

Probing the Implications of Changing the Outputs of Intelligence

A Report of the 2011 Analyst-IC Associate Teams Program

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Intelligence, especially intelligence analysis, cannot truly be transformed until its practitioners have reshaped the way they think of their products.

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This article is a result of the 2011 Analyst-IC Associate Teams Program sponsored by the Office of the Director of National Intelligence and the State Department's Bureau of Intelligence and Research. The IC members of the group, all experienced intelligence officers, teamed with Greg Treverton, a former vice chairman of the National Intelligence Council, to examine how intelligence is delivered to Intelligence Community consumers. The study's bottom line is that intelligence, especially intelligence analysis, cannot truly be transformed until its practitioners have reshaped the way they think of their products. This, the research team believes, must be done if IC analysis is to effectively serve future generations of policymakers.

For all the experimentation with technology and intelligence production over the years, intelligence products have remained remarkably unchanged: they are primarily static, branded, and stove-piped. They are words on a page or pixels on a computer monitor produced within agency stovepipes that give

pride of place to the subject matter expertise resident in those stovepipes. Early in our deliberations, we realized that the language of “products” was itself confining because it tended to channel thinking of intelligence producers into familiar grooves—viewing the outcome of analysis as a static commodity. Thus, we started to use the word “outputs” to open up our thinking about what it is that the Intelligence Community (IC) “produces” and how it interacts with policy officials and decisionmakers in sharing the fruits of its work.

In principle, social media—especially Wikis but perhaps also Facebook and others—provide openings for rethinking outputs. Wikis seem tailor-made for intelligence. As evolving, living documents that are changed as new evidence surfaces and new ideas arise, Wiki pages let experts in different subject areas come together and permit interested nonexperts to challenge views. And throughout, Wikis maintain easily followed, rich metadata about where evidence comes from and who altered the content.

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Outputs, Not Products

Consider the following scenario. Forward-deployed US commanders are devising possible military responses to the recent aggressive actions of *Country X*. During the meeting, one senior commander, using his secure iPad, texts a question to his intelligence analyst at another location. Meanwhile, in the classified blogosphere of Intelink, analysts from across the IC, including some of the top minds on the subject, have been debating *Country X's* next move. The intelligence analyst finds the thread, summarizes key points, and texts back to the commander. At the same time, the analyst injects concerns his commander has raised into the blog conversation, and the other IC participants begin to voice their opinions. The analyst reports the outcomes to his commander, who can immediately incorporate them into operational planning.

Such a vision of intelligence analysis is quite different from the IC's current model. Provision of secure iPads or similar technology is probably not terri-

bly difficult; the real challenge to adopting this model will be cultural. The norms of the intelligence business are reflected in the lexicon it uses. Intelligence analysis results in "products." Today, delivery of every "product" connotes the end of an analytic process, the completion of a "finished intelligence" report and its delivery to a customer. These reports are bounded, discrete, and static packages of data.

Provision of intelligence support, of course, is more complex, continuous, and nuanced than delivery of a single product. As an example, analysts forward-deployed to a customer's office sometimes provide annotated reports to the customer. These typically include raw, unevaluated intelligence reports the analyst thinks may pique the customer's interest. The analyst prints out the reports, highlights key passages, and adds notes on the report's impact on earlier analysis of the subject. This type of support was highlighted by former National Security Council Director for Afghanistan Paul Miller (a CIA officer on assignment to the NSC), who suggested that "senior analysts and managers should be allowed to e-mail quick replies and analyses directly to their policy counterparts [in the way that I could]. This approach may not be

appropriate for every account, but in crisis policymaking, it is indispensable."¹

In our hypothetical example, the analyst chatting to his commander on an iPad was providing intelligence support—the "output" of his expertise—but he was not producing a finished analytical product. In cases such as these, the term "intelligence outputs" more accurately captures the assortment of ways in which intelligence information and expertise are delivered, and suggests more precisely the benefits and utility the IC generates. Outputs could include telephone calls, conversations, or writing for other analysts, acts seldom counted in the current performance appraisal system. "Non-stat-worthy," these outputs are nevertheless often highly beneficial to customers. Similar non-stat-worthy activities for policymakers, such as contributions of tacit knowledge into an IC-wide repository, or the capturing of how judgments were reached in an assessment are generally considered less valuable or not valued at all in personnel evaluation systems.

At the same time, traditional intelligence products—the President's Daily Briefing (PDB) reports, the current intelligence production, the longer assessments, all of which are counted with great care in personnel evaluations—may not be well connected to customer needs. Panels studying the IC over the years have repeatedly

warned of gaps between IC support and end user needs.² One reason for this disconnect is that traditional finished analytic products are often not written with particular customers in mind. These kinds of observations help to paint a picture of the IC that “resembles a production process in a Soviet-style planned economy, where higher-order management determines production quotas for what *ought* to be manufactured, without regard to whether the end-users really want or need what is coming out of the production cycle.”³

Broader Customer Base Requires Broader Concept of Support

Former Deputy Director of National Intelligence (ADNI) for Analysis Thomas Fingar has noted that the concept of “national security” has broadened over the years, and especially so after 9/11. Where once the term was confined to military, diplomatic, and political/ideological threats, it now includes the geopolitics of energy, global financial flows, the spread of infectious disease, and the safety of individual American citizens anywhere on the globe. This expanded definition has in turn also increased the number and variety of institutions and individuals desiring or demanding analytic support from the IC.⁴

Intelligence Community Directive (ICD) 208 (“Write for Maximum Utility”) urges analysts to give customers informa-

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tion in a form they can easily use and share. However, it is becoming increasingly difficult for traditional finished intelligence products to meet the demands of today’s more diverse group of customers. A finely polished piece without a well-understood audience is likely to fail to fully meet the needs of any reader. A product that attempts to appeal to a wide audience risks coming across as a lowest-common-denominator product, vanilla and generic, and lacking specifics decisionmakers need. And a product written specifically for one individual but delivered to a wide audience will come across as irrelevant to many. How, then, can the IC meet the challenge of serving a diverse audience?

First, we think the IC must abandon the idea of a “final product” and end its reliance on a limited number of “finished intelligence” publications. In their place it should adopt flexible and varied forms of delivering support, sufficient to meet the differing objectives of America’s multiple national security missions. By pursuing a comprehensive range of outputs, the IC will be moving away from a product-centered model and toward a service-centric model like the one recently proposed in this publication by two senior IC analysts.⁵

In many ways, these opposing models have been competing for some time in the IC. Former CIA Associate Deputy Director for Intelligence Martin Petersen described it in an article in this journal in 2011.

A service mentality is the opposite of a product mentality, which often seems to drive the work of intelligence analysis... In a product mentality, the focus is on the producer, who thinks of a product as his or hers. It is also about packaging that product and disseminating it widely. Success is measured in numbers—how many units were produced or how many received each unit. It is about filling a book or producing a product to demonstrate that an analyst is ready for the next big step in a career.⁶

Focus on Products Leads Us to Neglect Other Important IC Functions

Over the past 60 years or so, the IC has developed and refined a process to support the construction of products. We argue that many of the IC’s norms are defined by the processes that create them. The need to create today’s products touches almost every facet of the IC. They affect hiring, orga-

Current IC Focus	Future IC Goals
Products	Outputs
Statistics & performance driven	Consumer needs-driven
Stove-piped production process	Analyst exchange during research/production process (including outside the IC)
Static products	Dynamic and static outputs
Discrete	Share while protecting sources and methods
Inconsistent feedback/lacking effective feedback mechanisms	Effective and utilized feedback mechanisms
No defined audience	Clearly defined audience
Set scopes/purposes determined by producing agency	Evolving and shifting scopes to meet consumer requirements
Analyst as producer to policymaker/decision maker	Value-added producer to consumers who need the intelligence
Product disseminated and complete	Dialogue between producer and consumer before and during production
Finished intelligence	Useful information and analysis to consumer
Traditional dissemination mechanisms	Traditional and non-traditional dissemination (including analyst as output via social media, etc)

nization, training, and performance measurement (individually and organizationally). Some have cynically said that intelligence analysts don't write for customers; they write for their human resources (HR) systems. As the saying goes, "a system is perfectly designed to deliver the results it is receiving." In the case of the IC, the HR system rewards only official, "stat-worthy" products, which means that other important IC responsibilities have sometimes been neglected. Two such neglected areas include the coverage of non-Tier-1 issues^a—in other words, matters falling outside the US government's top priorities—and

the documentation of analytical tradecraft.

The Tier Structure

In the first instance, because current intelligence publications such as the PDB emphasize the highest priority, generally shorter-term topics of importance to national-level decisionmakers—the Tier-1 issues, such as potential conflicts and nuclear or terrorist threats—the production formula of delivering products that provide definitive "so-whats" together with clear implications for action works.

That formula does not work as well with lower-priority, non-Tier-1 issues unless they become crises. These areas usually have fewer analytic, collection, and policymaking resources devoted to them. In many cases, analysts do their own collection—for example, finding and translating documents.^b In addition, because analysts who follow lower priority issues have more limited communities of interest in the policy and intelligence communities, they receive fewer requests for information. Under these circumstances, analysts called on to address a matter that suddenly becomes important to the president and other high level officials are especially challenged. They will have less information to work with and will be expected to provide more context to policymakers unfamiliar with the issues, personalities, and key factors at play.

Non-Tier-1 issues may lurk below the headlines, but they can rise up to bite both intelligence analysts and policymakers, as we saw at the outset of the Arab Spring in late 2010. Tunisia, for example, was not a Tier-1 country at the time. A system that recognizes and rewards work and outputs that enable longer-term analysis, even in seemingly less important areas, might improve the IC's ability to understand and

^a Tiers are defined and their components listed in the IC's annually reviewed National Intelligence Priorities Framework (NIPF). The NIPF was introduced after the fall of the Soviet Union, when allocating resources became a more complex matter than it had been during the two-superpower world.

^b Though not directly related to the tier structure, changes in the open source business model have led the DNI's Open Source Center to focus less on traditional tasks like translating articles and more on its own analytical production and on assessing other media (e.g., the World Wide Web and social networks).

quickly respond to events that suddenly magnify the importance of lower-tier issues.

Documenting Analytic Tradecraft

Analysts excel at providing clear, succinct assessments, but they traditionally resist providing details of how they come to their judgments.⁷ This occurs in part because the current product-oriented system does not reward the effort sufficiently.

Details of tradecraft may provide more information than most policymakers want, but without those details, readers will find it difficult to discern the rigor of the analysis or to reconstruct the thinking behind the conclusions. A disciplined approach to preserving records of analytical processes would help other analysts learn from the experience and apply methods used in one problem to another. Alternatively, with the passage of time, the previously used methodology could be applied to new data to come up with updated findings. New analysts could work to improve upon past methods instead of creating their own. The value of turning what might become stagnant methodology into progressive methodology built on the work of others cannot be overstated.

As things stand, the disincentives to creating such documen-

The product-centered environment has also discouraged the use of new technologies and opportunities for electronic collaboration.

tation outweigh the potential benefits, however great they may be to the IC as a whole. The time required is substantial, few policymakers ask for it, and there is the risk that in doing so, analysts and their managers will expose themselves to criticism, especially from those who might support alternative points of view.

This situation was partially addressed in ICD 203 (“Analytic Tradecraft”) and ICD 206 (“Source Requirements for Disseminated Analytic Products”). These two directives required, for the first time, analysts to “show their work.”⁸ In addition, as a result of ICD 203, intelligence agencies have established product evaluation boards to determine how well their products are conforming to ODNI analytic standards.^a In spite of such beneficial changes, there are still strong individual motivations to document as little of one’s tradecraft as possible.

Adoption of Collaborative Technologies

A product-centered environment also discourages the use of new technologies and opportunities for electronic collaboration. For example, we found only one organization that came

close to using Wikis to produce main-line products. The organization is a small group that works solely with openly available information. It does so in part because it is a relatively new entity, unencumbered by long-running past practices. Even so, it uses Wikis more for warehousing knowledge than for producing material for external audiences.

What Would Tools for a New Output-Focused Paradigm Look Like?

In a widely read blog post some time ago, Clay Shirky, a prominent thinker on the social and economic effects of Internet technologies, examined the challenges facing the newspaper industry in the digital age.

If the old model is broken, what will work in its place? The answer is: Nothing will work, but everything might. Now is the time for experiments, lots and lots of experiments, each of which will seem as minor at launch as craigslist did, as Wikipedia did, as octavo volumes did.⁹

While the IC faces declining budgets, it should not stop try-

^a CIA’s Directorate of Intelligence has had such an evaluation component since the mid-1980s.

Like it or not, analysts would be forced to “show their work” in a Wiki environment.

ing to innovate in support of customers. So, befitting Shirky’s challenge, below we offer six experiments that might lead to changed processes and outputs. Three focus on process, three on output.

I. Using Wikis to Draft Finished Intelligence

While Wikis have been available to the IC for more than five years, their adoption has been a wholly grassroots movement among advocates who believe Wikis have the potential to better capture knowledge and to promote increased transparency. However, this grassroots effort has been unable to effect change in the processes used to support the production of finished intelligence.

In all but a few cases, the current work process consists of creating Microsoft Word documents, sending them via e-mail, and receiving coordination and review comments in “track changes” on electronic files, or in writing on hardcopy printouts, and incorporating those comments into a final product. With the exception of the use of IC-wide computer connectivity—thanks to the introduction of the Joint Worldwide Intelligence Communications System (JWICS) and ICE-mail—this process would be recognizable by any analyst who left the IC in the mid-1980s. While comfortable to many, the process is

subject to losses—coordination and review comments between analysts and managers are not always well preserved in e-mail or hardcopy. How an agency came to its conclusions in any product is opaque to those who stand outside the process. One of those individuals, former Deputy Secretary of State James Steinberg, lamented that he wasn’t privy to these exchanges.¹⁰ We can imagine many other policymakers might share that sentiment.

While many in the IC would abhor the thought of showing customers “how the sausage is made,” such give-and-take could easily be captured using Wikis, which capture rich metadata, including the identities of those revising content and the nature of the changes they made. Like it or not, analysts would be forced to “show their work” in a Wiki environment.

In 2006, when Intellipedia was in its infancy, ADNI for Analysis Fingar proposed using Intellipedia to create a National Intelligence Estimate (NIE) on Nigeria. The effort failed for many reasons, not all of them related to technology. The project was probably too big and tried too soon. Many in the IC were uncomfortable with the new technology and immediately looked to undermine the effort. Despite such false starts, however, there are good reasons for pursuing these alterna-

tive forms of analysis. Now that Intellipedia has been around for more than five years, it would behoove the IC to try again, perhaps not with an NIE but with less ambitious objectives, in order to gain experience and to collect some successes upon which to build.

II. Adopting the Living Intelligence System

A much more ambitious project than Wiki-based analysis is currently under development within the IC, primarily within the National Geospatial-Intelligence Agency (NGA). The Living Intelligence System (LIS) aims to transform the stove-piped, agency-proprietary reporting and analysis process and to reduce the amount of static and duplicative analytic production. Rather than using Wikis simply to draft existing product lines, the LIS suggests that “tailored snapshots should be the exception not the rule and ‘products’ should be the by-product of the collaborative process, not the end state.”¹¹ The LIS would move the review process into the same place in which transparent, online collaboration takes place. Contributors, *including official reviewers*, would be held accountable, and they and their agencies would still receive credit for their work even in the absence of a traditional “finished” product. The system would show how points of view emerged—or were prevented from emerging—and who was responsible.

To date, there are only a few units in NGA that have been willing to test the LIS. Participation by other IC agencies would help determine the viability of the platform and potentially chart a new way forward for the community. Adoption of the concept in the IC would be an uphill battle, however, because many agencies are reluctant to give up their existing business models. Agencies often claim they are responding to the needs of customers who demand tailored output and would view other outputs as unwarranted and wasteful. Indeed, most customers interviewed for this study did want intelligence output tailored to their needs, but that does not mean that LIS could not be used to support such demands.

For LIS to succeed, it will need strong executive leadership willing to break the stranglehold that individual agencies have on existing production processes. Although some senior executives admit that they are embarrassed by redundant and duplicative production, they have done little to change the status quo.¹²

Even if it has executive buy-in, LIS would need to win over skeptical middle managers, who view it as a way to hold them accountable when something they approved or inserted turns out to be incorrect. The opaqueness of the existing production model lets them easily avoid accountability by permitting

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errors to be waved off as a systemic failure.

III. Fixing Outreach

As our world becomes more complex, useful expertise will increasingly be located outside of the IC. For instance, in a study of the analysis surrounding Arab Spring, the Stimson Center noted “NGOs in particular enjoy a distinct advantage in understanding societal intentions and capacities, and their more limited interaction with government officials may provide them more insight into societal trends.”¹³

Despite ODNI efforts to expand outreach to experts outside the IC, RAND research in support of this article revealed that significant hurdles remain. ICD 205 (“Analytic Outreach”) and numerous pronouncements by senior ODNI leaders on the importance of analysts engaging with the outside world have not overcome the sense that the task is simply too hard—money is required, outside contacts have to be vetted, discussion topics must be approved, and so on. In his *Studies in Intelligence* article cited earlier, Martin Petersen remarked, “Many of the people we serve believe they are better plugged into the world than we are. And in many cases, they are.”¹⁴

This echoes the sentiment of former Acting Director of the

CIA John McLaughlin, who has said that some customers believe they have a “more comprehensive and sophisticated understanding of the issues than intelligence specialists,” a view, he added, that was often justified.¹⁵ During a visit to CIA headquarters, former Deputy Secretary of State Steinberg lamented how analysts “don’t get out enough and get their hands dirty” because of security concerns.¹⁶ He suggested that this affects the IC’s ability to serve its customers.

Dennis Wilder, a senior CIA Directorate of Intelligence officer, won a Galileo Award in 2011 for a paper entitled “An Educated Consumer Is Our Best Customer.”¹⁷ During the award ceremony, Wilder, who was then a senior PDB reviewer, took the opportunity to discuss intelligence support to policymakers. He stopped short of calling IC products “irrelevant,” but it was clear from his remarks that he believed the IC was falling short of providing its customers with the insight they needed. Taking note of a book cowritten by former CIA analyst Jerrold Post on the health of world leaders, *When Illness Strikes the Leader*,¹⁸ Wilder reported that the book and another unclassified work by a CIA doctor did a far better job of informing policymakers on the subject than any he had seen from the IC. Yet, how

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many analysts have written unclassified products since they have become part of the IC?

This is not an isolated case. Former NSC Director for Afghanistan Paul Miller, mentioned earlier, told this research team that security restrictions on outreach are “isolating analysts and making contact with other experts in their fields difficult, awkward, and sporadic.”¹⁹ Ken Lieberthal, in a 2009 monograph published by the Brookings Institution, reported that “Security concerns have also sharply reduced the ability of most IC analysts to benefit from interaction with the non-IC academic, think tank, NGO, and business communities.”²⁰

These reports by senior leaders and senior customers are disturbing. Moreover, when this team reported its findings to an ODNI conference in July 2011, attendees lauded ICD 205 as a monumental accomplishment, from its initial drafting to its signing. Yet it is likely that a large percentage of IC analysts have never heard of it. They are more intimately familiar with the checklist—sometimes 20 steps long—that greets them when they apply to attend an outside conference or meet with an outside expert. Analysts probably need fewer policies and less education about outreach, and more assistance in

navigating the overbearing but necessary security hurdles to accomplish it. It may be more effective for the IC to channel resources into an outreach “center of excellence” staffed with knowledgeable security and counterintelligence personnel to assist analysts in this endeavor.

IV. Delivering Tablets

Nascent efforts to use iPads and other tablets to support customers do exist and are to be commended. However, effective use of this technology requires processes, people, and outputs that are wholly different from those we have today.

Because tablets offer so many new ways in which customers can engage with content, utilizing tablets will dramatically affect IC work practices. Customers receiving intelligence support through a tablet are almost certain to expect an experience fundamentally different from reading a traditional product. Those experienced in using tablets will want layered products that allow them to drill down deeply into subjects. If they are reading about a world leader, for example, they will expect links to the person’s closest associates, travel schedule, and videos of recent speeches. Yet the IC efforts we have observed still resemble the paper model, making tablets essentially “elec-

tronic paper.” Today’s digital IC products may allow a customer to drill down only one level, perhaps to an original source or a related leadership profile. The model for preparing a package to meet tablet-based consumers’ increased expectations is categorically different from the IC’s existing model, and changing it will require considerable effort.

During our ODNI presentation, one attendee mentioned that he was an early adopter of tablet technology but that he had abandoned the *New York Times* iPad app to return to the paper copy. Indeed, the relationship between people and new technology is a fragile one, and if users are to adapt to and accept changes in output, that new technology had better deliver a new and impressive experience. Examples of how tablets can facilitate the delivery of insight can be found in the “Our Choice” app or IDEO’s “Future of the Book.”²¹

V. Delivering Outputs via Electronic/Social Media

Expansion of electronic connectivity between the IC and its customers should continue. As noted in a 2005 *Studies in Intelligence* article,

The Intelligence Community has made substantial, although sporadic, efforts over the past decade and a half to explore better and more technologically advanced

*methods of communicating with consumers. The results, however, have been modest at best. The requirement to have background and contextual information available at the policymaker's fingertips in a timely fashion remains unfulfilled.*²²

Paul Miller took away a similar lesson from his experience on the NSC.

*The IC dissemination system resembles a stack of sliced Swiss cheese in which the slices haphazardly cover up the holes in the cheese. The IC has many dissemination systems, all of which have gaping holes.*²³

The most difficult aspect of supporting customers electronically may be the customers themselves, who have different delivery preferences. Steinberg indicated that he would have preferred “more electronic and real time engagement” with the IC, yet Miller reports that “most policymakers will not take the trouble to sign up for an account, install a web certificate, or regularly go to a website to look for new products.” His most effective dissemination system was e-mail.²⁴ With such wide-ranging preferences before it, the IC cannot appear flat footed in supporting its customers. In short, the IC cannot afford to be unprepared when “digital natives” take over its customer base.

A relatively low-cost experiment would be the introduction of recommendation engines, like those used by Amazon.com, into IC websites.

Most of the IC's electronic engagement with customers has been on classified networks. The hassle of accessing these networks has limited the frequency and ease of engagement. As an alternative, the IC may want to explore setting up private Twitter feeds to which customers can subscribe. Private Twitter feeds allow producers to approve who receives updates. The rules for IC use of Twitter would have to be established and made clear, but the medium would provide the ability to engage customers at any time of the customer's choosing. Updates might include notifications about new assessments, links to unclassified outputs, or immediate notification regarding new, unclassified developments.

VI. Using Recommendation Engines as Briefers

A relatively low-cost experiment would be the introduction of recommendation engines, like those used by Amazon.com, into IC websites used by customers. In today's publication environment, IC briefers perform the function of recommendation engines but cannot serve the large number of customers who would like to have a brifer. Technology can lend a hand.

On today's IC websites, a consumer interested in China will

be greeted by the same content as a visitor interested in terrorism. In contrast, Amazon.com, iTunes, Netflix, and other retailers have long greeted each customer based on that individual's interests. Just as briefers tailor briefing books for their customers, a recommendation engine could direct customers to IC products or websites of potential interest. This same technology could also benefit IC officers themselves.

Our suggestion of this approach should not be viewed as an attempt to replace briefers and the conversation they facilitate between the IC and its customers. The recommendation engine would primarily support customers without dedicated briefers.

The Challenges of a New Paradigm

New processes will no doubt raise new problems. For example, who would be allowed to contribute to Wikis and blogs? How should sensitive matters, especially compartmented material, be handled? What arrangements can be made to involve consumers, who in their activities often acquire information that analysts would want to have? How would this new system overcome traditional policymaker reluctance to share certain kinds of information with the IC? If policymakers

A shift to a more effective production paradigm will not take place as long as systems continue to reward production of the obsolete at the expense of new forms of information delivery.

are given access, how would an interactive system address the possibility that policymakers might gain undue influence over analysis? How would major analytic differences be adjudicated?

There also are questions regarding the evaluation of outputs under the paradigm we describe. Would product evaluation boards and ICDs on standards still be required? Would analysts maintain high trade-

craft standards in Wiki and blog environments? How will managers measure output and encourage and maintain good tradecraft?

Despite so many unanswered questions, we believe this paradigm shift would offer benefits that outweigh the risks. Indeed, in some ways, the shift may be unstoppable. The explosion of social media and whatever its future might bring seems likely to become more and more

important to political leaders as they reach out to their key constituencies, gauge public opinion, and try to get quickly ahead of crises. In that kind of environment, static, finished intelligence reports dealing mainly with top-tier issues will fail to meet the needs of the IC's consumers, from the top to working levels. A shift to a more effective production paradigm will not take place as long as systems continue to reward production of the obsolete at the expense of new forms of information delivery.

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Endnotes

Unless otherwise noted, all notes are unclassified.

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