



MARINE CORPS SYSTEMS COMMAND
Equipping our MARINES

Program Manager Wargaming Capability PMM 174 Industry Brief



LtCol Matthew B. Clinger
Program Manager
29 Oct 2019

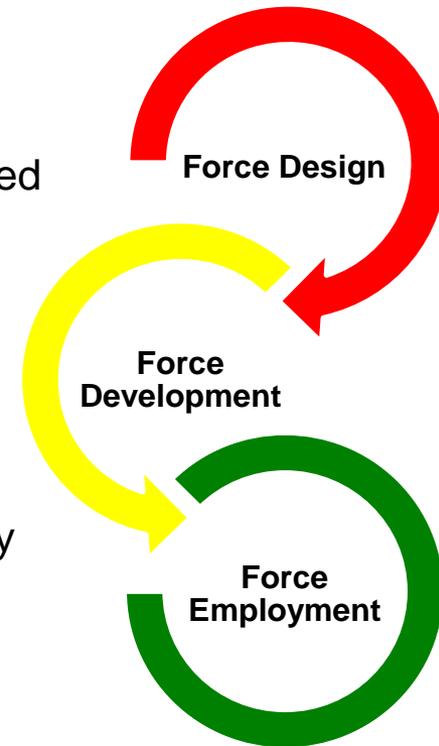


- Introduction
- Background
- Program Overview
- Capability Sets
- Schedule



Wargaming Capability = Wargaming Systems + Wargaming Center + People

- Supports CMC's #1 priority: Force Design
- Highly classified information embedded in all aspects of planning, execution, and analysis integrated within a purpose-built facility focused on:
 - Concept Development
 - Combat Development
 - OPLAN/CONPLAN Assessment
- Enhanced basis for analytically-informed decision support to capability development prioritization and resourcing
- Addition of the right technical and non-technical personnel: experts in M&S, Wargaming, facilitation, threats, and opportunities





Sequence of Events

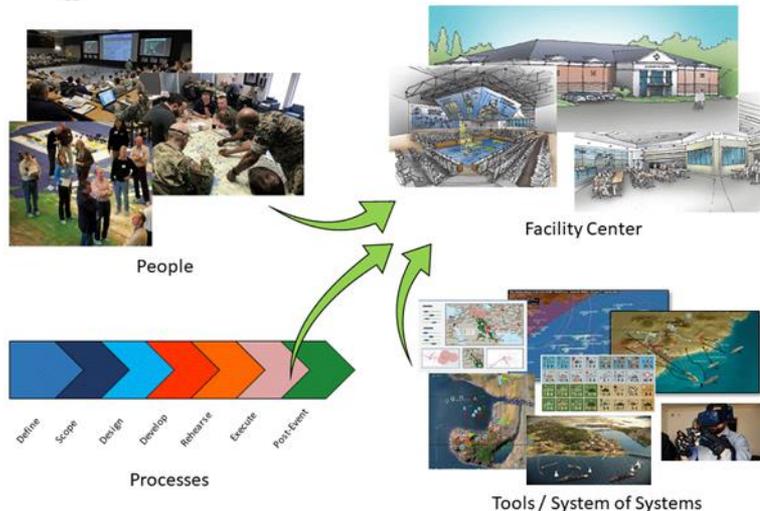
- Deputy SECDEF Guidance 2015
- SECNAV Guidance 2015
- POM-19 Marine Corps CBA results 2016
 - Identified eight (8) Capability Gaps
- General Officer's Symposium in Jul 2017
 - CMC directed the development of a "world class" wargaming facility
- Commander, MCSC Decision Memorandum in Sep 2017
- Conducted Wargaming Symposium Dec 2017
- Analysis of Alternatives Mar 2018 – Mar 2019
- MROC Approved Initial Capabilities Document (ICD) May 2018
- Material Development Decision (MDD) Jun 2018
- MROC Approved Capabilities Development Document (CDD) May 2019
- Designated Rapid Prototyping Program under Middle Tier Acquisition May 2019 –funded
- 38th CMC Planning Guidance July 2019, Force Design and Wargaming

8 Capability Gaps (CBA)

- 1) Define future force capability
- 2) Test existing OPLANS & CONOPS
- 3) M&S friendly & threat capabilities
- 4) Derive objective data for analysis
- 5) Wargame frequency for full development of concepts
- 6) Distributed wargames for broader participation
- 7) Education & leader development
- 8) Inform resource priorities

6 Recommendations (ICD)

- 1) Modeling & Simulation
- 2) Networked Wargaming Nodes
- 3) Data/Analytics
- 4) Facilities
- 5) Organizational & Personnel
- 6) Affordability

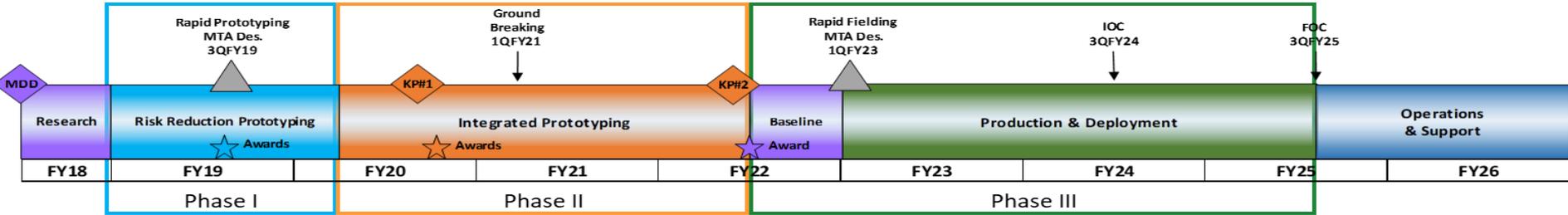


Strategy

- **Phase I – Risk Reduction Prototyping (FY19-FY20)**
 - Awarded OTs to Stucan Solutions, Cole Engineering Services, SimCentric, IBM, Bolder Games, BAH
- **Phase II – Integrated Prototyping (FY20-FY22)**
 - Plan to award to multiple vendors for full representative solution (combining all four capsets)
 - Plan to down-select to single vendor for Phase III
- **Phase III – Baseline/Production (FY23-FY25)**
 - Selected vendor will baseline/finalize system design, produce the wargaming solution, and sustain the system capabilities.
 - IOC FY24:
 - Secret class, three player cells, model & sim, interactive games w/ visualized results
 - FOC FY25:
 - TS/SCI, 2 concurrent war games, 5 player cell, full dynamic interactive games and visualized results and data
- **Sustainment Strategy/Plan:**
 - Areas expected to be contracted: (a) Material Solution/M&S Toolset, (b) M&S/Data Analytics Support Services, (c) Facility Operations. LSI model possible.

Program Status

- **Requirement:** CDD – MROC approved May 2019; JS/J-8 reviewed, JSD “Joint Information” Jul 2019
- **Designation:** Rapid Prototyping under Middle Tier Acquisition 10 U.S.C. 2302; Acquisition Decision Authority: Commander, MCSC; May 2019
- **Program utilizes Other Transaction Authority (OTA)** Agreements for Risk Reduction Prototyping and Integrated Prototyping phases
- **Test & Evaluation:** Prototyping Testing 1QFY20
- **MILCON Project #P719:** Ground Breaking 3QFY21; Complete 3QFY23





MARINE CORPS SYSTEMS COMMAND

Equipping our MARINES



Questions? Recommendations? Please contact us

MCSC_PM_WGC@usmc.mil

Opportunities and further information:

- Phase II Program Announcement - Pre-Solicitation 1 - M67854-20-PA-4650: <https://go.usa.gov/xVJQS>
- Phase I Program Announcement: <https://go.usa.gov/xV4qW>
- Pre Solicitation release expected 1QFY20 (complete), 2QFY20 (planned)
- Industry Day 2QFY20 (post PreSol 2)
- Integrated Prototype Award: Planned 4QFY20
- Force Design Modeling and Simulation Integration RFI (closed): <https://go.usa.gov/xV4Mn>



I: WARGAME DESIGN & SCENARIO GENERATION

- Common Web Delivery & Portal (HTML 5.0)
- Open Extensible Architecture-Master Object Model
- Modular Design with Common Databases
- Turbo-Tax like Design for Ease of Use

II: SCALABLE INTELLIGENT DATA SERVICES & MMT LIBRARY

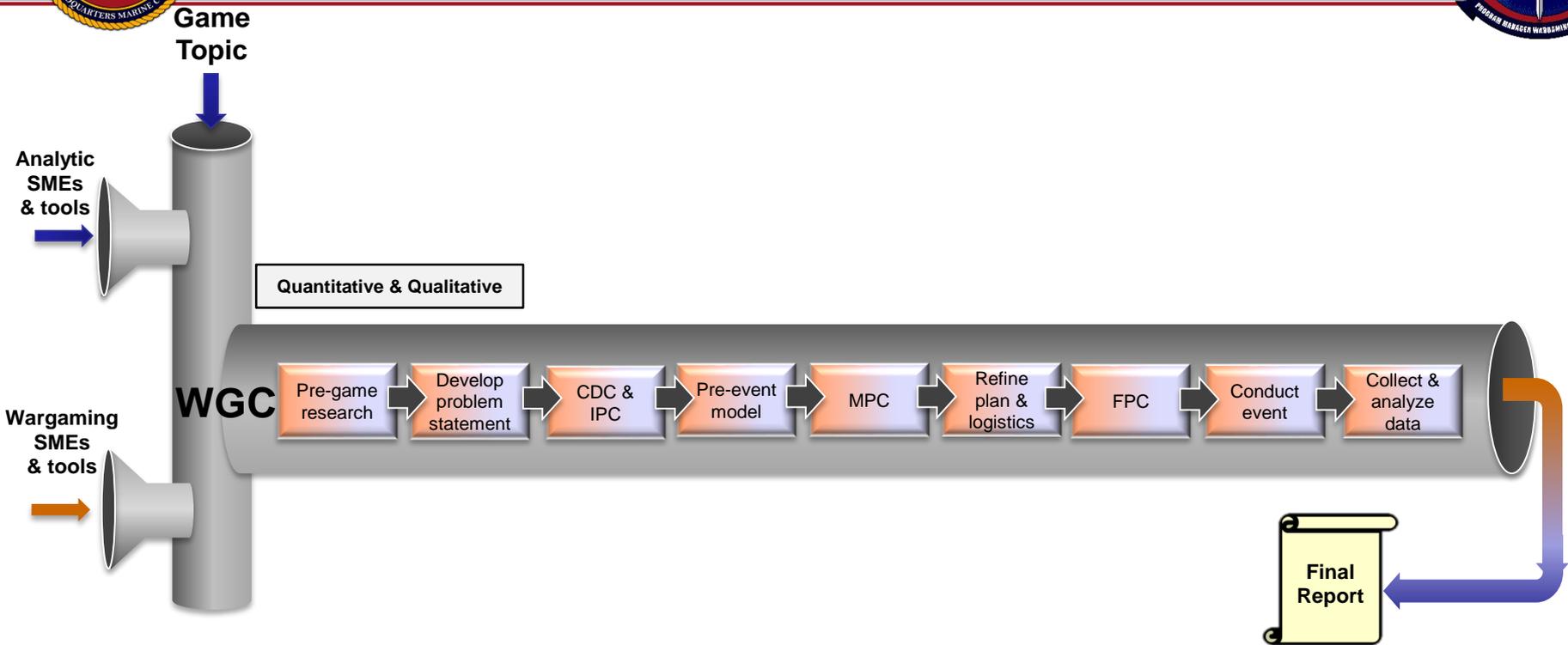
- Automated Data Normalization / Business Intelligence (BI)
- Runtime Database – dynamic results visualization
- Automated Data Tagging for CM & CDIS
- Multi-Level Security Enclave Design

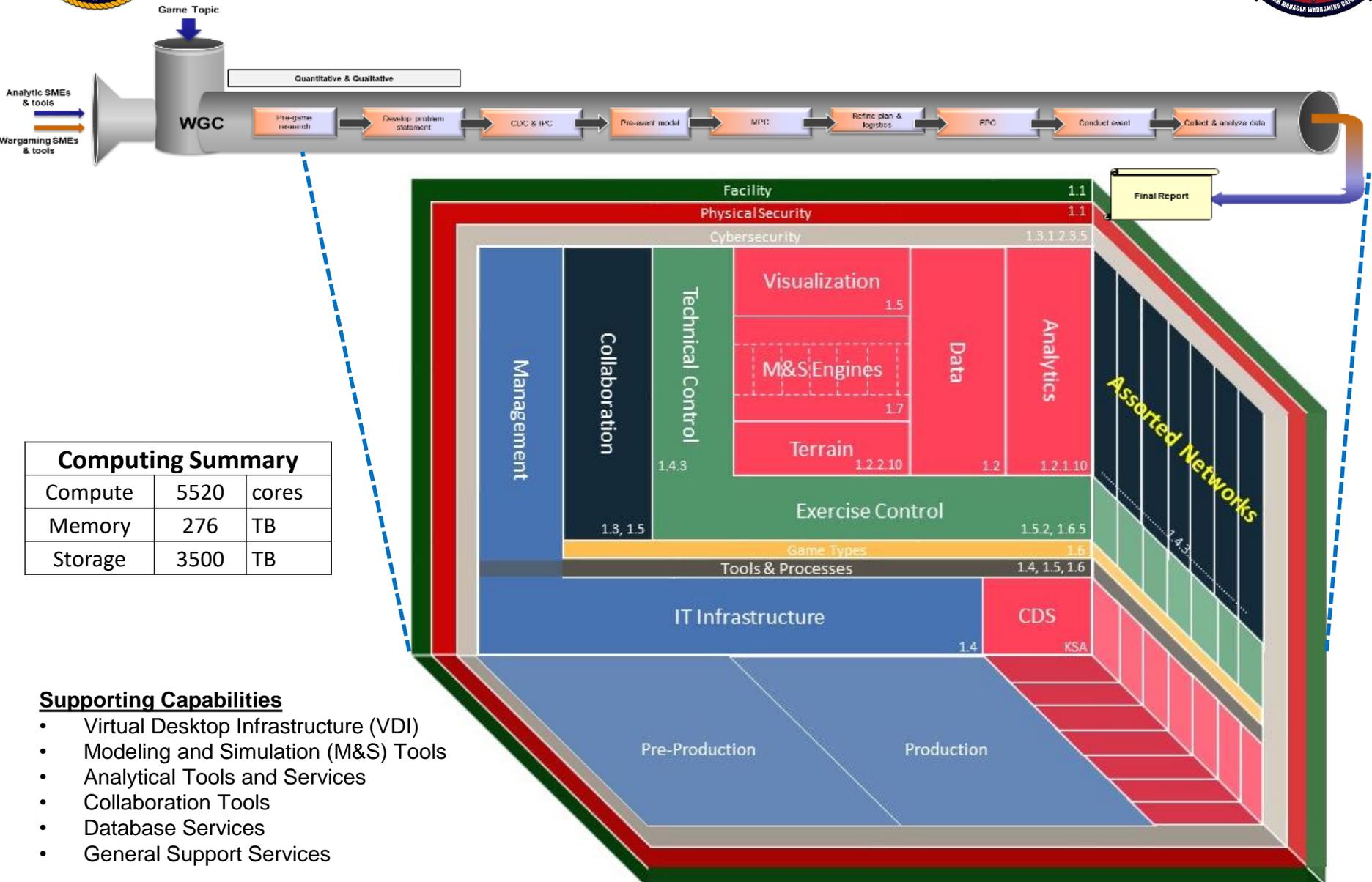
III: PLAYER INTERFACE & VISUALIZATION SERVICES

- Wargame Visualization COP
- Collaboration during Planning & Execution
- Tablet/VR/AR/2D/3D/Halo-based delivery
- Digital Orders and Plans

IV: M&S TO ENHANCE ANALYTIC RIGOR

- “Benchmarking” for Pre-Wargame Analysis
- Technical Exchange Specifications
- Synthetic Environment data exchange & reporting
- Automated Adjudication / Artificial Intelligence (AI)





Computing Summary		
Compute	5520	cores
Memory	276	TB
Storage	3500	TB

Supporting Capabilities

- Virtual Desktop Infrastructure (VDI)
- Modeling and Simulation (M&S) Tools
- Analytical Tools and Services
- Collaboration Tools
- Database Services
- General Support Services



ICD Capability Requirements and Gaps

Capability Requirement Name/Number	Capability Requirements		Current Capabilities	
	Operational Attribute/Metric	Initial Objective	Source	Current Performance
1. Assess concepts	Number of scenarios used annually	4	Manual Capability	2
	Types of operations assessed	Full ROMO		1 operation type annually
2. Test Current OPLANS and CONOPS	Environment	Coalition, represented accurately, in detail	Manual Capability	Coalition, generic
	Result of in-depth assessment	Generate a range of outcomes for any CONOPS, based on selected variables.		Single outcome per CONOPS, based on subjective judgment
3. Simulate capabilities.	Representation of friendly capabilities	Full range of capabilities, using information at TS/SCI, SAP, STO, NATO COSMIC	Manual capability	Capabilities represented at UNCLAS and collateral SECRET level only
	Representation of adversary capabilities	Full range of capabilities, using information at TS/SCI, SAP, STO, NATO COSMIC		Capabilities represented at UNCLAS and collateral SECRET level only
Individual subject matter experts	Number of personnel engaged at principal war game lab location	250		150
		quantitative information, using a range of visualization techniques		forms, with significant trends noted.

IOC/FOC Definitions in CDD

IOC	FOC
Estimated FY24	Estimated FY25
Execution of one wargame with the following: <ul style="list-style-type: none"> - minimum secret classification level - minimum three cells (blue/red/white) - computer assisted - competitive ground truth and perceived truths - digital plans/orders - fully dynamic interactive games and results visualization 	Execution of two simultaneous wargames with the following: <ul style="list-style-type: none"> - one game at the TS/SCI class. level - one game with participation from remote locations - one game with a minimum of five cells (blue/red/white/green/orange) - computer simulation driven - competitive ground/perceived truths - digital plans/orders - fully dynamic interactive games with 3D resolution - dynamic data/results visualization

Future Wargaming Descriptors

Facility Factors	Capability Factors
<ul style="list-style-type: none"> • Classification: Multiple levels from Unclass to Highest • Frequency of Games: 20 per year • Size of Games: Up to 250 participants • Permanent Personnel: ~155 FTEs (Mil/Civ/Ctr) <ul style="list-style-type: none"> - 70 Wargamers/Analysts - 60 Technical Support - 25 Other Support 	Full Synthetic Environment Wargame: <ul style="list-style-type: none"> - Wargaming in scalable synthetic environments with multiple games & excursions - Rule sets and adjudication routines simulated automatically - Inductive / Competitive Interactive / Deductive / Serial / Analytic-Batch - Computer Simulation Driven/Assisted - Fully Competitive Ground Truth & Perceived Truth - Digital Plans/Orders – Smart Graphics-Operational Decision Support - Fully Dynamic Interactive Game and Results Visualization