Background

The Global Force Management Data Initiative (GFM DI) mandates the implementation of a capability that provides a dynamic view of the DoD inventory based on Service Force Structure to enable timely and accurate senior leader decision-making to best assist the Chairman in fulfilling his statutory responsibilities in support of Secretary of Defense Allocation Decisions.

In support of the National Defense Strategy and the focus on Dynamic Force Employment (DFE) and Globally Integrated Operations, the Joint Staff J3 created Project ORION. ORION is a technology-enabled decision support platform that consolidates authoritative data from each of the services, provides global visualization of the forces and munitions, and allows Course of Action (COA) experimentation in order for users to provide validated best military advice to senior-level decision makers.

Resident within ORION are a suite of “light” applications that leverage the Global Laydown Server (GLS) – the aggregation of authoritative data, like the Joint Force Capability Catalog (JFCC). The JFCC is a DFE Decision Support Tool that provides Capabilities, Readiness, Availability and Employment (CRAE) data from Service and DoD authoritative data sources (ADS) to provide meaningful and understandable information to the user. It enables a common view of the Service’s force pool GFM Assignment and Allocation.

ProModel Corporation was chosen as an Industry Partner to design, develop, and deliver ORION based upon their extensive experience in providing decision support capabilities to the Army (Army Force Generation Synchronization Tool), the Navy (Naval Synchronization Tool), and their vast experience in the modeling and simulation domain.

Development Approach

ORION development melds together both Agile and DevOps methodologies to rapidly prototype capabilities and deliver functionality into production on the DoD’s SIPRNET every 2 weeks. User engagement (storyboard reviews, design reviews, and UX assessments) occur on-site with key stakeholders and lead user representatives to ensure high-velocity design, development, delivery, and testing. ORION combines in-production decision support functionality with a rapid-prototyping platform to iteratively deliver technology that enables DFE and Globally Integrated Operations.

How Does JFCC/GLS Support Global Force Management?

Currently, the Global Force Management process is a disjointed, non-integrated, time-consuming process that relies on antiquated systems, significant manpower, and latent information. ORION is a consolidated platform, enabled by application interfaces that are intuitive and optimized for efficiency that allows users to make timely and critical decisions, better inform key enterprise stakeholders, and optimize the allocation and assignment of forces across the globe.

Benefits:

Before the advent of ORION and the introduction of the JFCC and GLS, the Joint Planning and Execution Community had to rely on more than 40 disparate data sources/systems for the implementation of Global Force Management. ORION provides a single source of information (via data aggregation and connectivity to more than 26 authoritative data sources) with an intuitive decision support tool (JFCC application) that facilitates the efficient and effective execution of our National Defense Strategy.

ORION provides action officers, joint planners, and senior-level decision makers with a common operational view of forces in motion, unit-level attributes to inform decision making, and capabilities to perform Course of Action (COA) analysis both in real-time and well into the future.
Main Features of ORION

**Catalog**
The catalog module provides force structure visualizations, unit attributes (capability, readiness, availability, and employment), and capability and employable entity descriptions for each force in the service’s inventory.

**Constellation**
This module provides users with a geospatial perspective of the laydown of Forces and Preferred Munitions. Users can create scenarios and change layers (e.g., symbology/unit patches, AORs, etc.).

**Force Element Inventory – Predictive Analysis Tool (FEI-PAT)**
The FEI-PAT provides users with a graphical view of force assignment and allocation by Combatant Command. The visualization includes inventory, readiness, and availability. Users can conduct Course of Action analysis within this module.

**Force Element Inventory – Readiness Synchronization Tool (FEI-RST)**
This module provides users with visibility into future disposition of force element attributes (Capabilities, Readiness, and Availability) to enable COA analysis and excursions.

**Force Quality Index (FQI)**
Within FEI-RST, users have the ability to assess Force Quality predicated on data metrics associated with the levels of readiness, the fulfillment of Mission Essential Tasks, and the Availability of Force Elements based upon operational schedules and force generation models.

**Time-Phased Problem Set (TPPS)**
This module provides visualization of a problem set based upon strategic planning factors associated with pre-deployment activities, mobilization, deployment, JRSOI, and deployment.

**Dynamic Force Employment**
This module provides the user with the capability to create, visualize, and measure impacts of dynamic force employment scenarios against the current or future global laydown of the force.

**Capabilities in Development**

**TPFDD Health of Force**
This module provides users with Aggregated Health of Force Elements (associated with a Problem Set as well as remaining inventory) of a TPFDD over time. The user additionally has the capability to change the D-date of the Problem Set which propagates a potentially new sourcing solution based upon Force Quality.
Objectives

Major objectives supported by ORION are:

1. **View global force pool baseline** – The JFCC/GLS allow users to view the entirety of the service’s authorized forces (units, unit hierarchy, attributes, capabilities, readiness, and availability) via an intuitive graphical user interface.

2. **Capture dynamic command structures** – The JFCC/GLS provides the capability for users to organize the dynamic force structures of units assigned to task forces; depict actual battle formations; graphically represent command relationships (Operational Control and Tactical Control).

3. **Capture Global Demand** – The JFCC/GLS allows users to provide the Combatant Commander(s) (CCDRs) with the most appropriate and responsive forces based on stated requirements, balanced against risks [operational, future challenges, force management, institutional] and global priorities.

4. **Document Force Commitments** - The JFCC/GLS will allow users to identify all force obligations and clearly determine the command relationships as well as coordinate with the Combatant Commander(s) (CCDRs) to initially fulfil mission requirements with Assigned Forces and with forces previously provided through Annual (rotational) Allocation.

5. **Track Deployment/Redeployment timelines** – The JFCC/GLS provides the user with capability to capture the movement of forces and its equipment through its rotation into geographic Areas of Responsibility (AOR) that allows the coordination of transportation execution, feasibility analysis, and preposition of materiel.

6. **Map deploy/redeploy forces with Geospatial Data** - The JFCC/GLS provides the Joint Planning and Execution Community (JPESC) a Force Laydown visualization capability that enables unity of effort and DOD support for visualization of the Force Laydown (tabular and geospatial perspectives) to establish Lines of Communication and Joint Reception, Staging, Onward Movement and Integration (JRSOI).

**ORION Impact on Global Force Management Decisions:**

- More accurate representation of the Force Structure (by Service)
- Increased visibility of total force requirements by Combatant Command
- Accurate representation of dynamic command structures (nonexistent capability before JFCC)
- Increased visibility of a unit’s Capabilities, Readiness, Availability, and Employment (CRAE)
- Greater ability to conduct “What-if” and “Course-of-Action” analyses of force allocation and assignment decisions in support of the National Defense Strategy (to include Transportation Feasibility Analysis)
- Significant increase in efficiency and effectiveness of the Joint Planning process through the aggregation of data and cutting-edge graphical user interface

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**Achieving Dynamic Force Visibility**

- **Authorization Data**
  - Authorized by law and organized by the Service Title 10 Authorities
  - GFMDs + OUIDs
- **On-Hand Data**
  - Service OS, Service Force Generation ADS
  - OUIDs + UICs + UTCs
- **CRAE Data**
  - Capabilities, Readiness, Availability, Employment
  - CRAE + GFM Factors (Assignment, Allocation, War Plans, etc.)

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**What are you authorized?**
- 16
- 4

**What do you actually have?**
- 14
- 3

**What do you have to operate with?**
- 12
- 2

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