

# Public Sector Defense Solutions

*An Oracle White Paper*  
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## Did you know?

**Oracle Corporation was founded on the basis of a project for a military customer and that it now serves hundreds of Defense customers worldwide.**

- **Over 100 U.S. federal Government organizations run Oracle Applications**
- **23 of the 26 NATO countries Peace Establishments run Oracle Applications**
- **8 of the 25 European Union member MoD's run Oracle Applications and all of them use Oracle Technology**
- **16 Latin American and Caribbean Country Governments run Oracle Applications**
- **9 Asia Pacific Country Governments run Oracle Applications**
- **Oracle Human Resource Applications serve the largest number of military and civilians worldwide**

## EXECUTIVE OVERVIEW

The Public Sector Defense market is undergoing radical changes due to the changing global and local political circumstances. As a result of this, political leaders are demanding changes that will affect all aspects within military organizations. In addition to that budget constraints that are imposed within the government also put a burden on the military decision makers.

Since Oracle was founded on the basis of a project for a Public Sector Defense customer three decades ago, it has been a participant in the course of change. We have targeted the industries' challenges, applied our ingenuity, and provided new technologies that have allowed the military leaders to redefine their objectives and help them transform the military organization.

## INTRODUCTION

Military organizations are undergoing their most extensive transformation since decades and are rapidly evolving from an industrial-based model to a 21<sup>st</sup>-century information-based war fighting force. Network-centric warfare is emerging as the guiding paradigm for driving this transformation and, in a reversal of roles from previous transformations, is drawing its guidance from the commercial business world. In that world, market and product lifecycles are measured in months, and change is the operative norm. Physical assets are less important than the intelligent use of *knowledge*. Companies with technology infrastructures and business practices that help them get inside the decision cycle of their competitors are at a decided advantage.

In the same way, the military has realized the need to transform as the nature of threats to the nation have dramatically changed from the symmetric type of traditional warfare to using concepts like the 3-block war where humanitarian, peace keeping and war fighting is conducted at the same time and in the space of three city blocks. The military leadership is committed to the change, as the ability to stay inside the enemy's OODA (Observe, Orient, Decide, Act) loop becomes even more important in the shadowy asymmetric warfare being fought by terrorists and rogue nations.

Oracle is a network-centric company that has the technology and experience to assist the military in its transformation. Oracle's Database and Fusion Middleware, Collaboration Suite, Oracle Business Intelligence (OBIEE) and e-Business Suite are all products that can be used by the military in network-centric weapon systems. Oracle products and services provide the engineering expertise to implement, maintain and evolve these network-centric systems to meet the emerging threats of the 21<sup>st</sup> century.

#### Key challenges for Defense Organisations

- **How can personnel best suited for the mission be quickly deployed?**
- **How can defence forces assure that supplies and equipment are available for deployment?**
- **How can we enable collaboration and synchronization to enhance the speed of command?**

#### NEW CHALLENGES OF MODERN MILITARY OPERATIONS

There is no single way to define military operations. On a worldwide basis different forms exist ranging from a purely offensive nature, a defensive one to a peacekeeping one that is currently part of many expeditionary missions. All these different operations have to be supported by a flexible and reliable Network Enabled Capability (NEC) infrastructure that is also scaleable and secure. Most of the current military organizations have begun to plan for this and some of them are implementing new architectures to meet the current and future challenges and the key challenges that we are hearing are:

- *How can personnel best suited for the mission be quickly deployed?*
- *How can defense forces assure that supplies and equipment are available for deployment?*
- *How can we enable collaboration and synchronization to enhance the speed of command?*

When addressing these challenges we find that there is no single boundary anymore between the traditional back office and the information systems in the theatre of military operations. They have to be flexible, based on open standards, integrated, proven and secure.

#### Adaptability To Changing Missions

As the industry has learned time and again, a single, rigid platform is not the answer. Different aircraft are better suited for unique missions. Likewise, different technologies, applications and platforms offer unique strengths. Defense organizations need to deploy systems and applications that best suit their immediate objectives, while remaining open to joint operations and future expeditionary missions. As a practical matter, integration needs to occur across the diverse systems, applications, and platforms in place today. Further, this integration needs to happen rapidly and cost effectively—sometimes in weeks or months, not years—to meet the political and strategic objectives. Oracle is the only provider that offers systems and applications capable of full integration and true flexibility that spans the area from Business to Battlespace.

## **Oracle's Focus: Supporting Military Capability**

At Oracle, we have gone beyond transaction systems that update today's legacy systems with new technology. Oracle is focused on addressing the areas of high value to the military organization with solutions that support the delivery of military capability from the business side to the battlespace environment. In addition to providing a complete set of technology solutions, we have leveraged our industry expertise to develop applications that are tailored to managing the complexity of the military environment. Whether you are planning, designing or deploying your military capabilities, we have solutions that add value to your operations.

### **Planning Defense Capabilities**

#### **Support for all key Defense processes**

- **Planning**
- **Preparation**
- **Deployment**
- **Evaluation and Retirement**

The cycle of delivering deployable defense capability starts at the political level after which military decision makers are formulating strategic directions based on mid term and long-term requirements and the ambitions of the organization. The formulation of force requirements, force design and force planning is part of a complex process that includes the use of many resources and information that needs to be accurate and ready available. That is also applicable for the financial information used in the budgeting part of the planning process.

This is where Oracle provides solutions like collaboration tools, unified content management, business intelligence and financial budgeting tools to allow for rapid decision-making as well as auditable and secure information sharing.

### **Preparing Defense Capabilities**

#### **Reduce spend on goods and services**

Before military capability can be deployed they have to be provided first. This is where efficiency improvements can be obtained in a number of areas.

In the preparation phase assets are procured, personnel are being recruited, trained and posted and contractor logistic support is acquired. Defense Procurement is a complex activity and involves many resources and processes.

From spotting and exploiting new savings opportunities to enforcing contract pricing, Oracle Advanced Procurement drives down unit costs at every stage of your procurement process and streamlines all of your procurement processes.

With the industry's most robust purchasing transaction backbone, Oracle Advanced Procurement provides complete procure-to-pay automation.

Configurable automation executes routine transactions without intervention, making buyers more productive and freeing procurement professionals for strategic activities. Paper-based procurement processes are not only slow and expensive; they create barriers to enforcing purchasing policy. Oracle Advanced Procurement builds compliance right into the system. Unified financial and procurement controls place fiscal discipline on all procurement processes.

**Develop Defense Forces with Enterprise  
Talent Management**

The military workforce is increasingly mobile and aware of its value. At the same time, keeping a professional military force employed presents its challenges. These pressures make it critical for organizations to adopt practices that enable them to attract, grow, and retain the best talent. Oracle provides a complete set of integrated tools to manage talent organization-wide. It will drive successful sourcing and hiring with end-to-end recruiting, enables faster ramp-up to productivity for new hires via self-service tools and processes and help fit and deploy people to posts or missions using automation to identify required skills and qualifications.

**Deploying Defense Capabilities**

The actual deployment is what military operations are all about. This is where all disciplines come together to deliver what is needed to deliver fighting power or support peacekeeping operations. The relevant information management aspects relate to a wide scope of activities like:

- Personnel and Organizational Management
  - *Posting, Training, Career Development, Realignment*
- Defense Logistics
  - *Asset Tracking & Management, Maintenance, Repair & Overhaul and Transportation Management*
- Network Centric Operations
  - *Data Collection, Integration and Distribution*
  - *Collaboration*
  - *Common Operational Picture Creation*
  - *Geospatial Data Mapping*
  - *Intelligence*

**Streamline personnel and pay transactions**

During deployment of military capabilities typical personnel activities can be time consuming and because of the confidential nature of employee information and physical retention of voluminous personnel records, Human Resources has traditionally been labor intensive, error prone, and subject to extensive data fragmentation. Not only has this led to high maintenance costs, but also the inability to integrate and leverage workforce information to manage operational performance. Oracle HCM enables organizations to benefit from automation, ensures that confidential data is maintained electronically and securely, and provides timely access to information to enable employees to be more effective. It has also dedicated functions for the military forces.

**Oracle Defense Logistics assures that supplies and equipment are available for deployment.**

With traditional data management methods, a silo approach to storing and managing asset data emerged as a result of functional divisions. However with Oracle, you can achieve a single source of truth about all your assets, while maintaining full operational capability. You can consolidate all your Operations, Finance, and Maintenance asset data into a single, global asset information repository. Even if your data currently resides in multiple transactional systems and data warehouses, you can leverage Oracle's open integration architecture to seamlessly access, cleanse, and organize asset data from your existing IT investments. "All your assets" means all your assets, period. Oracle is the only solution provider capable of handling all asset types.

**Improve Asset Visibility, Tracking, and Control**

Even with so much information stored in a single location, Oracle provides a simple solution to eliminate the "information overload" problem. Access filtered, organized, relevant asset information via role-based views. While logisticians can access KPIs, performance trends, budgets, and cost roll ups, operations personnel and supervisors have immediate access to asset locations, repair histories, maintenance schedules, and lease/tenant information. Additionally, model and manage complex asset relationships for visibility extending beyond the individual asset level.

**Manage the full Defense Asset Lifecycle**

Traditionally asset management systems have focused on plant-level maintenance activities, but they require custom integrations to core Defense ERP systems, provide poor enterprise-level visibility to costs, materials and resources, and create additional IT cost and overhead. Oracle Enterprise Asset Management (eAM) is part of the Oracle e-Business suite with direct integration with all other required modules. This enables you to strategically monitor resource and cost planning throughout the defense organization. Military organizations are realizing increased mission readiness and major savings by more effectively analyzing their asset portfolio so that the best asset purchase, construction, swap and divestiture decisions can be made relative to their operational strategies. This is particularly true for organizations that are dis-aggregating operations into core competencies and non-core activities that are ripe for outsourcing or public-private partnership. Oracle eAM manages the entire asset lifecycle.

**Maintain Complex Defense Equipment**

Tracking configuration history is essential to any military organization that builds or maintains weapon platforms with complex configurations. Traditionally, maintaining configuration history has been a manual, time-consuming task where each unit in a fleet is maintained individually and requirements are entered multiple times. With Oracle Complex MRO, master configurations are established and requirements automatically flow to all units based on that master. Oracle Complex MRO gives users the ability to classify fleets into smaller groups and automatically flow requirements to all units in that group. With this configuration

**Optimize delivery of military supplies using  
Transportation Management**

control, component history is quickly and easily tracked throughout the asset lifecycle. Completing all maintenance activities associated with a visit and updating all records can be a time consuming, manual task. Oracle Complex MRO streamlines the execution process and simplifies processes by providing a complete execution flow, from creating work orders to deploying resources and completing the repair / inspection to updating maintenance history and configurations and returning aircraft or vehicles to service.

Military organizations today are caught between escalating customer expectations for on-time deliveries and rising fulfillment costs. This problem is compounded by the complexity of their logistics networks. Oracle offers advanced planning techniques that are essential for striking the optimal balance between transportation performance and cost.

The best plans are of little value unless followed by solid execution. Transportation execution has historically been difficult to control due to lack of real-time visibility into actual events transpiring once vehicles are en route. While this problem exists with internally operated fleets, it escalates when using logistics service providers. Global Transportation Management (GTM) not only provides the necessary visibility but it also enables trading partners to transact using your system.

Operating in a lean and demanding environment leaves little room for errors and inefficiencies, yet transportation operations still involve many manual, paper-based, and time intensive processes. Oracle provides key support for your logistics process automation strategy by having a configurable workflow-driven Business Process Automation to eliminate manual processes. It also provides seamless creation of transportation orders from delivery orders to fulfill demand and supply.

Logistics networks today are often large and intricate, involving a great number of nodes, legs, modes, and trading partners. Gaining visibility into this highly complex network is difficult but critical for driving efficiency and customer satisfaction. GTM delivers the following capabilities to provide you and coalition partners visibility into your logistics network. The Oracle Fusion Middleware allows organizations to integrate GTM with other business applications via Web Services

**Evaluating & Retiring Defense Capabilities**

At the end of the deployment cycle there is the assessment and retirement of the capabilities that have been planned, prepared and deployed. Using Corporate Performance Management these capabilities can be analyzed for operational effectiveness, cost efficiency and repeatability. Recommendations can be made to retrofit or modernize existing assets to extend the lifecycle.

Retraining or timely retirement of personnel using the Oracle HCM solution can result in a better outlook for newly recruits, thereby improving the attrition rate.

## **Network Centric Operations**

For some a technical challenge and for others a way of organizing and managing the flow of information to obtain decision superiority. Interoperability, connectivity and network-centric systems are critical elements to field a globally deployed, near-real time force posture. The government is adopting recognized industry standards and creating segmented technology architectures to realize the much higher levels of flexibility, performance, security and connectivity needed in 21<sup>st</sup>-century systems. The acquisition process itself is changing, because of the clear need to deploy systems now and refine as they are used, rather than taking years to define requirements and build and test an operational system.

Network-centric operations are staged in a battle space, the three-dimensional extension of the traditional battlefield. Of paramount importance is the availability of accurate, relevant and timely data throughout a globally aware infrastructure—a common operational picture. Sensors, platforms and operators (military forces) are all connected to share information. Forward-deployed forces can use “reachback” to get information from intelligence databases located in the home base. Air, ground and sea forces can “self-synchronize”, or rapidly tailor their capabilities in new ways to address emerging combat situations.

Oracle Corporation has been a leader in helping corporations build global, network-centric enterprises to compete effectively in the 21<sup>st</sup> century, and stands ready to address many of the challenges that the military faces in transforming to an information-based war-fighting infrastructure based on Oracle’s award winning Database Technology and geospatial capability, Fusion Middleware and fully government certified Security Solutions.

One of the major challenges in Defense environments is the integration of existing, disparate and new applications to create a new infrastructure. The Oracle Application Integration Architecture is a set of products that deliver sustainable business process-oriented integration across Oracle and other third-party applications. Built on a standards based Service Oriented Architecture (SOA), Oracle is delivering industry best practices and security and governance capabilities to help customers and partners build packaged industry processes – regardless of the applications involved. It will increase the speed of integration of disparate systems, better information sharing. With the addition of Oracle Business Intelligence a better decision-making will be obtained across all commands.

Network-centric operations require a high degree of collaboration over a robust technology infrastructure. Real-time target planning, intelligence sharing, “self-synchronization” and the ability to get inside the enemy’s decision loop all require users in different locations to be able to share information simultaneously. Oracle

Collaboration Suite provides electronic chat rooms, virtual whiteboards and the ability to manage voice, video and data.

To improve military effectiveness, a force must first understand its current operations. It must then conduct analysis to identify problems and define appropriate actions. Organizations often lack the necessary data and analytics to systematically improve effectiveness. The result: continued reliance on "gut feel" decisions with sub-par improvements. Today's managers are inundated with data, including those that are obsolete or irrelevant to his decision-making roles and responsibilities. When data is not readily available, managers rely on IT specialists to conduct slow, complex queries. Oracle's CPM solution provides a comprehensive management reporting system that drives better, faster decision-making and enables in-depth analysis of financial, personnel, logistics and operational activities.

## **CONCLUSION**

Military organizations are currently undergoing an extensive transformation and are rapidly evolving from an industrial-based model to a 21<sup>st</sup>-century information-based war fighting force. Many aspects have to change from the business side to the battlespace.

Oracle's Database and Fusion Middleware, Collaboration Suite, Oracle Business Intelligence and e-Business Suite are all products that can be used by the military in network-centric weapon systems.

Oracle is a network-centric company that has the technology, services, partners and experience to assist the military in its transformation.



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