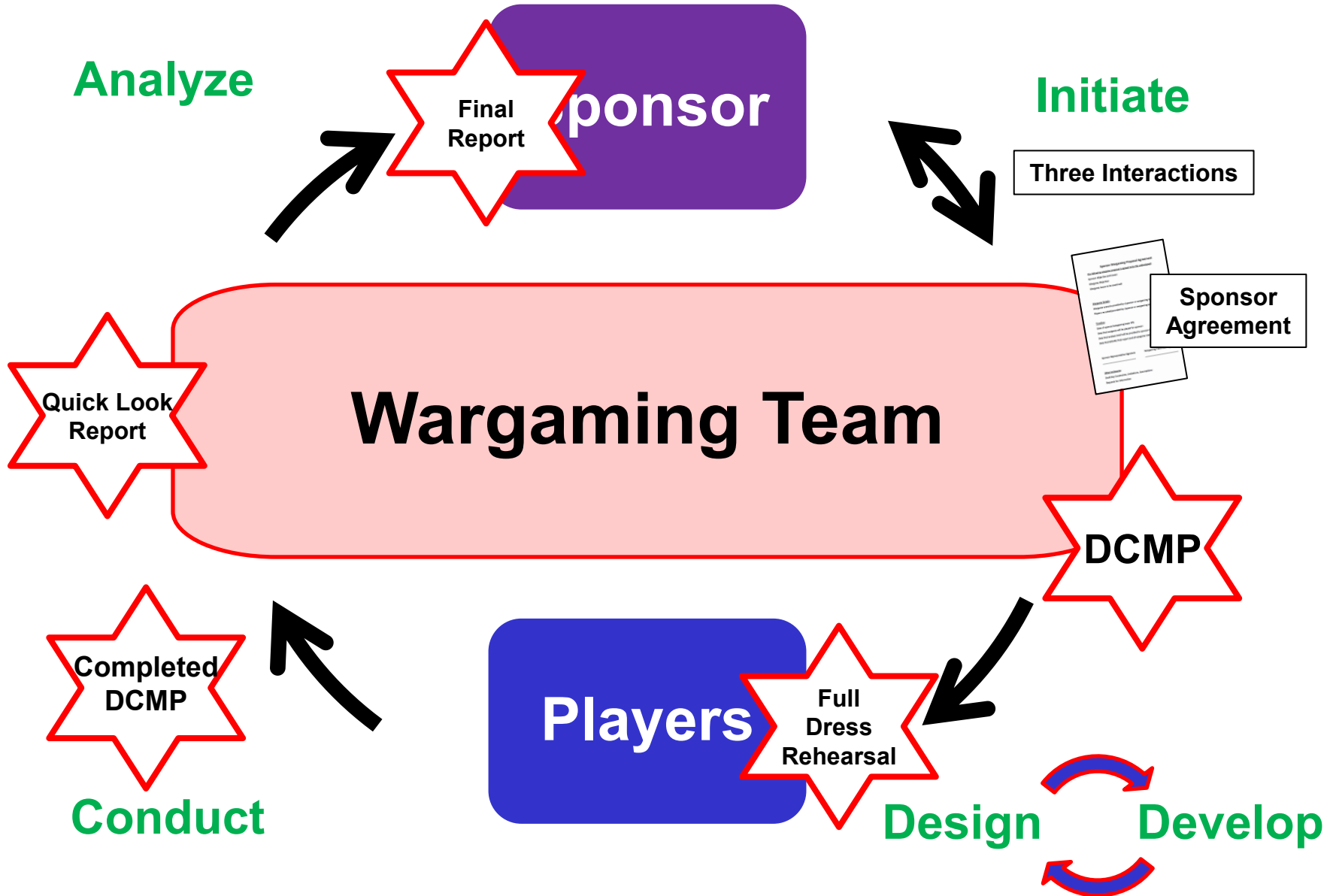
We also recommend scheduling Key Player Interviews after the wargame concludes. These could be conducted before or after the Quick Look Report!

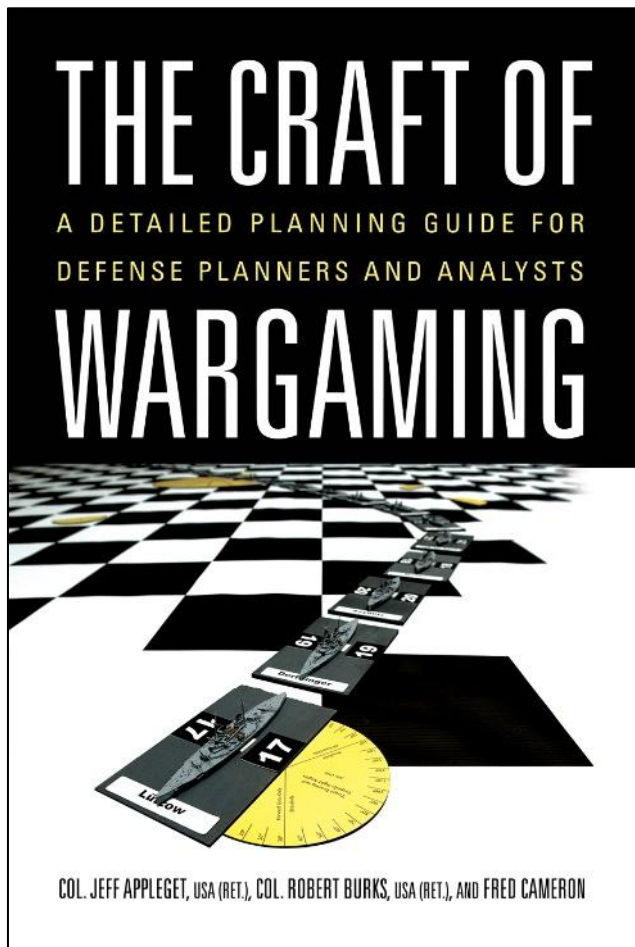
Communication and the Art of Wargaming Design*



**The Art of Wargaming, Peter Perla, pp. 191-192.*

Communication and the Phases of Wargame Creation





“For the past three decades the professional wargaming community around the world has been wrestling with a debate on the very nature of wargaming. Is it art or is it science? In this book Professor Appleget and his colleagues have cast new light on the issue. They make a cogent argument that, art or science, the design and creation of wargames is a craft—a craft which anyone with perception, patience, and practice can learn to apply productively to professional problems requiring the exploration and understanding of human decision making under the stress of both cooperation and conflict. As a handbook for learning and engaging in this craft, *The Craft of Wargaming* deserves a place in the library of every serious wargamer.”

—Peter P. Perla, author of *The Art of Wargaming*,

Wargaming creation is not an exclusive domain for a few mystical wargaming masters—with education and experience, almost anyone can make a significant contribution to designing, developing, and conducting a wargame.