CORPS G-2 STAFF COMPETENCIES: A DESERT STORM CASE STUDY

A thesis presented to the Faculty of the US Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
General Studies

by

ERIK W. SIMONSON, MAJOR, US ARMY
B.B.A., Gonzaga University, Spokane, Washington, 2006

Fort Leavenworth, Kansas
2017

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	**2. REPORT TYPE**	**3. DATES COVERED** *(From - To)*
9-06-2017	Master's Thesis	AUG 2016 – JUNE 2017

4. TITLE AND SUBTITLE

Corps G-2 Staff Competencies: A Desert Storm Case Study

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

MAJ Erik W. Simonson

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
US Army Command and General Staff College
ATTN: ATZL-SWD-GD
Fort Leavenworth, KS 66027-2301

8. PERFORMING ORG REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for Public Release; Distribution is Unlimited

13. SUPPLEMENTARY NOTES

An Army Warfighting Challenge asks what Soldier, leader, and unit competencies are required for successful reconnaissance operations. Understanding the elements which constitute a competency and meta-competency identify requirements to determine what competencies may be missing from current doctrine. Analyzing current and legacy doctrine from Operation Desert Storm provided insight into how a corps headquarters planned, assessed, and executed reconnaissance during a highly successful campaign. Studying accounts on corps headquarter performance when directing and assessing reconnaissance operations further highlighted competencies required within corps intelligence sections. Legacy doctrine and accounts from Operation Desert Storm highlight the requirement for timely and accurate intelligence reports and products to support decision making. Current doctrine discusses the time element within intelligence synchronization processes, but with less emphasis than AirLand Battle doctrine. Adding a new intelligence core competency rooted in legacy doctrine while re-aligning current intelligence core competencies allows for better alignment of processes, competencies, and skills.

15. SUBJECT TERMS
Skill, Competency, Intelligence, Reconnaissance

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**			**19b. PHONE NUMBER** *(include area code)*
(U)	(U)	(U)	(U)	71	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: MAJ Erik W. Simonson

Thesis Title: Corps G-2 Staff Competencies: A Desert Storm Case Study

Approved by:

_____, Thesis Committee Chair
Gregory M. Thomas, M.A.

_____, Member
Lawrence D. Wilson, Ph.D.

_____, Member
Jeffrey D. Vordermark, M.A.

Accepted this 9th day of June 2017 by:

_____, Director, Graduate Degree Programs
Prisco R. Hernandez, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the US Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

CORPS G-2 STAFF COMPETENCIES: A DESERT STORM CASE STUDY, by MAJ Erik W. Simonson, 71 pages.

An Army Warfighting Challenge asks what Soldier, leader, and unit competencies are required for successful reconnaissance operations. Understanding the elements which constitute a competency and meta-competency identify requirements to determine what competencies may be missing from current doctrine. Analyzing current and legacy doctrine from Operation Desert Storm provided insight into how a corps headquarters planned, assessed, and executed reconnaissance during a highly successful campaign. Studying accounts on corps headquarter performance when directing and assessing reconnaissance operations further highlighted competencies required within corps intelligence sections. Legacy doctrine and accounts from Operation Desert Storm highlight the requirement for timely and accurate intelligence reports and products to support decision making. Current doctrine discusses the time element within intelligence synchronization processes, but with less emphasis than AirLand Battle doctrine. Adding a new intelligence core competency rooted in legacy doctrine while re-aligning current intelligence core competencies allows for better alignment of processes, competencies, and skills.

ACKNOWLEDGMENTS

I sincerely thank my thesis committee for not giving up on my project over the course of the year, especially Mr. Greg Thomas, who would not let me give up on this thesis. I truly appreciate the time spent together to ensure my thoughts translated to understanding, when often times they did not. Dr. Wilson provided excellent guidance regarding competencies and skills that I otherwise would have missed during this project. He also shaped my vision for defining and describing competencies and models in a clearer and more meaningful manner. Mr. Vordermark served as a critical advisor during an especially tough period of time during the thesis, ensuring that I met deadlines and finished on time. His input continually incorporated concepts taught through the common core curriculum, ensuring I harnessed the full power of my educational experience while at Fort Leavenworth.

I also thank my family for allowing me the time and space to study over the course of the year, especially my wife Becky. After a series of tough, time demanding assignments, Becky cared for our family to minimize impacts on my studies. She ensured we all reaped the rewards of our assignment at Fort Leavenworth, ensuring the boys learned, grew, and experienced life to the fullest over the year. I could not have completed this project without your undying support and love.

TABLE OF CONTENTS

Page

ACRONYMS

A2AD	Anti-access and Area Denial
ACR	Armored Cavalry Regiment
ADM	Army Design Methodology
ADP	Army Doctrine Publication
ADRP	Army Doctrine Reference Publication
ARCENT	US Army Central Command
ATP	Army Training Publication
CATS	Combined Arms Training Strategies
CENTCOM	Central Command
CI	Counterintelligence
DA PAM	Department of the Army Pamphlet
E-MIB	Expeditionary Military Intelligence Brigade
FLOT	Forward Line of Troops
FM	Field Manual
FMSWeb	Force Management System Web
GEOINT	Geospatial Intelligence
HUMINT	Human Intelligence
IA	Intelligence Analysis
IPB	Intelligence Preparation of the Battlefield
IO	Intelligence Operations
IS	Intelligence Synchronization
ISTA	Intelligence, Surveillance, and Target Acquisition
J-STARS	Joint Surveillance Target Attack Radar System

LRST	Long Range-Surveillance Team
MASINT	Measurement and Signatures Intelligence
MDMP	Military Decision Making Process
METL	Mission Essential Task List
MMAS	Master of Military Art and Science
OPSEC	Operations Security
OSINT	Open Source Intelligence
PED	Processing, Exploitation, and Dissemination
PIR	Priority Intelligence Report
SAMS	School of Advanced Military Studies
SCUD	Subsonic Cruise Unarmed Decoy
SIGINT	Signals Intelligence
SPOT	Satellite Pour l‘Observation de la Terre
TECHINT	Technical Intelligence
TRADOC	Training and Doctrine Command
UAV	Unmanned Aerial Vehicle
US	United States

ILLUSTRATIONS

Page

CHAPTER 1

INTRODUCTION

The Research Question

The primary research question is what corps echelon G-2 competencies existed within Operation Desert Storm corps headquarters intelligence sections leading to successful reconnaissance operations. By examining corps G-2 competencies, the thesis reveals shortfalls in legacy and current doctrine as identified in Operation Desert Storm historical accounts. Extracting competencies required for planning successful reconnaissance operations assists in answering a first order question postulated by the Army Capabilities Integration Command within their Army Warfighting Challenges.

Problem Context

Since Operation Enduring Freedom began in 2001, corps headquarters have away from serving as a tactical headquarters. Instead, contemporary corps headquarters serve as a land component, joint, or multi-national headquarters. As corps command functions have evolved, skills required to plan and execute corps level tactical operations atrophied. As the US military shifts towards warfare dominated by anti-access and area denial systems, ground reconnaissance operations increase in value.

The research topic aims to investigate and unearth corps G-2 section competencies which led to successful reconnaissance operations during Operation Desert Storm. This topic is significant to the military profession as it assists in answering a first order question posed to improve current and future force combat effectiveness. This thesis will attempt to fill a gap in scholarly literature by identifying competencies

required by a corps G-2 section not currently recognized in doctrine. Identifying shortfalls in current doctrine shapes potential changes in training and organizations for future conflict.

The Army currently forecasts challenges defeating adversaries with advanced anti-access and area denial (A2AD) capabilities. Defeating A2AD capabilities likely requires ground and aerial reconnaissance as planned by corps and subordinate headquarters. Examining problems faced during Operation Desert Storm from a doctrinal and organizational viewpoint allows the Army to make changes to future doctrine and organizations. This thesis serves to review successful operations to gain insight on defeating a growing global problem set.

Assumptions

A base assumption for this thesis is reconnaissance operations, as planned and analyzed by a corps G-2 staff during Operation Desert Storm, resulted in successes. Without this assumption, studying successful reconnaissance operations would be very difficult to extract successful interactions between leaders, units, and Soldiers from which one would form a conclusion to shape future reconnaissance competencies required. To mitigate this assumption, analysis focuses on tenets related to reconnaissance operations as conducted during other operations, particularly security operations.

A second assumption includes intelligence core competencies existed within corps headquarters during Operation Desert Storm. Unlike current doctrine, legacy warfighting guidance failed to explicitly define and describe required corps G-2 core competencies. Instructions regarding corps G-2 section duties, responsibilities, and functions imply certain core competencies exist. Defining competencies requires

doctrinal analysis and translating requirements from legacy doctrine into terms more easily understood as outlined in current documents.

Competencies studied contain elements used at any echelon and unit type, not just corps headquarters. While any headquarters could fulfill research topic requirements, the echelon chosen remained the corps due to document availability and written Operation Desert Storm accounts. The thesis also assumes competencies studied and analyzed can be replicated, trained, and evaluated through different units, missions, and operations. The methodology utilized to review and analyze core competencies translates to other branches and functions within the Army and applies broadly beyond reconnaissance and intelligence.

Definitions

Reconnaissance is a mission undertaken to obtain, by visual observation or other detection methods, information about activities and resources of an enemy or adversary, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area (Department of the Army 2015, 1-76).

Surveillance is the systematic observation of aerospace, surface or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means (Department of the Army 2015, 1-87).

A skill is a developed aptitude or ability (Merriam-Webster 2017). To have a skill, one must exhibit practiced and proficient abilities in a particular activity. For the purposes of the thesis, an individual Soldier task exemplifies a skill.

A competency is a set, collection, or amalgamation of skills which allows one to perform a complex or multifaceted task well. (Dreyfus 2004, 177-181). Team collective tasks translate to competencies required within a staff section.

Meta-competencies can be learned, but cannot be taught. Meta-competencies serve as an overarching ability under which competence shelters (Brown and McCartney 1995, 43-53). Intelligence core competencies exemplify meta-competencies. Meta-competencies transcend current tasks as defined by a unit's mission essential task list. This thesis uses meta-competency and core competency synonymously.

Intelligence operations is one of four primary means for information collection. The other three are reconnaissance, surveillance, and security operations (Department of the Army 2015, 2-10).

Security operations are those operations undertaken by a commander to provide early and accurate warning of enemy operations, to provide the force being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow the commander to effectively use the protected force (Department of the Army 2015, 1-81).

Intelligence, surveillance, and reconnaissance is an activity which synchronizes and integrates the planning and operation of sensors, assets, and processing, exploitation, and dissemination systems in direct support of current and future operations. This is an integrated intelligence and operations function (Joint Chiefs of Staff 2012, GL-12).

Intelligence is the product resulting from the collection, processing, integration, evaluation, analysis, and interpretation of available information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential

operations. Intelligence is also the activities which result in the product as well as organization engaged in such activities. (Department of the Army 2015, 1-49).

Scope

This thesis will answer research questions by reviewing written work regarding successful reconnaissance operations during Operation Desert Storm. Additionally, written works must include observations regarding a corps G-2 section. Written work volume regarding corps operations enables a deeper study regarding reconnaissance operation planning and intelligence competencies required. Intelligence observations permeate nearly every written account about Operation Desert Storm, so specifically limiting the scope to corps headquarters serves to limit the research volume required to answer the thesis.

The research scope also includes doctrinal and organizational documents as a background to understanding written accounts from Operation Desert Storm. Doctrinal and organization changes fundamentally alter how intelligence supports reconnaissance operations. To extract valid conclusions from written accounts, each analytic point and conclusion is examined through a doctrinal and organizational lens to ensure the context within written accounts readily translates into comparable terms.

Limitations

Legacy doctrine served as a significant piece to understand the framework in which Operation Desert Storm corps headquarters planned reconnaissance operations. While some legacy doctrine exists in digital mediums, most documents are not available, which hinders informational searches and sorting. Due to the research process's

discovery regarding information best suited to the thesis, an exhaustive legacy doctrinal study which may influence conclusions precludes completion within given timelines. To overcome shortfalls in time tables, reviewing monographs and theses related to intelligence competencies focused research efforts to relevant material. Previous studies lack research into core competencies, but unexamined legacy doctrine possibly clarifies information presumed missing during the analysis and conclusion paragraphs. Particularly, FM 34-1, *Intelligence and Electronic Warfare Operations*, published before May 1986, may contain information necessary to clarify points made about legacy doctrine.

Written accounts and combat studies regarding Operation Desert Storm focus more on macro issues regarding intelligence core competencies and reconnaissance planning. Microanalysis regarding skills, abilities, processes, and procedures either do not exist or exist in small and, therefore, unreliable data sets. The research process to extract potential information would again expand beyond the available timeline utilized for publishing the thesis while adding marginal value. To overcome a shortfall in micro analysis, this thesis attempts to synthesize written accounts from multiple viewpoints, analyze doctrine in use, and fill gaps with knowledge and advances in understanding from current doctrine. Finally, personal experience, knowledge, and institutional training round out gaps in information to produce a comprehensive, reliable, and valid view regarding core competencies.

Delimitations

Expanding research to include other campaigns would provide greater breadth to understand corps G-2 competencies. Operations before the Vietnam War bear less

significance due to legacy organizational designs. Reconnaissance operations can differ significantly between operating areas based on the Vietnamese terrain. Narrowing this study to operations over desert terrain may lead to incorrect conclusions.

The second major delimitation includes a focus on Operation Desert Storm rather than campaigns more recent. Focus on an older campaign allows for deeper reach into material based on classification and quantity. Operation Desert Storm's silver anniversary occurred in 2016, resulting in a larger written volume to study. While nearly 15 years have passed since Operation Iraqi Freedom, written work quantity and quality relating to Operation Desert Storm provides a greater volume to study.

Doctrinal and organization analysis between 1980-1995 established understanding regarding conditions within the Army during Operation Desert Storm. The Army evolved during the Operation Desert Storm era, producing several doctrinal publications. Reading and referencing the nuances between doctrinal and organization changes exceeds allowable in-depth study time. Focusing on competencies within intelligence and corps G-2 sections allows proper comparison to current organizations and doctrine, but may lose nuance without proper analysis.

Study Significance

The thesis attempts to fill a gap in scholarly literature by gain understanding regarding ways in which intelligence competencies support reconnaissance operations and planning. By reviewing current and historically relevant doctrine and organizations, observations will highlight mismatches within organizations, conceptual flaws, and successful strategies as expressed in historic accounts.

The Army's Capabilities Integration Center posed twenty questions to the military community dubbed as Warfighting Challenges. Warfighting Challenge #11, "Conduct Air-Ground Reconnaissance and Security Operations," contains ten additional questions to assist in answering the primary question. One additional question asks, "What are the Soldier, leader, and unit competencies required for Army forces to conduct reconnaissance and security operations in the future?" The thesis directly addresses Soldier, leader, and unit competencies to partially answer the first order question.

CHAPTER 2

LITERATURE REVIEW

Current Intelligence Doctrine

Understanding gaps within the Army's doctrine requires research into current publications. Current applicable publications include ADRP 2-0, *Intelligence;* ADRP 1-02, *Terms and Military Symbols;* FM 6-0, Change 2, *Commander and Staff Organization and Operations;* ATP 2-19.3, *Corps and Division Intelligence Techniques*, and ATP 3-92, *Corps Operations.* Identifying core competencies, roles and responsibilities, design, and reconnaissance planning roles allows comparative analysis between current and legacy corps. Studying corps as a tactical headquarters within current doctrine best aligns comparable information to examine doctrine utilized during Operation Desert Storm.

The Intelligence Process

The Army utilizes a four-step model to describe its intelligence process. The four-step intelligence process includes plan and direct, collect, produce, and disseminate. Intelligence competencies support the four steps in various ways, but do not correlate directly to any particular step (Department of the Army 2016a, 3-2). Intelligence Operations (IO) competencies enable the collect step. The intelligence analysis (IA) competencies support planning, directing, and producing functions. Intelligence synchronization (IS) competencies support dissemination, but also heavily influence the analyze and assess continual process. The intelligence process chart outlines example activities within each step.

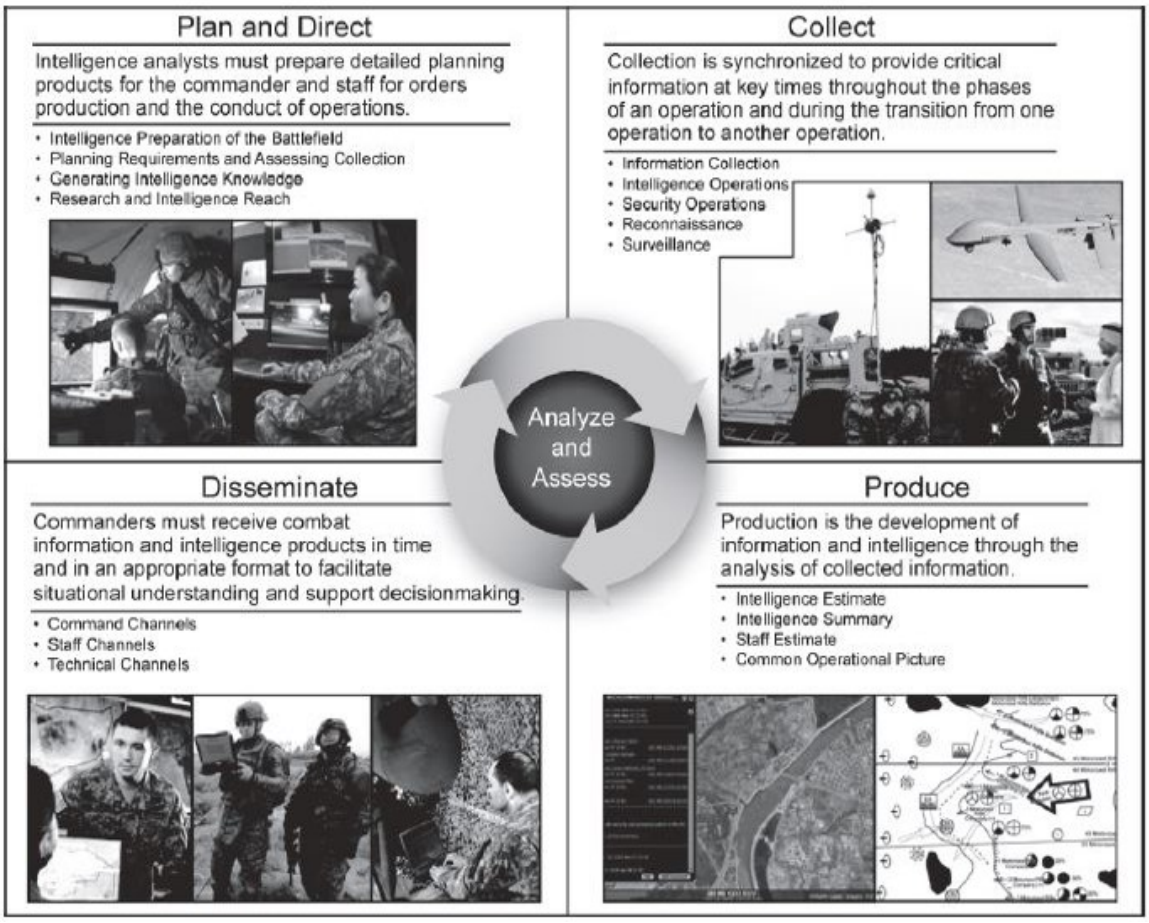

Figure 1. The Intelligence Process

Source: Headquarters, Department of the Army, Army Doctrine Reference Publication (ADRP) 2-0, *Intelligence* (Washington, DC: Government Printing Office, August 2012), 3-2.

Intelligence Core Competencies

Intelligence core competencies fall into three broad areas: intelligence operations (IO), intelligence analysis (IA), and intelligence synchronization (IS) (Department of the Army 2016a, 2-9). Intelligence synchronization is the art of integrating information collection and intelligence analysis with operations to effectively and efficiently support decision making (Department of the Army 2016a, 2-10). Intelligence operations are tasks

undertaken by military intelligence units and Soldiers to obtain information to satisfy validated requirements (Department of the Army 2016a, 2-10). Intelligence analysis is a process by which collected information is evaluated and integrated with existing information to facilitate intelligence production (Department of the Army 2016a, 2-11). Each intelligence core competency serves as a meta-competency. The following paragraphs explain each core competency to provide greater detail regarding skills inherent in each.

Intelligence Synchronization

The first intelligence meta-competency is intelligence synchronization (IS), which balances time and requirements. Requirements include collection, production, required accuracy, and usefulness to the commander. IS requires the intelligence staff to maintain an effective relationship with the commander and other staff sections. Intelligence staffs must also focus information collection, effectively disseminate predictive assessments, and adapt to changing situations. Effective intelligence staff qualities include information collection expertise, leveraging the intelligence enterprise, mastering intelligence processes, and establishing a collaborative environment (Department of the Army 2016a, 2-10). IS asks analysts to balance how information is shared with knowledge production.

Intelligence Synchronization Competencies

Information collection activities provide commanders with detailed and timely intelligence. Through analysis, information collected becomes intelligence which answers the commander's critical information requirements as well as other requirements. Information collection requires the intelligence staff to anticipate, coordinate, prioritize,

and balance requirements. Collection activities also require the staff to reach other organizations to fulfill requirements as well as control active collection operations (Department of the Army 2016a, 2-2). Coordination and synchronization exemplify synchronization activities.

Intelligence staff provides support to targeting. Support activities include target development, target assessment, and targeting effectiveness. Figure 2 below lists competencies required to support targeting in the left column with skills and resources utilized to execute the competency. The task range varies between producing analytic products and disseminating knowledge, highlighting the core activities within IS.

Intelligence Synchronization Skills

Four primary intelligence products facilitate situational awareness and decision making for commanders and their staffs. The four products are: intelligence estimates, intelligence summaries, running estimates, and intelligence related common operating picture contributions. Developing, producing, and updating intelligence products demonstrate key skills required to maintain synchronization within the intelligence section as well as across all section, units, and echelons (Department of the Army 2016a, 3-8). Producing analytic products as an individual task supports IS collective tasks by providing opportunities to share knowledge and refine products. Such sharing typically occurs in a fusion analysis center.

Receive guidance on—	• Commander's intent. • High-payoff targets. • Attack criteria. • Lead time between decision points and target areas of interest. • Rules of engagement. • Combat assessment requirements.
Develop—	• Modified combined obstacle overlay. • Situation and event templates. • High-value targets.
Explain—	Threat courses of action as part of wargaming based on friendly courses of action, refine event template, assist in developing the high-payoff target list, target selection standard matrix, and attack guidance matrix.
Produce—	Planning requirements tools.
Collect—	Information for target nomination, validation, and combat assessment.
Disseminate—	• high-payoff target-related information and intelligence to the fires cell or appropriate location immediately. • Pertinent information and battle damage assessment per standard operating procedures or other instructions.

Figure 2. Intelligence Support to Targeting Competencies

Source: Headquarters, Department of the Army, Army Doctrine Reference Publication (ADRP) 2-0, *Intelligence* (Washington, DC: Government Printing Office, August 2012), 5-9.

Intelligence Operations

The second key corps G-2 intelligence meta-competency is IO. IOs are one of four primary means. Information requirements drive IOs. Information collection plans typically specify an intelligence operation's focus. IOs utilize mission orders, tasked through the G-3 section, similar to other information collection operations. Intelligence operators must synchronize collected data with analytic cells to provide refined products to support decision making. Effective coordination occurs laterally and vertically to avoid fratricide and maximize collection capabilities (Department of the Army 2016a, 2-10). IOs utilize specialized technical and general tactical skills for successful task completion.

Intelligence Operations Competencies

Single-source intelligence activities utilize competencies unique to each intelligence discipline. The intelligence disciplines include: counterintelligence (CI), geospatial intelligence (GEOINT), human intelligence (HUMINT), measurement and signature intelligence (MASINT), open-source intelligence (OSINT), signals intelligence (SIGINT), and technical intelligence (TECHINT). Processing, exploitation, and dissemination (PED) activities constitute an additional competency required within IOs (Department of the Army 2016a, 4-2). The intelligence disciplines contain competencies required to conduct IOs. Each discipline harnesses unique specialized technical skills.

Intelligence Operations Skills

Soldiers execute individual skills when conducting single-source intelligence activities. Intelligence activities utilize competencies achieved through skillfully applying multiple Soldier tasks. The figure below lists intelligence disciplines, core activities, and supporting functions within the intelligence process. Particularly, each intelligence discipline utilizes different terms to describe competencies, activities, functions, uses, purpose, and mission. Themes common to all disciplines include unique collection focus areas, the need to analyze and produce single source reports, and balance time requirements to ensure intelligence products are timely and relevant.

CI		GEOINT		HUMINT	
Core Functions*	Operations Investigations Collection Technical services and support Analysis and production	Core Activities*	Define GEOINT mission requirements Obtain mission-essential GEOINT Evaluate available GEOINT data Use and disseminate GEOINT Maintain and evaluate GEOINT	Collection Activities+	Screening Interrogation Debriefing Military source operations Liaison Reporting
Core Missions*	Counterespionage CI support to force protection CI support to research, development, and acquisition Cyber CI	Core Uses*	General military intelligence and I&W Safety of navigation Operational awareness Mission planning Mission command products Target intelligence	Core Uses+	Determine threat Capabilities, Characteristics, Intentions Facilitate friendly force visualization
MASINT		**OSINT**		**SIGINT**	
Collection Activities+	Electronic signature collection Seismic signature collection CBRNE signature collection Analysis and production	Collection Activities+	Collect, exploit, and disseminate OSINT	Discipline Subactivities*	Communications intelligence Electronic intelligence Foreign instrumentation signals intelligence
Core Uses+	Support to I&W Support to targeting Technical collection not discernible through other intelligence means	Characteristics*	Provides the foundation to generate intelligence knowledge Answers requirements Enhances collection Enhances production	Core Uses+	Provide intelligence on threat intentions, capabilities, composition, and disposition Provide targeting information for delivery of lethal and non-lethal fires effects
TECHINT				**Chart Key**	
Collection Activities+	Collect, process, analyze, and exploit data pertaining to foreign equipment and Assess capabilities and vulnerabilities of captured	Core Goals*	Ensure US Forces maintain a technical advantage over any threat Provide timely, relevant, accurate, predictive, and tailored support Provide detailed assessments of foreign technological threat capabilities, limitations, and vulnerabilities		* Denotes actual term used in doctrine + Derived term based on description from doctrine

Figure 3. Intelligence Operations Competencies

Source: Created by author. Derived from Department of the Army, Army Doctrine Reference Publication (ADRP) 2-0, *Intelligence* (Washington, DC: Government Printing Office, 2016), 4-2 to 4-9.

Intelligence Analysis

The final corps G-2 intelligence meta-competency is intelligence analysis (IA). Analysis facilitates commanders' and other decision makers' ability to visualize the environment, organize forces, and control operations. IA's purpose is to describe the current and attempt to assess future conditions. IA assists in developing initial information collection requirements and continuously refines active collection requirements. IA complements IS. Qualities found within effective IA include critical

thinking, ability to embrace ambiguity, and collaboration (Department of the Army 2016a, 2-11).

Intelligence Analysis Competencies

IA supports both Army Design Methodology (ADM), the Army's Problem-Solving Process, and the Military Decision-making Process (MDMP). Both processes serve as a staff planning competency. To complete MDMP, the intelligence staff assists in friendly course of action development, focusing specifically on developing a collection plan to answer information requirements. The intelligence staff conducts steps outlined within mission analysis, including, but not limited to:

1. Analyzing the higher headquarters' order
2. Performing initial IPB
3. Determining specified, implied, and essential tasks
4. Reviewing available assets
5. Determining constraints
6. Identifying critical facts and assumptions
7. Provide input to risk management
8. Determine initial commander's critical information requirements
9. Determine the initial information collection plan
10. Update the operational timeline
11. Deliver a mission analysis briefing
12. Derive input from the initial commander's guidance
13. Issue a warning order (Department of the Army 2016a, 5-2 – 5-6).

Intelligence Analysis Skills

To support MDMP, analysts study threat characteristics, design threat templates and models, develop threat courses of action, identify high-value targets, and complete event templates and matrices. Analysts also produce weather effects matrices as well as lines of communication, modified combined obstacle, hazard, and civil consideration overlays. Analysts develop specialty products as required for visualization and understanding, as required (Department of the Army 2016a, 5-2).

Intelligence Doctrine Summary

Current intelligence doctrine articulates three overarching meta-competencies. These core competencies, along with the intelligence process, forms a base from which intelligence supports decision makers. The three intelligence meta-competencies encompass a wide skill and competency range while describing processes in a general manner. The intelligence process utilizes the core competencies throughout each step within the process in very broad terms. Each meta-competency describes competencies and skills inherent to them. Meta-competencies and intelligence processes do not prescribe how intelligence functions, but do describe how each relates to another.

Corps Intelligence Doctrine

The following section outlines current doctrine related to corps intelligence sections. Doctrine describes roles and responsibilities, intelligence activities, and unit organization. Corps headquarters serve in several configurations as defined by requirements within the operational theater. Corps intelligence doctrine begins focusing

the intelligence process and core competencies into directed activities required to support decision making at multiple echelons.

Corps Intelligence Roles and Responsibilities

The corps intelligence section executes two major activities: focused activities and information collection. Intelligence sections focus activities to develop detailed knowledge about an adversary and potential enemy doctrine, weapons systems, and leadership, as well as terrain (Department of the Army 2016b, 6-7). Focused activities draw expertise from the IA core competency. Information collection activities contain the remaining roles and responsibilities. Intelligence Soldiers utilize IS and IO core competencies while performing information collection.

G-2 Roles and Responsibilities

The G-2 helps the commander focus and integrate information collection assets and resources to satisfy corps intelligence requirements. The G-2 performs a several tasks involving reconnaissance, including, but not limited to—

1. Overseeing the intelligence functional cell; specifically situation development, target development, support to lethal and nonlethal targeting, support to indications and warnings, support to assessment, and support to protection.
2. Providing the commander and staff with assessments about threat capabilities, intentions, and courses of action as they relate to the corps mission.
3. Identifying gaps in intelligence and developing collection strategies.
4. Disseminating intelligence products throughout the unit as well as to higher and subordinate headquarters.

5. Answering requests for information from subordinate commanders, staffs, and higher and adjacent units.
6. Coordinating the units' intelligence requirements with supporting higher, lateral, and subordinate echelons.
7. Overseeing the intelligence cell's contributions to planning requirements and assessing collection.
8. Monitoring IOs.
9. Ensuring ongoing IOs are collecting information needed for anticipated decisions or other priority intelligence requirements (PIRs).
10. Ensuring information concerning the PIRs is processed and analyzed first.
11. Recommending changes to the information collection plan based on changes in the situation and weather (Department of the Army 2016c, 2-8).

Information Collection Activities

Information collection involves planning requirements and assessing collection, tasking and directing collection, and executing collection (Department of the Army 2016b, 7-10). Intelligence sections assist the corps commander in identifying exploitable opportunities. To identify exploitable opportunities, intelligence identifies information gaps required by the corps commander to make a decision. Information requirements typically exceed available assets and capabilities. Information collection occurs through intelligence, reconnaissance, surveillance, and security operations (Department of the Army 2016a, 2-10). Information collection activities draw expertise from IS meta-competencies.

Analysis Activities

The corps may establish a fusion center to coordinate and focus IA. Fusion centers serve as an ad hoc organization formed from different units, organizations, or agencies. Fusion centers allow expedited processing, exploitation, analysis, and dissemination of collected information requirements by centralizing technical experts. Fusion centers include all unified action partners when possible. Each participant contributes intelligence from their respective agency or department while hastening dissemination back to their parent organization. Fusion centers act as a hub to develop information collection plans based on information requirements (Department of the Army 2016a, 2-11). Analysis activities leverage the IA meta-competency.

Corps Intelligence Roles and Responsibilities

The corps intelligence section contains a small analytic element assigned to corps headquarters. When deployed, analysts augment corps intelligence sections from an expeditionary military intelligence brigade. Corps receive additional assets for information collection, reconnaissance, and surveillance. Force packages potentially include units specifically trained for reconnaissance as well as intelligence collection assets from the expeditionary military intelligence brigade. While corps should coordinate with assets aligned for deployment, unit readiness may result in different units tasked for support. Corps must exercise standard operating procedures and retain flexibility to maximize effectiveness.

Expeditionary Military Intelligence Brigade

An expeditionary military intelligence brigade (E-MIB) supports each corps headquarters. E-MIBs provide counterintelligence collection and activities, HUMINT collection, SIGINT collection, and processing, exploitation, and dissemination (PED) support. The E-MIB serves as primary information collection asset assigned or attached to a corps. E-MIB composition contains six PED platoons, two multifunctional platoons, four counterintelligence operations management teams, and twelve HUMINT collection teams (Department of the Army 2016b, 6-7).

Corps Long-Range Surveillance Company

The corps long range-surveillance team (LRST) serves to answer the commander's specific information needs. LRSTs are typically lightly armed and operate in squad sized elements to conduct surveillance. LRSTs execute four primary missions including surveillance, zone and area reconnaissance, target acquisition, and target interdiction. Other LRST missions include route reconnaissance, sensor emplacement and recovery, pathfinder operations, personnel recovery, and chemical and radiological surveillance and monitoring operations. Doctrinally, the corps headquarters battalion contains the LRSC (Department of the Army 2016b, 7-19). Recent changes identified in Total Army Analysis led to all three active duty LRSC and National Guard LRSC deactivations through 2018 (Horton 2017). The loss of LRSCs means corps headquarters must plan for and leverage collection platforms not directly owned or controlled by the corps.

Corps Reconnaissance Planning

While the G-3 remains responsible for reconnaissance planning, the G-2 provides recommendations for reconnaissance collection priorities based on information requirements. Reconnaissance assets collect validated information requirements as tasked by the operations section. Information collection managers identify available collection assets, capabilities, limitations, and mission variables to determine which assets best fulfill collection requirements. Within the IS core competency, the intelligence section validates information requirements with the operations section. Because the intelligence section develops and manages collection requirements, the operations section relies on input to optimize collection. The G-2, with G-3 assistance, helps the commander coordinate, integrate, and supervise executing information collection plans and operations (Department of the Army 2016b, 7-11).

Corps Doctrine Summary

Gorps G-2 intelligence doctrine nests with greater Army intelligence doctrine while adding specificity and clarity. Clarity includes, but is not limited to, articulating specific intelligence competencies which support meta-competencies at the corps level. Corps headquarters require augmentation in both analytic personnel and collection assets. Duties and responsibilities drive activity within the corps G-2 section. The intelligence section must organize in a way to allow information collection management, analysis, production, and synchronization activities. The G-2 synchronizes collection efforts with the G-3 to produce a coherent collection plan tasked through the operations section.

Operation Desert Storm Doctrine Review

To understand written accounts regarding reconnaissance planning during Operation Desert Storm, one must understand how the Army operated circa 1990. The Army's AirLand Battle concept served as the Operation Desert Storm operating force doctrinal and organizational cornerstone. Nested within AirLand Battle was Army 86. Army 86 promulgated corps level operational concepts (Department of the Army 1981b, 1). Both documents outline requirements for corps headquarters to focus on the deep fight, leverage Air Force capabilities, and shape subordinate division fights.

The Soviet Union's collapse between 1989-1991 initiated early looks to redefine Army doctrine. After Operation Desert Storm, the Army undertook a massive doctrine overhaul to better align new technologies with operating concepts executed in 1991. Doctrine approved after Operation Desert Storm provides reflections regarding lessons learned, updated operational concepts based in the new security construct, and an Army preparing for a more expeditionary use (Romjue 1997, 2). While not in use during Operation Desert Storm, some early post-war doctrine may provide insights into how corps G-2 sections planned reconnaissance operations.

Operation Desert Storm Intelligence Core Competencies

Intelligence played a significant role in the three keys to credible warfighting capability on an integrated battlefield. Sensor and surveillance systems prevented surprise attack and provided necessary targeting and surveillance information. Command and control systems provided sufficient all-source intelligence in near real time to maneuver

forces (Department of the Army 1981b, 8). Intelligence Preparation of the Battlefield focused on key equipment and infrastructure identified during peacetime.

Intelligence, surveillance, and target acquisition (ISTA) tasks include IPB, target development, situation development, collector management, electronic warfare, operation security support, and counter command, control, and communications. IPB, while continuous, primarily occurs prior to hostilities to increase ISTA asset deployment timeliness. Target development includes correlating information, cueing ISTA assets, detection, identification, and locating enemy activity. Situation development supports corps commander's battlefield visualization to apply force and fire support at the right time and place. Situation development also includes environmental analysis normally identified during IPB (Department of the Army 1981b, 42).

Collector management integrates adjacent corps, echelon above corps, Air Force, and national collection systems. Electronic warfare jams enemy command control and communications systems within 150km of the forward line of troops (FLOT). Intelligence must synchronize electronic warfare operations with fire support and maneuver to achieve a 50% disruption effect. Operation security focuses on identifying enemy intelligence capabilities and analyzing friendly unit vulnerabilities. Vulnerability assessment include high-value target, pattern, and profile analysis; identifying friendly vulnerabilities by enemy collection platform; recommending countermeasures, and providing support to deception and rear area operations (Department of the Army 1981b, 43).

Corps 86 Intelligence Roles and Responsibilities

The Army designed corps headquarters to shape operations within 150km of the FLOT. During offensive operations, corps headquarters interdict combat and combat support forces in depth. Intelligence collection focused on areas influencing the FLOT within the next 96 hours. The intelligence area of responsibility typically reached 300km beyond the FLOT (Department of the Army 1981b, 41).

The corps headquarters typically served as the first echelon that integrated information from national and tactical assets. Corps intelligence sections processed, exploited, and disseminated two data types: combat information and intelligence. Combat and combat support units utilized combat information without interpretation, analysis, or integration with other data. Intelligence required validation, integration, and comparison with other data before exploitation by combat units. Combat information integrated with intelligence to form analytic products. Intelligence sections balanced the time and processing requirements to produce or disseminate analytic products (Department of the Army 1981b, 40).

The corps headquarters executed ten key tasks. Command, control and communications, interdiction, and ISTA, four corps headquarter key tasks, heavily rely on intelligence functions for successful execution (Department of the Army 1981b, 30). G-2 duties include:

1. Conducts continuous intelligence preparation of the battlefield (IPB).
2. Directs intelligence-collection activities.
3. Assesses collection activities results.
4. Refines the requirements for further collection efforts.

5. Develops targets.
6. Provides OPSEC information to the G-3.

Corps 86 and Reconnaissance Planning

The corps plans limited ground reconnaissance operations while executing concepts contained in AirLand Battle. Despite identifying a need to shape the deep fight through fires, the primary corps reconnaissance organization, an Armored Cavalry Regiment (ACR), primarily executes tasks as a covering force in both the offense and defense. While on the offense, corps reconnaissance organizations cover a division's front, flank, or rear, as required (Department of the Army 1981a, 6-28 – 6-34). While in the defense, corps assets cover a division's front or flank. The operational concept allowed for limited reconnaissance, but ultimately served to gain and maintain initial contact for main body forces (Department of the Army 1981b, 47). Generally speaking, ground reconnaissance planning guidance within doctrine lacked definition within the AirLand Battle operating concept.

Operation Desert Storm Corps Intelligence Design

Legacy doctrine lacks any detail regarding corps intelligence organizational design. Doctrine mentions ACRs, military intelligence groups, and other special assets support corps during operations. Units mobilize to support corps, but retain no formal relationships beyond the conflict. Like current doctrine, the legacy corps required a similar enabler support structure and style to achieve the mission.

Corps Intelligence Challenges During Operation Desert Storm

The corps participating in Operation Desert Storm faced challenges within intelligence core competencies, design, roles and responsibilities, and reconnaissance operations. Organizing written reports into the above groups focuses observations into common themes. The common themes drive topics within chapter 4, analysis, later in the thesis.

Intelligence Meta-competencies

Doctrinal categories organized written accounts from Operation Desert Storm to better support current and legacy doctrine analysis. Utilizing the core competency model from current doctrine, written accounts provide insight into how intelligence activities leverage competencies. While doctrine did not describe core competencies during Operation Desert Storm to the same detail level as current doctrine, organizing observations into core competency categories allows easier analysis.

Intelligence Analysis

Operation Desert Storm served as the first conflict where decision makers at the warfare's three levels accessed vast intelligence information data sets, predominantly collected by aerial and space borne platforms (Wilson 1999, 2). A key competency required for successful offensive operations included imagery exploitation from theater and national systems. Corps level and below commanders requested vast collection requirements to finalize plans, but limited assets prevented collection. Strategic assets remained focused on other priorities and generally did not support the tactical fight. The

Joint Surveillance Target Attack Radar System (J-STARS) served as a key collection asset to alert ground commanders where Iraqi forces repositioned (Swain 1994, 94).

By mid-September 1990, intelligence analysts confirmed Iraqi army composition and disposition in forward echelons. Conscript units occupied fixed positions facing south and east in increasingly prepared defensive belts. Operational reserves and regular army mechanized forces positioned to react to any allied penetration. Republican Guard Forces Command retrograded from Kuwait to southeastern Iraq. Iraqi defense forces left the western flank undefended (Swain 1994, 79). Analysis activities provided a foundation for the eventual guard and offensive operations conducted by each corps.

Intelligence Operations

US Army Central Command (ARCENT) planners underestimated requirements for intelligence support to operations, particularly in battle damage assessments linked to the air campaign (Swain 1994, 156). Information collection management suffered initially as there were no plans to utilize U-2 reconnaissance to support offensive operations. Tactical units received near real time reports from U-2s, but tactical commanders demanded visual products. Collecting information to produce hard copy products interfered with providing near-real time intelligence reports (Cross 1995, 51).

While U-2s initially collected large imagery swaths at a lower resolution, tactical commanders requested higher resolution images. Resulting changes to collection platforms meant that the collection swath shrank significantly, but produced images with useful resolution. Tactical commanders continued to challenge U-2 collection by requesting larger collection areas while retaining image resolution. Collection

requirements changed well within normal tasking timelines as tactical commanders negotiated with CENTCOM staff for prioritized collection (Cross 1995, 38).

Intelligence Synchronization

The operational analysis center positioned itself in Riyadh, Saudi Arabia (Swain 1994, 145). ARCENT deployed liaison teams to facilitate intelligence information sharing with subordinate commands, particularly XVIII and VII Corps (Swain 1994, 146). The two tactical corps received little intelligence information from their subordinate units due to deception requirements limiting reconnaissance and intelligence collection (Swain 1994, 89). Strategic level analysis produced reports and assessments which conflicted with each other, further clouding enemy forces visualization (Shellum 1996, 12).

Shifting collection priorities caused U-2 crews to dynamically retask collection operations, potentially resulting in conflicting data fed to analysts conducting battle damage assessments. Analysts at different levels used different intelligence sources, resulting in one cell utilizing videotapes from strike missions, another cell satellite imagery, and a third cell the U-2 data. Lacking fusion analysis led to an overestimating residual Iraqi combat power while underestimating air strike effectiveness. Airborne platforms served as the most reliable platform to confirm or deny air strike effectiveness. The Iraqi air defense system, however, limited Airborne platform overflights due to tactical risk (Wilson 1999, 62).

The intelligence architecture supporting decision making lacked design to transmit information collected for strategic level decision makers to operational or tactical level commanders. The developmental architecture lead to latency in information

dissemination. Strategic level analysis stripped images down to smaller areas, resulting in less than optimal products for consumption at lower echelons. Poor sensor coverage led to the correct Iraqi order of battle analysis, but overestimated their strength due to over counting. Cloud cover degraded collection capability for over half of the time used to build up coalition forces, allowing Iraqi forces to move while collection platforms failed to track movement (Wilson 1999, 104).

Operation Desert Storm Corps Intelligence Design

Initially, XVIII Airborne Corps prepared for defensive war while executing Operation Desert Shield. Inherent to defensive operations, the intelligence section required less personnel to support operations (Swain 1994, 43). To utilize a deception plan, operational planners decided to reposition maneuver units only when ready to conduct offensive operations. Intelligence collection operations focused on aerial reconnaissance due to restrictions on using ground forces. Analysts utilized theater and national collection assets rather than relying on bottom-up tactical collection platforms to fulfill deception requirements (Swain 1994, 89).

Arabic linguist support shortages limited intelligence information exploitation. Developmental systems established an intelligence distribution communications network. Tactical and operational intelligence investment lagged behind other modernization and technological improvement plans (Swain 1994, 156). Data greatly outpaced analytic processing capability as well as the information technology infrastructure required to process it.

VII Corps utilized Pioneer Unmanned Aerial Vehicles (UAVs) for mine hunting and attack helicopter target acquisition. Pioneer UAV collection operations focused on

tactical level objectives. UAVs provided coverage in areas considered high risk to personnel. The tradeoff for reduced risk to personnel resulted in lower available time for collection as the fleet could not conduct midair refueling operations to extend loiter time. UAVs carried fewer sensors, limiting them more focused technical collection efforts (Wilson 1999, xv). Initially, U-2s supporting offensive operations focused collection on identifying SCUD launchers rather than supporting tactical information requirements. Eventually, U-2 dynamic retasking, as controlled by CENTCOM, allowed tactical information requirement collection (Cross 1995, 40).

The United States utilized manned reconnaissance aircraft and reconnaissance satellites to fulfill several information requirements. The US utilized two major commercially available spaced based collection platforms known as the US LANDSAT and *Satellite Pour I 'Observation de la Terre,* or SPOT. Department of Defense utilized these satellites for terrain analysis, map substitutes, and mission planning. Satellites provided reconnaissance over large areas every 99 minutes (Wilson 1999, 17-18).

Space based reconnaissance allowed for information collection without violating other nation’s sovereignty while eliminating the risk to pilots operating a manned platform. Images provided data at 36 yards by 115 miles wide from the LANDS AT and 38 miles by 38 miles from the SPOT. Spaced based reconnaissance operations remained vulnerable if threat forces understood the orbital collection rate and remained in positions where a satellite gathers little usable information (Wilson 1999, 20).

Operation Desert Storm Corps Intelligence Roles and Responsibilities

By September 25th, 1990, the CENTCOM J5 realized three key considerations. First, CENTCOM forces sought to fight the fewest enemy formations possible. Second, an air offensive must reduce enemy formations to 50 percent in aggregate prior to executing offensive operations. Third, while anticipating fast mechanized maneuver, CENTCOM and subordinate units anticipated the need for rapid intelligence acquisition, reporting, and targeting to ensure success (Swain 1994, 78).

As VII Corps planned its ground attack to destroy the Iraq's Republican Guard, ARCENT developed the echelon-above-corps intelligence collection and dissemination support packages to support corps operations. The G-5 SAMS planners displaced G-2 staff members, rendering the section less effective. Corps staff lacked bottom-up reporting prior to executing offensive operations to preserve operational security within the deception operation (Swain 1994, 155).

Reconnaissance Operations Supporting Corps

The two most leveraged manned area imagery-producing platforms were the U-2 Dragon Lady and the SR-71 Blackbird. The U-2 provided imagery, electronic intelligence, and enemy electronic emitter pinpointing. It also tracked vehicle and troop movement or monitored nuclear facilities in unfriendly nations. Like space based platforms, the U-2 collected in all weather conditions as equipped. The U-2 also paired with a ground station to provide near real time imagery to an analyst team.

Moving target indicator sensors attached to the U-2 provide information on moving ground targets, creating another capability for collection. The SR-71 collects

information with a similar capability to the U-2 while operating at a speed and altitude that provides greater protection from air defense systems. The SR-71 comes at an hourly operational cost over six times greater than the U-2, leading to its eventual retirement in January 1990 (Wilson 1999, xiv).

A major manned platform advantage over satellite based platforms is manned platforms generally can fly as directed while satellite based platforms must follow a pre-designated orbit established during its launch. Manned platforms can be “dynamically retasked” to collect information over a different area based on an updated collection requirements (Wilson 1999, xiv).

By August 1990, satellite imagery revealed Iraqi military forces massing 120,000 troops and over 1,000 tanks along the southeastern Iraqi border. Multi-platform imagery proved useful to Iraqi Army composition and disposition. Collection failed to identify intent behind the massing or initial military objectives should Iraq invade its neighbors. Once Iraq invaded Kuwait on August 2, 1990, planners requested collection and analysis support to determine Iraqi order of battle, defensive positions, and key asset locations for targeting (Wilson 1999, 62).

Due to Iraq’s air defense systems, and recent SR-71 retirements, reconnaissance operations did not rely on manned aerial platforms. As a result, Operation Desert Storm marked the first-time satellites directly supported warfare’s three levels. Because strategic decision makers required information on strategic targets like nuclear and chemical facilities, while operational leaders required information focused on military strength and activity, satellite collection priorities conflicted between intelligence consumers (Wilson 1999, 63).

The U-2 arrived on 17 August 1990 to provide strategic reconnaissance to support Operation Desert Storm. While strategically focused, the U-2 provided more than "30% of the total intelligence, 50% of the imagery intelligence, and 90% of all Army targeting intelligence" for operational and tactical level decision makers. U-2's reconnaissance operations focused on identifying Iraqi troop movements, potential targets for future offensive operations, and eventually hunting Iraqi Subsonic Cruise Unarmed Decoy (SCUD) missiles (Wilson 1999, 65).

CHAPTER 3

RESEARCH METHODOLOGY

This thesis utilizes qualitative analysis to answer research questions. The qualitative analysis encompasses current and Operation Desert Storm era doctrine, organizations, roles, responsibilities, and designs. Analysis also focuses on reviewing written accounts regarding reconnaissance operations during Operation Desert Storm.

Current doctrine analysis utilized the Army Publication Directorate to ensure reviewed publications remained relevant. Organizational analysis did not use Force Management System Web (FMSWeb) tools to avoid "For Official Use Only" information. Conclusions drawn from regarding current organizational analysis originate from information found in doctrinal references.

Operation Desert Storm doctrine follows the official Training and Doctrine Command (TRADOC) history provided in *American Army Doctrine in post-Cold War*. This history outlines which publication versions existed during the mid-1980s and 90s. Organizational analysis related to Operation Desert Storm units originates from valid publications as outlined in the TRADOC history piece. Some written accounts facilitated organizational capabilities and shortfall analysis but remained secondary to doctrinal writings when content conflicted.

Written accounts reference corps reconnaissance operations, intelligence competencies, and decision making executed by tactical and operational commanders. Other theses and monographs related to corps reconnaissance operations during Operation Desert Storm provided similar written accounts. After reviewing similar written accounts, analyzed works included in this thesis most closely relate to corps

intelligence and reconnaissance operations. Utilizing the Ike Skelton Combined Arms Research Library's paper and digital resources facilitated a thorough search on available works relevant to the study.

Several monographs and Master of Military Art and Science (MMAS) theses discuss intelligence related topics within Operation Desert Storm. After reviewing over thirty monographs and theses, research determined a study regarding core competencies within the corps headquarters failed to exist. Reviewing cited works within the above mentioned monographs and thesis allowed for continued research into written accounts regarding corps G-2 sections, reconnaissance operations, and intelligence competencies.

CHAPTER 4

ANALYSIS

Analyzing Current Doctrinal Shortfalls

Identifying competencies required for corps intelligence staffs to plan reconnaissance operations serves as the primary research question within this thesis. As such, understanding doctrinal gaps in current publications outlines issues in identifying any potentially missing competencies. By focusing on what constitutes a competency, analysis highlights capability gaps within doctrine.

Intelligence Core Competency Analysis

Current intelligence doctrine fails to standardize terms of reference within ADRP 2-0 and across other publications. Specifically, competencies lack definition to understand what the intelligence community views as a competency. The three core competencies serve as meta-competencies as defined in key terms within this thesis. Figure 4 below highlights how skills, competencies, and meta-competencies describe desired capabilities within intelligence staffs and formations. Identifying skills which constitute a desired competency allows focused training and resourcing for successful operating conditions. Identifying competencies desired within a meta-competency, particularly the three intelligence core competencies, generates synergy and understanding between required competencies.

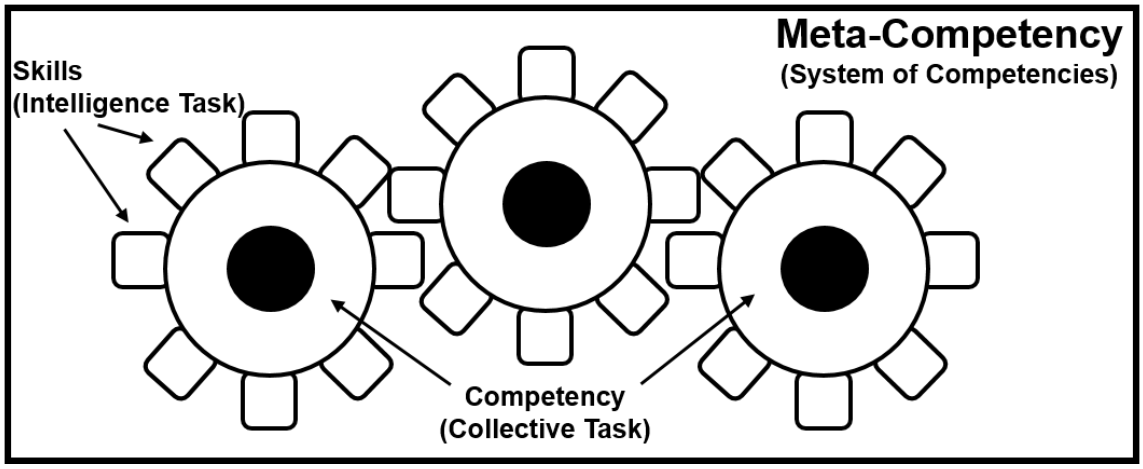

Figure 4. Skill to Competency Relationship

Source: Created by author.

Intelligence core competencies serve as meta-competencies required within all organizations and disciplines. ADRP 2-0 therefore outlines a requirement for all units and intelligence Soldiers to competently conduct IS, IO, and IA. The intelligence core competencies should encompass all desired activities required from intelligence to support the commander and staff. Further core competency analysis within the intelligence process, duties, and responsibilities highlight how each supports specific functions.

The Intelligence Process and Core Competencies

As highlighted in chapter two, intelligence core competencies and the intelligence process exists within two different systems. Three core intelligence meta-competencies exist within the intelligence process, to varying degrees. Continuous analysis and assessing processes serve as a catch all activity embodied within IS. Simultaneously, the intelligence process describes IS activities apart from analysis and assessment activities.

Described another way, IS occurs internally to the intelligence staff and externally to other staff sections and organizations.

The collect step heavily utilizes IO core competencies. The produce step similarly utilizes the IA core competency. The disseminate step harnesses the IS core competency. The intelligence process step, plan and direct, requires all three intelligence competencies working in unison to accomplish required tasks.

The plan and direct step contains a bulletized activity referring to planning information requirements and assessing collection. Conducting IPB and generating intelligence knowledge draws competencies directly from IA. Planning information requirements requires IS within the planning section to ensure running estimates and other products contain updated and accurate information. Once the staff identifies collection requirements, tasking orders direct IO to collect the required information. Assessing collection requires coordination with units conducting the information collection and dissemination activities. Research and intelligence reach focus synchronization activities with other organizations, utilizing more external synchronization competencies.

Planning requirements and assessing collection require different competencies and skill sets such as internal vs. external synchronization for successful completion. Analysis repeatedly and unambiguously identified speed as a critical IS competency component. Competent IS practice assumes anaysts have time to establish connectivity, coordinate, and utilize technological systems to gain understanding through external synchronization. Internal synchronization activities include face to face information sharing, digital file transfer, or other actions which remain within a headquarters.

Generally, internal synchronization occurs with or without digital connectivity and is limited by time, manpower, and requirements to maintain situational awareness. Assessing collection requires internal synchronization to understand how situational awareness changes and external synchronization to adjust collection operations.

Core Competencies and Supporting Competencies and Skills

The Army produces tasks, conditions, and standards to evaluate how competently a Soldier, or group of Soldiers, execute an individual or collective task. Individual tasks (a skill) generally build to a collective task (or competency) that support a meta-competency. Eventually, competencies directly support a unit's mission essential task list, or METL. The Combined Arms Training Strategy (CATS) website identifies skills and competencies which support company and below echelon units. Future army CATS growth should address the linkage of skills and competencies to overarching meta-competencies associated with each warfighting function.

Because CATS utilizes a website interface, changes to individual and collective tasks, conditions, and standards occur with greater ease than approving changes to other doctrinal references. As technology and techniques change, tasks, conditions, and standards change to reflect the updated environment. Core competencies, as written in ADRP 2-0, reflect long term competencies required, apart from changes in tactics, techniques, procedures, and technology. Therefore, the core competencies describe a more generic meta-competency rather than supporting competency labeled as a supporting task.

While examining each core competency, some supporting competencies appear as collective tasks while others appear as skills which support a collective task. When

examining the IA competency, ADRP 2-0 references conducting IPB as an iterative process within MDMP. Conduct IPB, collective task 34-SEC-3180, captures the skills required to perform the competency. ADRP 2-0 references disseminating combat information through command channels as a competency. Figure 1 in this thesis lists information collection, IO, reconnaissance, surveillance, and security operations as components within the collect step. Information collection utilizes the four other items mentioned within the collect step. Content within the chart seems loosely associated with the headlining topic.

IO, as described in Figure 3, lists seven intelligence disciplines. Each discipline describes the missions executed and activities executed constitute each discipline. Each discipline varies significantly, making discerning each discipline's competencies and their supporting skills problematic.

For example, the GEOINT discipline appears to list individual or collective tasks to describe its core activities while other disciplines list mission types executed within the discipline. Standardizing what constitutes a competency within each discipline provides more comparable terms of reference when understanding how disciplines support the IO meta-competency.

Legacy and Current Doctrine Analysis

Where chapter two outlined information contained within legacy and current doctrine, chapter four attempts to draw parallels and divergences within intelligence skills, competencies, and organization. Comparing and contrasting historical and contemporary doctrine, as well as by major subject area, provides additional insights. Unlike current doctrine, Operation Desert Storm legacy doctrine utilized one capstone

operating concept with supporting pamphlets, field manuals, and training documents. The Army's current Army Doctrine Publication (ADP) and Army Doctrine Reference Publication (ADRP) system approaches doctrine from a more functional standpoint.

Intelligence Core Competencies Comparison

Utilizing the framework established in current doctrine, intelligence core competencies provides understanding as to how the Army wants corps intelligence sections operating. Because legacy doctrine avoided using explicit terms outlining competencies required for intelligence professionals, comparison only occurs through applying legacy definitions to current ones. ADRP 2-0's current version served as the first publication officially defining intelligence core competencies. Fortunately, a codified core competency understanding allowed doctrinal analysis to determine if skills included in the competencies were to change over time.

Intelligence Synchronization

Intelligence synchronization balances collection, production, exploitation, and dissemination time requirements (Department of the Army 2016a, 2-10). AirLand Battle addressed the requirement to balance process information time and produce and disseminate analytic products. Both AirLand Battle and ADRP 2-0 generally agree on a fundamental balance between two major skill sets: collection and processing/exploitation against production and dissemination. Inherently, analysts spend time either processing and exploiting new information or produce updated analytic products for dissemination.

Intelligence Operations

The corps directs IO by generating information requirements and tasking collection in the information collection plan (Department of the Army 2016a, 2-10). ISTA lumps IPB and collector management with tasks no longer associated with the IO core competency. Electronic warfare and counter command, control and communication operations migrated to non-lethal effects and are no longer intelligence centric activities. Operations security support falls into the protection warfighting function within the G-3's purview. IPB and situation development skills belong with the IA core competency.

Ultimately, current and legacy doctrine identify the need for corps intelligence sections to identify collection requirements and communicate requirements to personnel conducting IO. Both doctrine sets also determined the need to prioritize, assess, and reallocate collection assets as needed. Collector management and collection management skills include common themes regarding leveraging assets outside the corps. When comparing current and legacy doctrine, IO contains the same identified skills but eliminates aspects no longer conducted within the intelligence warfighting function. Specifically, electronic warfare and operations security skills no longer fall under the intelligence umbrella.

Intelligence Analysis

IA skills translate closely between current and legacy doctrine. Both highlight commander visualization, force organization, and operations control requirements. Doctrine discusses the relationship between conducting analysis and synchronizing answered and new information requirements with collection management. A legacy competency called target development blends IA and IO processes.

A Legacy Competency

Target development touches on the elements highlighted by ADRP 2-0 regarding the relationship between IA and IO. While ADRP 2-0 highlights there is a relationship between IA and operations, target development identifies an integrating function in which intelligence utilizes skills discussed within the synchronization, analysis, and operations core competencies.

Target development specifically addresses the need for IA feeding operations in such a way the corps can more effectively command and control the fight. Corps-level operations require intel section to efficiently analyze and disseminate updated products to support deep operations, especially lethal fires. Legacy doctrine describes target development as a process which values quick, direct updates to critical decision makers for effective fires. Current doctrine generally describes synchronization competencies but does not address the speed or direct nature required to conduct target development tasks.

Planning and Execution Competency Friction

FM 100-5, *Operations* (1986), identifies deep surveillance and target acquisition key to successful deep operations. Despite acknowledging the need for deep operations, corps ground reconnaissance planning guidance lacks definition and content. Particularly, the corps should utilize national and sister service reconnaissance assets. Doctrine regarding the ACR mentions zone reconnaissance as an appropriate reconnaissance operation to support corps requirements.

The disconnect between FM 100-5, *Operations*, FM 17-95, *Cavalry*, and TRADOC PAM 525-5, *AirLand Battle and Corps 86*, indicates that while a corps ACR could do reconnaissance, corps headquarters should focus planning efforts to collect

information requirements utilizing assets other than ground reconnaissance. The two corps in Operation Desert Storm lacked other reconnaissance assets which current corps design allows. Despite the Army containing differing reconnaissance assets between then and now, doctrine generally avoids describing how intelligence sections, particularly the information collection section, identifies information requirements, validates the requirement, coordinates with the operations planners, tasks ground reconnaissance assets, and adjusts collection.

Intelligence Roles and Responsibilities Comparison

Intelligence roles and responsibilities highlight competencies required within the corps G-2 staff section. Figure 5 below highlights how roles and responsibilities translate between doctrine sets. Each role or responsibility utilizes a skill mixes and competencies found within the meta-competencies from the intelligence core competencies. Each role or responsibility outlines a general activity but does not translate into a specific task as recorded in CATS.

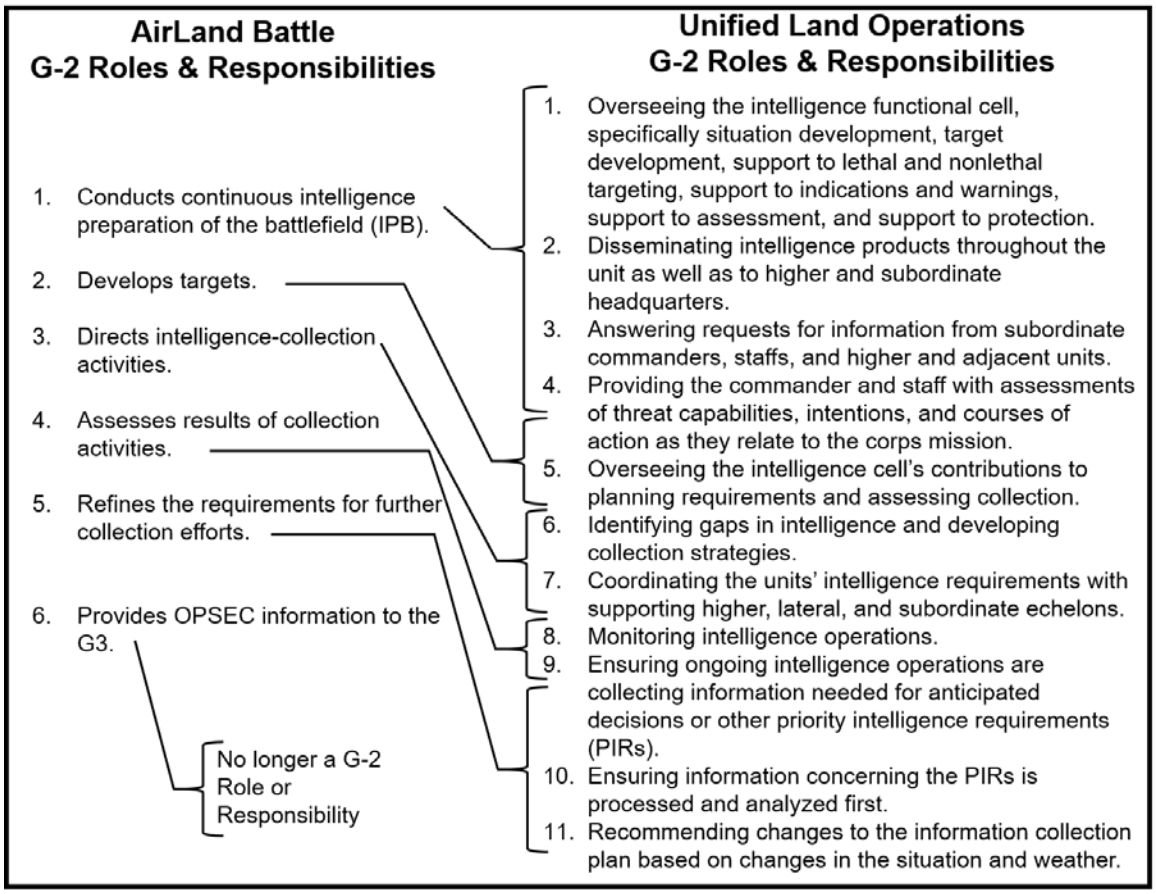

Figure 5. G-2 Roles and Responsibilities Comparison

Source: Created by author. Derived from FM 100-5, *Operations,* 1986), 46; FM 6-0, *Commander and Staff Organization and Operations, 2014,* 2-8.

Roles and Responsibilities Comparison

Current doctrine includes more tasks for corps G-2s than AirLand Battle. Only five of the six roles and responsibilities listed in AirLand Battle translate to the eleven roles outlined in ADRP 2-0. The sixth role from AirLand Battle, Operations Security, belongs within the operations section within current doctrine. Each doctrinal set requires

the G-2 to develop products to assist in planning, managing collection operations, assessing collection, and developing targets.

Core Competency Relation to Roles and Responsibilities

Legacy doctrine allows the intelligence section to direct IO while current doctrine only allows the section to monitor operations. Currently, operations sections task collection assets with input from the intelligence section. Current doctrine addresses in detail IS roles and responsibilities conducted by the G-2 which AirLand Battle failed to address directly. Legacy roles and responsibilities nearly match current intelligence core competencies. Developing targets and conducting IPB form the nucleus for IA. Direct intelligence-collection activities reflect IO competencies. Assessing collection activity results and refining the requirements for further collection efforts follow elements within IS.

Understanding Reports from Operation Desert Storm

The final section within doctrinal analysis focuses on tying together current doctrinal shortfalls, the current doctrinal framework, identified doctrinal requirements from legacy doctrine, and assessments regarding corps intelligence staff effectiveness.

Intelligence Core Competency Framework

Mirroring other thesis sections, examining each meta-competency written account allows for success and failure comparison. Therefore, this section highlights focus items within IA, IO, and IS.

Intelligence Analysis

Within AirLand Battle doctrine, most IA occurs prior to combat operations. ARCENT's intelligence infrastructure supported a top down driven analysis system. As updated reports and products flowed into the ARCENT analysis center, analysis products trickled towards the numbered corps. While a corps may refine provided IPB products, it's ability to incorporate new running estimates and planning product information was at ARCENT's mercy. Restricting reconnaissance operations at and below the two numbered corps prevented any bottom-up refinement based on new information, resulting in increased demands for imagery to answer a commander's information requirement. Because strategic level analysts disagreed and produced conflicting reports, it is likely the corps commanders and staffs requested high resolution imagery collection to rectify poor assessments.

Intelligence Operations

ARCENT appeared to retain most collection capabilities within the Kuwait Theater of Operations throughout Operation Desert Storm. Because the corps limited its collection apparatus to preserve operational security, intelligence collection management served as the main conduit to answer information requirements. While the written accounts lack detail regarding intelligence collection management, reflections from U-2 historians indicate that tactical requirements shifted collection priorities at ARCENT. Additionally, prohibiting ground reconnaissance efforts forced intelligence collection managers to focus planning efforts on articulating intelligence requirements and requesting capabilities from higher headquarters. Utilizing theater and national collection

efforts in the corps collection management section is in line with AirLand Battle doctrine and other historical accounts.

Intelligence Synchronization

AirLand Battle identifies similar requirements for quick and accurate intelligence information and assessment dissemination. Reports from aerial collection platform operators indicate collected information transited to tactical decision makers in a timely fashion. The same reports indicate frustration within the synchronization competency to balance production requirements with dissemination efforts. Determining how many hard copy products U-2s produced rather than providing near-real-time reporting highlights the challenges within the competency. Shifting requirements also places collection priorities at risk as personalities drive collection rather than legitimate need. Written accounts highlight challenges analyzing near-real-time information, producing updated analysis products, informing decision makers, and adjusting collection. IS contained a several tasks beyond the scope within one competency.

Some accounts indicate the intelligence architecture failed to support tactical decision making. While the accounts lack specificity, it appears the central analysis node in Riyadh lacked ample communications with tactical headquarters. One specific observation noted architecture failed to meet data demands required on a digital battlefield. Different echelon IA section utilized different U-2 data to arrive at different conclusions, presumably due to raw report and product availability. Exploiting similar, or same, data at different echelons creates inefficiencies in intelligence information processing, exploiting, and dissemination. Establishing a functional architecture,

outlining roles and responsibilities, and leveraging analytical power within different nodes synergizes analytic and synchronization efforts.

Target Acquisition

While not a current core competency, corps level target acquisition supported targeting and situational understanding. Aligning U-2 collection towards real-time information supported the requirement for intelligence to cue lethal and non-lethal fires within the corps deep fight. Information requirements shifted, resulting in a changed ISTA asset allocation, supporting target acquisition competency.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Doctrinal Recommendations to Current Competencies

The intelligence process outlines how the intelligence core competencies and supporting competencies relate to each other. The intelligence process also highlights intelligence process workflow during execution. Doctrine loosely addresses how core competencies support the intelligence process, but does so indirectly. Understanding how skills, competencies, activities, roles, and responsibilities link together aligns processes with the desired function for each cell.

Figure 6, below, displays how doctrine could align skills, competencies, roles and responsibilities, the intelligence process, and the core competencies to better standardize how to describe each function. Clearly describing what doctrine wants Soldiers and leaders to do along with why skills and competencies build on each other allows leaders to best align their organization to meet mission requirements.

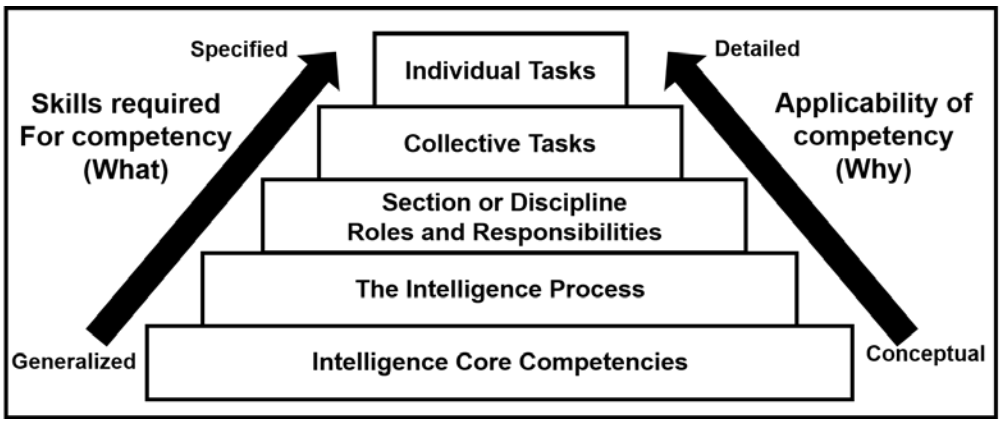

Figure 6. Intelligence Competency Crosswalk

Source: Created by author.

Defining Current Core Competencies

Current doctrine links IO and IA core competencies through the IS competency. IA supports command and decision maker ability to visualize the environment and apply resources at critical times. IO answer information requirements to support decision making. IS requires two major competencies to blend analysis and operations: intelligence information collection and dissemination, and integration into operations and decision making.

Intelligence Overwatch Core Competency

Legacy doctrine utilizes a target acquisition competency to highlight time sensitive nature of intelligence. Transplanting target acquisition competency into future doctrine allows intelligence professionals to better understand and develop skills required for a specific integrating competency within a staff. The proposed “Intelligence Overwatch” core competency utilizes the short time requirement outlined in legacy doctrine differentiated target acquisition from modern core competencies. Identifying that intelligence consumers require timely and accurate analysis to make decisions separates slower synchronizing functions from fast paced requirements.

Each of the four core competencies utilize planning and execution timelines differently. The competencies also align towards activities centered around analyzing or supporting decision making. Figure 7, below, aligns the four competencies to highlight how each core competency aligns with activities and timelines.

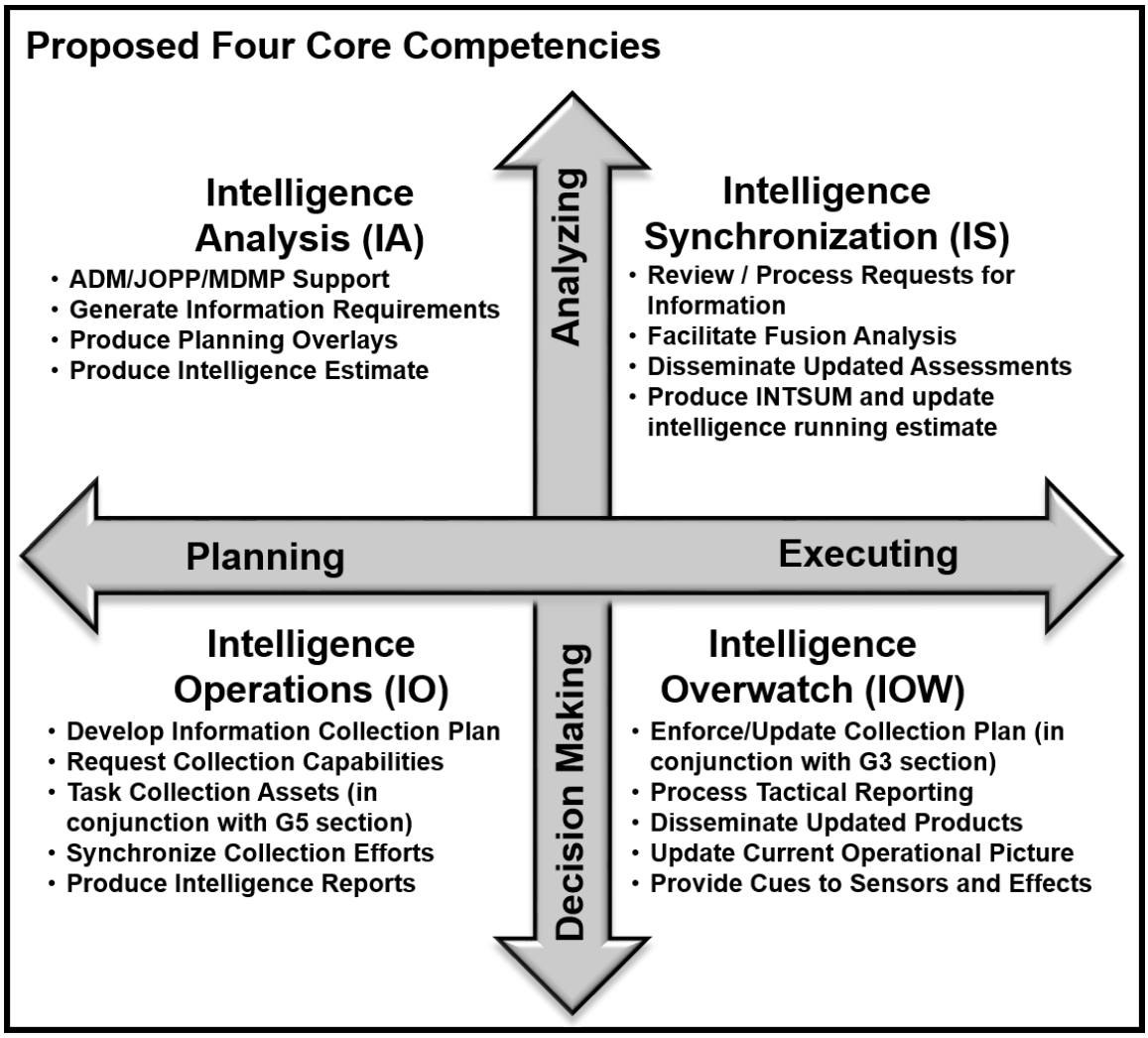

Figure 7. Four Core Competency Functions

Source: Created by author.

Redefining Core Competencies

By establishing a new core competency, the current competencies require adjustments to eliminate redundancy. Redefining IA to focus solely on analyzing the current environment and assessing future conditions aligns IA towards a planning function within an organization. Intelligence overwatch (IOW) falls on the spectrum's opposite side by utilizing planning tools as a baseline, updating execution products with

new information, and informing key decision makers about changes on the battlefield based on short time requirements. IO begin when analysis identifies an information requirement. IO plans generate orders to collection platforms based on forecasted requirements and allocated assets. In contrast, IS analyzes intelligence operation effectiveness and disseminates non-time sensitive products to consumers.

Figures 8-12, below, highlights how the four core competencies relate to five common competencies required in a corps intelligence section. Each competency mirrors a duty or responsibility outlined in AirLand Battle doctrine as adjusted to current doctrinal requirements. Drawing on ADRP 3-0's Unified Action block approach, each rectangle's parceling corresponds to respective meta-competency contribution. Statements supporting each core competency highlight skills utilized while executing the section competency. Skills highlighted originate from bullets in figure 7, above.

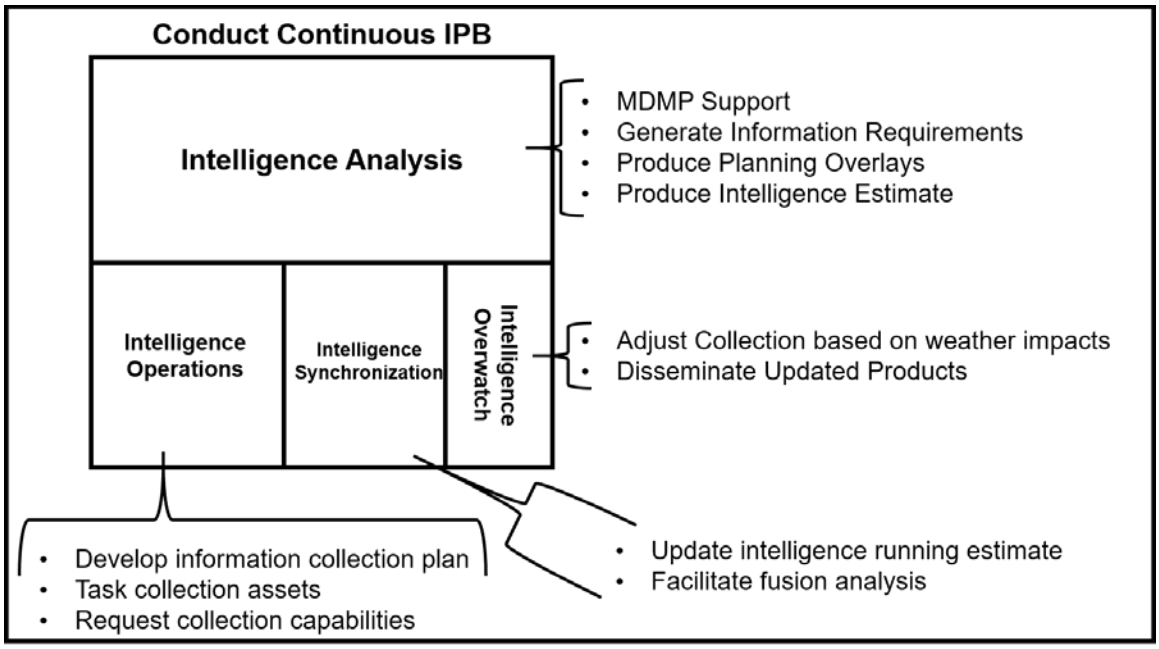

Figure 8. Conduct Continuous IPB Competency

Source: Created by author.

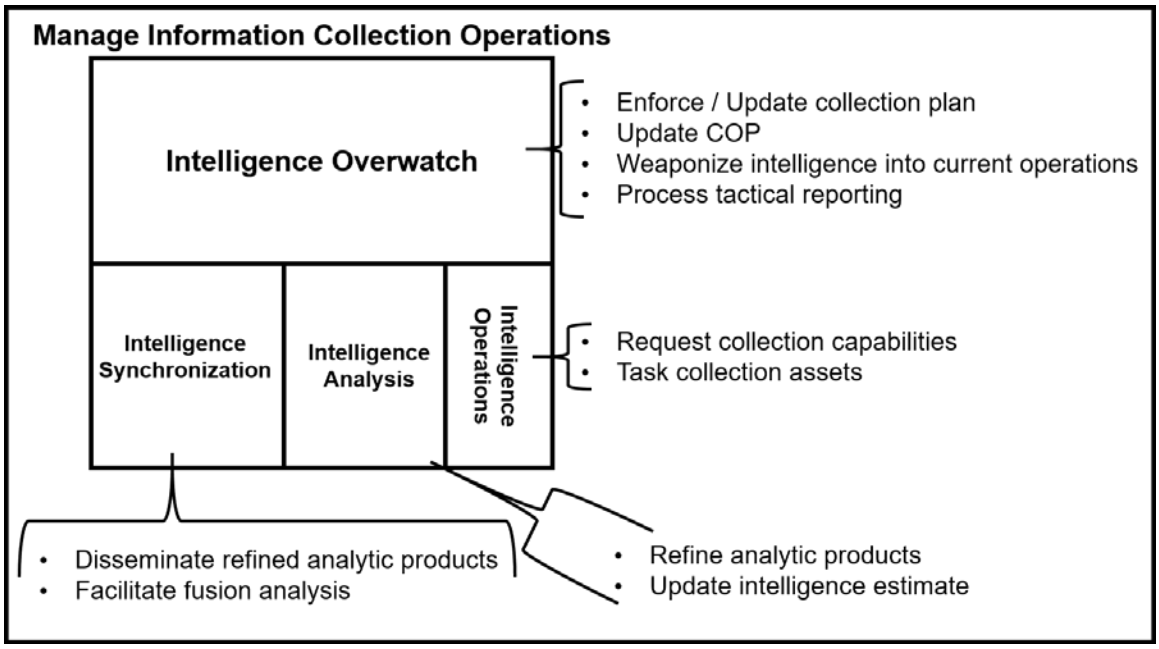

Figure 9. Manage Information Collection Operations

Source: Created by author.

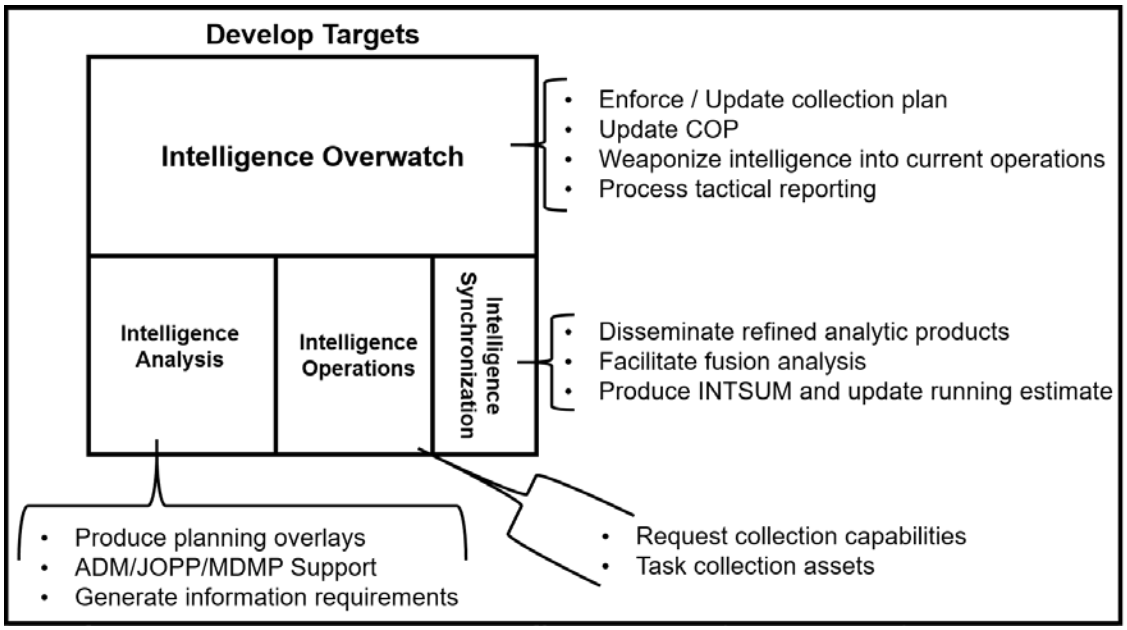

Figure 10. Develop Targets

Source: Created by author.

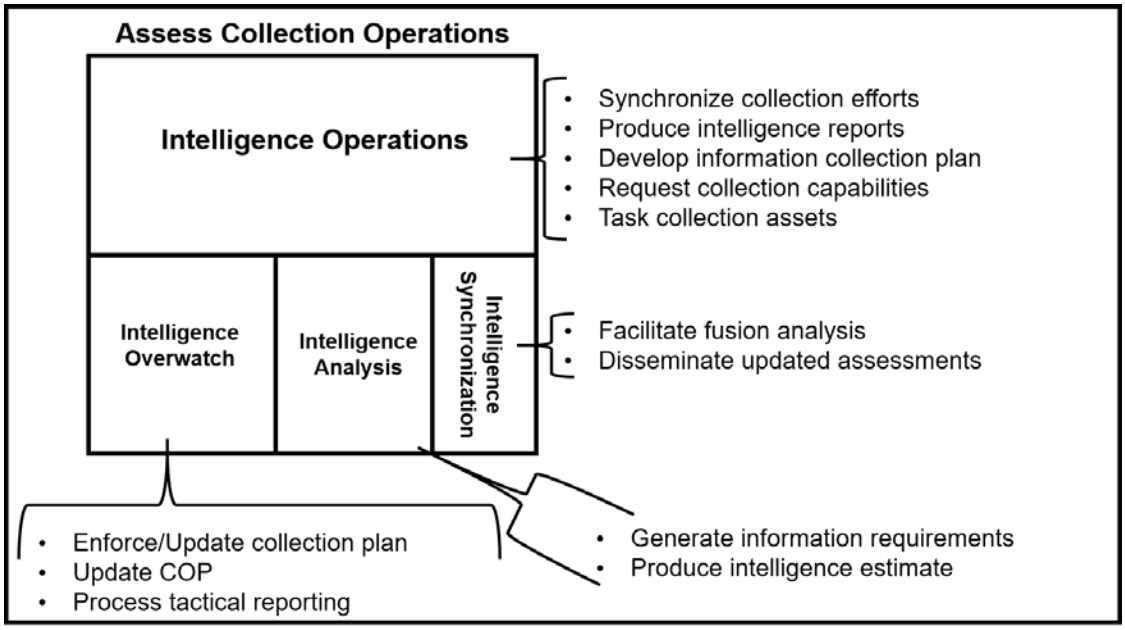

Figure 11. Assess Collection Operations

Source: Created by author.

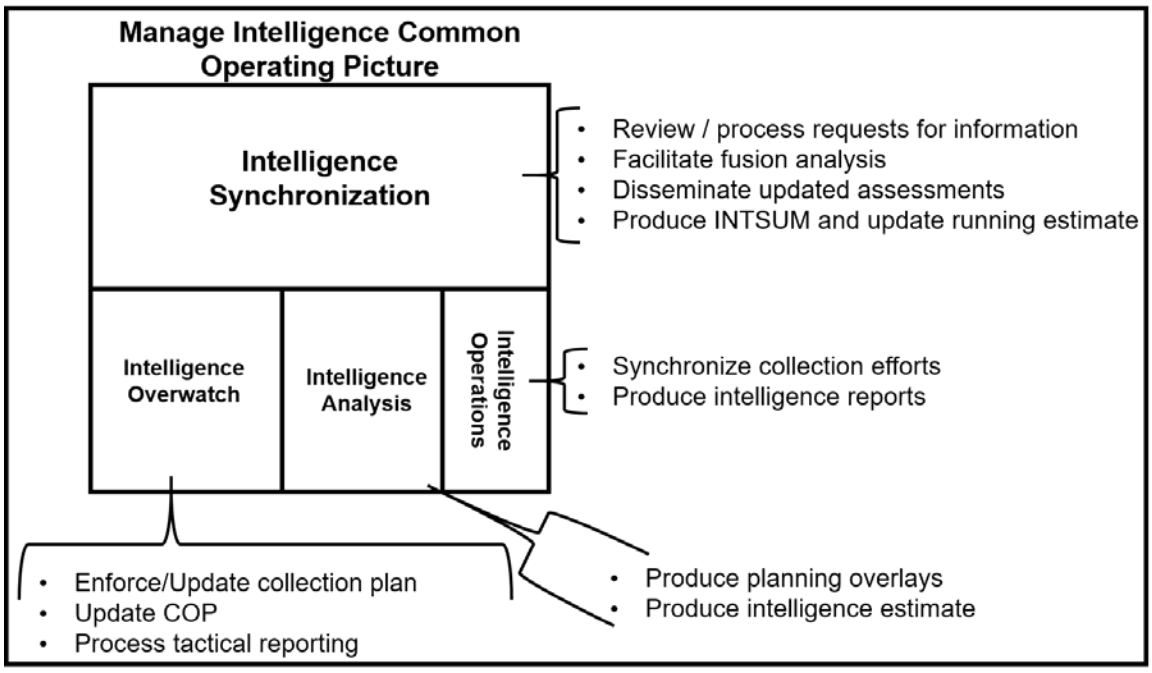

Figure 12. Manage Intelligence Common Operating Picture

Source: Created by author.

Core Competencies and Reconnaissance

Reconnaissance planning and execution relies on the four future intelligence meta-competencies working within the intelligence process to support decision making. Analysts identify information requirements and develop named areas of interest. IO involves tasking reconnaissance units to collect information as required. Intelligence overwatch adjusts collection tasks as information flows into the headquarters, ensuring assets are properly tasked and allocated. IS ensures everyone understands the information obtained through reconnaissance operations. Codifying the intelligence overwatch competency lashes the intelligence warfighting function with active reconnaissance operations to maximize collection effort effectiveness. Operation Desert Storm

highlighted the need for timely analysis and reporting to adjust reconnaissance units performing security operations. Future conflicts may require a deliberate focus from intelligence professionals to ensure reconnaissance efforts reach optimal effectiveness as anti-access and area denial technology limit reconnaissance platform capabilities.

BIBLIOGRAPHY

Brown, Reva Berman, and Sean McCartney. 1995. “Competence is Not Enough; Meta-Competence and Accounting Education.” *Accounting Education* 4, no. 1 (March):43-53.

Cross, C. F. 1995. *The Dragon Lady Meets the Challenge: The U-2 in Desert Storm.* Beale Air Force Base, CA: 9th Reconnaissance Wing, USAF.

Department of the Army. 1981a. Field Manual (FM) 17-95, *Cavalry.* Washington, DC: Government Printing Office.

———. 1981b. TRADOC PAM 525-5, *The AirLand Battle and Corps 86.* Washington, DC: Government Printing Office.

———. 1986. Field Manual (FM) 100-5, *Operations*. Washington, DC: Government Printing Office.

———. 2015. Army Doctrine Reference Publication (ADRP) 1-02, *Terms and Military Symbols.* Washington, DC: Government Printing Office.

———. 2016a. Army Doctrine Reference Publication (ADRP) 2-0, *Intelligence.* Washington, DC: Government Printing Office.

———. 2016b. Army Training Publication (ATP) 3.92, *Corps Operations.* Washington, DC: Government Printing Office.

———. 2016c. Field Manual (FM) 6-0, *Commander and Staf Organization and Operations*, Change 2. Washington, DC: Government Printing Office.

Dreyfus, Stuart E. 2004. “The Five-Stage Model of Adult Skill Acquisition.” *Bulletin of Science, Technology, and Society* 24, no. 3 (June): 177-181.

Joint Chiefs of Staff. 2012. Joint Publication (JP) 2-10, *Joint and National Intelligence Support to Military Operations.* Washington, DC: Government Printing Office.

Horton, Alex. 2017. “Army Deactivates its Small Team Reconnaissance Units.” *Stars and Stripes*, January 23. Accessed April 17, 2017. https://www.stripes.com/news/army-quietly-deactivates-its-small-team-reconnaissance-units-1.450392#.WPVN1KK1uUl.

Merriam-Webster. 2017. “Skill.” Accessed April 25, 2017. https://www.merriam-webster.com/dictionary/skill

Romjue, J. L. 1997. *American Army Doctrine for the Post-Cold War*. Washington, DC: United States Army Training and Doctrine Command.

Shellum, B. G. 1996. *Defense Intelligence Crisis Response Procedures and the Gulf War*. Washington, DC: Defense Intelligence Agency.

Swain, R. M. 1994. *"Lucky War," Third Army in Desert Storm.* Leavenworth, KS: US Army Command and General Staff College Press.

Wilson, C. P. 1999. *Strategic and Tactical Aerial Reconnaissance in the Near East.* Washington, DC: Washington Institute for Near East Policy.