

Show Me the Data!

The Future of Knowledge-Enabled Maintenance



LMI

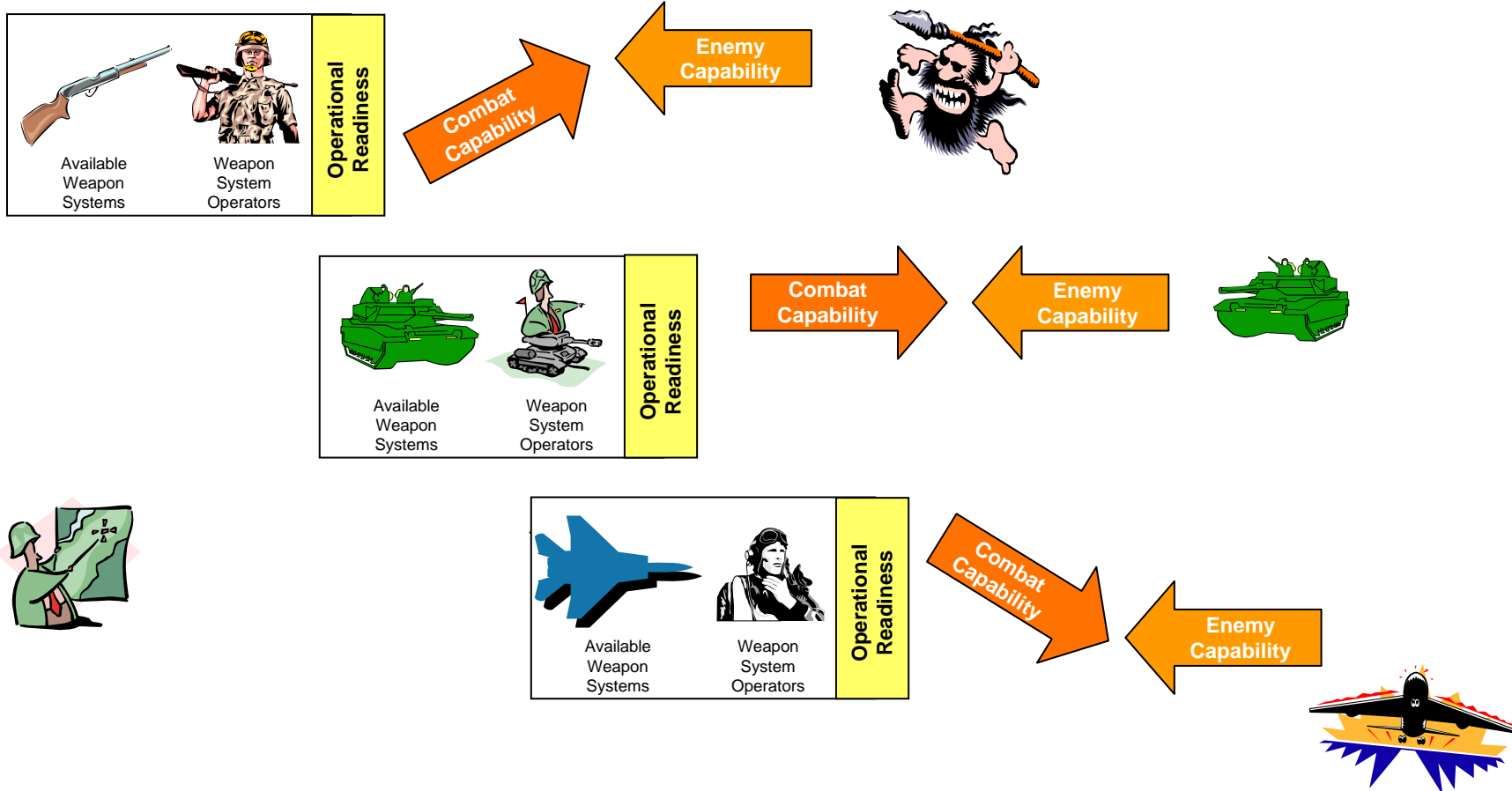
GOVERNMENT CONSULTING

THE OPPORTUNITY TO MAKE A DIFFERENCE HAS NEVER BEEN GREATER

Legacy Battlespace Mass-based Warfare



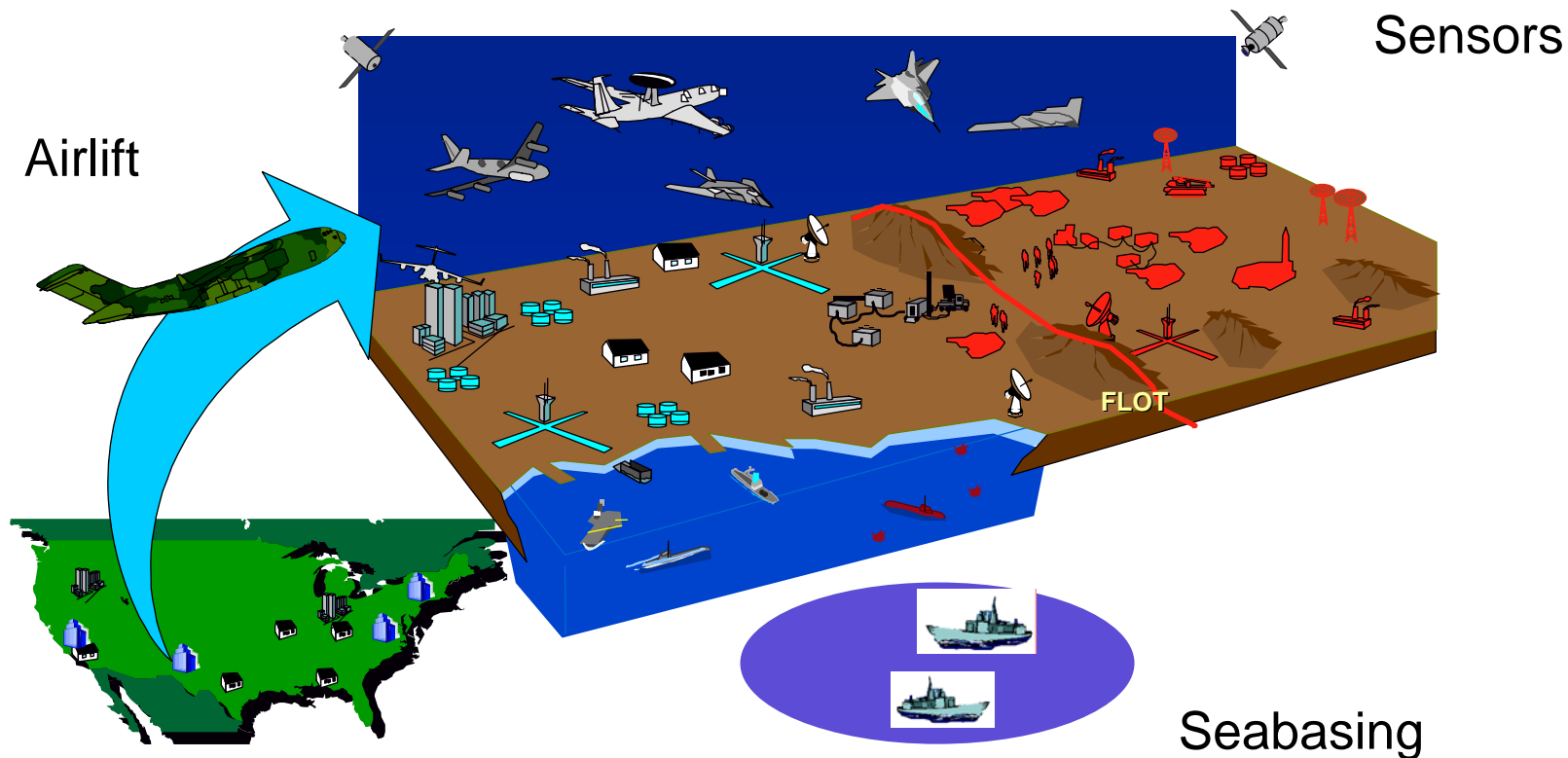
- Massed Forces, Centralized Command & Control, Labor-Intensive Combat



Transformed Battlespace Network Centric Warfare



- **Distributed Forces, Decentralized Command & Control, Information-Intensive Combat**



Logistics Transformation

Sense & Respond Material Support



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

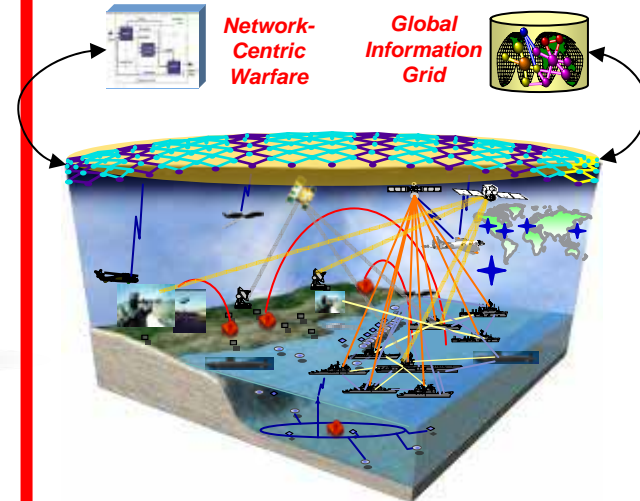
Just-in-Time



- 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

Sense and Respond



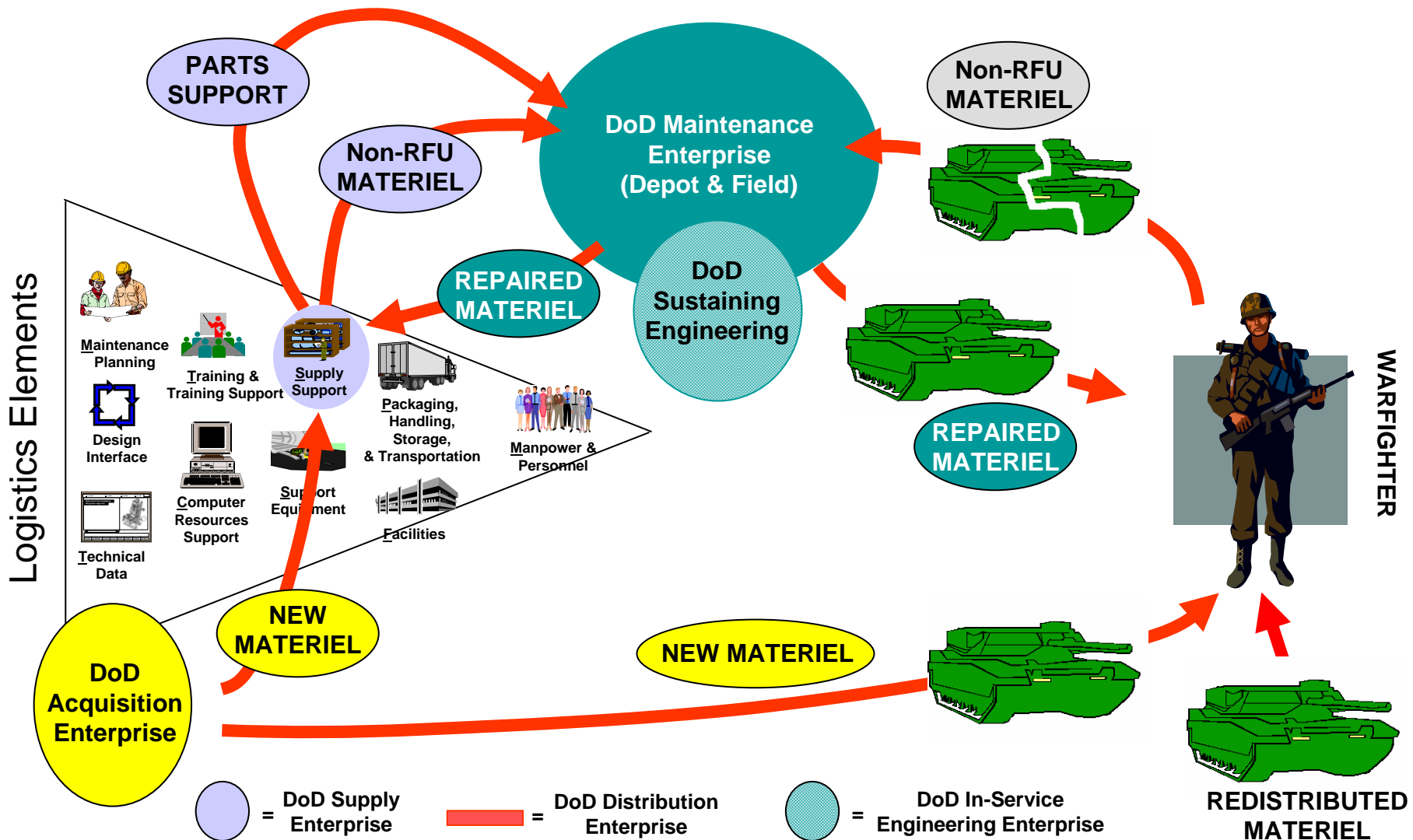
- Adaptive is better
- Inventory is dynamically positioned throughout
- Uses transportation flexibility and robust IT to handle uncertainty
- Supports distributed, adaptive ops

Prime Metric:
Speed/Quality of Effects

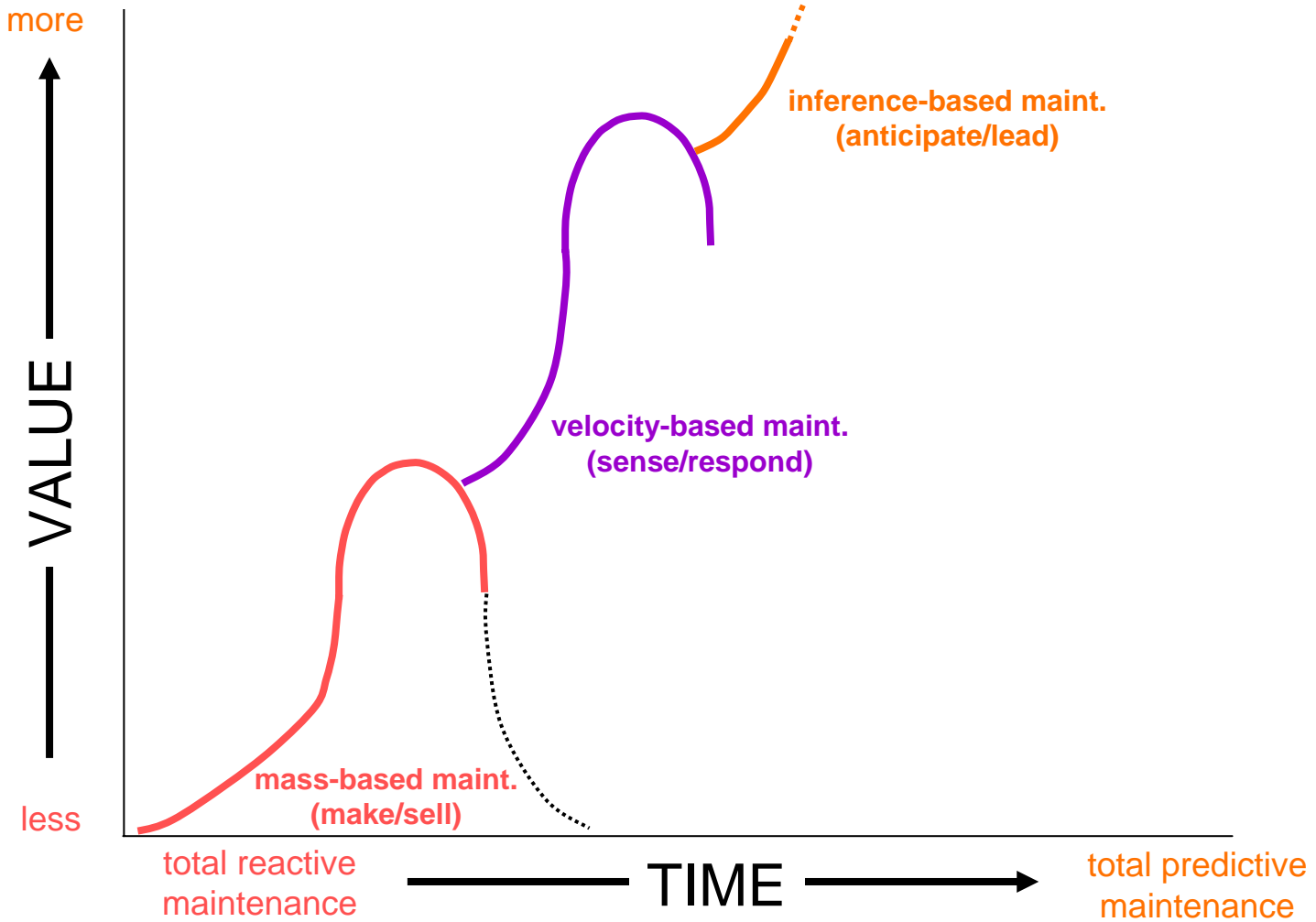


Transformed Maintenance

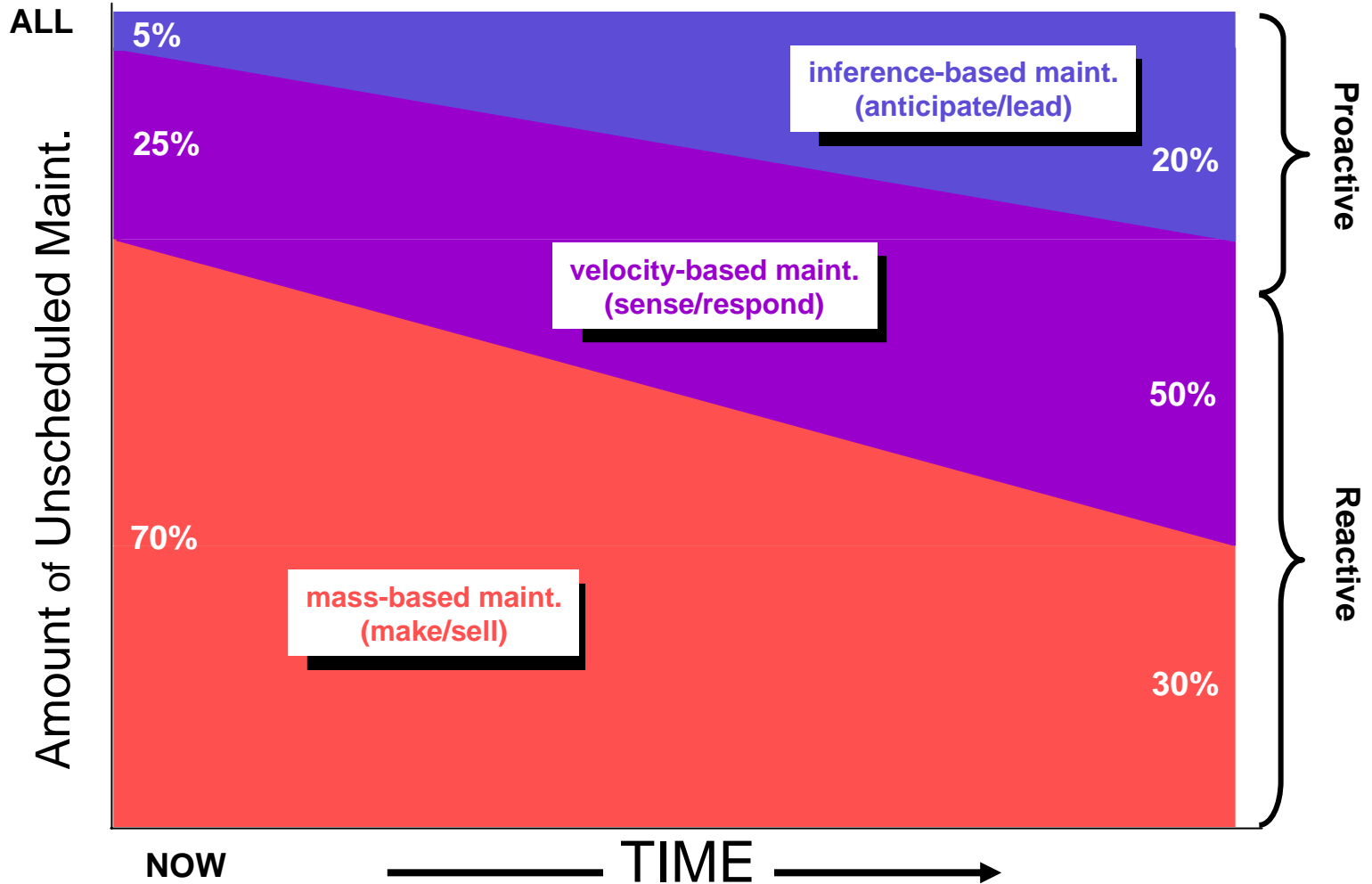
Anticipate Warfighter Requirements



Maintenance Transformation



Balance Between Reactive Maintenance and Proactive Maintenance



Core Competency of Transformed Maintenance: *Knowing Earlier*



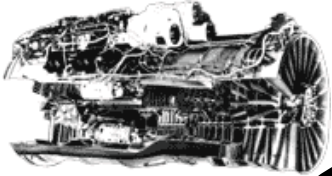
- ❖ **More and better probes**
- ❖ **Superior analysis of existing data**
- ❖ **Superior pattern recognition**
- ❖ **Faster frame-switching**
- ❖ **Systems knowledge: Knowing Why**



Notional H-60 Materiel Readiness Value Chain End Points



RFI T-700



Designated supplier expects to provide required materiel as planned

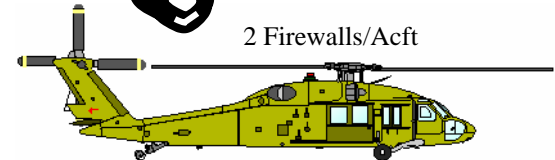
Procurement Office

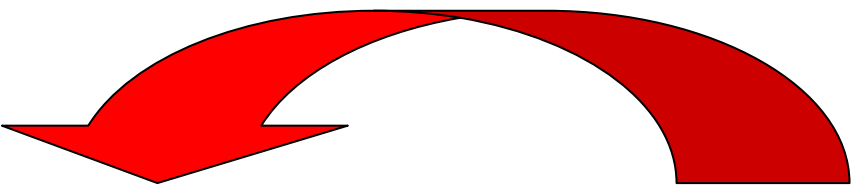
“Value Chain”

Tasked Unit Commander expects that required materiel will be made available as planned

SPG/CPG → Unit Mission(s) Assigned → Materiel Requirement Plan

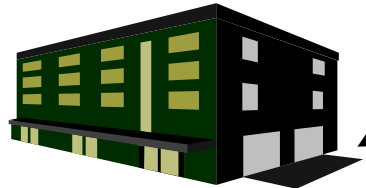
Tasked Unit





Retrograde Flow

Repair Activity

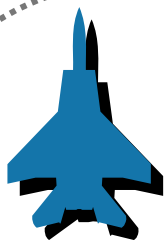


Maintenance Pipeline

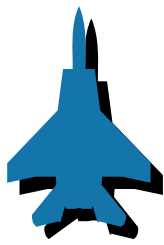
Non-RFU F-404 In Work Non-RFU F-404 In Work

Non-RFU Retrograde F-404

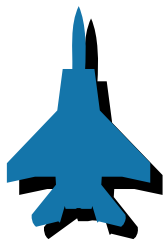
Transportation



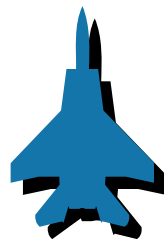
RFU F-404 RFU F-404



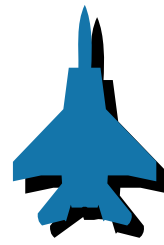
RFU F-404 RFU F-404



RFU F-404 RFU F-404

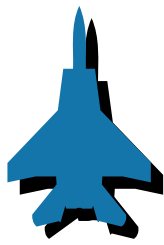


RFU F-404 RFU F-404

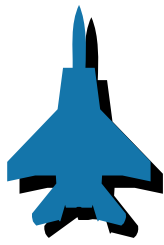


RFU F-404 RFU F-404

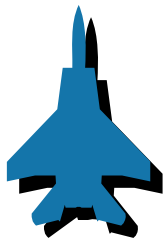
Distribution



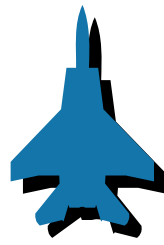
RFU F-404 RFU F-404



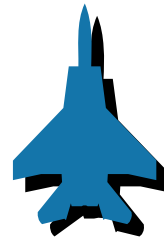
RFU F-404 RFU F-404



RFU F-404 RFU F-404



RFU F-404 RFU F-404



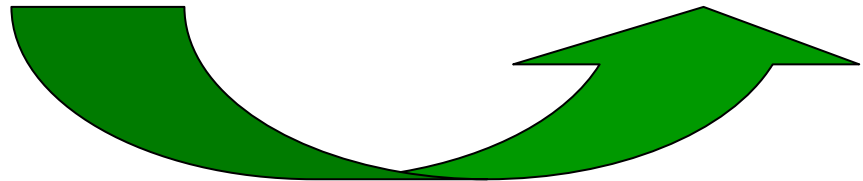
RFU F-404 RFU F-404

Supply Warehouse

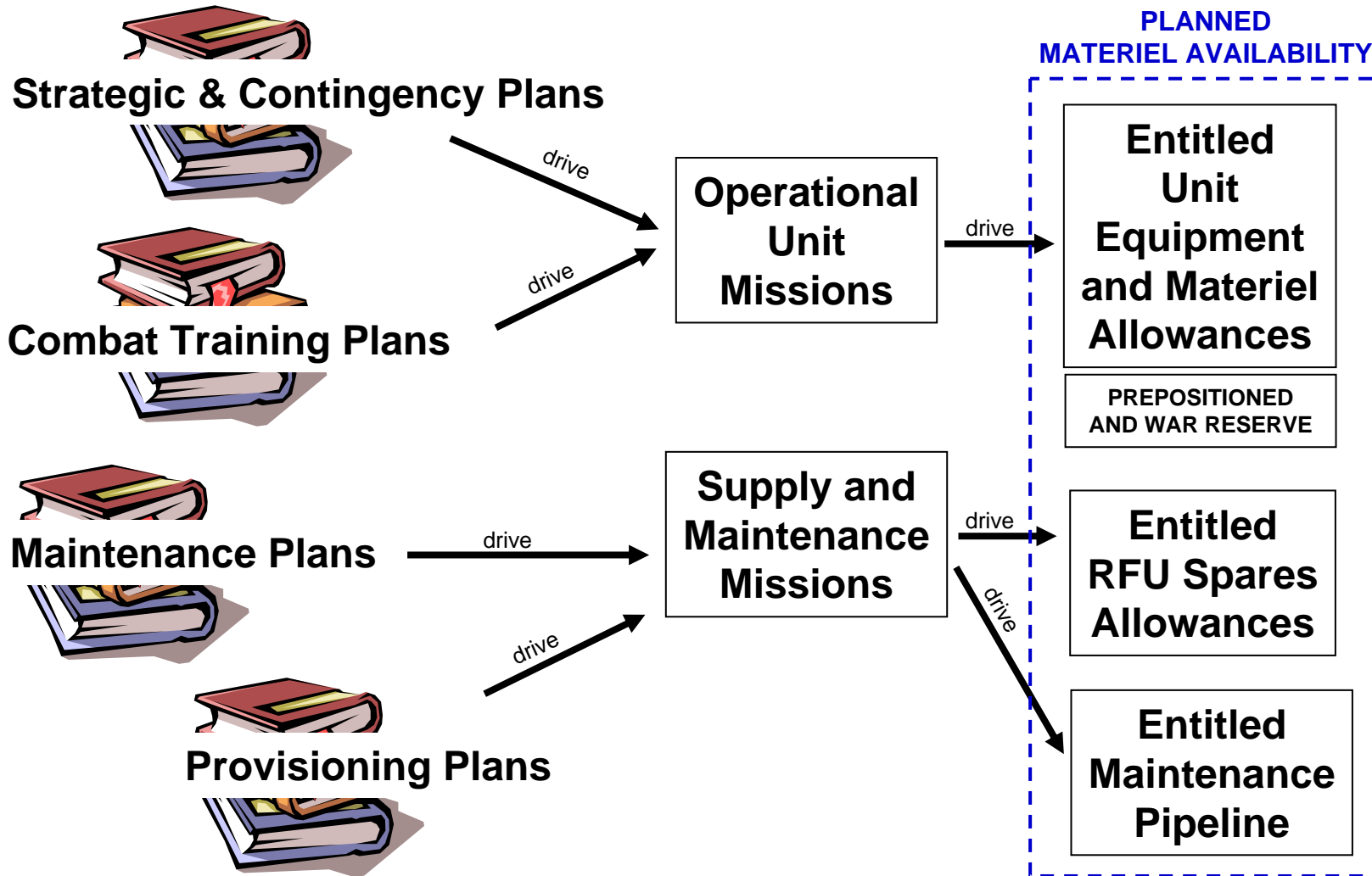


RFU Spare In Can RFU Spare In Can

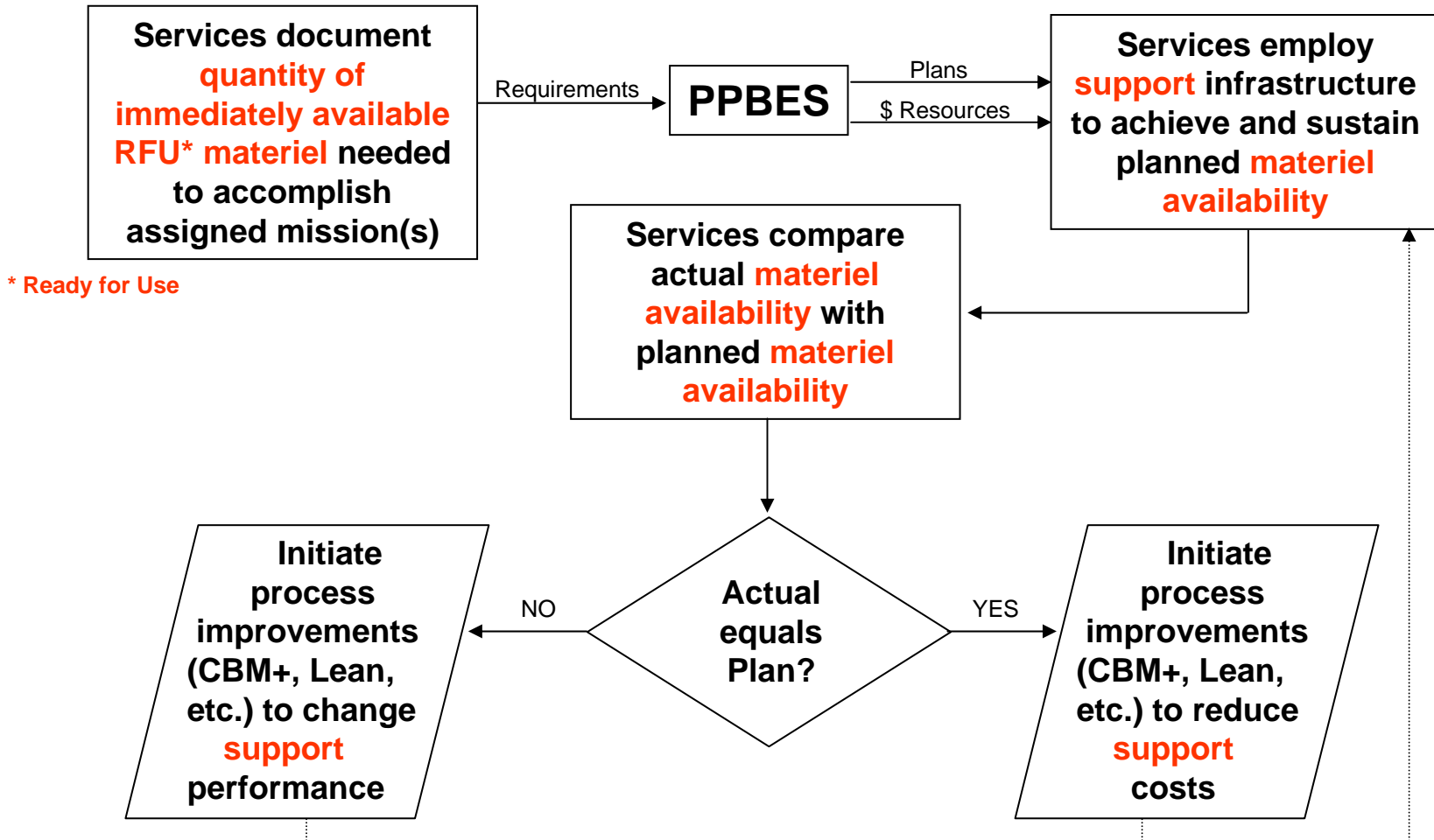
Sustainment Flow

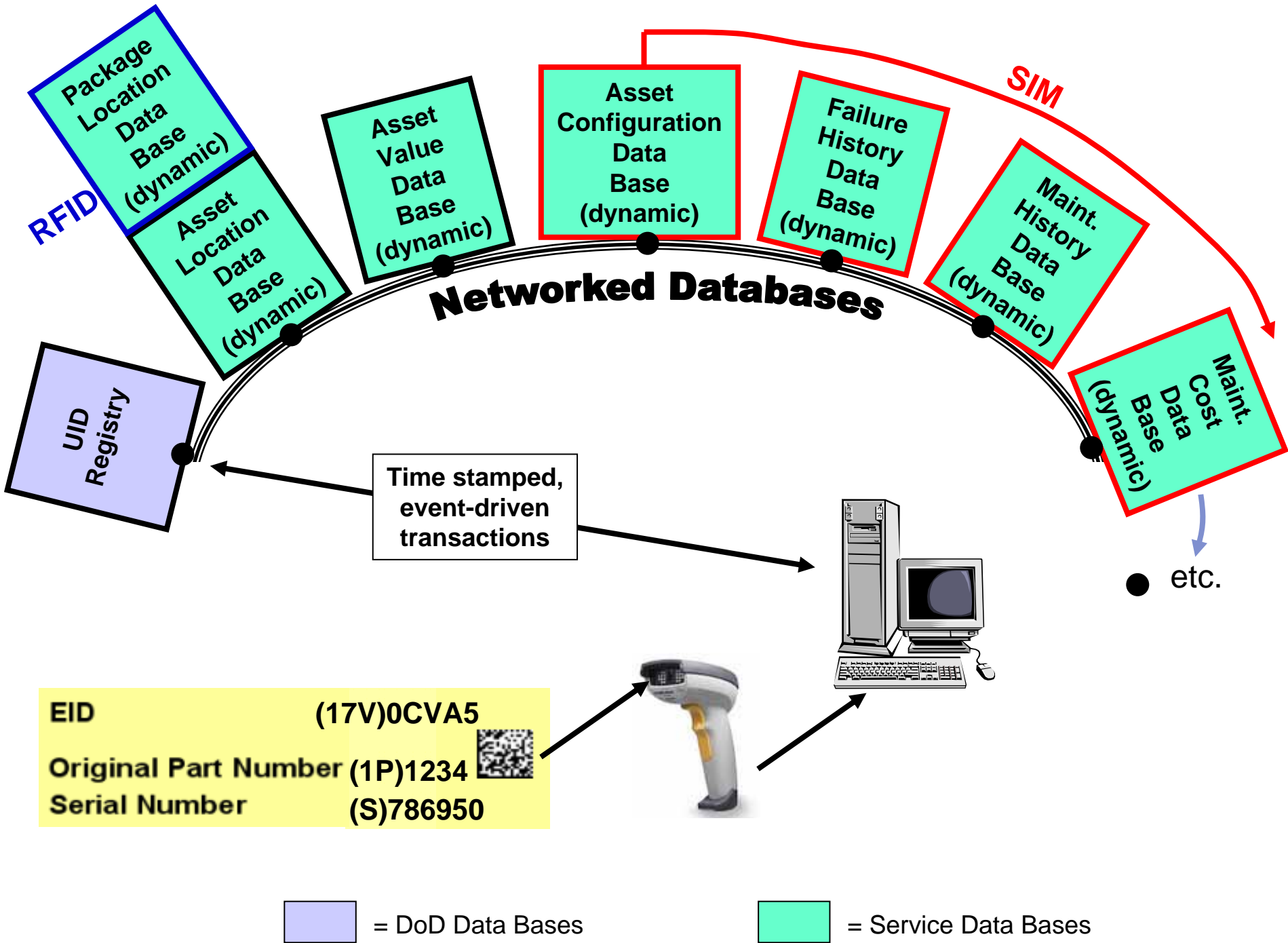


Establishing the Materiel Readiness Requirement Tying Plans to Expected Mission Outcome

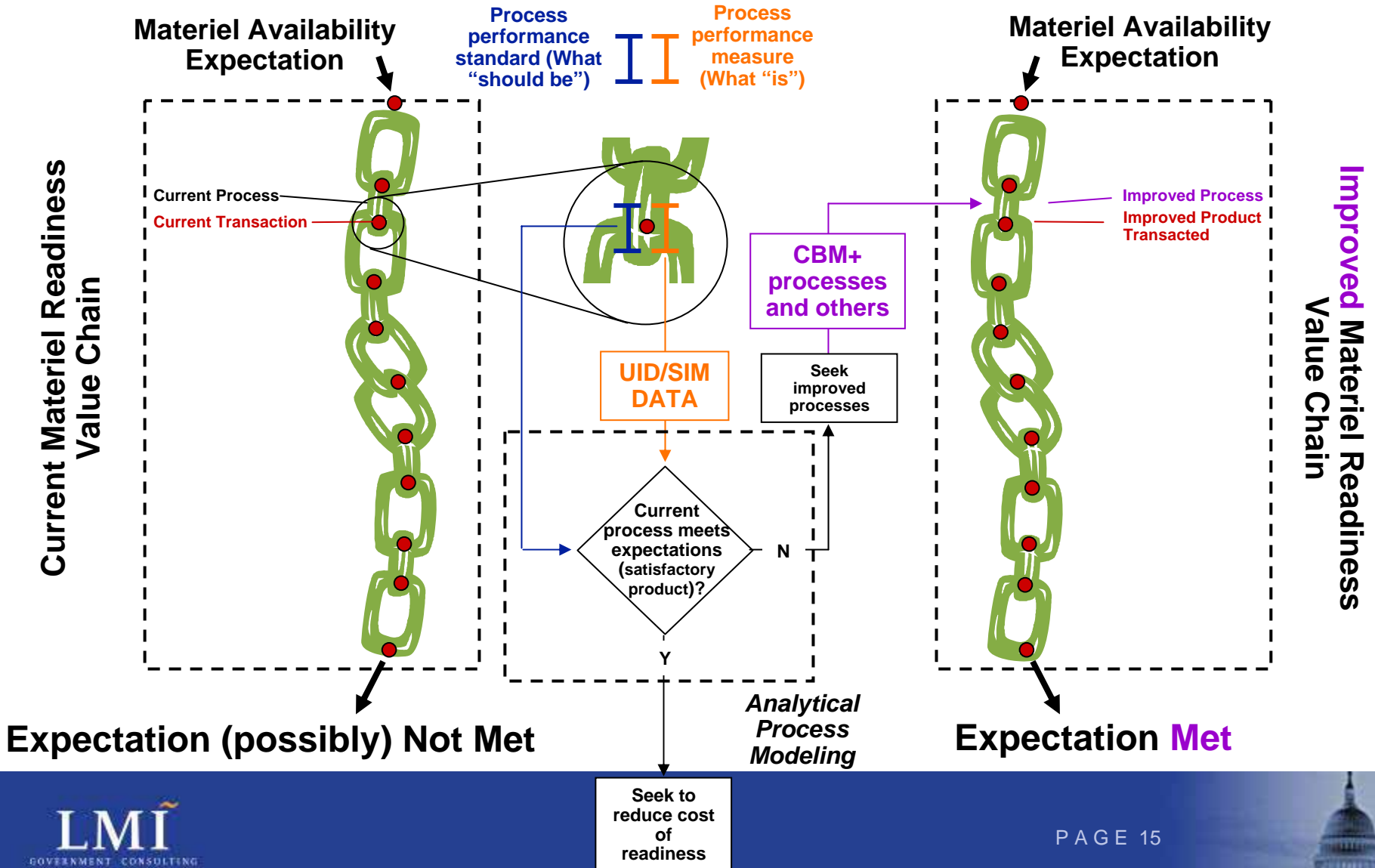


Measuring Performance-to-Plan Where is the Data?

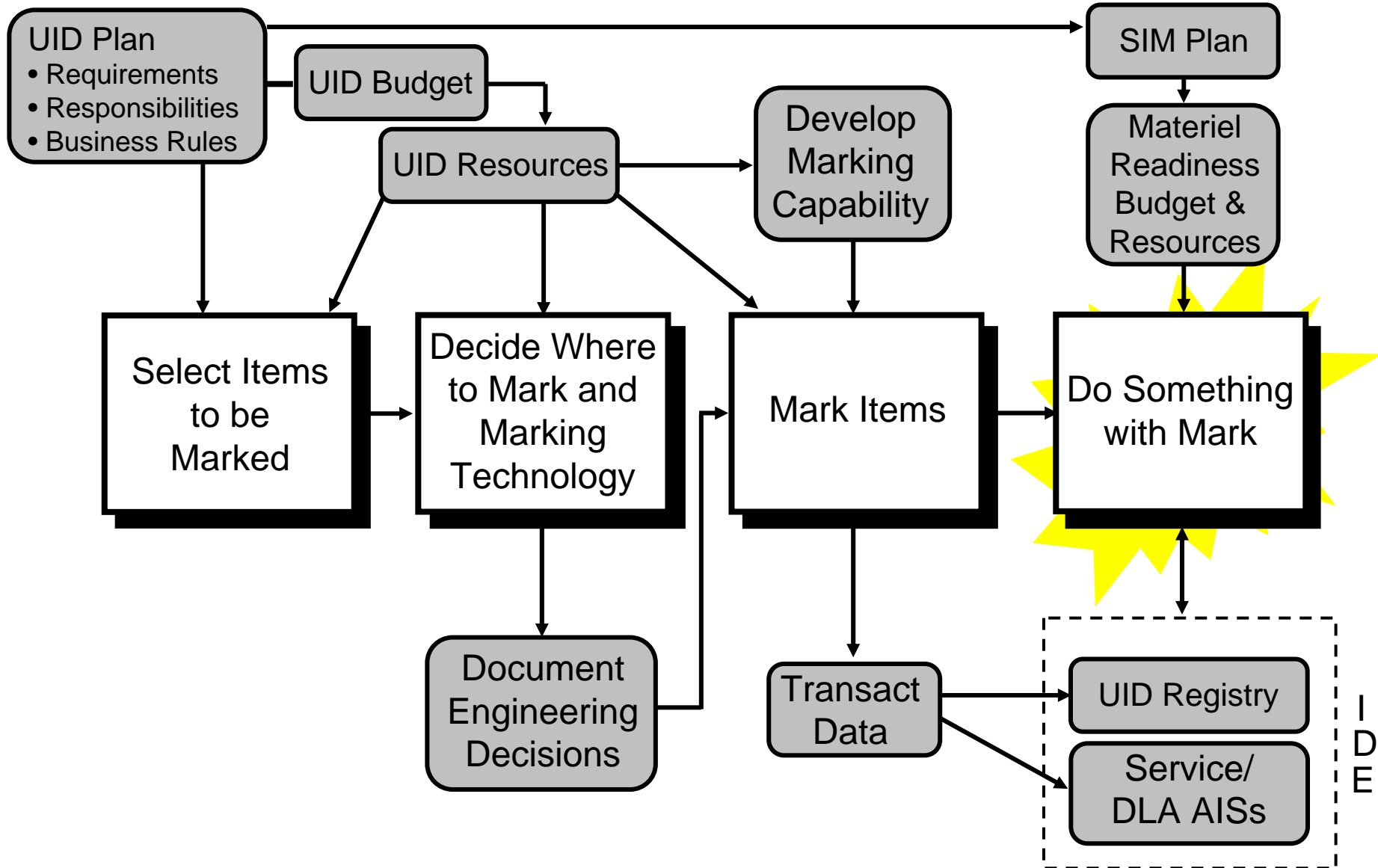




UID/SIM and CBM+ Role in Materiel Readiness Process Improvement

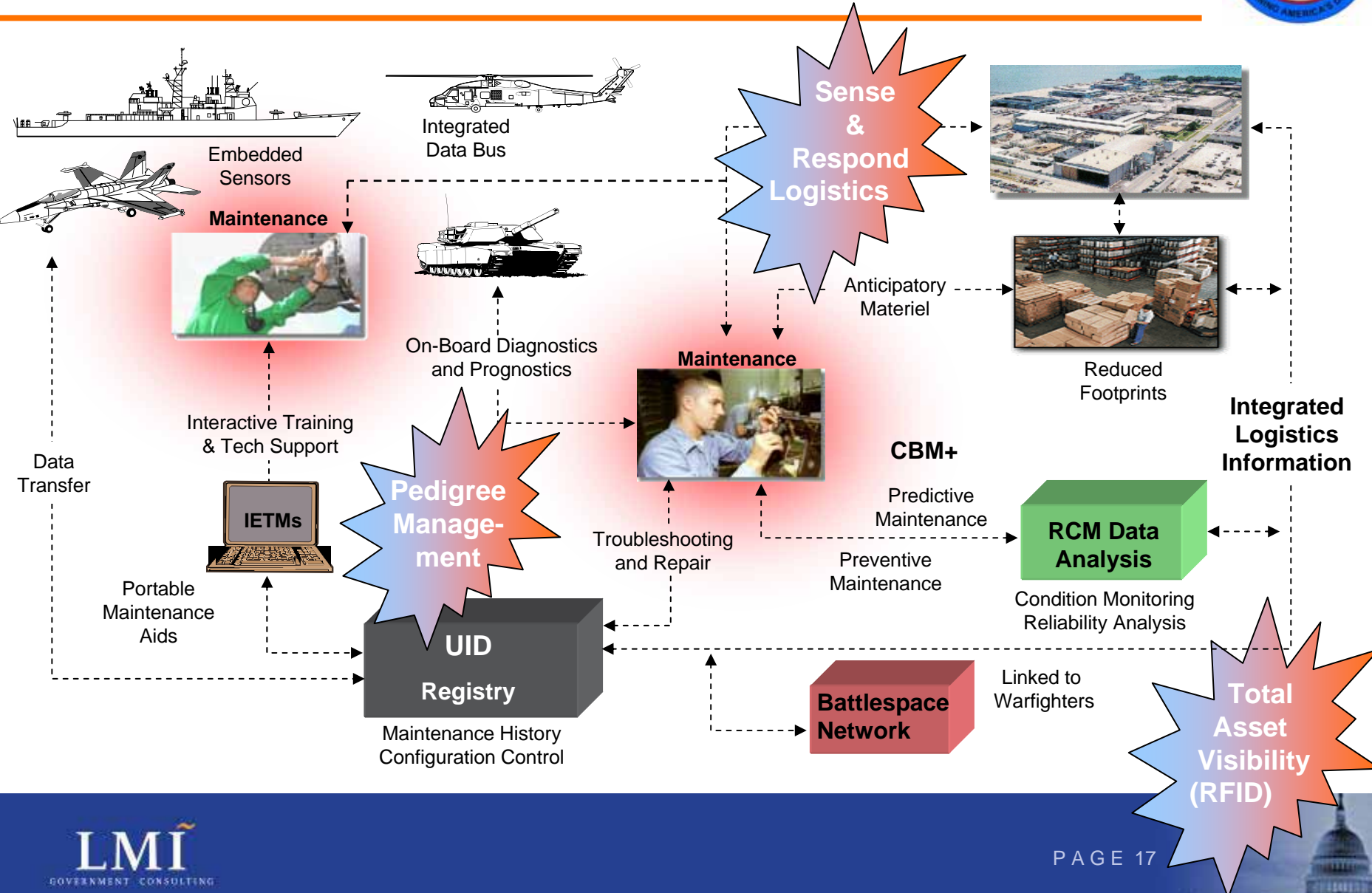


Getting to Pedigree Management



Maintenance Transformation

Knowledge-Enabled Decisions and Actions



Maintenance Transformation Won't Happen by Itself...



**Forward
Forecasting**

Get ahead of the problem

**Forward
Planning**

Create the future

- **Enterprise Alignment**
- **Disciplined Process**
- **Correct Incentives**
- **Outcome-oriented Metrics**

**Forward
Budgeting**

Lock in the resources