

An Integrated System for Fulfilling DoD Range Sustainability Requirements



George R. Thompson, Ph.D.
President and CEO

Chemical Compliance Systems, Inc.

706 Route 15 South, Suite 207 • Lake Hopatcong, NJ 07849 • 973-663-2148 • (fax)

973-663-2378

gthomps@verizon.net • www.chemply.com



The CCS "Core" Database System

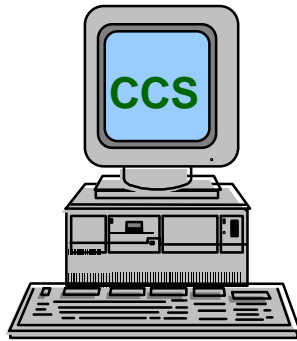
2,500
CHEMICAL COMPOUND DICTIONARY
 Tabulation of 2,500 specific chemicals within 58 compound categories

2,125,000
COMPENDIUM OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
 A compilation of acute and chronic health effects for 140,000 chemicals

340,000
CHEMICAL CROSS REFERENCE DICTIONARY
 A cross-referencing system of CAS numbers and their associated synonyms

6,900,000
ITEM INDEX & PRODUCT DESCRIPTIONS
 Unique identifiers for over 75,000 chemical product items

6,400
CHEMICAL DISPOSAL CODES
 Disposal and compatible chemical family storage classifications for 3,200 chemicals



Master Chemical Reference Data
 (2,915,000 References)

350,000
LIST OF LISTS
 Reference listings for 4,650 regulated hazardous chemicals and associated data found on 300 local, state, federal and international lists

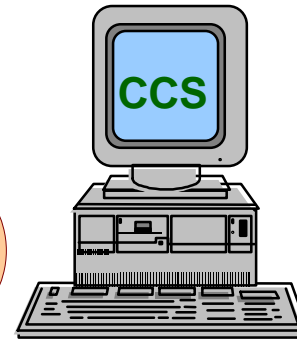
265,000
MANUFACTURERS
 Detailed information for 8,200 manufacturers of chemical products

3,000,000
PRODUCT COMPONENTS
 Specific descriptors for more than 300,000 product components

80,000
RATING INFORMATION OF CHEMICAL HAZARDS
 A rating classification covering health, fire, reactivity, environmental, protective equipment, etc., for 3,200 chemicals

2,500
CAMEO
 Information data for responders to hazardous chemical emergencies (firefighting, health, first aid, etc.)

375,000
PRODUCT USER DIRECTORY
 Dictionary listing of organizations that use each of the 75,000 unique items



Master Product Reference Data
 (10,960,000 References)

60,000
MSDS IMAGES
 Mode 4 TIF multi-page images of manufacturer MSDSs

6,400
SAFE CHEMICAL STORAGE CODES
 Chemical hazard and compatible family storage classifications for 3,200 chemicals

1,100
CHEMICAL HAZARD RESPONSE INFORMATION SYSTEM
 Comprehensive source of preventive, precautionary and response data

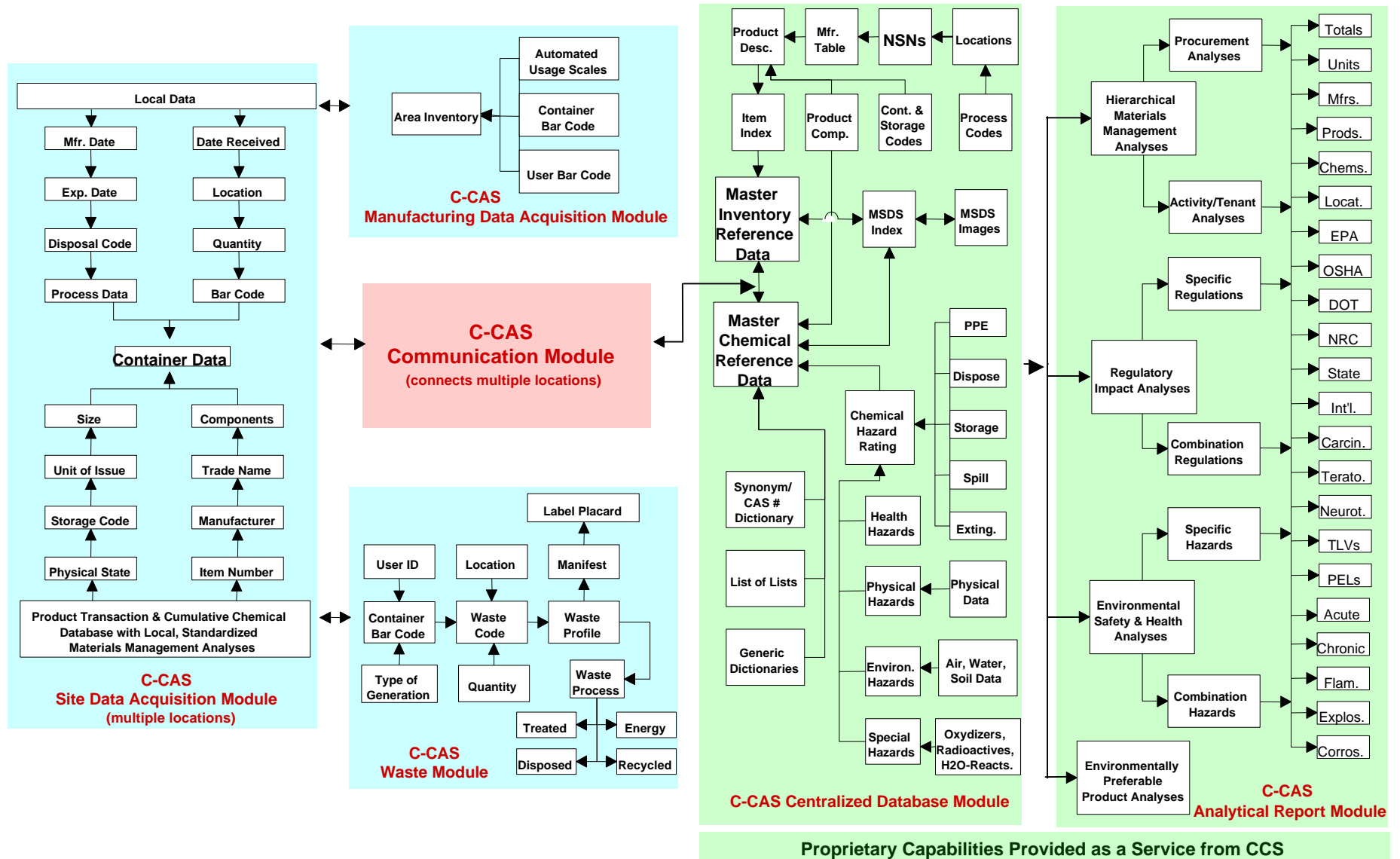
1,050
OIL & HAZARDOUS MATERIALS TECHNICAL ASSISTANCE DATA SYSTEM
 Information relating to spill response and harmful effects

413
GENERIC CATEGORIES
 Product classification codes derived from federal/state commodity lists that categorize similar products

670
PROCESS CODES
 Dictionary of USN, DA and MD categories used to track HM usage and HW generation

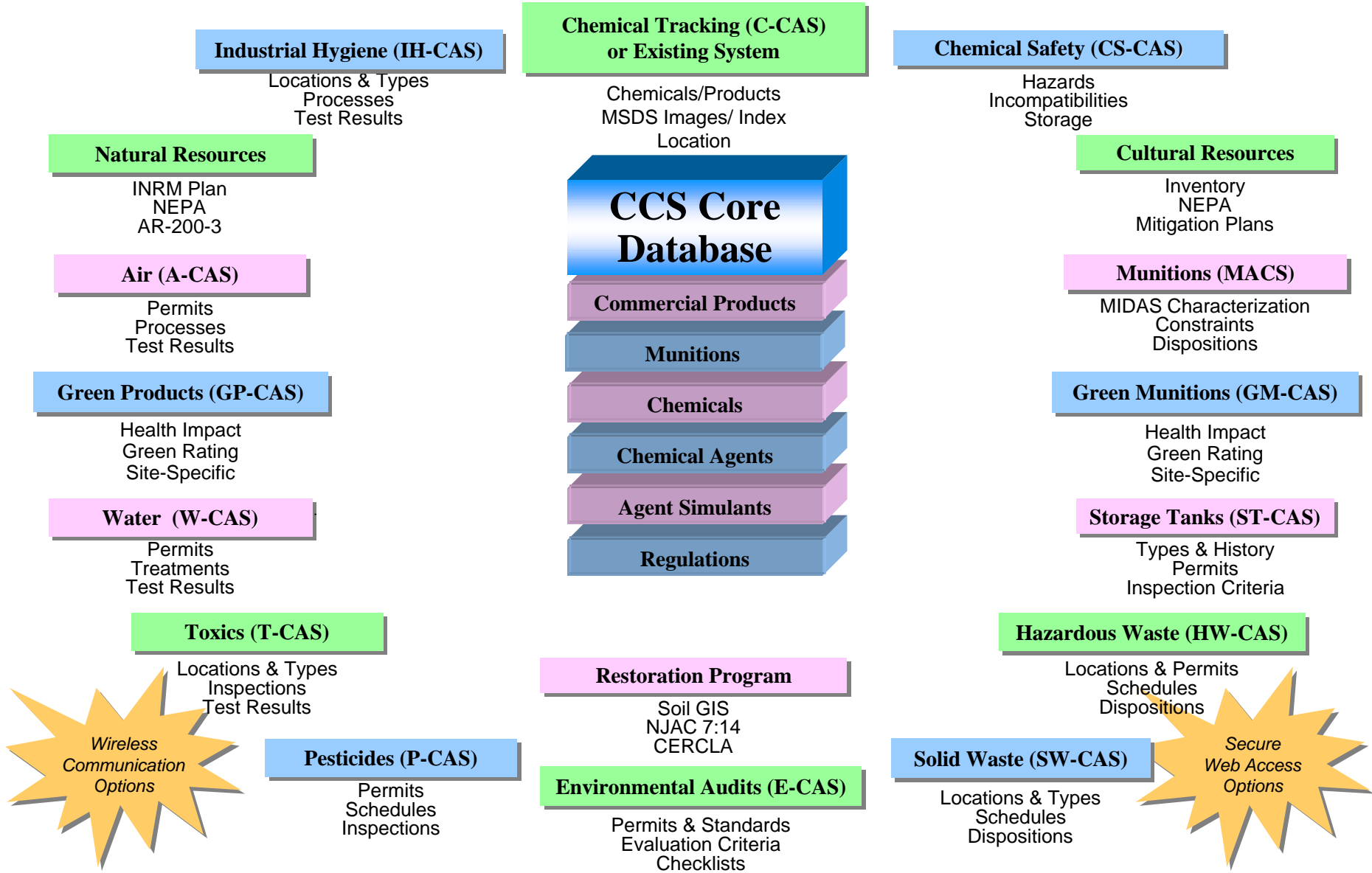
360,000
MSDS INDEX
 Searchable parameters for each of our 60,000 imaged MSDSs

Chemical Compliance Analytical System (C-CAS)

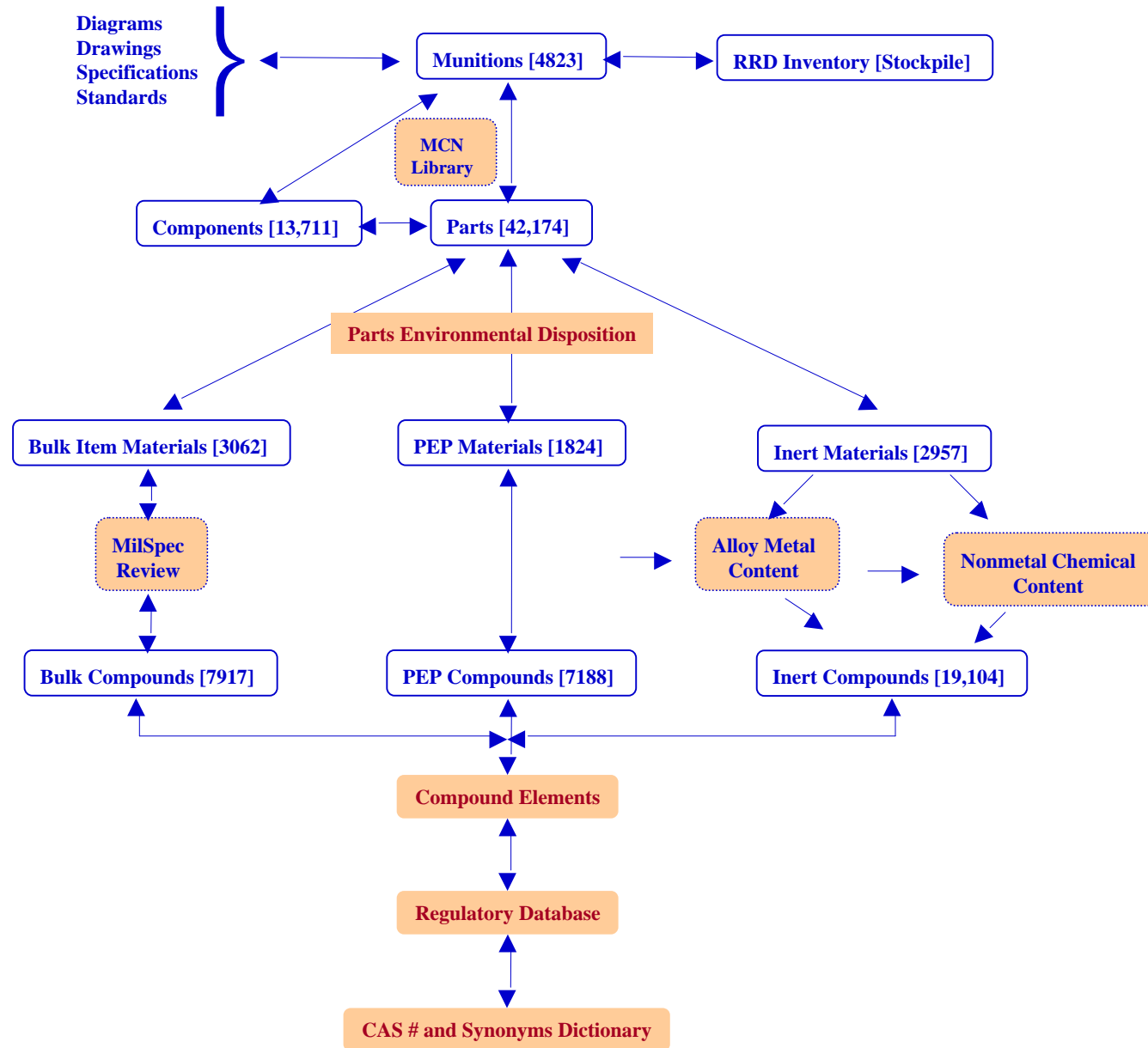


Centralized Chemical Hazard and Environmental Management System (C-CHEMS)

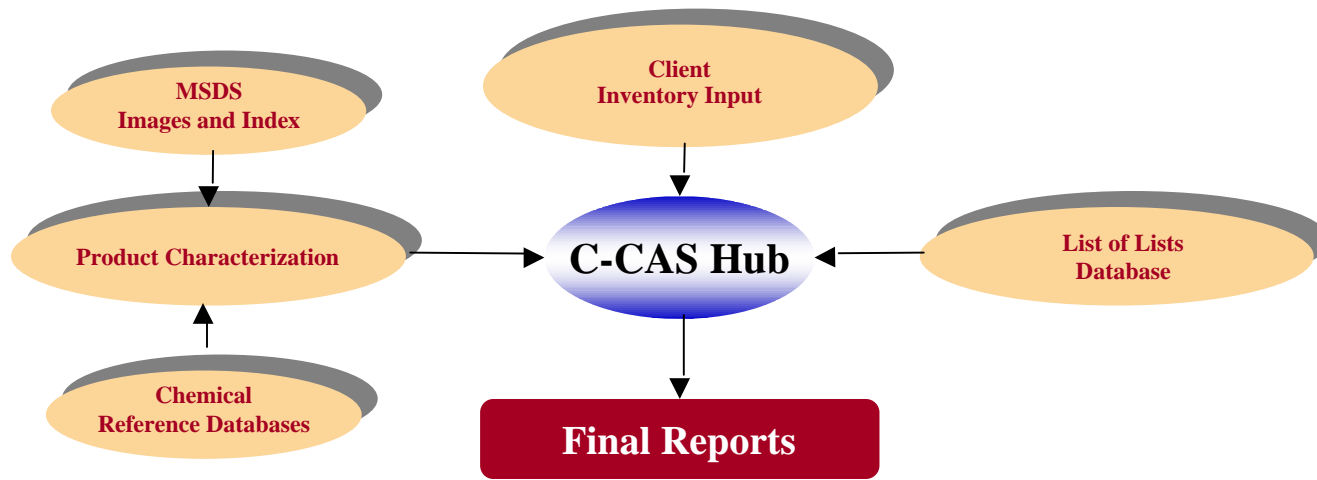
Centralized and Relational Databases



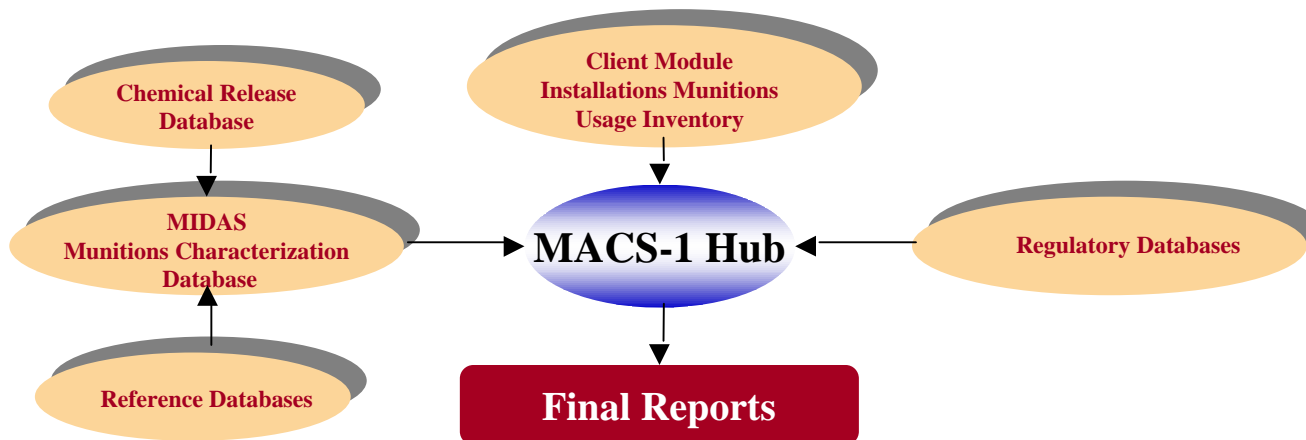
Enhanced MIDAS Database Library



Chemical Compliance Analytical System (C-CAS) Derivative Systems

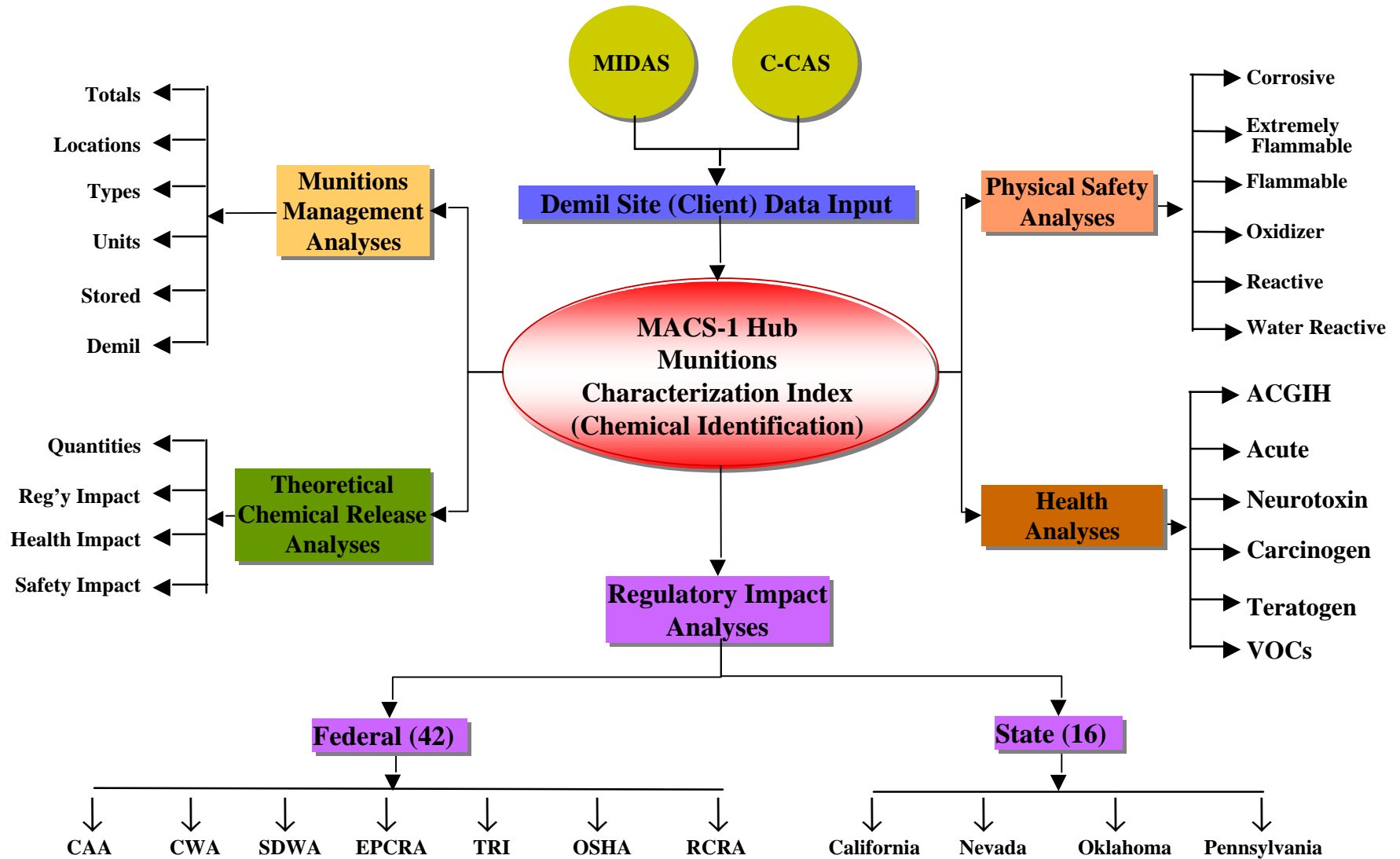


Munitions Analytical Compliance System for Demil (MACS-1)



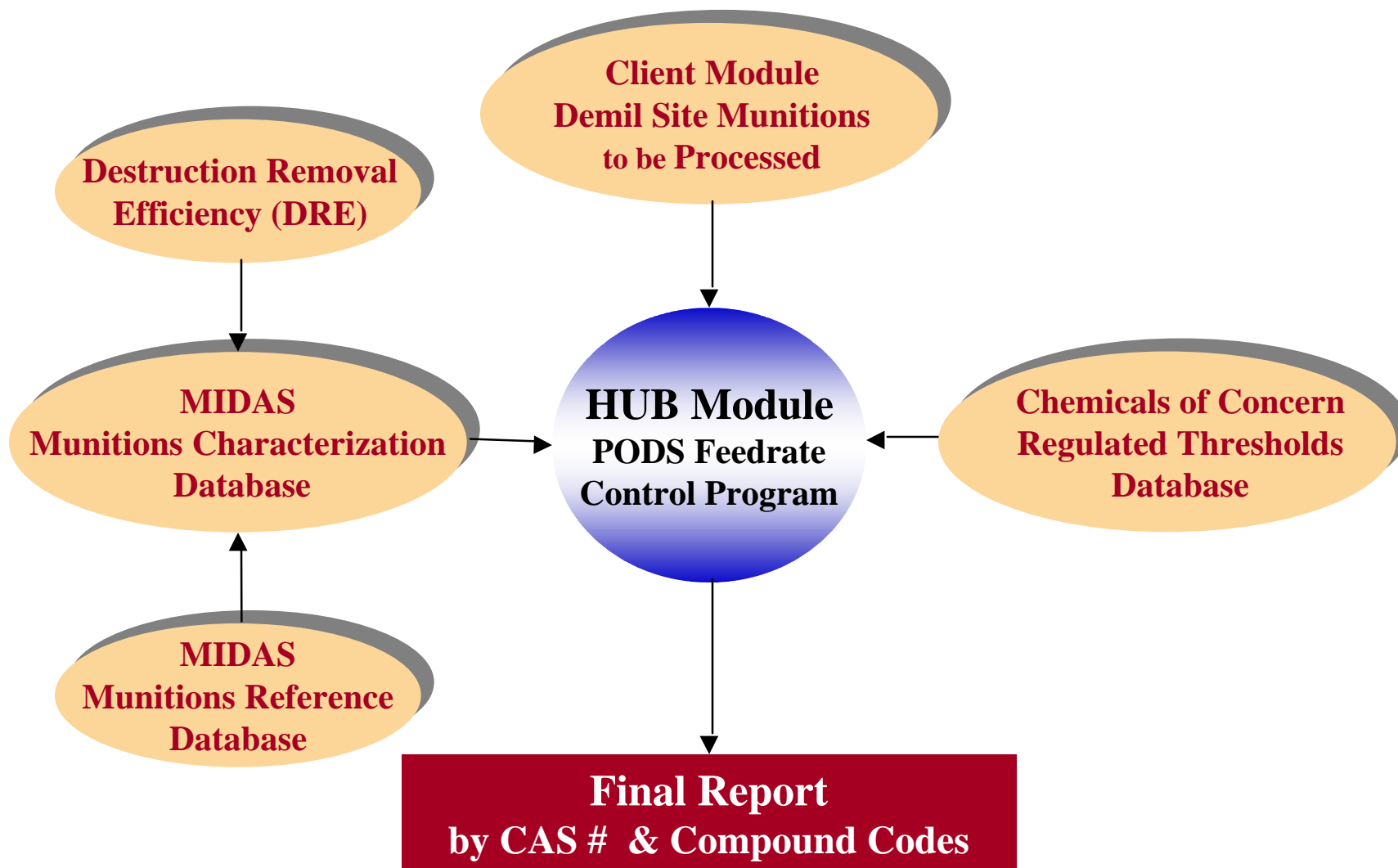
MIDAS Interface

Munitions Constituent Analytical Assessment Capabilities

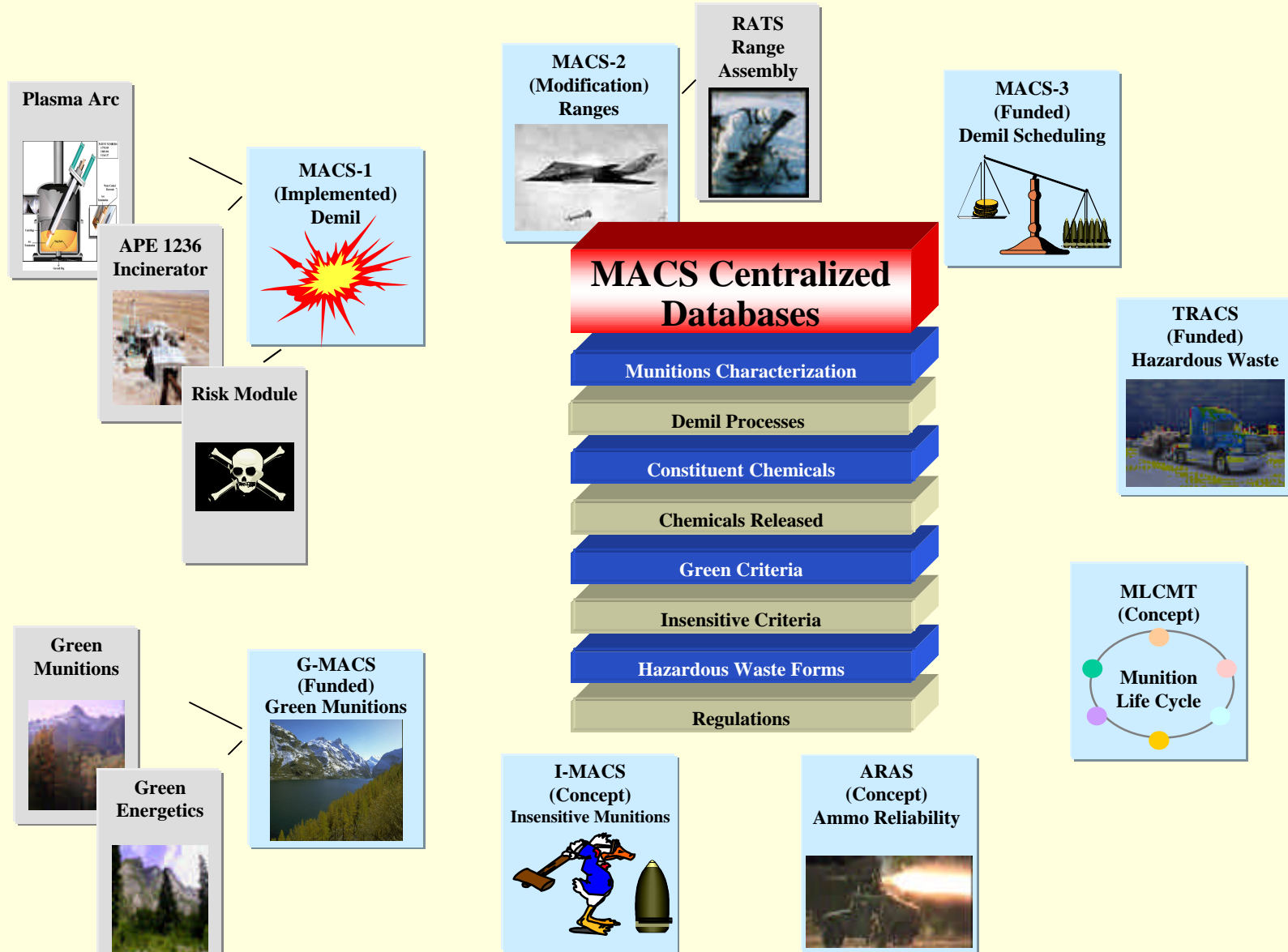


Munitions Analytical Compliance System (MACS)-1

PODS Feedrate Control Capability

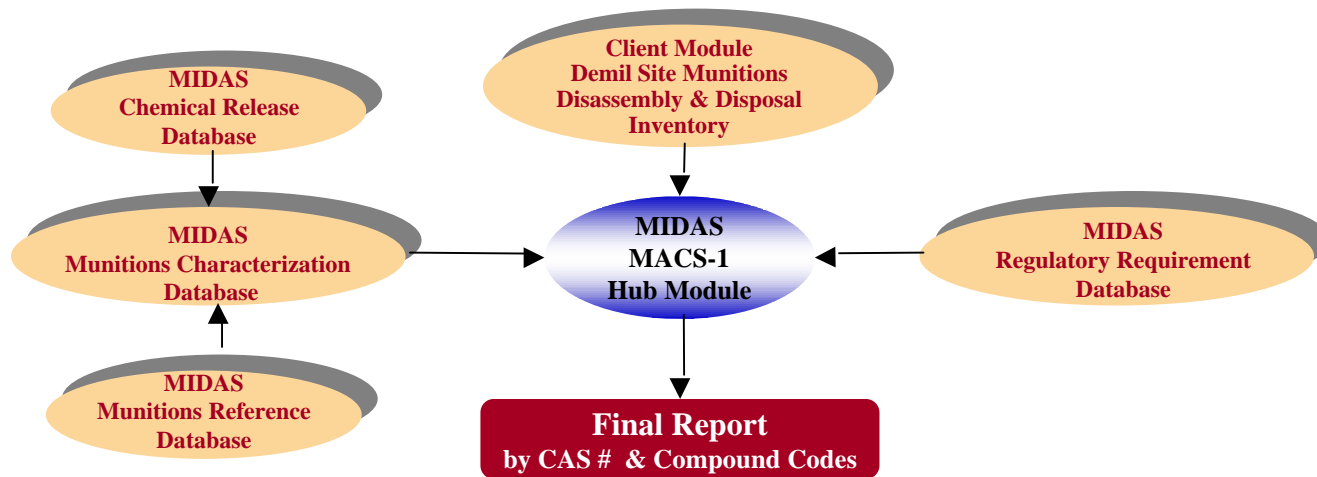


Munitions Analytical Compliance Systems (MACS)

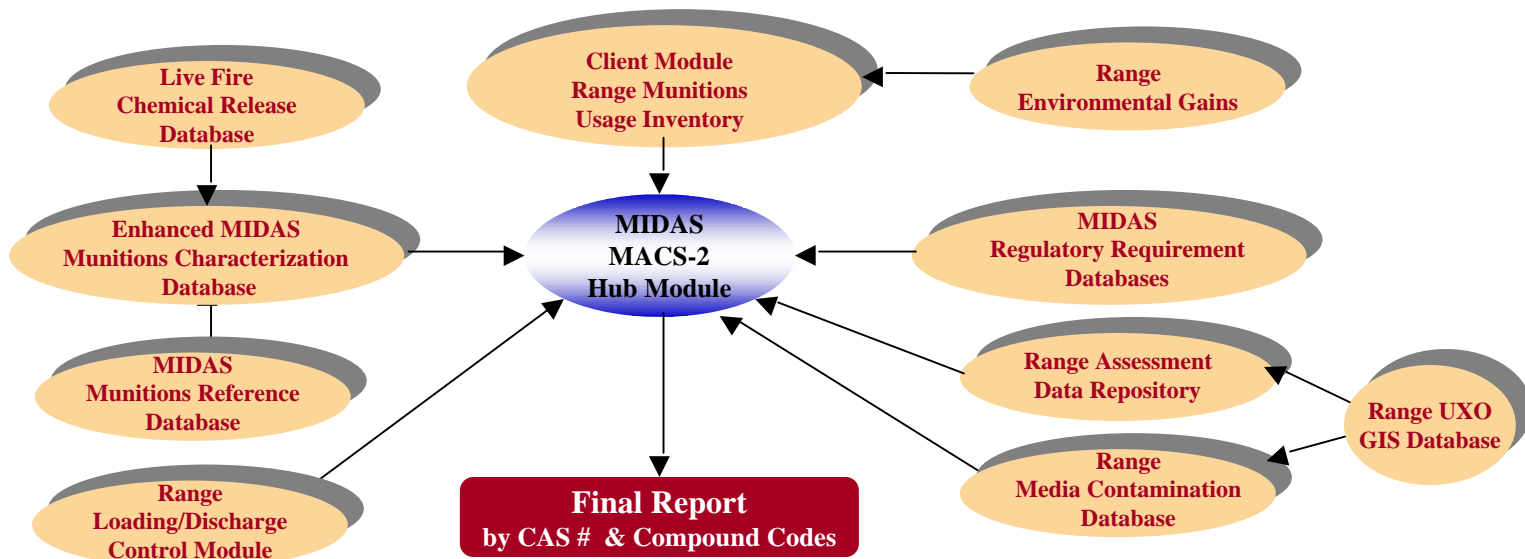


Other Potential MACS-1 Derivative Systems

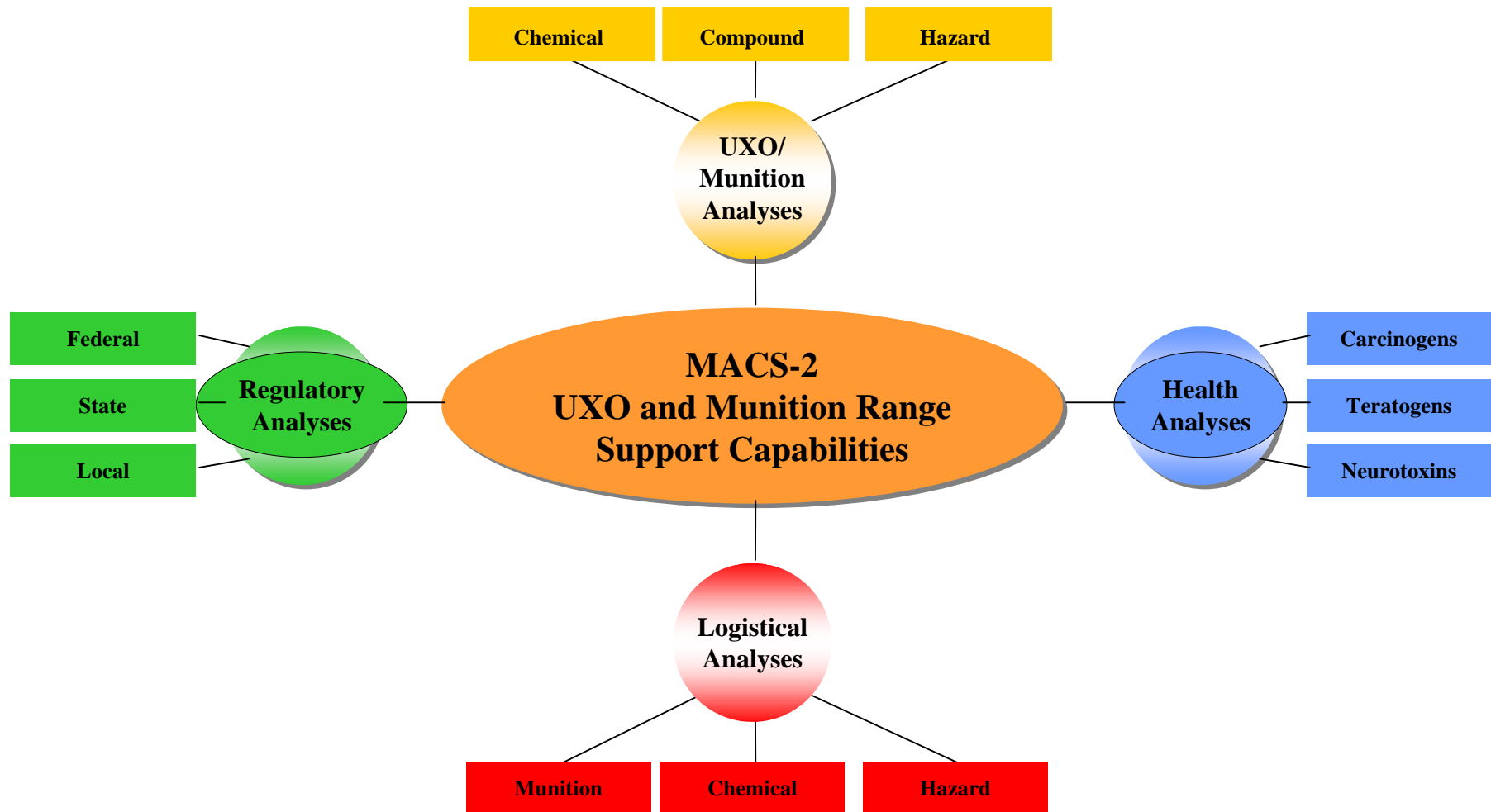
MACS-1 Demil Site Environmental Analysis Capability



MACS-2 Installation/Range Environmental Analysis Capability



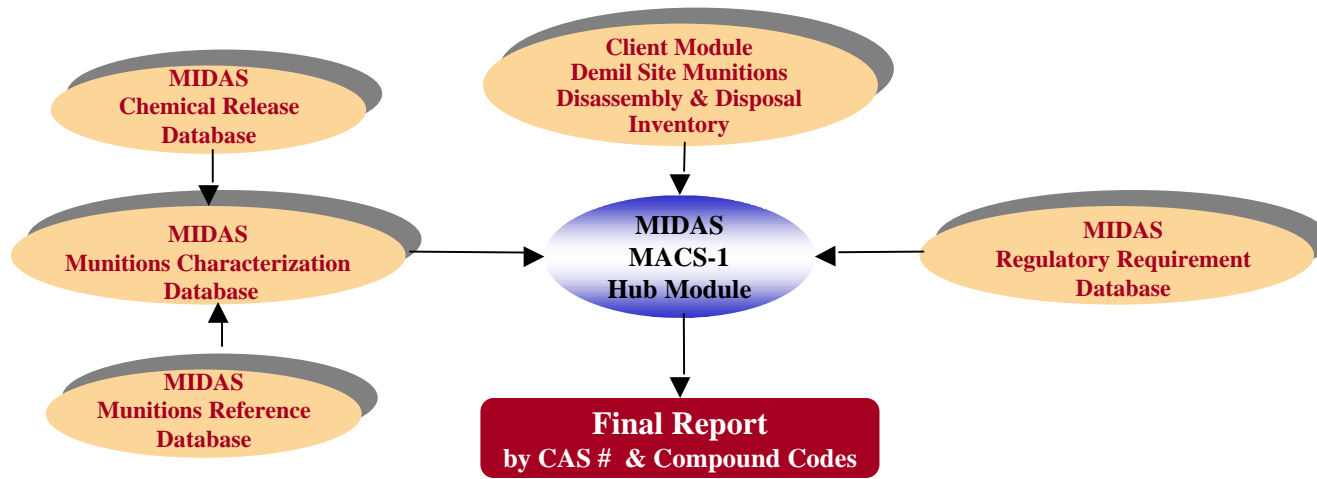
MACS-2 UXO and Munition Range Support Capabilities



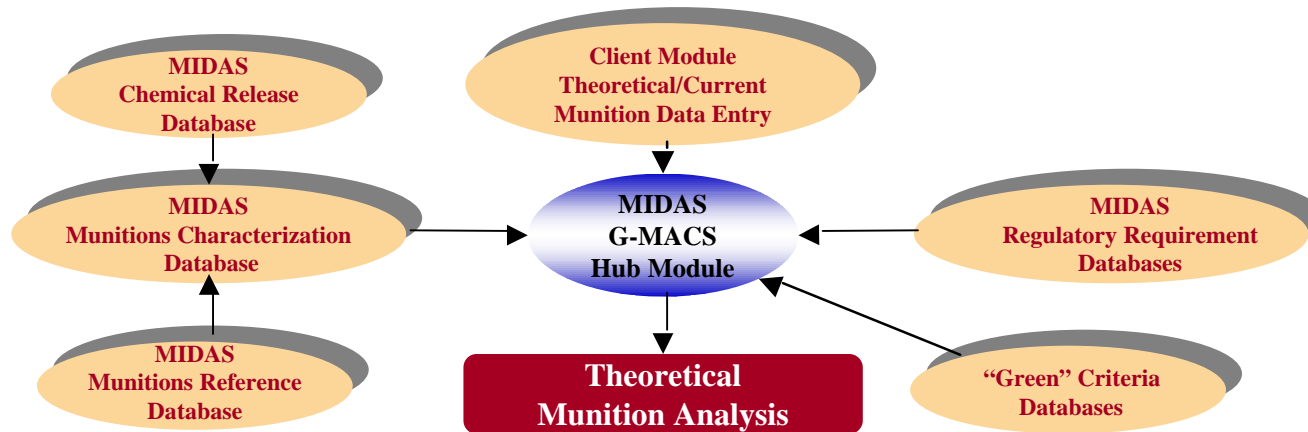
Cost Effective and Easily Implemented Best Management Practices

Other Potential MACS-1 Derivative Systems

MACS-1 Demil Site Environmental Analysis Capability

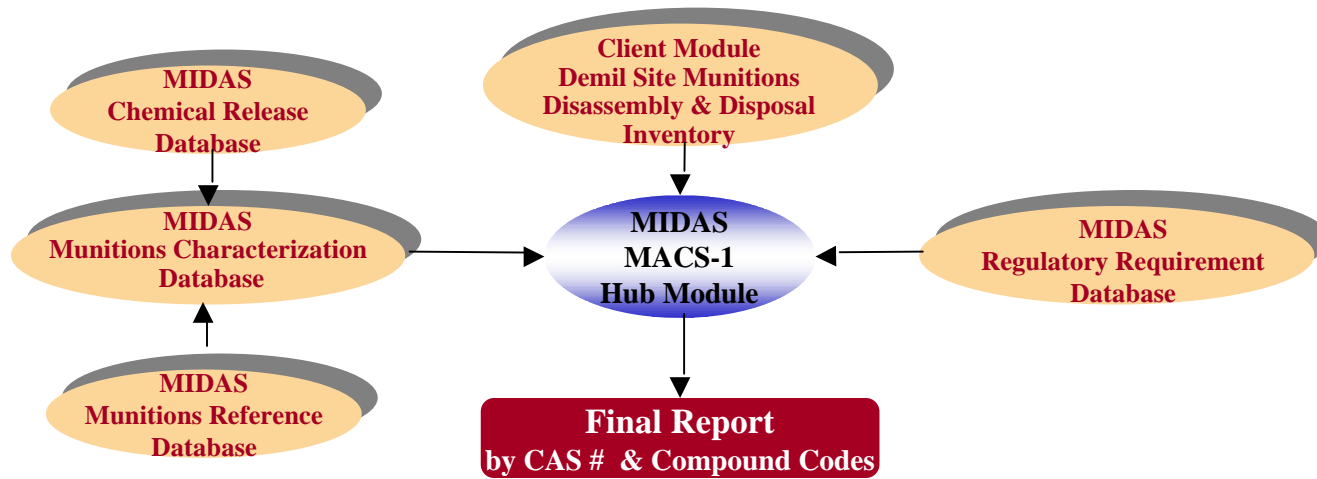


"Green Munitions" Analysis Capability (G-MACS)

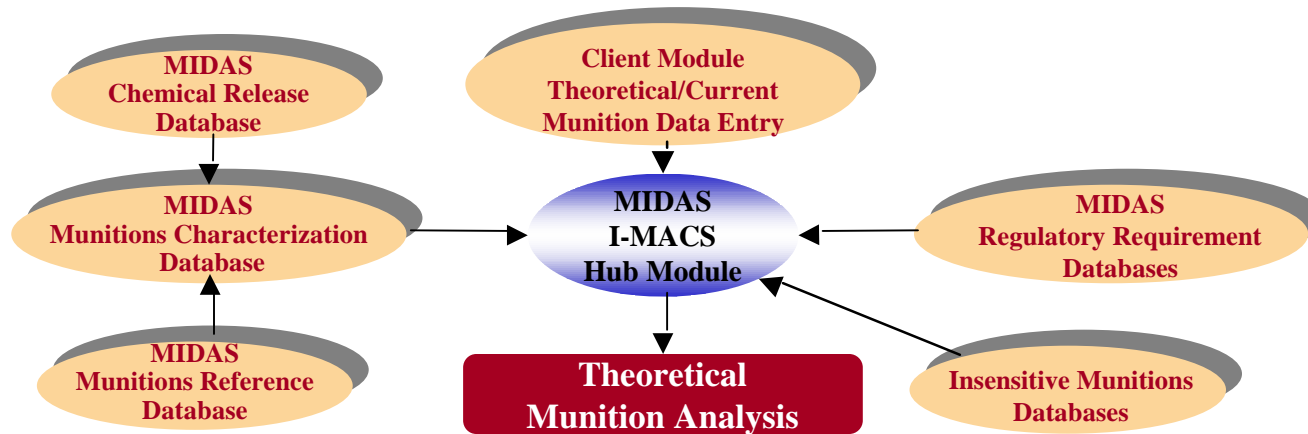


Other Potential MACS-1 Derivative Systems

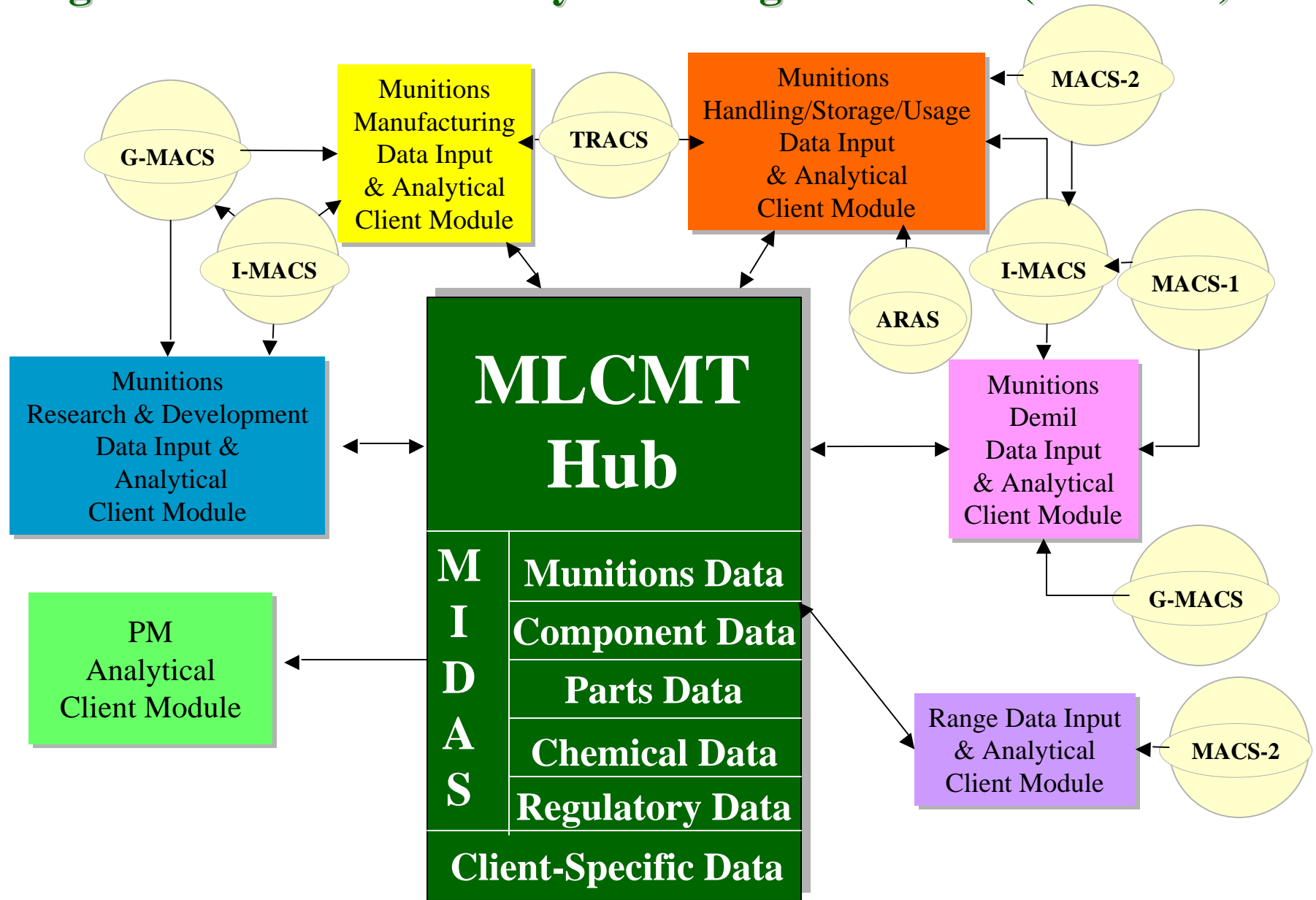
MACS-1 Demil Site Environmental Analysis Capability



Insensitive Munitions Analysis Capability (I-MACS)



Integrated Munitions Life Cycle Management Tool (MLCMT)



Environmental Pressure Points—Support Capabilities



Range Political Issue Support Capabilities

MACS-1 Demil Database

- **2 Years of Demil Data**
- **13 Demil Sites**
- **Site Analyses**
- **National Analyses**

CY02 Applications

- **HAPs MACT Standard Analysis**
 - **Perchlorate Analysis**
-

MACS-2 Range Usage Database

- **Ongoing Analytical Resource**
- **Information Excellence (MIDAS-based)**
- **Integrated Management Resource**
- **Outreach Resource**

Key to Sustainable Range Plan and EMS

Range Sustainability Capabilities

Range Issues

CCS Range Support Capability

Environmental Compliance	MACS-2
Pollution Prevention	MACS-2, G-MACS, I-MACS
Environmental Technology	MLCMT, G-MACS, I-MACS
Acquisition	G-MACS, I-MACS, MLCMT
Conservation	MLCMT, C-CHEMS
Restoration	MACS-2