



Strategy for Intelligence, Surveillance, and Reconnaissance

By Jason M. Brown

In the last 10 years, numerous reports have highlighted obstacles to the integration of intelligence, surveillance, and reconnaissance (ISR) into military campaigns and major operations.¹ The root cause of many of these difficulties is adherence to a centralized Cold War collection management doctrine focused on production rather than goals and objectives.² This Industrial Age concept is not agile enough to meet the challenges of military operations in the information age, which include compressed decision cycles and demands for operational precision. A strategy-oriented approach that balances ISR ends, ways, and

means will more effectively meet commanders' needs and expectations in today's increasingly complex operating environments.

The Problem

The history of the U-2 aircraft in Operation *Iraqi Freedom* illustrates the challenges related to ISR integration. Shortly after the start of the Iraq War, insurgent use of improvised explosive devices (IEDs) caused the United States to spend billions of dollars and dedicate substantial resources toward defeating these threats. This included tasking reconnaissance aircraft to find IEDs prior to detonation.³

Intelligence collection managers at the Multi-National Corps–Iraq (MNC-I) headquarters routinely tasked the U-2 to conduct change detection, a technique of using two images taken at different times to determine changes on the ground. In theory, if an insurgent planted an IED in the time between the two images, an analyst could detect a change on the second image and report the possibility of an IED.⁴ Because the collection managers treated all counter-IED requirements equally, MNC-I “peanut-butter spread” U-2 coverage throughout Iraq.⁵ As a result, the U-2 could not capture the second image required for change detection until 4 to 5 days after the first, while insurgents often detonated IEDs within hours of planting them. Moreover, analysts within tactical units had to submit most collection requests no later than 72 hours in advance of a U-2 mission, long before units planned and executed missions

Colonel Jason M. Brown, USAF, is Commander of 693rd ISR Group at Ramstein Air Base, Germany. He was previously Military Assistant to Deputy Under Secretary of Defense for Intelligence, Joint and Coalition Warfighter Support, and Commander of 13th Intelligence Squadron “Dark Knights” at Beale Air Force Base, California.

involving ground movement. Finally, collection managers at MNC-I discouraged U-2 operators and analysts from interacting directly with ground units for fear the units would circumvent their rigid collection request process. Consequently, U-2 operations did not integrate with the tactical operations they were meant to support.⁶ The result was little to no evidence that change detection found any IEDs. Despite this lack of evidence, collection managers, concerned more about the percentage of satisfied requirements than flaws in ISR strategy, continued to task the U-2 to hunt for IEDs via change detection for nearly 5 years.⁷

This U-2 example illustrates a decades-old systemic problem with ISR. During the Cold War, limited availability of collection assets and an Industrial Age approach to intelligence production favored long-term indications and warning problems focused on large-signature collection targets such as Soviet tank divisions. As a result, a system of managing competing requirements emerged that worked well for static environments but failed to adequately integrate ISR operations into dynamic military operations.

While a lack of analytic and collection resources contributed to ISR problems, it did not explain why the same issues persisted despite a massive infusion of ISR resources into Iraq and Afghanistan.⁸ In 2010 the Department of Defense (DOD) ISR Task Force (ISR TF) conducted a study on the utility of ground moving target indicator (GMTI) platforms, such as the E-8C Joint STARS, in Afghanistan. The study found the utility was “moderate to low” not because GMTI was inappropriate for the operating environment, but because there was not an effective organizational framework to integrate ISR operations to optimize intelligence and tactical effects.⁹

The following describes how the doctrinal collection management process essentially works. An analyst believes that a specific intelligence discipline, such as GMTI, can identify a signature related to a collection target, which is validated, deconflicted, and prioritized by collection managers. A collection manager then tasks an asset to collect the requirement

based on the priority ranking and the frequency with which analysts need information about the collection target.

The ISR TF discovered many drawbacks to this process. First, analysts and collection managers rarely had the appropriate understanding of ISR capabilities to determine the feasibility of requirements. Analysts submitted requirements based on limited ISR training prior to deploying, and collection managers throughout the validation process often rubber-stamped requirements. For example, analysts would submit GMTI requirements over cities failing to recognize GMTI platforms’ inability to distinguish moving targets in the clutter of an urban environment. Second, there was little incentive for time-constrained analysts to remove older requirements from the collection management system. Collection managers provided little oversight on purging the system of stale requirements, yet they would grow frustrated, for example, if their change detection requirements had a 35 percent satisfaction rate.¹⁰ The third problem was that requirements were rarely prioritized to focus ISR on the most important task at any given time. For example, if five different units had counter-IED requirements in the system, each likely had the same priority, even though four out of five may not have planned any ground movement during the collection cycle. Lastly, there was little to no feedback to determine if intelligence collection was meeting commanders’ expectations. The system focused on whether ISR resources “satisfied” the requirement, which meant collection occurred, not that collection actually met commander’s intent. In short, analysts, collectors, and consumers rarely interacted directly, and ISR planners expended more energy on administering requirements than planning to meet commanders’ objectives.¹¹

Many leaders and analysts eventually realized that it was not viable to submit formal intelligence requirements and then hope all the pieces would arrive at the right time.¹² Military units achieved ISR success by focusing less on managing requirements and more on ends, ways, and means. In other words, they succeeded

when they thought through objectives and concepts to allow commanders to arrange ISR resources in time, space, and purpose.

Units found some success in countering IEDs, for example, by refocusing ISR from locating the devices to understanding the insurgent network behind them. To meet the *ends* of protecting troops from IED attack, ISR planners adjusted the *ways* from threat warning to targeting, and the *means* from route scans to manhunting. This new approach required phasing and layering ISR resources against the right targets at the right time. One Marine unit in early 2012, for instance, dedicated 80 percent of its ISR resources to studying insurgent network patterns and linkages. This shift against routine procedures of route scans and patrol overwatch required a great deal of restraint by the unit commander to allow time for ISR efforts to generate targeting intelligence. In this case the Marine unit learned the path to force protection was indirect and was only obtainable by carefully thinking through the ISR strategy that would achieve the commander’s goals.¹³

The Marines’ success juxtaposed with the ineffective Industrial Age requirements-based processes illustrates the need for new thinking about ISR strategy. The Marines succeeded because they adjusted ISR ends, ways, and means to achieve their commander’s intent. Rather than impose an ISR construct meant for static warning scenarios, commanders must emulate the Marine example and create processes that generate similar effects throughout a joint force engaged in a campaign. Other warfighting functions such as joint fire support have a solid foundation and track record for achieving that purpose—that is, integrating the ends, ways, and means related to that function with the overall campaign strategy.¹⁴ Joint forces can achieve the same result by developing a process to develop and articulate a commander’s intent for ISR.

Developing the Commander’s Intent

The goal of an ISR strategy should be to create a problem-centric and not a requirements-centric approach to opera-



AH-64 Apache attack helicopter at Bagram Airfield after conducting armed reconnaissance operations and precision air strikes (U.S. Air Force/Matt Hecht)

tions. In other words, analysts, platform operators, and consumers should state the problems they must solve, not simply what requirements they must satisfy. Success in military operations increasingly depends on a commander's ability to unify the ISR enterprise in support of campaign goals. Articulating intent—the traditional method that commanders use to establish unity of effort for organizationally complex operations—is the necessary but often overlooked step to focus ISR strategy.

According to the Chairman of the Joint Chiefs of Staff (CJCS), *intent* is one of the basic principles of mission command, which is the operating construct “critical to our future success in defending the nation in an increasingly complex and uncertain operation environment.”¹⁵ He continues, “Shared context is a critical enabler of . . . intent. In mission command, intent fuses understanding, assigned mission, and

direction to subordinates. Commanders will be required to clearly translate their intent (and that of higher commanders) to their subordinates and trust them to perform with responsible initiative in complex, fast-changing, chaotic circumstances.”¹⁶ The key to intent, therefore, is to establish shared context. Lawrence Shattuck states, “It is not enough to tell subordinates what to do and why. When situations permit, commanders should explain how they arrived at the decision. Explaining the rationale helps subordinates understand and develop similar patterns of thought.”¹⁷

ISR operations over the last decade have demonstrated the importance of explaining intent to higher headquarters and outside organizations as well. Major John Ives, the J2 for Combined Joint Special Operations Task Force–Afghanistan (CJSOTF-A), explained how his team sold the ISR strategy for Village Stability Operations (VSO) to establish

shared context among higher headquarters collection managers and supporting ISR organizations:

*Fearing our phased non-kinetic collection requirements, taken individually, would go uncollected, the J2 ISR team briefed the plan in its entirety to the [higher headquarters] collection managers (CM). The briefing flowed from the operational macro view of CJSOTF-A's mission to the tactical micro view of a village stability platform, followed by the comprehensive collection plan as it related to the phases of VSO expansion. . . . Linking the purpose of the collection plan to the individual requirements proved highly productive and informative. The CMs recognized the overall long term phased collection plan as both sustainable and feasible.*¹⁸

All of this suggests that ISR strategy must start by framing the problem, setting mission expectations, and



Marines load RQ-7B Shadow UAV onto launching ramp, Camp Leatherneck, Helmand Province (U.S. Marine Corps/Robert R. Carrasco)

outlining objectives in a way that will guide the activities of disparate groups and organizations at all levels toward a common purpose.

Framing Intelligence Problems

Commanders and their ISR staffs must understand *what* they are trying to accomplish before they determine *how* to accomplish it. This starts by examining the campaign goals in order to determine the problems ISR operations must solve. The challenge for ISR in recent campaigns is the lack of a common framework for approaching problems to consistently drive collection and analysis. From the 1970s through the 1990s, the DOD Intelligence Community had a clear system for profiling potential adversaries in the form of orders of battle overlaid with capability assessments. While this machine was adequate for conventional scenarios, it was virtually meaningless to the operations over the past decade, and no framework has clearly arisen to replace it.¹⁹ Intelligence problems have become campaign specific; therefore, planners must make the effort to frame unique problems and not rely on peacetime organizational inertia to define the categories for analysis and collection.

Framing those problems begins with exploring the ends, ways, and means of

the various players who influence the operating environment. That effort can provide planners manageable categories of intelligence problem sets (IPS) to focus ISR planning.²⁰ Planners must avoid making IPS an order of battle by another name. Categorizing with proper nouns (people, places, and things) can result in analytic gaps; therefore, analysts and planners should focus on behavior and intent as the criteria to define IPS. For example, in assessing threats to air operations, an intelligence organization may spend a great deal of time studying an integrated air defense system (IADS). What an organization may overlook is that the adversary's primary objective, or end, is *not* to shoot down aircraft; it is to *prevent* getting bombed. While the organization may pursue this goal by using its IADS, it will likely use other ways and means to achieve the goal—cyber attack or poisoning the airbase water supply, for example. The most appropriate IPS in this scenario would be *adversary attack of our airpower*. This ends-ways-means problem framing drill can provide the analytic framework for a campaign and the starting point for focusing ISR.

Once planners identify IPS, they can then determine where and how to leverage the ISR enterprise by asking a series of questions. What are the capabilities and limitations for ISR against each

IPS? What IPS are most relevant in the pursuit of campaign goals? How thin can planners spread resources among IPS while still effectively supporting the campaign? In answering these questions, planners should consider five roles and missions for ISR that emerged in the last decade: understanding the environment, targeting, operational assessment, threat warning, and operations overwatch.²¹ The commander must effectively balance these roles and missions by identifying priority, weight of effort, and phasing within the campaign.

Ranking Roles and Missions

Historically, ISR has been decisive when focused on the right roles and missions at the right time. The U.S. Navy was victorious during the Battle of Midway primarily because signals intelligence and aerial reconnaissance provided awareness of Japanese operations (threat warning) and reaction to Navy deception efforts (operational assessment). During the Korean War, the effort of U.S. intelligence to analyze the site of the Inchon Landing (understand the environment) enabled the strategic surprise of the amphibious operation. Efforts to understand and destroy key components of air and air defense capabilities were the decisive factors in both the Six Days' War and Operation *Desert Storm* (targeting).²²

Inherent tension between ISR roles and missions, particularly those that require operational and tactical patience (understanding the environment, operational assessment, and targeting networks) and those requiring short-term support (threat warning, operations overwatch, and targeting specific threats) can result in an ineffective application of resources. The counter-IED examples show how competition for assets between roles and missions requires commanders to make clear choices. If commanders do not articulate priorities between roles and missions, planners inevitably revert to spreading resources thinly, primarily to support short-term operational needs, while potentially making ISR ineffective for all missions. As Devault LeClaire states, "Using an ISR asset exclusively

to support operations is ‘robbing Peter to pay Paul’ in that planning based on sound information and intelligence is not possible without robust collections.”²³ Choosing to focus ISR on a single problem set does not guarantee success, however. When commanders focus on roles and missions where ISR is ineffective (threat warning for IEDs), they siphon resources away from roles and missions where ISR succeeds (targeting the network).

Another dilemma commanders face when developing an ISR strategy is whether to strengthen ineffective ISR roles and missions. While attempts to strengthen ISR capabilities for threat warning against IEDs were mostly ineffective, efforts to reorient ISR toward understanding the environment and population in Iraq and Afghanistan were vital in pursuit of counterinsurgency objectives. Adding additional remotely piloted aircraft to the Libya operation improved North Atlantic Treaty Organization targeting capabilities, helping lead to Muammar Qadhafi’s demise.²⁴

Determining which roles and missions to emphasize or strengthen requires a constant evaluation of the enterprise’s capabilities, coverage, capacity, and constraints. ISR planners can use these “4Cs” throughout the development of ISR strategy by asking the following questions about specific resources and the enterprise as a whole:

- Are the available resources capable in dealing with the problem sets?
- Is the capacity sufficient to cover the timelines related to the IPS operating scheme?
- Does the enterprise have adequate coverage both geographically and within the networks analysts are trying to understand?
- What constraints prevent the ideal employment of resources?

The answers to these questions can help commanders develop obtainable and relevant objectives for ISR.

Stating Objectives

Joint doctrine defines an *objective* as “a clearly defined, decisive, and attainable

goal toward which every operation is directed.”²⁵ Using campaign goals, IPS, roles and missions, and the 4Cs as a foundation, commanders can develop ISR objectives that provide focus and direction to operational and intelligence efforts. ISR objectives can also provide a basis for resource development, deployment, apportionment, and allocation. Staffs struggle with these activities because collection requirements provide the foundation for ISR resourcing decisions. Requirements are difficult to regulate, which inevitably leads to an ever-increasing demand for resources and a misrepresentation of needs and risk. The U-2 was continually tasked to conduct change detection, for example, because the requirement satisfaction rate was always low and collection managers believed they needed to fix that shortfall. If, instead, the ISR staff used an objective such as “Provide threat warning for convoys by delivering intelligence to ground units of probable IED locations,” U-2 change detection missions would have received appropriate scrutiny when they did not produce results or, put another way, when the ways and means did not achieve the ends. ISR objectives that flow from commander’s intent and appropriately defined IPS provide a better foundation for ISR assessment.

Objectives provide a common terminology to prioritize the things a commander must *know* alongside what he must *do*. This is important for working through the competition between roles and missions (that is, should planners pull resources off targeting missions to conduct operations overwatch?). As the roles for all types of resources continue to blur—traditional fire and maneuver assets gathering intelligence, for instance—objectives offer a clear process to prioritize both operational actions and intelligence collection for infantry squads, fighter pilots, remotely piloted aircraft crews, and cyber operators alike. Finally, objectives provide a foundation for implementing mission command through mission type orders (MTOs) within an ISR enterprise.²⁶ MTOs convey purpose and intent and facilitate the interaction among ISR

consumers, platform operators, and analysts.²⁷ This is the surest way to establish shared context within the organizationally complex ISR enterprise.

The four components of a commander’s intent for ISR—campaign and operational goals, intelligence problem sets, roles and missions, and objectives—are the foundation of a strategy. Intent is more than a way to establish shared context and unity of effort; it is an investment in ISR strategy that eventually pays substantial dividends.²⁸ The largest dividend of intent is the foundation it establishes for leading the ISR enterprise. As organizations become more connected and operations become more complex, leadership in implementing intent matters infinitely more than management.

Implementing the Strategy

In addition to a conceptual framework, commanders and their staffs require a practical method to develop and carry out ISR strategy given information age capabilities and challenges. Iraq provided an example of a higher staff exercising tighter controls to regulate and synchronize ISR in an attempt to deal with emerging organizational and operational complexities.²⁹ Centralized ISR planning as part of a joint operational planning process may work well in the early phases of a campaign and in high-risk scenarios; however, as operations progress, headquarters attempting to control diversified and distributed processes and organizations can stifle the ISR enterprise’s ability to adapt to changing conditions in a campaign. Despite lessons from Iraq and Afghanistan, joint doctrine still emphasizes a centralized method for developing ISR strategy, failing to account for the complex command relationships or the increasingly collaborative nature of ISR planning that affects the full spectrum of operations.³⁰ Rather than focus on centralized planning, commanders should concentrate on synchronizing ISR strategy teams at multiple echelons and components through appropriate resourcing, relationships, and processes.

While not using the term *ISR strategy teams*, in recent campaigns formal or

working groups emerged within organizations to flatten hierarchical structures and integrate expertise to improve ISR operations. Commanders and their staffs can discern practical methods to integrate these teams by specifically examining strategy improvements between the height of operations in Iraq (2006–2008) and Afghanistan (2010–2012). There were significant differences between the campaigns that partially account for these improvements including wider dispersal of units, a greater coalition presence, and a much larger armada of ISR assets in Afghanistan. However, the most important lessons on ISR strategy from Afghanistan are not related to ostensible situational advantages, but rather come from structural and procedural improvements that reduced friction, promoted planning integration, and encouraged operational creativity.

Identifying the Lessons

At the height of operations in Afghanistan, commanders made two key structural improvements to ISR strategy as compared to Iraq. First, the United States dedicated more manpower to ISR planning at multiple echelons. This included deploying Air Force ISR liaison officers (ISRLOs) to brigade- and battalion-level units. Embedding ISRLOs created de facto ISR strategy teams that effectively worked through the 4Cs of ISR strategy and flattened hierarchal planning processes. Second, the International Security Assistance Force Joint Command (IJC) offered greater incentives for planners to think through ends, ways, and means rather than flooding the system with requirements. While headquarters in both Iraq and Afghanistan conducted Joint Collection Management Boards to allocate resources, the former focused on the number of operations and requirements as a means to justify allocation, while the latter encouraged analytic rigor in its allocation process. Subordinate units in Afghanistan more often had to explain not simply *what* they needed but *how* they would employ ISR resources. The introduction of the ISR MTO concept, which provided tacti-

cal units greater flexibility in executing operations and an organizational construct to share operational context, offered another incentive to integrate strategies. IJC required detailed coordination and planning before approving ISR MTOs. In short, higher headquarters in Afghanistan focused more on prioritization, and units were more likely to receive resources and/or more flexibility when they invested intellectual capital in ISR strategy instead of simply submitting requirements. This second structural improvement—designing a system that encouraged better planning—could not have happened without the first improvement—resourcing units with the right people to carry out that planning.³¹

Building the Team

Given those lessons, how should ISR strategy teams organize and operate? Describing how special operations forces designed their ISR teams in Iraq and Afghanistan, Lieutenant General Michael Flynn, USA, wrote in 2008, the “organizational imperative was simple: get the best people and bring them together face to face in a single location collaborating on a target set while orchestrating reachback support to their national offices.”³² But what if face-to-face interaction is not feasible? Organizational and logistical constraints may lead to a distributed ISR strategy team connected by modern technology. While not always ideal, there were numerous examples in Afghanistan where a distributed construct worked when members were focused on launching planning efforts, building relationships, and remaining relevant. Whether formal, ad hoc, face to face, or distributed, ISR strategy teams succeeded with the right mix of analysts, capability experts, and consumers with the right planning, critical thinking, and leadership abilities.³³

Effective teams must include active leadership and expertise to break through the inherent imperfection of processes, technology, and organizational structures. Simply relying on formal, impersonal processes will not sufficiently

focus the enterprise to solve a unit’s intelligence problems. ISR strategy teams must address challenges through leadership, tradecraft, policy, and technology, in that order. Too often, commanders and staffs approach problems in the reverse. As Timothy Oliver, who served five tours in Iraq and as an intelligence battalion commander in Afghanistan, asserts, “Any success or failure of intelligence stems from the same source as other types of military failures, from the leadership. Intelligence must be an ‘all hands’ effort, and commanders, consumers, and producers all must drive this process and insist on its success.”³⁴

Fostering Relationships

ISR strategy consistently succeeds when team leaders overcome the challenges of multiorganizational complexity and lack of unity of command by building solid personal relationships. Alternatively, poor relationships often directly contribute to ineffective ISR strategy. Because every commander’s level of confidence and perception of risk are linked to ISR, competition for resources between organizations can quickly become personal. Trust can easily break down when teams begin to stereotype along organizational lines and argue over command relationships. Trust depends on selecting knowledgeable team members who can break down cultural and organizational barriers in pursuit of mission accomplishment and installing the right leaders to direct their efforts.

Leaders overcome barriers and create trust by demonstrating transparency, empathy, and competence. Major Ives provides an example: “Our ISR team’s proficient grasp of collection management created a mutual trust with the IJC ISR planners. Over the next few days, our two teams worked hand-in-hand towards a theater-wide effort supporting the original purpose of the focus area collection without disrupting the IJC priority collection plan for ongoing named operations.”³⁵ Ives illustrates the success that well-resourced teams had when operating within a system that incentivized both competence and interaction. Valuing

competence and creating trust resulted in a virtuous circle that reinforced itself over time, leading to a willingness to accept greater risk to obtain greater payoff in future ISR operations.

Testing the Process

Trust alone, however, will not deliver success. ISR strategy teams must also build an effective structure and process to meet mission requirements. Other than identifying the need to integrate effectively within operational planning processes, any other prescriptive guidance on developing ISR strategy would not likely apply across a broad spectrum. Leaders must avoid making the campaign fit a doctrinal process, and must instead design a process to fit the campaign. That said, planners should apply several tests to any ISR strategy development process.

First, does the process minimize and scrutinize assumptions? Unlike fire and maneuver capabilities, ISR does not have an adequate test and evaluation process. As a result, ISR planners often rely on assumptions about capabilities versus collection targets, and consequently they should conduct thorough operational assessments to continuously evaluate those assumptions. Planners may assume a sensor is adequate for finding IEDs but must develop a feedback loop that focuses on the interplay of enemy and friendly activities to determine the assumption's validity.

Second, does the process minimize gaps and seams in a way that creates a problem-centric ISR enterprise? ISR teams must work through organizational complexity by refining the process to make the enterprise act as a whole. Organizing constructs including ISR objectives, MTOs, or a find-fix-finish-exploit-analyze targeting model can provide the synchronization needed for a problem-centric approach.³⁶

Third, does the process allow for resources to quickly mass and disperse with minimal friction? Losing ISR resources to another unit or mission often creates a significant emotional event for commanders and staffs. This can cause staffs at multiple levels to expend energy

on organizational knife fights instead of future planning. Organizations can overcome this friction when commander's intent is adequately developed, updated, and communicated in a way that subordinate commanders perceive that the allocation decisions are consistent and in line with campaign goals. IJC's prioritization and weighting scheme enabled massing and dispersal while limiting friction because ISR stakeholders at all levels understood that IJC made its allocation decisions in line with the commander's priorities.

When designing processes to develop ISR strategy, commanders and staffs should consider important lessons from Iraq and Afghanistan that demonstrate the need for dedicated teams at multiple levels to continually refine ISR strategy. Investment in leadership, manpower, relationships, and balanced processes are critical to making these teams effective. This focus provides the best method to ensure shared context and expertise throughout the enterprise. It also overcomes the disaggregation inherent in the requirements-based collection management process. As Lieutenant General Flynn concludes:

If we do more synchronized planning with greater rigor right from the start, using our operations planning process, we can provide our subordinate units greater flexibility and less uncertainty. At the end of the day, we achieve success in combat when subordinate units collectively understand the mission and higher commands have properly resourced them for success. Then and only then can they accomplish a well-synchronized campaign plan.³⁷

Conclusion

ISR strategy should provide focused direction and create a shared context that orients the ISR enterprise toward problem-solving over production. Articulating intent, as the CJCS asserts, is the best method to achieve these aims. The commander's intent for ISR should define intelligence problems and identify the critical ISR roles and missions to address those problems based

on the capabilities, coverage, capacity, and constraints of available resources. Intent must guide the enterprise and joint force toward achieving specific ISR objectives that support campaign goals. In short, intent balances the ends, ways, and means of ISR operations and facilitates leader efforts to integrate intelligence and operations in ways modern military campaigning demands.

The key to developing and implementing ISR strategy is finding ways to move organizations, relationships, and processes toward collaboration, trust, and incentives. During recent operations, leaders created ISR strategy successes when they overcame organizational inertia and doctrinal restrictions that impeded integration. This happened when leaders focused teams of experts at multiple echelons on ISR strategy. These teams balanced the needs of lower level commanders with campaign goals and reduced friction between organizations that inevitably occurs in operations involving life and death.

The role of ISR in building confidence and reducing risk naturally leads to competition over resources. Less successful attempts to reduce pressure and friction in recent campaigns included throwing resources at problems or spreading them evenly among organizations without adequately balancing ISR ends, ways, and means. The struggle to counter IEDs offers an example of how organizations can obsess over numbers while losing sight of operational realities. The last decade drove significant learning on ways to make ISR relevant in high-tempo operations. The joint force must codify the hard lessons learned on evolving ISR processes that reduce friction and increase timeliness while retaining a focus on priorities and effectiveness. Failure to do so will mean future commanders and staffs will once again spend energy and resources chasing white whales instead of developing winning ISR strategies.

When faced with information age challenges and their impact on ISR operations, many still insist better adherence to collection management doctrine is the answer. Departure from proven doctrine has certainly led to disaster for military

forces in the past. However, joint ISR doctrine has yet to prove itself in major operations without significant modification. If there is one fundamental flaw in current joint doctrine, it is that ISR is *managed*, while other forms of operation are *led*—and doctrine that relies on management over leadership will fail time and again in the heat of battle. JFQ

Notes

¹ Patrick W. Lueb, Department of Defense (DOD) Intelligence, Surveillance, and Reconnaissance (ISR) Task Force (TF), interview by author, October 15, 2012. Mr. Lueb is the lead action officer for the ISR TF Mission Management project. The project began in 2010 after an ISR TF study on the effectiveness of ground moving target indicator (GMTI) in Afghanistan. Based on the results of the study, General James Cartwright, then Vice Chairman of the Joint Chiefs of Staff, directed the ISR TF to lead a doctrine, organization, training, materiel, leadership and education, personnel and facilities change recommendation to improve ISR mission management. The author was the lead project officer for the doctrine and organization working group for this effort. The ISR TF found several documents, including reports from the General Accounting Office (GAO-12-396C, GAO-11-224C) and 2010 Joint Forces Command ISR Summit, which highlighted similar integration challenges identified during the GMTI study.

² David A. Deptula and R. Greg Brown, “A House Divided: The Indivisibility of Intelligence, Surveillance, and Reconnaissance,” *Air & Space Power Journal* 22, no. 2 (Summer 2008), available at <www.airpower.au.af.mil/airchronicles/apj/apj08/sum08/deptula.html>.

³ For a discussion of airborne reconnaissance change detection techniques for the counter-IED mission, see Joint Airpower Competence Centre, *NATO Air and Space Power in Counter-IED Operations*, July 2011, available at <www.japcc.de/fileadmin/user_upload/Reports/CIED_2/NATO_Air_and_Space_Power_in_Counter-IED_Operations_A_Primer-Second_Edition.pdf>.

⁴ Rick Atkinson, “There was a Two-Year Learning Curve . . . and a Lot of People Died in those Two Years,” *The Washington Post*, October 1, 2007, available at <www.washingtonpost.com/wp-dyn/content/article/2007/09/30/AR2007093001675.html>.

⁵ Stephen C. Price, Jr., “Close ISR Support: Re-organizing the Combined Forces Air Component Commander’s Intelligence, Surveillance and Reconnaissance Processes and Agencies” (Thesis, Naval Postgraduate School, December 2009), 156, available at <http://edocs.nps.edu/npspubs/scholarly/theses/2009/Dec/09Dec_Price.pdf>.

⁶ Michael L. Downs, “Rethinking the Combined Force Air Component Commander’s Intelligence, Surveillance, and Reconnaissance Approach to Counterinsurgency,” *Air & Space Power Journal* 22, no. 3 (Fall 2008), available at <www.airpower.maxwell.af.mil/airchronicles/apj/apj08/fal08/downs.html>.

⁷ Atkinson and author’s direct experience.

⁸ Between 2008 and 2012, the ISR TF directed the increase of ISR resources in Iraq and Afghanistan totaling over \$11 billion.

⁹ Lueb, interview.

¹⁰ This is a synopsis of a discussion the author had with Multi-National Corps–Iraq collection managers in August 2008 regarding the ineffectiveness of change detection.

¹¹ Lueb, interview.

¹² Colonel Rachel A. McCaffrey, chief, ISR division at the Poggio Renatico Combined Air Operations Center 5 for Operation *Unified Protector*, email to author, January 20, 2013.

¹³ Lueb, interview.

¹⁴ Joint Publication (JP) 3-09, *Joint Fire Support* (Washington, DC: The Joint Staff, June 30, 2010), chapter 2; and U.S. Joint Forces Command, *Joint Fires and Targeting Handbook*, October 19, 2007, chapter 2.

¹⁵ General Martin E. Dempsey, “Mission Command White Paper,” April 3, 2012, 3, available at <www.jcs.mil/content/files/2012-04/042312114128_CJCS_Mission_Command_White_Paper_2012_a.pdf>.

¹⁶ *Ibid.*, 5.

¹⁷ Lawrence G. Shattuck, “Communicating Intent and Imparting Presence,” *Military Review*, March–April 2000, 71.

¹⁸ John M. Ives, “Back to Basics: Reenergizing Intelligence Operations,” *Small Wars Journal*, January 16, 2013, available at <<http://smallwarsjournal.com/jrnl/art/back-to-basics-reenergizing-intelligence-operations>>.

¹⁹ Chris Whitlock, former president of National Interest Security Company and Edge Consulting, email to author, November 2, 2012.

²⁰ *Theater ISR CONOPS* (Washington, DC: Headquarters Department of the Air Force, January 4, 2008), 6.

²¹ This list of roles and missions is not outlined in doctrine but is derived from the author’s own experience and suggestions from colleagues.

²² Gregory Elder, “Intelligence in War: It Can Be Decisive,” *Studies in Intelligence* 50, no. 2 (April 2007), available at <www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol50no2/html_files/Intelligence_War_2.htm>.

²³ Devaunt Z. LeClaire, “ISR Integration: The Marine Corps can learn from British forces,” *Marine Corps Gazette* 95, no. 6 (June 2011), 52.

²⁴ Thomas Harding, “Col Gaddafi killed: convoy bombed by drone flown by pilot in

Las Vegas,” *The Telegraph* (London), October 20, 2011, available at <www.telegraph.co.uk/news/worldnews/africaandindianocean/libya/8839964/Col-Gaddafi-killed-convoy-bombed-by-drone-flown-by-pilot-in-Las-Vegas.html>.

²⁵ See the definition for the term *objective* in JP 1-02, *DOD Dictionary of Military and Associated Terms* (Washington, DC: The Joint Staff, November 8, 2010, as amended through January 31, 2011).

²⁶ Dempsey, 5.

²⁷ Jaylan Michael Haley, “An Evolution in Intelligence Doctrine: The Intelligence, Surveillance, and Reconnaissance Mission Type Order,” *Air & Space Power Journal* 26, no. 5 (September–October 2012), 41.

²⁸ J. Richard Hackman, *Collaborative Intelligence: Using Teams to Solve Hard Problems* (San Francisco: Berrett-Koehler Publishers, 2011), 19. Hackman observed during his study of intelligence teams that an “up-front investment in developing a performance strategy that takes explicit account of a team’s task requirements, its performance context, and the outcomes it is charged with achieving can generate substantial dividends later.”

²⁹ Lieutenant Colonel Stephen C. Price, USAF, ISR liaison officer in Iraq, May–November 2007, email to author, January 23, 2007. This account is also based on author observations.

³⁰ JP 2-01, *Joint and National Intelligence Support to Military Operations* (Washington, DC: The Joint Staff, January 5, 2012), defines *joint intelligence operations center* as the focal point for intelligence planning, collection management, analysis, and production (xii).

³¹ This assessment is based on the author’s experience as an intelligence squadron commander responsible for deploying ISR liaison officers, executing ISR operations, and implementing ISR mission type orders in Iraq and Afghanistan from 2008 to 2010, as well as direct interaction with the ISR TF from 2010 to 2012.

³² Michael T. Flynn, Rich Juergens, and Thomas L. Cantrell, “Employing ISR: SOF Best Practices,” *Joint Force Quarterly* 50 (3rd Quarter 2008), 56–61.

³³ Haley, email to author. This is also based on the author’s personal observations.

³⁴ Timothy Oliver, “A Blueprint for Success, Marine Corps intelligence operations in Anbar,” *Marine Corps Gazette* 94, no. 7 (July 2010), 82, available at <www.mca-marines.org/gazette/article/marine-corps-intelligence-operations-anbar>.

³⁵ Ives.

³⁶ Flynn, Juergens, and Cantrell, 57.

³⁷ Michael T. Flynn and Charles A. Flynn, “Integrating Intelligence and Information: Ten Points for the Commander,” *Military Review*, January–February 2012, 4–8.