Chemical, Biological, Radiological, and Nuclear (CBRN) and Medical
Communities of Interest (COI)
# Information Sharing

Doug Hardy
JPM IS SSA Manager
douglas.hardy@navy.mil
(619) 553-5410

CBRN COI ⇔ Medical COI Data Sharing
(Why a Pilot?)

- CBRN COI to Medical COI data sharing supersedes the requirement for multiple point to point interfaces among the many separate medical and CBRN systems. Opens way for additional COI data sharing.

- No CONOPS exist for CBRN ⇔ Medical data sharing, developing notional Use Cases to facilitate CONOPS development, and promote net-centric services (DoD Net Centric Data Strategy & Web Services)

- CBRN Medical Pilot proposal suggests partnering with MSAT ACTD to enhance connectivity of both the Medical and CBRN COIs to interface/interoperate.

- The MSAT ACTD and CBRN PORs would both benefit from data sharing…
  - Pilot promotes CBRN Information Systems (IS) programs of record to:
    - pull medical data to generate CBRN course of action
    - pull medical data to CBRN to conduct crisis and deliberate planning
    - receive medical alerts and display in the CBRN view
  - Pilot promotes MSAT ACTD to:
    - pull CBRN detector/sensor data for medical surveillance
    - pull CBRN hazard prediction data for medical crisis planning/action and analysis
    - push medical alerts to the CBRN view
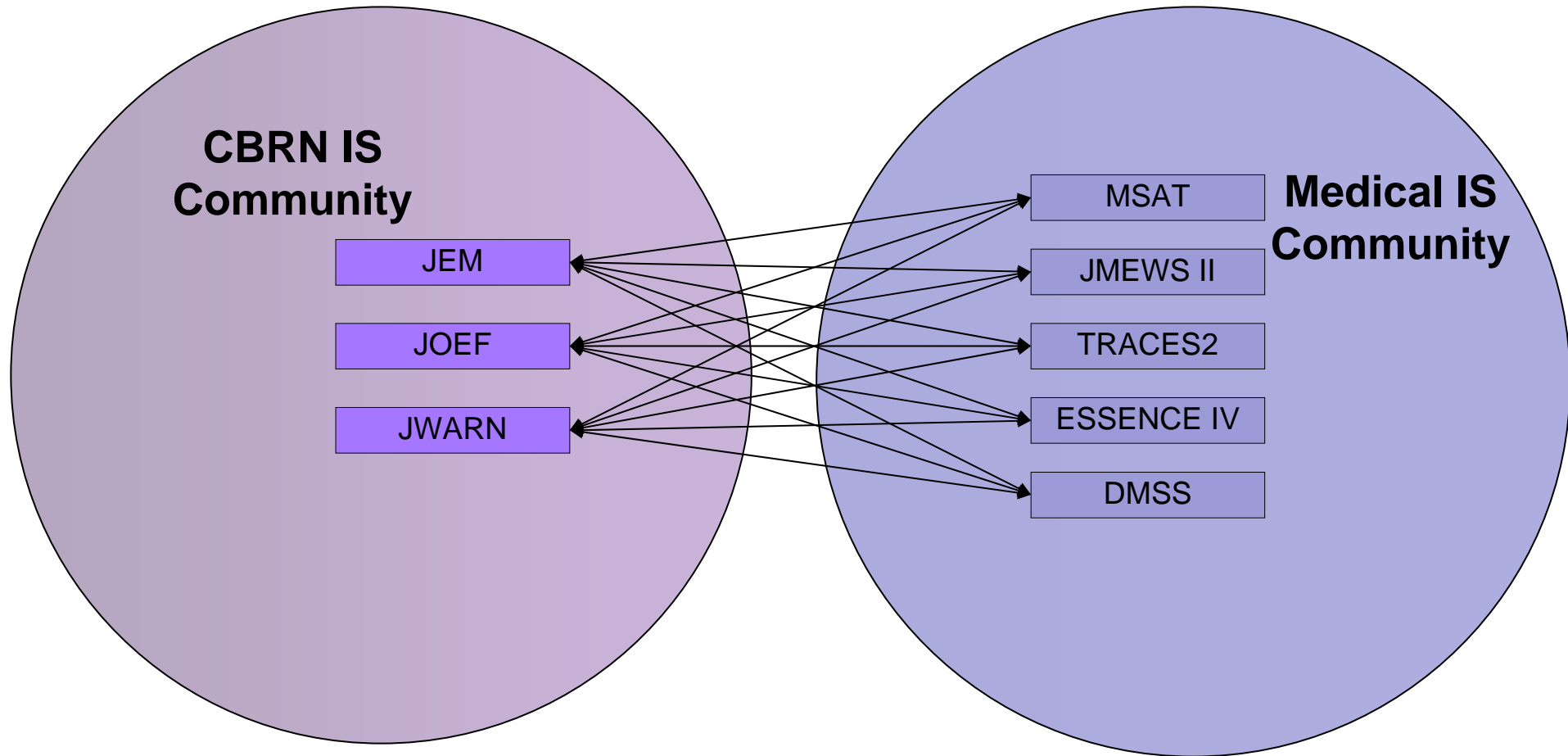   - identify medical server

Notional JWARN Data Sharing Approach
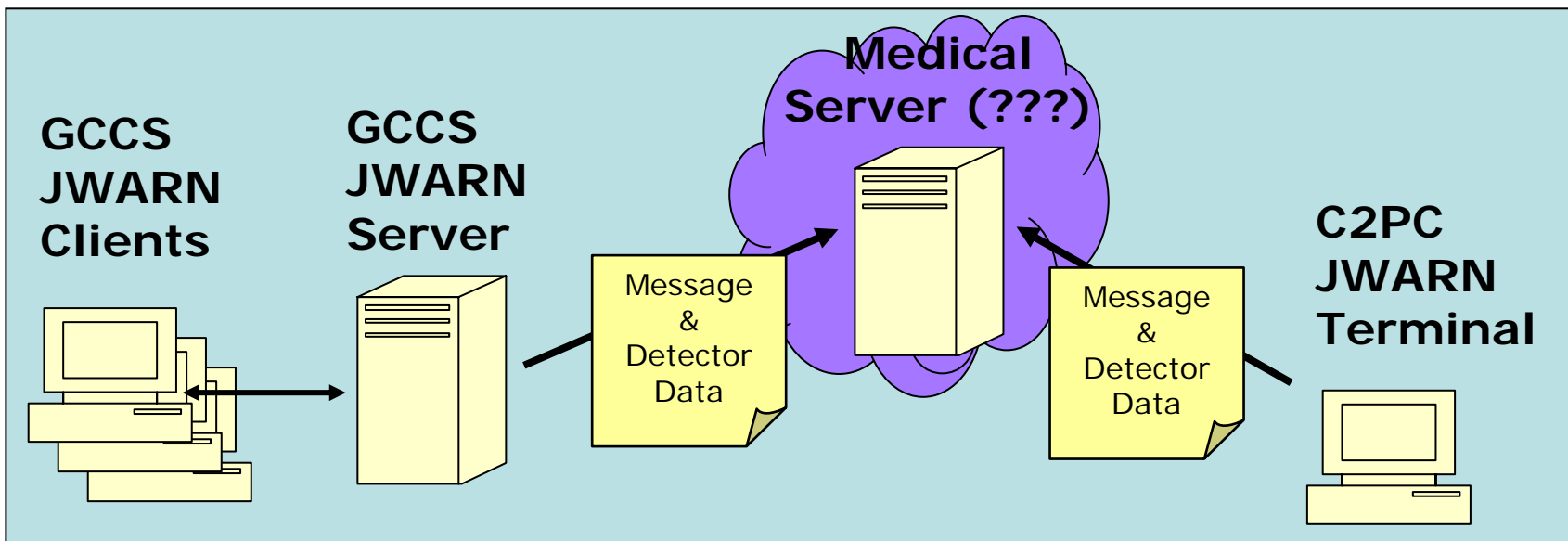
- **Current approach:**
  - **Does not have an identified medical end-point / server**
  - **Is not scalable and is a stove-piped "file-based" solution**
  - **Does not provide an agreed upon Data Model / Schema for sharing of data between Medical, CBRN and other COIs**
  - **Does not support real time data exchange "manually intensive"**
  - **Does not meet DoD's direction for "net-centric" services**

CBRN ⇔ Medical
System to System Data Exchange

CBRN IS Community

JEM

JOEF

JWARN

Medical IS Community

MSAT

JMEWS II

TRACES2

ESSENCE IV

DMSS

CBRN COI ⇔ Medical Notional Interfaces
Pilot Project (Phase 1)

CBRN IS COI

JEM

JOEF

JWARN

CBRN Data Schema

Medical IS Community

MSAT

JMEWS II

TRACES2

ESSENCE IV

DMLSS
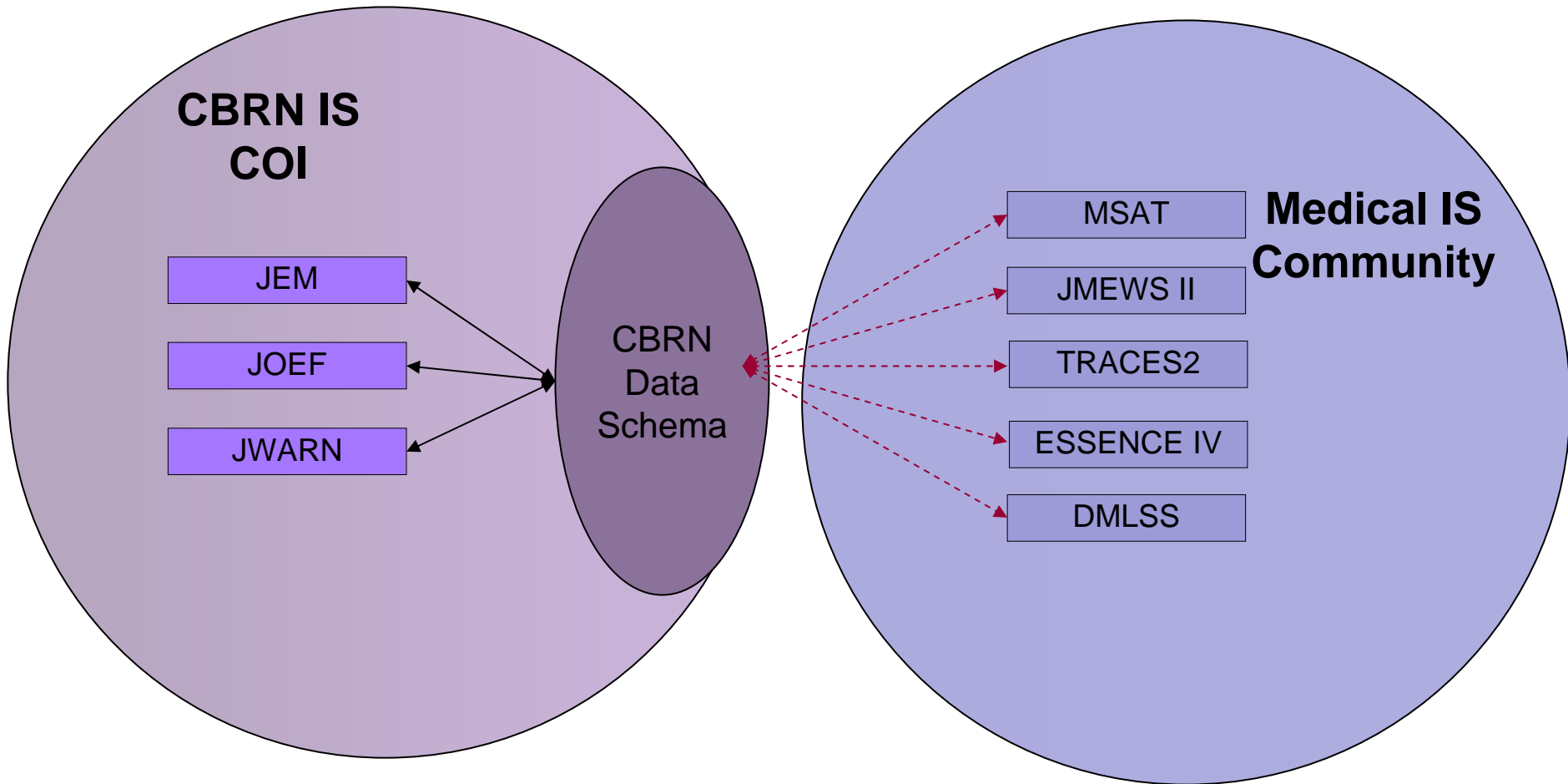
CBRN ⇔ Medical COI Data Sharing
Pilot Project (Phase 2)

FBCB2

CBRN COI

NBC Control Center

NBC Cell

NBC Ops/Plans

NBC Decon Team

CBRN Detect

CBRN Recon/Survey

C2PC

JTF Surgeon

JTF Medical Planners

JTF Medical Logistics

GCSS

Medical COI

Epidemiology

JTF Medical Operations

JTF Medical Regulating

CBRN Information Systems

TMIP/ JMEWS II / MSAT

CBRN-Medical COI Pilot Project

GCCS

6
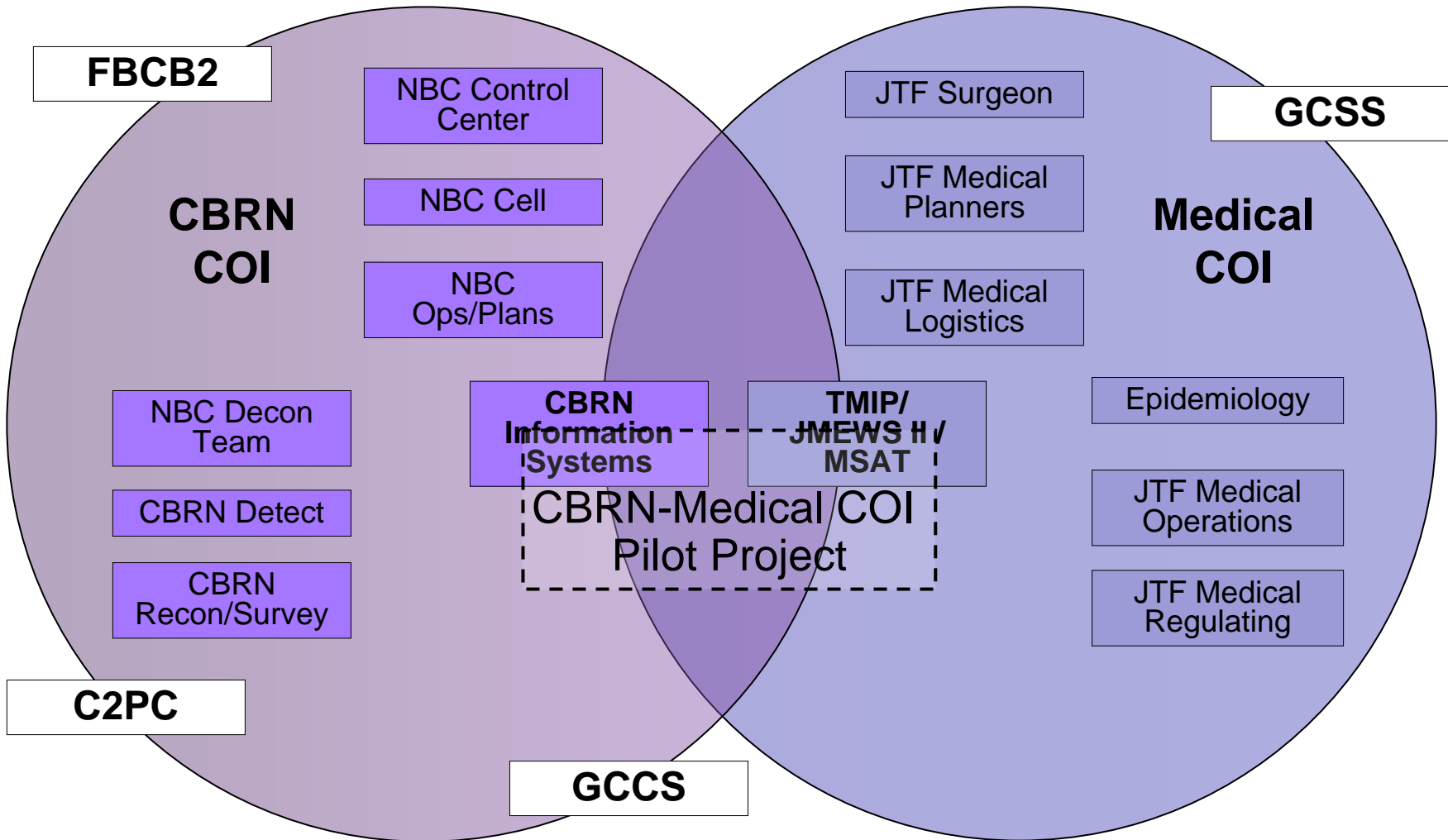
CBRN IS ⇔ Medical IS Data Sharing

CBRN	Systems Sensors		**Collect/ Process**
CBRN IS	JWARN JEM JOEF	**CBRN-Medical** **Pilot Project**	**Process/ Analyze/ View**
MED IS	TMIP JMEWS II MSAT		**Process/ Analyze/ View**
MEDICAL	Systems Sensors		**Collect/ Process**

7
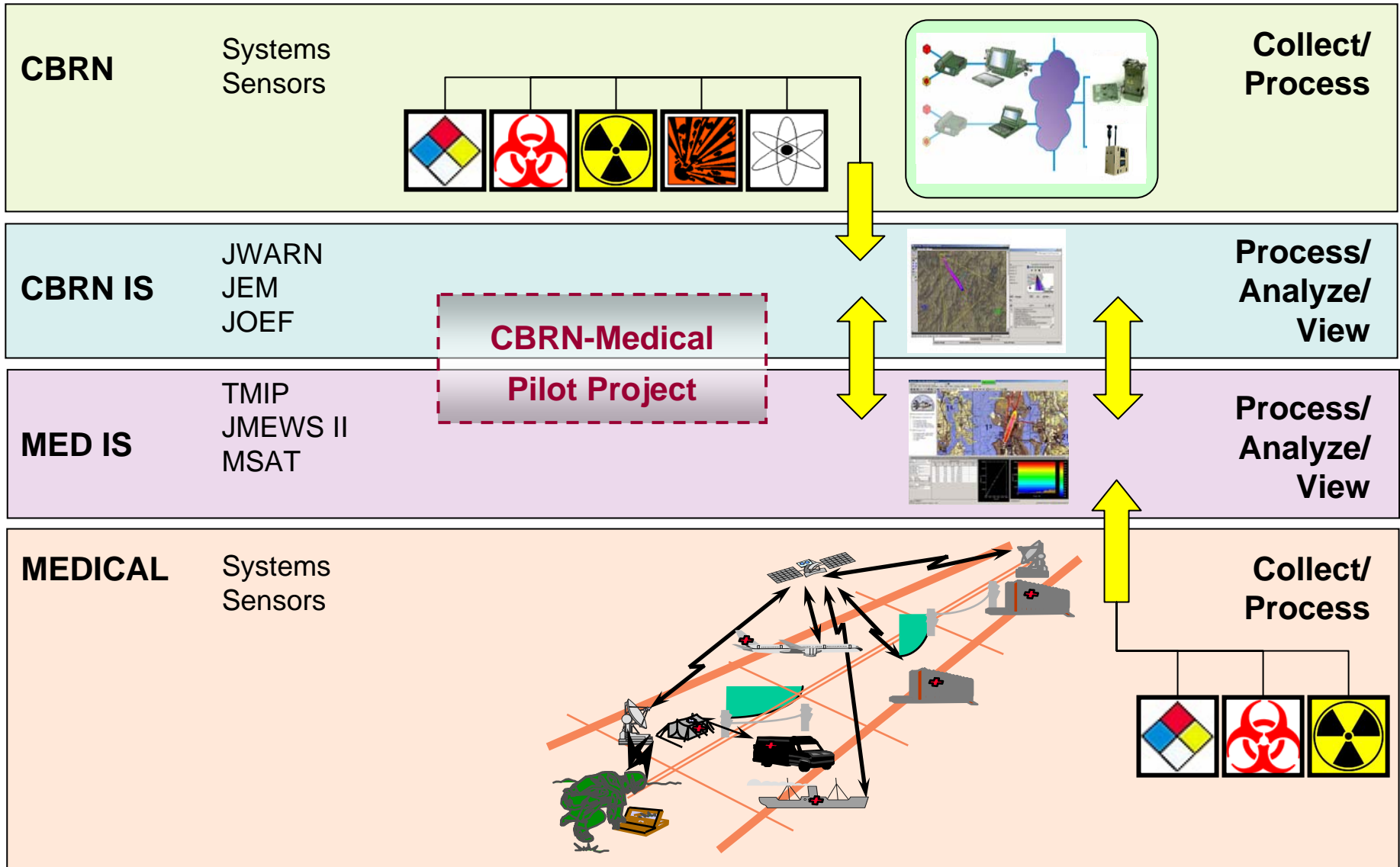
Sample Use Cases for Data Sharing

⇨ **Medical Surveillance**

    1) **Low Level/Long Term Exposure**

⇨ **Crisis Planning/Action**

    2) **WMD Hazard Alert/Prediction**

    3) **Casualty Prediction**

    4) **Medical Logistics Requirements**

CLASSIFICATION LEVEL HERE

TMIP | Joint Medical Workstation II

Welcome back, System Administrator
Home Page Manage Filters Help Logout

Unit Status   Surveillance   Map View   AnnexQ Reporting   Search   Administration   Preferences

Current Status   Bulletin Board   Subjective   Blood   Equipment   Supplies   **Beds**   Event View   AnnexQ Report Status

Your Location: Unit Status > Beds

Your Filters: PACOM Only, consisting of 10 Units in: PACOM   (Change filter)   (Remove filter)   (View Units in filter)

Bed Status

This page displays the most recent bed status, as reported by units in their most recent AnnexQ report.

8 of 10 joined units (80%) have filed **MedSitRep** in the last 4 day period.

Type	Authorized	On Hand	Mission Capable	Total Occupied	USA	USAF	USN	USMC	USCG	Non-US Military	EPW	US Civilian	Other Civilian	Other	Status
Level 2 beds	656	656	656	0	0	0	0	0	0	0	0	0	0	0	G

Export options: Excel | XML | CSV

Key to this Chart
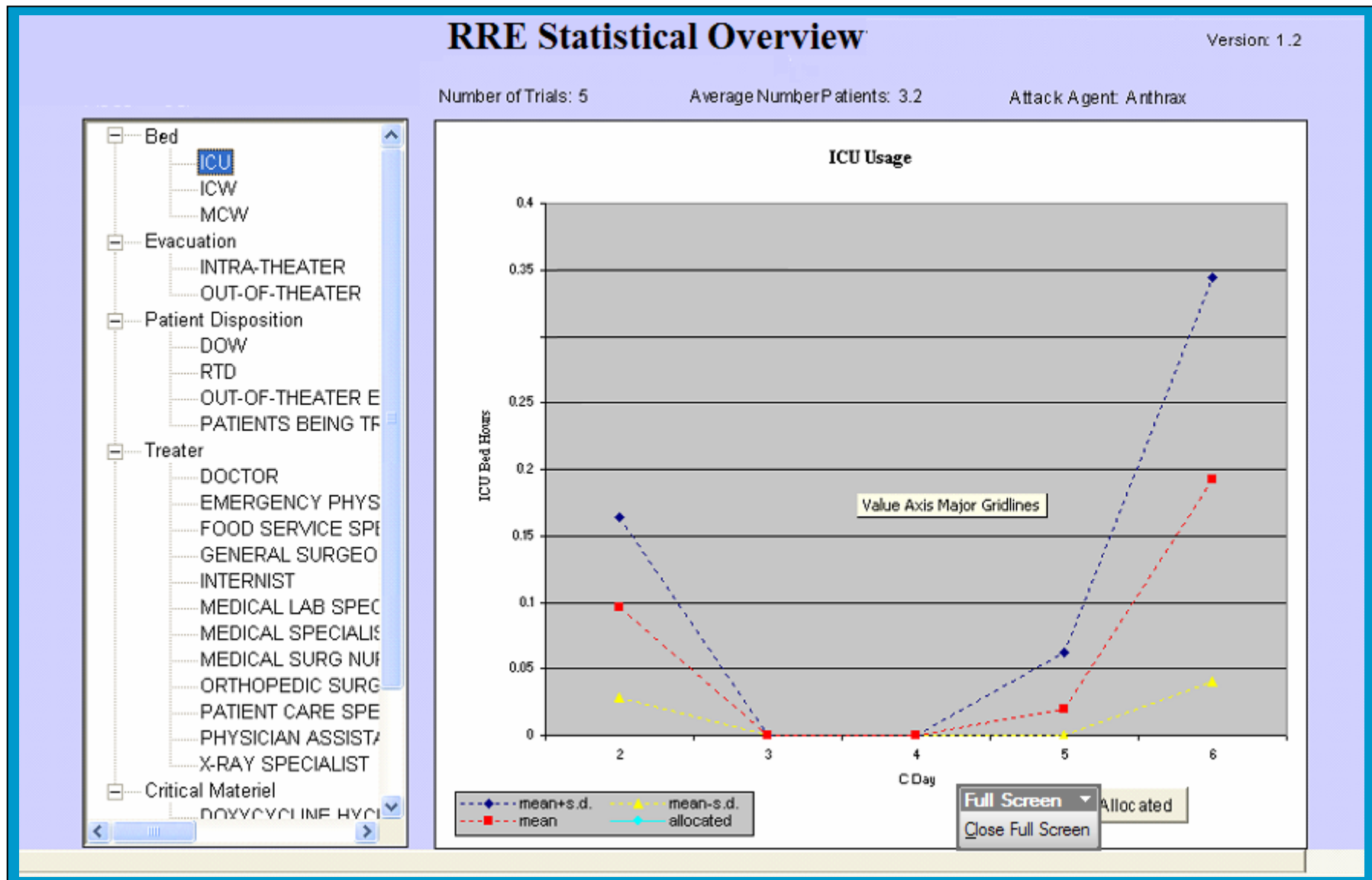
G - 0-30% Occupied   Y - 31-50% Occupied   R - >50% Occupied

Percentage occupied is defined as Total Occupied / Mission Capable Count.

This report shows data from the following Units: US ARMY: SamBAS (SAMBAS),CSH1 (CSH1),STAGING (STAGING),BAS1 (BAS1),CSH2 (CSH2),BAS2 (BAS2),BAS3 (BAS3),BAS4 (BAS4),MTF (MTF),CSH3 (CSH3)

Operational Planning - JOEF
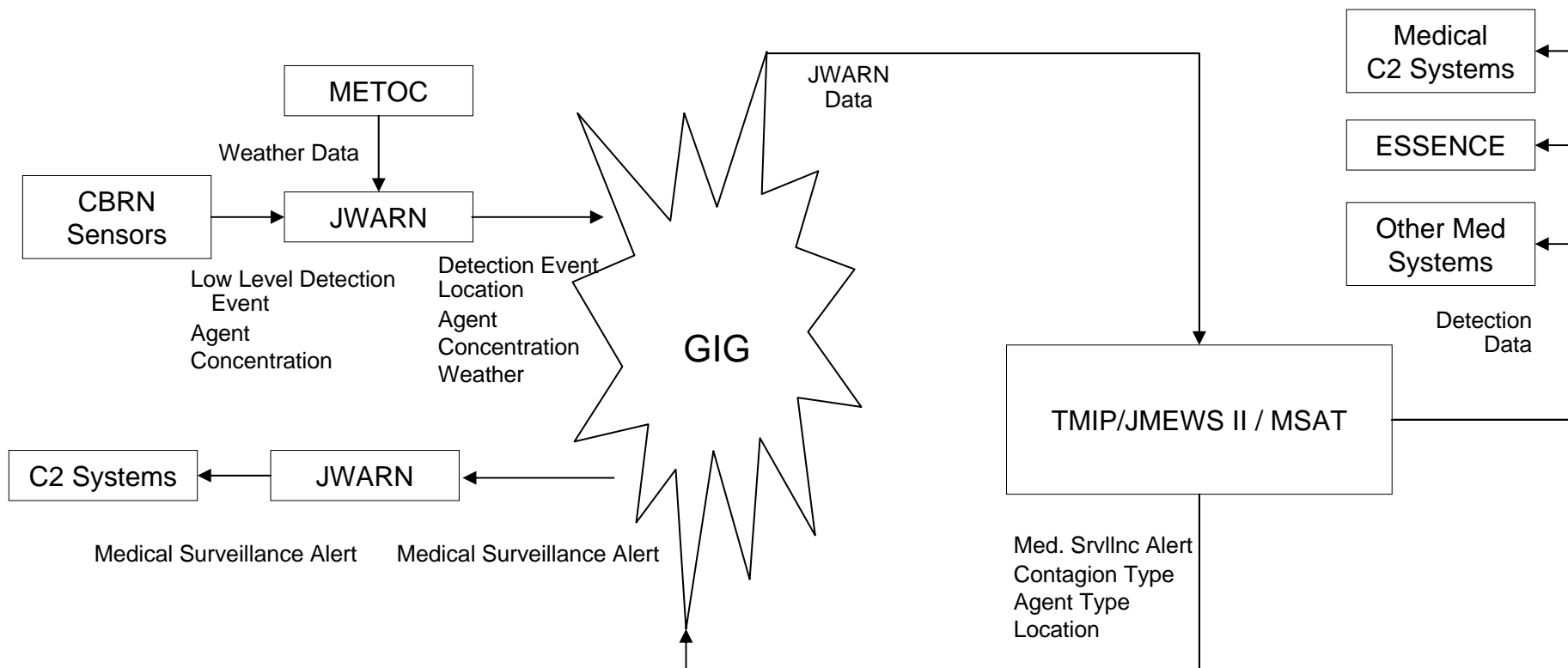
Medical Surveillance
1) Low Level/Long Term Exposure

a) **Raw detector data from CBRN sensors used by Medical Applications to accomplish long term surveillance.**

b) **Medical COI Alerts to CBRN COI of long term events/hazards**

Crisis Planning/Action
2) WMD Hazard Alert/Prediction

JWARN
Data

| JEM | ← | METOC |

Prediction Data

Weather Data

GIG

CBRN
Sensors → JWARN

Detection Event
Multiple Detectors

Agent
Concentration

Detection Event
Location
Agent
Concentration
Weather

NBC 1-6 Msgs

Current/Predicted
affected areas

TMIP/ JMEWS II / MSAT

Event
Data

Med
Systems
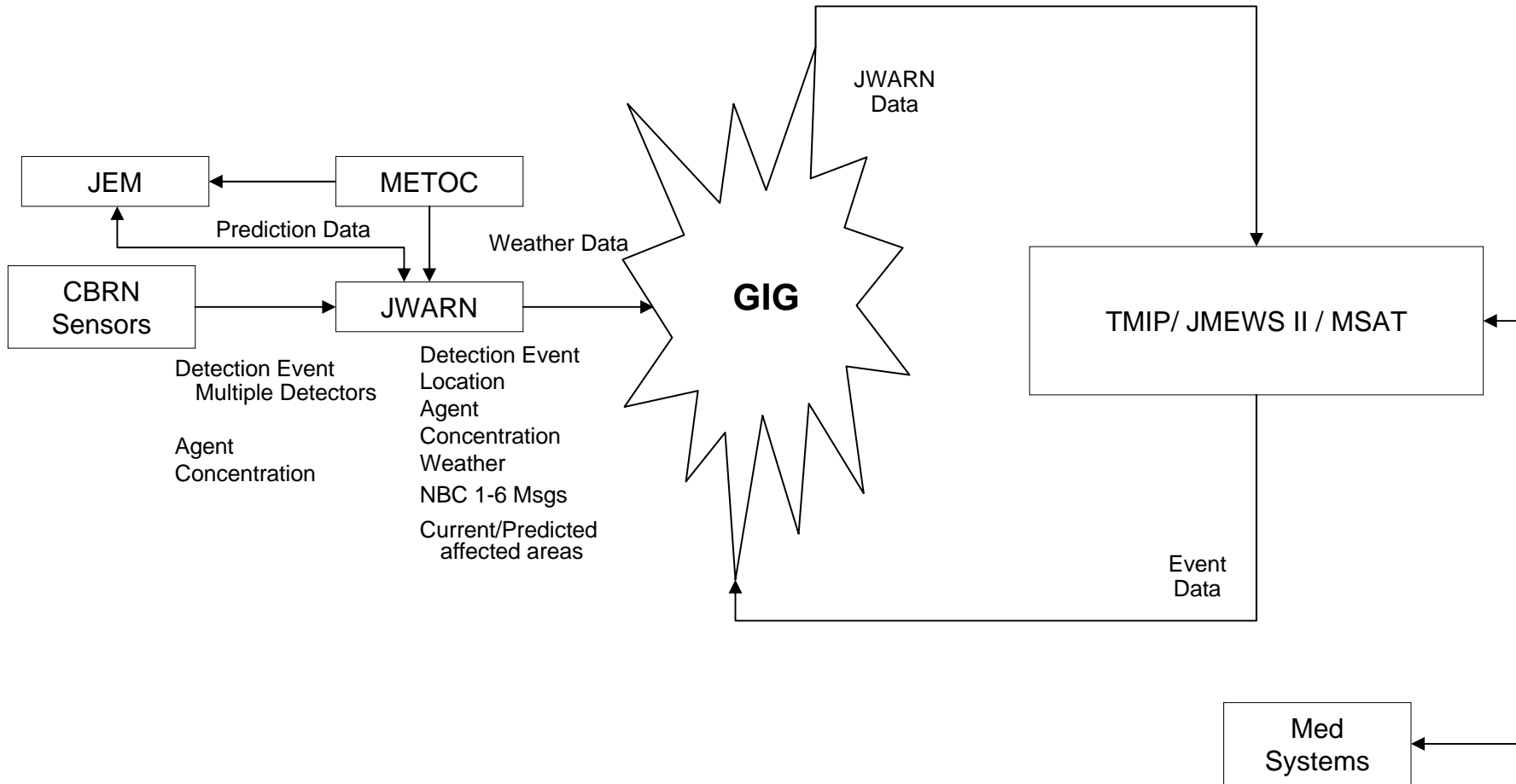
Crisis Planning/Action
3) Casualty Predictions

C2 Systems ← JOEF ← **GIG** ← Event Data ← TMIP/ JMEWS II / MSAT ↔ Med Systems

Consequence Mgmt Data

COA Data

Medical Data

Unit ID

Location

Assumed MOP posture

Number of current casualties

Expected level/type of contagion

Percent unit effectiveness vs time vs. treatment and MOP posture

14
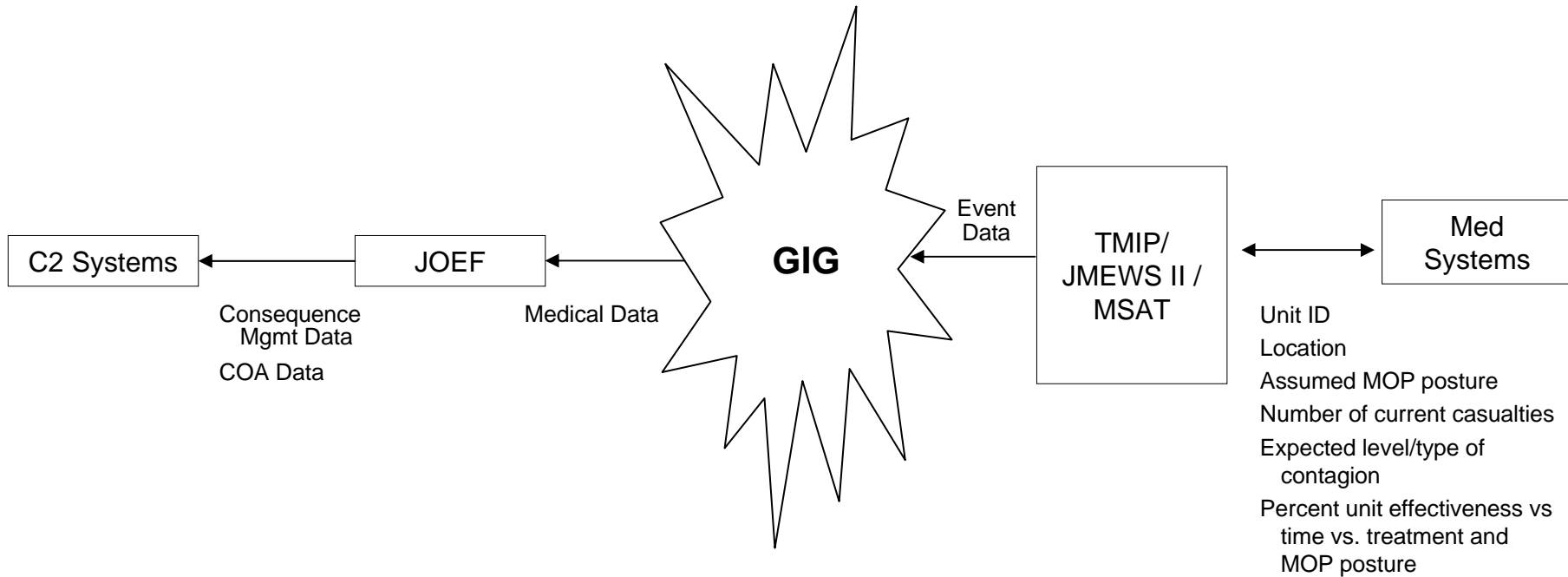
Crisis Planning/Action
4) Medical Logistics Requirements

C2 Systems ← JOEF ← **GIG**

Consequence
Mgmt Data

COA Data

Log Reqmts.

Medical Data

Event Data

TMIP/
JMEWS II /
MSAT

Required additional resources

Required additional transport

Effect of Resources/Transport
vs. Casualties vs. Time

Med Log
Systems
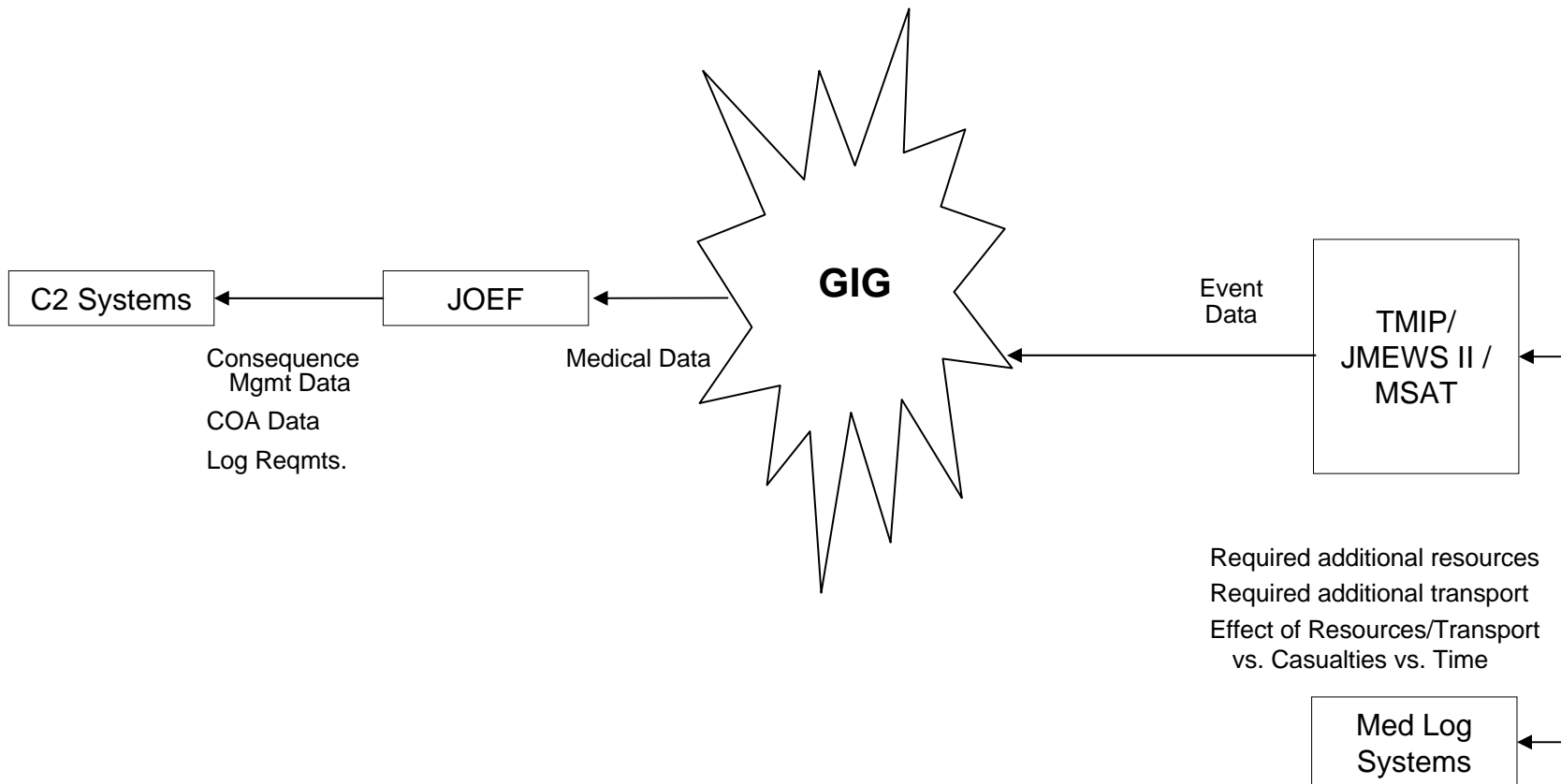
CBRN ⇔ Medical Interoperability
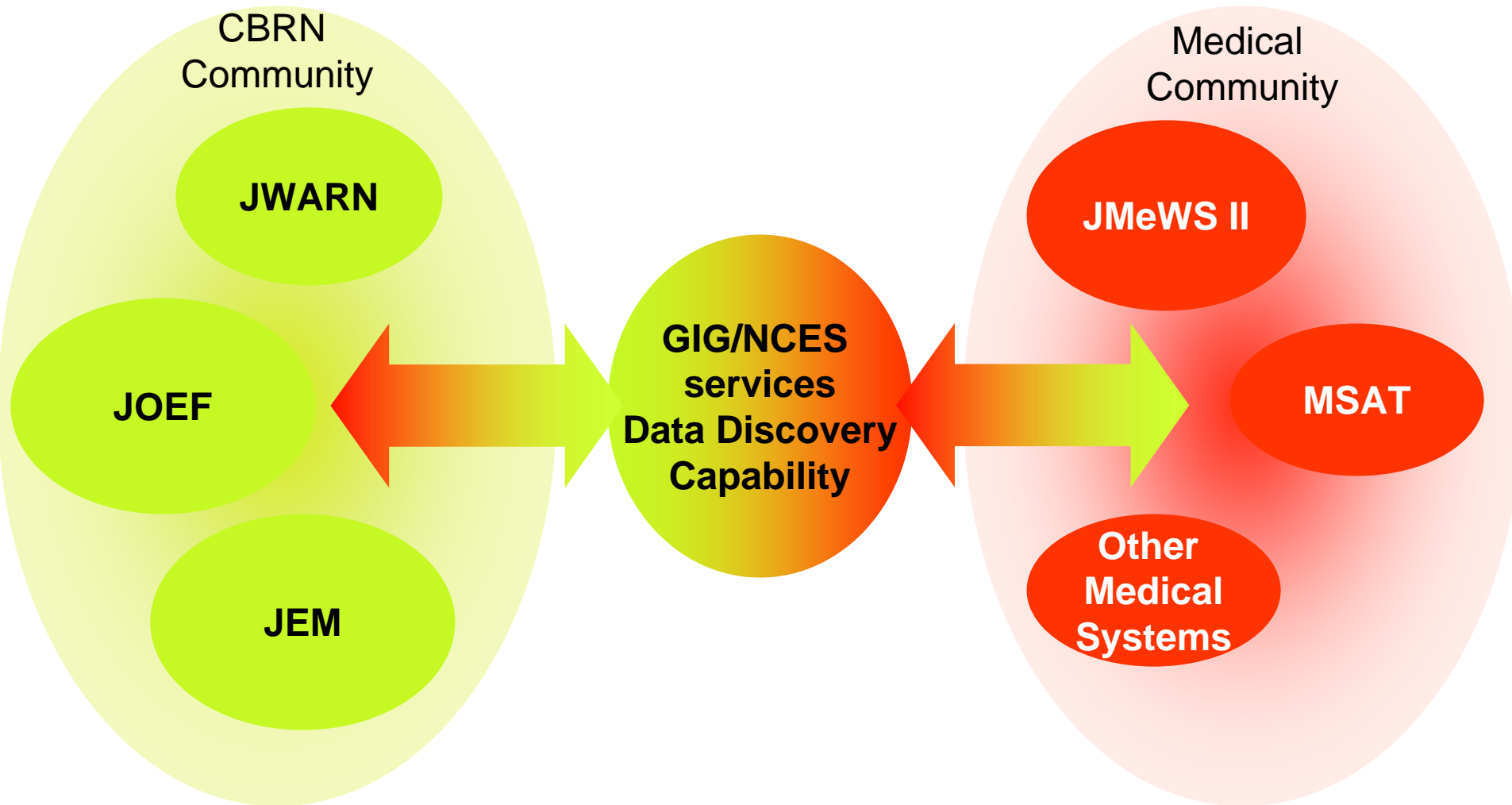
Phased CBRN ⇔ Medical Migration

Current
(JWARN=>TMIP)

Phase 1
(CBRN⇔MSAT)

Phase 2
(CBRN⇔MSAT)

- **No CONOPS (CBRN-Med Data Sharing)** → • **Develop CONOPS based on "best of" Use Cases** → • **Refine Phase 1 CONOPS (Identify additional CONOPS use cases)**

- **One-way sharing (push only from CBRN to Medical)** → • **Develop technology for sharing on GCCS-X Platforms (initial IER's)** → • **Develop Shared Data Models and Schema**

- **Use Legacy COE for Interoperability** → • **Prototype NCES-based Web-Services for GIG Interoperability**

- **Address backward compatibility to Legacy COE**

time

17

Way Forward

- ✓ **Brief out to MSAT ACTD to get "thumbs up"/buy-in that they are the Pilot's best fit from Medical community**

- **Receive S&T Resource Support for CBRN to participate in MSAT ACTD for CBRN ⇔ Medical Initial Capability Demonstrations**

- **Preparation of Pilot MOU/MOA (time-phased technical approach, resource commitment, expected outcome)**