Robotic Systems
Joint Project Office

Project Managers Briefing
7 November 2007

Paul Varian - CIV USA AMC [paul.varian@us.army.mil]
JRRF Manager

Represented by

Gerald C. Perlmutter (Avantix)
Barry W. Jones (NGC)

Approaches to Logistics

Yesterday (Mass-Based)	Today (Just-in-Time)	Tomorrow (Sense and Respond)

Yesterday (Mass-Based)

- **More is better**
- **Mountains of stuff measured in days of supply**
- **Uses massive inventory to hedge against uncertainty in demand and supply**
- **Mass begets mass and slows everything down**
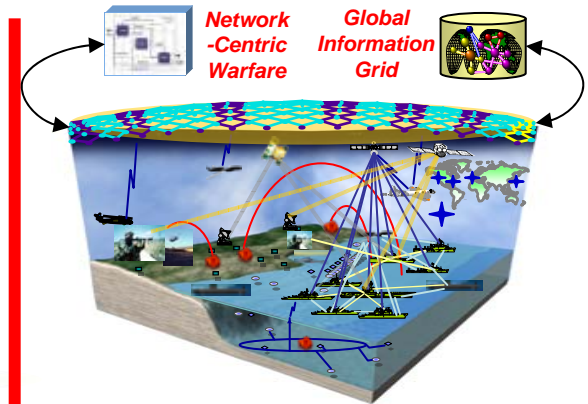
Prime Metric:
Days of Supply

Today (Just-in-Time)

- **On-time is better**
- **Inventory is reduced to a minimum and kept moving**
- **Uses precise demand prediction and static optimization to purge uncertainty**
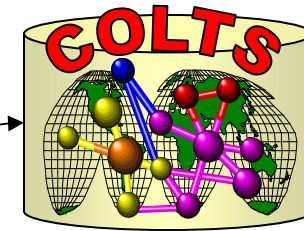- **Works great, except when it doesn't**

Prime Metric:
Flow Time

Tomorrow (Sense and Respond)

Network-Centric Warfare   *Global Information Grid*

- **Adaptive is better**
- **Inventory is dynamically positioned throughout**
- **Uses transportation flexibility and robust IT to handle uncertainty**
- **Initial S&R models look promising**
- **Supports distributed, adaptive ops**

Prime Metric:
Speed/Quality of Effects

Today's RS JPO approach to COLTS Sustainment

Tomorrows Logistics Knowledge-enabled, demand driven Sense and Respond

COLTS

Global Information

Interoperable joint communications to the tactical level

IUID / RFID + COLTS = TAV

Work Order,TM and history quarry of all data provides a real-time knowledge-based environment

WEB-Based configuration management result of real-time structure tracking

All JRRF's have global inventory view. Material can be moved from closest JRRF. Automated 1149

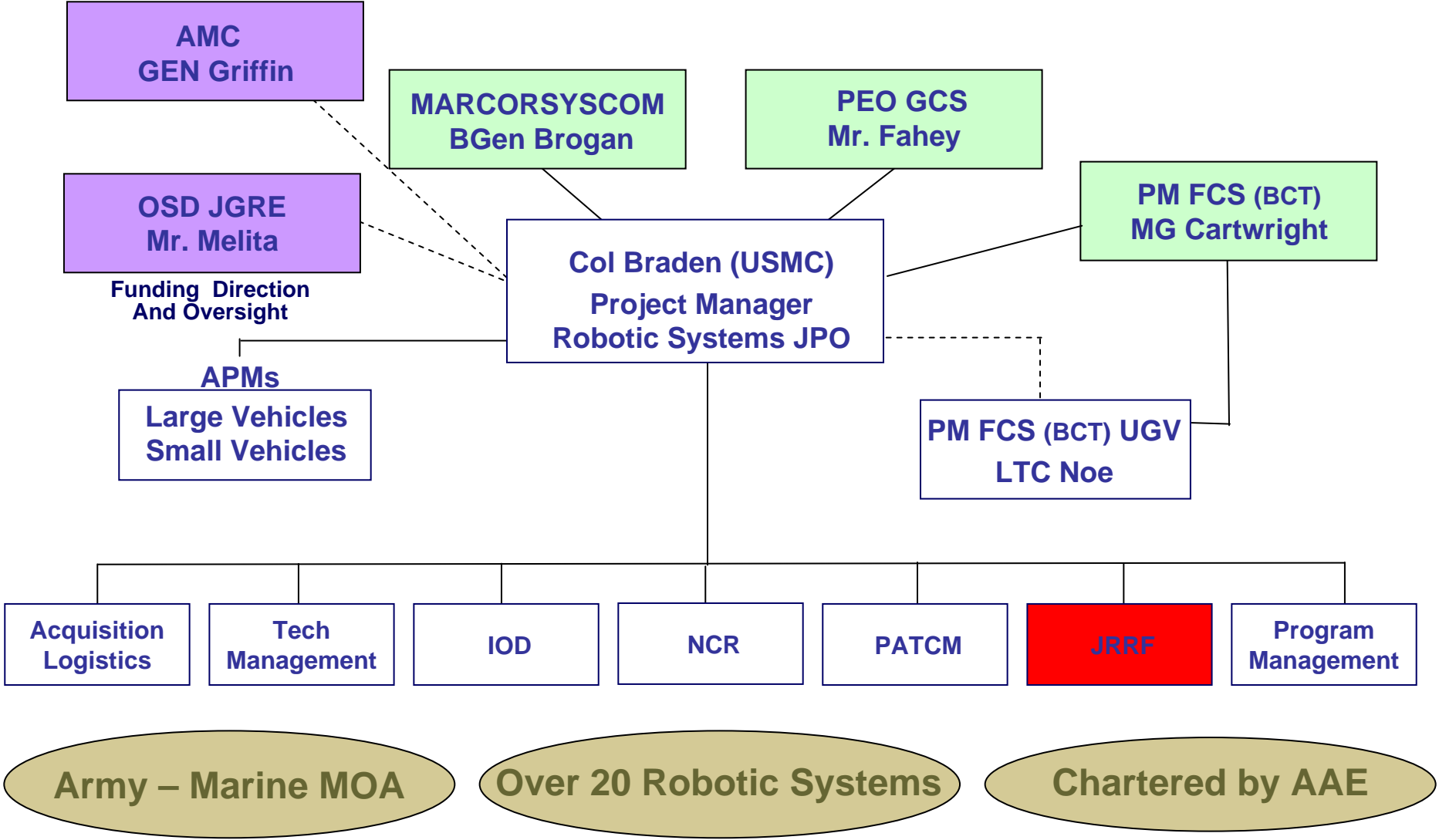WEB based application. All organizations have access

WEB technology with integrated commercial shipping tracking. All parties see the same date to manage risk

Prime metric: Right material, right place, right time
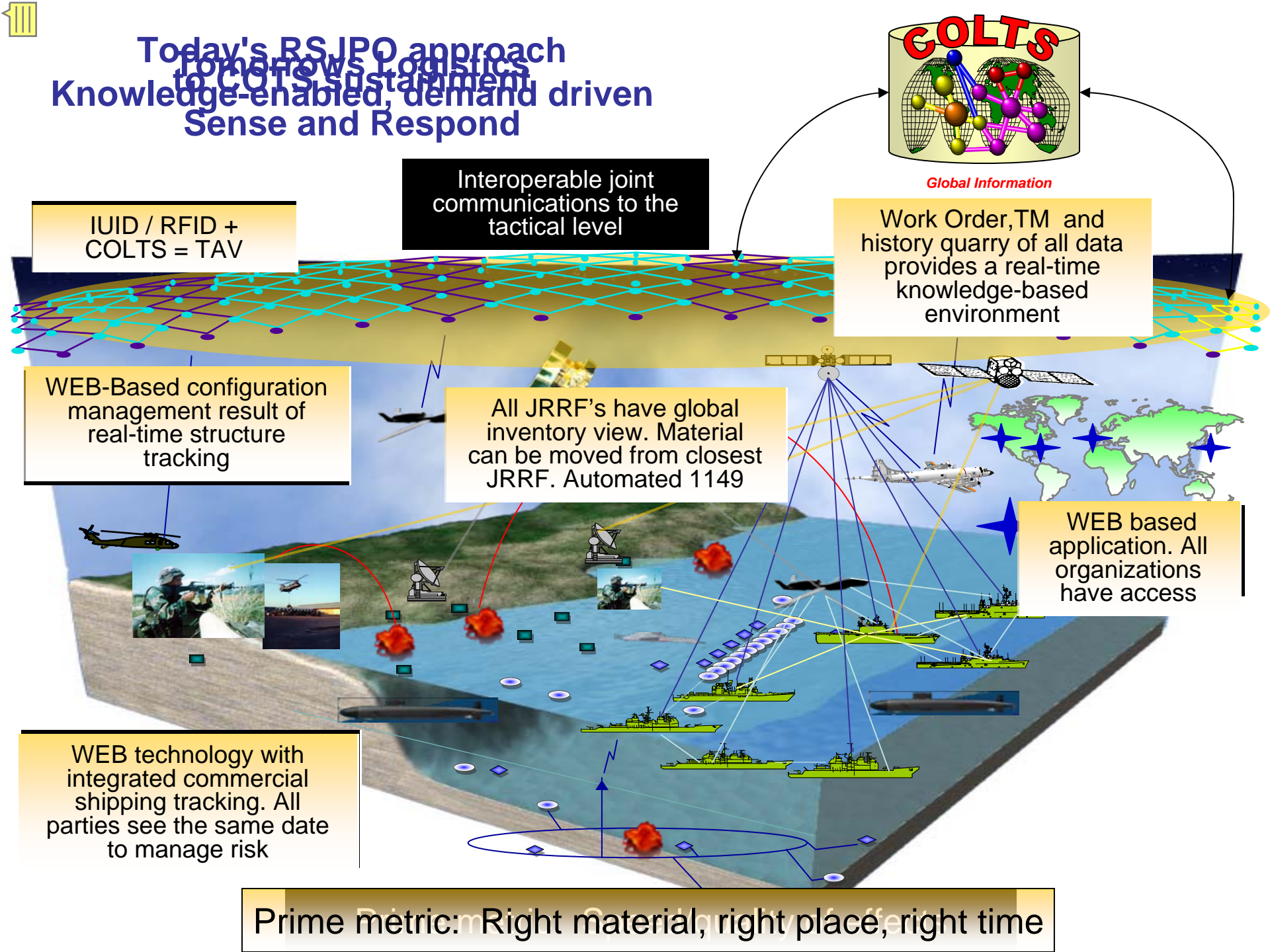
Who we are

RS JPO Organization / Relationships

AMC
GEN Griffin

OSD JGRE
Mr. Melita

Funding Direction And Oversight

MARCORSYSCOM
BGen Brogan

PEO GCS
Mr. Fahey

PM FCS (BCT)
MG Cartwright

Col Braden (USMC)
Project Manager
Robotic Systems JPO

APMs
Large Vehicles
Small Vehicles

PM FCS (BCT) UGV
LTC Noe

| Acquisition Logistics | Tech Management | IOD | NCR | PATCM | JRRF | Program Management |

Army – Marine MOA

Over 20 Robotic Systems

Chartered by AAE

JRRF Mission

Provide in-Theater Support for Joint Service Theater Provided Equipment (TPE) Ground Robots. Serve as Single "Belly Button" for OIF/OEF Training, Sustainment, Assessment, and Accountability.

Three Support Areas:

1 - Current JRRF Operations

2 – Joint Robot Repair Teams to Remote Users MTT's

3 - Pre-Deployment Training and Support Capability

Alignment
- **CENTCOM Strategy**
- **AMC Tasking**
- **JARB Guidance**

2006 Measures of Effectiveness (OIF)

# of Missions	# of Found & Cleared IEDs	# of Destroyed Robots
30,000	11,100	150

- **16,000 Robot Repairs Conducted Annually**
- **Find and Clear Rate is Approximately 37%**
- **SOP is to Employ a Ground Robot first**
- **Bomb Suits Only used When Terrain Prevents Robot Employment**

Joint Robot Repair Fielding (JRRF)
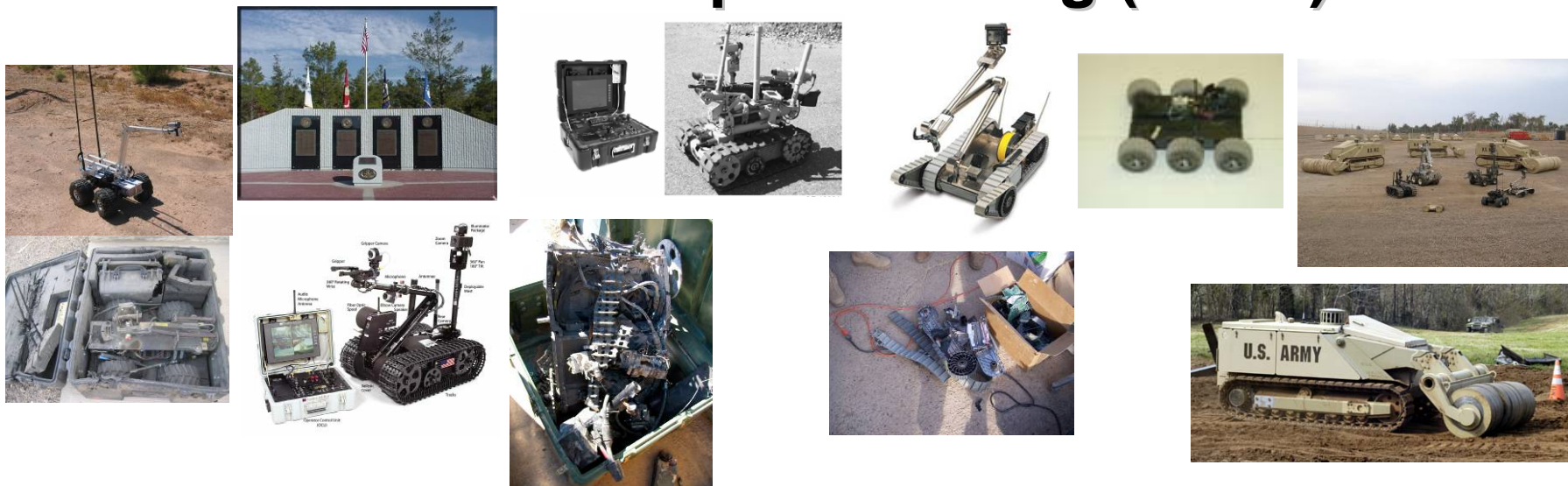
- **Single "Belly Button" for In-Theater Sustainment & Accountability**
    - **162 Bots (2004)** - **1800 Bots (2005)** - **4300 bots (Now)** - **6000+ est'd (2008)**
- **Pre-Deployment Training Sites JRRTs and Mobile Training Teams –** *Joint Reserves (61%)*
- **4 Hour Robot Turn-Around Standard –** *Leveraging "Joint Float Pool Concept"*
- **Web-Accessible Supply Chain Management Started –** *To Provide Global Visibility*
    - **Accountability** - **Parts Reordering** - **Reliability Tracking** - **Trouble Desk Info**

**"One-Stop-Shop"
for Spiral
Ground Robots**

**Thousands
of Missions / Hundreds of
Lives Saved!**

Credible, Capable, Cost Effective

What we do

- New technology insertion
  - Filling the "gap" between need it now and programs of record.

JRRF-Iraq (Camp Victory)

How we do it ?

It's all about Performance Based Logistics (PBL)

The Current (DAU) Definition:

PBL primary tenets are documentation of **WAR-FIGHTER** performance requirements as measurable metrics.

A fraction of the measurable metrics:

Operational Availability, Operational Reliability, Cost per Unit Usage, Total life cycle cost, Logistics Footprint, Logistics Response Time,

YADA, YADA, YADA

What Joint Robotics Repair Facility Is Doing

1. Define the **WAR-FIGHTER** : As the private or crew member in the heat of it.

2. Understand what is important to the (war-fighter) private or crew member:

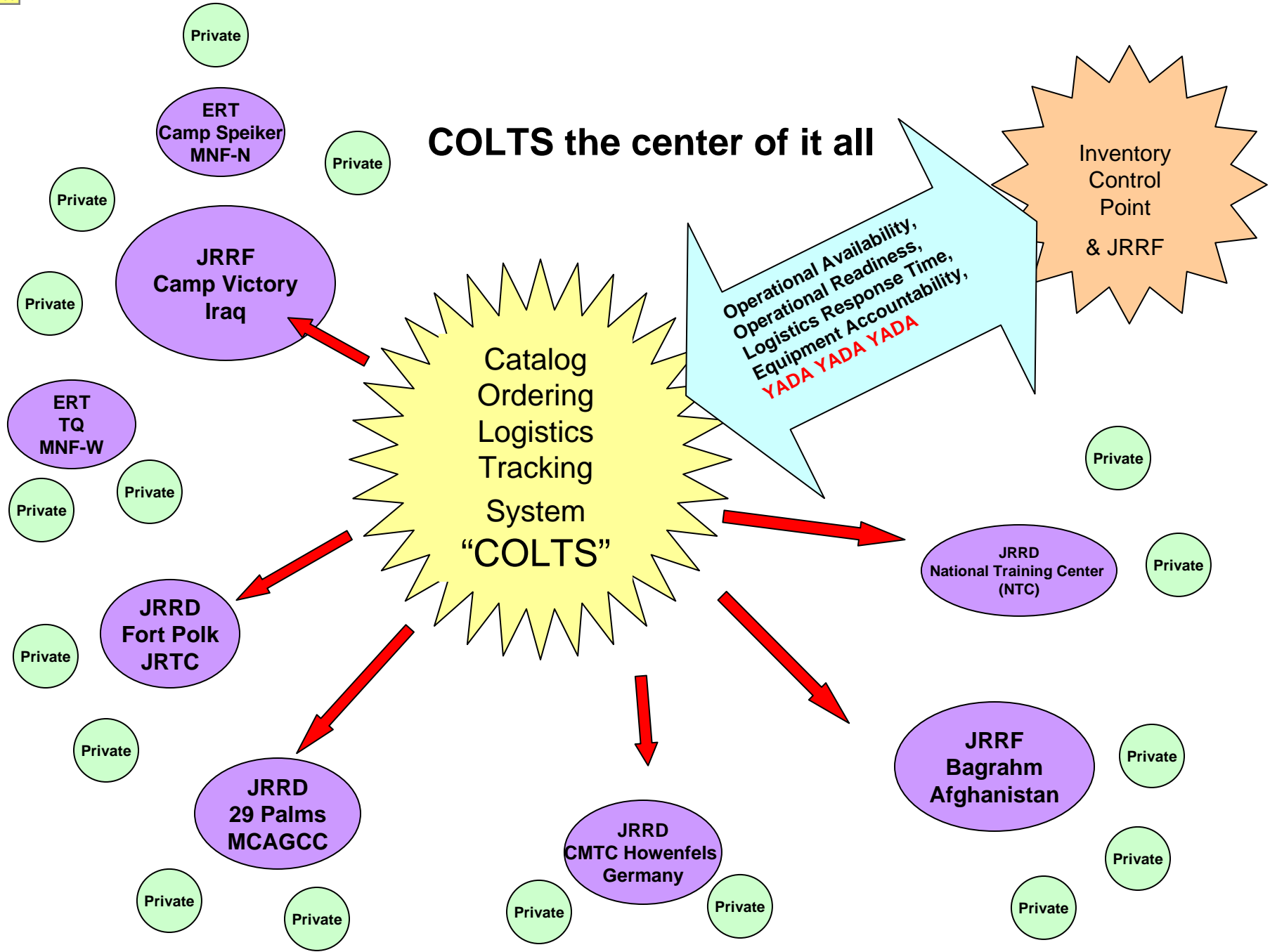   Time
    Equipment that works
    Time

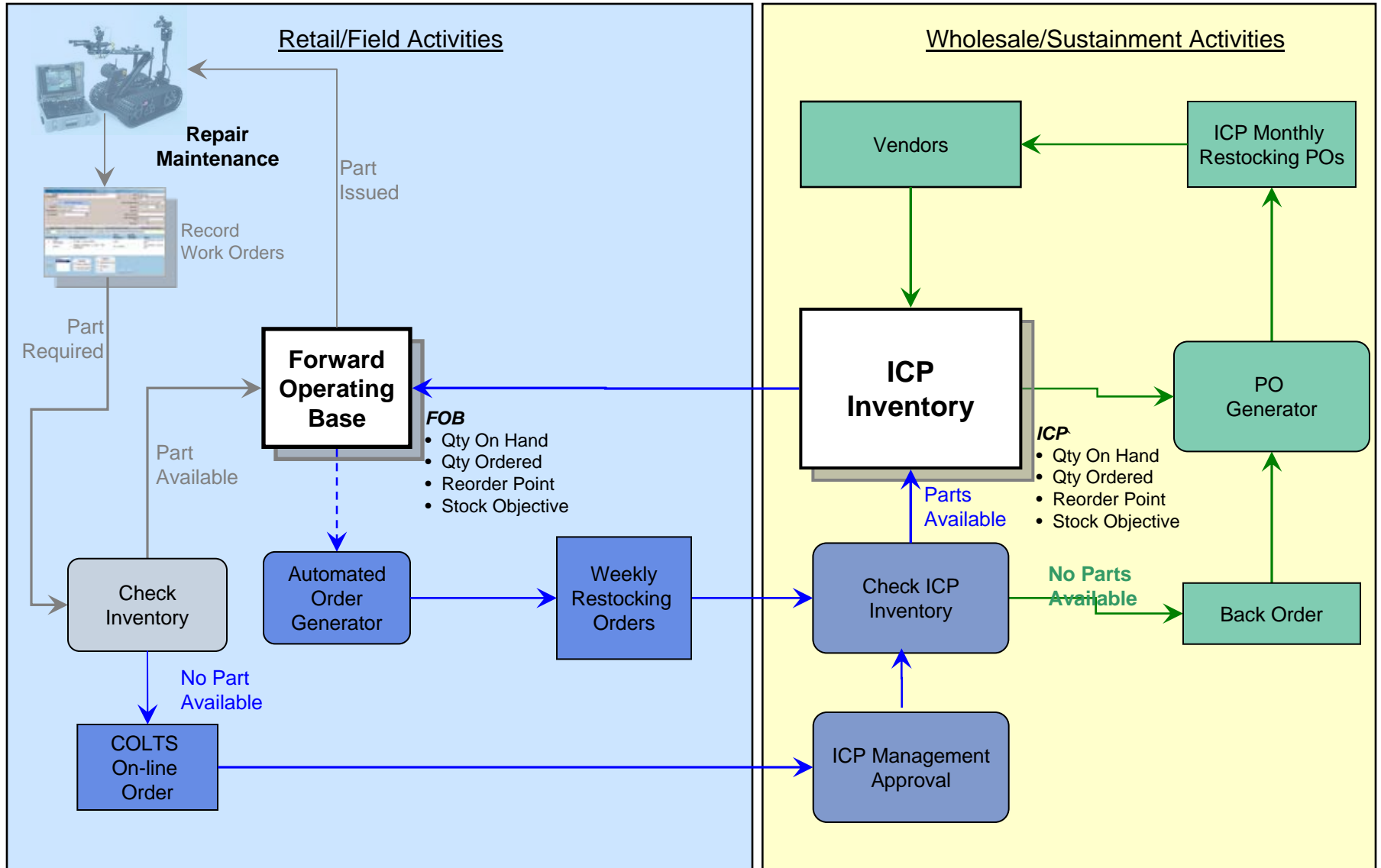3. Define PBL in a term the private or crew member understands.

    We structure our support to be reactive to the private or crew member in the heat of it. He receives a robot in 4 hours or less PERIOD

COLTS the center of it all

Private

ERT
Camp Speiker
MNF-N

Private

Private

JRRF
Camp Victory
Iraq

Private

Private

ERT
TQ
MNF-W

Private

Private

Catalog
Ordering
Logistics
Tracking
System
"COLTS"

Operational Availability,
Operational Readiness,
Logistics Response Time,
Equipment Accountability,
YADA YADA YADA

Inventory
Control
Point

& JRRF

Private

Private

JRRD
National Training Center
(NTC)

Private

JRRD
Fort Polk
JRTC

Private

Private

JRRD
29 Palms
MCAGCC

JRRD
CMTC Howenfels
Germany

Private

Private

JRRF
Bagrahm
Afghanistan

Private

Private

Private

Private

Private

COLTS Supply Chain Overview

Robotic Systems Joint Project Office

Supply Chain Management (SCM)

Catalog Ordering Logistics Tracking System (COLTS)
And Item Unique Identification (IUID)

Don't just generate the data

USE THE DATA