

# *Fighting the Networked Force*

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**Mr. John J. Garstka  
Asst. Director for Concepts and Operations  
Office of Force Transformation  
Office of the Secretary of Defense  
(703) 696-5713**

**[john.garstka@osd.mil](mailto:john.garstka@osd.mil)**

**[www.oft.osd.mil](http://www.oft.osd.mil)**



# *Bottom Line Up Front*

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- **Network Centric Warfare (NCW)**
  - **An Emerging Military Response to the Information Age**
  - **Maturing capabilities demonstrated during OEF/OIF**
  - **Evolving evidence base provides insight into capabilities of networked forces**
- **NCW Implementation**
  - **Not just about technology**
  - **Involves all lines of development**

# *A US Transformation Goal: Desired Attributes of a Transformed Joint Force*

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- **Fully Integrated:**
  - All DoD component capabilities are born joint and are able to **integrate** into a **focused effort with a unified purpose**
- **Networked:**
  - Linked and synchronized in time and purpose— **allowing dispersed forces to communicate**, maneuver, and **share a common operating picture**
- **Adaptable:**
  - Forces that are **tailorable and scalable**, prepared to quickly respond to any contingency
- **Expeditionary:**
  - **Rapidly deployable**, employable, and sustainable—regardless of anti-access, or area denial environments
- **Decision Superior:**
  - **Gain and maintain information superiority** to shape the situation or react to changes
- **Decentralized**
  - Uses **collaborative planning** and shared knowledge to empower subordinate commanders to **compress decision cycles**
- **Lethal**
  - **Capability to destroy** an adversary and/or his systems in all conditions and environments

*Source: United States Armed Forces - Joint Operations Concepts (JOpsC)*

# *How a Networked Force Operates: Network Centric Operations*

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Creates an **Information Advantage** and translates it into a decisive **Warfighting Advantage**

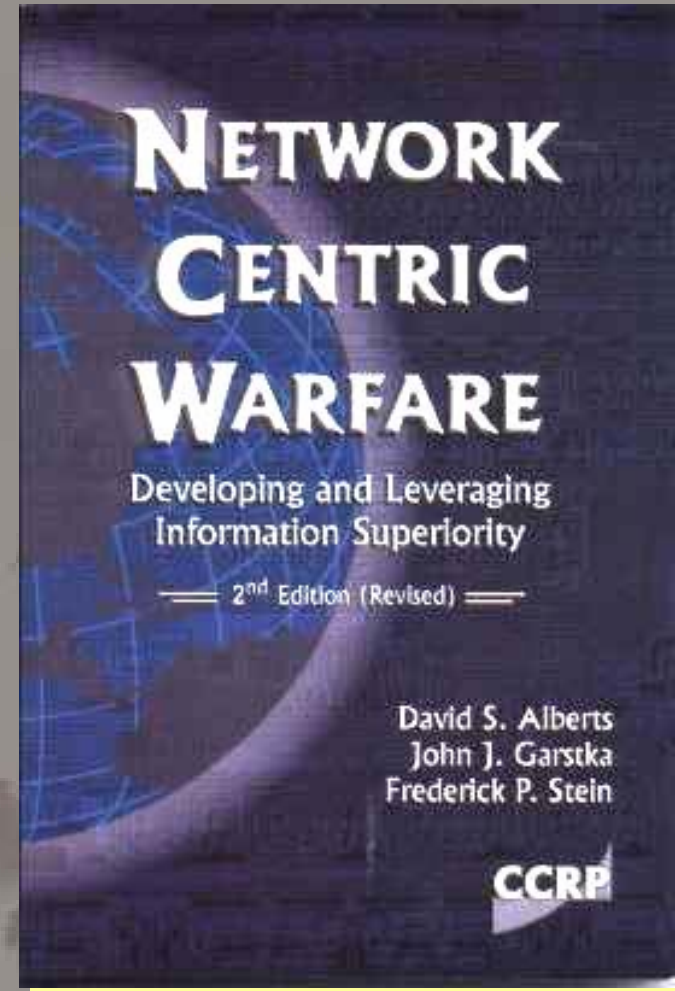
**Information Advantage** - enabled by the robust networking of **well informed** geographically dispersed forces

Characterized by:

- Information sharing
- Shared situational awareness
- Knowledge of commander's intent

**Warfighting Advantage** - exploits behavioral change and new doctrine to enable:

- Self-synchronization
- Speed of command
- Increased combat power



*Exploits Order of Magnitude Improvement in Information Sharing*

# Domains of Warfare

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## Shared Situational

- Understanding
- Awareness
- Assessment

**Social  
Domain**

**Leadership  
Unit Cohesion  
Morale**

## Situational

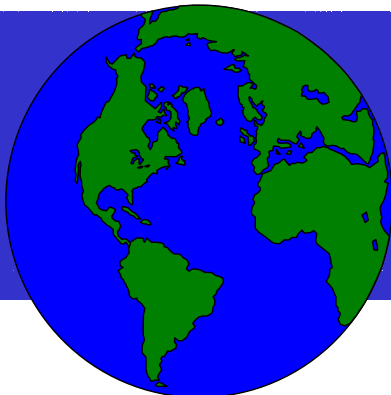
- Understanding
- Awareness
- Assessment

**Cognitive  
Domain**

**Mind of the Warfighter**

**Where Information is Created , Shared .....**

**Information  
Domain**



**Strike  
Maneuver  
Protect**

**Physical  
Domain**

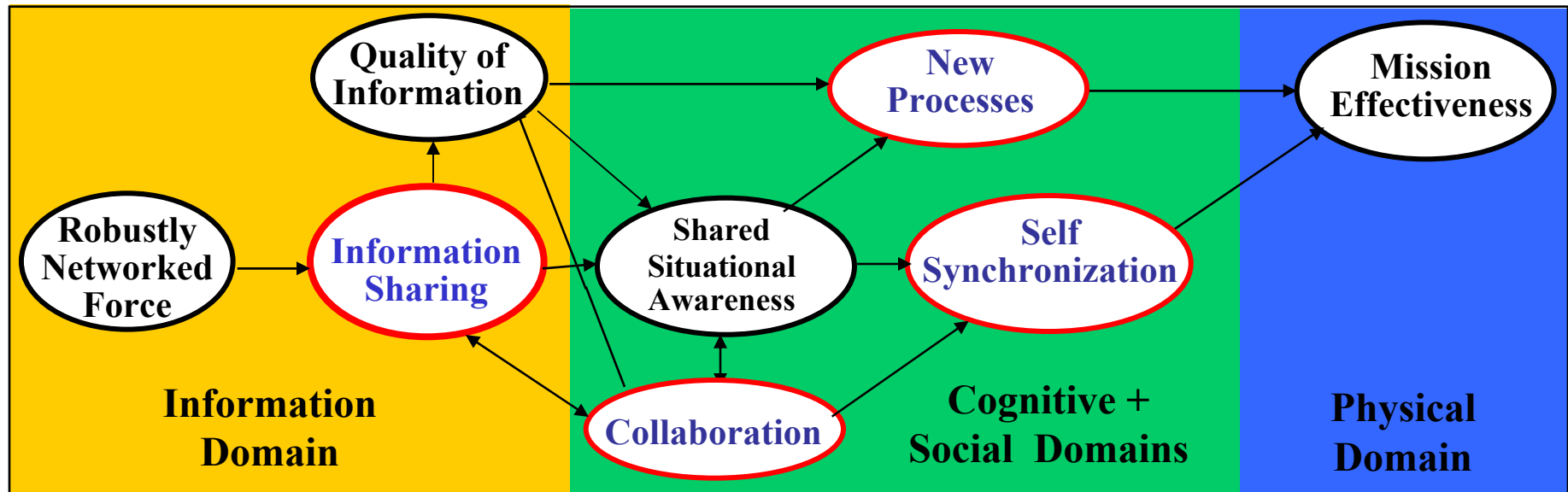
# Tenets of Network Centric Operations

...The New Value Chain

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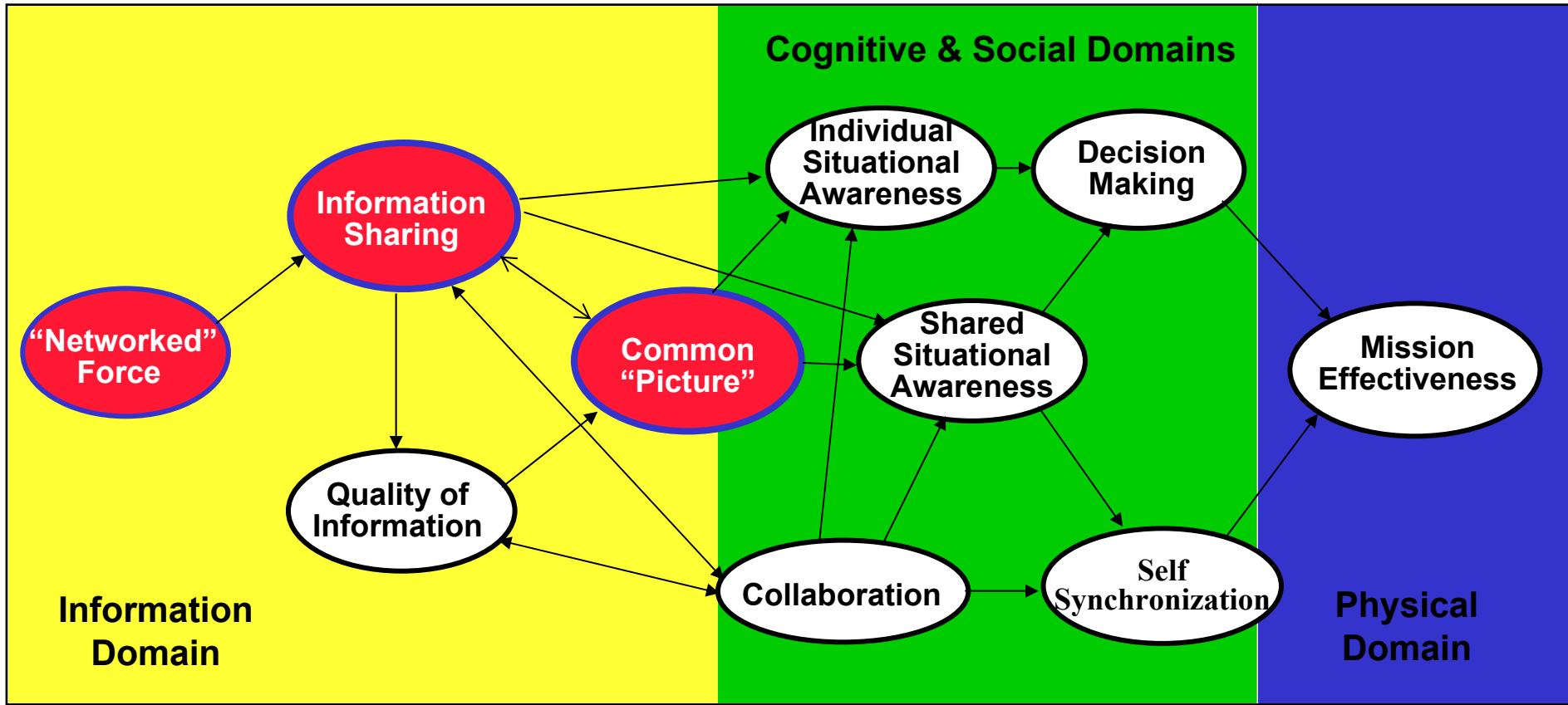
## Tenets of NCW: A Hypothesis Regarding Sources of Power

- A Robustly **Networked Force Improves Information Sharing**
- Information Sharing And Collaboration **Enhances the Quality of Information** and **Shared Situational Awareness**
- Shared Situational Awareness **Enables Collaboration** and **Self Synchronization** and Enhances Sustainability and **Speed of Command**
- These in Turn **Dramatically Increase Mission Effectiveness**

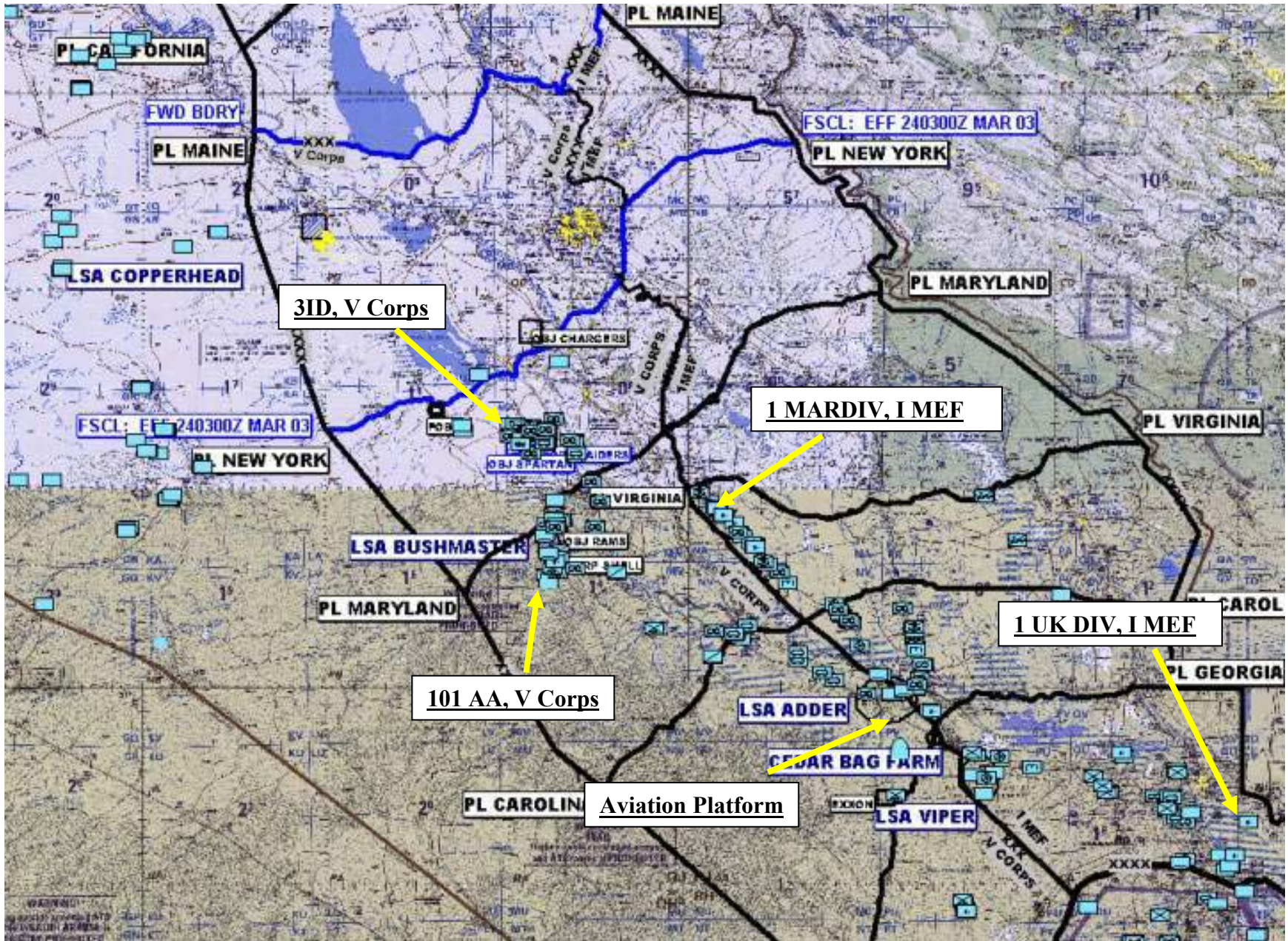


# Ground Maneuver during Operation Iraqi Freedom: Key NCW Relationships

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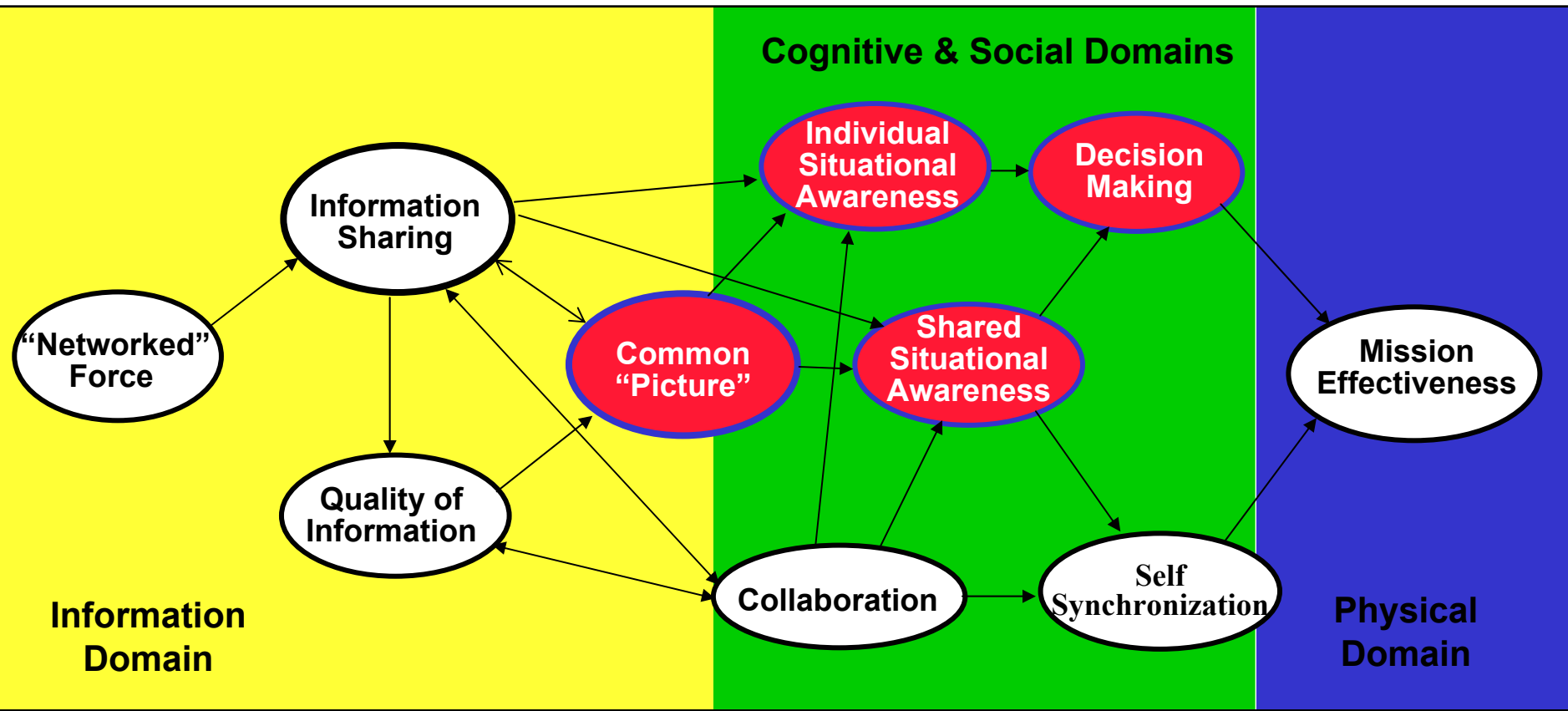
# Common Operational Picture (Blue Forces) OIF - 25 March 2003 (D+6)





# Ground Maneuver during Operation Iraqi Freedom: Key NCW Relationships

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# *Impact of Increased Situational Awareness on Command and Control at the Division Level*

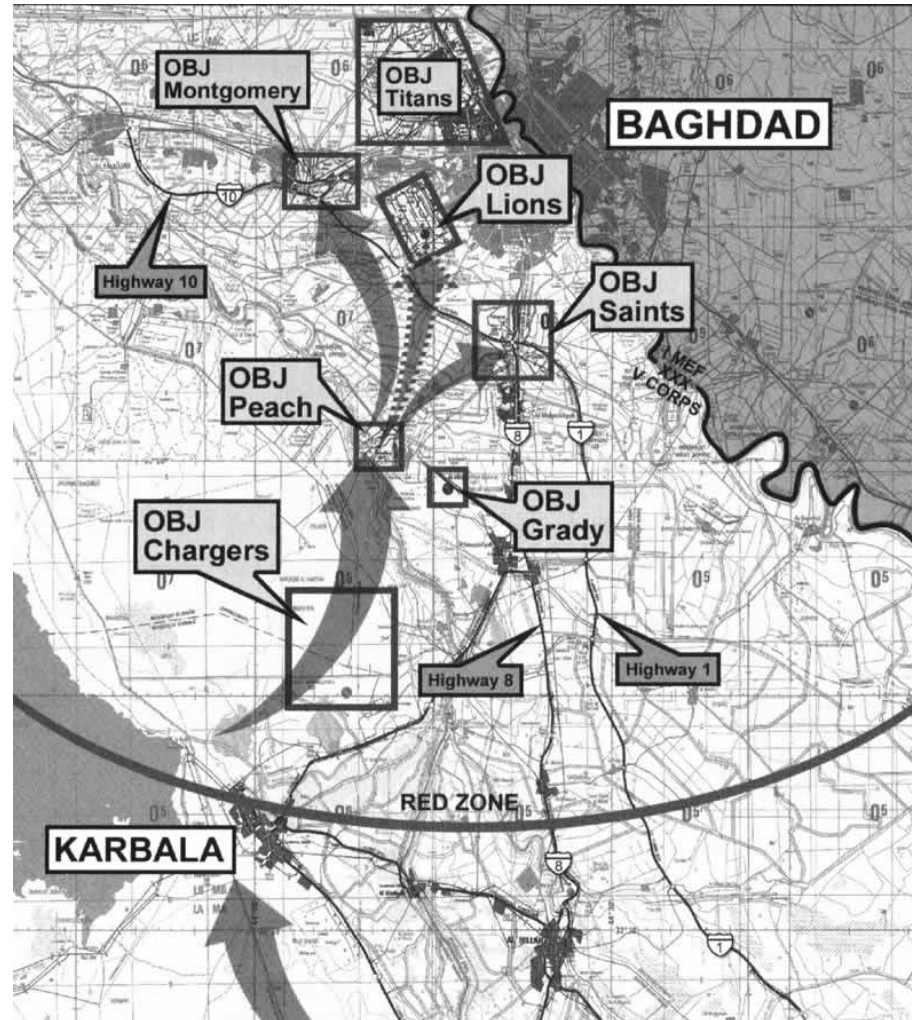
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*Major General Blount, Commander, 3<sup>rd</sup> Infantry Division*

# *V Corps Maneuver Objectives: Karbala to Baghdad*

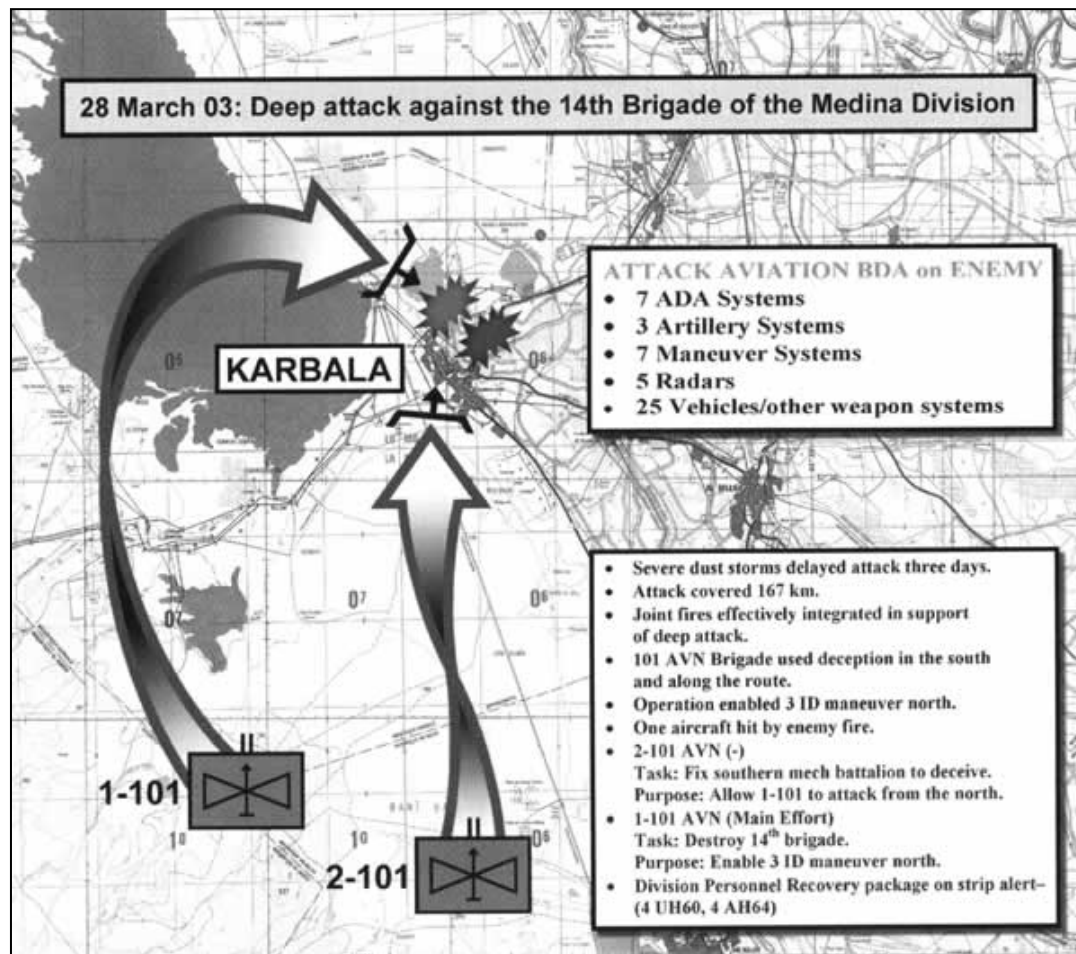
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# *Deep Attack Against Iraqi Forces at Karbala*

## *28 March 2003 (D+9)*

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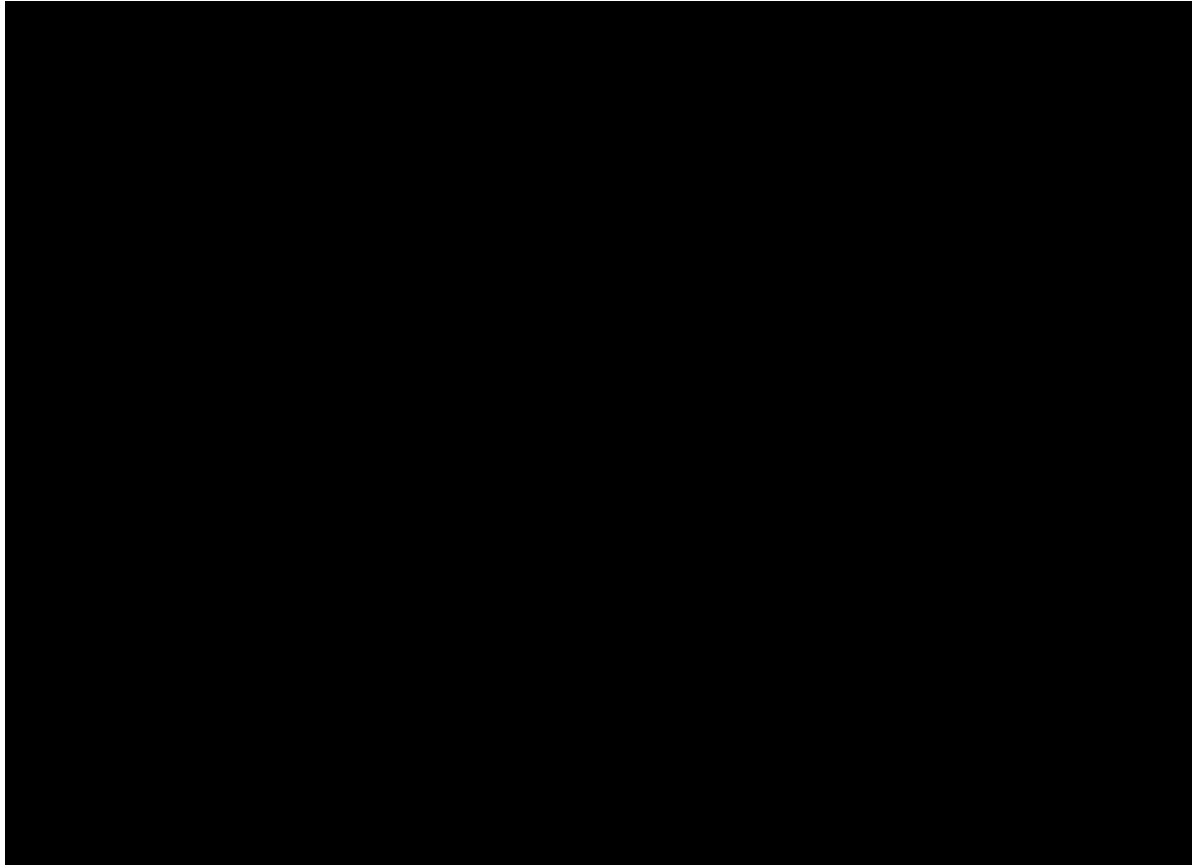


*101<sup>st</sup> Airborne – Deep Attack Against 14<sup>th</sup> Brigade of Medina Division*

# *Deep Attack Against Iraqi Forces at Karbala*

## *28 March 2003 (D+9)*

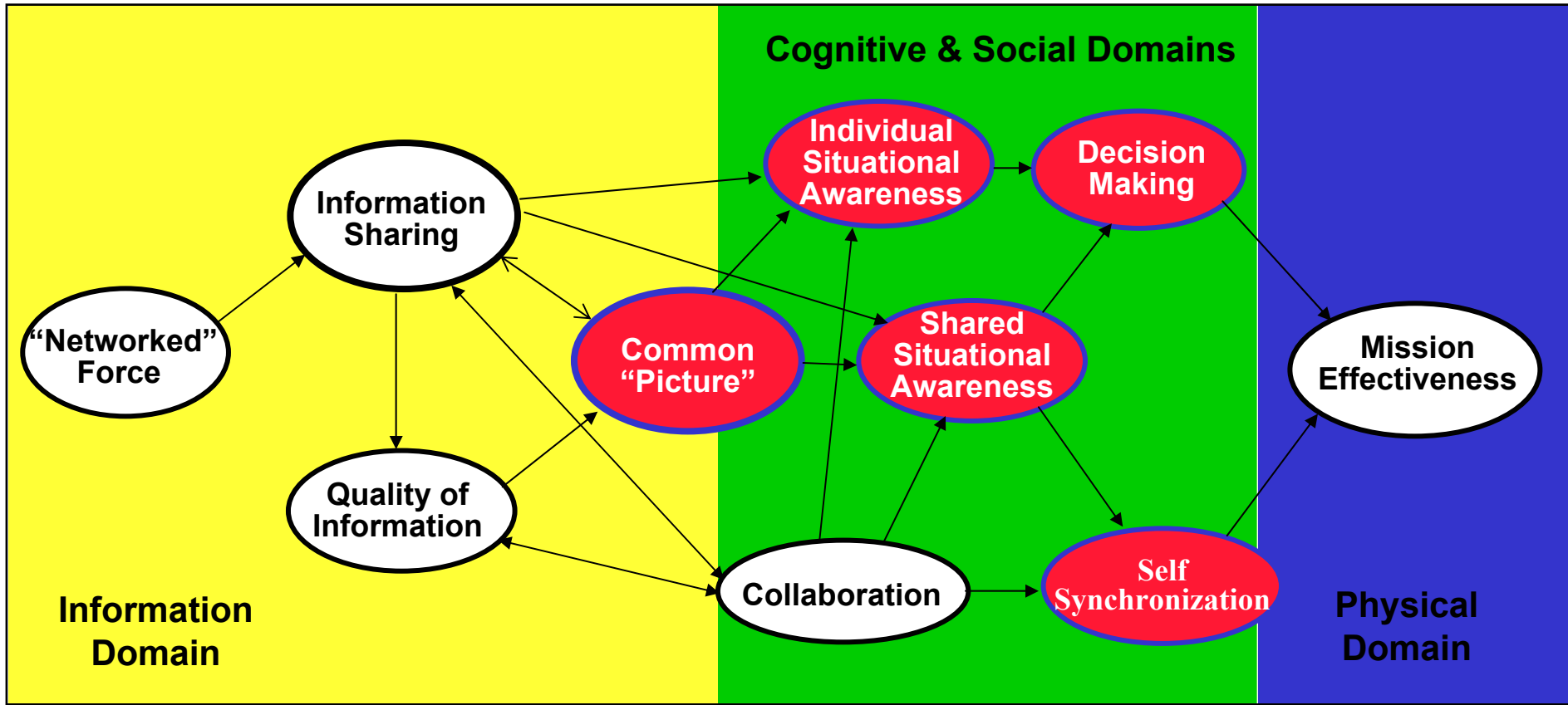
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*FBCB2/BFT Common Operational Picture enables integration of Joint Fires  
During Deep Attack at Karbala*

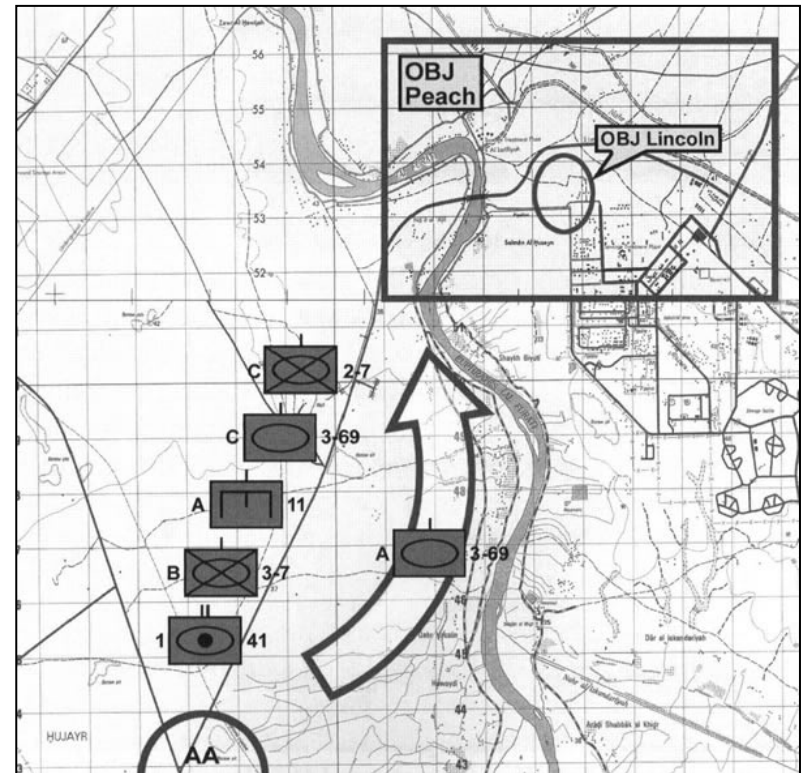
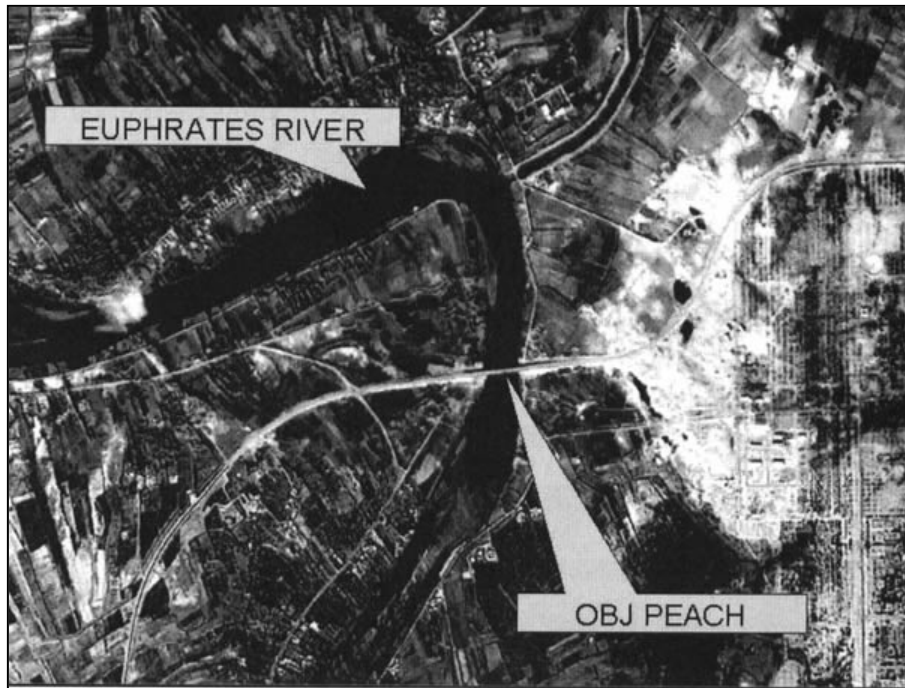
# Ground Maneuver during Operation Iraqi Freedom: Key NCW Relationships

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# *Seizing Objective PEACH: Bridge across the Euphrates River*

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# *Self-Synchronization: Seizing Objective PEACH*

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*2 April 2003 (D + 14)*

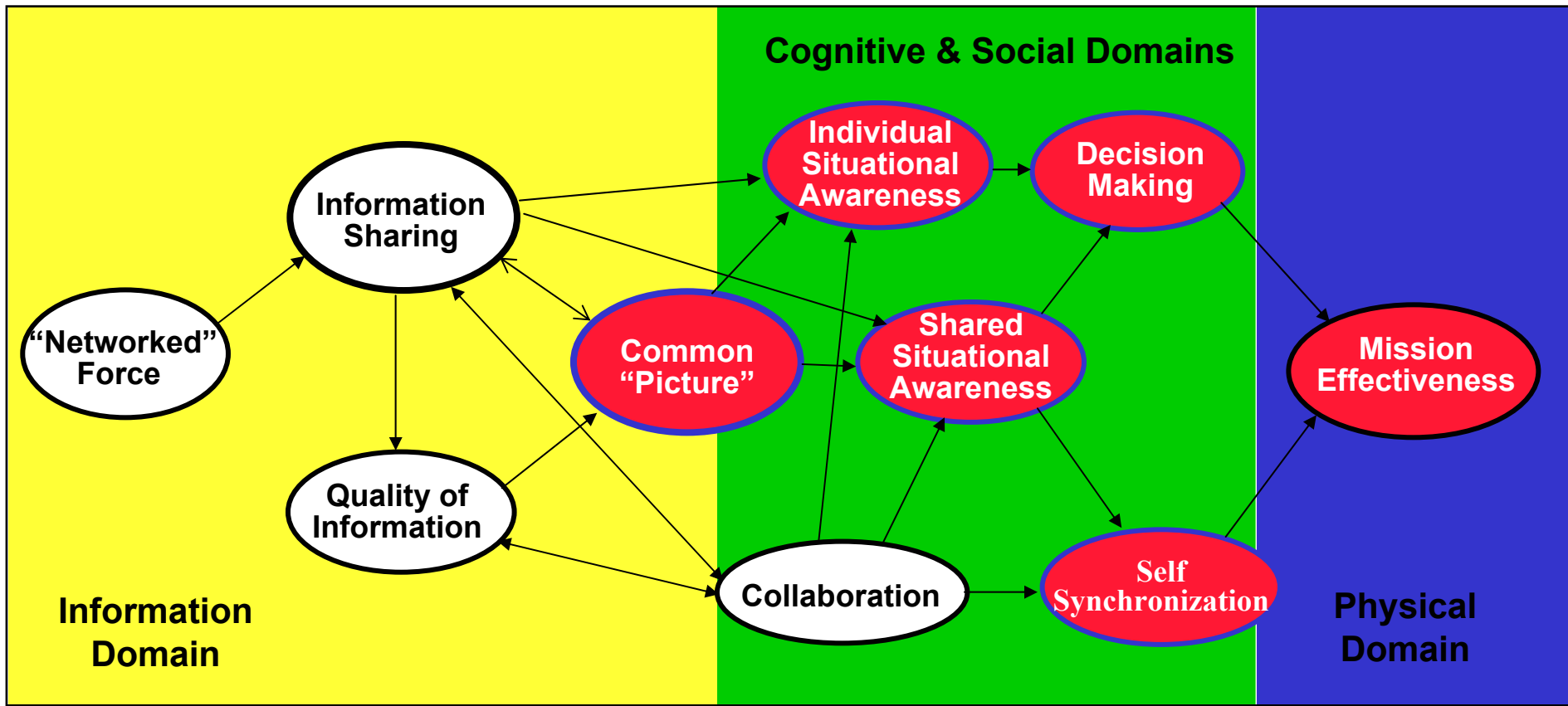


*LTC Marcone – Commander 3/69 Armor – 1<sup>st</sup> BCT, 3<sup>rd</sup> ID*



# Ground Maneuver during Operation Iraqi Freedom: Key NCW Relationships

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# *Increased Mission Effectiveness: Reduced Fratricide*

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*“I’m the lead company of the lead TF of the lead Brigade...There was nobody to my front.. I was able to look at my screen and see where friendly units were to my left, right, and to my rear. I was able to pass that information immediately down to my platoons so fratricide was basically eliminated”*

- CPT Stewart James, Commander, A-2/69 AR, 3<sup>rd</sup> BCT, 3ID

*“The whole squadron was in column on a highway. FBCB2/BFT displayed the locations of all blue forces. I knew the location of observed red, and was able to call for fire based on FBCB2/BFT knowledge”*

- CPT, Commander, A Troop 3/7 Cavalry Regiment, 3<sup>rd</sup> Infantry Division

*“Our counter battery radar picked up rounds through the Marine sector. Prior firing counter battery, the Fire Officer checked the BFT screen and ascertained that a 3ID unit (Army) had crossed over into the Marine sector and was firing at the enemy. Had it not been for BFT (FBCB2), we probably would have fired upon a friendly 3ID unit”*

- LTC, USMC Division Forward Senior Watchkeeper

# *Increased Mission Effectiveness: Achieving Surprise*

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*2<sup>nd</sup> Royal Tank Regiment – 1<sup>st</sup> (UK) Armd Div, used a combination of the satellite imagery and the positioning capability of FBCB2/BFT to identify targets for urban raids. During operations in Az Zubayr and Basrah, information was provided on likely insurgent operating bases. These were, generally, houses in urban neighborhoods. Using FBCB2/BFT these locations could be pinpointed and could be reached rapidly using FBCB2/BFT for navigation. This enabled 2<sup>nd</sup> Royal Tank Regiment to achieve **surprise** and also minimized the impact of **collateral damage** through misinterpreting information.*

**Source: NCO Case Study on US/UK Coalition Operations during Operation Iraqi Freedom**

# *Getting the Theory Right: Command and Control of a Networked Force*

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## *What's Different?*

- **“Common” Operational Picture**
  - Reduced “Fog” of War
- **Shared Situational Awareness (SA)**
  - Significantly increased SA for :
    - Commander
    - Subordinate Commanders
    - Individual Warfighters
  - Decreased “cognitive loading” in developing SA
- **Command Intent**
  - Increased shared situational understanding
  - Enhanced by capabilities for real-time collaboration
- **Enhanced Decision Making**
  - Speed + Better Decisions
- **Increased Tactical Agility**
- **Reduced Risk**

# *Enhanced Decision Making: “Decision Superiority”*

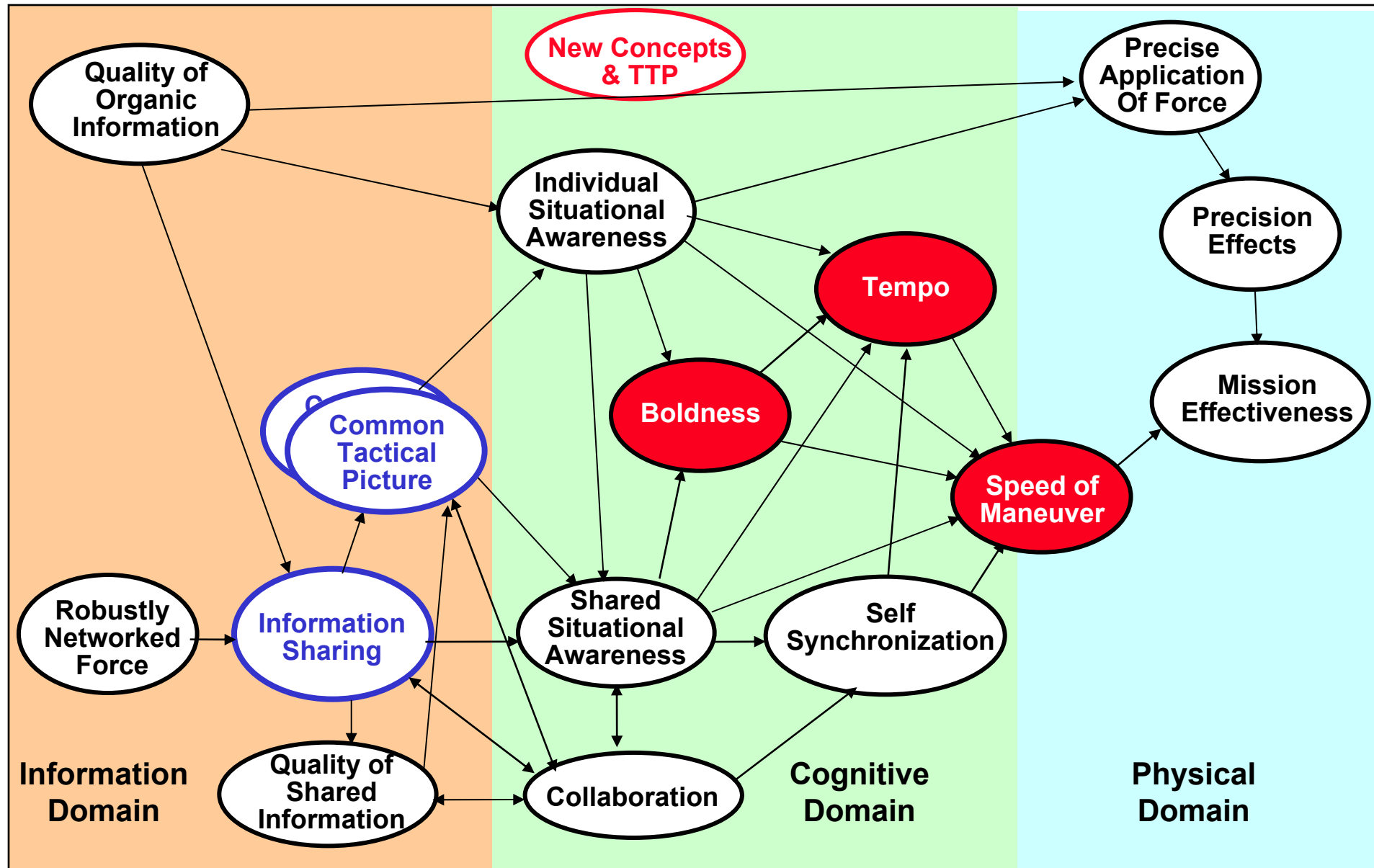
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*“What I will tell you is that the technology advances in our military today, compared to my experiences in Desert Storm, allowed me to talk via tactical satellite communications and other means across a battle space of hundreds of miles; to be able to conduct, when we need to, video teleconferences, where commanders can plot out where they’re and what decisions they need to do next; and put all that together in a joint construct, where I could see where all the airframes were, where all the ships were, where my counterparts in air and maritime components can see where the ground formations are.*

*When you put all that together, that allowed us to make decisions with situational awareness of where we were at, where the enemy was, and our view of the terrain and the weather much, much faster than we ever could in the past and exponentially faster than our opponent could. So when you put that all together, it allowed us to make decisions and execute those decisions faster than any opponent.”*

***Lt. Gen. David D. McKiernan  
Coalition Forces Land Component  
Commander, OIF  
23 April 03***

# *Network Centric Warfare: Key Relationships*



# *NCO Transformation: The Key Elements*

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*Today*

*Future*

Leadership and Education

Personnel/Culture

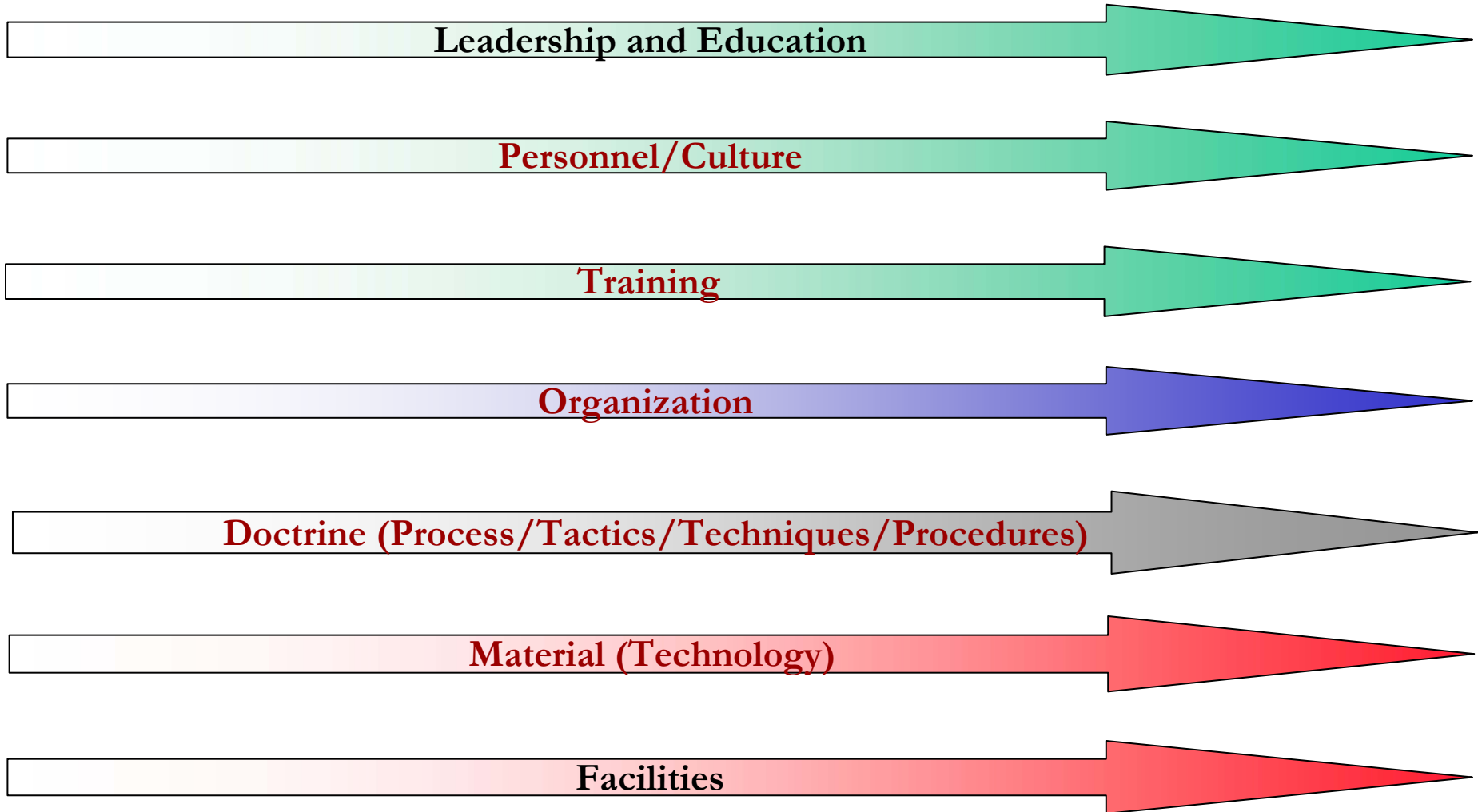
Training

Organization

Doctrine (Process/Tactics/Techniques/Procedures)

Material (Technology)

Facilities



# *NCO Transformation: OIF Ground Forces*

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2002

2003

Leadership and Education

*CFLCC and V Corps Commanders have previous experience with networked forces*

Personnel/Culture

*Clear willingness to use new technology under fire*

Training

*Very limited training with FBCB2/BFT*

Organization

Doctrine (Process/Tactics/Techniques/Procedures)

*Networked Forces Fought Differently*

Material (Technology)

*ABCS + FBCB2 (Company Level Deployment) + SATCOM + C2 Vehicles*

Facilities

*In Theater Facilities for installing FBCB2/BFT*



# *Transformation to Network Centric Operations: Insights and Challenges*

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- Transformation to network centric operations involves all “lines of development”
- Technology
  - Information Technology (IT) is critical enabler
  - Clear benefit to focused IT investments
- Doctrinal (Process) and Organization
  - Changes in these areas are to key achieving mature capabilities for network-centric operations
- Leadership
  - To achieve their full potential, networked forces must be led by leaders who understand how networked forces can operate
  - Education and training are key to developing this understanding
  - Operational experience can accelerate individual and organizational learning

# *Conclusion*

- **Network Centric Operations (NCO)**
  - **Military response to the Information Age**
    - **Exploits new source of power – information sharing**
  - **Key tenets and concepts increasingly well understood**
  - **Maturing body of evidence exists**
    - **Key NCW capabilities demonstrated during OEF/OIF**
- **NCO Transformation**
  - **Involves all lines of development**

**Questions?**