United States Army

LOGISTICS INTEGRATION AGENCY

LIA Rock Drill Laboratory
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U.S. Army Logistics Integration Agency
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Thank You!!

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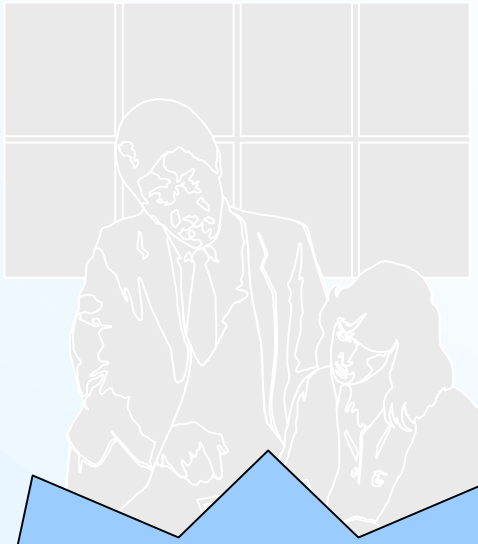
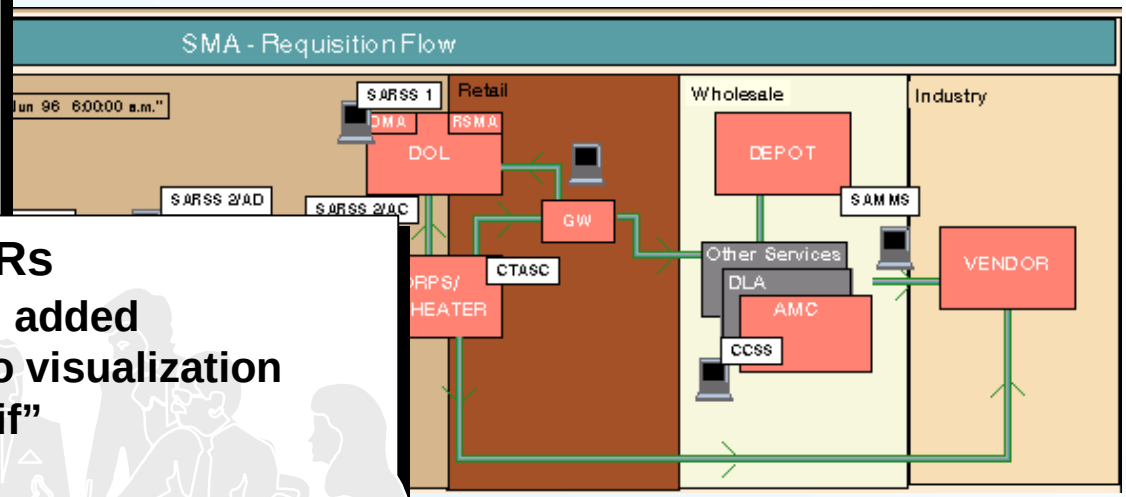


Outstanding Senior Leadership Support and Encouragement

Background

Rock Drill

Visualization of Class IX supply process, materiel flow and financial interfaces



IPRs

- **Demonstrated added mathematics to visualization and the "what if" capability**
- **Interim Credit Policy and SSF**
- **Class V and Depot Maintenance processes**

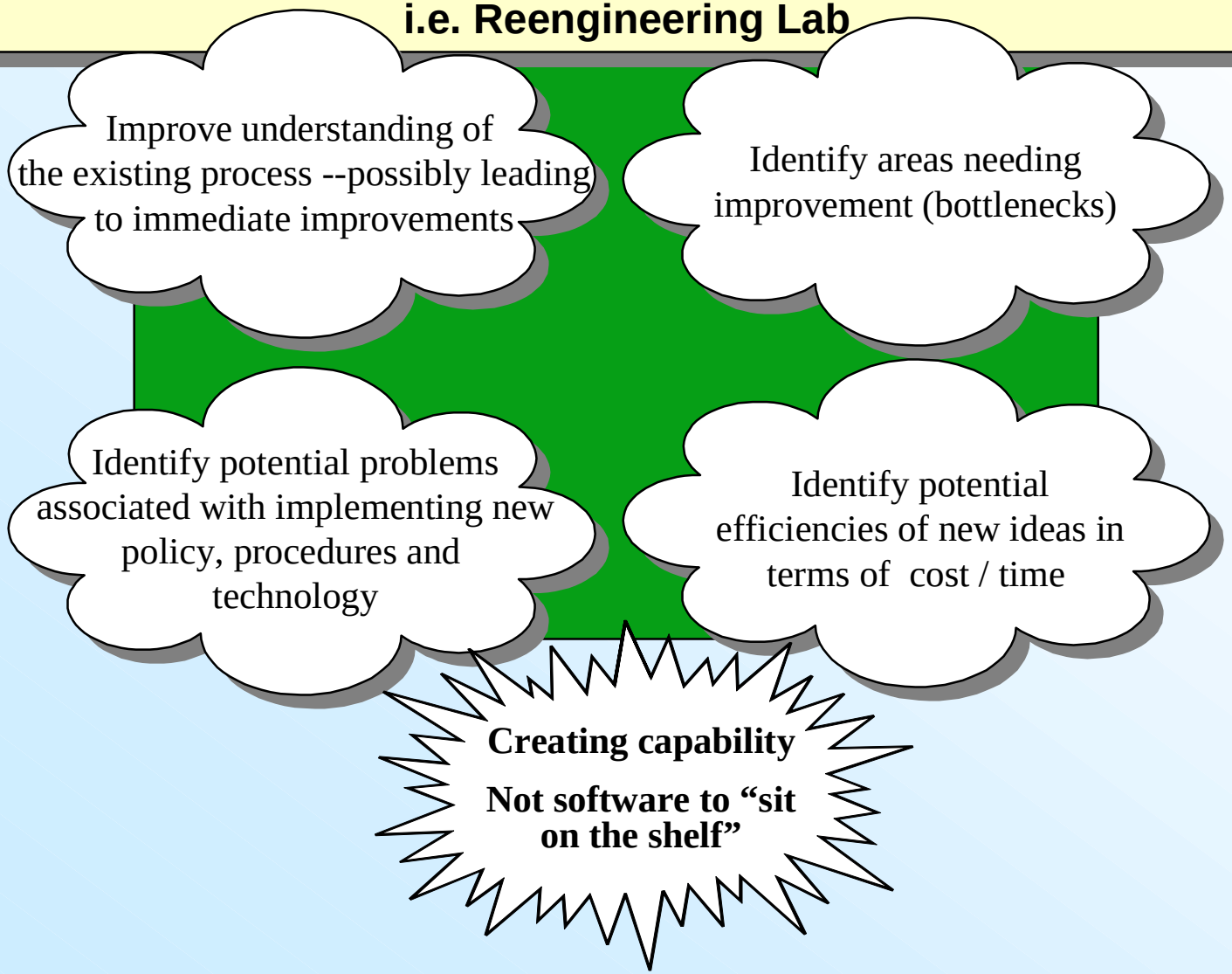
A cost effective, non disruptive means of doing BPR analyses

DCSLOG Guidance

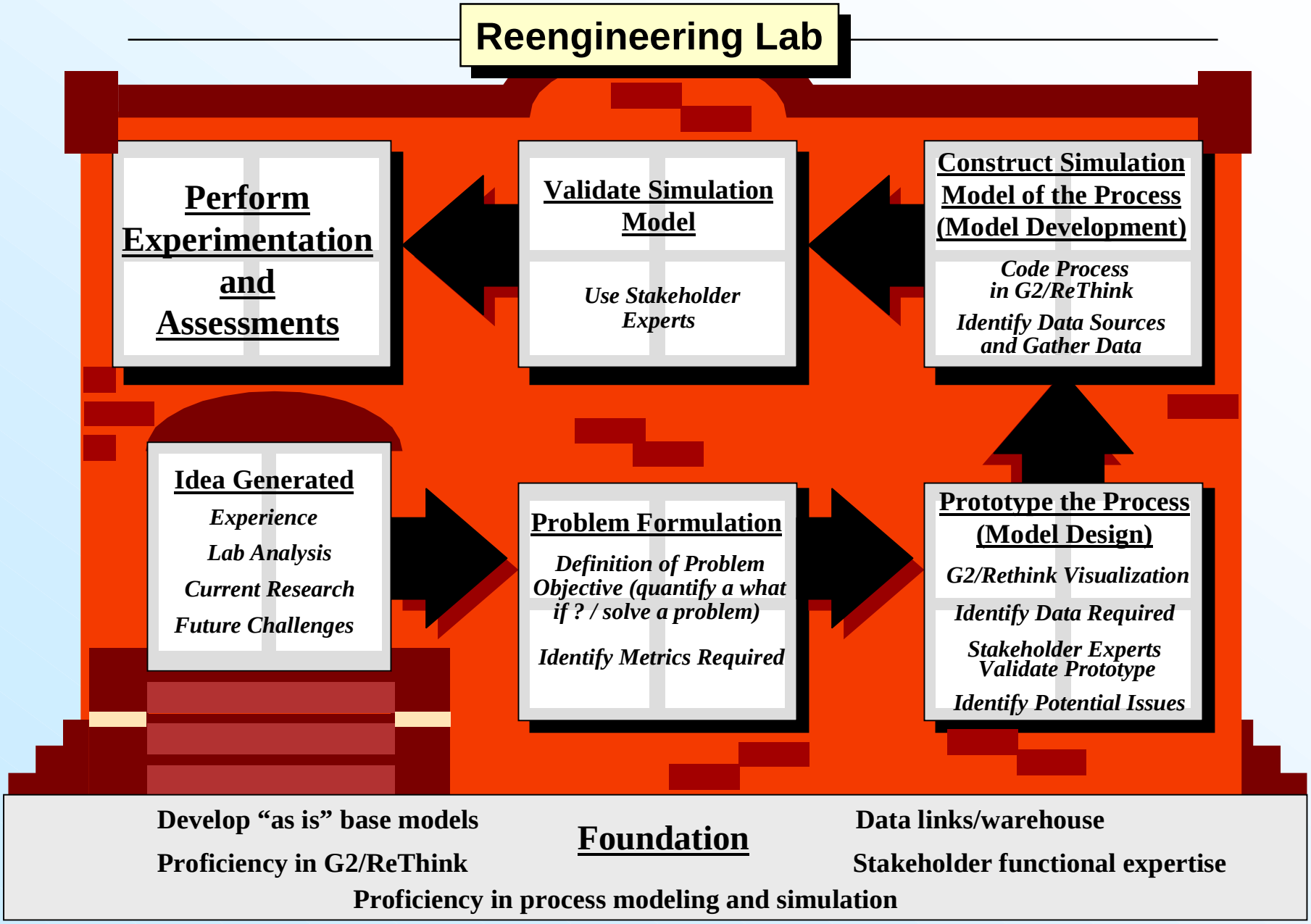
- **Continue to work with PM-SSF and other staff to provide policy insights**
- **Continue working Class V and Depot Maintenance**
- **Continue to market capabilities**
- **Provide CD-ROM to trainers**

LIA Rock Drill Laboratory Objectives

Provide a cost effective, non disruptive means of testing and experimenting with policy, procedures and technology insertion in a virtual environment i.e. Reengineering Lab



LIA Rock Drill Laboratory Approach



Modern Simulation Technology

- **Gensym's G2/ReThink software tool**
  - **Design:**
    - **Provides an "electronic canvas" to do hands-on modeling**
    - **Quick graphical way to see processing task sequences and interdependencies.**
  - **Discrete Event Simulation:**
    - **Measure the performance of existing & proposed business processes.**
    - **"What if" analysis - test re-engineering ideas before implementation -- Questions like:**
      - **"How will restructuring impact my cycle-time and stockage requirements?"**
      - **"How much will throughput increase if I add additional resources?"**
  - **Process data:**
    - **Input data can be simulated or loaded from external files and databases so that historical process data can drive the models.**
    - **Output data can be captured and displayed as it's developed or stored in external files for in depth analysis.**

Verification & Validation

Definitions

Verification - model operates as intended

Validation - model is an acceptable representation of the "real world" system

Approach

Verification

- "Face validation" methodology: SMEs review the visualization of the process to determine if it represents the Army process

- "Structured walk through" methodology: all members of the modeling team walk step-by-step through the computer program

Validation

- "Historical data" methodology: comparing actual data with data produced by the model

- "Sensitivity Analysis" methodology: changing the values of inputs or parameters to determine whether the effect on the model's output is reasonable and expected

Applications

Class IX

- Single Stock Fund
- Interim Credit Policy
- Low Dollar Value Excess Policy
- Root Causes of Excess
- Repair vs. Long Supply Pricing
- Affect of Apache PVS on AWCF

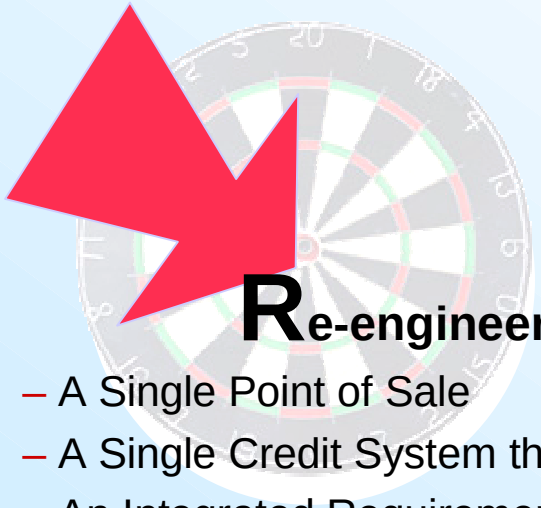
Maintenance

- Depot Maintenance Planning Process Redundancies
- Depot Maintenance Parts Problems
- PMCS/5988-E
- National Maintenance Manager

Class V

- Installation Ammunition Management System
- Just-In-Time Distribution
- Stock Reduction

Single Stock Fund Project



Re-engineer logistics and financial functions to give the Army:

- A Single Point of Sale
- A Single Credit System that is simple, needs based & gradually de-links credit from OPTEMPO
- An Integrated Requirements Determination System
- A National manager responsible for supply, maintenance & finance

Rock Drill Lab Objectives

•Develop and use credible, quantitative tools to test SSF business rules prior to and during field testing

•Facilitate common understanding of end-to-end "As Is" and "To Be" business processes

Single Stock Fund Project

- **Accomplishments:**

  - Developed & validated Forces Command (FORSCOM) "As Is" and "To Be" models and ran 1 years worth of data for Ft Campbell and Ft Stewart to test initial business rules and estimate

  - Developed & validated Training & Doctrine Command (TRADOC) models

  - Tailored models for Ft. Sill & Ft. Lewis

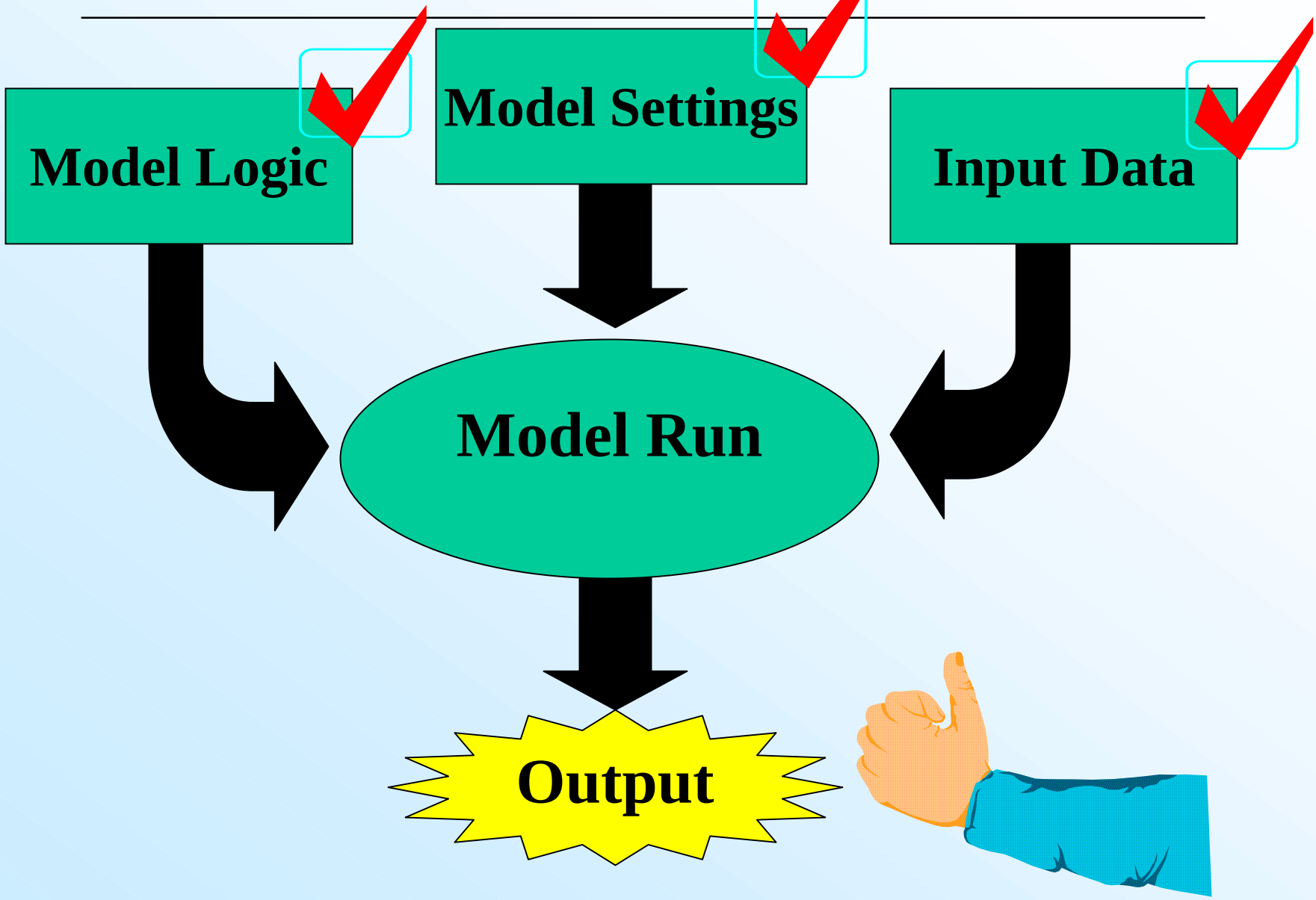
  - Developed visualization of the Army Material Command (AMC)model for Redstone Arsenal Support Activity

- **To Do:**

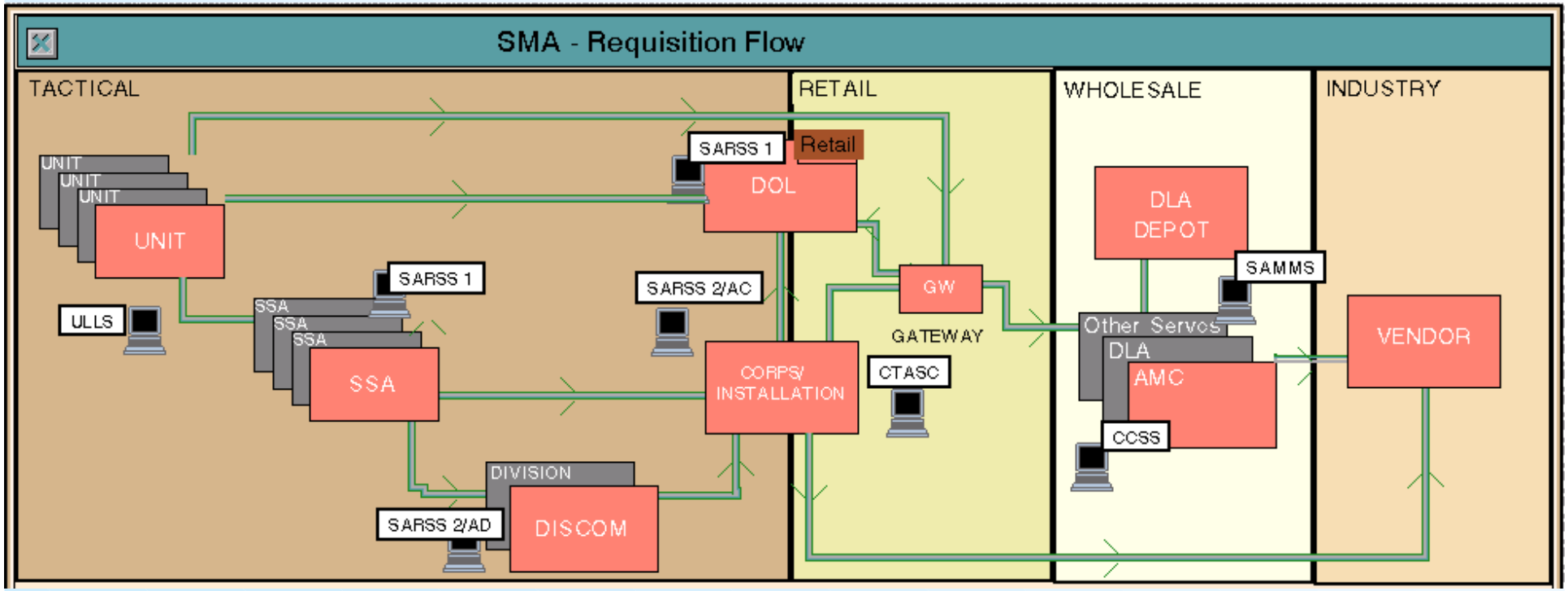
  - Execute model for SSF demonstration sites (Ft. Sill / Ft. Lewis / Redstone Arsenal Support Activity)

  - Incorporate features needed to test integrated requirements determination and integrated maintenance

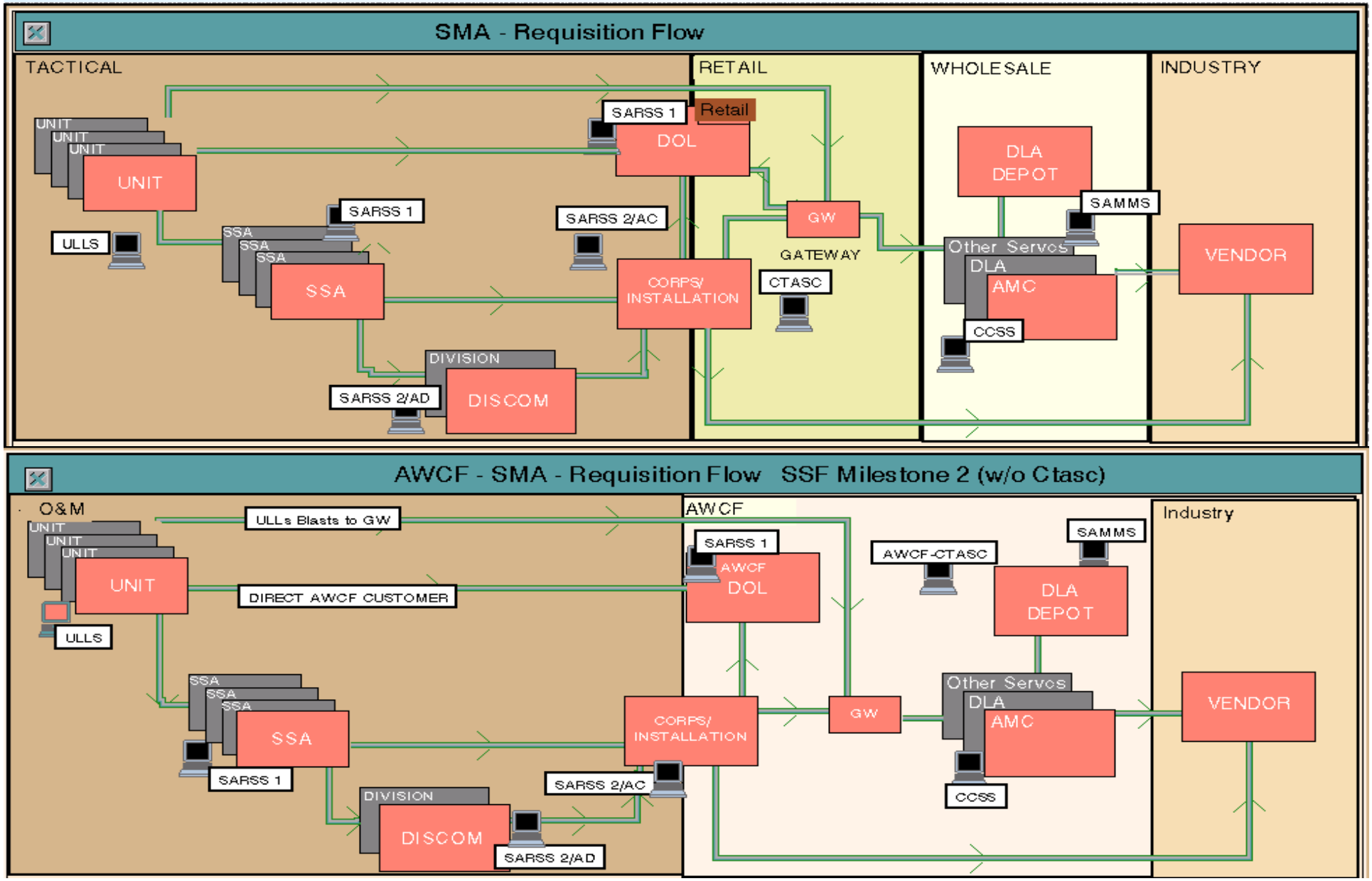
Model Run Approach



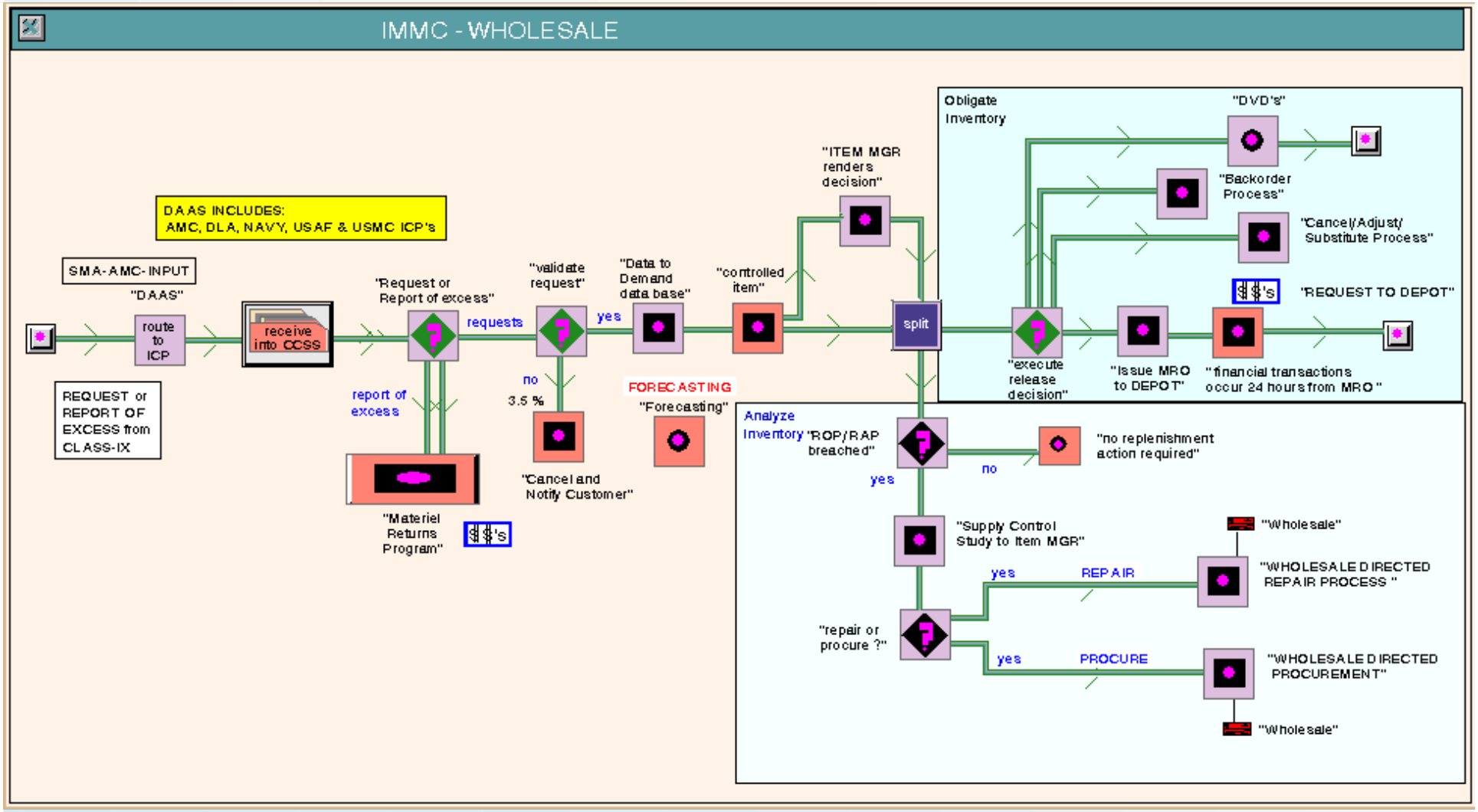
Class IX - “As Is” Requisition Flow



Class IX - "To Be" Requisition Flow
SSF Milestone 1/2

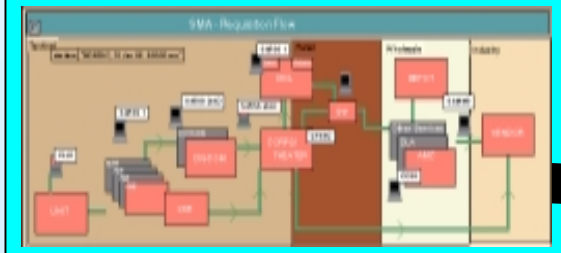


Class IX - Wholesale

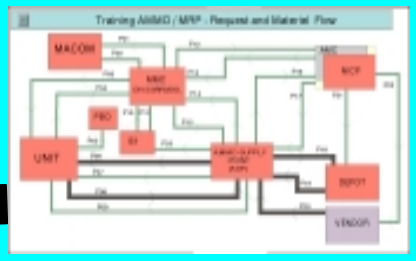


Integrated Vision

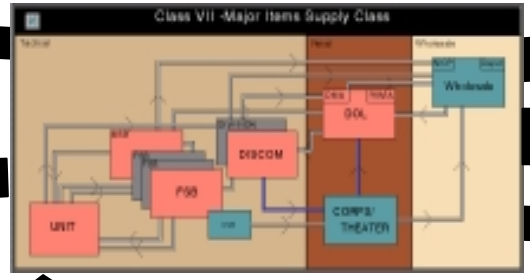
Class IX



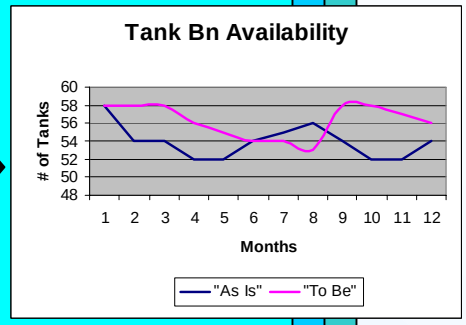
Class V



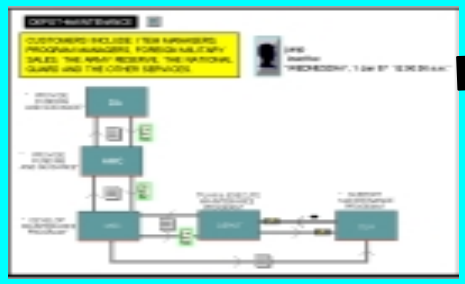
Class VII



OPTEMPO



Maintenance



Class III

Materiel

Transportation Systems

Unit Deployment