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Description of document: Office of the Director of National Intelligence (ODNI)
DNI/CHCO Study: Achieving a Robust Collaborative Environment 2007

Requested date: 07-April-2015

Release date: 30-July-2024

Posted date: 06-October-2024

Source of document: FOIA Request
Director, Information Management Office
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OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE
WASHINGTON, DC

30 July 2024

Reference: ODNI Case No. DF-2015-00246

Dear Requester:

This letter responds to your Freedom of Information Act (FOIA) request received on 7 April 2015, by the Office of the Director of National Intelligence (ODNI), requesting a digital/electronic copy of the DNI/CHCO study: Achieving a Robust Collaborative Environment.

This request was processed under the FOIA, 5 U.S.C. § 552, as amended. ODNI located the requested document and considered the foreseeable harm standard during the review process. It was determined that certain information must be withheld pursuant to the following FOIA exemptions:

- (b)(3), which applies to information exempt from disclosure by statute. Specifically:
 - The National Security Act of 1947,
 - Section 102A(i)(1), 50 U.S.C. § 3024(i)(1), protects information pertaining to intelligence sources and methods; and
 - Section 102A(m), as amended, 50 U.S.C. § 3024(m), which protects the names and identifying information of ODNI personnel;
 - the Central Intelligence Agency Act of 1949, Section 6, 50 U.S.C. § 3507, which protects, among other things, the names and identifying information of CIA personnel; and
 - 50 U.S.C. § 3605, (formerly P.L. 86-36) which protects information pertaining to the functions or organization of NSA and certain information pertaining to NSA employees.
- (b)(6), which applies to information that, if released, would constitute a clearly unwarranted invasion of personal privacy.

If you are not satisfied with this response, a number of options are available. You may contact me, the FOIA Public Liaison, at dni-foia-liaison@dni.gov or the ODNI Requester Service Center, at dni-foia@dni.gov or (703) 275-1313. You can also submit an administrative appeal to the Chief FOIA Officer, c/o Chief, Information Management Office, Office of the Director of National Intelligence, Washington, DC 20511 or emailed to dni-foia@dni.gov. The appeal correspondence should be clearly marked “Freedom of Information Act Appeal of Adverse Determination” and must be postmarked or electronically transmitted within 90 days of the date of this letter.

Lastly, the Office of Government Information Services (OGIS) of the National Archives

and Records Administration is available with mediation services and can be reached by mail at 8601 Adelphi Road, Room 2510, College Park, MD 20740-6001; telephone (202) 741-5770; toll-free (877) 684-6448; or email at ogis@nara.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Greg Koch', with a long horizontal flourish extending to the right.

for
Gregory Koch
Chief, Information Management Office
FOIA Public Liaison

ENCLOSURE 1

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Integrated Concepts Development Office

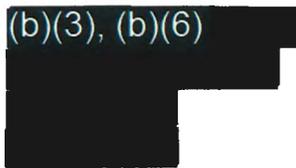
(U//~~FOUO~~) Achieving a Robust Collaborative Environment

Study 27

20 May 2007

Study Team Members:

(b)(3), (b)(6)

A large black rectangular redaction box covers the names of the study team members. The text "(b)(3), (b)(6)" is visible at the top left of the redaction.

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Scope Note

Director of National Intelligence (DNI) Michael McConnell has made the need to create a culture of collaboration the top priority for the Intelligence Community (IC). This study recommends how, building on recent success, the IC can best embed collaborative work practices throughout its component organizations. It focuses primarily on what makes people want to collaborate, not on information technology (IT) solutions or information-sharing policies. The latter are being worked intensely and effectively, so this study has little to add to these topics. The study also looks briefly at the policies that prevent people from collaborating and possible remedial steps that the Office of the Director of National Intelligence can take. The study concludes, however, that until the IC understands the underlying human factors and how to address people's concerns and expectations about collaboration, statements from the leadership calling on IC organizations and staff to be more collaborative are unlikely to have the desired impact.

Two years after the release of the Weapons of Mass Destruction Commission's report on intelligence capabilities of the United States, two of its recommendations that are key to collaboration have yet to be instilled into how we conduct our daily work: a modern workforce that is built for jointness and an integrated collection enterprise.

- Collaboration will remain impossible if the IC continues to work on mostly non-web-based, stovepiped information systems. An unparalleled opportunity now exists to leverage a new "digital" generation of officers who expect to work in a networked environment and view collaboration as integral to their work practices.
- For collaboration to take root at the working level, the IC must engage in a fundamental re-thinking of how it undertakes collection management. Collectors and analysts need to engage in a robust dialogue, given the constantly changing information needs and context generated by today's world. Once analysts and collectors join in conducting target development and determining not only what is essential to collect but also how it should be collected, then collaboration will become a normal and integral part of the IC work process and the community can manage US intelligence capabilities as a single, powerful force.

Achieving a more collaborative environment will require policies and an IT infrastructure that allows the various intelligence disciplines and agencies to synchronize their efforts in mutual support of a solution that is greater than the sum of its parts. In this way, collaboration will become a force multiplier across the IC.

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Study 27: Achieving a Robust Collaborative Environment

Impetus for This Study

Initial tasking for this study came from the office of the Deputy Director of National Intelligence for Collection (DDNI/C) in December 2005, which requested a study on how to institutionalize collaborative practices in the Intelligence Community (IC). The tasking posed the question: “In what ways could the analytic community assist the collection community in honing collection requirements, providing advisory tasking on collection targets, etc.”

After consultation with the staffs of the Deputy Director of National Intelligence for Analysis (DDNI/A) and the DDNI/C, the Study Team expanded the terms of reference to encompass analyst-to-analyst collaboration as well as linkages between IC analysts, collectors, and operators and other US Government and non-US Government entities operating outside of the traditional IC. The Terms of Reference for Study 27 are provided in Appendix A.

In the initial interviews, the Study Team was encouraged to focus (in descending order of priority) on the need for:

- Policy changes (e.g., balancing the “need-to-know” with the “need-to-share”).
- Cultural change (the value of moving away from the concept of the stand-alone officer to the value of small group activity).
- A more enabling information architecture (network connectivity, web-based tools).

Collaboration: The DNI’s Top Priority

Director of National Intelligence (DNI) Michael McConnell has made collaboration his top priority for the Intelligence Community. On 11 April 2007, the DNI announced his 100-Day Plan for Integration and Collaboration. The first of six focus issues listed in the plan was “Creating a Culture of Collaboration.” The 100-Day Plan states:

To create the diverse community of professionals necessary to provide the best possible intelligence to policy-makers, we need to recruit and hire the best people, give them the cross-training opportunities and performance evaluations to help them achieve their best, and retain the best among them.

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The 100-Day Plan reinforces several other themes addressed in this study, including the need to:

- Better balance the risk of disclosure with the need to provide information to those who need it.
- Consolidate and synchronize requirement data from across the IC.
- Radically rethink security rules.
- Accelerate the integration of analytic workspaces.

Of the ten priorities for the IC in the ODNI's Spotlight of 3 April 2007, the first two priorities deal with collaboration and information sharing:

- 1. More Fully Integrate the Intelligence Community**
(Incorporate collaboration and "jointness" into all IC activities—emulate Goldwater-Nichols impact in DoD for the IC)
- 2. Increase Information Sharing/Improve IT Tools and Processes**
(Move beyond a "need to know" to a "responsibility to provide;" analysts as center-driver of IC—know customers and sensors)

His fourth priority—**4. Overhaul Security Processes and Practices** (*calibrate security with sharing requirements*)—also plays a critical role in helping create a culture of collaboration across the IC, as will be discussed later in this study.

The value of building a culture of collaboration linking analysts, collectors, and operators was illustrated in the statement DNI McConnell made following his trip to (b)(3) in March 2007. In his letter to the IC on 16 March 2007, the DNI said:

My recent trip to (b)(3) allowed me to witness first-hand the fantastic progress IC Agencies are making collaborating with one another to seamlessly integrate collection, analysis, and operations. . . . To sustain and replicate these successes, we must institutionalize the joint community collaboration we have learned in the Global War on Terror. We must ensure that our new level of collaboration is not just crisis driven, but is a fixture of the way we do business from this time forward. . . . We have a unique opportunity to change the culture to a Community where we all see each other as partners, not competitors.

Study Team Research Methodology

The team conducted over (b)(3) interviews with senior policy officials in the ODNI and at several IC agencies (see Appendix B: Study 27 Interviews). Team members focused on the following key research questions:

- Where has analyst-collector collaboration worked well in the past? What accounts for its success? What explains failures?
- What minimal conditions must be met for collaboration to succeed? Is there a magic formula?

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- Why is collaboration harder to achieve in a virtual environment than when people are co-located?
- How can the IC leverage the influx of younger and more web-savvy workers to create a collaborative environment across the entire community?
- What actions must the DNI take to create a culture of collaboration across the IC and to enhance the IC's access to non-governmental expertise?

The Study Team also co-hosted a series of collaboration workshops that were designed primarily to acquire ground truth about both the obstacles to and the incentives for collaboration.

- In October 2006, ICDO and Ambassador (b)(3), (b)(6), the former National Intelligence Officer (NIO) for Africa, co-hosted two two-day workshops bringing together counterterrorism and internal target analysts and collectors working on (b)(3). Over (b)(3) officers representing (b)(3) agencies and U. S. Central Command (USCENTCOM) participated in a session aimed at generating more synergy between the two communities (see Appendix C: (b)(3) Collaboration Workshop).
- ICDO and the (b)(3) Mission Manager co-hosted a two-day workshop on 6-7 February 2007 that focused on two themes: building a more robust community of interest on SharePoint and assessing the threat to internal security. Over (b)(3) persons attended from a dozen IC components plus U. S. Pacific Command (USPACOM), (b)(3) and U. S. Strategic Command (USSTRATCOM) (see Appendix D: (b)(3) Workshop on Collaboration and Internal Security).
- The MITRE Corporation sponsored a one-day Best Practices Validation Workshop on 11 April 2007, focusing on why collaboration was working—and why it had not—in eight different experiments drawn from across the IC (see Appendix E: MITRE Best Practices Validation Workshop).
- On 15 May 2007, ICDO, the NIO for Latin America, the acting (b)(3) Mission Manager, (b)(3) co-sponsored a one-day workshop that engaged some (b)(3) experts from Washington (b)(3) in developing sets of indicators of major political change in (b)(3) while fashioning a capability for joint knowledge creation on Intellipedia and developing a tool for mapping their community (see Appendix F: (b)(3) Scenarios, Drivers & Indicators).

In the course of conducting the interviews and workshops, team members discovered:

- Collaboration is mainly a leadership and policy issue; it is about empowering people. It is **not** about IT tools, institutional reorganization, or how information is stored, mined, organized, or disseminated.
- The correct nexus for collaboration workspace is the human interface with other minds, **not** the human interface with IT.
- The purpose of collaboration is to facilitate human networking that results in putting more eyes on the target and promoting analytic excellence, not causing information overload.

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- Achieving a robust collaborative environment will require a major leadership commitment on the part of the DNI.

Research conducted by team members showed that the IC was adept at collaborating in a crisis situation but has performed poorly in translating these practices into daily work routines. Examples of effective collaboration with co-located entities abound, but are comparatively rare when multiple agencies are involved in virtual collaborative efforts. The relative lack of success in establishing a culture of collaboration across the IC is a growing concern because:

- In today's increasingly complex and interdependent world, no one person or organization has a monopoly on what is needed to get the job done.
- With more than half the community having less than five years of work experience in the IC, the need to connect new officers with more experienced members of the workforce has grown dramatically.
- Expertise is increasingly dispersed as the boundaries between analyst, collector, and operator become ever more fuzzy.
- It is far more efficient to engage the full spectrum of key players at the start of a project and generate consensus on how to proceed than to wait until the end of the process and fight over what is right.
- Mandating more co-location is not a feasible solution. Co-locating people from multiple organizations in centers simply is not scaleable as an effective way to address all of the IC's key challenges.

The IC's Track Record

Learning from the Past

Until recently (the past two years), most successful attempts to create collaborative communities have involved co-location. To cite just a few examples the team encountered:

- The creation of the DCI's Counternarcotics Center (CNC) and the Counterterrorism Center (CTC) in the 1980s proved the value of having analysts and collectors working side-by-side in one center. In both cases, the co-location resulted in more refined and efficient collection and far more effective targeting.
- (b)(3) [REDACTED]
- Joint Intelligence Activity Task Forces (JIATFs) (b)(3) [REDACTED] have become increasingly skillful at multi-INT cueing, fusing intelligence from all sources, sharing operational leads, performing joint link analysis, and avoiding premature responses on operational leads that could compromise sources.
- (b)(3) [REDACTED]

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(b)(3) [Redacted]

Most efforts to promote multi-agency virtual collaboration, however, have proven far less successful. Over the past two decades, the IC has launched many experiments to promote successful multi-agency collaboration, with strikingly little or no success. Collaboration where it has occurred has been largely through face-to-face meetings supplemented by email exchanges.

In contrast, the Study Team discovered one noteworthy example of successful virtual multi-agency collaboration (b)(3)

[Redacted]

The COI provides a common work environment for analysts and collectors at NSA, DIA, DoE laboratories, NGA, and the ODNI's Open Source Center. (b)(3)

[Redacted]. The COI is available on a 24/7 basis, permits easy exchange of documents and the sharing of files, and draws on a network of analysts who have met face-to-face and have come to trust each other.

(b)(3) [Redacted]

[Redacted]

These objectives are commendable, and most are essential to effective collaboration. Unfortunately, our research indicates that the IC largely ignored this checklist when implementing collaboration tools. Specifically, in the 1980s and the 1990s, the IC apparently held the general view that simply adding participants to a collaboration tool

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would lead to collaborative activity. It paid too little attention to introducing collaborative processes that make the best use of the tool or to the human factors involved in collaboration. Moreover, the tools were generally outside a user's normal work environment and at times difficult to use or access, further reducing incentives to use them.

Expecting More from the Future

Fortunately, the IC has made striking progress in the past two years toward establishing a robust collaborative environment. The IC appears to be approaching a **tipping point** where a growing percentage of the workforce—especially those recently hired—are turning to web-based tools as a common platform for peer-to-peer collaboration. Web-based platforms such as Web 2.0 have provided effective and increasingly popular venues for collaboration.

- The use of blogs has increased rapidly over the past two years. From April 2006 to April 2007, the number of team blogs on Intelink increased from 37 to 278; the number of individual blogs has expanded from 1,060 to 2,012.
- The use of wikis has grown even more dramatically. Intellipedia has expanded from just over 7,000 articles when it was announced a year ago to almost 100,000 articles in April 2007. It now has over 12,000 registered users and as many as 8,000 edit "hits" in a single day.
- Instant Messaging and on-line chat capabilities are more universally available across the IC and are being used increasingly, mostly by newer employees who were well versed in this medium before joining the IC.

While the new "digital generation" is far more inclined to build personal networks and work in teams, even these "digital natives" do not seem to have embraced the full array of collaborative tools constructed to support such activity. Members of the digital generation have tended to focus most of their attention on what they are most comfortable with: blogs and instant messaging. The result is a paradox: The IC is being populated with a new generation of officers highly inclined to collaborate, but they have done little to avail themselves of the suite of collaborative tools and systems developed over the past decade. One possibility is that they are unaware of what collaborative capabilities currently exist; another is that they do not find the tools sufficiently user-friendly, particularly if they are not "web-based." More important, the existing infrastructure for access to information and work processes keeps most employees tethered to today's stovepiped systems.

The opportunity now exists to create a collaborative environment capable of growing and sustaining many diverse cultures. In this emerging environment:

- Entrepreneurs can innovate; e.g., the blossoming of Intellipedia in ways never anticipated.
- Collaborators can collaborate; e.g., the rapid creation of COIs made possible by JWICS tools now certified to compartmented security levels.
- Analysts will be able to "think" in public, using such vehicles (b)(3)

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- What intelligence officers in one organization know can be seen by others who need to know it (The Library of National Intelligence).
- The hard work of integrating multiple data feeds tailored to analyst needs is automated (b)(3)
- Collectors can track the value of sources and methods to intelligence production (b)(3)

This new environment can nurture the potential to develop a common value set that will enhance tradecraft standards and help create a new metric of professional excellence.

Key Findings

Focus on Human Factors

Achieving a robust collaborative environment will require far more than just improving IT and enabling information sharing systems. While these actions will help, the obstacles to institutionalizing collaborative practices across a diversity of cultures—cultural, structural, and managerial—run much deeper and go to the heart of how the community has traditionally conducted its affairs. Better IT networks alone will be unavailing in the absence of a culture that encourages their use.

Sharing information more freely does not solve the problem resulting from a glut of data. Analysis will never drive collection if analysts lack a good understanding of how information is collected and simply ask for “more.” The IC will never exploit the full potential of collectors on the front line until they are brought into the analytic process. While technology is an important multiplier in promoting better collaboration, collaboration is unlikely to become embedded in the various IC cultures until work processes take advantage of its potential power. Senior leaders need to demonstrate their support for collaboration by “walking the talk.”

Antiquated policies also play a big role in impeding effective collaboration. In all too many cases, risk aversion trumps risk management and the need-to-know trumps the need-to-share. The IC has explicit penalties for sharing information too broadly—including loss of employment—but imposes no comparable penalties for sharing insights and information too narrowly. Analysts battle over who gets credit as the primary drafter and those who contributed significantly to the quality of the final product often go unmentioned. The role of team building and teamwork often is not cited as a criterion for career advancement.

Three Core Principles

The community can only accomplish a major transformation in how it conducts its business if the entire workforce has an unambiguous understanding of the Director’s vision. Study Team members believe that the DNI can best articulate his “Command Intent” by establishing a straightforward doctrine of collaboration that will guide the

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behavior of all members of the community—analysts, collectors, operators, and managers alike (provided separately). This doctrine of collaboration should consist of Three Core Principles:

- The “need-to-know” and the “need-to-share” should be replaced by a “responsibility-to-provide.” Access to the same information is an essential precondition for effective collaboration among IC officers striving to achieve common mission objectives.
- Members of the IC should be empowered to share their insights, information, and work in progress (within pre-established guidelines) without being required first to seek the permission of their superiors.
- Make collaborative communities self-defining, self-creating, agile, and adaptive. The user, not the IT provider, should own the environment.

Responsibility to Provide. The DNI has already announced the first core principle of this doctrine in his 100-Day Plan for Integration and Collaboration (<http://www.dni.gov/100-day-plan/100-day-plan.pdf>). In essence, this principle sends the message to all members of the IC that they have a responsibility to “think above their pay grade” in order to ensure that what they are doing fits into—and is complemented by—what others working their topic are doing across the community. The need to ensure that everyone has the information necessary to optimize overall mission performance must also be balanced by the need to protect secrets. IC members must maintain counterintelligence and security standards, but they should not cite them to justify not sharing with someone who has a right to know and whose mission performance would be enhanced by having that information. As the workforce takes on more responsibility to share, management must also take more responsibility for providing clear guidelines and additional training on the characteristics of a good sharing decision and how to properly protect sources and methods.

Empowerment to Participate. Empowerment also carries responsibility. The IC must establish guidelines that set parameters for what can be shared, how, and with whom. IC officers must know the “rules of the road” for engaging with others both within and outside their organizations. The function of management is to audit these exchanges. Risk-averse managers may prefer the alternative—to require pre-approval for every interaction—but this will ensure that little collaboration takes place. The key is to foster an open, sharing environment and accept the risk that on occasion someone might start to cross the line. From an information-sharing standpoint, it is far better to reel someone in who starts to cross the line than to discourage sharing in order to diminish or eliminate risk. Some mistakes may be made, but the overarching value is that a culture has been created where true collaboration may take place.

User-driven Environment. The third core principle simply acknowledges the complexity of the world in which the IC now must function. No longer does the community enjoy the luxury of Cold War targets that are mostly state-based and static. In today’s world, targets are increasingly fluid and agile. They are more likely to be networks than states. It usually takes a network to confront a network, putting the onus on the IC to instill the same degree of agility in its work process if it is to succeed.

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Six Imperatives for Effective Collaboration

On the basis of its assessment of past successes and failures in developing collaborative communities, an extensive review of the classified and unclassified literature, and recent “hands-on” experience in helping to build collaborative communities on (b)(3) [REDACTED], the Study Team concluded that collaboration is unlikely to succeed unless the following six imperatives are satisfied:

- Mission Criticality
- Mutual Benefit
- Mutual Trust
- Access and Agility
- Incentives
- Common Understanding

Mission Criticality. Participants must operate within a shared virtual environment to conduct their core activities. They will fail to take advantage of this environment if they view it only as a “nice-to-have” resource to exploit when they have extra time. Users should feel a personal need to draw on the network, engage their colleagues, or log on to the website as part of their daily routine. If three agencies decide to collaborate in creating a joint database, the data should only reside in the shared space; no one should enter data into their “home system” and then enter it again into a “shared” database.

Mutual Benefit. Participants in the system must derive benefits from each other’s knowledge and expertise in ways that help them perform their key missions. Participants should possess a shared sense of mission and articulate a common set of goals and objectives for the “collective.”

Mutual Trust. Participants are much more likely to engage in meaningful collaboration if they know and trust each other. Developing such trust usually requires personal interaction, particularly for the older generation of workers. Once people have met face-to-face, they become much more willing to engage in collaborative behavior. Even if they have met only once, human nature dictates they will be more inclined to pick up the phone, send an email, or otherwise reach out to collaborate.

Access and Agility. Collaboration cannot succeed if the right people cannot connect with each other virtually on demand. Given the pace of world events, users should be able to create virtual work groups or add new members to their group within hours if not minutes. The government must be able to do its work at the same pace of business and with the same agility as their adversaries. Likewise, one size does not fit all. Policies and collaboration tools must enable innovation, “public” thinking, broad dissemination, and the tracking of source and method but also permit compartmented, small group collaborations.

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Incentives. The most important, and often overlooked, incentive for collaborating is that collaborative work practices, when appropriately designed, should always end up saving people time. Participants cite as a major incentive their personal experiences that collaboration usually improves the overall intelligence product and enhances their personal impact. Effective collaboration at the start of a project almost always leads to faster coordination at the end. Management needs to reinforce these messages by giving credit for collaboration and teamwork at career panels.

Common Understanding. With the wide variety of organizational cultures found within the IC, chances for miscommunication abound. The Study Team found that they also were consistently underestimated. For example, the phrase “raw data” is a fairly simple concept for a DIA analyst seeking more information from NSA, but a much more complicated issue for the NSA officer who must approximate how many levels of processing (including translation) are appropriate to satisfy such a request. Every workshop conducted by the Study Team generated proposals for the establishment of lists of common terms, acronyms, and definitions.

The (b)(3) COI noted the value of documenting in one place all the key assumptions that underlie their analyses and operational decisions. Workshop participants pointed out that the simple process of listing the key assumptions forced everyone to critically examine and prioritize the list. The same theme also emerged in the Best Practices Validation Workshop, when differences of opinion regarding the relative importance of the Six Imperatives were eventually traced to the various definitions being used by different officers for terms such as collaboration, system, and information sharing.

In every collaboration workshop, a consensus developed that the creation of a new portal, web page, or a wiki should be accompanied by posting that site’s mutually agreed-upon rules of engagement (ROE). The inclusion of such ROE on various web sites has become an increasingly common practice, reflecting self-discipline and good tradecraft. However, participants made a strong case that ROE should be allowed to vary considerably from site to site and should not be standardized. For example, some sites might permit anonymous blogs to encourage new analysts to participate, while others would ban anonymous blogs to ensure full documentation of postings. That being said, many expressed interest in developing a list of standard factors that should be taken into consideration when compiling the ROE for a particular site.

Four Critical Enablers

Successful implementation of a robust culture of collaboration requires several critical enablers:

- A committed and engaged leadership
- Conducive policies
- Collaboration cells; i.e., a human support infrastructure
- The ability to obtain technical support on demand

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Engaged Leadership. Virtually every study of successful transformation of a business culture includes a key finding that change must be led from the top. If CEOs do not “walk the talk” and practice what they preach, then many employees will view pronouncements about the need to collaborate as empty rhetoric or just another fad. More important, engaged leaders send a powerful message to the workforce when they integrate collaborative practices into their daily work practices—and those of the staff. This validates the message that collaboration is not only a preferred mode of conducting business but is the most effective way to do so.

The experience of General James Cartwright at USSTRATCOM dramatically illustrates this lesson. General Cartwright described the operating culture when he took over command of USSTRATCOM as Napoleonic, relying on stove-piped legacy computer systems. His vision is to transform the culture of how the command does its business by changing human behavior. The objective is a global, net-centric, persistent, 24/7 collaborative environment that more rapidly delivers product to the customer.

In a recent staff meeting, General Cartwright was quoted as saying:

The metric is what the person has to contribute, not the person’s rank, age, or level of experience. If they have the answer, I want the answer. When I post a question on my blog, I expect the person with the answer to post back. I do not expect the person with the answer to run it through their senior NCO, the Officer in Charge, the Branch Chief, the Executive Officer, and the Division Chief and then get a garbled answer back before he or she posts it to me. It is the responsibility of the person’s first-line supervisor to make sure I get my answers, to guide them toward a better way, and to not get in the way.

Needless to say, his approach—and particularly his use of web-based tools—has created some discomfort within the ranks, especially among mid-level managers. Although some have resisted his new ways of doing business, most are quickly learning how to play by General Cartwright’s new set of net-centric rules.

Consistent Policies. Policies must support collaboration and be adjusted when they do not. Managers should be particularly alert to situations where oft-cited “policies” turn out to be better described as deeply encrusted traditions. In many cases, when collaboration collides with bureaucracy, closer scrutiny will reveal that what was asserted as dogma is no more than a common practice that can be fairly easily changed.

Policies must also be consistent across all IC entities. Requiring people who work in the same spaces to operate under different sets of rules quickly erodes the ability to collaborate. Team members were struck by one rather mundane but notable example during a visit to a center when they discovered that officers from one organization were allowed to wear headphones to block out distracting noise in a large cubicled work area while their colleagues at adjacent desks were prohibited by their home organization from having headphones for security reasons.

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Collaboration Cells. Every working group highlighted the importance of having access to human enablers who can advise on how to work best collaboratively and assist in tailoring a set of collaborative tools to specific work objectives. Collaboration Cells provide this essential ingredient in the process, addressing key human factors that have traditionally been overlooked. They can help translate the DNI's Command Intent and assist both managers and employees in tailoring application of the Three Core Principles and Six Imperatives to their specific requirements. They can lead the way in promoting best practices and leveraging lessons learned across the community.

Technical and Administrative Infrastructure. One of the quickest ways to discourage the instinct to collaborate is to make tools difficult to access and use or to deny officers much-needed technical support when difficulties arise. In ICDO's various collaboration workshops, the Study Team found that analysts, collectors, and operators were much more inclined to try out and continue to use collaborative systems and software when the tools were intuitive, access was easy, and technical support was available within a matter of hours or at most days.

Administrative practices must also be consistent with the DNI's Doctrine of Collaboration and the Six Imperatives. Personnel appraisals should include collaboration criteria, stressing both the willingness to work in teams and the development of specific collaborative skill sets. Similarly, security policies should be evaluated in terms of their impact on collaboration and whether they unnecessarily impede efforts by the workforce to cross organizational boundaries and personally engage with each other.

Additional Considerations

Size matters. A key insight for the Study Team is that size makes a difference. True collaboration is a personal process that requires the willingness to share partly formed opinions and insights, risk being wrong, and adopt new collaborative business practices. For these reasons, people feel the need to trust those with whom they collaborate. Social science research places the optimal size of a collaborative community at between 50 and 100 depending on the key characteristics of the group, such as the diversity of functions, deadlines, and personal backgrounds. Moreover, research in the science of human interaction strongly supports the thesis that the optimal number of people for effective small group behavior is six to seven. Consequently, although the desired shared virtual environment must include a broad spectrum of participants, COIs must be able to coalesce; collaboration initiatives must focus on small groups with a common mission and objectives and the tools tailored to meet those goals. Appendix C provides an example of how "trust bubbles" comprising interlocking cells of six to seven IC colleagues could be formed to integrate (b)(3), (b)(7)(F) analysts, collectors, and operators in a single collaborative environment.

Situational awareness is lacking. In non-crisis situations, most collectors and analysts do not know the current policies of their policy counterparts or even their own senior leaders. Few in the community know—even in the most general terms—the results of Deputies and Principals meetings at the White House, even when these results could have

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a direct impact on how they conduct their daily business. Many are surprisingly unaware of what their counterparts are doing in other agencies. Invariably, when the entire community is convened to work a particular issue, more than half of those in the room have never met each other. In the ICDO's (b) (3) Workshop, for example, only two people knew more than half of those in the room and only four people in the (b) (3) Workshop had met more than half of those in the room. Many of those interviewed also expressed concern that with the rapid growth of the IC workforce, analysts have become less knowledgeable about collection systems and less able to task collectors effectively.

Recommended DNI Actions

Transforming how the IC conducts its daily business is a daunting task. Effective change management requires strong leadership, a well-articulated vision, constant iteration, and persistence. Cultural change demands a long-term strategy and a senior leadership fully committed to change. The good news is that the IC already has a committed leadership, a solid community framework to build on, and an increasingly younger workforce that it can empower. If the IC makes a modest investment in collaborative tools and staff support accompanied by new training initiatives, the Study Team believes the IC workforce can be successfully migrated to a more collaborative work environment within a matter of a few years, not decades.

The DNI must take dramatic actions to signal that he is serious about the need for jointness and more collaborative work practices. The first step is to articulate Command Intent—in essence, a doctrine of collaboration for the IC. The doctrine would consist of the Three Core Principles to guide the behavior of all members of the community—analysts, collectors, operators, and managers alike.

Recommendation 1: The DNI should underscore his commitment to creating a culture of collaboration.

- **Establish a doctrine of collaboration consisting of the Three Core Principles.**
- **Require that IC policies and practices be consistent with the Six Imperatives for Effective Collaboration.**
- **Introduce policies that leverage his fiscal and executive authorities to support the Four Critical Enablers.**

Senior leadership should reiterate the Three Core Principles at every opportunity. Success will be measured by how many employees cite the three principles in dealing with their management. By articulating and reiterating the Three Core Principles, those who want to collaborate will feel empowered to do so. If employees encounter resistance from their colleagues or their managers, they can cite the Three Core Principles as their authorization to proceed collaboratively. In essence, establishing the Three Core Principles shifts the burden of proof from those who now must justify attempts to collaborate to those who must explain why collaborating would be inappropriate or argue that it would violate well-established (and probably outdated), work practices.

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Recommendation 2: The DNI should ensure that IC business practices and infrastructure support the Three Core Principles, Six Imperatives for Effective Collaboration, and Four Critical Enablers.

- **Make support for collaboration and teamwork an explicit evaluation criterion in all IC performance appraisal systems.**
- **Require the DNI and all agencies to report annually on progress made toward building a common understanding of the Three Core Principles, Six Imperatives, and Four Critical Enablers.**

The DNI has launched a major IC-wide strategic initiative on human capital that includes taking a new approach to performance appraisals. This provides a superb opportunity to underscore the value of reaching out beyond one's particular account or unit to tap other expertise in the community. For example, in addition to evaluating analysts on the basis of what products they have generated, IC managers should track what they have done to improve other analysts' work. Similarly, managers should evaluate collectors on their ability to engage other collectors in developing cross-INT solutions to enduring collection challenges. Ideally, the culture should change so that when a paper or a project begins, the first question asked is: "To whom should I reach out in order to do this job right?" Career panels should also recognize and reward officers when they engage with others, and particularly when they volunteer their time and resources to help others.

The ODNI's Intelligence Community Collaboration Framework (see Appendix H) calls on IC managers to reexamine their performance evaluation and rewards systems to ensure that their contributions to collective national intelligence goals are emphasized as key criteria for agency and individual performance. It also requires individual IC agencies to develop and implement collaboration plans with measurable goals and produce an annual report summarizing progress in implementing those plans. Finally, the framework mandates that the DNI, in turn, produce an annual report on the state of collaboration in the IC, drawing on these agency submissions.

The Study Team strongly endorses this strategy, but would recommend that the IC go one step further. Team members believe that such annual reports will have much more impact if they are drafted by line managers—not staff officers. The papers should be short—three pages at most—and should communicate both to the DNI and to their own workforce what they personally have accomplished in establishing a common understanding of how to implement collaboration. The papers should also briefly document evidence of their success in making that vision a reality.

Recommendation 3. The DNI and his senior leadership should be visible role models for collaboration. They should:

- **Use collaborative systems to keep their communities posted on their policymakers' and decisionmakers' key concerns and priorities.**
- **Develop collection management models that emphasize joint target development and integrated collection strategies.**

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- **Create communities of interest connecting collectors, analysts, and operators both at HQ and in the field.**
- **Expand the “reach” of these communities to non-governmental entities (NGOs, business, academics) as appropriate.**
- **Issue annual reports on (1) how they have used their executive and fiscal authorities to enable, empower, and incentivize collaboration, and (2) how the community, including the analytic process and products, has benefited.**

Few in the IC workforce will believe their senior leaders are seriously committed to creating a culture of collaboration until they see those leaders actually “walk the talk.” They will look for specific signals that collaboration is not just another fad to which they must tip their hat temporarily before returning to business as usual in a few months or years. Fortunately, with the creation of the ODNI, senior DNI managers now have both the executive and fiscal authority to enable, empower, and incentivize collaboration. Mission Managers, for example, could exploit their fiscal authority by developing mechanisms to reward those who help develop and maintain truly collaborative inter-agency databases. They could allocate funds to an office’s R&D or “expertise-building” account in proportion to how much each office contributed to the joint database. The senior IC leadership should encourage Mission Managers and other senior managers across the community to brainstorm with their management teams how they can best enable, empower, and incentivize collaboration within their particular COIs.

The IC leadership should urge senior managers to employ the tools they are encouraging their workforce to use. (b)(3)

Collaborative tools such as blogs or Intelink portals provide senior managers with a powerful vehicle for articulating their vision and objectives as well as an excellent forum for keeping analysts, collectors, and operators working a common issue apprised of key policymaker and combatant commander priorities. The NIO for Africa, for example, has established an NIO’s Corner in the Africa Portal on Intelink where he can provide policymaker feedback to the entire Africa collective with one simple posting. If members of the collective know they can go to this site to find out what is happening downtown, or in Washington, or at Headquarters, it serves as a magnet to pull more officers onto the Intelink website and into their collaborative COI.

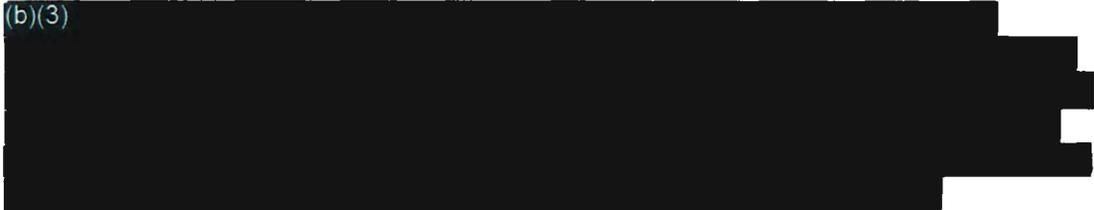
“Separate but equal” collection guidance by individual agencies does not work; neither does “one size fits all” guidance directed at all collectors. As the world becomes more complex and interdependent, the IC’s approach to collection management must also become more integrated. Barring the unexpected windfall, it is increasingly difficult in today’s world for any single agency to achieve its full potential against the most difficult intelligence challenges without the assistance of other agencies. Although most senior managers agree that an integrated collection strategy is usually much more effective than an array of parallel efforts, the IC persists in trying to manage collection by pursuing interagency agreement on a list of common collection requirements.

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IC agencies increasingly need to work from a common road map that defines the role of each agency and intelligence discipline for achieving a desired intelligence goal. Such a road map would raise key questions requiring analyst/collector consensus. For example, the road map would prompt managers to ask what it would take to answer a given question, where to make long-term investments to generate longer-term questions, and how interoperability between separate collection capabilities might achieve traction on issues that defy single-discipline attacks.

(b)(3)



The challenge, however, extends well beyond the IC. The vast majority of knowledge, insight, and innovation the community needs access to is external to the IC's mostly closed systems. This suggests that serious attention should be given to enhancing the IC's connectivity to the outside world and harnessing the power of open innovation. The talents of the new "digital generation" need to be leveraged to develop more dynamic, cross-disciplinary, multi-national, and globally connected communities of expertise on issues as divergent as pandemics, climate change, and border security.

Recommendation 4. The DNI should promulgate policy guidance endorsing the practice of joint knowledge creation.

- **Shift the priority in the IC from producing finished intelligence products to leveraging the emerging web environment (Intellipedia) to create shared, corporate knowledge that is always current and accessible.**
- **Encourage analysts, collectors, and operators to exploit web portals, wikis, and blogs to pool their knowledge, identify intelligence gaps, instill rigorous analytic standards, and challenge key assumptions.**

The IC needs a new capability that allows analysts, collectors, and operators in the field to capture and share their knowledge, build joint databases, and track drafts and other work in progress. Every workshop ICDO held revealed that in-depth knowledge of the target was never the sole domain of the all-source analyst. Frequently, a DO Reports Officer, a field-deployed NSA collector, a J-2 officer, or an NGA GEOINT analyst brought significant knowledge and insight to bear on the subject at hand. In fact, collectors possessed unique knowledge and valuable insights usually not available to Washington, D.C.-based analysts. Over the course of the three substantive workshops, a strong consensus emerged that our customers should be informed by the entire array of IC knowledge and that this would best be accomplished by capturing such knowledge in wiki format on Intellipedia.

Each Mission Manager or COI leader would identify a set of key intelligence topics or questions that the community should track on a real time basis. A lead analyst would

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generate the initial draft characterizing the IC's current state of knowledge on a particular topic and then other analysts, collectors, and field operators would enrich the discussion by adding their expertise. Each entry would have a banner at the bottom of the page indicating who had contributed to the entry and that person's affiliation. The banner would also state that the entry was to be considered work product and not authoritative finished intelligence. Customers who desired an authoritative statement from the community on that topic could request this through normal channels and the COI would issue a formal, coordinated intelligence product. This formal product probably could be processed and disseminated rapidly because in most cases those who contributed to the wiki entry would have pre-coordinated the content.

The DNI could jump-start this shift in priority to wiki-based intelligence by requiring, for example, that all Q&As produced in support of the DNI's Worldwide Threat briefing be maintained in this fashion. Such prompting, however, may well prove unnecessary as momentum already is building quickly for generating intelligence product in this fashion. A formal pronouncement from the Front Office endorsing the use of Intellipedia to capture joint knowledge would go a long way toward creating the necessary conditions to legitimate and expand this work practice.

The Study Team cautions that the value of such postings in joint knowledge repositories is severely diminished if the various inputs are not sourced carefully. Joint knowledge is of little use to other members of the IC and the customer if the source of the information is not stated explicitly or the information is provided anonymously. Authors cannot cite the information entered in other finished intelligence if the report lacks accurate sourcing. Anonymity can serve a useful purpose—for example in a new analyst's chat room—but it is counterproductive if the postings intended to create joint knowledge.

Participants in the ICDO workshops argued that the value of the postings would be significantly enhanced if a "credibility" stamp accompanied each posting. Users can evaluate the credibility of a HUMINT report by reviewing the source description and the source's access, but other streams of reporting may lack such evaluation mechanisms. Open source information probably poses the greatest challenge. Accurately reporting the source of the information (a newspaper, journal, or website) does not suffice: it is equally important for the consumer to understand the credibility of that reporting source. Is the newspaper or website known to have a particular bias? Does it have a reputation for consistently generating high-quality reporting?

Study Team members believe the ODNI should take the lead in developing metrics for assigning credibility to various streams of reporting. In circumstances where the government does not own the reporting stream, the IC should consider introducing an external validation mechanism similar to that used by Amazon.com that would allow customers of the reporting to generate their own credibility ratings.

Intellipedia and Intelink COI portals provide an excellent venue for IC analysts, collectors, and operators to jointly identify and track key intelligence gaps. Gaps can be

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listed and analysts, collectors, and operators can informally collaborate on the most promising strategies for finding the missing information.

The (b) (3) Workshop proposed that the IC also use COIs to capture and challenge key assumptions. Participants suggested that everyone working on (b) (3) post their key assumptions in one location, which would help make the analysis more transparent and avoid analytic mindsets by giving others working in related fields an opportunity to challenge the assumptions. Participants also recommended that the proposed COI maintain a registry of bad assumptions, or the IC's version of "urban legends," that new analysts should avoid. By moving the Key Assumptions process onto Intellipedia or a wiki-like platform, the working community would be more likely to detect when a key assumption has become a key uncertainty and new collection requirements are needed.

Last, the IC has just begun to explore how the fruits of joint knowledge creation can be made available to the policymaking and decisionmaking community. For example, should policymakers have access to everything that is posted on Intellipedia even when it is in only the initial stages of conceptualization? Will they appropriately interpret caveats that joint knowledge creation products do not constitute finished intelligence? One way to explore these issues would be to commission a series of table top exercises involving analysts, collectors, and policymakers to jointly explore how best to craft the intelligence-policy interface in a web-based world.

Recommendation 5. The DNI should establish an interagency working group to institute security policies that foster collaboration.

- **Supplant current requirements for passing interagency clearances with access to a single clearance database that is readily available to all IC components.**
- **Allow people access to all IC facilities if they have the right badge and were invited.**
- **Leverage the resources of annuitants who work for multiple agencies to span cultural and organizational boundaries.**

During the course of our study, team members discovered many situations in which security practices conflicted with the efforts of those trying to collaborate (see Appendix I: Physical Barriers to Collaboration: Security Practices). To cite some of the more striking examples:

- CIA and NSA information systems have different policies regarding the sharing of classified information with foreign nationals, which significantly impedes information sharing.
- In far too many instances, post-crisis Lessons Learned studies have revealed that senior analysts did not see critical compartmented information because they were not cleared for the compartment, did not know to ask for it, or were denied access because of an arbitrary cap on the number of people allowed into a compartment.

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- Analysts, collectors, and operators have found it increasingly difficult to meet with each other face-to-face because of building access requirements. On 23 April 2007 the DNI announced that officers holding Green or Blue badges issued by the CIA, DIA, NGA, NRO, NSA, and the ODNI will be allowed facility entry and interoperable turnstile access at each other's agencies. This is a major step forward, but the principle of "One Community, One Badge" needs to be extended throughout the IC, which will likely prove a much greater challenge.

The security model that has defined IC practices for the last decade is based on the concept that each member of the IC works only for a single agency and does all of his or her work in a single building. Access more often than not is a function of what the "building manager" allows, not what level of security clearances a person holds. The current access paradigm results from stovepipes and the need to "protect turf"—neither of which is conducive to successful collaboration. Table 1 contrasts the Vertical Cold War Model of security with the Horizontal Collaboration Model.

Table 1. Contrasting Security Models

Vertical Cold War Model	Horizontal Collaboration Model
<ul style="list-style-type: none"> • Large, visible, and fixed target 	<ul style="list-style-type: none"> • Small, invisible, mobile targets
<ul style="list-style-type: none"> • Concept of force-on-force 	<ul style="list-style-type: none"> • Asymmetric warfare
<ul style="list-style-type: none"> • Homeland threatened by foreign countries 	<ul style="list-style-type: none"> • Homeland threatened by individuals in country
<ul style="list-style-type: none"> • Classified information often decisive in government decisionmaking 	<ul style="list-style-type: none"> • Open source information often decisive in understanding adversary
<ul style="list-style-type: none"> • International relationships are mostly partnerships with other security services 	<ul style="list-style-type: none"> • International relationships involve much broader range of players with different security requirements
<ul style="list-style-type: none"> • Information is processed in vertical stovepipes with managers deciding how and what is distributed 	<ul style="list-style-type: none"> • Information is shared horizontally, with managers facilitating movement across agencies
<ul style="list-style-type: none"> • Government is acknowledged leader in technology, including information systems 	<ul style="list-style-type: none"> • Government is struggling to keep pace with commercial technology applications
<ul style="list-style-type: none"> • Work done mostly by government staff 	<ul style="list-style-type: none"> • Work done mostly by contractor staff

The IC has tried to embed the current security model into collaborative technology but has rarely succeeded. The Study Team believes a more productive strategy would be to adjust the current security model along the lines of the DNI's 23 April announcement to meet the imperatives of the new mission rather than to try to bend technology to accommodate antiquated security policies.

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The Study Team encourages the DNI to continue to press for badge interoperability across all agencies. (b)(3)

The IC must then make some serious resource decisions (b)(3)

guards at all IC facilities should have access to this single system—or to someone who can immediately access the database for them. Access to a facility would be granted on the basis of two criteria:

- The visitor has a reason to visit and has been invited by someone working in that facility.
- The visitor has appropriate clearances as indicated on the Security Clearance Database.

An alternative, and more efficient, approach would be to allow visitors access to a building if they have been invited and can show a badge proving that they have the appropriate clearances. This might require standardizing badges, (b)(3)

The DNI can leverage the resources of annuitants working in multiple agencies to span cultural and organizational boundaries by:

- Holding clearances for such annuitants at the ODNI level.

- (b)(3)

- (b)(3)

The movement to a less stove-piped organizational culture has had an impact on the annuitant workforce. An increasing number of annuitants now work as contractors for several IC entities. Study Team members believe this process should be encouraged because it often leads to greater cross-fertilization of ideas across IC agencies. For example, a former senior manager who evaluates the product of one agency can provide fresh insight on how to improve the product of another agency where she performs a similar function. Annuitants who work on several contracts for a variety of agencies can also find themselves not under a contract for a short period of time. It is much more efficient for the ODNI to hold the clearances for such individuals in a central repository.

(b)(3)

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(b)(3) . If the former employee intends to enter into contracts with several agencies, much confusion could be avoided if that person's clearances were held at the ODNI level.

Most rehired annuitants have little sense of exactly what clearances they currently hold, when their last background check was conducted, or when they had their last polygraph. This becomes a particular problem if they retire from one agency and intend to return to work for another. (b)(3)

Recommendation 6. The DNI should signal to the IC workforce his intent to create a culture of collaboration and hold managers accountable.

- **Institute the practice of conducting Collaboration Surveys (modeled after Counterintelligence Surveys) to track progress and compliance with IC collaboration policy.**
- **Establish a private "alert channel" that employees can use to notify the ODNI when their workplace does not follow IC policy.**

Instituting a culture of collaboration will require a major change in how people think and how they interact with each other. Change, by its very nature, is threatening. Opposition to change usually is the norm, not the exception. If the IC desires true dramatic change, then it must send strong signals to the workforce that the boss is serious about the need to modify organizational behavior. The following initiatives would send exactly that message.

- By creating a small staff to conduct a handful of Collaboration Surveys each year, the IC would put both managers and the workforce in general on notice that they will be held accountable for implementing collaborative work practices should their unit be selected for a survey. The survey teams would have the primary purpose of helping managers to facilitate the incorporation of collaborative policies within their work environment and to interpret the DNI's Command Intent. Such surveys could also enable senior managers to identify those in the workforce who do not support or actively resist change.
- It is very difficult for top levels of management to penetrate the bureaucracy to obtain a clear view of what actually is happening at the working level. An alert channel, which could report directly to the DNI or to the Collaboration Survey unit, would provide the DNI with a much better capability to acquire ground truth. The IC would encourage employees to use the alert channel if they believe their organization ignores the Three Core Principles and Six Imperatives or is implementing them improperly within their work environments.

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Enabling Recommendations

The following recommendations would require action by different elements within the ODNI and more broadly across the IC.

Recommendation 7. Foster the use of Collaboration Cells across the IC, building on the success of units such as the ODNI's Collaboration Consulting Team (CCT), (b)(3), and the Global Futures Forum.

The success or failure of efforts to promote cultural change often depends on how effectively the transforming vision is articulated to lower level managers and the workforce writ large. In the wake of 9/11 and faulty analysis on the Iraq WMD programs, the CIA's Directorate of Intelligence (DI) launched a major effort to instill more rigor and imagination into analytic processes. As more and more analysts, and then managers, became exposed to a variety of structured analytic techniques, it soon became apparent that a human infrastructure was needed to facilitate the use of these techniques.

(b)(3)

(b)(3) . In fact,

several examples of such "collaboration teams" already exist and each can already point to a long list of accomplishments.

- The DDNI/A/AT&T established the ODNI's Collaboration Consulting Team (CCT) as a community resource to enhance and integrate collaboration efforts across the community. The CCT generates technical and business process solutions tailored to the specific needs of a group, helps people and organizations exchange best practices, and gathers feedback from users and customers to evolve a more effective community collaboration strategy.
- (b)(3)
- The Global Futures Forum has brought collaboration to the world stage, working with foreign governmental and non-governmental bodies to reconceptualize the profession of intelligence as a globalizing phenomenon, and building bridges across well-entrenched organizational barriers.

The challenge is to establish a sufficient number of collaboration cells to ensure an adequate **human** support infrastructure. These cells can serve as engines of change, empowering the workforce to instill collaborative practices into their daily routines. Managers can use the cells to better connect analysts, collectors, and operators with state-of-the-art collaborative tools and techniques. In building such a human infrastructure, senior management must also establish appropriate incentives to join a Collaboration Cell and ensure that working in the cell will enhance careers.

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Recommendation 8: Develop templates and software tools to help analysts, collectors, and operators who are new to an account identify and map their personal and organizational networks:

- **Build and refresh “spider-like” locator link charts that map members of their COI.**
- **Apply the “Facebook” and “MySpace” skills they have already learned in college and private life to announce their arrival on a new account and publicize their talents and their professional associations.**
- **Expand the use of social networking and social benchmarking discovery tools.**

One frustration that surfaced in every workshop centered on the difficulty that officers encountered when they tried to find out who else in the IC was working their target or issue. With a substantial influx of new officers and the seemingly constant turnover within the ranks, this has become a serious obstacle to collaboration. Databases such as the Analytic Resources Catalog (ARC) address this issue to some degree but many view them as cumbersome and not tailored to their specific needs. Both the (b)(3) workshops explored promising solutions to this problem that would leverage the proclivities of more web-savvy new hires. The (b)(3) Mission Manager has launched a pilot project to institute such a system.

Fortunately, (b)(3) will provide the environment for just such activity as soon as it becomes operational. With only a modest further investment in collaborative tool development, officers across the IC should be able to employ a variety of tools to map and navigate their COIs. The software would give any user on the Intelink the ability to define and map his or her community and to add his or her name to an existing map when moving to a new account.

- Each map would employ a basic wheel-and-spoke arrangement to show key organizational nodes associated with the topic, subunits in that node that work the topic, and a list of individuals in the unit that work the topic (see Figure 1).
- The map would list individuals by name and title or account and include a hyperlink to their personal bio page or locator sheet in ARC or Intellipedia that contains the appropriate contact information. Persons under cover could be listed simply with a title and a phone number.
- The chart would be maintained primarily by people who have just joined the COI. Ideally, a culture would quickly emerge whereby one of the first things officers would do when assigned to a new account would be to explore who else belonged to their new network. Once an officer accessed the spider locator chart, it would be simple to add their name to a node (and delete the name of the person he or she replaced) and otherwise update the chart if necessary.

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Figure 1. Intelligence Support to Special Operations Forces

Such a software tool would offer the key advantage of allowing IC members to quickly ascertain all the players in a particular community. Users could tell at a glance, for example, how many units at DoE or at State INR work that issue. The map could be fairly simple (for example, a chart showing the dozen or so people in the IC responsible for tracking (b)(3)) or more complex (if, for example, those working (b)(3) opted to map their entire community). The users would decide how far to “spread the net.”

Participants in the ICDO’s Digital Generation Panel noted that the IC needs to harness the social networking potential of commercial applications such as Facebook and MySpace. They argued that the IC should make similar software available on Intelink to allow officers, particularly those new to the workforce, to advertise their presence, list their skill sets, develop their networks, and identify potential collaborators. The IC should also emphasize developing more robust social benchmarking and social networking software applications like Tacit and del.icio.us.

Recommendation 9. Require that newly leased and newly constructed workspace (and existing workspace as feasible) incorporate collaboration-friendly design elements to improve the quality of work, productivity, and creative thinking.

Key requirements would include:

- Availability of a chair for a visitor.
- Work spaces that balance the need for privacy with the potential for easy interaction with colleagues.
- Common areas where people can gather spontaneously or “run into each other” en route to their cubicle or office.

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Human beings are herd creatures and they like to socialize both in private life and in their office environments. Workspace that makes collaboration among people physically difficult reduces collaboration and, even worse, impairs people's innate tendency to socialize and collaborate. Much of the office space surveyed by team members had little if any space for socializing, holding team meetings, entertaining visitors, or holding collaborative workshops. The recent surge in hiring has greatly exacerbated this problem, leading to the conversion of conference rooms and meeting rooms to office cubicles in several buildings. Unfortunately, cramped quarters and dysfunctional office space has a direct impact on the quality of work products, productivity, and creative thinking.

Critical thinking, and particularly the ability to challenge established mindsets, rarely emanates from cramped and dysfunctional workspace. Various studies have shown that improvements in office design, lighting, acoustics, ventilation, and temperature control can increase productivity by 15-20 percent (see Appendix J: Physical Barriers to Collaboration: Workspace). The optimal office design gives employees an option for both distraction-free workspace and a place to meet and interact informally with their colleagues. One solution is to design enclosed workspaces or cubicles that encircle more public spaces which would increase the frequency of random encounters and interactions among individuals, both within and across teams.

As a consequence of tight budgets and a rapidly expanding workforce, management may have no option but to accept a decrease in productivity, product quality, and collaboration. This, however, should be a conscious decision of senior management, and not a hidden cost. Looking ahead, the IC should make a more concerted effort to think strategically about the best ways to design workspace prior to fitting-out newly constructed or newly leased buildings.

Recommendation 10. All senior managers should create opportunities for members of their communities to meet face-to-face at least annually to foster a more effective human environment for collaboration.

Such sessions should focus on substantive issues and target real problems. The underlying theme would be to explore how analysts, collectors, and operators can collaborate more efficiently and perform more effectively on their joint mission.

Collaborative work practices are difficult to instill in a group of people who have never met each other. For this reason, most people find it difficult to pick up the phone and call a stranger. Just one previous encounter—no matter how abbreviated—can make that phone call much easier. Because of such human dynamics, personal connections are often essential to building trusting relationships. Lacking that face-to-face interaction, people are disinclined to trust others with their information and to share their partially formed views and insights.

If Mission Managers and other senior managers are to build a collaborative environment, they must create opportunities for members of a COI to meet with each other face-to-face. An annual conference is the classic formula, but smaller workshops that wrestle

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with specific intelligence challenges are likely to more productive. Personal interactions should not be confined to breaks between speakers; they should be an integral part of the conference or seminar setting.

Recommendation 11. The ODNI should develop and conduct IC-wide collaboration training courses at four levels.

- **New Hire.** Focus on the collaboration tools (e.g., A-Space, locator maps, MySpace, web portals, blogs, Intellipedia and other wikis) that new employees can use to connect with their community.
- **Journeyman.** Explore cultural and organizational barriers to collaboration and the tools and techniques that can be used to overcome them.
- **First Line Supervisor.** Address the changing role played by First Line supervisors as the IC shifts to cross-agency collaboration. Share lessons learned that have applicability across the entire IC.
- **Executive.** Emphasize how best to facilitate collaborative practices, applying the Three Core Principles, Six Imperatives for Effective Collaboration, and Four Critical Enablers.

In the 100-Day Plan, the DNI addressed the need for collaboration training to help promote jointness throughout the IC—a theme that surfaced in all the collaboration workshops. Having representatives from multiple agencies participate in the same training courses and workshops would exert a major impact in helping to promote a culture of collaboration. Workshop participants emphasized the need, however, to differentiate the kinds of training provided based on the experience level of the group.

- For new officers, training should focus on developing the necessary skills to exploit existing (or soon to be deployed) collaborative tools in the IC. The ODNI should use the training to build expectations that among the first things IC officers should do when beginning to work on a new account would be to register or update their presence on ARC (b)(3); create, update and explore the locator map for their new community; reach out to meet their new colleagues; identify and join the appropriate web sites; and establish a list of reading requirements.
- For journeyman officers, the focus should shift to developing a better understanding of the cultural and organizational barriers to collaboration. Moreover, analysts need to learn more about collectors and collection systems; collectors need to understand how analysts can help them identify targets and how they establish collection priorities; and operators need greater awareness of the constraints under which various analysts and collectors function.
- First Line supervisors need direct exposure to their counterparts across the IC, the challenges they face, and the tools they have used to facilitate more collaborative work practices in their units. Training should also focus on enhancing cross-cultural awareness and learning how to leverage expertise that does not reside in their own work units.
- Senior managers need opportunities to pool their experiences as they explore how to better facilitate collaborative processes and build more robust bridges across organizations and COIs. Most important, the focus should be on the

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transformation from a culture where managers control what their units generate to one where the primary function of management is to orchestrate and facilitate high-quality, joint production.

Recommendation 12. Post this study on Intellipedia and encourage input from the IC workforce.

- **Engage the IC in a dialogue about each recommendation.**
- **Establish a personal blog for the DNI to discuss the study's key findings and recommendations.**
- **Use the study to elicit examples of best practices in collaboration as well as procedures that must be changed to achieve a robust collaborative environment.**

Posting this study on the DNI's website and, more important, on Intellipedia would send a powerful signal to the workforce. Several of the recommendations in this study will almost certainly generate discussion, and all the recommendations would benefit from more ground truth. The use of Intellipedia would also signal that the Study is a work in progress—and a living example of the direction in which the DNI wants to move intelligence production.

The DNI would send a far more powerful signal if he chose to launch his own blog. He could use the current study as a starting point to engage the workforce in a personal conversation about the need to create a culture of collaboration. Concerns that the use of blogs by senior officials would invite flammers or create more problems than they solve have generally proven unfounded. Usually those who take the time to fashion a message for a senior official have demonstrated good discipline. General Cartwright could provide some useful perspective on how to launch and manage just such a blog. One caution: a decision to launch a personal blog must be accompanied by a plan to ensure that it remains an active tool of management.

Implementation of these recommendations could vastly improve the IC's ability to work collaboratively within its own environment, but the benefits could prove ephemeral if major efforts are not taken to better connect the IC to the ever more rapid and dense global networks proliferating outside the IC. As the world shifts from a linear, production-oriented mentality to an increasingly complex and interdependent intelligence "ecosystem," the need to find connectiveness through social networking and the smart use of virtual collaborative systems is a growing imperative. IC officers may become highly collaborative, but they also need to become better connected to where the main action is—the global community.

Transforming how the IC conducts its daily business will be a daunting task. Effective change management requires strong leadership, a well-articulated vision, constant iteration, and persistence. The DNI and his leadership team must take dramatic actions to signal that they are serious about the need to institute jointness and to embed collaborative work processes across the community. The recommendations contained in this report are designed to build the momentum necessary to accomplish that task.

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