The complexity of the contemporary US security environment demands a new, comprehensive way of assessing and contending with the ongoing challenges. The current method can be characterized as a symptomatic rather than systemic approach. The present interagency and multinational mechanism consists of reacting to immediate threats and opportunities, dealing with the conditions of violent extremism, and responding to each crisis as it arises. Such actions are often slow, isolated, and wholly inadequate. Government planners and operators focus on immediate response to a crisis without considering the long-term implications. Academicians and members of think tanks focus on long-term solutions and potential policy changes, without means of testing their proposals or getting the information to those who would act on it. The private sector pays for forecasts and data-mining to understand and profile the same areas of concern, yet military planners do not benefit because they lack adequate access to academic endeavors or private-sector reports.¹

Combatant Commands (COCOMs) need to find methods of integrating the agility and innovation of the private sector with the foundational knowledge of academic efforts to meet the emergent needs of military commanders and planners. With the proper kind of creative thinkers and pragmatic project managers, COCOMs can forge helpful bonds with willing partners, while leveraging the knowledge and experience of the private and
public sectors. This integration of resources and expertise will help foment and nurture the conditions for peace and stability in conflict-prone regions.

**Integral Collaboration Teams**

The military is taking important steps to close the knowledge gap between academia and “boots on the ground.” Secretary of Defense Robert Gates, in a speech to the Association of American Universities, said the military is beginning to employ human terrain teams “with the assistance of anthropologists and other experts to get a better sense of the cultures in which they’re operating. The human terrain program—which also includes economists, historians, and sociologists—is still in its infancy and has attendant growing pains. But early results indicate that it is leading to alternative thinking.”

To bolster the success the human terrain teams are having at the tactical level, academic and private-sector resources also need to be integrated at the operational and strategic levels. The Integral Collaboration Team (ICT) concept provides an inclusive framework that will incorporate human terrain teams and other similar initiatives at the COCOM and national level, and connect them to a broader community of interest.

Given the complexity of conflict-prone areas, ICTs will take a holistic approach that addresses the social, political, and cultural landscapes; assess situations in a predictive and anticipatory manner; find common ground; and enable governments and the private sector to synergize their capacity for planning, leverage resources, implement thoughtful action, and assess results. The most critical need, and perhaps the key to all other adaptive change in response to complex threats and opportunities, is establishing a multidisciplinary and strategic “think-act-reflect” capability at the COCOM-level. This capability will employ innovative training, research, monitoring, planning, and assessment support for developing systems approaches to wicked problems, both concepts that are worthy of lengthier examination.

Systems approach refers to a holistic and comprehensive analysis of complex and intensely challenging problems. According to Irene Sanders, author of *Strategic Thinking and the New Science: Planning in the Midst of Chaos, Complexity, and Change*, a systems approach:

Colonel Fred T. Krawchuk recently finished a tour with Multi-National Force-Iraq and will lead US Special Operations Command’s Interagency Task Force in the fall. He is a graduate of the United States Military Academy, University of Navarra-International Graduate School of Management, and Harvard University.
Represents a growing body of interdisciplinary knowledge about the structure, behavior, and dynamics of change in a specific category of complex systems known as complex adaptive systems—open evolutionary systems in which the components are strongly interrelated, self-organizing, and dynamic. Rain forests, businesses, societies, our immune systems, the World Wide Web, and the rapidly globalizing world economy can be thought of as complex adaptive systems. Each of these systems evolves in relationship to the larger environment in which it operates. To survive, the system as a whole must adapt to change. As a result, we are witnessing the integration of knowledge across disciplines and the emergence of new concepts, tools, and a vocabulary of complex systems thinking. Across the frontiers of science, this new more complete, whole systems approach is replacing the old reductionist paradigm, where scientists traditionally tried to understand and describe the dynamics of systems by studying and describing their component parts.¹

A wicked problem has innumerable causes, is difficult to describe, and does not have only one correct answer.² Environmental degradation, terrorism, and poverty are classic examples of wicked problems. They are the opposite of hard but ordinary problems, which may be solved in a finite time period through the application of standard techniques. Not only do conventional processes fail to resolve wicked problems, but they may exacerbate situations by generating undesirable consequences.

The ICTs will employ a systems approach to wicked problems. With reachback to academia and policymaking institutions combined with direct links forward to organizations in the field, ICTs will provide a comprehensive network for the rapid transfer of knowledge and understanding. These teams can shape a COCOM’s strategic direction with sophisticated forecasting, innovative solutions to long-term security issues, and by providing pragmatic prototypes for creating a stable and peaceful security environment in concert with interagency and multinational partners.

**A Reason for Being**

ICTs support COCOMs to:

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“Government planners and operators focus on immediate response to a crisis without considering the long-term implications.”

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• Establish and maintain a community of interest, to include experts and stakeholders.
• Provide connectivity between COCOMs, academia, think tanks, and the interagency community in the United States and abroad.
• Develop systems and processes to leverage social science, ethnographic, political, psychological, economic, and cultural expertise.
• Institute and test new solutions to meet the challenges of extremism and the underlying conditions that foster instability and other security conundrums.
• Originate integral, cross-sector training and consulting programs capable of discovering common ground, providing linkages between stakeholders, and creating more efficient collaboration in conflict-prone areas.
• Offer comprehensive long-range planning, advice, experimenting, monitoring, consulting, and assessment regarding strategic issues.
• Share innovative solutions and lessons learned with the greater community of interest and other stakeholders.

The ICTs, due to their multidisciplinary makeup and strategic outlook, will execute whatever mission the strategic environment requires, designing prototypes, models, and performing experiments as needed. The ICT’s focus will not be on current operations or plans in the traditional military sense. Instead, the ICT will address issues that are resistant to today’s approaches, taking a more long-term approach to identifying threats, opportunities, and desirable outcomes. The ICT will monitor the operational environment with a network of subject-matter experts, bringing them together as required to systematically analyze wicked challenges, model potential outcomes, and recommend comprehensive solutions.

With this thorough analysis in hand, the ICT will then produce prototypes. Research and development are often limited to the world of hardware. The emphasis of the ICT, however, will be on a systems approach in an effort to resolve the social, cultural, behavioral, economic, and human dimension of complex, regional challenges. Areas of focus might include irregular warfare, negotiations, conflict prevention, and private-government collaboration in conflict-prone areas.²

The ICT will recommend, and where appropriate, coordinate with international and nongovernmental organizations to establish new partnerships for the COCOM in an effort to resolve complex strategic issues. Results from these experiments may identify areas for additional research and development, opportunities to transition future planning and operations, or possible applicability for other regions and issues. ICTs will recommend scaling-up those prototypes that prove successful in the field. Following the
operation of a prototype, the ICT will produce a case study with lessons learned, ensuring results are recorded within the knowledge management database for sharing and institutional continuity.

**Team Selection**

This sophisticated approach to strategic thinking requires cross-sector expertise and rigorous knowledge management. Teams require credible members with positional power, skilled in the generation of creative ideas, relationship building, the design of novel concepts, and with the ability to develop pragmatic approaches, translate knowledge into action, and manage change. The ICT should include individuals with functional expertise in cultural anthropology, social science, history, psychology, regional studies, modeling, complexity science, economics, media, and other relevant disciplines.\(^6\) The team also requires a support staff that includes a budget officer, contracting expert, training manager, community of interest manager, research librarians, and knowledge management specialists.

There are those in academia who argue that this kind of approach “exploits social science for political gain.”\(^7\) Certainly the military and government as a whole need to ensure they respect the researchers’ ethical considerations. They can best accomplish this by being open and transparent with regard to how analysis is used, understanding that scholars have an opportunity to positively influence the formulation and execution of defense policy. A more sophisticated understanding of the causes of an emerging conflict that leads to an appropriate resolution, for example, might help alleviate suffering and reduce violence before it spirals out of control. Montgomery McFate, a cultural anthropologist who regularly advises the American military, dismisses what she believes to be unsupported criticism of academics working with the military. “I’m frequently accused of militarizing anthropology,” she said. “But we’re really anthropologizing the military.”\(^8\)

**Team Formation**

Prospective ICT leaders require an open-mind and certain level of intellectual astuteness. They need to thrive on ambiguity and actively seek diverse perspectives. These requirements may stress individuals typically found within the Department of Defense, due to the fact that the current culture normally favors results-oriented rather than process-oriented approaches and often does not reward creative or entrepreneurial attributes. COCOMs will need to recruit and promote the right mix of people, individuals capable of balancing
results with innovative processes, network building, multidimensional analysis, and maintaining a long-term perspective. ICT leaders need to be process-, task-, and relationship-oriented. Special operations officers, foreign area officers, military strategists, civil affairs officers, information operations officers, and government civilians who may demonstrate such attributes are candidates to lead ICTs.

Teams may reflect a mix of contractor, government employee, and military members. The internal and external balance of outsourcing versus team membership might resemble the following: Knowledge database management, community of interest, subject-matter network, and open-source research and analysis can be outsourced. Strategic planning is a core competency of the military and should remain under its direction. COCOMs will need to utilize innovative and nimble private-sector capabilities, information, and processes if they are to remain relevant. The ICT will blend the agility of civilian organizations and their capabilities, the expertise of diverse researchers, and the planning capacity of the military in support of long-range planning and strategic initiatives.

For ICTs to succeed and thrive, senior champions need to commit to the concept and support recruiting the right kind of individuals. COCOM commanders should make the ICT part of their special staffs and place ICT liaison elements in Washington, D.C., and overseas with deployed elements. The ICT concept may well require longer periods of assignment than senior leaders typically serve. Those responsible for the assignment of personnel should consider the additional time that may be required for the full development of leaders in these organizations. Senior leaders in COCOMs will also need to be open to assessments from a variety of external organizations, supportive of flat organizational structures, prepared to provide the ICTs with broad-based empowerment, and demonstrate a willingness to openly engage change. In order to be successful, ICTs will need the freedom and top-cover that permits opportunities to rapidly research, acquire resources, experiment,
and apply comprehensive solutions in an evolving and fast-changing environment. Creative individuals often challenge constraints, limitations, and authority, so COCOMs will need to be prepared to accommodate such free-thinking team members. Senior champions and grassroots catalysts are needed to ensure change management occurs within bureaucratic organizations. Innovative members who form the ICTs will require a dedicated budget, a direct line of communication with senior decisionmakers, and the ability to rapidly create new concepts and programs.¹⁰

**Multidisciplinary Analysis**

An innovative and multidimensional ICT that is well-supported by COCOM leadership will provide the military the edge required to meet the multitude of complex threats and opportunities faced by operators. Commanders and planners need to fully understand the threats and their underlying conditions, the environment which generates and supports these threats, and the needs of other stakeholders in the region.¹¹ The ICT will provide comprehensive assessments of conditions that generate instability, as well as the circumstances underpinning peace and prosperity.

Military operations influence complex, dynamic systems. These are open-ended systems with a number of interdependent variables and feedback loops, often resulting in unintended consequences. Each problem is unique and constantly evolving. These are often the wicked problems referenced earlier where stakeholders cannot agree on the scope or cause of the problem, let alone a solution. The linearity of the chosen solution compounded by single or simplified points of view can render the approach ineffective at best and even potentially detrimental.¹² COCOMs cannot hope to understand the system dynamics if they place themselves outside of the system. What military forces do, how they are perceived, and how they react to stakeholders, media, and others in their area of operations are all integral to system dynamics.¹³ It may be as difficult for military leaders to understand themselves and their “blind spots” as it is to understand the local populace of a distant land.

The need for a more comprehensive diagnosis of the challenges and opportunities for the military leader requires a systems approach.¹⁴ In support of these requirements the ICT would conduct research and provide analysis based on a diverse array of sources, such as scholarly works, briefings, government reports, private-sector risk analysis, open-source data-mining, media, conference proceedings, and personal interviews. Integrated interviews and surveys might be with military officers, law-enforcement officials, academics, regional security experts, historians, journalists, human-rights advo-
Cultural, historical, ethnographic, religious, psychological, and socio-economic factors would need to be analyzed, synthesized, and visually displayed. The use of a geographic information system and interactive portals to display data would assist in the identification of hot spots and provide opportunities for anticipating conflict. Sharing this common operational picture with interagency and multinational partners will foster greater collaboration, because everyone will be utilizing the same data. Sharing this map will afford stakeholders an opportunity to contribute to the creation of a more complete operational picture, the result of integrating diverse perspectives.

Multidimensional analysis and the diagnosis of challenges and desired outcomes are required if commanders and strategists are to have the perspectives they require. Social, economic, psychological, and cultural information and subject-matter experts will be available for strategic planning and implementation. COCOMs require these capabilities if they are to successfully organize, analyze, and apply this vast amount of knowledge.

**Coordinated Action and Implementation**

A holistic diagnosis of emerging threats will guide the military to innovative solutions and capabilities benefitting the COCOMs. The mere suggestion of an emerging trend or pattern is simply not enough. The ICT will help commanders specify what regional security objectives they desire, and the paths and processes supporting those objectives. The ICT should not be limited to identifying worst-case scenarios; the team can also explore best alternatives and the strategy required to achieve them. This methodology means that the ICT will operate in a predictive analytical and anticipatory mode, rather than being reactive. After synthesizing diverse perspectives, the

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ICT will provide creative approaches to security requirements. With innovative alternatives in hand, COCOM planners can then direct ICTs to focus on the design of new solutions for particular areas.\(^\text{17}\)

Once a particular design has been approved, the ICT can initiate prototypes while continuously monitoring results. Innovative solutions require different types of partnerships. For example, multiagency and cross-sector operations require significant levels of coordination. An effective cross-sector plan may span defense, development, and diplomacy arenas; involving any number of agencies. Not only do senior military leaders need to engage interagency partners, COCOM members also have to develop the capacity to negotiate with partner-nation elites, grassroots organizations, and regional leaders in the private and public sectors.\(^\text{18}\)

New prototypes may require alternative methods of training if the military is to successfully execute these new capabilities. Integrating multidisciplinary knowledge while working with diverse stakeholders will require innovative interactions. Negotiations, systems thinking, and complexity theory all play a critical role in learning how to function successfully in today’s operational environment.

Using an entrepreneurial start-up model, COCOMs will form the individual ICTs and evaluate their methodologies and strategies. By observing the environment or market, analyzing competitors, listening to partners, attending conferences, soliciting feedback, and brainstorming with experts, the ICT will be able to provide value and insight from this plethora of sources. The process will assist planners in developing new programs, activities, or capabilities for the COCOM. Following creative analysis, the ICT will design practices or procedures supportive of the new activity. Additionally, they will develop prototype solutions that may rapidly succeed or fail; and then revise as needed. The ICT, by exercising a full-cycle approach (think, act, and reflect) to wicked problems, can modify training, organizational, doctrinal, policy, and leadership solutions in support of COCOM’s missions.\(^\text{19}\)

**Relationships and Networks**

The ICT’s approach to comprehensive diagnosis and collaborative action with stakeholders will require access to experts in varying fields—a network of subject-matter experts. Information sharing leading to a comprehensive operational picture and innovative design requires establishing and maintaining relationships with a wide variety of resources. A community of interest needs to be cultivated and nurtured. The ICT will also help COCOMs establish a knowledge network so they might reach out to experts outside the military. These experts would provide information as requested by com-
manders, planners, and analysts. The ICT support staff would also have the additional responsibility for managing information that experts provide, and establishing portals and repositories for that knowledge.

The ICT will facilitate outreach programs to academia, think tanks, and the private sector through the use of websites, conferences, and other communication means bridging the gap between strategic requirements and capabilities. Many of these institutions and researchers already conduct analyses on topics of mutual interest such as terrorism, threat forecasting, and irregular warfare. If properly staffed and organized the ICT will function as a bridge connecting researchers.

Conferences provide an excellent means of establishing and sustaining a community of interest. Inviting diverse voices to a neutral venue, such as a seminar, is an excellent method to initiate dialogue. If well-thought, workshops can integrate leaders from a variety of agencies, private-sector organizations, and even nations, hopefully, in a mutual effort to develop understanding, explore mutual interests, deepen relationships, coordinate planning, and discovering insights. In addition to hosting conferences, the ICT will proactively seek opportunities to participate in workshops as a means of learning, relationship building, and sharing perspectives.

Integrating diverse voices is critical for any number of reasons. Globalization, technology, media, business, environmental issues, and security are all evolving factors that highlight the need for increasing connectivity and interdependence. COCOMs cannot create secure environments without first considering how military action interacts with political, economical, cultural, and social systems. Establishing and maintaining these networks supports a dialogue among partners, leaders, and policymakers; enabling the military to efficiently employ its resources. These exchanges will increase mutual tolerance and create new methods for individuals and organizations to move toward common ground.

Lessons Learned and Continuity

Change takes time and often requires unarguable results if new capabilities are to be successful. Given the long-term challenge of irregular warfare, it is imperative that the ICT be able to demonstrate a persistence of effort and information-sharing. Continuity is critical to maintaining momentum in such endeavors. ICTs will utilize the knowledge gained to share with other stakeholders. Long-term membership in the ICT will also promote continuity of effort. Other forms of sustained learning might include portals, newsletters, publications, podcasts, and CD/DVDs. Such a system will provide parties with a common database, avoiding duplication of effort. Stakeholders
Conclusion

Building new strategic capabilities is critical if the military is to remain relevant in today’s rapidly evolving security environment. The Department of Defense faces a volatile and disruptive future. COCOMs need to look beyond their current programs and methodologies, and prepare for the challenges and opportunities likely in the next 20 years. Initiatives designed to address capacity-building at the national level, shaping operations, and the conditions fostering extremism face a number of challenges that illustrate the critical need for a long-term, strategic “think, act, and reflect” capability within the military.

Effective strategic planning is an investment requiring patience and persistence. Leader support, recruiting the best-suited and qualified individuals, and a dedicated budget are critical if we are to build a problem-solving capability within COCOMs. With creative thinkers and pragmatic project managers within the ICTs, military leaders will be capable of forging bonds with any number of partners capable of leveraging knowledge from a number of sources.

Developing a comprehensive method for strategic innovation in the COCOM demands the development of a systems approach. An approach utilizing the best expertise from within government, academia, and the private sector. ICTs provide the promise of an innovative approach in analyzing and developing comprehensive solutions to “wicked problems.” A blend of diverse perspectives and multidimensional strategic planning will provide COCOMs with an adaptive means for creating secure environments in conflict-prone areas. ICTs, task organized to maximize expertise and capabilities, will help close the gap between strategic and tactical, public and private. By shortening the decision cycle by means of direct access to decisionmakers as well as operators, ICTs will assist COCOMs in staying ahead of a growing variety of challenges.

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threats. Strategic assessments, prototyping, cross-sector collaboration, and knowledge management will provide COCOMs with a proactive means to help create conditions for peace and security.

NOTES

1. Ann C. Gallenson, personal interview, May 2007; and e-mail exchanges, November 2007. Ms. Gallenson is president of A Charles Consulting and has worked as a strategic consultant for a number of years on a variety of complex projects, to include Department of Defense initiatives, interagency collaboration, and private-public partnerships.


8. Ibid.

9. Curtis Johnson, phone conversations and e-mail exchanges, October 2007. Mr. Johnson is an expert in complexity science with Sandia National Laboratory in Albuquerque, New Mexico, and has been applying systems approaches to complex problems to include terrorism, socio-political identity issues, and information operations.


12. Williamson Murray and Allan R. Millett, Military Innovation in the Interwar Period (New York: Cambridge Univ. Press, 1998), 303. “It now appears that stable systems with regular, simple, predictable dynamics are in fact exceptions in nature rather than the rule . . . . They suggest that the world as a whole does not work in a mechanistic, deterministic fashion, that complex social interactions like military innovation or actual combat do not reduce to simple, linear processes, and that the study of human affairs, the interplay of literally hundreds, if not thousands of interdependent variables, is more of an art than a science. The process of innovation within military institutions and cultures, which involves numerous actors, complex technologies, the uncertainties of conflict and human relations, forms a part of this world and is no more open to reductionist solutions than any other aspects of human affairs.”


18. Kim Cragin, personal interview, April 2008. Ms. Cragin is an associate international policy analyst at RAND. Her research focuses on terrorism-related issues, including arms trafficking, suicide bombings, anti-US extremism, the relationship between terrorism and development, terrorist groups’ operational requirements, and border security.

