



# JWARN



**Joint Warning and Reporting Network**<sup>TM</sup>

## Overview

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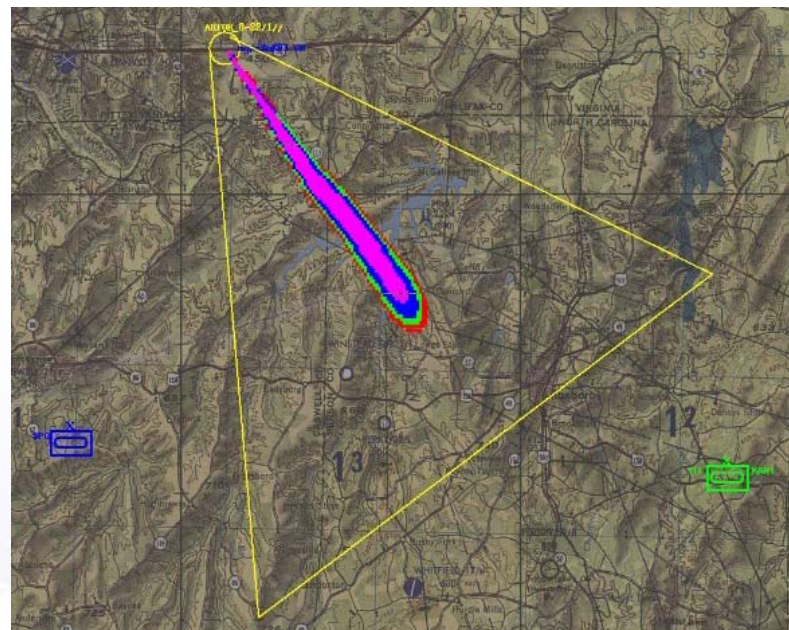
# JWARN Description

- **Connects CBRN sensors directly to Joint and Service Command and Control (C2) systems**
- **Consists of software segments operating on the C2 systems**
- **Provides the means to configure, monitor and manage the sensor network**
- **Automatically, in near real-time, provides the following:**
  - Alerts from the sensor network
  - Plot of the hazard area
  - Displays plot on the Common Operational Picture (COP)
  - NBC warning and dewatering message to units in the hazard area



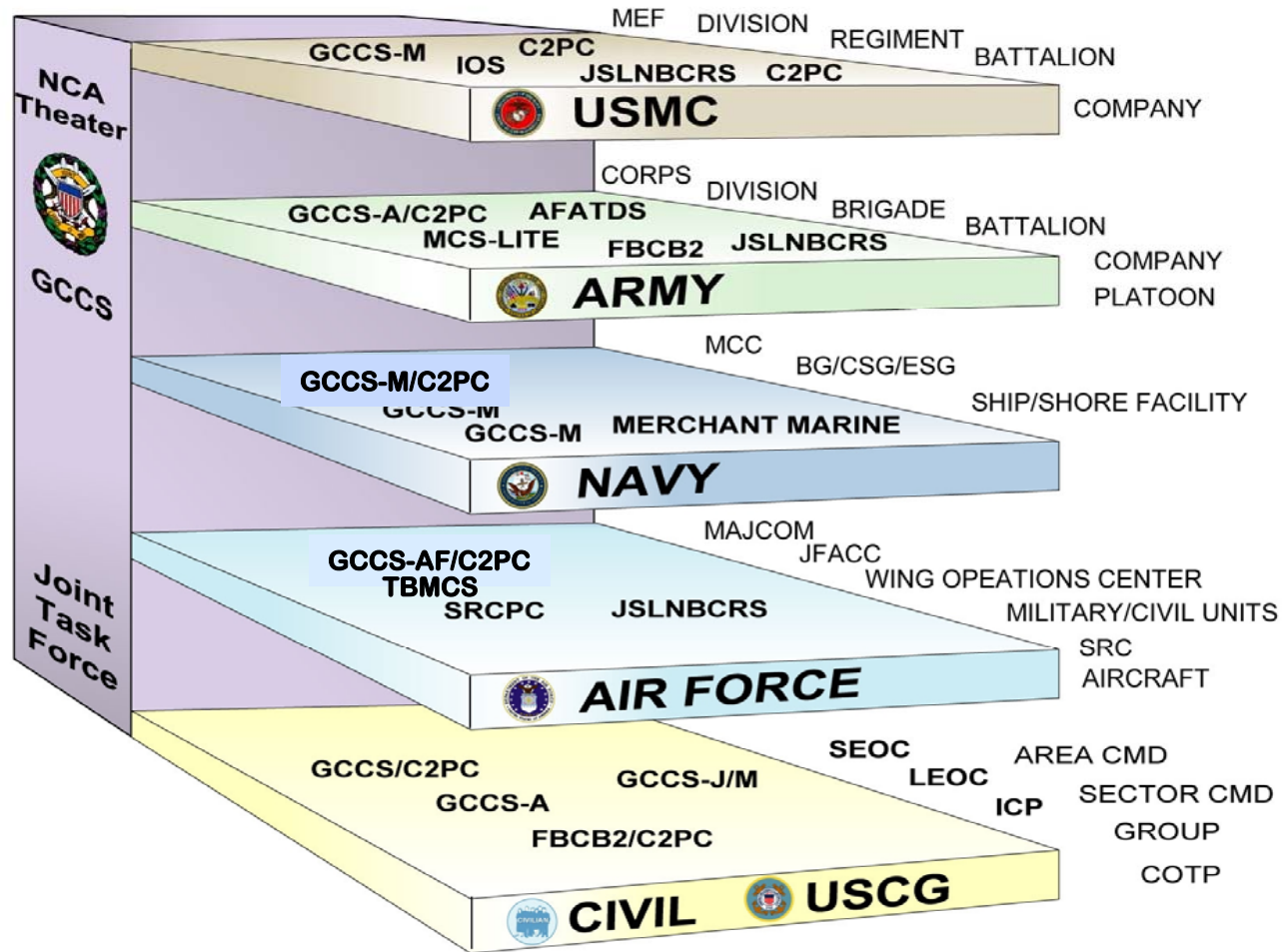
# JWARN Core Capabilities

- **Enables an immediate and integrated response to threats of contamination through rapid warning and dissemination of CBRN information:**
  - Automatically collect and consolidate sensor information
  - Transport sensor-derived information through the JWARN Component Interface Device (JCID) network to the host C2 platform
  - Report CBRN and Toxic Industrial Materials (TIM) hazard detection
  - Generate hazard area plot MTP-45 and Joint Effects Model (JEM)
  - Display hazard warning area on Common Operational Picture (COP)
  - Generate warning and de-warning (NBC) messages to affected forces





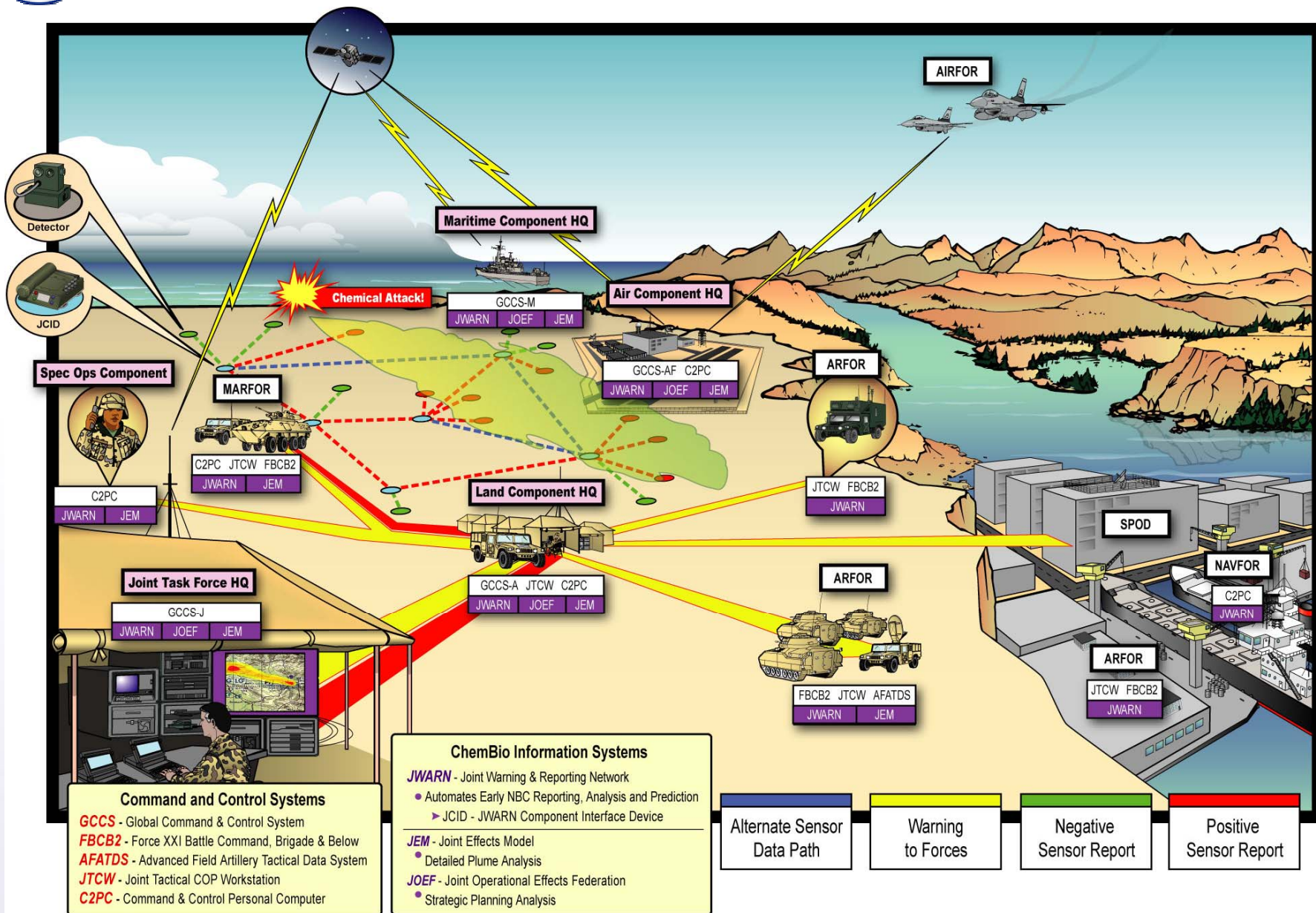
# JWARN Reaches Across All Echelons





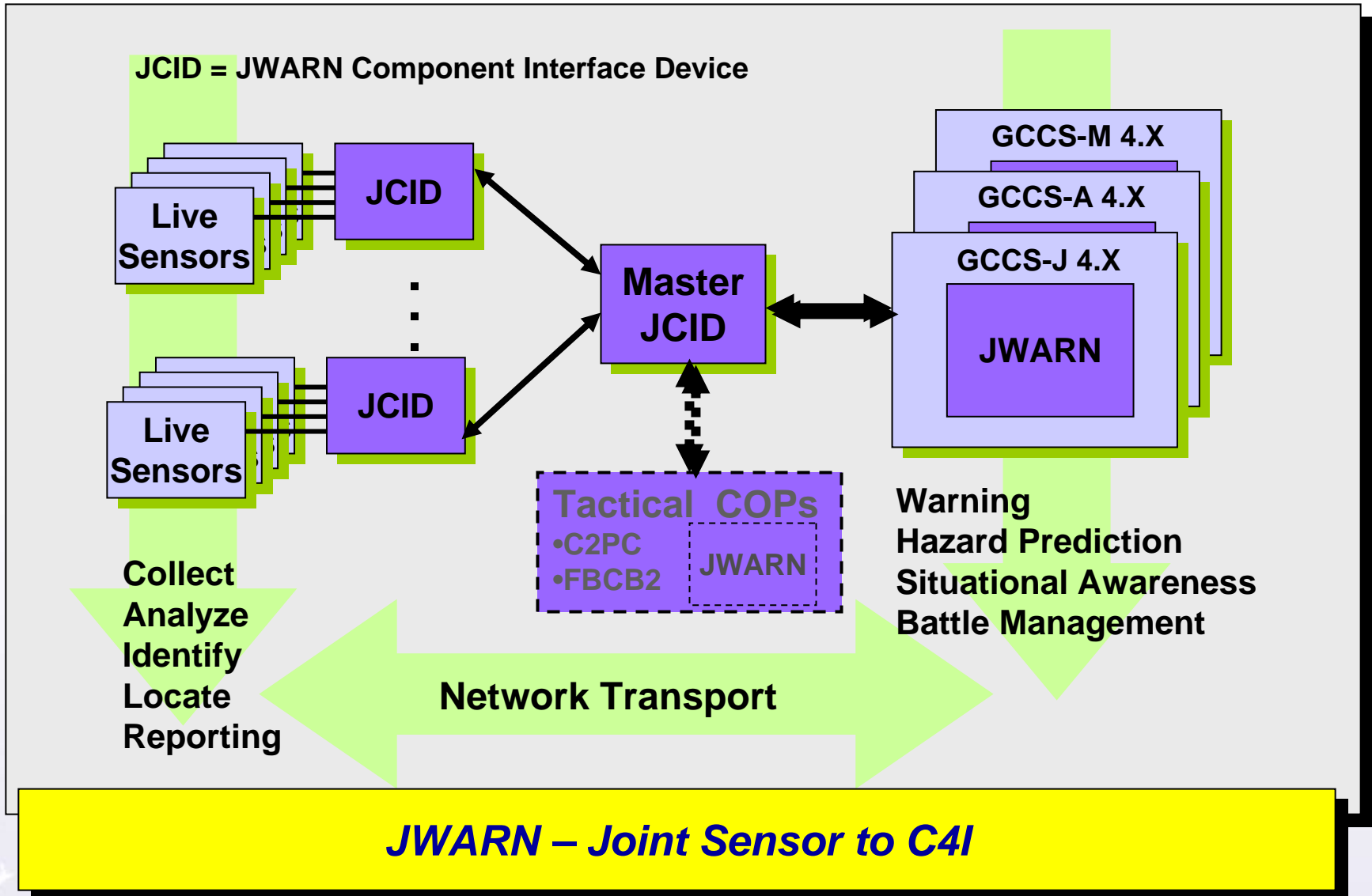


# JWARN Operational View



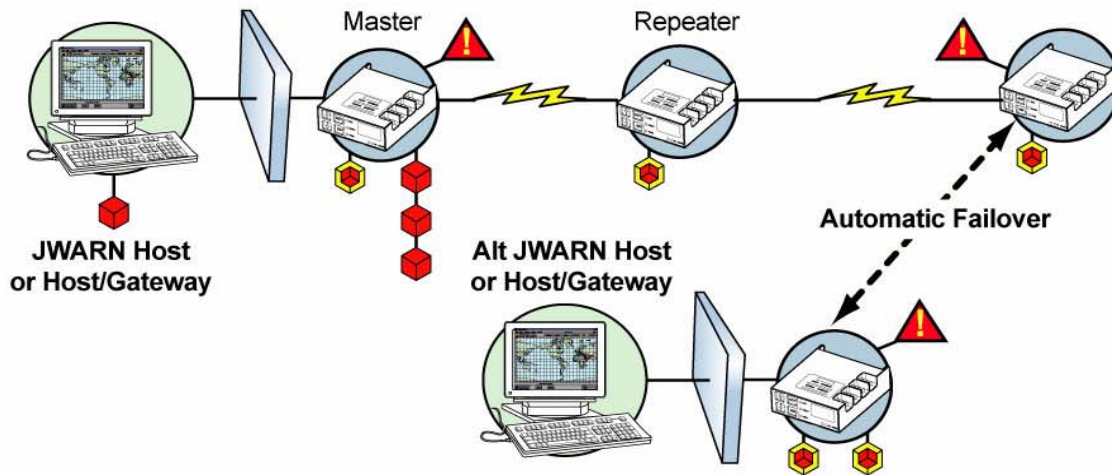
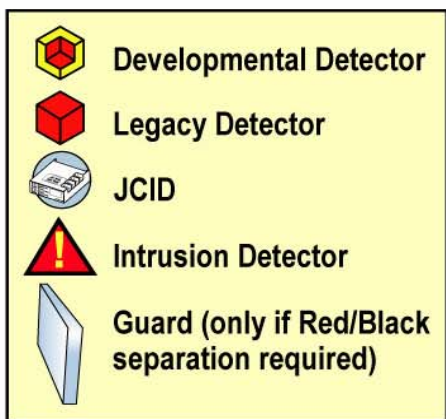
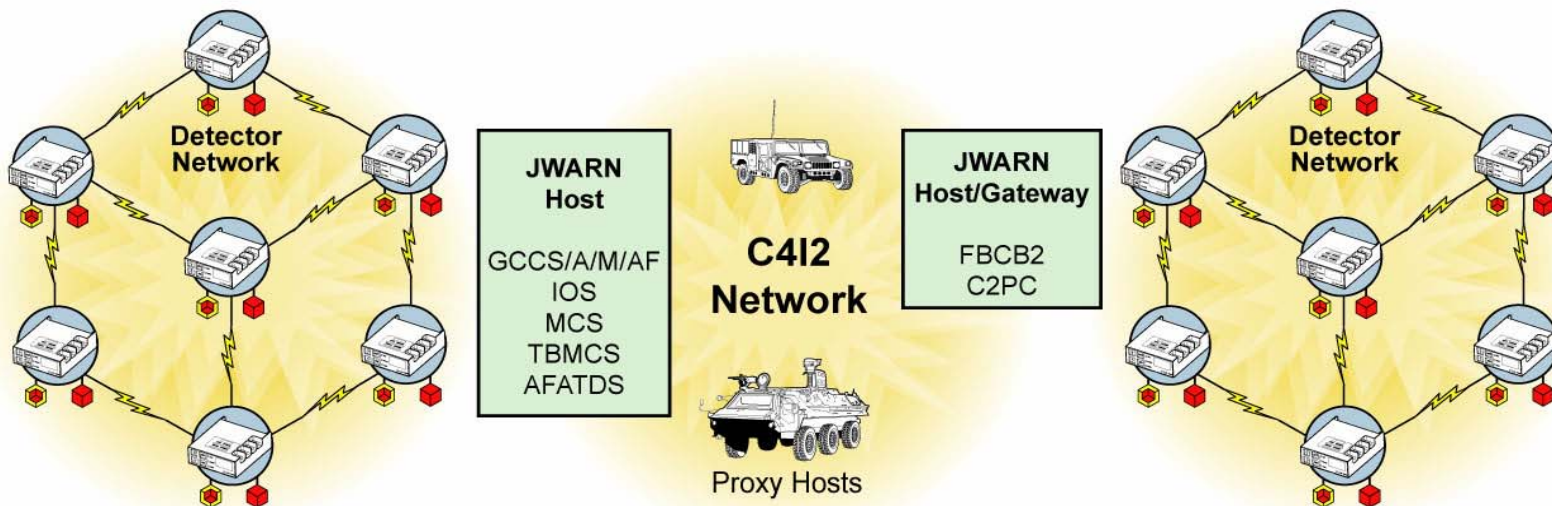


# JWARN System View





# JWARN Detectors on Host and JCID Networks

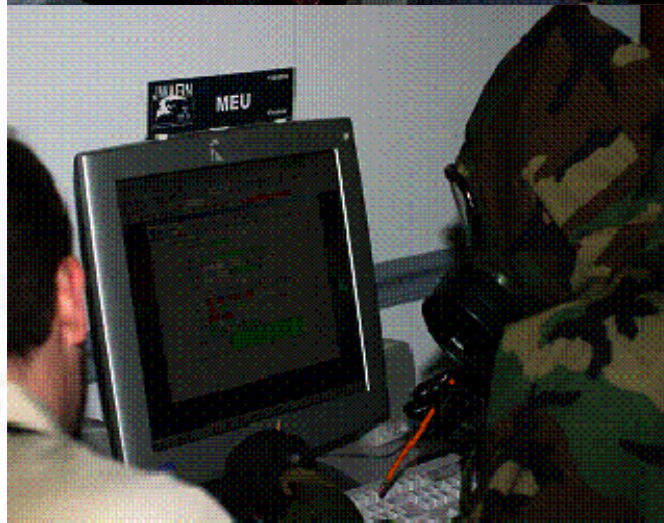






# Benefits to the Warfighter

- Automates a process which was previously manual and error prone
- Minimizes time from detection to warning (less than 2 minutes)
- Provides timely warning and de-warning of affected units to maximize combat effectiveness
- Automates recording and archiving of exposure data which will enable more effective forensic analysis
- Compatible and integrated with current and future Command & Control systems







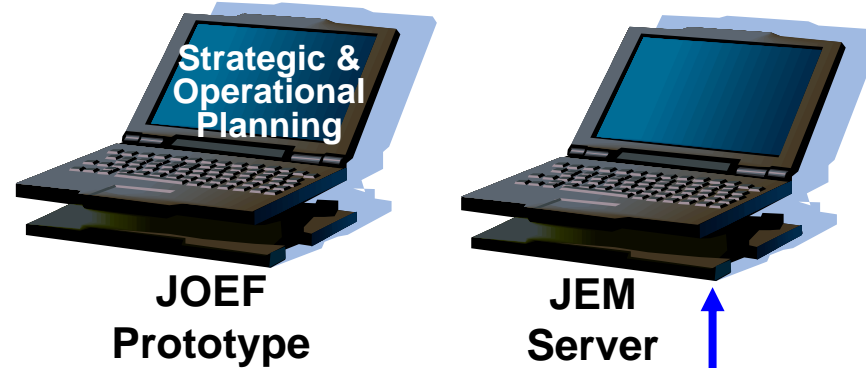
# JWARN Initial Capability (JIC) Prototype

- Support early Warfighter involvement with JWARN, Joint Effects Model (JEM), and Joint Operational Effects Federation (JOEF) technologies
- Support of User Interface requirements
- Provide an opportunity to validate and refine the Services' CONOPS and Tactics, Techniques, and Procedures (TTPs)
- Support User Assessments (UA)
- Support Conferences, Technical Demonstrations (CWID2005) and Experiments
- Support early Integration and Data Management for an integrated System
- Provide a venue to validate and refine Measures of Performance (MOPs) and Measures of Effectiveness (MOEs)
- JIC suites are available at no cost to qualified organizations

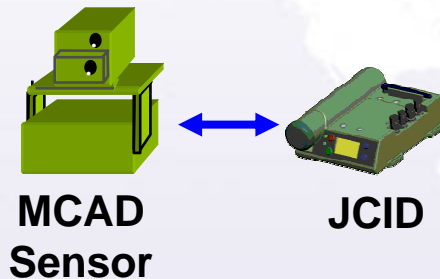
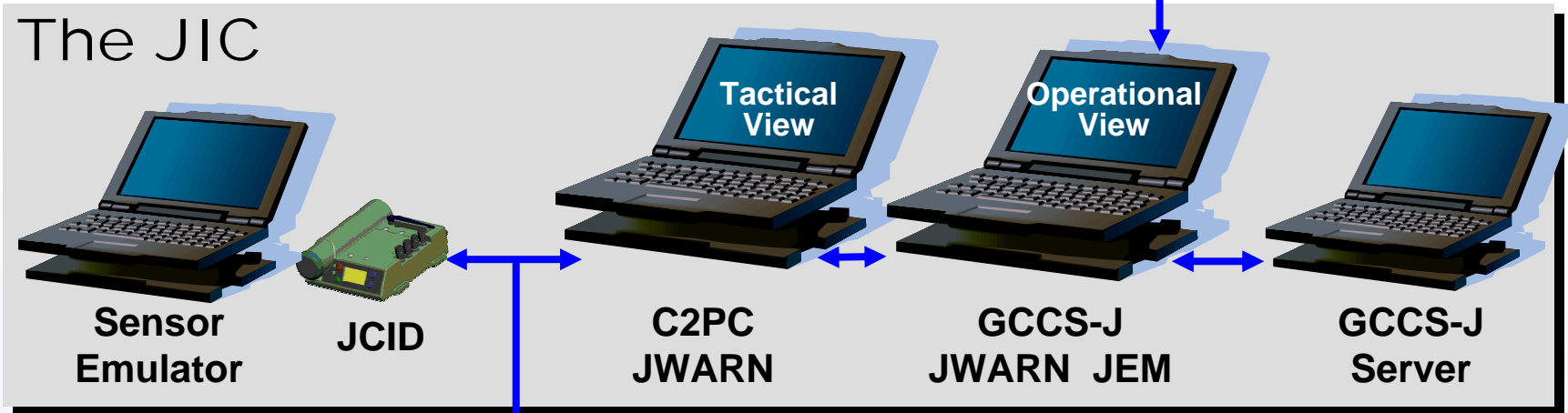
***JIC will be used to generate operationally “relevant” feedback from the Warfighter to the Developer***



# JIC Architecture

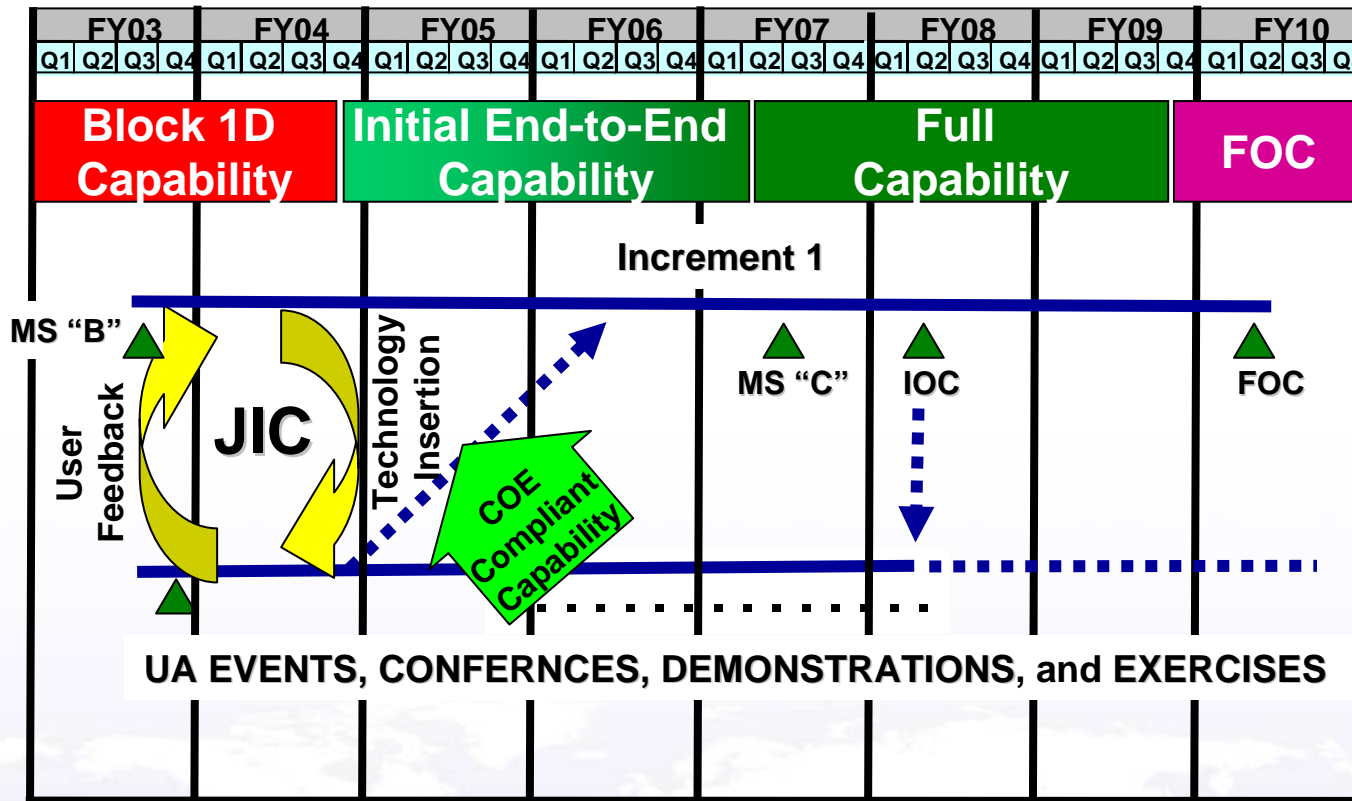


## The JIC





# Science & Technology (S&T) Insertion and JPM-IS Initial Capability (JIC)



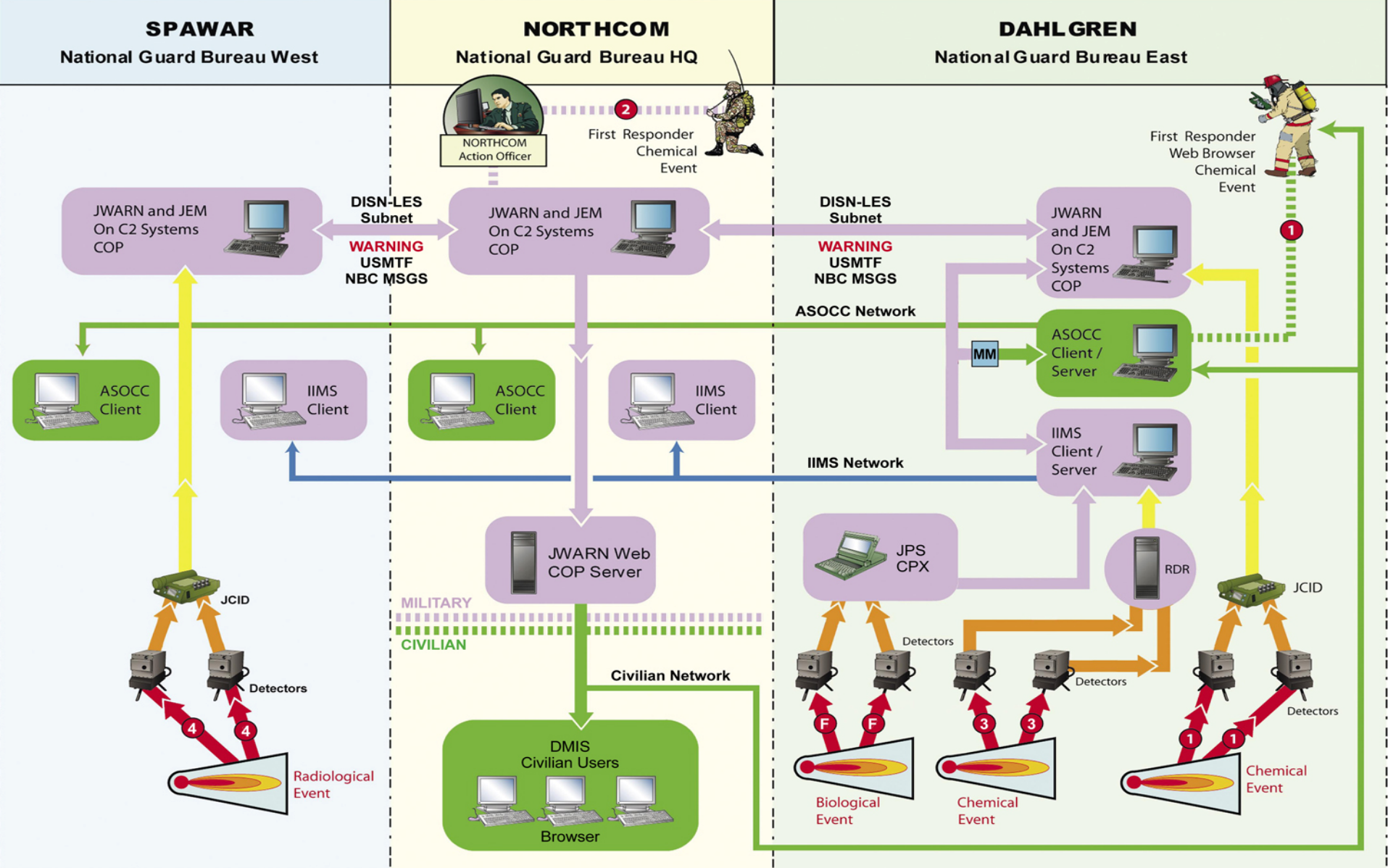
***JIC generates operationally relevant feedback from Warfighter to Developer***  
***JIC is a platform for Science and Technology (S&T) insertion into a Program of Record***



# CWID '05 Concept Demonstration

- **What the trial demonstrated:**
  - Rapid, sharing of CBRN information across Civilian and Military Command and Control (C2) domains
  - A viable, Cross Domain Solution (CDS)
    - Civilian → Military (ASOCC)
    - Military → Civilian (WebServer)
- **The trial components:**
  - 1 Civilian and 4 Military systems, in 3 Locations, all connected & interoperable
  - Teaming Partners: JWARN, JEM, IIMS, ASOCC, and JPS
  - Trial Partners: DMIS, Wireless Wall, and Tidewater Technologies
- **What each site demonstrates:**
  - DAHLGREN – End-to-end: 1<sup>st</sup> Responder provides input & receives output, all 3 sites involved
  - NORTHCOM – End-to-end: Military input & warns Civilians and Military, all 3 sites involved
  - SPAWAR – End-to-end using dissimilar systems: Military IIMS & warns Civilian & Military, all 3 sites involved





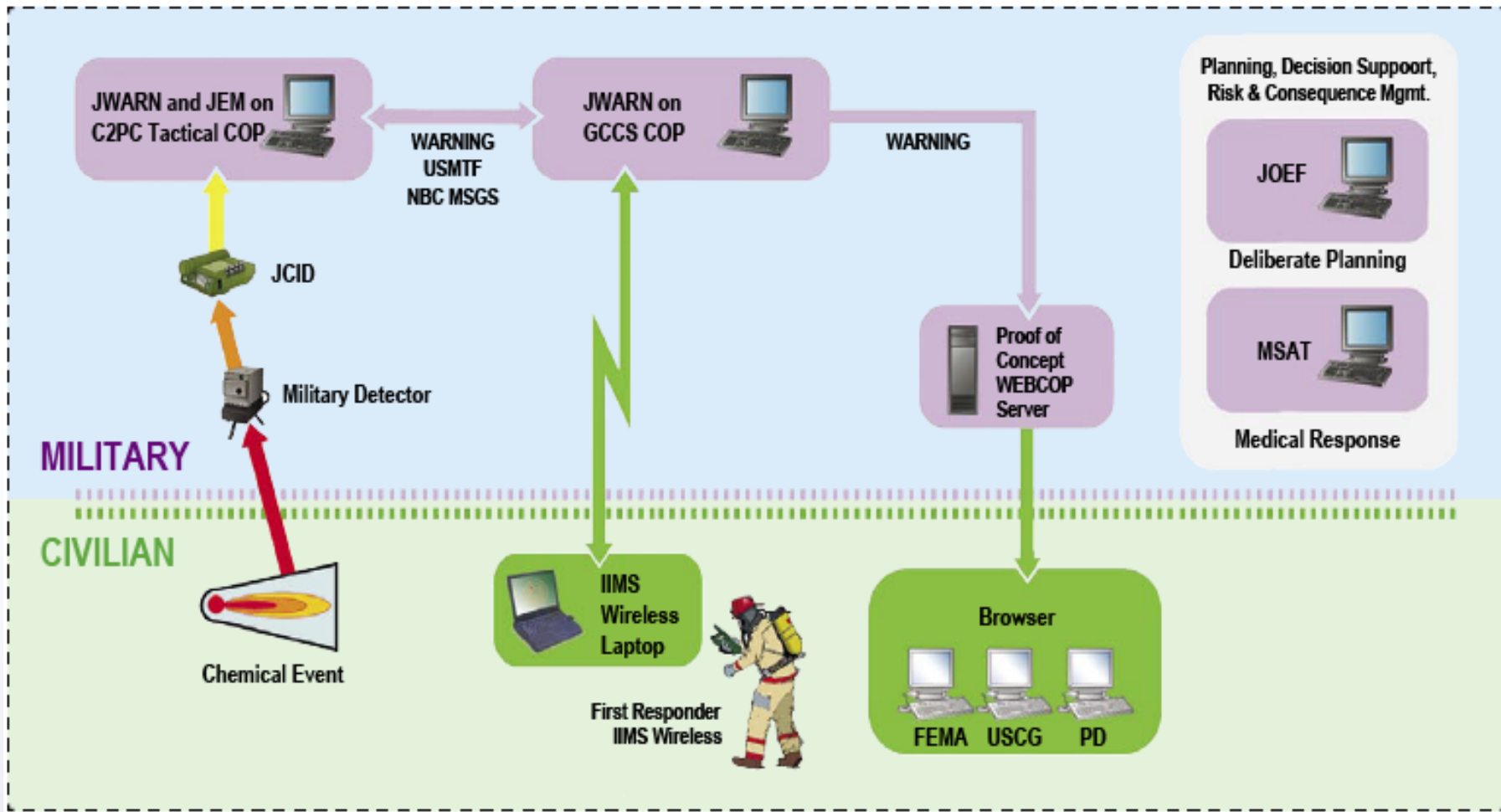
- ① Chemical Event 1 Starts Here
- ② Chemical Event 2 Starts Here
- ③ Chemical Event 3 Starts Here
- ④ Radiological Event 3 Starts Here
- F Biological Freeplay Event Starts Here

- Event Effect
- Detector Data
- JCID Data
- Military Network
- Civilian Network
- IIMS Network

- ASOCC – Area Security Operations Command and Control
- JEM – Joint Effects Model
- JWARN – Joint Warning And Reporting Network
- RDR – Remote Data Relay
- DMIS – Disaster Management Interoperability Services
- JCID – JWARN Component Interface Device
- JPS CPX – Joint Portal Shield Command Post
- IIMS – Integrated Information Management System
- COP – Common Operational Picture
- C2 – Command and Control
- MM – Message Mediator



# CBIS 05 Architecture





# JWARN Summary

- **Connects CBRN sensors directly to, and resides on, Joint and Service Command and Control (C2) systems**
- **Provides both the physical substrate for sensor connectivity and allows connection to the C2 host**
- **Provides the means to configure, monitor and manage the sensor network**
- **JWARN is the accredited CBRN Warning and Reporting DoD Program of Record and provides a solid venue for S&T insertion strategy**

