DLA
DEFENSE LOGISTICS AGENCY
Established 1961

The Nation's Combat Logistics Support Agency

Research & Development
STRATEGIC DISTRIBUTION AND DISPOSITION (SDD)

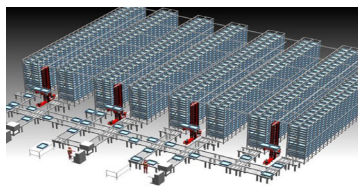**Program Manager: Manuel Casas**

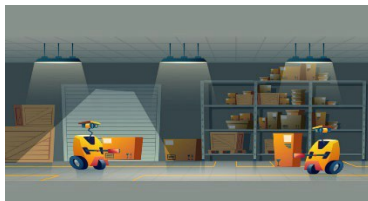✉ Manuel.Casas@dla.mil

OBJECTIVE

To advance innovation, science & technology into DLA's Distribution/Disposition network through research & development of technology solutions. To develop smart-warehouses for DLA in order to optimize warehouse operations to efficiently & effectively sustain warfighter readiness.
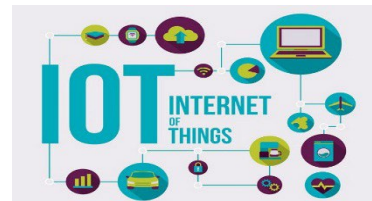
PROBLEM AREAS

INVENTORY MANAGEMENT

DoD's inventory management practices and procedures have been ineffective and inefficient. DoD has experienced high levels of inventory that were in excess of requirements and weaknesses in accurately forecasting the demand for inventory items.

MATERIAL DISTRIBUTION

DoD has faced challenges in delivering supplies and equipment, including not meeting delivery standards and timelines for cargo shipments as well as not maintaining complete delivery data for surface shipments.
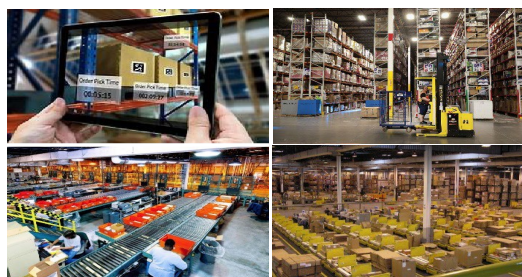
ASSET VISIBILITY

DoD has had weaknesses in maintaining visibility of supplies, such as problems with inadequate radio- frequency identification information to track all cargo movements.

INNOVATION & TECHNOLOGY

- Identify technologies solutions to solve the problem areas above

- R&D support includes market research, requirements analysis, research & development, feasibility studies, prototype development, test & evaluation, and Business Case Analyses (BCAs)

- Improvements include automation for DLA Distribution/Disposition business processes in inventory management, material distribution, and asset visibility

Continue driving innovation by managing science & technology for DLA Distribution/Disposition

STRATEGIC ALIGMENT

Support DOD Modernization Priorities

5G Connectivity
Automation & Robotics
Artificial Intelligence
Integrated Network of Systems of Systems
Cybersecurity Controls

Support DLA Strategic Plan

DLA's Mission of sustaining warfighter readiness
DLA's Vision of being innovative
Modernize Acquisition & Supply Chain Management

Support DLA CIO's Information & Technology Strategy

Digital Business Transformation
Continually modernize
Cybersecurity Controls
Advance analytics
Technology governance

W A R F I G H T E R A L W A Y S

THE CHALLENGE

The SDD program challenges include legacy capabilities that are inadequate for emerging worldwide distribution and disposition requirements resulting in inefficient business process that are labor intensive leading to long lead times in completing tasks, incurring human error and inaccuracy of data, and high cost in labor and operations compromising DLA logistics respond to the warfighter.

THE SOLUTION

Develop **Smart-warehouses** for DLA in order to optimize distribution operations to effectively and efficiently sustain warfighter readiness. The Smart-warehouse is a system of system composed of Robotics, Modeling & Simulation, Sensor IoT, Cybersecurity controls, the cloud, Augmented Reality, 5G Connectivity, and AI (predictive analytics)

The Smart-Warehouse Industry 4.0 Technologies

- Autonomous Robots
- Modeling & Simulation
- Sensor IoT
- Cyber-security
- The Cloud
- Augmented Reality
- 5G
- Predictive Analytics

WARFIGHTER READINESS
THE BENEFITS

- Optimization of DLA Distribution/Disposition Centers

- Automation of DLA Distribution/Disposition business process to reduce labor hours, operational cost, human error, and lead in completing tasks

- Enhance and improve DLA's logistics response to the warfighter

WHOLE OF GOVERNMENT PARTNERSHIPS

- **FFRDCs**
- **NAVSUP**
- **MARCOLOG**
- **NIWC**
- **ERDC**
- **Industry**
- **UARC**
- **OUSD R&E**

ACCOMPLISHMENTS & ONGOING EFFORTS

- Strategic partnership w/ OUSD R&E, NAVSUP, & MARCOLOG to establish the DLA 5G Smart Warehouse Test Bed at DDAG.

- Strategic partnership w/ DOD Sponsors Research Center (FFRDCs/UARCs)

- Establish addendums (User Requirements) for Distribution Modernization Program (DMP)

- Establish 5G Integrate Product Team (WIPT) for project collaboration

- Engage Industry for effective and affordable solutions

- Integrate DOD System Engineering concepts for a system of system 5G Smart-warehouse