
OUT OF CHAOS COMES:
CONVERGENCE!

Defense Logistics as a Chaos Theory...

- Chaos Theory is the name science has come up with to describe the very complex way the world works.
  - Much of mathematics is "linear", or related to a line, making equations and figuring out the answer fairly straight forward.

- But there are some things that just can't be explained so easily, like weather patterns, ocean currents, and defense logistics. There are too many things going on to keep track of: It almost seems as if they are random, or "chaotic".
  - Chaos theory is a way describe and predict these types of events.

- As a Chaos Theory, defense logistics process streamlining is next to impossible without reference modeling, as End-to-End Logistics spans the Galaxy!
  - Reference models visualize the "Best of Breed" across the National Technology Industrial Base
    - Reference Models feed off of logistics data: better data, better results

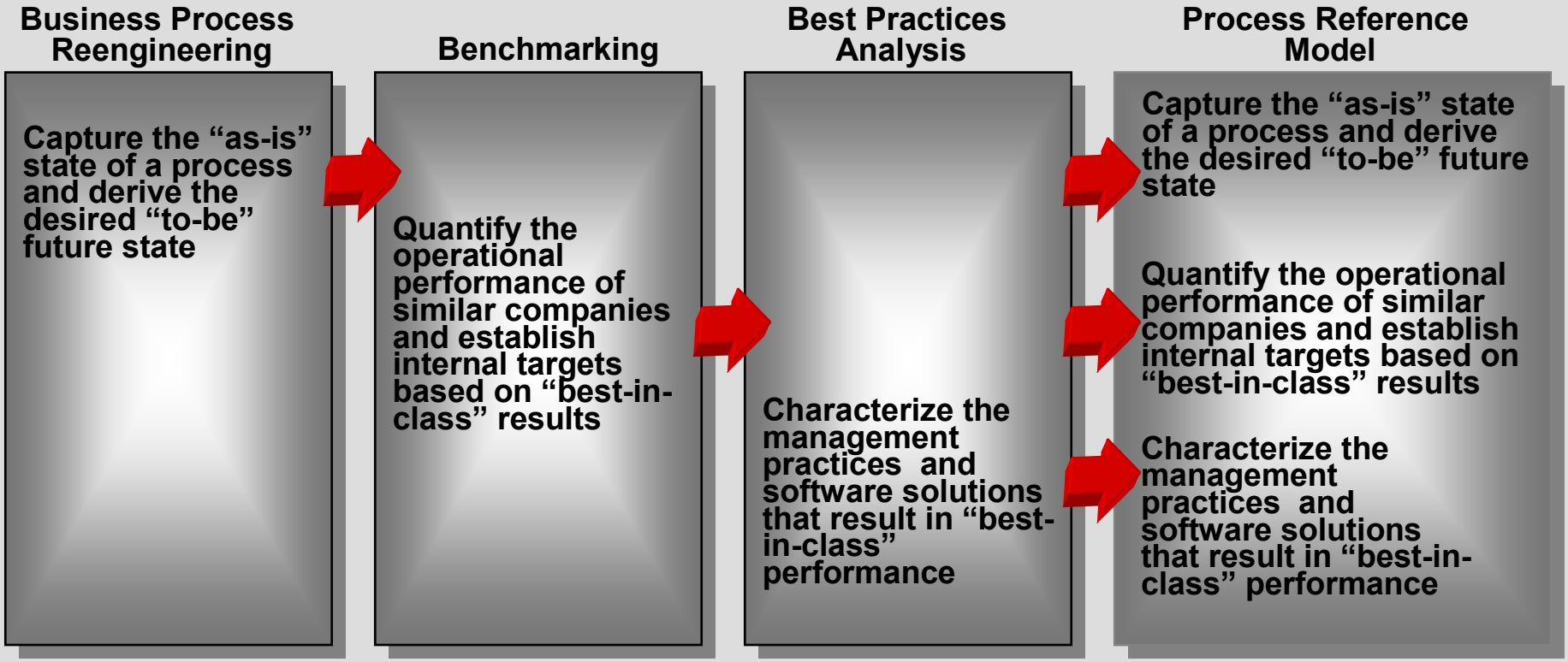
- As a Chaos Theory, defense logistics data analysis requires a common logistics data schema, as data files are so huge and tedious.
  - A common data schema is tantamount to logistics data linkage

Topics of Discussion

- Operations Reference Models – what are they?
- A Perspective On Life Cycle Logistics
- What is Industry Using for operations modeling?
  - Supply Chain Operations Reference model
  - Design Chain Operations Reference model
- The Need for Information
  - Common Logistics Data Schema
- Bringing it All Together (a Notional Concept)
- A parting Shot

What is a Reference Model?

- Process reference models integrate the well-known concepts of business process reengineering, benchmarking, and process measurement into a cross-functional framework

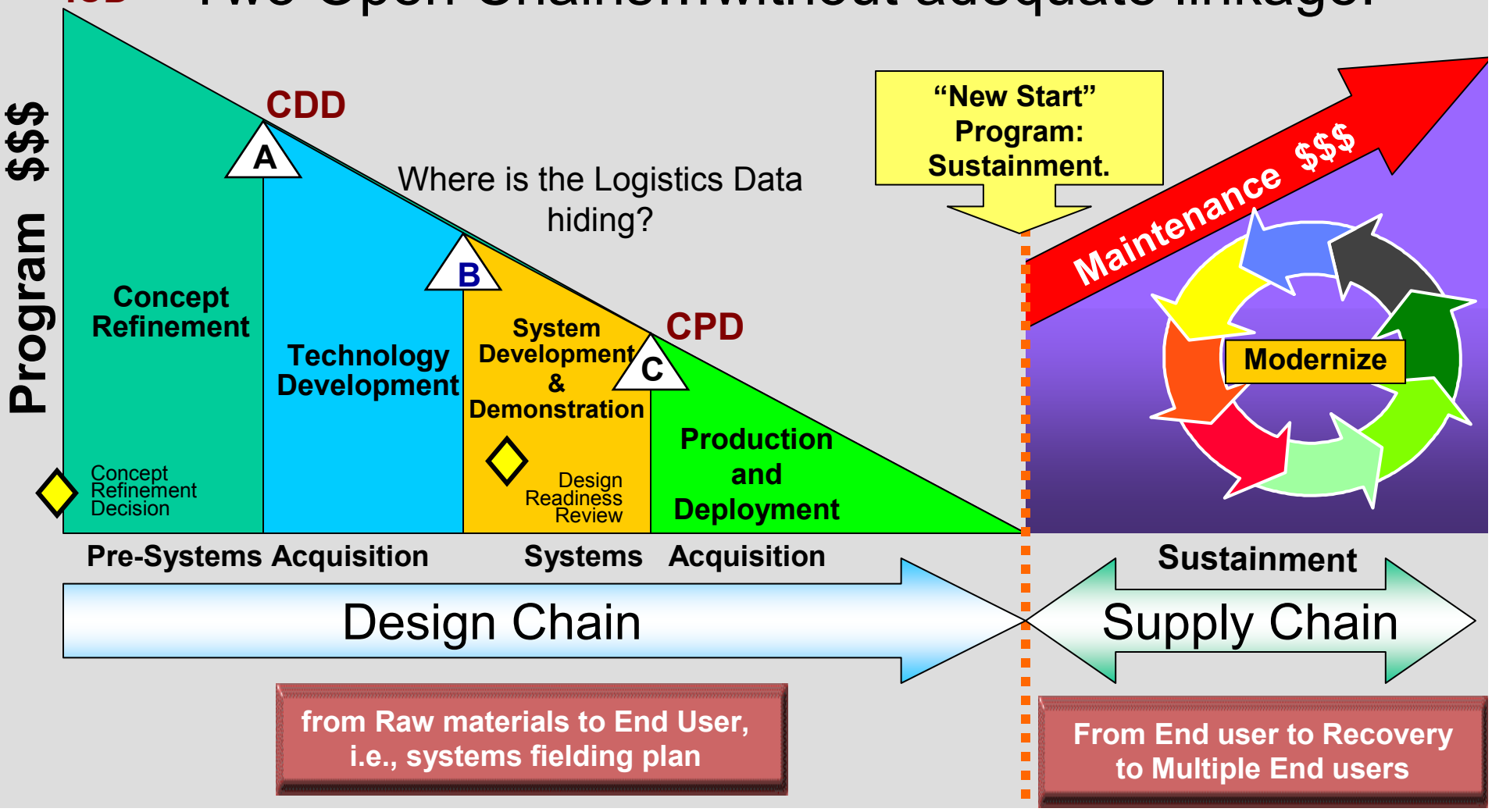


Data **is the fuel for reference models**

SCOR Supply-Chain Council

What does Life Cycle Logsitics Look Like Today?

Two Open Chains…without adequate linkage!



Is There a Reference Model Available?

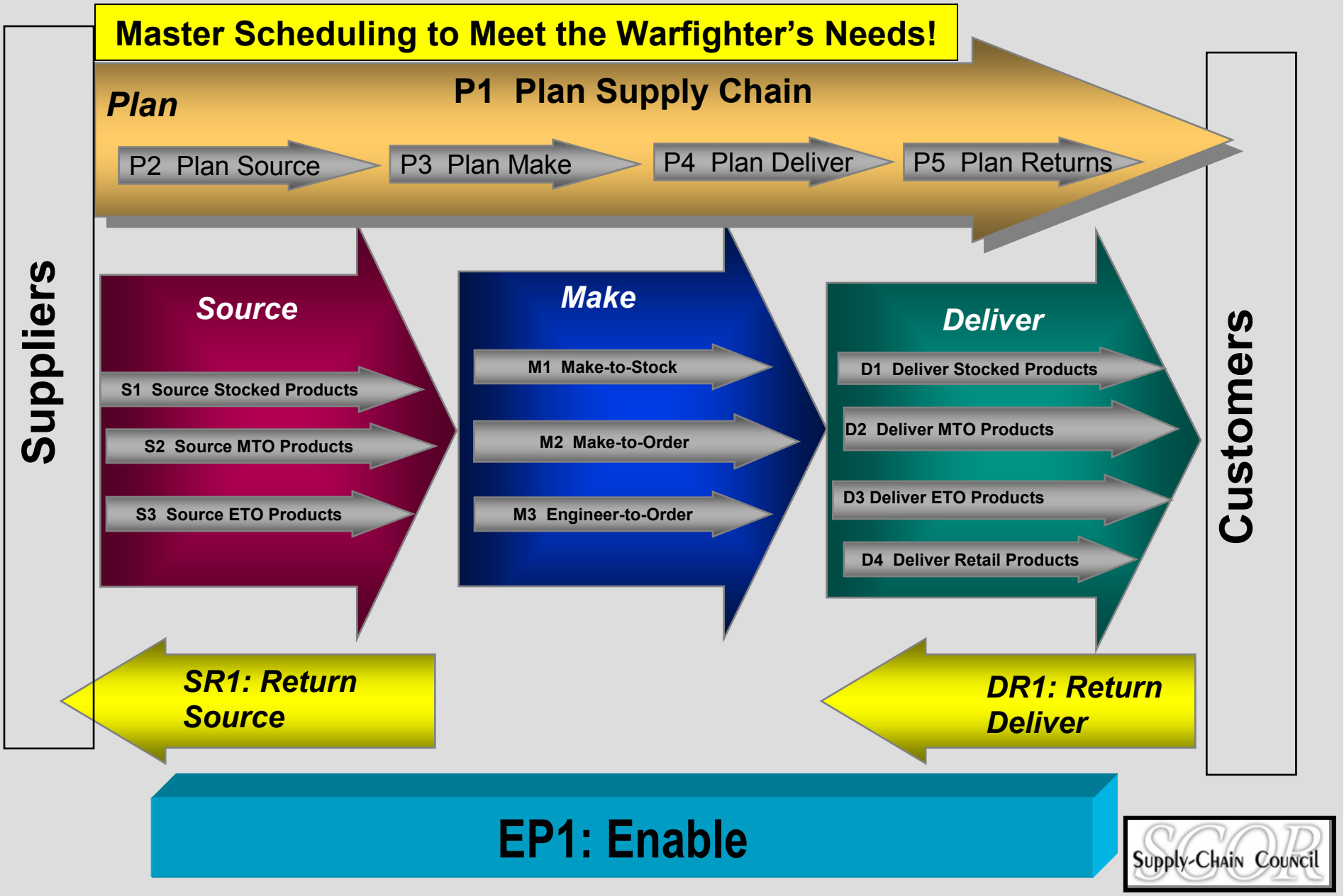
The Supply-Chain Operations Reference-model (SCOR)

- SCOR is a management tool that has been developed by the Supply-Chain Council as the standard diagnostic tool for supply-chain management, enabling users to address, improve, and communicate supply-chain management practices.

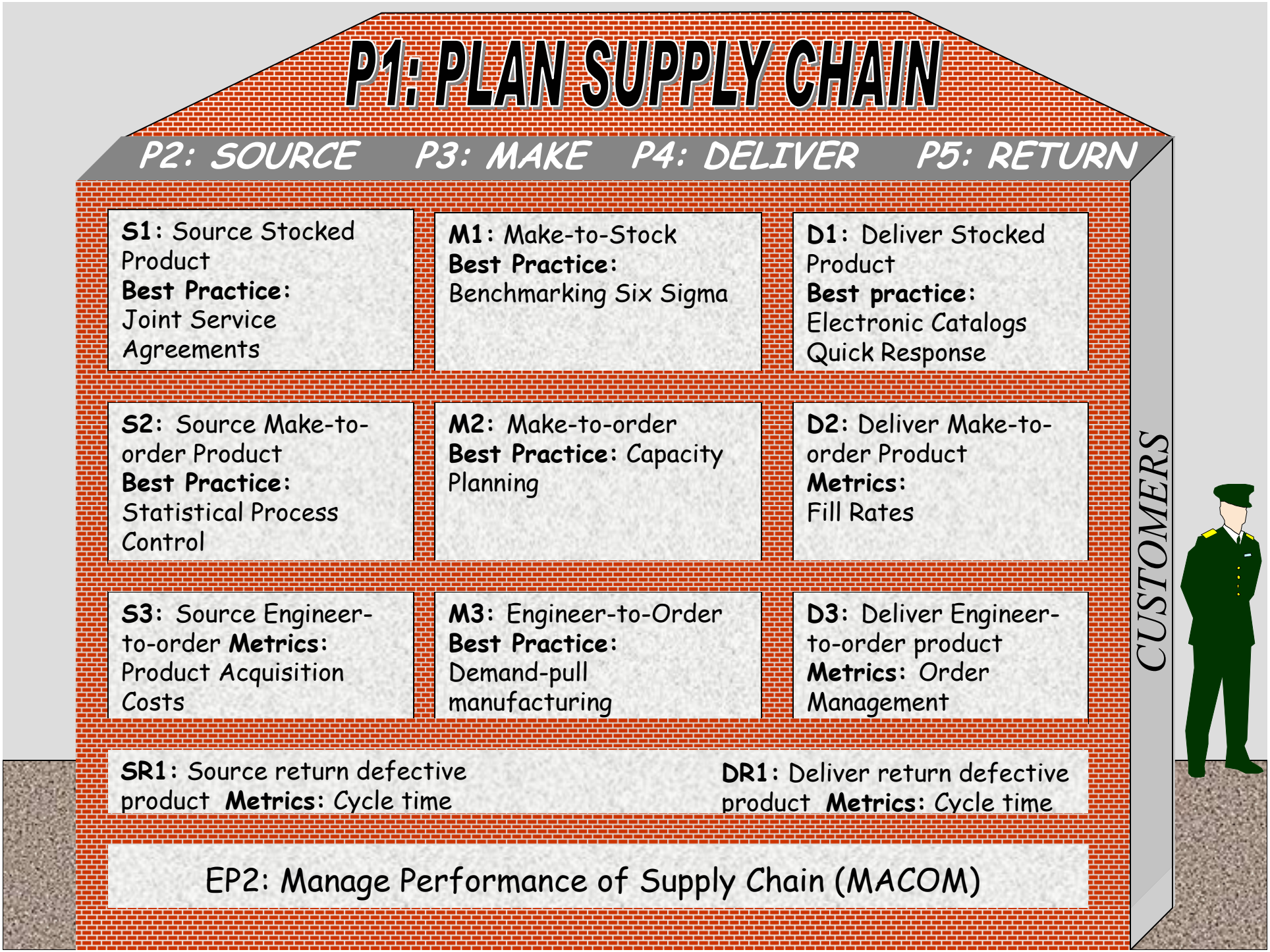
- The SCOR-model:
  - Describes the business activities associated with all phases of satisfying a demand.
  - Utilizes process building blocks.
  - Identifies metrics.
  - Uses a common set of definitions.
  - Links virtually any supply chain within Government and Industry.

SCOR Supply-Chain Council

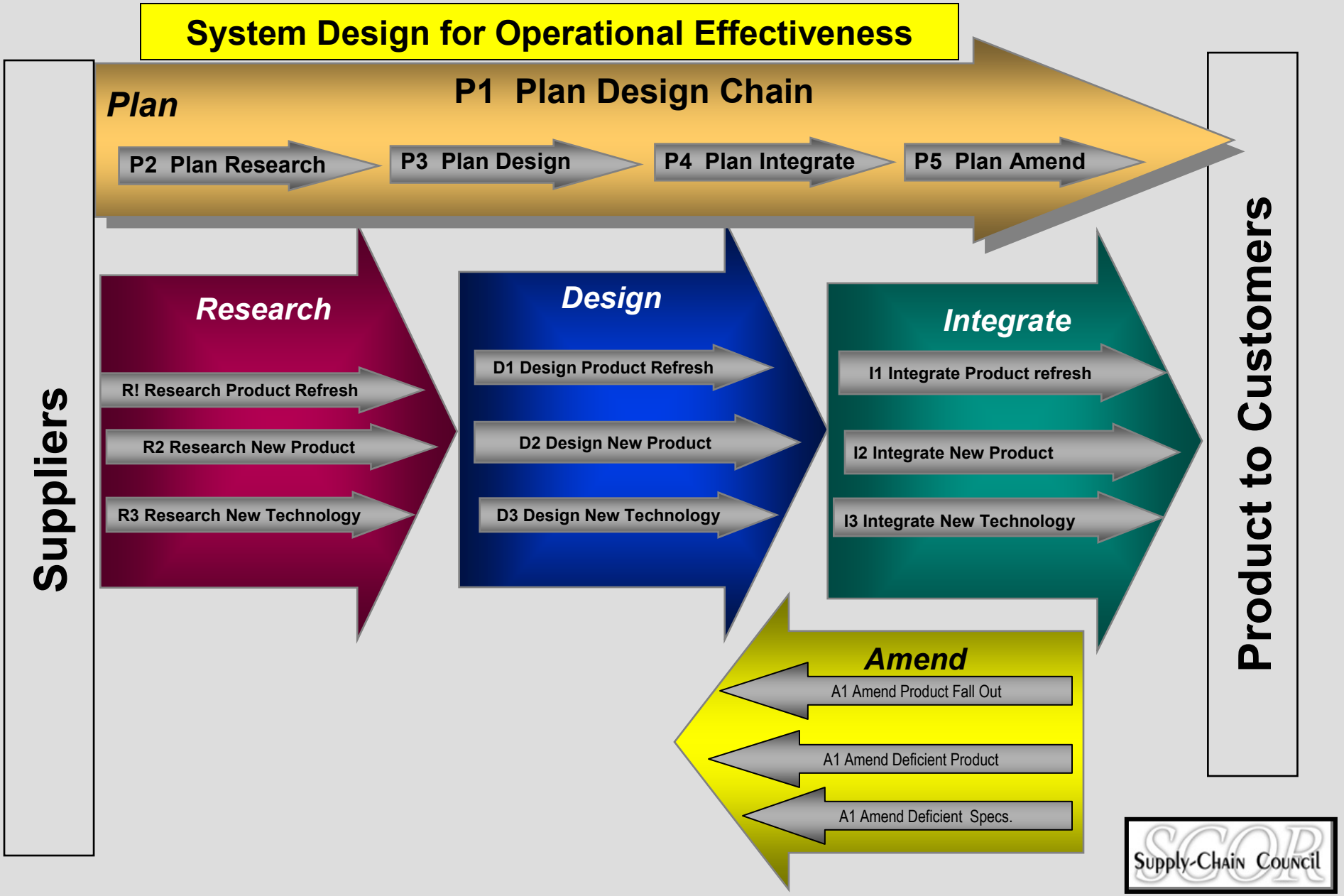
Supply-Chain Operations Reference model (SCOR v7.0)



SCOR Supply-Chain Council


P1: PLAN SUPPLY CHAIN
P2: SOURCE
P3: MAKE
P4: DELIVER
P5: RETURN
S1: Source Stocked Product
Best Practice: Joint Service Agreements
M1: Make-to-Stock
Best Practice: Benchmarking Six Sigma
D1: Deliver Stocked Product
Best practice: Electronic Catalogs Quick Response
S2: Source Make-to-order Product
Best Practice: Statistical Process Control
M2: Make-to-order
Best Practice: Capacity Planning
D2: Deliver Make-to-order Product
Metrics: Fill Rates
S3: Source Engineer-to-order Metrics: Product Acquisition Costs
M3: Engineer-to-Order
Best Practice: Demand-pull manufacturing
D3: Deliver Engineer-to-order product
Metrics: Order Management
SR1: Source return defective product Metrics: Cycle time
DR1: Deliver return defective product Metrics: Cycle time
EP2: Manage Performance of Supply Chain (MACOM)
CUSTOMERS

Design-Chain Operations Reference model (DCOR v1.0)



Sustaining Performance Requires Information

Plan

Deliver Source Make Deliver Source Make Deliver Source Make Deliver Source

Return Return Return Return Return Return Return Return

Product Support Provider

Product Support Integrator

Program Manager

MACOM

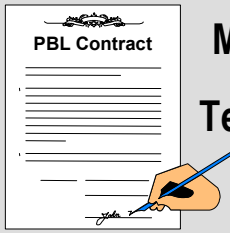
Warfighter

Common Logistics Data Schema

Performance Based Logistics Approach

Competencies Metrics

Best Practices Technology

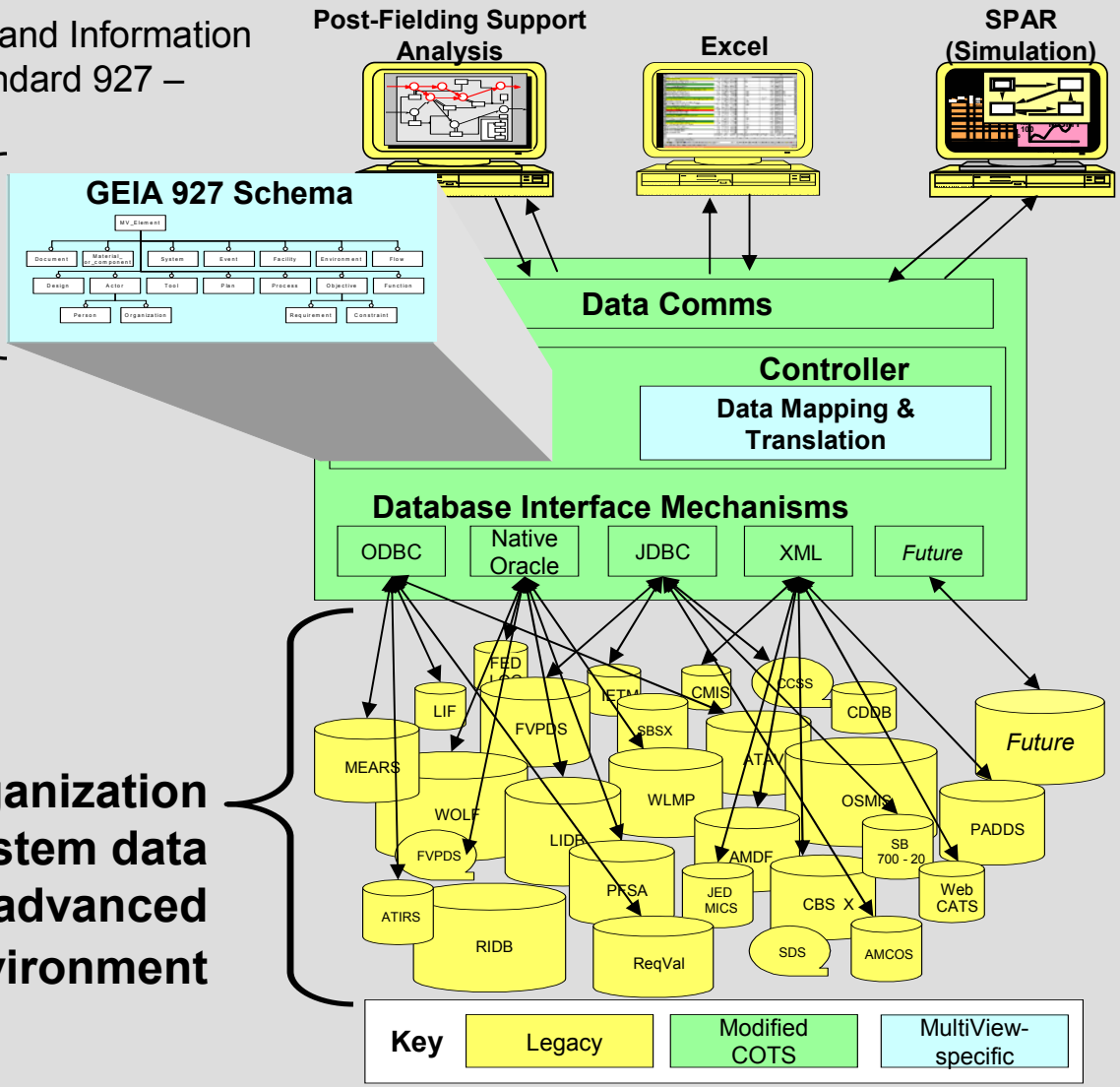


Life Cycle Logistics

What is Common Logistics Data Schema?

Example – the Government Electronics and Information Technology Association (GEIA) standard 927 – ***Multiview***

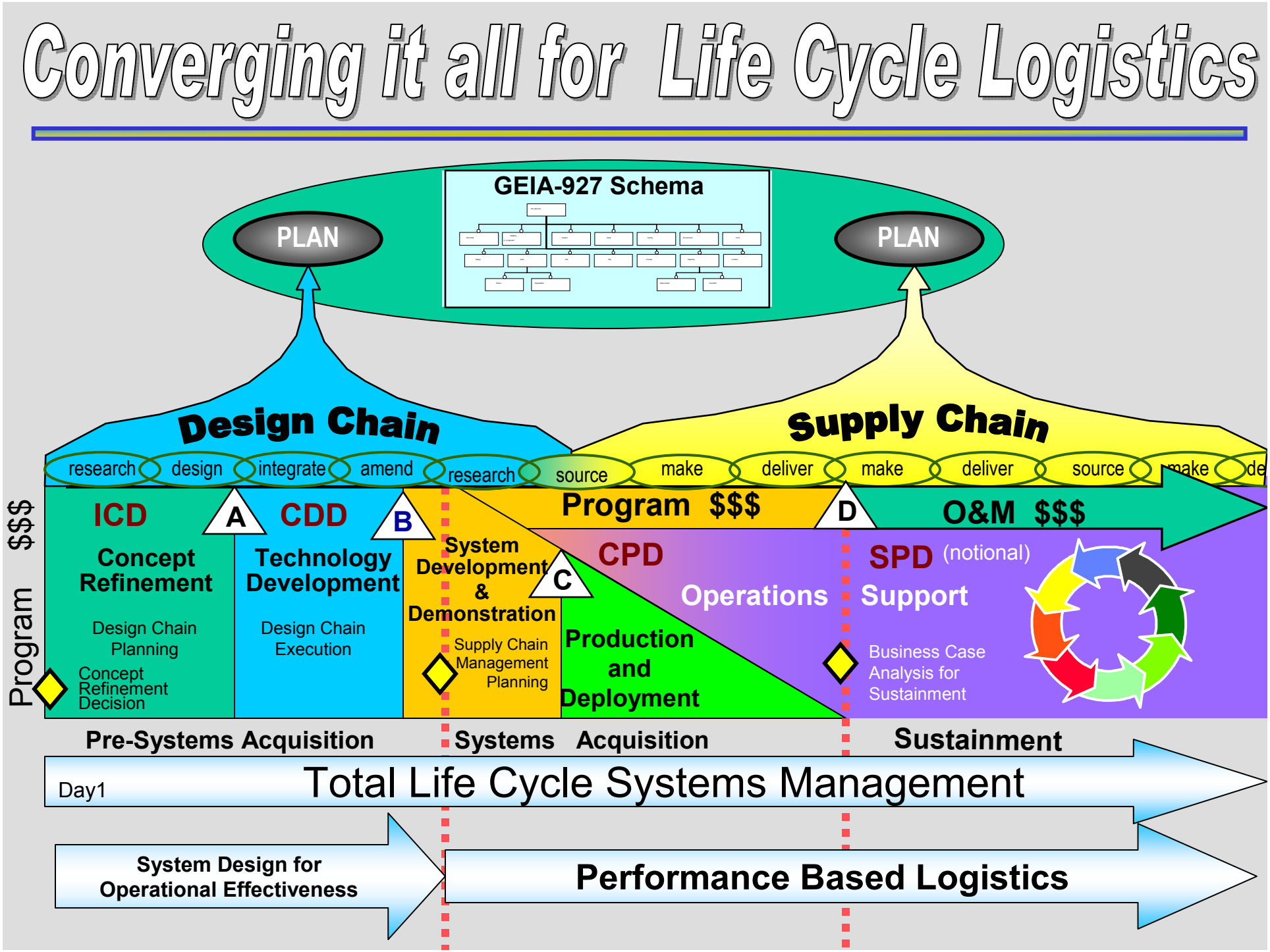
Multiview **- an integrated multi-domain data schema for representing system product and process data.**



The data schema is the organization and interrelationships of system data essential for developing an advanced integrated environment

USAMC LOGSA--Supporting Warfighters Globally

Converging it all for Life Cycle Logistics



ONE LAST SHOT:

just an opinion…

- A Milestone "D", with exit criteria and a Sustaining Performance Document (notional) could be the conduit between Acquisition and Sustainment.
  - Presently, the biggest life cycle event has no criteria
    - Cost, Schedule, Performance, & Supportability under one focal point across the Life Cycle
- Sustainment currently relies too heavily on forensics to determine plan of action
  - Need to map the requirements from Technology Development to operations & support
    - Move beyond "respond and fix"
  - Needs to become a value added service
- Presently "Data Rich and Information Poor"
  - A Common Data Schema would interact all facets of logistics and engineering
    - The "tie that binds" between engineers and logisticians!

For further information and discussion:

TOBYHANNA ARMY DEPOT
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Thanks!

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