



Strategic Command

Defence Experimentation and Wargaming Hub

**Wargame Skills and Learning Analysis  
for UK MoD Strategic Command**

**Vedette Consultancy**



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**Connection UK 2024**

# **Wargame Skills and Learning Pathways**

**Analysis conducted for UK Ministry of Defence**

**Gareth Jones, Vedette Consultancy**



## Key Briefing Points:

1. Background to MoD Approach
2. Analysis of Wargame Skills Requirements including (PDSF/PLNA)
3. Research Methods and Stakeholders
4. Results Wargame Skills Framework and Learning Pathways
5. Questions and any further discussion points

# The Approach to Defence Wargaming Training & Skills

- UK Defence & Security Industry Strategy 2021
  - Industry, government and academia work together in strategic relationship
  - Bi-lateral and multi-lateral links with partners to innovate and create capability
  - Understand current & future skills demand for government, industry and academia
  - Pan-Defence Skills Framework (PDSF) flexibility working across government and industry
- **PDSF approach has been adopted for developing Professional Wargaming**



# Analysis: PDSF Process and Benefits

1. Process involves subject matter experts writing clear definitions of skills based on the knowledge, skill application, experience, and behaviours that individuals need for different levels of proficiency.
2. Benefits:
  - *greater empowerment and flexibility: offering "zig-zag careers" to increase flexibility in career planning*
  - *lateral entry to allow specialists to join the military at ranks that recognise their skills and experience*
  - **focussed training and development:**
    - **establishing clear pathways for training and development to improve skills**

# PDSF for Wargaming Capability

Proficiency Levels		Level 1: Awareness		Level 2: Foundation		Level 3: Working / Junior Practitioner		Level 4: Practitioner	
		Demonstrates basic knowledge of the skill and how it is applied. Able to recall information and follow basic instructions/orders.		Applies knowledge and performs discrete tasks under limited supervision.		Applies knowledge and experience to complete tasks unsupervised, adopting suitable tools/techniques.		Demonstrates consistent application of skill in a range of environments. Able to share knowledge with and direct others.	
		No		Yes		No		Yes	
<b>Knowledge</b>		<b>Knowledge</b>		<b>Knowledge</b>		<b>Knowledge</b>		<b>Knowledge</b>	
		<ol style="list-style-type: none"> <li>1. Understanding of basic wargaming terminology and concepts.</li> <li>2. Familiarity with common wargaming techniques and tools (i.e. game mechanics, materials, modes of data collection and formats of reporting).</li> <li>3. Knowledge of historical and contemporary examples of wargame best practice.</li> <li>4. Awareness of the role and function of wargaming, within the paradigm of experimental techniques, and wargaming's relative utility in supporting decision-making and strategic planning.</li> </ol>						<ol style="list-style-type: none"> <li>1. Comprehensive understanding of several wargaming methodologies and frameworks.</li> <li>2. Proficiency in evaluating the strengths and weaknesses of different wargaming approaches.</li> <li>3. Familiarity with advanced wargaming tools and software.</li> <li>4. Knowledge of the role of wargaming in diverse contexts, such as military, political, and business environments.</li> </ol>	
<b>Skill Application</b>		<b>Skill Application</b>		<b>Skill Application</b>		<b>Skill Application</b>		<b>Skill Application</b>	
		<ol style="list-style-type: none"> <li>1. Able to participate in simple wargaming exercises and scenarios.</li> <li>2. Capable of identifying wargame objectives and can analyse, interpret and deliver simple wargame results.</li> <li>3. Skilled in identifying key factors that influence the outcomes of wargames, including context biases, player motivations, and can identify some lessons to be learnt.</li> <li>4. Proficiency in using basic wargaming tools and software.</li> </ol>						<ol style="list-style-type: none"> <li>1. Ability to design, develop, and execute wargaming exercises built on imaginative narratives and supported by convincing, effective story telling.</li> <li>2. Capability to assess and refine wargame processes to enhance their effectiveness.</li> <li>3. Skill in integrating wargaming with other analytical and decision-making techniques to fully address requirements of customer master questions.</li> <li>4. Proficiency in employing advanced wargaming tools and software to facilitate complex exercises.</li> </ol>	
<b>Experience</b>		<b>Experience</b>		<b>Experience</b>		<b>Experience</b>		<b>Experience</b>	
		<ol style="list-style-type: none"> <li>1. Participation in introductory wargaming courses or workshops.</li> <li>2. Involvement in entry-level wargaming exercises or simulations.</li> <li>3. Exposure to a range of wargame scenarios and situations.</li> <li>4. Familiarity with requirements of wargame debriefings and after-action reviews.</li> </ol>						<ol style="list-style-type: none"> <li>1. Involvement in multiple wargaming exercises or simulations in various contexts.</li> <li>2. Collaboration with diverse teams (including the sponsor) to design and implement wargames.</li> <li>3. Experience in conducting wargame debriefings and after-action reviews and engaging with sponsor.</li> <li>4. Familiarity with the iterative process of refining wargaming methodologies.</li> </ol>	
<b>Behaviour</b>		<b>Behaviour</b>		<b>Behaviour</b>		<b>Behaviour</b>		<b>Behaviour</b>	
		<ol style="list-style-type: none"> <li>1. Openness to learning and willingness to try multiple design techniques and concepts to find best fit.</li> <li>2. Demonstrates a collaborative attitude when participating in wargames and embraces a constructive criticism and challenge in a fail-fast fail-safe design environment.</li> <li>3. Willingness to share insights and learn from the experiences of others, is actively engaged within relevant wargame Communities of Practice.</li> </ol>						<ol style="list-style-type: none"> <li>1. Adopts a proactive approach in identifying and addressing challenges in wargaming exercises while remaining objective and on track.</li> <li>2. Places appropriate emphasis on developing effective communication and teamwork within wargaming scenarios.</li> <li>3. Promotes a culture of continuous learning and improvement in the field of wargaming.</li> <li>4. Actively seeks opportunities to learn wargaming.</li> </ol>	
Skills Std 1 (WG Design)		Skills Std 2 (WG Analysis)		Skills Std 3 (Scenario Develop)		Skills Std 4 (Facilitation)		Skills Std 5 (Adjudication)	

Captures up to 7 skills levels from awareness to expert across key wargaming practitioner and customer functions.

PDSF Structure captures required:

**Knowledge (yellow)**

**Skills Application (green)**

**Experience (blue)**

**Behaviours (pink)**

# UK Stakeholders Consulted



Interaction with key UK professional wargaming stakeholders and SMEs

Key:

- HMG (in purple)
- Industry (in grey)
- Academia (in blue)

Sector	Organization
MOD	Dstl Defence Wargaming Centre
MOD	Defence Academy (DCMCI)
Academia	Cranfield University
MOD	Strategic Command Joint Warfare
MOD	SONAC
PaG	Cabinet Office, Emergency Planning College
Academia	Kings College London
Academia	Bath Spa University
Industry	LBS Consultancy, Stone-Paper-Scissors, Vedette Consulting, QTSL
Academia	UK Operational Research Society (ORS)

# 5-Eyes (FVEYS) Stakeholders Consulted



Interaction with key national professional wargamers in Aus, NZ, Canada, US & NATO SACT

Key:

- Government (in purple)
- Industry (in grey)
- Academia (in blue)

Country	Organization
Australia	Defence Science and Technology Group (DSTG)
Canada	Canadian Joint Warfare Centre
Canada	McGill University
Canada	Department of National Defence
US	USAF Le May Centre
US	CNA & Georgetown University
US	US Naval Postgraduate School
US	Army War College
US	USMC Wargaming Centre
US	National Defence University
US	US Connections
US	SACT Norfolk
NZ	NZDF Defence Technology Agency (DTA)
US	Military Operational Research Society (MORS)



# Wargaming Pan Defence Skills Framework

Skill Proficiency Levels (to right): Functional Skill Areas (below):	P1 Awareness	P2 Foundation	P3 Practitioner (PDSF P4)		P4 Expert (PDSF P6)		
1. Wargame Commissioning	Wargame E-Learning	Common Foundation					
2. Wargame Design	Wargame E-Learning		A		P	A	P
3. Wargame Analysis	Wargame E-Learning		A		P	A	P
4. Wargame Scenario Development	Wargame E-Learning						
5. Wargame Integration	Wargame E-Learning		See note 1		P	A	P
6. Wargame Facilitation	Wargame E-Learning		A		P		
7. Wargame Control	Wargame E-Learning						
8. Wargame Adjudication	Wargame E-Learning						
9. Course of Action Wargame Delivery	Wargame E-Learning		A		P	A	P
10. Wargame Participation	Wargame E-Learning						

**Key:**

Block A: Entry assessment for practitioner or expert level courses (by TDA).

Block P: Portfolio of Evidence evaluation or other suitable assessment completed (by TDA).

# Envisaged Set of Learning Interventions

## Awareness Learning:



e-Learning

## Defence Experimentation:

1. Policy, Strategy & Force Development
2. Wargaming in Defence Experimentation



- Masterclass for senior leader Commissioners
- Formal course for their staff members

## Professional Wargamers:



1. Wargaming Fundamentals
2. Course of Action (CoA) wargame courses for Defence.
- 3 Initial Wargame Design, Integration & Adjudication (common foundation course).
4. Analysis
5. Facilitation & Control
6. Scenario Development
7. Advanced Design, Analysis, Integration & Adjudication Masterclasses.

# Inaugural Commissioners Masterclass at RCDS 2024



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4. Wargame Scenario Development	Wargame E-Learning						
5. Wargame Integration	Wargame E-Learning		See note 1		P	A	P
6. Wargame Facilitation	Wargame E-Learning		A		P		
7. Wargame Control	Wargame E-Learning						
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# PDSF Illustrations: Wargame Design KSEB - Knowledge

Skill Area	Skill Name
Wargaming	Wargame Design
Description/Overview of Skill	
Elicits commissioner requirements, infers parameters, selects appropriate methods, tools and mechanics in order to design a wargame which fulfils specific defence development objectives or generates specify military training or professional military education effects.	
Level 1: Awareness	Level 2: Foundation
Demonstrates basic knowledge of the skill and how it is applied. Able to recall information and follow basic instructions /orders.	Applies knowledge and performs discrete tasks under limited supervision.
Knowledge	Knowledge
<p>1. Has a basic understanding of the key knowledge elements of wargaming as an endeavour for analytical and learning purposes including:</p> <ul style="list-style-type: none"> <li>a. Knowledge of historical and contemporary examples of wargame best practice.</li> <li>b. Understanding of basic wargaming terminology and concepts.</li> </ul>	<ul style="list-style-type: none"> <li>1. Familiarity with common wargaming techniques and tools (including game mechanics, materials, modes of data collection and formats of reporting).</li> <li>2. Awareness of the role and function of wargaming, within the range of experimental techniques, and wargaming's relative utility in supporting decision-making and strategic planning.</li> <li>3. Familiar with the history of wargaming and its influence on the development of strategy.</li> </ul>

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NA	<ol style="list-style-type: none"> <li>1. Able to participate in simple wargaming exercises and scenarios.</li> <li>2. Capable of identifying wargame objectives and can analyse, interpret and debrief simple wargame results.</li> <li>3. Skilled in identifying key factors that influence the outcome of wargames, including common biases, player motivations, and can identify some lessons to be learnt.</li> <li>4. Proficiency in using basic wargaming tools and software.</li> </ol>

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Questions

Feedback?



Questions  
Feedback?

