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# INFORMATION MANAGEMENT CONOPS

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**3 December 2002**

**US Army Signal  
Center & Fort  
Gordon**



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# Purpose

**Brief the IM CONOPS to inform the symposium  
IM work group of:**

**Definition of IM**

**Signal Role**

**Way Ahead**

***To receive pertinent comments on:***

**SC IM Strategy**

**Roles / Responsibilities**



# Current Revolution in Military Affairs

**Communications and information exchange capabilities enable the disintegration of an enemy through precision strike and precision maneuver.**

***Information Management will enable revolutionary systemic synergies by providing the ability to make correct decisions based upon shared information***



# The Signal Role In IM

**What exactly is IM and  
what is the Signal  
Corps role?**

**Information:  
A Combat  
Multiplier**

**Information:  
An Element of  
Combat Power**

**How do we get  
from here...**

**To here?**



# The Signal Role In IM

Army Regulation 5-22

Management

## The Army Proponent System

Warfare Center
<b>Designated Area:</b> Languages. <b>Proponent:</b> Assistant Chief of Staff for Intelligence
<b>Designated Area:</b> Information mission area. <b>Proponent:</b> Commandant, U.S. Army Signal School
<b>Designated Area:</b> Public affairs. <b>Proponent:</b> Chief of Public Affairs, HQDA
<b>Designated Area:</b> Community activities. <b>Proponent:</b> Commandant, U.S. Army Community Activities

*d.* Commanders who are designated branch and specified proponents as shown in tables 1 and 2 will—

(1) Develop and document concepts, doctrine, tactics, techniques, procedures, organization designs, materiel requirements, training programs, training support requirements, and manpower requirements (except as provided in AR 600-3).

(2) Coordinate proponent initiatives with user units.

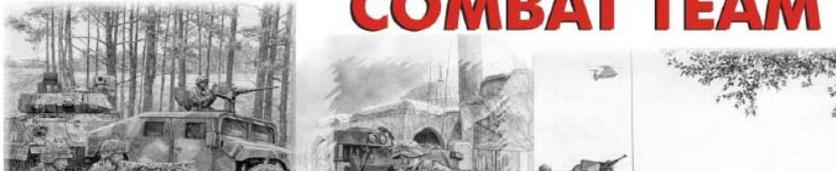


# IM Support to C2

November 2001

FM 3-90.3 [FM71-3]

## **THE MOUNTED BRIGADE COMBAT TEAM**



### **INFORMATION MANAGEMENT**

3-29. Information management is the provision of relevant information to the right person at the right time in a usable form to facilitate SU and decision making. It consists of relevant information and information systems (operational picture, COP, and SU). The BCT XO is responsible for information management.



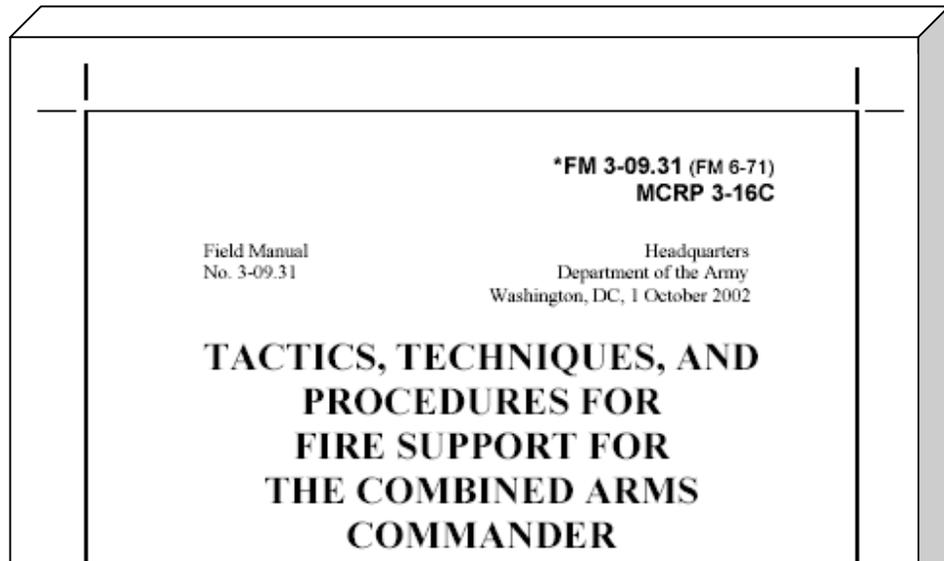
Headquarters  
Department of the Army

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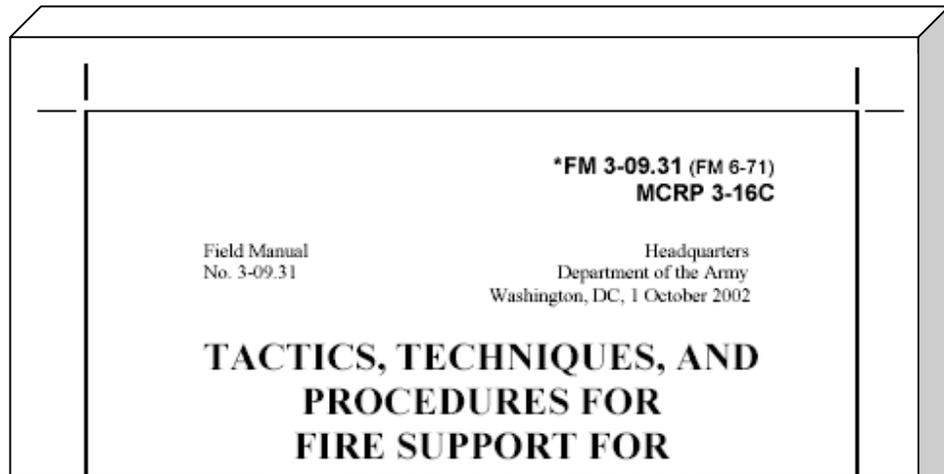
# IM Support to C2



- How will BDA get reported and to whom? Who will make a re-attack decision? When is the latest desired effects can be achieved through re-attack and still fulfill the purpose of attacking the target?
- How will the results of attacking this target get disseminated to the maneuver unit whose scheme of maneuver is affected by the capabilities this target possesses? (Both command and fire support channels?)



# IM Support to C2

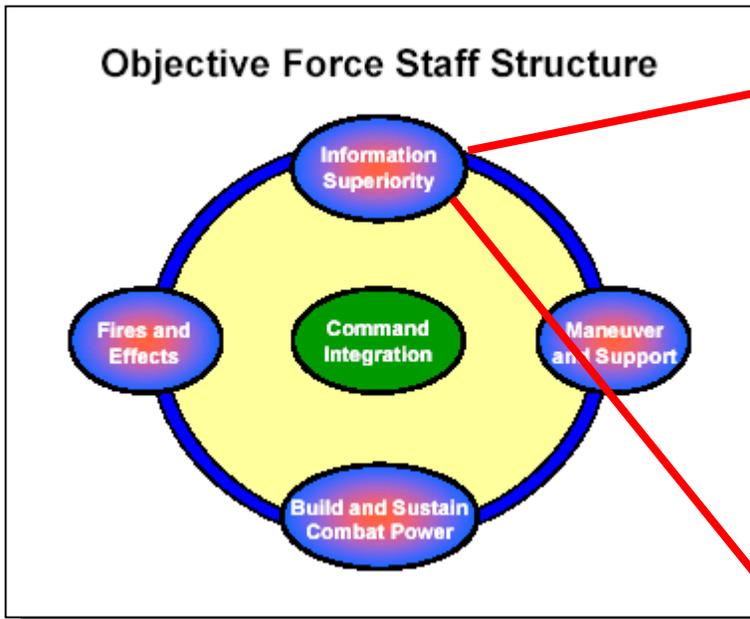
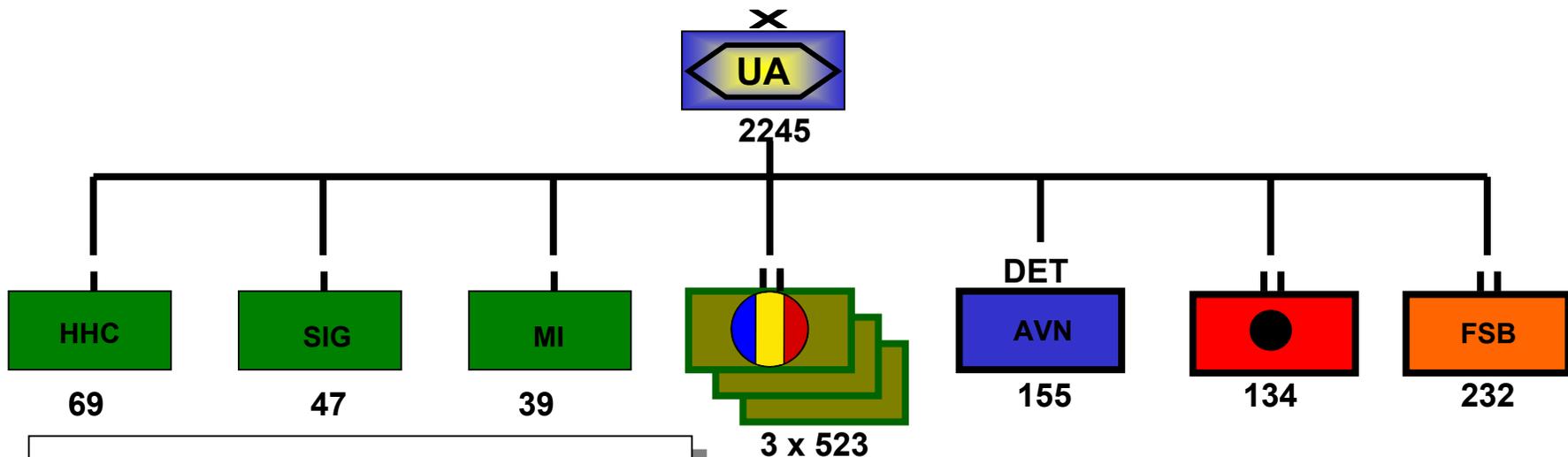


## **Radar Zones Critical Friendly Zone**

E-12. A CFZ is an area, usually a friendly unit or location, that the maneuver commander designates as critical. It is used to protect an asset whose loss would seriously jeopardize the mission. When the computer predicts that an enemy round will impact in a CFZ, the computer will report the location of the weapon that fired the round in precedence ahead of any other detection. Any location of a weapon firing into a CFZ will result in an immediate call for fire (FM;CFF message), unless it is manually overridden by the radar operator. The FM;CFF message is received by



# UA Bde Headquarters



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# Information Superiority Cell



## 1.3 Information Superiority Cell

The primary focus of the IS cell is to develop and maintain the knowledge edge over the enemy. This cell will have staff expertise traditionally represented by signal, intelligence, cavalry, and information operations. Space, PSYOPS, civil affairs, and public affairs are done with augmentation. The IS cell directs the planning and management functions essential to all knowledge based warfare. Using its reliable and redundant multi-layered network, the IS cell manages human and technical sensors to **produce the COP**. The IS cell **assists the commander in reaching an understanding** of the battlespace by applying analysis and judgment to the COP. It then **directs dissemination** of this analysis, consistent with the commander's intent, to facilitate a tempo of operations with which our adversaries are unable to cope.

The IS cell executes a **variety of staff and planning functions** to reach this knowledge advantage. These include staff planning **for network operations, surveillance and reconnaissance planning and execution, deception, intelligence, information assurance, space asset access, collection management, intelligence planning and analysis, and overall sensor fusion** (local sensor fusion occurs at multiple levels and staff nodes). (UA O&O)

**IM is a team effort!**



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# The Signal Role

## **User Support Focus:**

- **Provide information capabilities/services and integration**
- **Awareness of: Support requirements – Current & future**
  - Quantity and quality of spt provided**
  - Emerging capabilities**
- **Requires active involvement with supported organizations and systems**



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# **Signal Corps IM Strategy**

- 1. Ensure leaders and decision makers are provided relevant, decision quality information whenever and wherever needed.**
- 2. Ensure global access to Army, joint, GO, NGO, and coalition information via a single, integrated network.**
- 3. Ensure interoperability among Current, Stryker, and Objective forces.**
- 4. Provide protection of information and information systems from attack/intrusion from internal and external threats.**
- 5. Capitalize on advances in information technology to enable increases in operational efficiency and effectiveness.**
- 6. Prepare trained, competent, and confident professionals to execute Information Management tasks and support functions throughout the Army.**
- 7. Support integration of effective IM processes and procedures throughout the Army with coordinated, comprehensive, timely doctrine.**



# The Foundation

**FM 3-0**

Relevant Information is all information of importance to commanders and staffs in the exercise of command and control.

**FM 6-0**

Information Systems are the equipment and facilities that collect, process, store, disseminate, and display information. These include computers – hardware and software – and communications, as well as policies and procedures for their use.

## Definitions

**Information Mgt**

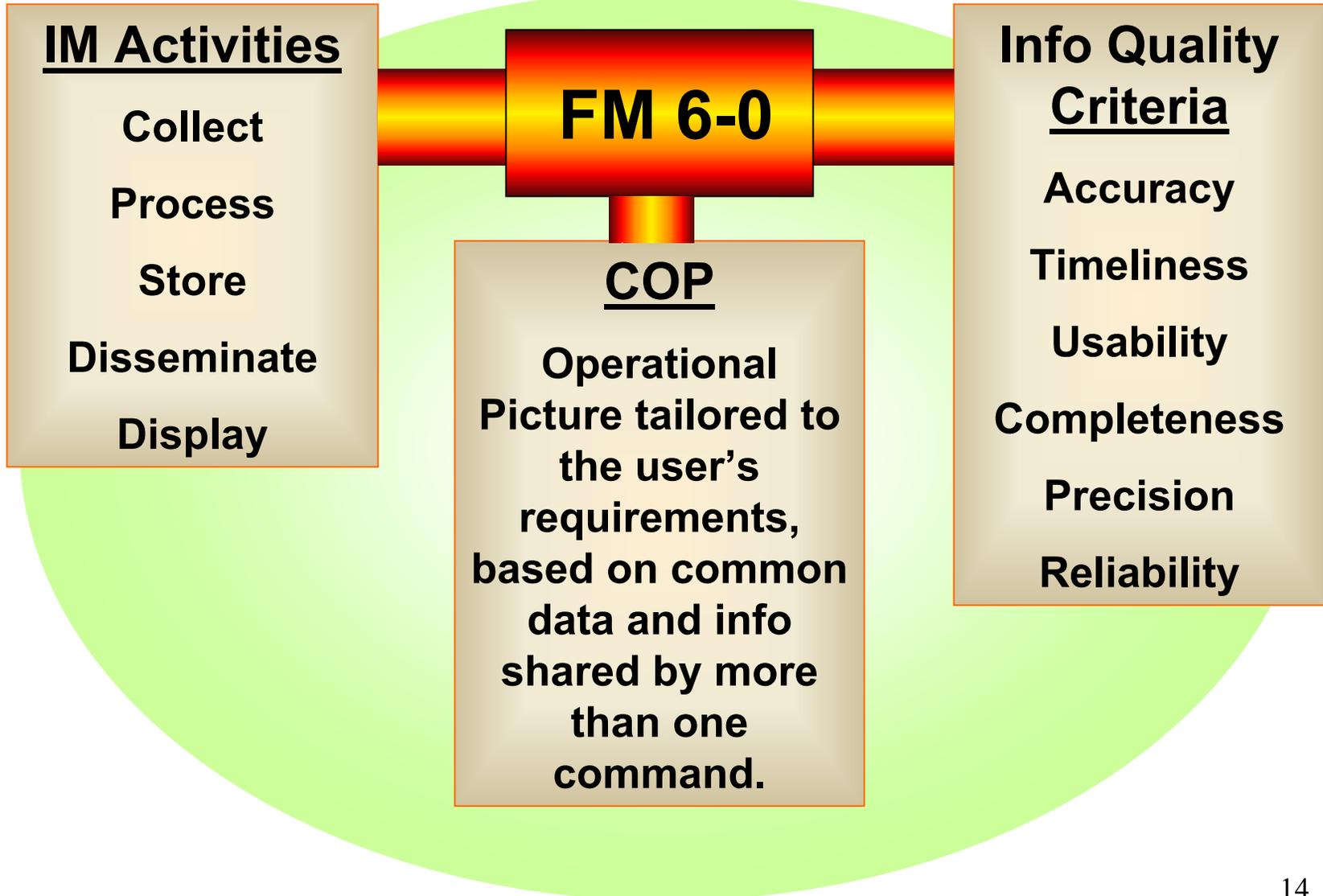
**Information Systems**

**Relevant Info**

Information Management is the provision of Relevant Information to the right person at the right time in a usable form to facilitate understanding and decision making. It uses procedures and information systems to collect, process, store, display, and disseminate data and information.



# The Foundation





# The Foundation

**FM 6-0**

**DECISION**

**Cognitive**

**Hierarchy**

**UNDERSTANDING**

**JUDGMENT**

**KNOWLEDGE**

**COGNITION**

**INFORMATION**

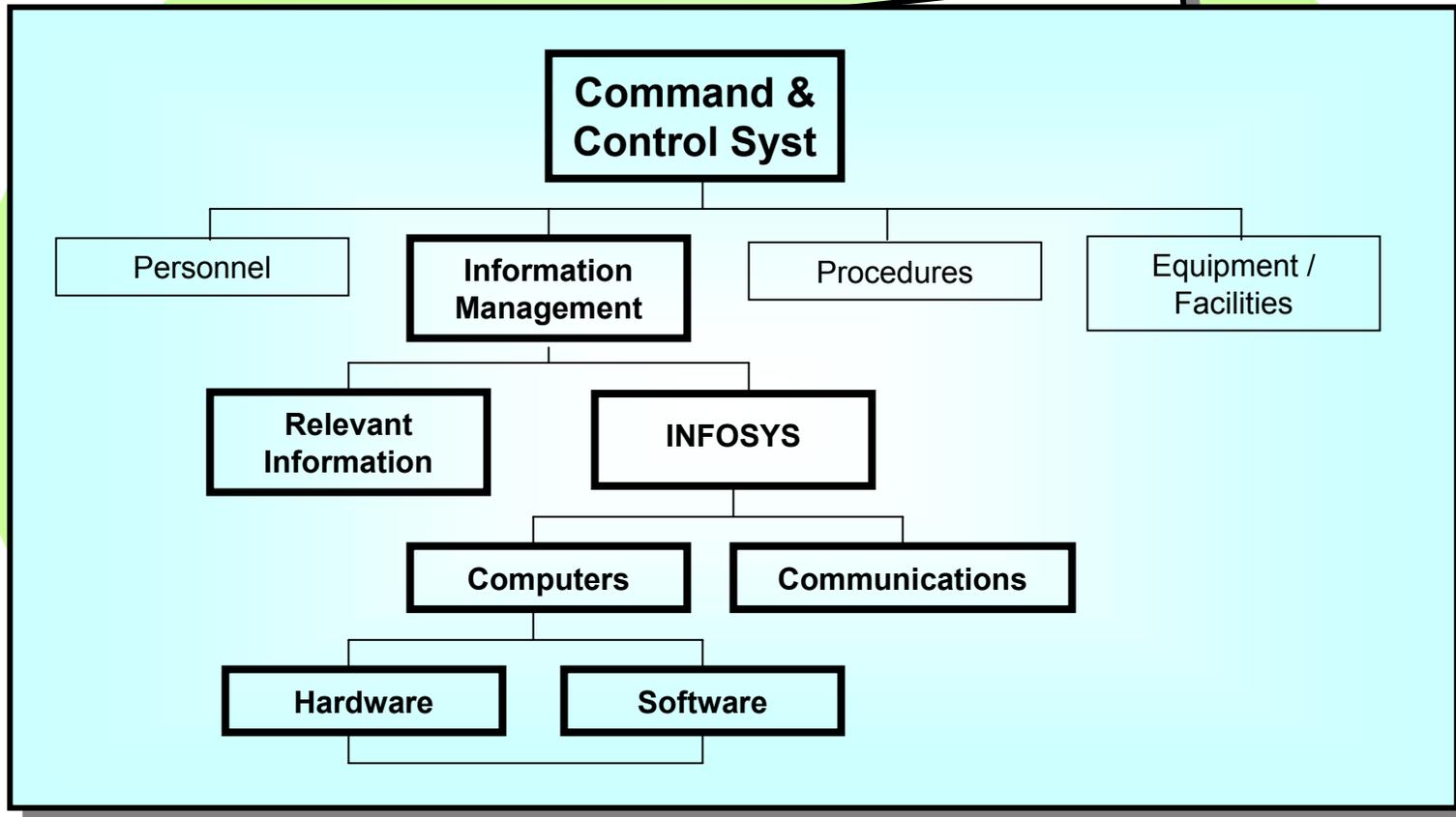
**PROCESSING**

**DATA**



# The Foundation

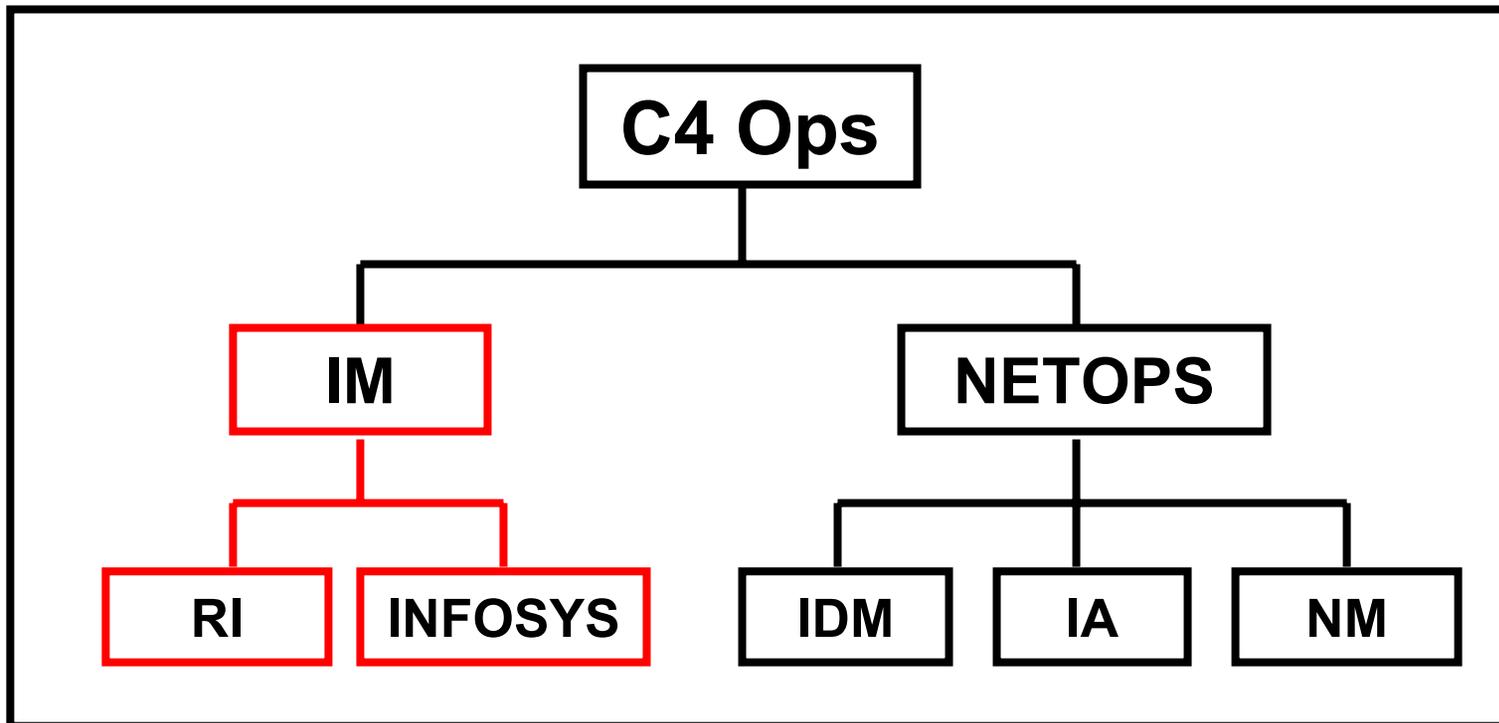
## FM 6-0



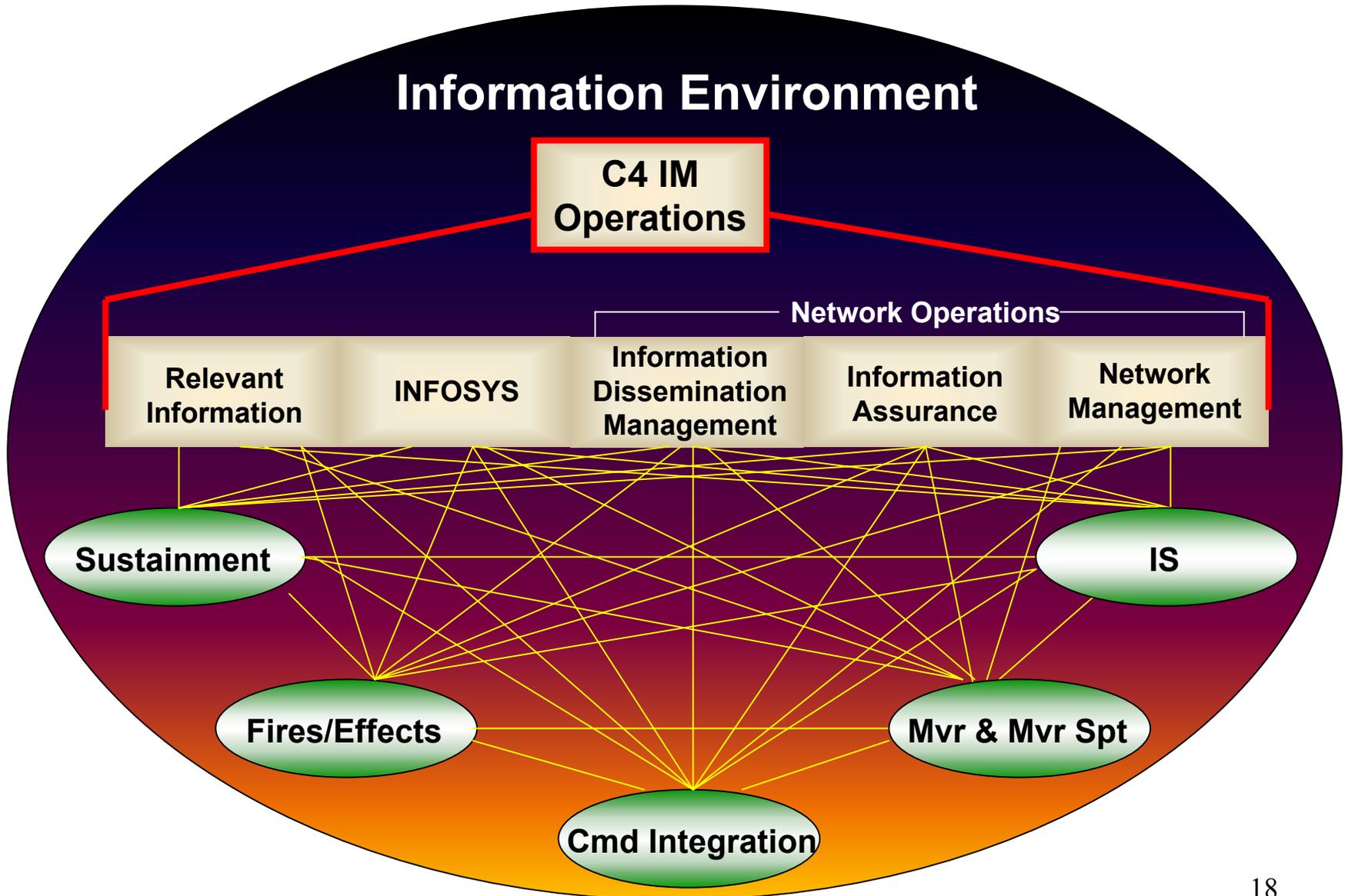


# C4 Operations (FM 6-02.42)

C4 Operations are the implementation of IM and NETOPS...to provide the means for the commander to receive the relevant information needed to attain the knowledge to fight and win the battle ... in conjunction with IO enable the commander to achieve IS (FM 6-02.42)



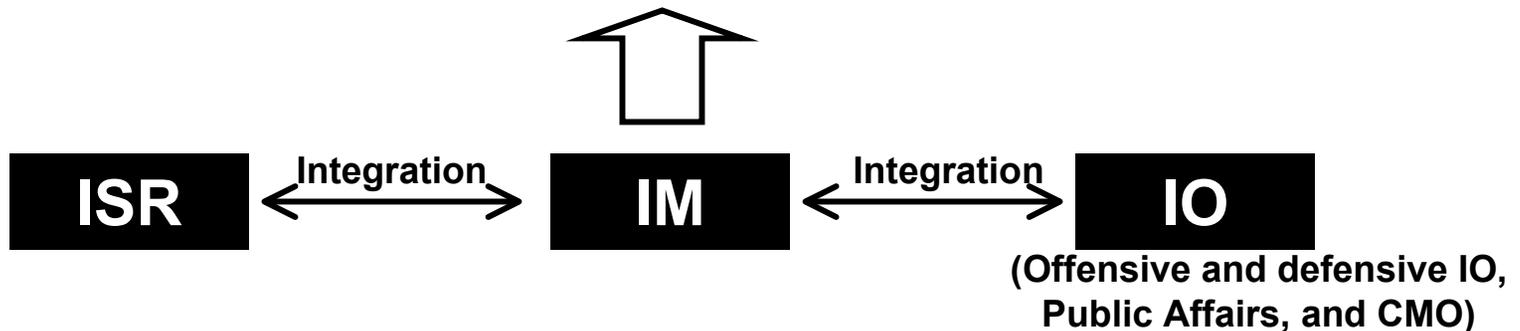
# Integrated Info Environment





# Information Superiority

Relevant Information



(Offensive and defensive IO, Public Affairs, and CMO)

- Fight for Information and develop Intelligence
- Fuse intelligence developed across echelons and BOS
- Predict threat COAs and environmental effects

- Focus relevant information and build the COP
- Enhance knowledge, understanding and visualization
- Improve quality and speed of decision making

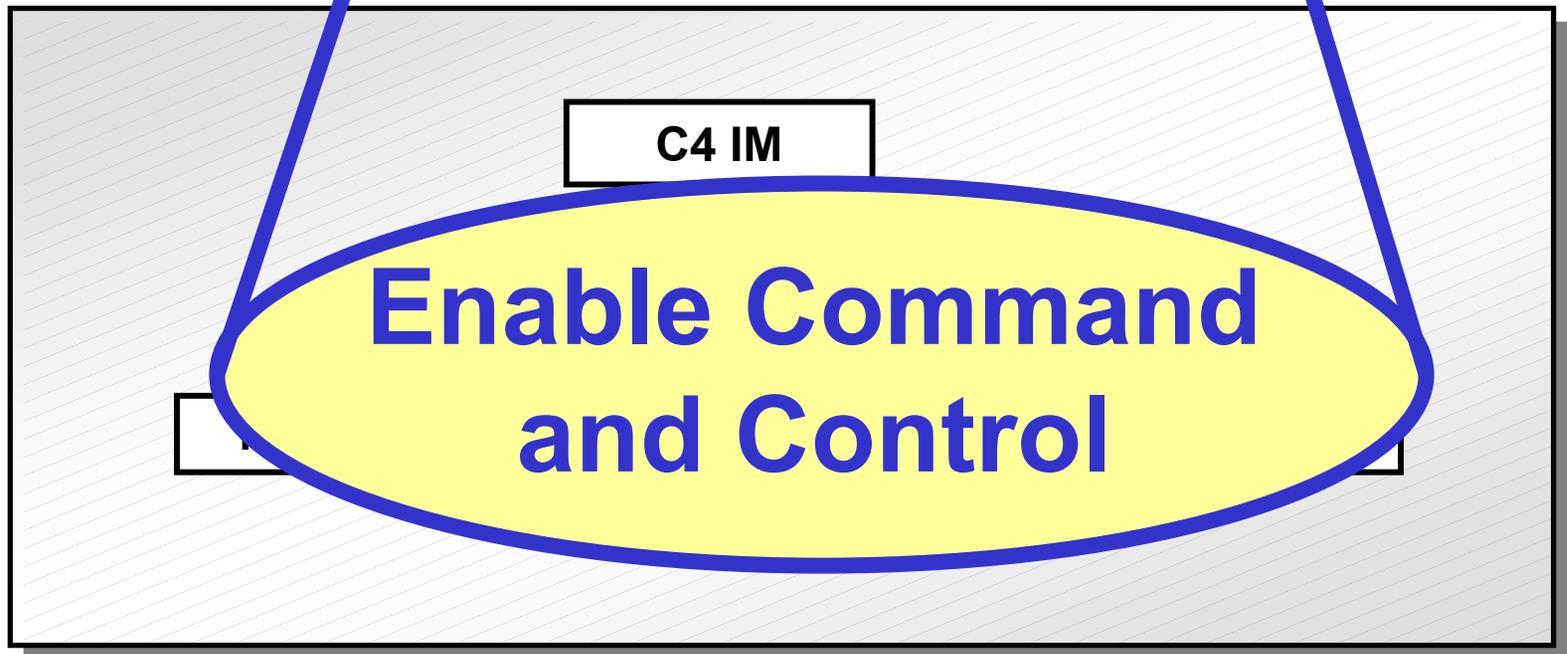
- Shape adversary and other perceptions/actions
- Impact adversary C2 and information systems
- Protect friendly information systems and C2

Information Systems



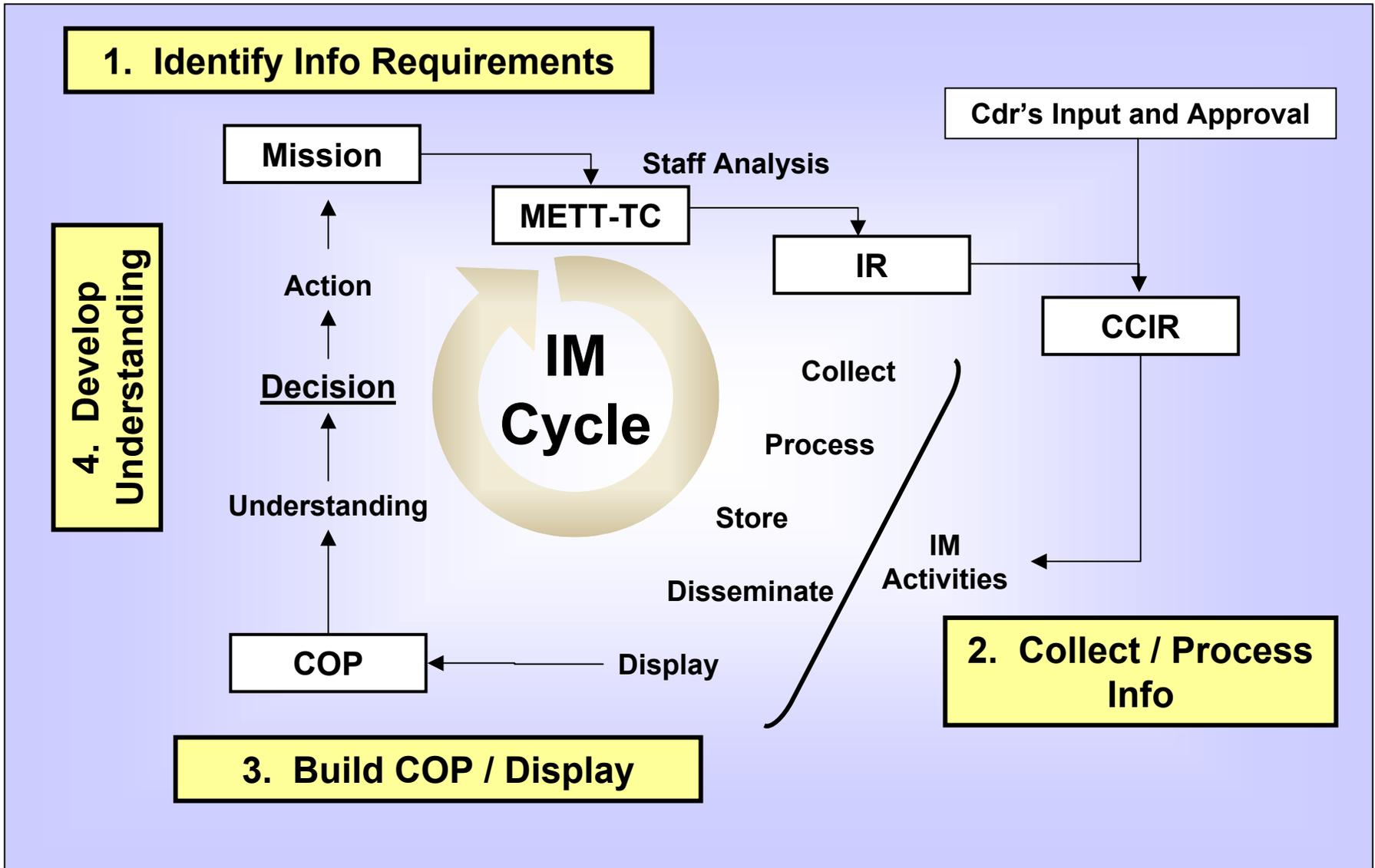
# Information Management

Information Management is the provision of relevant information to the right person at the right time in a usable form to **facilitate decision making.** It uses procedures and information systems to collect, process, store, display and disseminate data and information. (FM 3-0, FM 6-0)



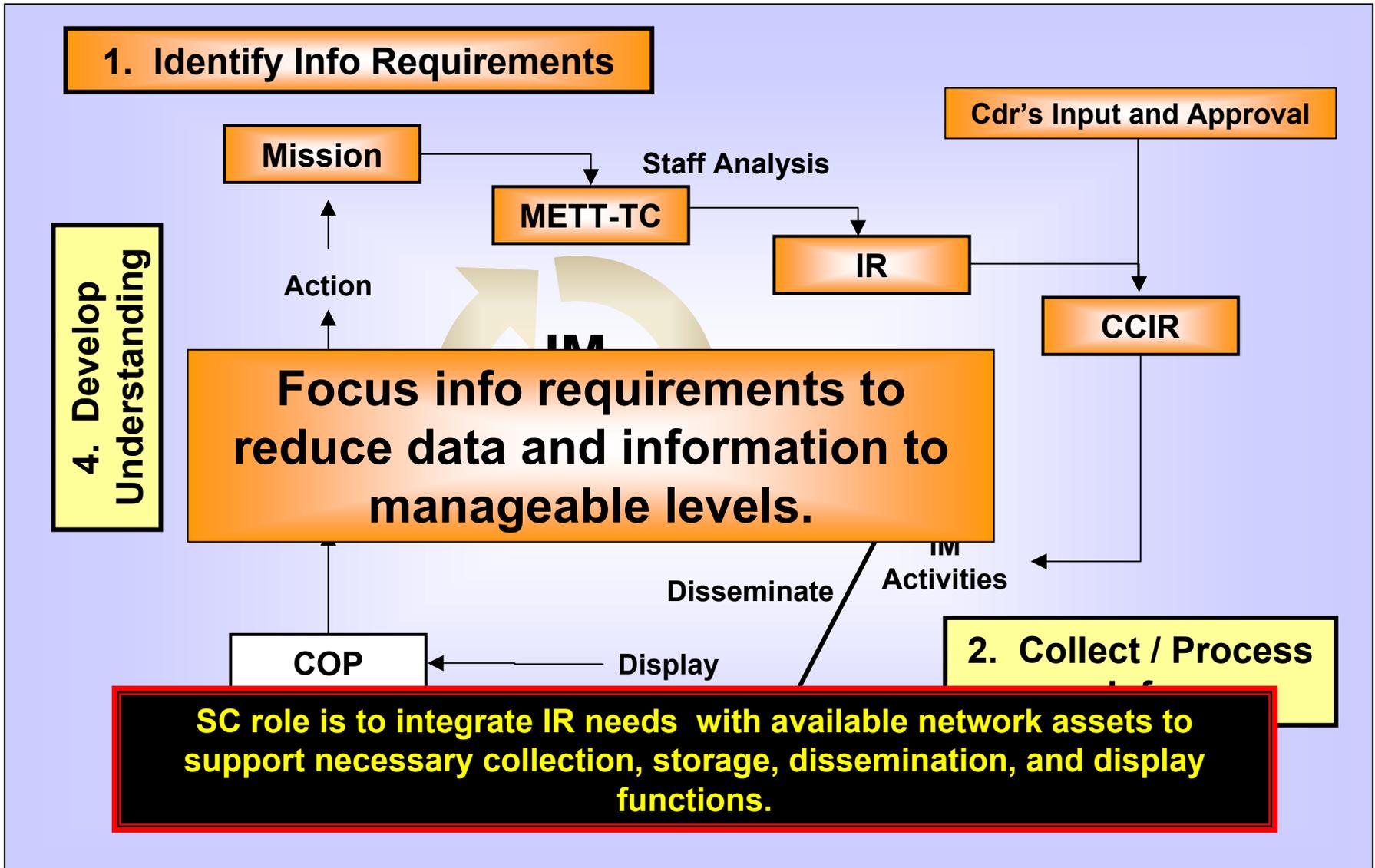


# Information Management Cycle





# Information Management Cycle





# Information Management Cycle

## Collection

The continuous acquisition of Relevant Information about the factors of METT-TC by any means including direct observation, other organic resources, or other official, unofficial, or public sources from the information environment. (FM 6-0)

Staff Analysis

C

Cdr's Input and Approval

IR

CCIR

Collect

Process

Store

Disseminate IM Activities

COP

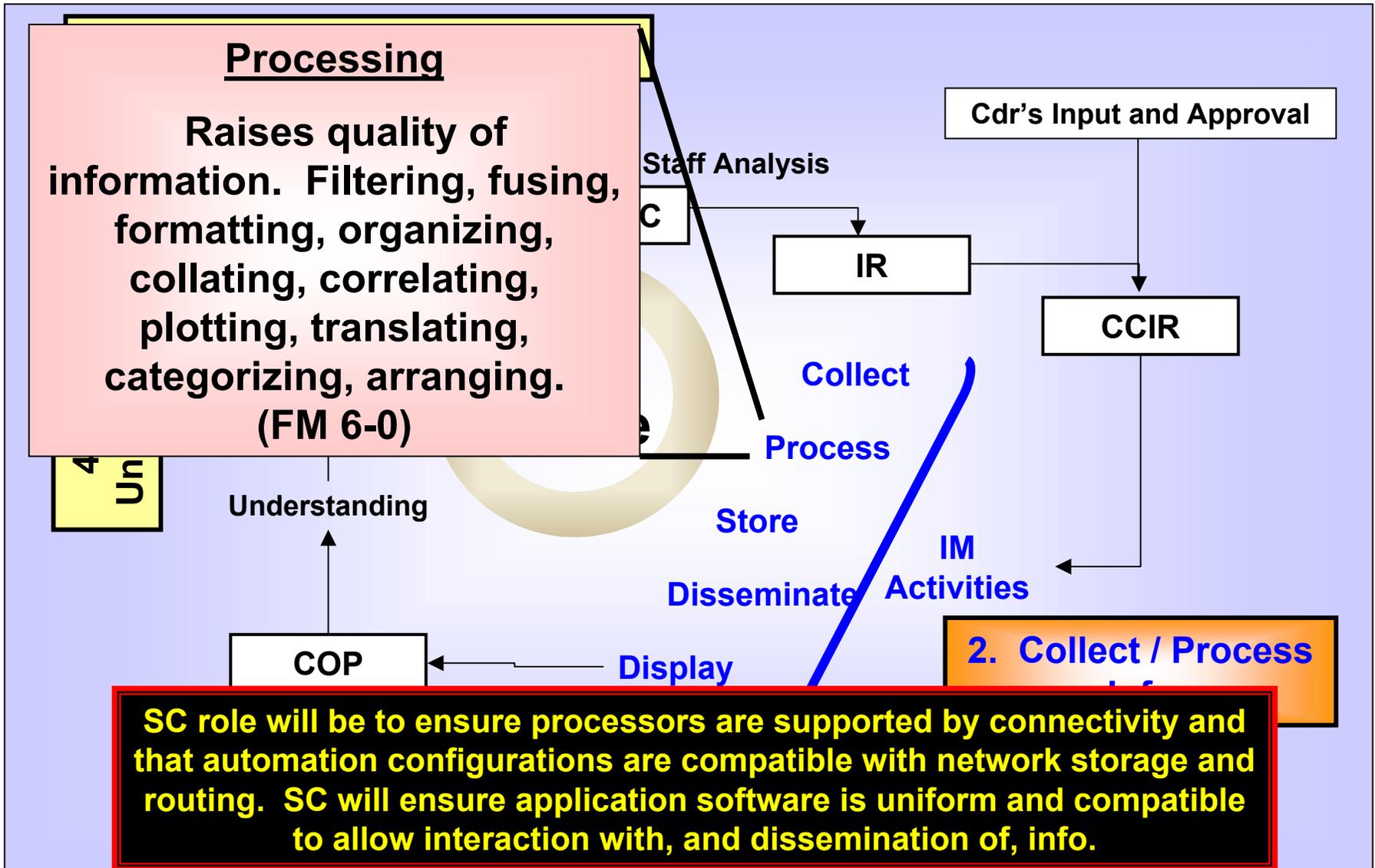
Display

2. Collect / Process

**SC role will be to integrate collection efforts to enable adequate network support. (Nothing can be stove piped anymore)**



# Information Management Cycle





# Information Management Cycle

## Storing

Retention of RI in any form, usually for orderly, timely retrieval and documentation until it is needed for exercising C2. (FM 6-0)

Cdr's Input and Approval

Staff Analysis

IR

CCIR

4. Develop Understanding

Decision

IM Cycle

Collect

Process

Store

Disseminate IM Activities

Understanding

COP

Display

2. Collect / Process

**SC role will be to integrate storage of common data and IDM functions.**

3. Build COP / Display





# Information Management Cycle

## Display

Representing RI in a usable, easily understood audio or visual form tailored to the needs of the user that conveys the COP for decision-making and exercising C2 functions.  
(FM 6-0)

Understanding

COP

Display

Staff Analysis

C

IR

Cdr's Input and Approval

CCIR

Collect

Process

Store

Disseminate

IM  
Activities

2. Collect / Process

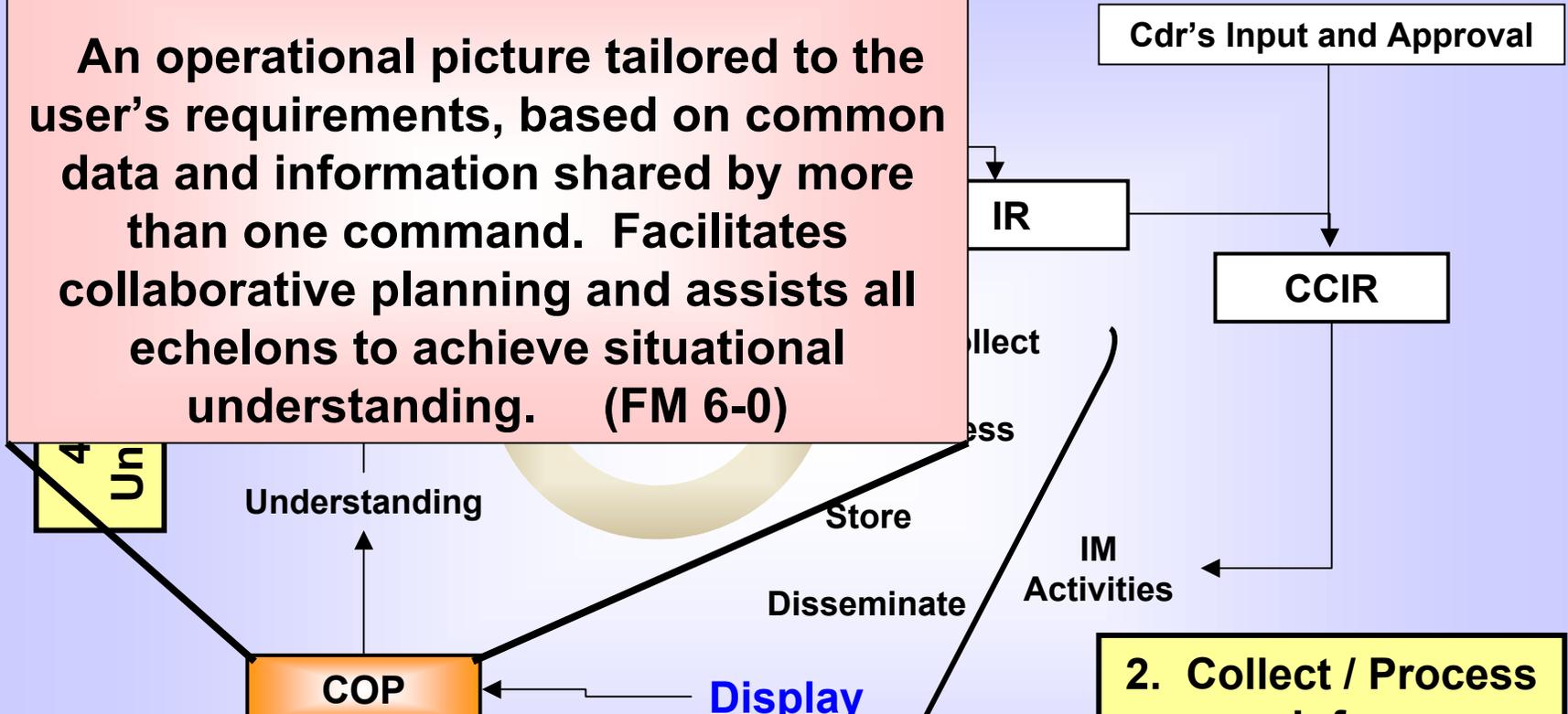
SC role will be to manage the display means and to provide required connectivity for automatic updating based on mission requirements.  
COP Management



# Information Management Cycle

## Common Operational Picture

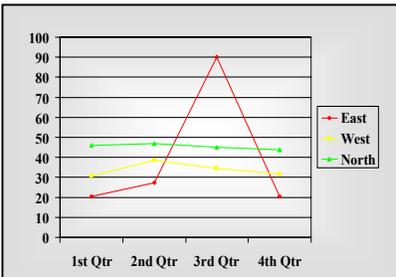
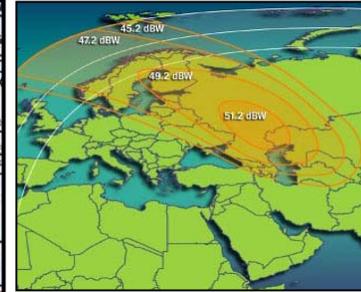
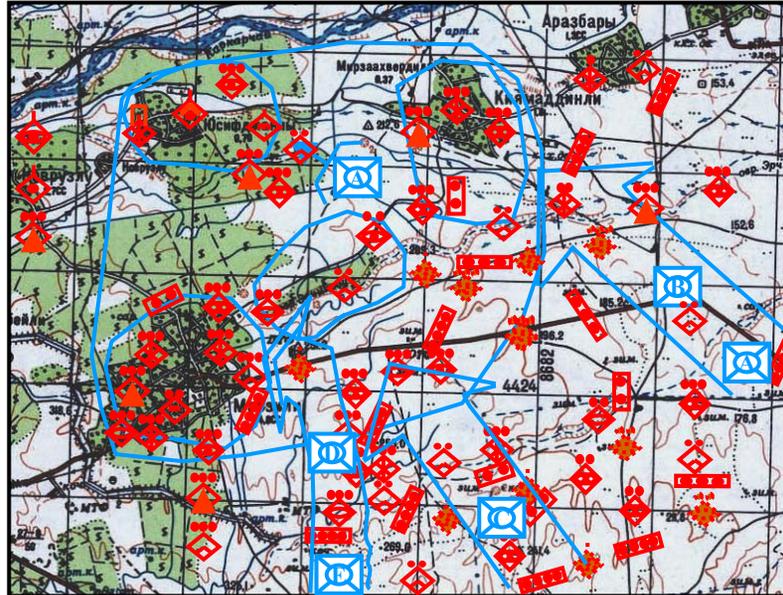
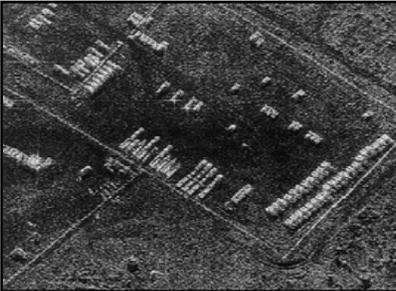
An operational picture tailored to the user's requirements, based on common data and information shared by more than one command. Facilitates collaborative planning and assists all echelons to achieve situational understanding. (FM 6-0)



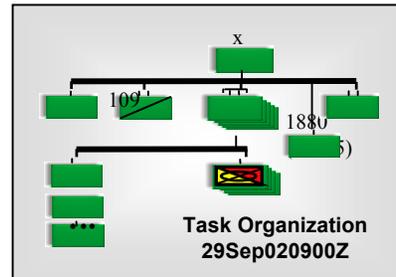
Signal role will be to ensure data feeds are operational, networks are configured to support feeds, info is complete, display supports operations / changes as required, info is current.



# COP Display



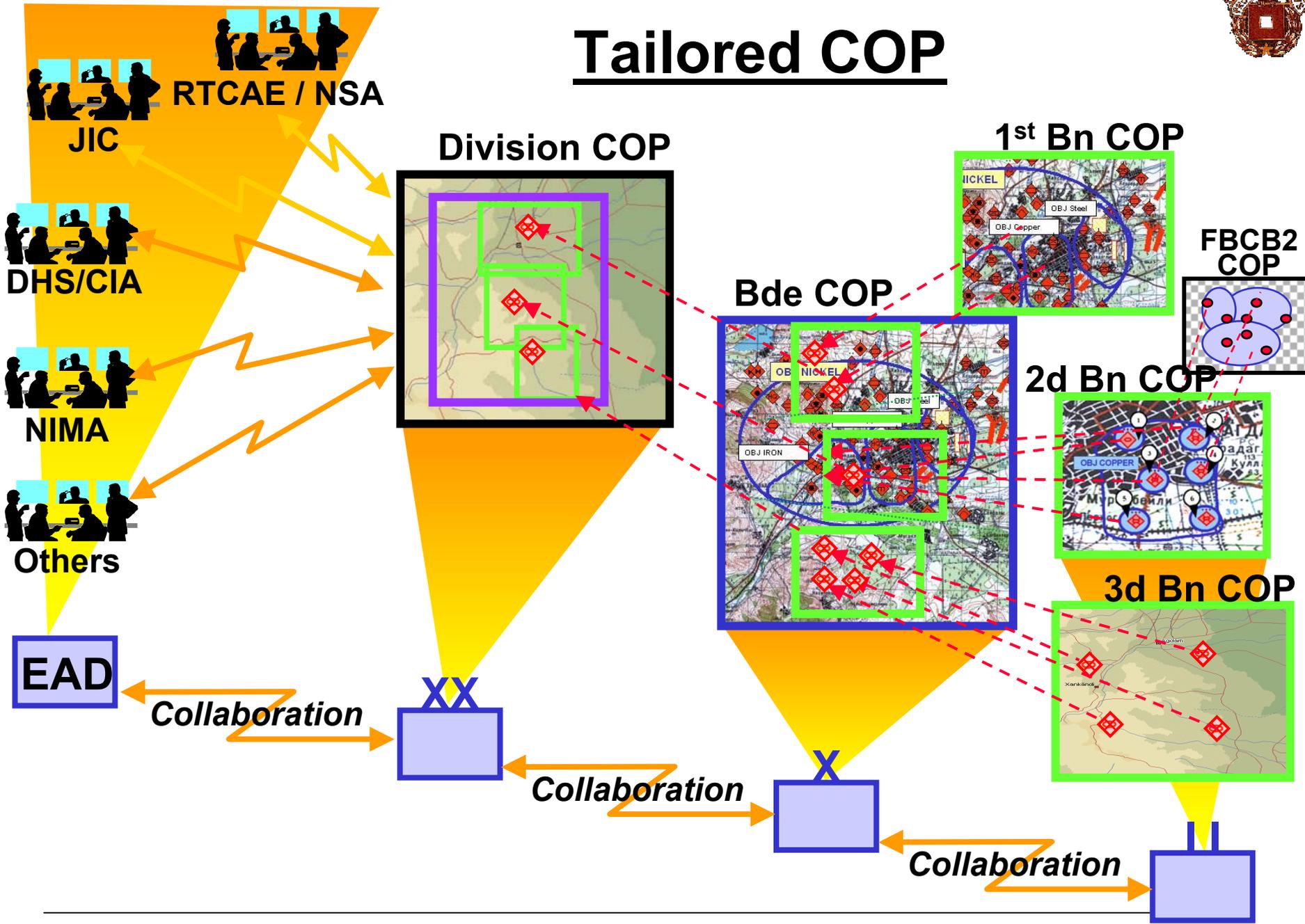
	DC	BN	SD	WD	FG	RT	QG
W	●	●	●	●	●	●	●
S	●	●	●	●	●	●	●
V	●	●	●	●	●	●	●
F	●	●	●	●	●	●	●
FB	●	●	●	●	●	●	●
D	●	●	●	●	●	●	●
A	●	●	●	●	●	●	●



ZULU



# Tailored COP

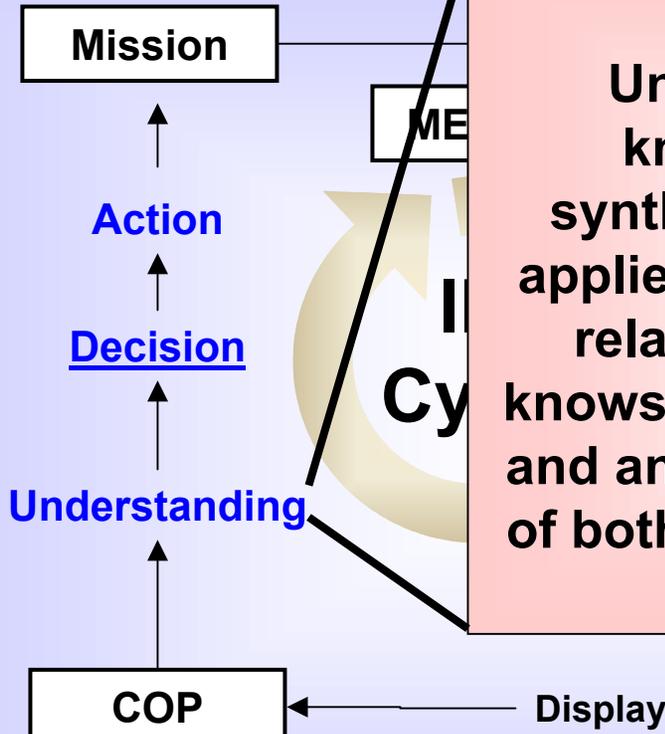




# Information Management Cycle

## 1. Identify Info Requirements

4. Develop Understanding



## Understanding

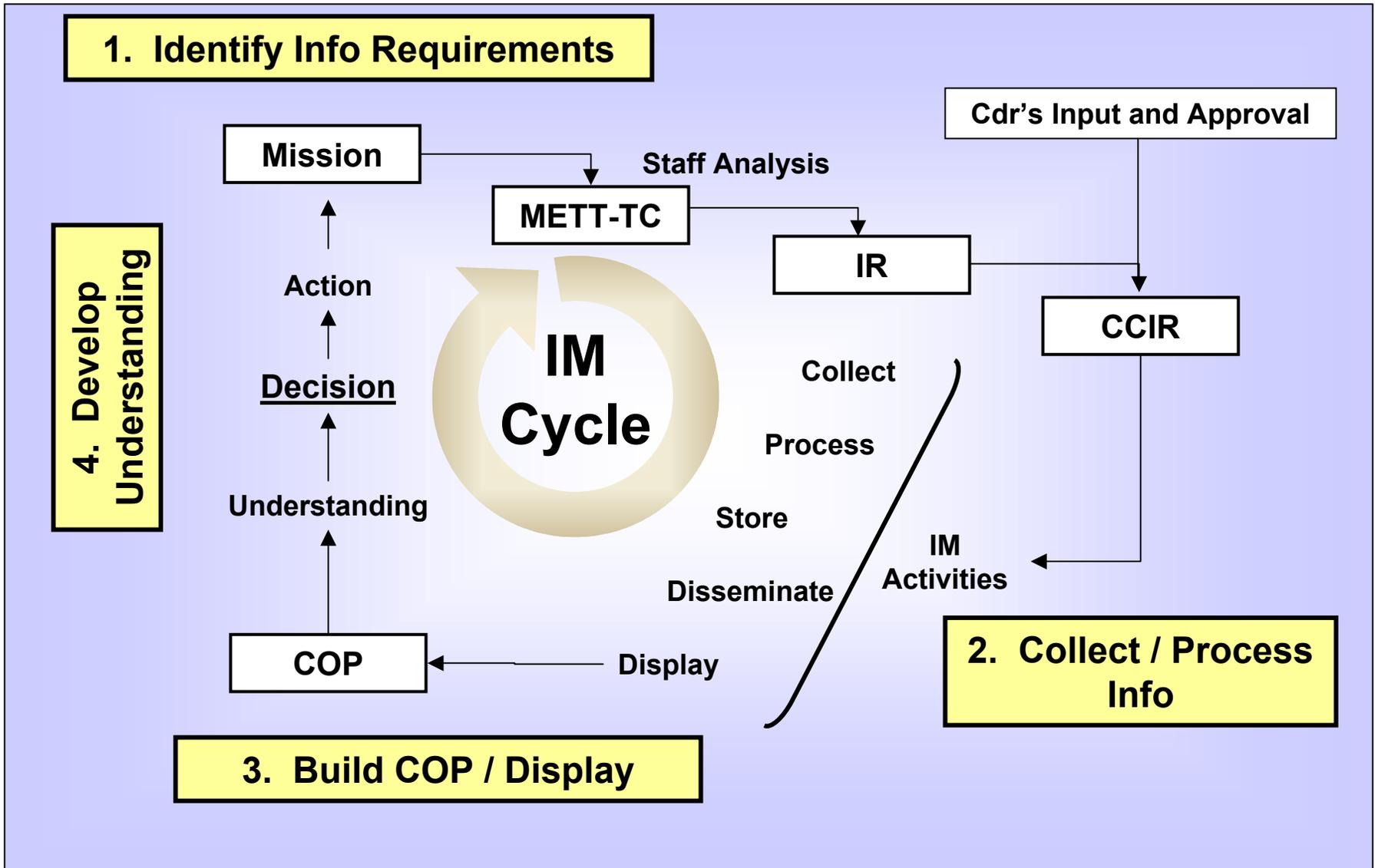
Understanding comes from knowledge that has been synthesized and had judgment applied to it to comprehend inner relationships. A commander knows what is happening and why and anticipates the consequences of both his forces' actions and the enemy's. (FM 6-0)

## 2. Collect / Process

The SC role will not be to provide the understanding, but to provide the means for collaboration and information exchange.



# Information Management Cycle





# **Information Management Plan**

**Operation Ultimate**  
**Justice**

**Information Management**  
**Plan**

**July 2010**

**Final Coordination Draft**

**Developed by an information management board under the supervision of the G6.**

**An integrated plan to address the processes, procedures, connectivity, and systems to support the information requirements of staff sections and the command as a whole.**

**Appendix to Annex K**



# Information Management Plan

## TABLE OF CONTENTS

### 1. Introduction

1.1. Purpose

1.2. Scope

### 2. Corps Organization

2.1. Corps Headquarters

2.2. Boards and Committees

2.3. Subordinate Organizations

2.4. Other Organizations

### 3. IM Roles

3.1. Command

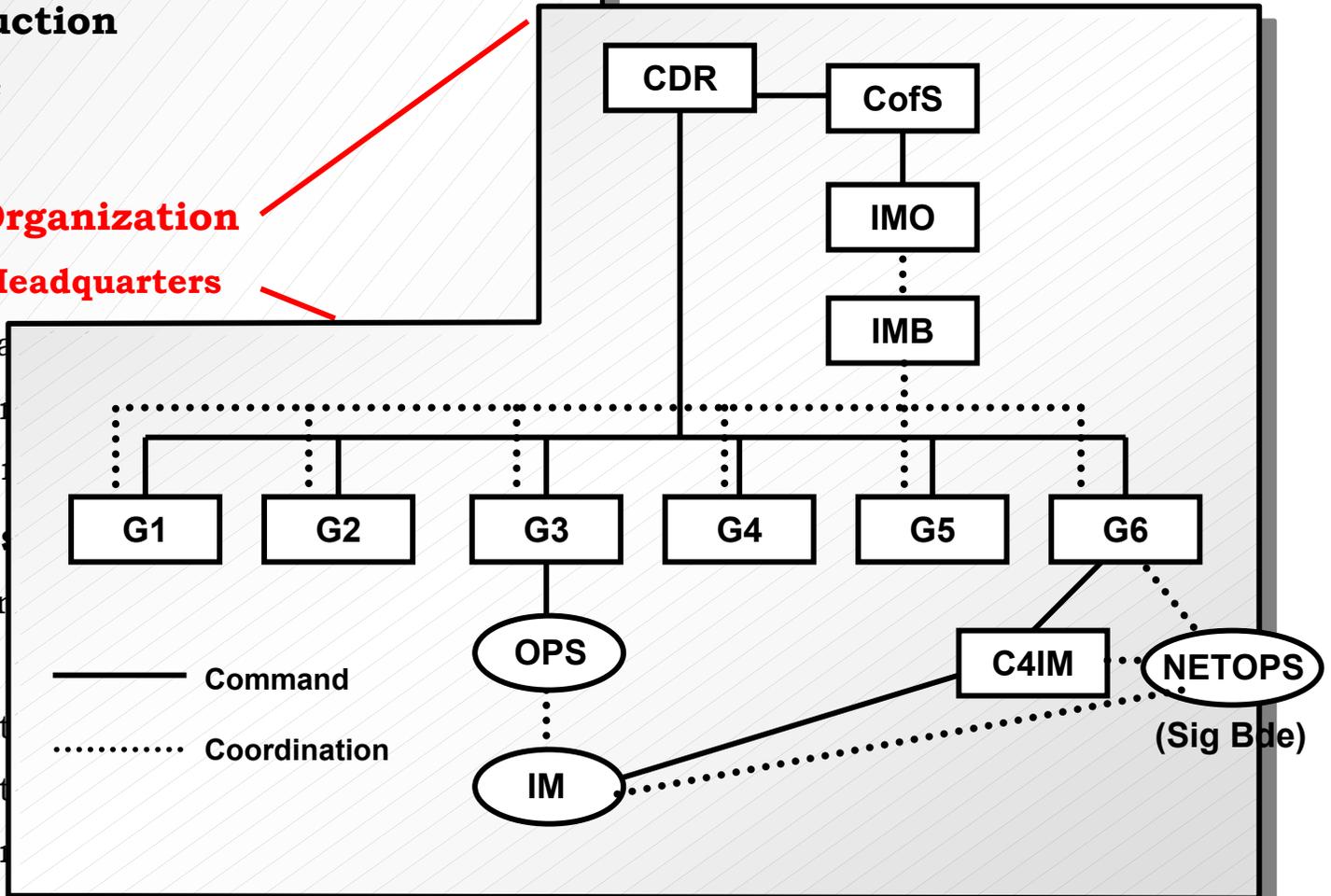
3.2. Chief of Staff

3.3. Information Management

3.4. Information Management

3.5. Subordinate Organizations

3.6. Other Organizations





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# Signal Personnel

## SC Personnel:

- **Will be intimately involved with IM processes throughout a command**
- **Will not perform the IM functions of others just as SC personnel do not perform all comms**
- **As proponents, will provide doctrine, guidance, oversight, staff assistance**
- **Must understand IM needs of the command**
- **Understand the operations they support**
- **Must be effective team players with all elements they interact with**



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# Implications

**Doctrine: New means of ops req new doctrine**

- Information Centric

**New doctrine must be synchronized**

- Joint
- Branches
- Coalition

**New tasks require new SC doctrine**

- COP Mgt
- IDM
- Collaborative Tools
- INFOSYS
- DRO



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# Implications

## **Training / Leader Development:**

### **Technology is not enough**

- **New tasks will require in depth understanding of warfighting for SC leaders**
- **New IM capabilities will require understanding of network policy, restrictions, and limitations by users**

### **C4IM Capabilities = Training Anywhere**

### **Rapid Evolution Requires Different Tng**

- **Life Long Learning**
- **Assignment Oriented Tng**



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# Implications

## **Organizations:**

**New roles / capabilities / doctrine will cause changes in force design**

- **Warfighters in AO, support functions out of AO**
- **Network Mgt from afar**
- **Embedded comms in OF will reduce SC presence at UA**



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# Implications

## **Materiel:**

### **Current / Stryker**

- Evolution of current systems
- Adoption / adaptation of commercial systems
- Battlefield vs garrison

### **Objective**

- New systems
- Garrison / tactical environments will merge
- Truly joint



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# Implications

## **Soldier:**

### **New thinking**

- **More interconnected**
- **More empowered**
- **More effective**

### **New Capabilities**

- **Part of the network**
- **Access to firepower**
- **Individual decisions have large implications**
- **Maturity, professionalism mandatory**



# Signal Corps IM Strategy

1. Ensure leaders and decision makers are provided relevant, decision quality information whenever and wherever needed.

## Signal Corps

- Ensure connectivity exists
- Provide network management
- Integrate collection mgt with network configuration
- Integrate dissemination plans with network mgt
- Coordinate, implement info security measures
- Provide automation support
- Manage COP
- Establish DRO

## Functional Proponents

- Determine dissemination priorities
- Decide who gets what information
- Manage user collection, storage, processing, retrieval
- Interpret data, info for understanding
- Establish reports and report procedures
- Produce RI
- Manage internal RI displays



# Signal Corps IM Strategy

2. Ensure global access to Army, joint, GO, NGO, and coalition information via a single, integrated network.

## Signal Corps

Install, Operate, Maintain comms networks

Coordinate with information systems and C2 applications developers for interoperability with network, each other

Coordinate with units, staffs, for information access

## Functional Proponents

Develop, field information systems

Identify information requirements, sources



# Signal Corps IM Strategy

## 3. Ensure interoperability among current, Stryker, and Objective forces.

### Signal Corps

Coordinate with systems developers  
Plan, provide network interface capability

### Functional Proponents

Determine INFOSYS requirements  
Operate INFOSYS IAW network parameters



# Signal Corps IM Strategy

## 4. Provide protection of information and information systems from attack / intrusion from internal and external threats.

### Signal Corps

IOM info assurance network functions (CND)

Establish info security policy, procedures

Perform vulnerability assessments with G2/LIWA

Monitor compliance with policy

Report infractions, events

### Functional Proponents

Implement user security measures

Enforce, comply with policy



# Signal Corps IM Strategy

5. Capitalize on advances in information technology to enable increases in operational efficiency and effectiveness.

## Signal Corps

Coordinate with DARPA, national labs, and industry to monitor advances and present emerging requirements from the field

Coordinate with proponents in the production of requirements documents

Coordinate in, participate in systems development and testing

## Functional Proponents

Identify emerging requirements

Produce requirements documents

Participate in systems development and testing



# Signal Corps IM Strategy

6. Prepare trained, competent, and confident professionals to execute Information Management tasks and support functions throughout the Army.

## Signal Corps

Identify IM tasks, procedures  
Develop training and training sustainment materials  
Evaluate training effectiveness  
Conduct training  
Provide staff assistance and TTP development

## Functional Proponents

Coordinate with Signal Corps to identify IM tasks, procedures  
Provide feedback on effectiveness of training and training sustainment



# Signal Corps IM Strategy

7. Support integration of effective IM processes and procedures throughout the Army with coordinated, comprehensive, timely doctrine.

## Signal Corps

Identify IM roles and responsibilities

Link IM methods, procedures to warfighting doctrine

Coordinate with maneuver, maneuver support, and sustainment proponents

Coordinate with other services, agencies, allies

## Functional Proponents

Participate in IM doctrine development



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# Conclusion

- **IM/comms is driving Revolution in Military Affairs**
- **RMA equals joint integration / synergies**
- **SC is central given integration of IM-comms**
- **Sig Cen must develop supporting doctrine**
- **Drive change or be changed**



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# Way Ahead

<b>30 Sep</b>	<b>Received SigCen DCD guidance</b>
<b>5 Nov</b>	<b>Briefed CAC</b>
<b>18 Nov</b>	<b>FM PD out for staffing</b>
<b>5 Dec</b>	<b>Signal Symposium</b>
<b>31 Dec</b>	<b>SigCen CG Approval of PD</b>
<b>31 Jan</b>	<b>CAC, TRADOC approval of PD</b>
<b>1 Feb</b>	<b>Begin FM</b>



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# Backup Slides



# Information Operations Career Field (Officer)

<b>Functional Area</b>	<b>Name</b>
<b>24</b>	<b>Information Systems Engineering</b>
<b>30</b>	<b>Information Operations</b>
<b>34</b>	<b>Strategic Intelligence</b>
<b>40</b>	<b>Space Operations</b>
<b>46</b>	<b>Public Affairs</b>
<b>53</b>	<b>Information Systems Management</b>
<b>57</b>	<b>Simulation Operations</b>

# Comms & Information Systems Ops (Enlisted)

