Introducing the Canadian ISTAR Information Centric Collaborative Workspace

Paper One:

From the Organization Perspective

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Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR)

- The role of ISTAR is to integrate the intelligence process with the surveillance, target acquisition, and reconnaissance assets in order to improve a Commander's Situational Awareness (SA) and to cue manoeuvre and strike assets.

- ISTAR TD (2001-2005) is a DRDC technology demonstration project that provides risk reduction through advice, proof-of-concepts and technology demonstrators.

- Sponsored by Director Land Command Information (the Land Forces Capability Manager) and ISTAR OMNIBUS project (2004-2012)
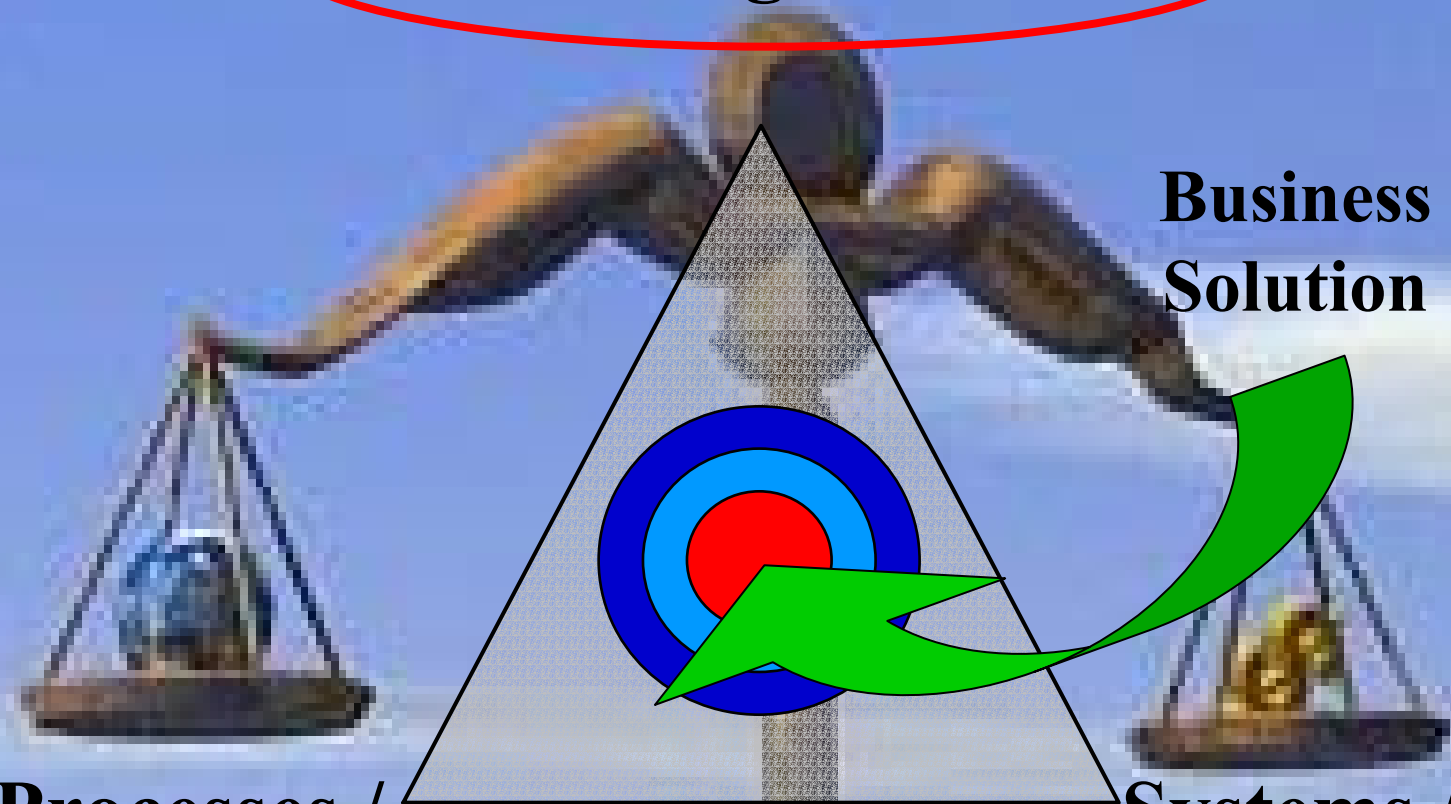
PERSPECTIVE AND BALANCE
System of Systems Harmony Triangle

Users / Organizations

Business Solution

Processes / Procedures

Systems / Functionality

Canadian Forces Strategic Operating Concept (SOC) (DND 2004)

Capstone
Operating Concept

SOC

Integrating
Concepts

Effect-Based Approach
Network Enabled Operations

Functional
Concepts

LF ISTAR
Info-Centric Collaborative Workspace Concept

C4ISR,
Conduct Operations
Sustain, Generate

Environmental
Operating Concepts

Navy, Army, Air Force
Operating Concepts

# Pertinent Land Forces Operating Concepts

- **LF ISTAR Capability Concept of Operations:** The role of ISTAR is to integrate the intelligence process with the surveillance, target acquisition, and reconnaissance assets in order to improve a Commander's Situational Awareness and to cue manoeuvre and strike assets. (CLF Paper 2002)

- **Collaborative Working Concept:** "The environment in which a military commander makes the best use of available knowledge, experience and intellect from command and staff teams to achieve a common purpose." (CA CW CONOPS 2004)

Functional Concepts

- **Force Employment Concept** revolves around five operational functions: Command, Sense, Act, Shield and Sustain. (CLF Paper 2004)
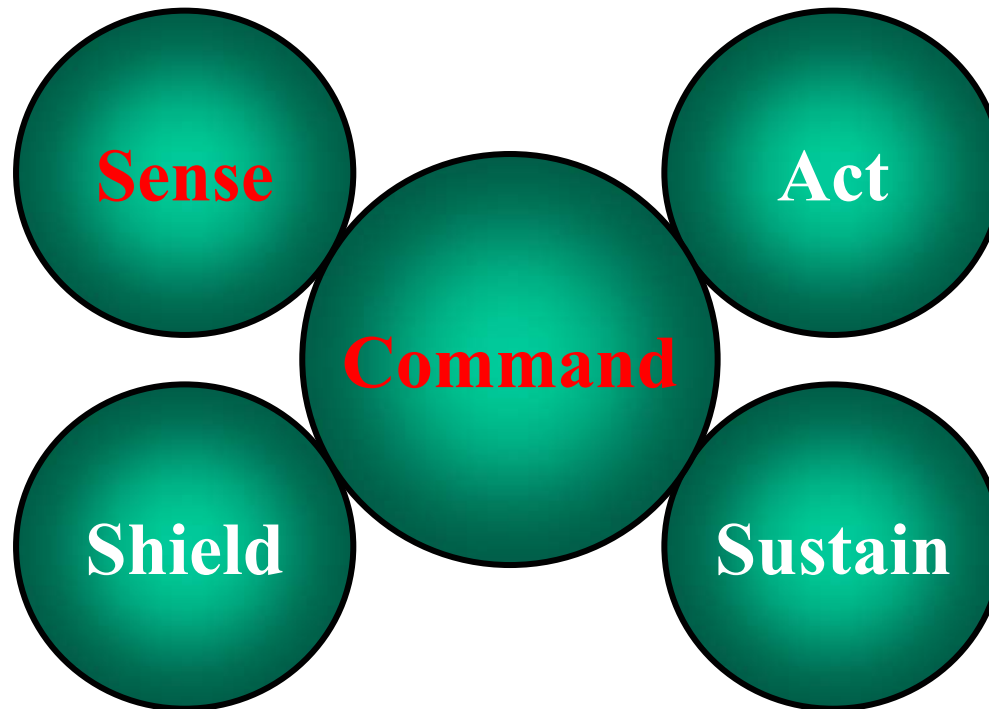
Integrating Concept:
Network Enabled Operations (NEOps)

- **Network Centric Warfare (NCW):** An information superiority-enabled concept of operations that generates increased combat power by networking sensors, decision makers and shooters to achieve shared awareness, increased speed of command, higher tempo of operations, greater lethality, increased survivability, and a degree of self-synchronization. (Alberts *et al*, 1999)

  - US-AS: NCW

  - UK: Network Enabled Capabilities (NEC)

  - **CA: Network Enabled Operations (NEOps)**

 - Generally: Network Centric Operations (NCO)

Operational Environment

- The premise is based on a three-block war concept employing medium weight forces deployed over complex terrain against an asymmetric threat with an unsympathetic population.

- The following major characteristics of this environment include:

  - An asymmetric nature of the threat;

  - Enlarged areas of operations;

  - Non-contiguous and non-linear operations;

  - The concept of the "Three-block war";

  - Use of complex terrain;

  - Increased tempo of operations; and

  - Effects-Based Approach (EBA) within a Network Enabled Operations (NEOps).

The Continental General Staff System
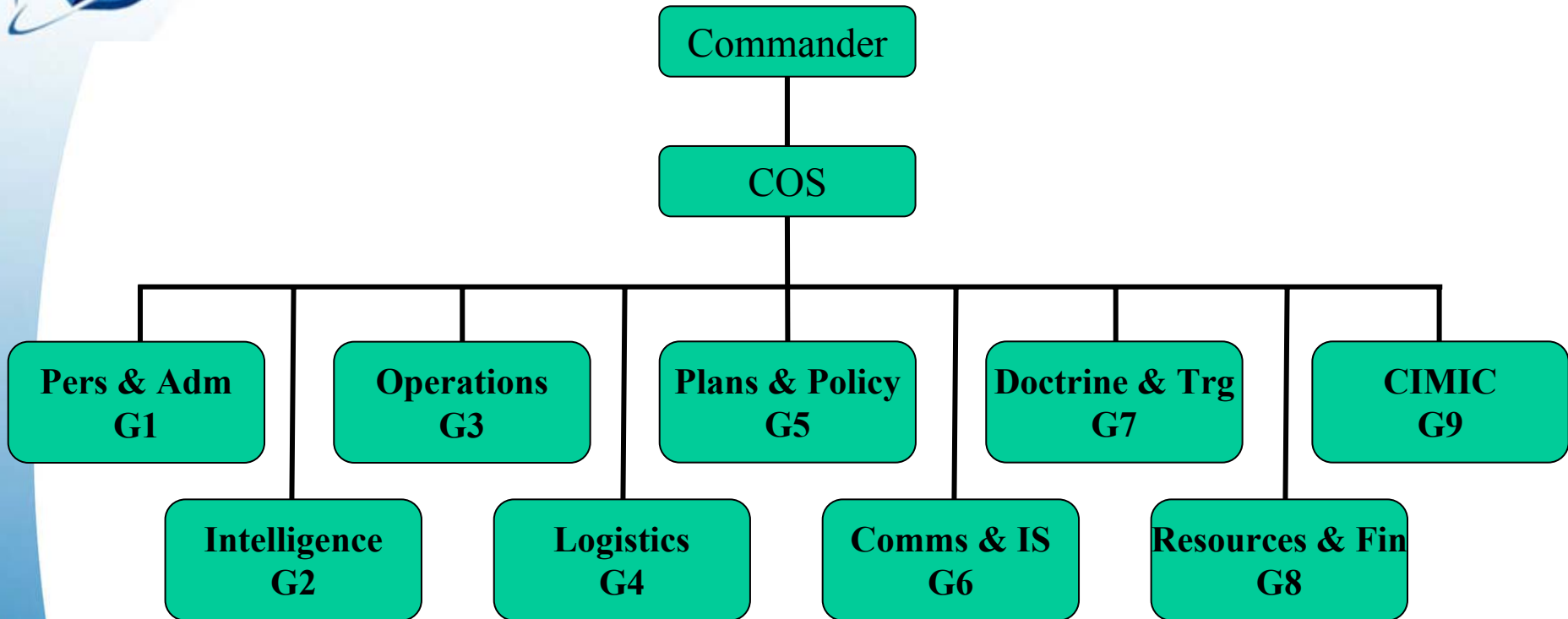
- G1 (Personnel - Administration)

- G2 (Intelligence)
- G3 (Operations)
- G4 (Logistics)
- G5 (Plans and Policy)

- G6 (Communications and Information Systems)
- G7 (Doctrine and Training)
- G8 (Resources and Finance)
- G9 (Civil-Military Cooperation)

Stovepipe Systems

- The "general" staff have overspecialized themselves in the execution of specific activities: Operational Planning Process (OPP), Battle Procedure (BP), Intelligence Preparation of the Battlefield (IPB), etc.

- This overspecialization has come to the detriment of increased collaboration to the accomplishment of the common goal.
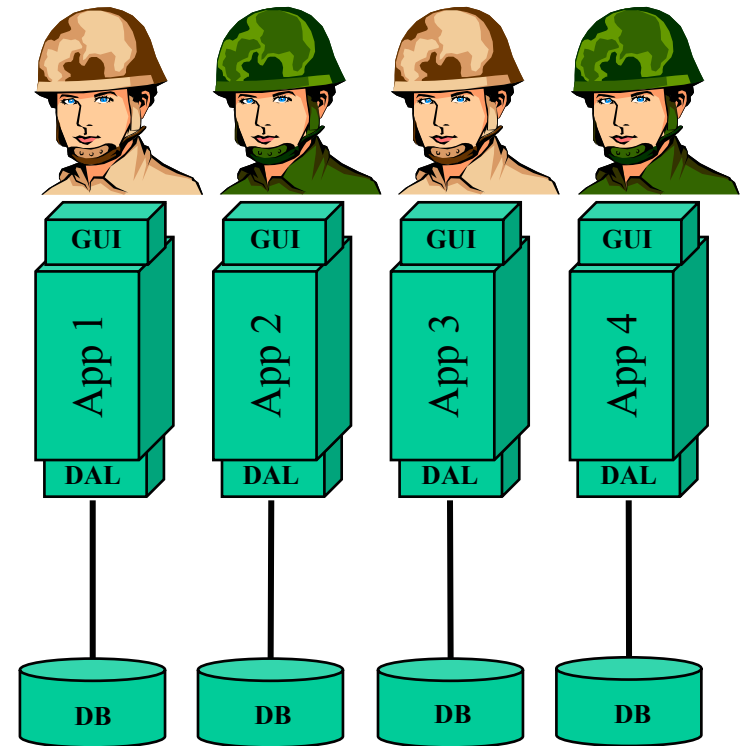
Conditions for Improving HQ Structure

- Emphasize knowledge management;

- Have reduced reliance on traditional functional staff (G1 to G9 structure) by having teams organized around operational functions and products or services;

- Be based on strict rules for collaboration and information sharing;

- Foster personal accountability;

- Be disciplined; and

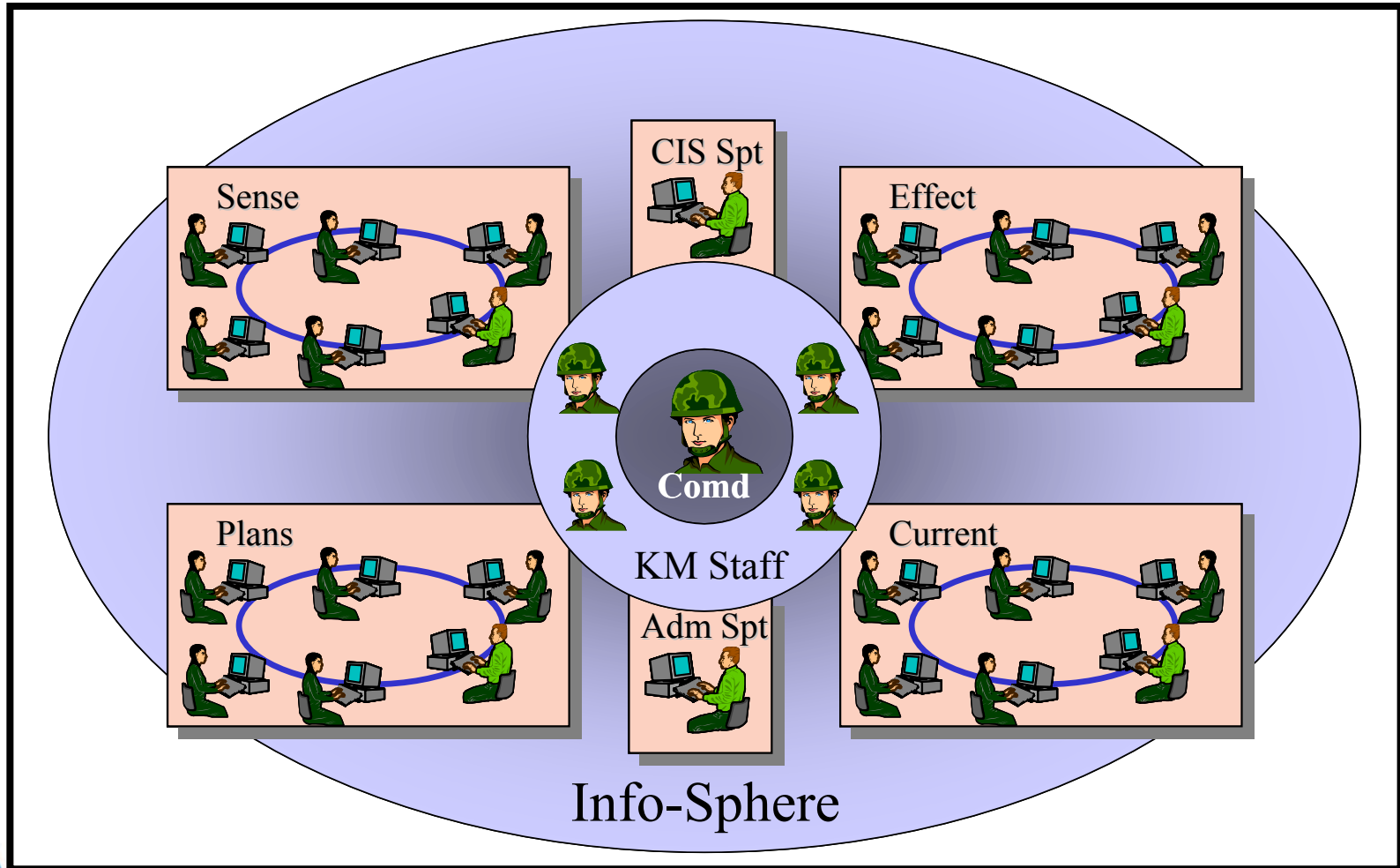- Be capable of shared tasks while distributed across space, time or organizational boundaries.

Collaborative Command Centric Concept: Typical Staff Structure
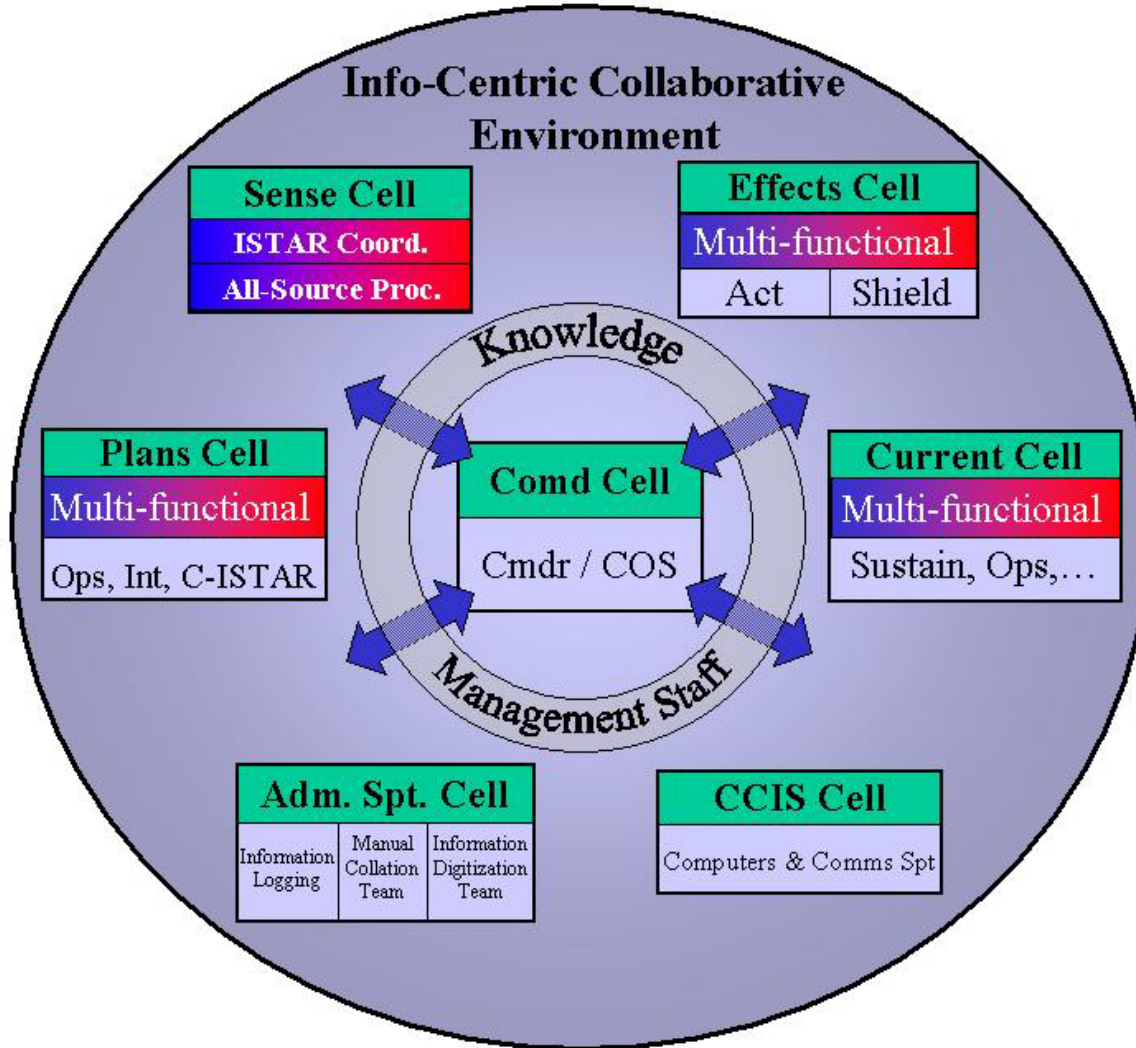
Collaborative Command Centric Concept: Typical HQ Structure

Organizational Objectives

- Collaborative Working must contribute to:
  - Unity of action
  - Commitment of all to the pursuit of a common goal
  - Decentralization of decisions and actions
  - Trust between team members
  - Mutual understanding
  - Timeliness of decision making
  - Effectiveness and efficiency of the decision-making/action processes

Conclusions

- Operational environment has changed.

- Continental staff system does not lend itself to effective collaboration.

- Proposed staff structure based on operational functions.

- Command processes must emphasize collaborative working.

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