

Optimization of Military and Commercial
Goods Movement through Southern California
and
Port of Entry Inspection Technology Infrastructure
Model Seaport Inspection Process

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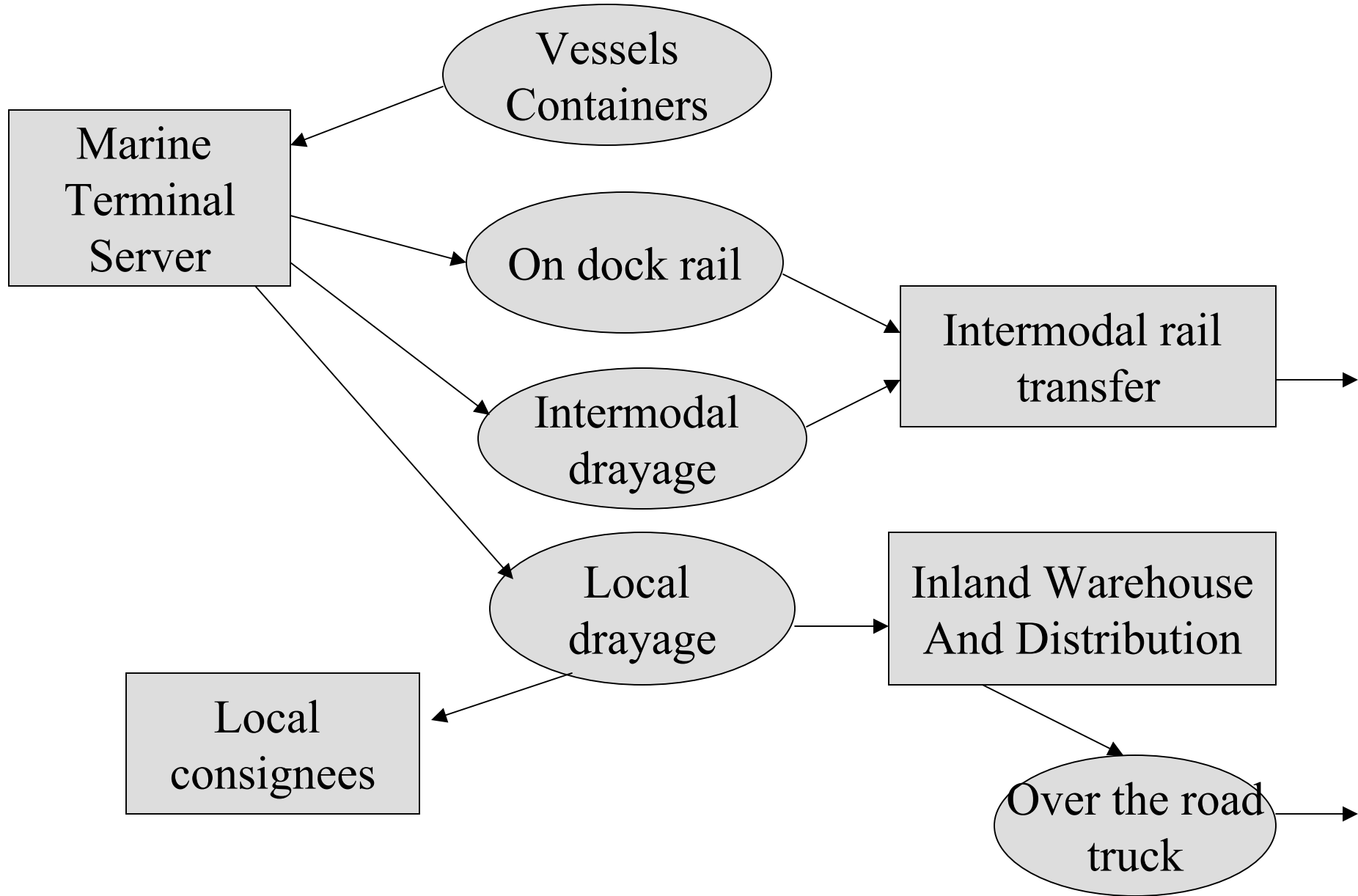
November 1, 2002

Balancing Goods Movement and Supply Chain Security

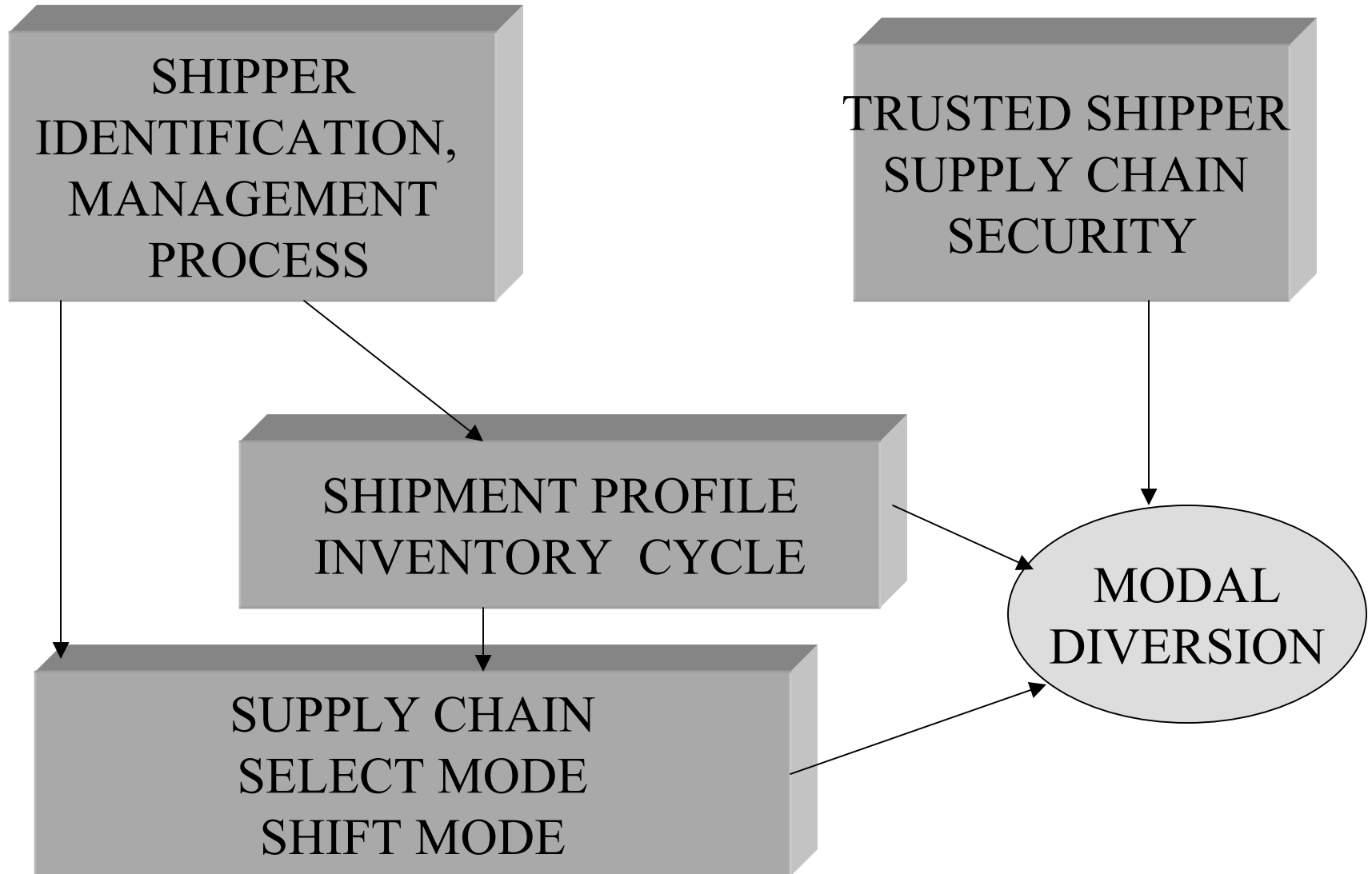
- President Bush and Customs Commissioner Bonner:
 - “Security is top priority....Safety of sea freight and international ‘weak link’”
- 24 hour advance notice on US-bound shipping
- US Officers in foreign ports and inspect shipments
- Focus shift from drugs to deadly material
- Computer picks containers based on historical violators
- Containers checked for tampered seals and inspected by gamma-ray radiation
- Electronic filed records checked for unusual goods and movements

“For U.S. Customs, Trade and Security Clash on the Docks”, WSJ, 9/12/02

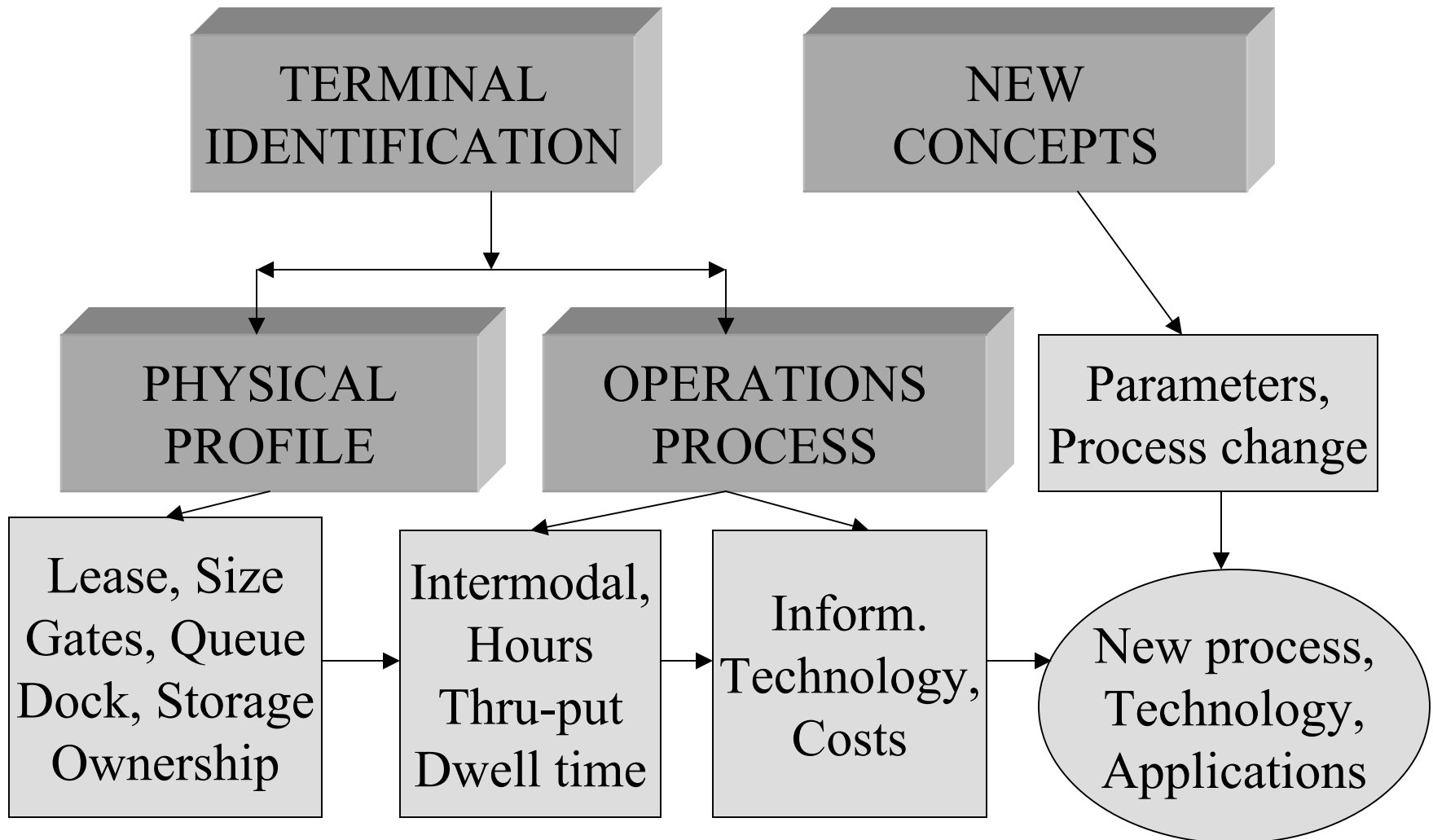
PART 1 – REGIONAL GOODS MOVEMENT SUPPLY CHAIN



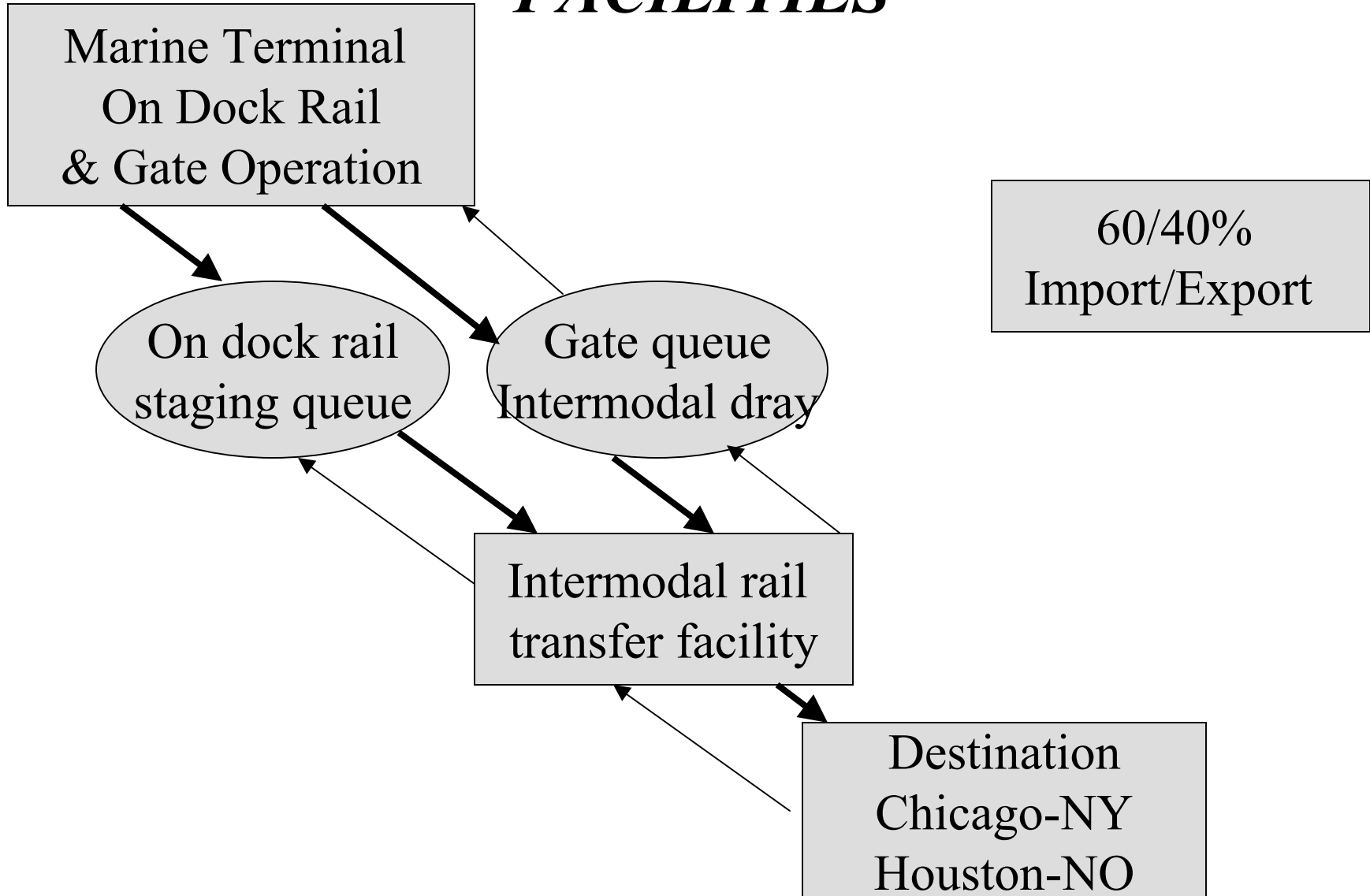
SHIPPER SUPPLY CHAIN SURVEY DATA



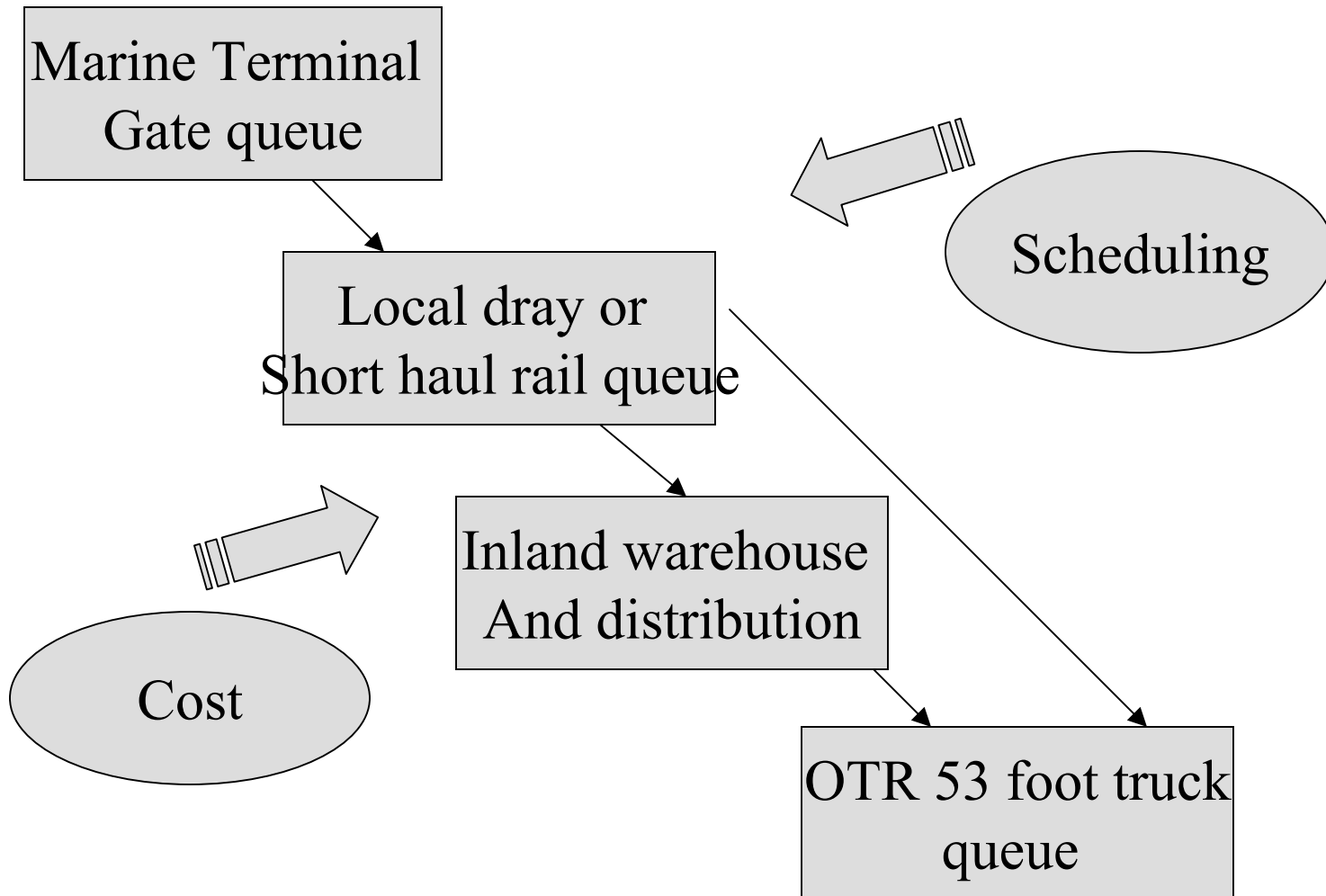
MARINE TERMINAL SURVEY DATA



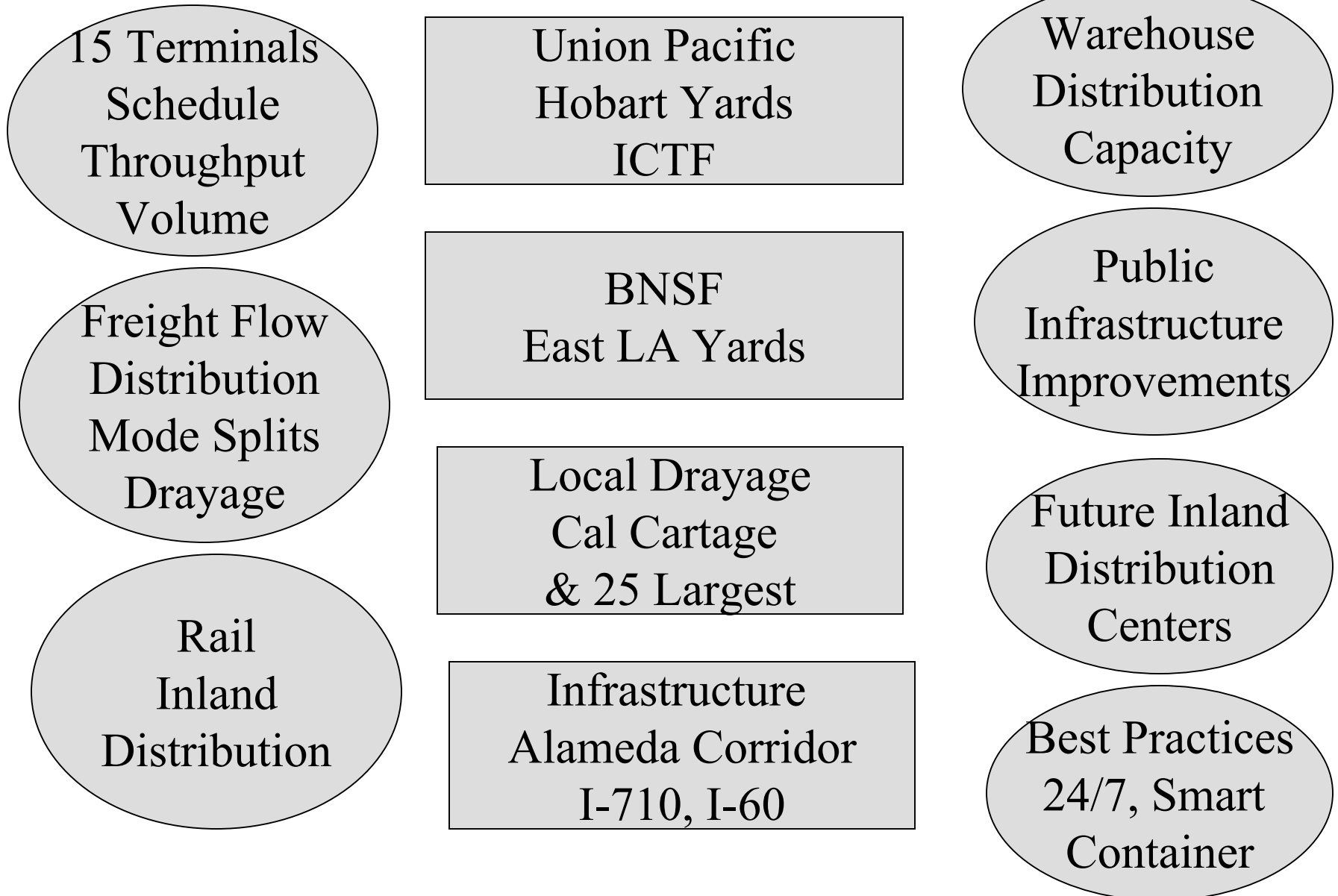
INTERMODAL RAIL TRANSFER FACILITIES



INLAND WAREHOUSE AND DISTRIBUTION CENTERS



Regional Goods Movement Freight Flow Model



Regional Goods Movement Freight Flows

On dock rail: vessel to double stack rail car, via intermodal rail transfer facility to inland destination

Contract rail: vessel to intermodal dray to intermodal rail facility to inland destination

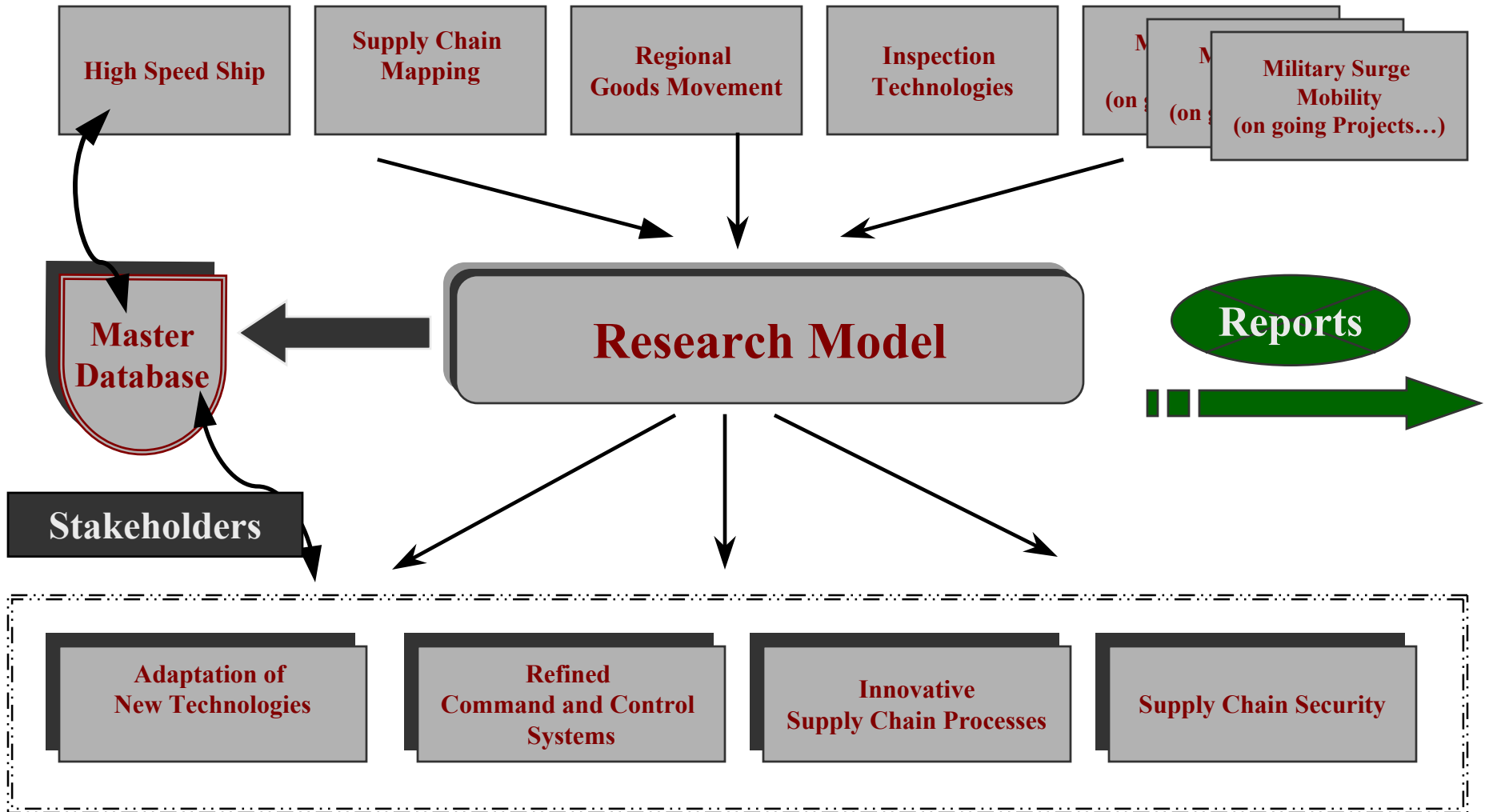
Trans-docking: vessel to local dray to inland warehouse via OTR truck to inland destination

Mini-landbridge: hot hatch vessel to chassis via local dray to local consignee

Local consignee: vessel to CFS via local dray to local consignee

Military: unit deployment via convoy and 89-foot flatcar to local break bulk terminal

Database Concept



Desk Top Exercise – Model Analyses

Military Mobilization

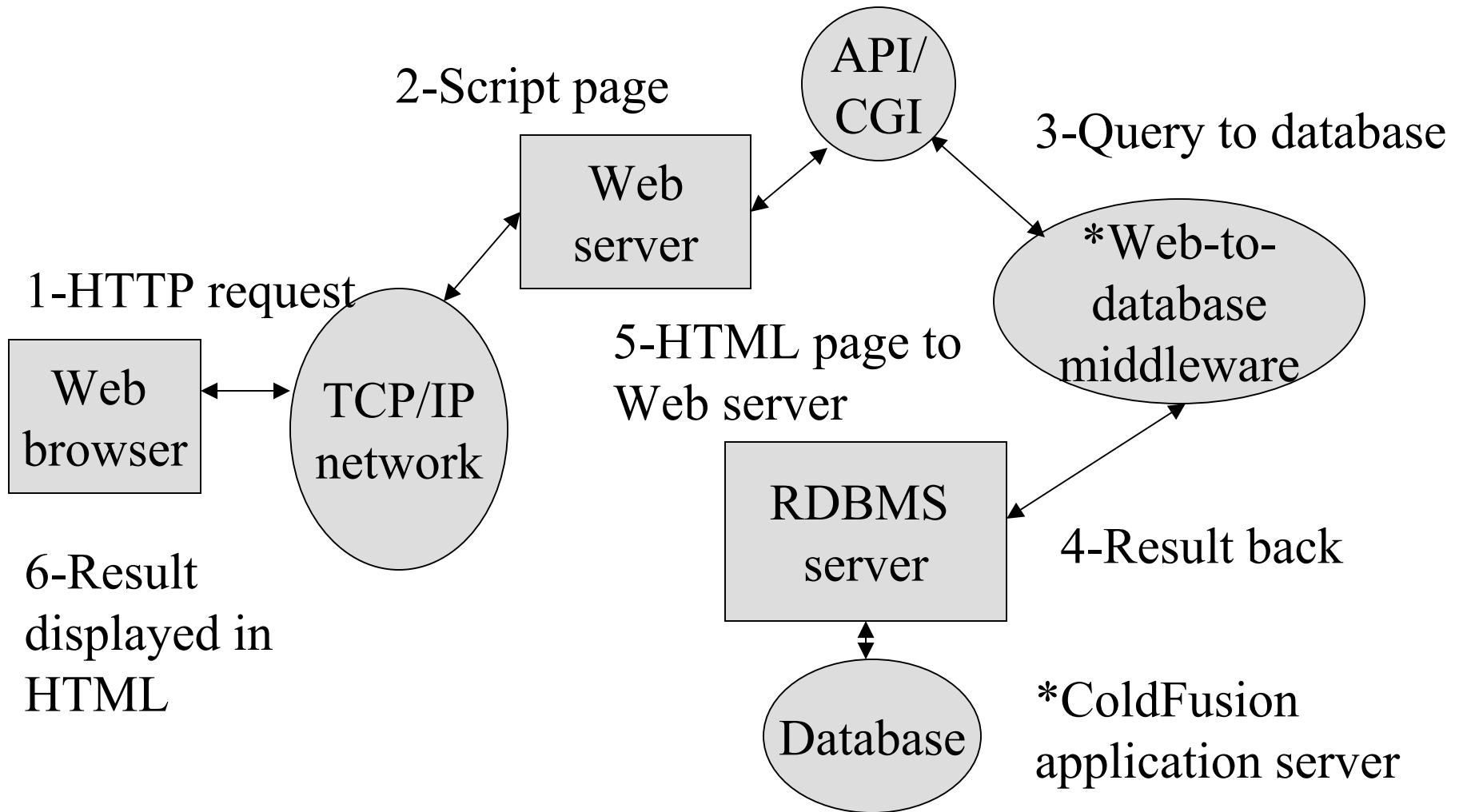
Scenario 1. *Unit deployment -*

- 1st Marine Expeditionary Force from Camp Pendleton
- Supply chain disruption at 38th Street Pier in San Diego

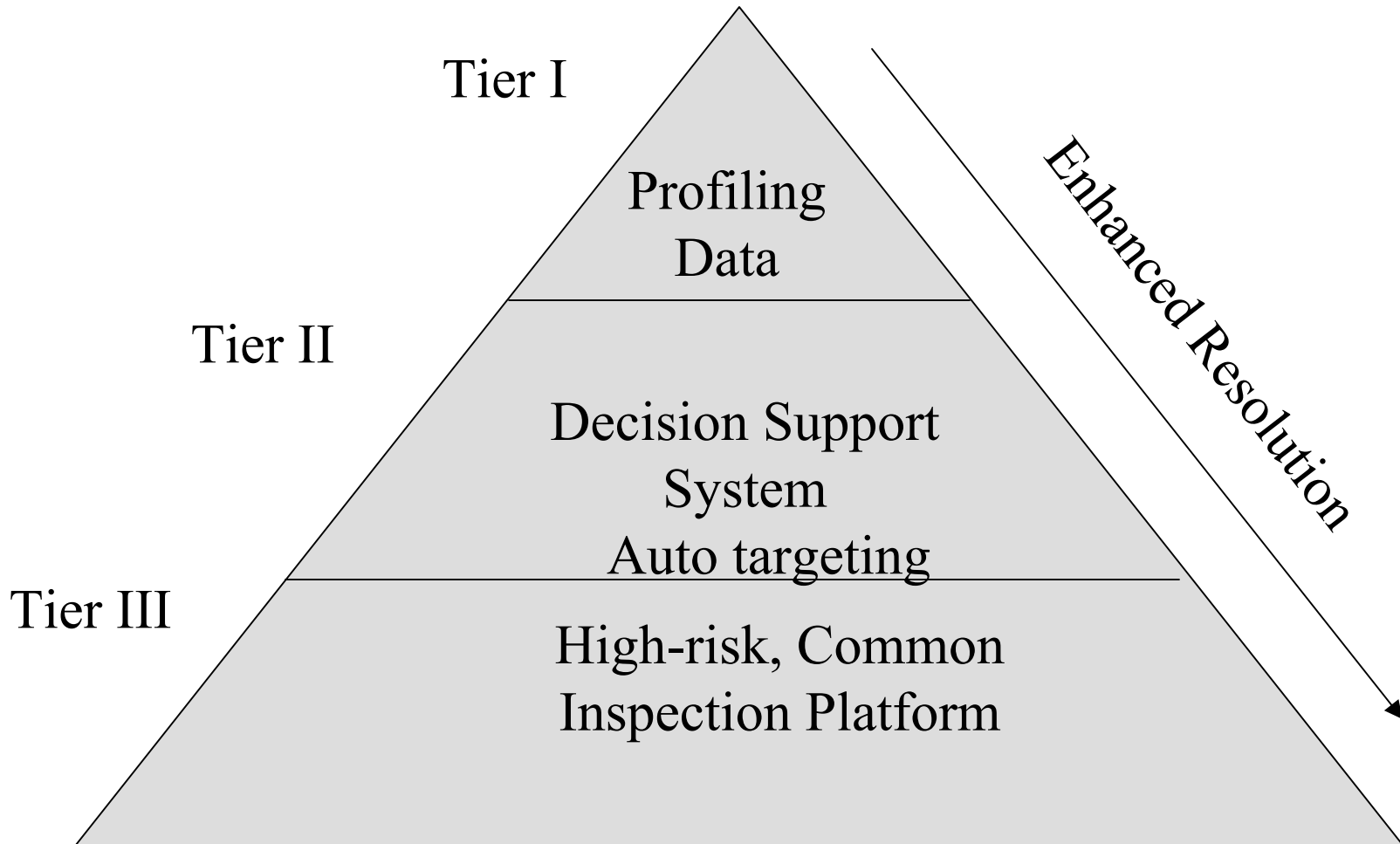
Scenario 2. *Surge deployment –*

- Sustainment by USA/USMC
- Theatre requirements determined by Defense Logistics Agency Regional Distribution Center, Tracy, CA, or HQS, New Cumberland, PA

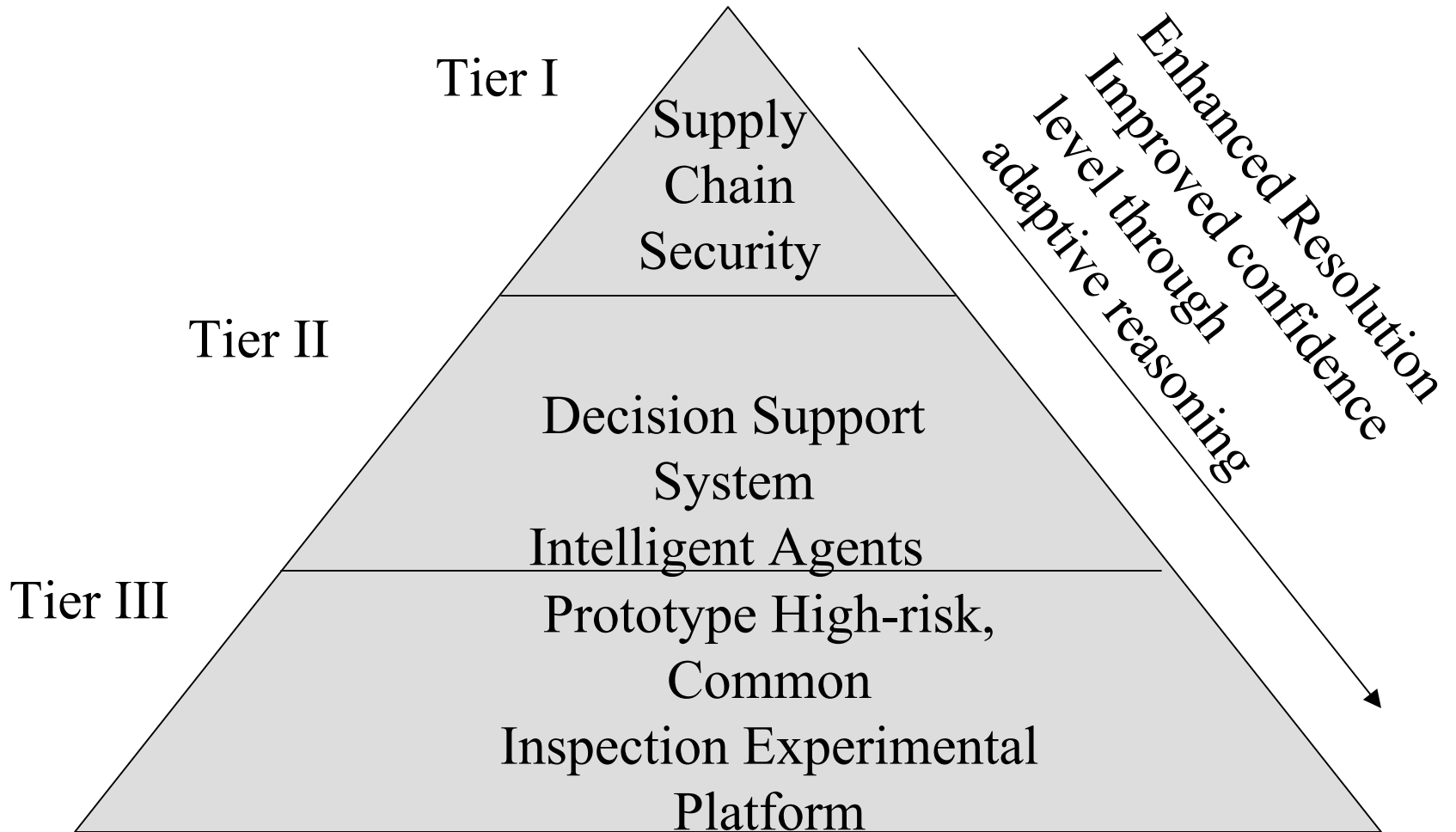
WEB-TO-DATABASE



Part 2. Model Inspection Platform



Model Seaport Security Strategy



INSPECTION PROCESS STAGES

PRE 9/11/01

Intelligence
Profiling

Investigation
Targeting ATS

Data analysis
Pre-screening

Non-intrusive
examination

Physical
inspection

Sampling
analysis

Devanning
CES



INSPECTION PROCESS STAGES

Intelligence Profiling

Trusted shipper
C-PATT E-Seal
stuffing/tagging

POST 9/11/01
Pushing out border

Pre-screening
Data analysis

Pre-clearance

Targeting
ATS

Non-intrusive
Examination

CSI Carrier AMS
link to Customs 24
hr. pre-departure

ITDS interface

Load/no load
Origin port

E-seal poll
Upon
arrival

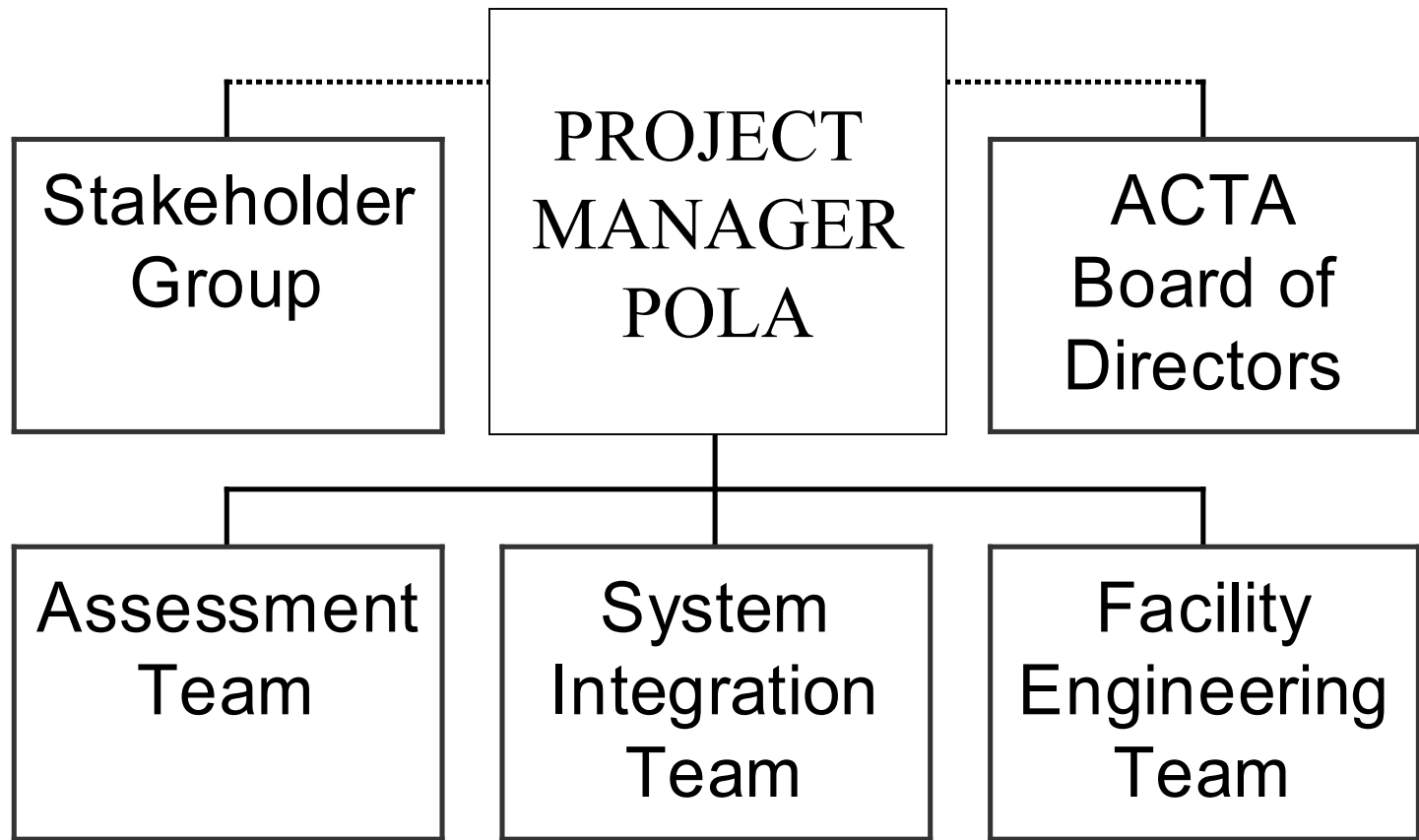
High risk
container
inspection
facility

WMD screen

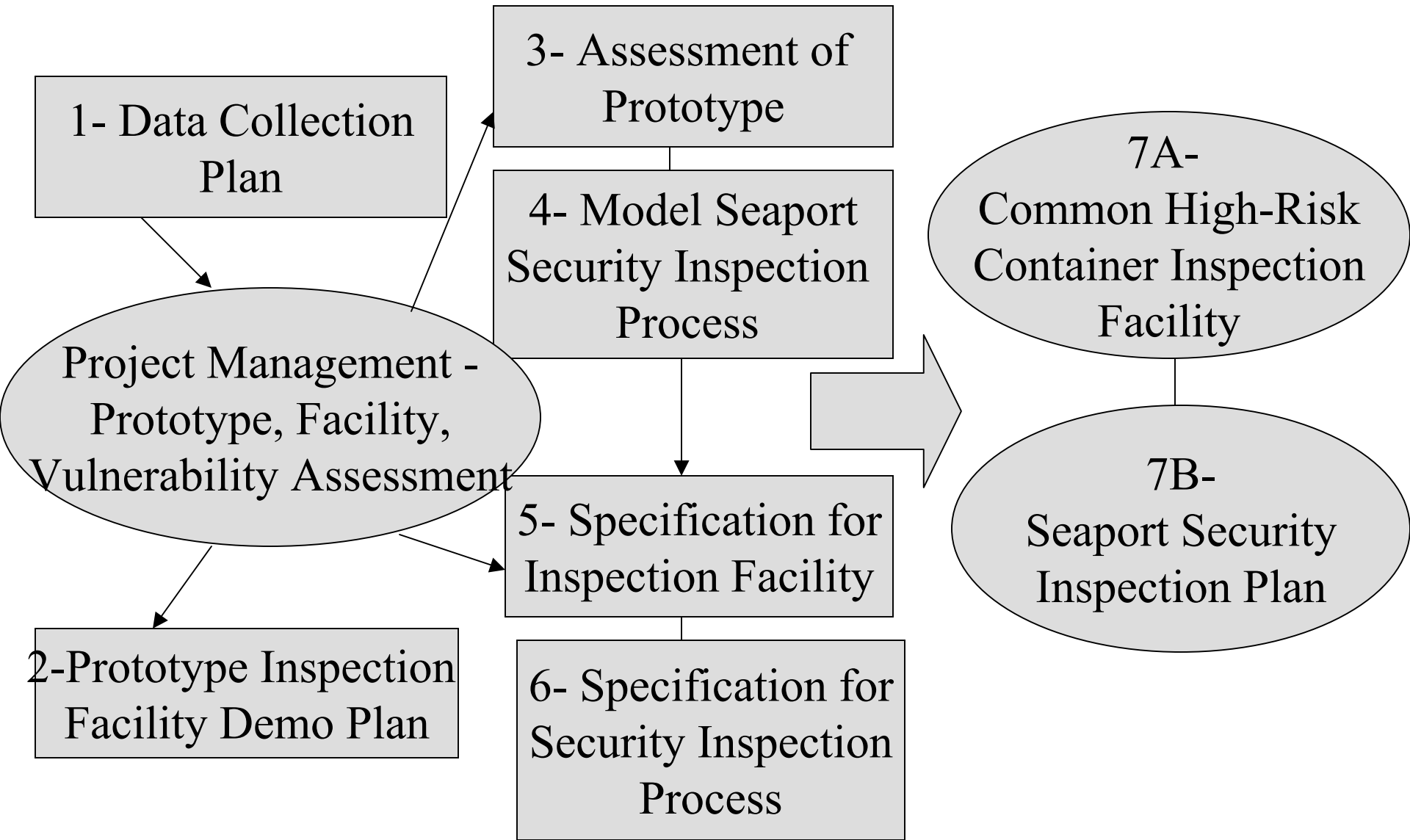
Physical
exam
CES

RFID tagging

*Demonstration Project -
High-risk, Common Inspection Platform*

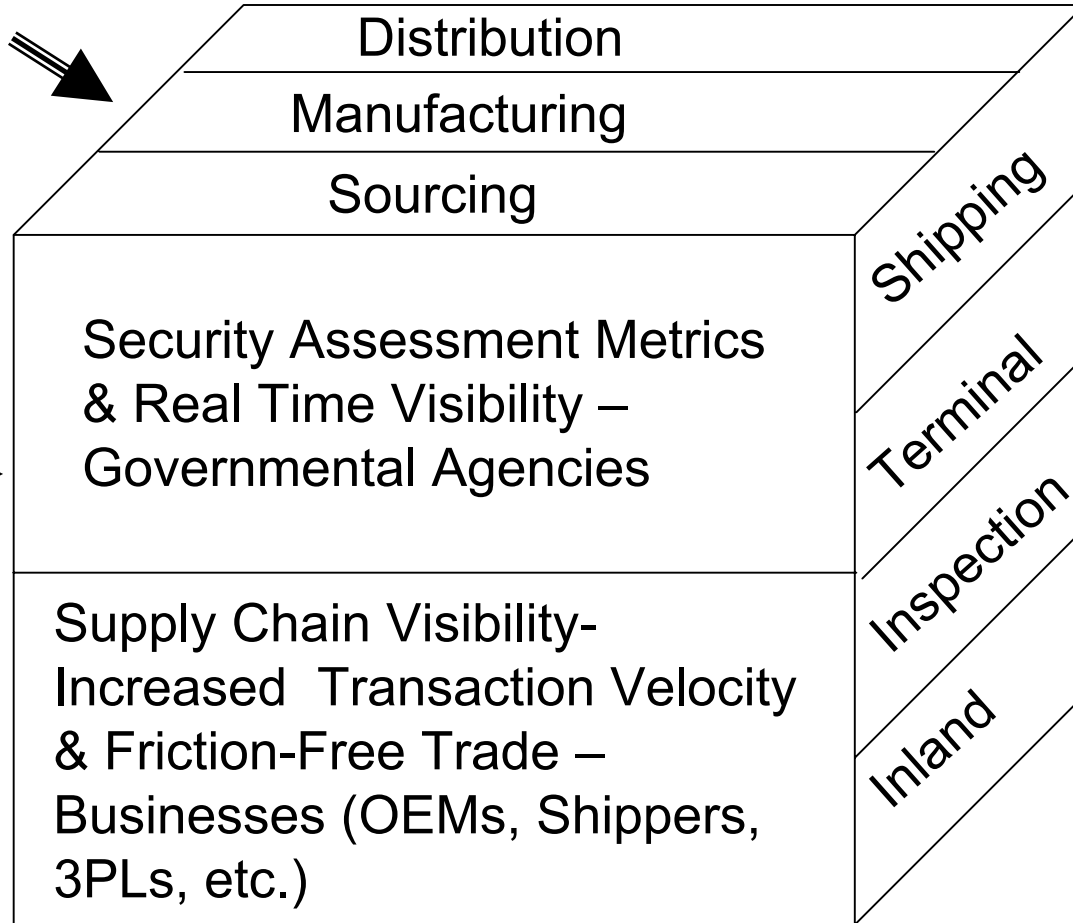


Proof-of-concept - Inspection Facility Project



The 3- Dimensional Vulnerabilities Assessment Model

Major Supply
Chain
Functions



Functional
Areas

Metrics to
Build Risk
Management
Model

Ram Reddy

VULNERABILITY ASSESSMENT

Catastrophic

- Business operations is disrupted for weeks/months.
- Example - Disablement of a functional area (shipper, terminal, etc.)
- Consequence - firms seek alternate sourcing, distribution & manufacturing sources.

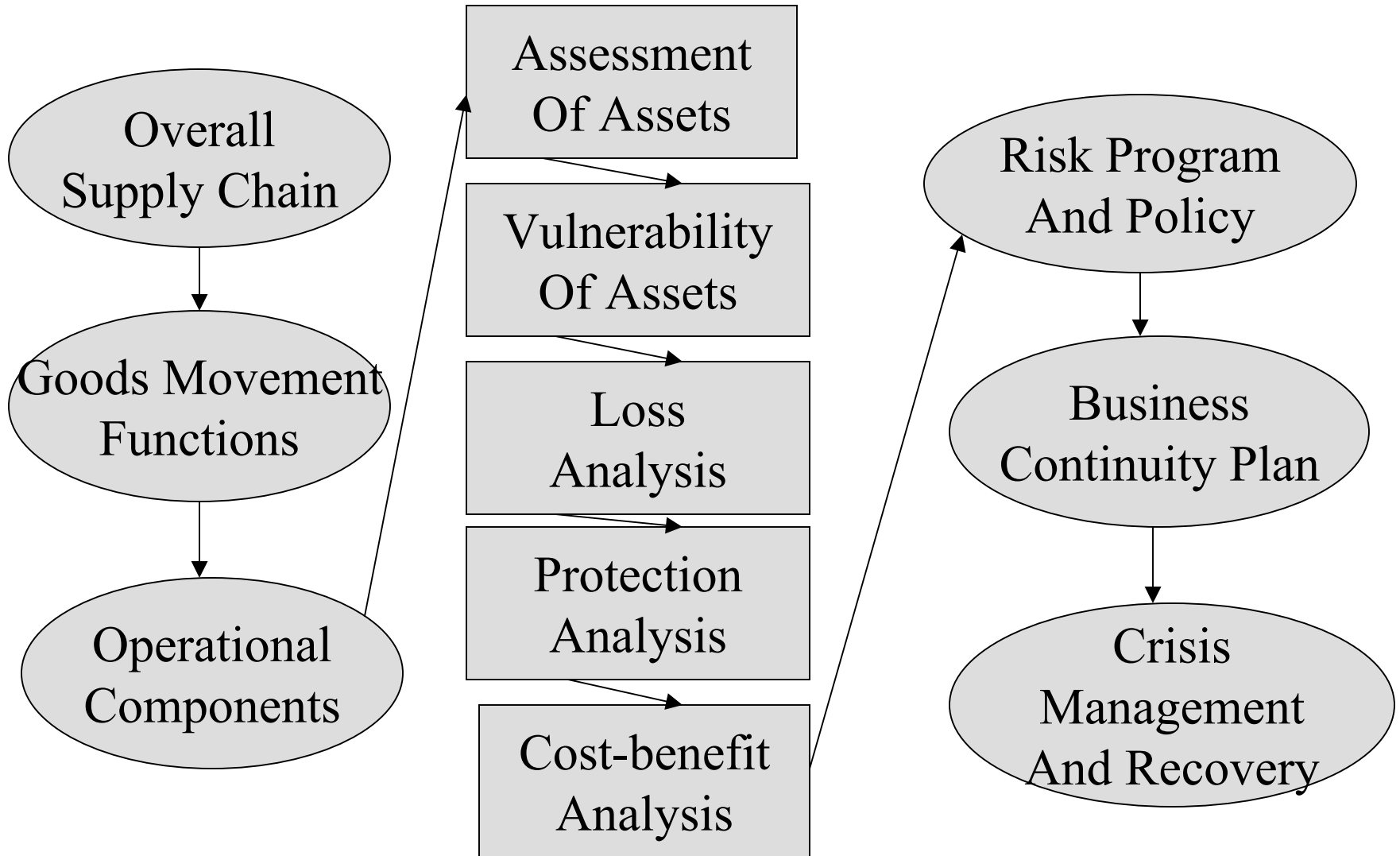
Major

- A functional area is unavailable temporarily (days or weeks)
- Example - troop deployment, etc.

Minor

- A facility within any functional area is unavailable for hours/days.
- Example - rail or crane accidents at ports, etc.

Risk Management Process



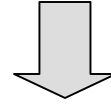
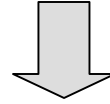
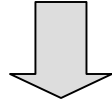
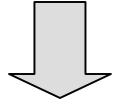
Integrated Decision Support Research

Modules

Analyses

Proof-of-Concept

Outcomes



Regional
Goods
Movement

Inspection
Technology

Marine Terminal,
Intermodal Rail

Inland
Warehouse/
Distribution

Military
Deployment

Supply Chain
Vulnerability
Assessment

Throughput
Optimization

Database



Infrastructure
capacity
planning

Information
Inspection
Technology
utilization

Benchmarking
Standards,
Best Practices

Improved
Supply
Chain
Mobility

Safety
Reliability
Accessibility
Efficiency
Security

Project Products

- Goods Movement
 - 01
 - Preliminary supply chain database model
 - Web interface design
 - 02
 - Incorporate real data
 - Conduct analyses on supply chain and military surge
- Inspection Technology
 - 01
 - Engineering model of seaport inspection platform
 - Inspection demo plan
 - 02
 - Feasibility demo of inspection facility
 - Seaport security model

SUMMARY

Trade and Security

