

## **Evaluating Army Structured Professional Forums: Innovations in Understanding and Assessing Effectiveness**

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### **ABSTRACT**

As the rate of change in the operational environment outpaces the development of doctrine and schoolhouse instruction, Army leaders must direct their own development in order to adaptively and professionally meet the challenges brought on by Army transformation. Army Structured Professional Forums (SPFs), powered by advances in collaborative toolsets and multimedia presentation software, provide a means for self-development and professional growth. Systematic assessment of the functioning and impact of SPFs is critical for ensuring that SPF activity is aligned with organizational goals and producing return on investment. Assessing the impact of an SPF requires identification of those performances that activity in the forum can reasonably be expected to influence. In this paper, we present an approach for evaluating the functioning of SPFs and identify several candidate metrics for assessing the impact of SPFs. These serve as a foundation for organizing an effectiveness analysis of SPFs, and provide a general method for assessing SPF impact at the individual, unit, and organizational level.

### **ABOUT THE AUTHORS**

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**Dr. Joseph Psotka** is a research psychologist at the Army Research Institute where he has been a Senior Scientist in the Training Laboratory, in Basic Research, and in Organization and Personnel Research. He holds a Ph.D. from Yale University and an M.A. from Harvard. He was a Program Director for the Applications of Advanced Technologies program at the NSF. His research currently focuses on the application of cognitive science and automated technologies to learning and instruction, with a special emphasis on their role in developing leadership knowledge, skills, values, and attitudes.

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### **KNOWLEDGE SHARING, THE PROFESSIONAL SOLDIER, AND ORGANIZATIONAL EXCELLENCE**

It would be a profound understatement to claim that Army leaders must be agile in order to meet the demands of the current operational environment. At a time when the Army's organizational structure is undergoing the most significant change since the 1960's (Smith, 2005), leaders must command a wider range of missions than ever before, often within the domain of a highly adaptive, asymmetric threat. Moreover, the increased involvement of U.S. forces in full-spectrum operations is changing the fundamental role of the Army from warfighting to more broadly supporting the political ends of the federal government through peacekeeping, stabilization, counterinsurgency, and conventional warfighting, among others. As the rate of change in the operational environment outpaces the development of doctrine and schoolhouse instruction, leaders must direct their own development in order to adaptively and professionally meet the challenges brought on by Army transformation.

Army Structured Professional Forums (SPFs), powered by advances in collaborative toolsets and multimedia presentation software, provide a means for leader self-development and professional growth. As members of an SPF, geographically distributed leaders can directly share practical solutions, generate new ideas, and exchange lessons learned from operational experience faster than the institutional knowledge-dissemination process currently allows. Through discussion and the development of social networks, SPFs also enable the growth of a sense of professional community and mutual obligation among their members, many of whom may never meet face-to-face. The Army senior leadership recognizes the importance of agility and professionalism in its leaders and currently supports four active SPFs with nearly twenty more in development as part of a broader Army knowledge-management initiative.

The early stages of an initiative present the most valuable opportunity to establish checks that ensure the initiative is functioning effectively and meeting organizational goals. Establishing such checks enhances the organizational impact of the initiative. It is currently unknown, however, what to assess in order to determine whether an SPF is functioning effectively and having a demonstrable impact on individual, unit, and organizational performance. The present study was conducted as an initial effort to address this gap in understanding of the effectiveness and impact SPFs.

In this paper, we present an approach for evaluating the functioning of SPFs and their impact at the individual, unit, and organizational level. Our approach is based on a framework we developed for understanding how SPFs generate productivity and excellence, which provides direction regarding what to assess. The status of key determinants of impact at the foundational levels of the framework (i.e., SPF functional effectiveness) has implications for whether impact will be observed at the individual, unit, and/or organizational level.

### **SPFs – Serving the Passionate Professional**

Knowledge-sharing programs have been adopted by several commercial organizations whose leadership has recognized the importance of employee agility and initiative to competitive advantage and organizational success. Serving as the foundation for best practice in knowledge management is the community of practice (Cragger & Lemons, 2003). Wenger, McDermott, and Snyder (2002) define communities of practice (CoPs) as: "groups of people that share a concern, a set of problems, or a passion about a topic and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (p. 4). Online CoPs provide a virtual roundtable where people with similar concerns can exchange knowledge and work together toward innovative practical solutions (Bobrow & Whalen, 2002). Online CoPs have generated significant return on investment through increased productivity

and decreased redundancy in the commercial organizations that have supported their development and implemented them effectively (Crager & Lemons, 2003).

The SPF represents an extension of the online CoP beyond building practical solutions to building the profession itself (Woodie, 2005). SPFs differ subtly from online CoPs. Whereas SPFs share the design principles of online CoPs, the primary purpose of SPFs is to support professional conversation among forum members through moderated and facilitated discussion.

SPF members do not share only a single common problem as CoP members do. Often, multiple CoPs are situated inside a single SPF. Membership in these forums consists of present, future and past practitioners spanning organizational boundaries. Figure 1 depicts the main page of one SPF called *S3-XO.net*, which is designed to support battalion and brigade staff operations officers (S3s) and executive officers (XOs). The knowledge-organization, community-building, and search features of this page typify those found in other SPFs.

**S3-XO.Net**

Welcome aboard new members. We have grown! We currently boast roughly 2500 future, current, and past S3s and XOs. Members have posted 5300 knowledge objects on our site. Our content continues to grow creating a vast knowledge-base for our users.

S3s and XOs are experts that are distributed across the Army and often disconnected from their peers. S3-XONet is your antidote to this problem. We promote a new method of collaboration, information exchange, and sharing of best practices across boundaries of time and distance. You will be able to contribute to the generation of new ideas and make valuable contacts. In addition, you will solve daily problems and foster individual competencies, making a significant contribution to overall Army learning. Check out **Net Call June 2005** to get the latest news on our portal.

This site is authorized to carry only unclassified FOUO information and below only. (FOUO) Tactics, Techniques, and Procedures that relate to Operation Iraqi Freedom, Operation Enduring Freedom, and Operation Noble Eagle (GWOT) should be considered classified confidential and distributed only via classified handling.

Forum	Thread	Posts	Date Posted	Posted By
Warfighting: Open Discussion	MDMP for the collaborative unit (SBCT, 4ID, etc.)	11	2005-06-07 9:07	robert thomton
Warfighting: Open Discussion	Command Post of the Future	6	2005-06-06 15:01	James Barton

Figure 1. *S3-XO.net* Homepage

Through voluntary participation, SPF members provide a positive solution-oriented voice within the Army profession. SPFs such as *companycommand.mil* (*CC.mil*) and *NCOTeam.org* reflect the passion for the profession and the devotion to learning and personal growth typical of U.S. Army leaders. Consider the following quotes from members of these SPFs:

"I look forward to ... see what great information you all [*CC.mil*] are going to put out. I can't wait to share it with the other platoon leaders and the Company XO."  
– Paul

"I was on this site whenever I logged onto a computer in Iraq. ... I'm definitely a stronger and more well  
2005 Paper No. 2137 Page 3 of 12

rounded NCO because of *NCOTeam.org*. ... When I did have a pretty big personal/professional issue, I addressed my concerns to my peers on this site and received nothing but support and guidance. ... An Army of One really doesn't mean an Army of individuals; we truly are one team here." – SSG JL, Iraq

### Assessing the Effectiveness and Impact of SPFs

Although it may seem to be common sense that healthy, active SPFs have an impact on organizational performance, an understanding of how SPF activity generates organizational effectiveness is still in its infancy. Put another way, it remains to be explained

how passionate activity in an SPF results in individual, interpersonal, leader-team, community, and unit growth and how this growth ultimately improved unit performance and promotes organizational excellence.

Understanding the impact process requires that a causal framework be developed to link activity in an SPF ultimately to organizational excellence (Crager & Lemons, 2003; Lesser & Storck, 2001; Snyder & Briggs, 2003). Case studies from commercial organizations provide the outline of such a causal framework and provide the first evidence that efforts to support problem-focused knowledge sharing (i.e., in CoPs) can have a tremendous return on investment (e.g., Crager & Lemons, 2003).

Developing a causal framework for understanding impact on Army effectiveness is an exceedingly difficult task for multiple reasons. First, the effectiveness of the Army is not easily quantified (i.e., it is not reflected in units of production or revenue dollars) or even conceptualized (e.g., the Army is successful both when it wins conflicts and when it prevents conflicts through stabilization and support). Moreover, when attempting to determine the impact of a particular SPF, there is the problem that nearly every aspect of Army effectiveness is determined by the collective activity of members of that SPF and other individuals. Finally, through other components of the Army knowledge-management initiative, leaders have a very broad range of resources available to them for knowledge acquisition and sharing. The adaptive cross-membership of individual leaders in multiple communities makes isolating the impact of a particular SPF on organizational effectiveness difficult.

The challenge of developing a meaningful causal framework and demonstrating impact means that impact must be clearly understood within the context of the SPF of interest and its members. The key is to align metrics and measures of SPF activity with organizational objectives and mission through the tasks that SPF members must perform to do their jobs effectively. In the next section, we present our proposed causal framework for conceptualizing how SPF activity results in organizational impact.

### LINKING SPF ACTIVITY TO ORGANIZATIONAL EFFECTIVENESS

Figure 2 shows our proposed causal framework for linking SPF activity to organizational effectiveness. We explain each component of the framework in the following five sections.



**Figure 2. Framework for Linking SPF Activity to Organizational Effectiveness**

#### SPF Structure and Characteristics

The foundation of this framework is SPF structure and characteristics. This component represents the features of the SPF that support knowledge retrieval and the development of social connections that lead to discussion and the development of new knowledge. These features are the determinants of SPF activity and impact. SPF structure and characteristics may include interface design features/usability and forum features, as well as the administrative backbone of the SPF, including the composition of the core support team, the organizational support for the SPF, the alignment of the SPF goals with the organizational mission, among other considerations.

#### Social and Intellectual Capital

Enabled by SPF structure and characteristics is the development of social and intellectual capital. If the SPF is designed and administered effectively, members will be able to retrieve actionable (i.e., relevant and timely) knowledge from the forum. Effective SPF design will also allow members to participate actively in developing a network of individuals with whom to discuss novel problems and collaboratively generate new knowledge. Discussion and the development of social capital are key characteristics of SPFs that differentiate them from knowledge repositories or portals (Kendall & McHale, 2003; Schweitzer, 2003).

Forum members must be actively developing social and intellectual capital for there to be a demonstrable impact of the SPF on individual, unit, and organizational performance.

### **Leader Competence and Professionalism**

The development of social and intellectual capital leads to improved leader competence and professionalism. Specifically, the acquisition and development of actionable knowledge through collaboration enhances individual technical, tactical, and/or conceptual competence. Leaders are better equipped to handle challenges such as applying the military decision making process (MDMP) or leveraging technology, for example, because they have been exposed to the effective methods their peers have used to develop standard operating procedures or to work with emerging digital systems.

Professional self-identity also develops through active knowledge sharing and development because it is through this activity that the leader actively participates in gaining a concrete sense of his role in his current duty position and the associated tasks, duties, and responsibilities he must perform. Participating in the SPF also fosters the skills and attitudes necessary for continuous professional self-development.

Discussion with peers promotes a sense of professional community, a sense that one belongs to a group of people who share similar duties and responsibilities, who play a similar role in the larger organization, who face similar problems and challenges, and to whom one is responsible for being respectful and helpful.

Interpersonal competence is enhanced through storytelling in which leaders share how they handled novel and sensitive interpersonal issues. Leadership Effectiveness is enhanced through storytelling in which leaders share how they handled authentic leadership issues. It is through this storytelling that the tacit knowledge critical to leadership effectiveness is acquired (Cianciolo, Antonakis, & Sternberg, 2004).

### **Organizational Effectiveness – Unit**

Organizational Effectiveness at the Unit Level stems from the development of leader competence and professionalism. The expert and mature leader is more technically competent, as well as a more effective role model and team player, which is critical in supporting the day-to-day operations, morale, professionalism, and combat effectiveness of the unit.

### **Organizational Effectiveness – The Army**

Organizational Effectiveness at the Army Level stems in large part from the enhanced functioning of its tactical warfighting units. In short, these units must see first, understand first, act first, and finish decisively in full-spectrum operations. The organizational effectiveness of the Army is also enhanced when it is achieving better results with fewer resources, and retaining more, higher quality personnel. This result is achieved, in part, through increased professional self-development on the part of Army personnel and increased satisfaction with Army life.

### **PROPOSED METRICS FOR ASSESSING SPF EFFECTIVENESS**

To assess the effectiveness of SPFs, we propose using a red-amber-green rating system in order to translate qualitative information into “analytic” metrics, that is metrics that will allow rough comparisons between the aspects of effectiveness within a particular SPF or across SPFs. The proposed system, which allows a combined red/amber and amber/green rating, is essentially an alternative format to a five-point rating scale. We propose using a red-amber-green system instead of a numerical rating scale so that (a) status ratings will communicate the predicted influence of the rated effectiveness aspect on the impact of the forum; and (b) the use of numbers does not (mis)lead reviewers to believe that the rating system has quantitative properties (e.g., an interval or ratio scale) that it does not. The assignment of a status rating to any element is a subjective decision, based on an understanding of best practice in knowledge sharing, and ratings can, at best, be thought to fall on an ordinal scale.

### **SPF Structure and Characteristics**

As described previously, SPF structure and characteristics determine the level of activity in the SPF and the impact it can be expected to have on performance. If the SPF does not have a solid foundation, the forum will not be active and cannot be expected to generate impact. Similarly, if an SPF is found to be inactive and incapable of generating impact, the root of the problem may be revealed by evaluating the effectiveness of the SPF’s structure and characteristics. In order to determine the effectiveness of SPF structure and characteristics, we propose assessing in detail three broad aspects of the SPF foundation: (1) the plan on which the development of the forum is based; (2) the personnel structure that supports forum growth and activity; and (3) the degree to which the forum meets the general functional

requirements for online knowledge sharing and community building.

Tables 1, 2, and 3 show the proposed components of the SPF plan, personnel structure, and functional requirements to be assessed using the red-amber-green system. Below each table are the proposed criteria for assigning a “Green” status rating to each component (“Amber” and “Red” status are not discussed here due to space limitations). The proposed components and their corresponding evaluation criteria are based on a review of the literature discussing best practice in online CoPs (e.g., Crager & Lemons, 2003; Dixon, Allen, Burgess, Kilner, & Schweitzer, 2005; Stuckey & Smith, 2004; Wenger et al., 2002) with some modification to address the differences between SPFs and CoPs.

**Table 1. The Plan**

Plan Component	Status		
	Red	Amber	Green
Statement of Purpose			
Envisioned Impact			
Description of Target Audience			
Statement of Cultural Norms, Core Values, or Conventions			
Specification of Roles and Responsibilities			
Functional and Technical Specification			

For an SPF to have an impact on its parent organization, it must begin with a plan (Dixon et al., 2005; Wenger et al., 2002). The plan is necessary for aligning the purpose and activity of the forum with the goals of the organization. The plan is also a means by which forum support personnel can gain a thorough understanding of the target audience to be served by the forum, their interests, needs, etc. Such an understanding is necessary for effectively attracting forum members, fostering forum activity and growth, and identifying targets for impact assessment. Finally, the plan requires that the administrative structure and the functionality of the forum be considered ahead of time, which enables the forum to transition smoothly from start-up to advanced stages of activity.

The SPF plan’s statement of purpose earns a “Green” status rating when it clearly indicates the target audience to be reached and the overall function the forum is to serve for the target audience. The statement of purpose should have clear implications for who is to

be granted membership to the forum, for the nature and organization of the content to be discussed in the forum, and for the functional requirements the forum must meet in order to be effective.

The envisioned impact of the forum on the organization is assigned “Green” status when it includes specification of what organizational goals will be affected by forum activity, how that impact will be achieved through attitude and behavior change, and what the criteria for assessing that impact will be.

The SPF plan’s description of the target audience earns a “Green” status when the target audience is clearly defined, its particular needs are identified, its needs of particular interest to the parent organization are highlighted, and the other means by which these needs may be met are identified/ruled out.

The statement of cultural norms, core values, or conventions to be upheld in the forum is rated “Green” when these factors are clearly stated, criteria enabling the forum support personnel to assess whether they are being honored are identified, and a means for forum support personnel to enforce them is specified.

The specification of roles and responsibilities present in the SPF plan is rated “Green” when it makes clear who of the forum support personnel is responsible for what role in supporting the forum, how much of their time is expected to fulfill this responsibility, and the specific tasks/duties required to fulfill this responsibility.

The SPF plan’s functional and technical specification earns a “Green” status when the behavioral and technical requirements of the online collaborative work environment (e.g., what behaviors the collaborative work environment is intended to support) are outlined in detail, including security requirements.

**Table 2. Personnel**

Personnel Category	Status		
	Red	Amber	Green
Leadership			
Core Group			
Facilitators			
Technical Support			

Because SPFs do not “run themselves,” their leadership and support personnel are absolutely critical to their effectiveness. These individuals establish the overall vision for the forum, secure continuous organizational support, recruit new members, monitor and update the collaborative work environment, and

support member needs, among other activities. This requires substantial time investment as well as significant social capital.

The leadership of the SPF earns a “Green” status rating when the leadership is providing overall vision, is passionate about the professional development of the SPF members, is knowledgeable about the domain addressed by the SPF, is supported by his/her higher-ups, is committing between 20-50% of his/her time to the forum, and spends time networking for the forum behind the scenes.

The core group supporting the SPF is rated “Green” when the core group members are knowledgeable and experienced members of the forum target audience, have subject matter expertise in both knowledge management and the domain addressed by the SPF, have a strong, wide social network, have a passion for developing the profession, actively recruit members, expert contributors, and other supporters to the forum, and are actively involved in maintaining the forum. The core group must consist of at least one full-time community coordinator.

Forum facilitators are rated “Green” when facilitators actively monitor discussion threads, seek out, post, and organize knowledge in the forum, identify subject matter experts to contribute to the forum, and link forum members with problems to members with solutions.

Technical support is “Green” when the technical support staff members are knowledgeable about both knowledge management and information technology, perform frequent usability and quality assurance analyses, develop new features necessary to the site, monitor database health and functionality, and train the support staff to use the technology.

**Table 3. Functional Requirements**

Functional Requirement Category	Status		
	Red	Amber	Green
Locating the Forum			
Joining the Forum			
Tone in the Forum			
Conversation Support			
Locating Content			
Locating People			

Functional requirements are those general-level functionalities that must be enabled by the SPF’s collaborative work environment such that people can

become forum members and participate in forum activity.

The ease with which the forum is located is rated “Green” when (a) direct links to the forum can be found using common search engines (e.g., Google or, in this case, Army Knowledge Online or Battle Command Knowledge System); and (b) the forum leadership actively spreads the word about the forum by visiting units, contacting combat training center observer/controllers, or using existing social networks.

New members’ ability to join the forum achieves a “Green” status when the process for joining can be completed in 24 hours or less and membership restrictions are in line with limiting forum membership to the intended target audience and a small number of additional interested parties (e.g., experts not in the target membership or subordinate personnel supporting target members). A Green rating also requires that 80% or more of user reflections on joining the forum are positive.

The tone maintained in the forum is “Green” when the collaborative work environment provides all of the following features--a welcome letter sent to new members, a statement of the forum mission/purpose on the homepage or directly accessible through the homepage, a statement of core values and conventions on the homepage or directly accessible through the homepage, and a FAQ section--and two of the following three features--a user comments area, an area for press releases or other information, and a brief tutorial or introduction to the collaborative work environment.

Conversation support achieves a “Green” rating when user-friendly asynchronous chat capability is featured as a central component of the forum (Schweitzer, 2003).

The ability to locate content in the forum is rated “Green” when the collaborative work environment provides all of the following features--a knowledge search capability that supports searching on multiple criteria (e.g., key words, author, content type, etc.), frequent (weekly) updating of recent content additions, flags or other indication of recently added content (including discussions), hit counts or other indication of popular/useful content (including discussions), direct links or general links and associate explanation for locating content outside the forum (e.g., in this case the Center of Army Lessons Learned or the Army Library system), links between content inside the forum, a newsletter featuring forum highlights, and content analysis and synthesis. A Green rating also

requires that 80% or more of user reflections on the retrieval and organization of content are positive.

The ability to locate people in the forum is rated “Green” when the collaborative work environment provides all of the following features--a directory of the forum membership, a person search capability, and member bios that include (a) name; (b) contact information (email and phone); (c) branch; (d) current duty position and station; (e) assignment history; (f) combat experience; (g) topic areas of expertise; and (h) a listing of posts made by the individual with associated links--and two of the following three features--a list of who’s currently logged in to the forum, a “featured people” area in the forum, a “featured people” area in the forum newsletter.

### Social and Intellectual Capital

Social and intellectual capital are the products of member activity in an SPF that has effective structure and characteristics. Social and intellectual capital are the means by which activity in the forum generates improved performance and enhanced sense of professionalism. In order to determine the effectiveness or quality of the social and intellectual capital in an SPF, we propose assessing in detail four broad components: (1) connections among members; (2) shared context among members; (3) content; and (4) conversation.

Tables 4 through 7 show the proposed elements of connections, context, content, and conversation to be assessed using the red-amber-green system. Below each table are the proposed criteria for assigning a “Green” status rating to each component. As in the preceding section, the proposed components and their corresponding evaluation criteria are based on a review of the literature discussing best practice in online CoPs and modification to address differences between CoPs and SPFs.

**Table 4. Connections**

Connection Characteristics	Status		
	Red	Amber	Green
Membership Composition			
Participating Members			
Identifying Experts			
Facilitation of Connections			
Connection Quality			

Connections are the overall structure of who is reached in the forum and how, and are critical for developing

the intellectual capital that will enhance organizational effectiveness (Nahapiet & Ghoshal, 1998). Because the SPF must serve its target audience in order to have an impact, target members should make up the majority of the forum membership and activity. However, some institutional involvement in the forum may be important for ensuring that social and intellectual capital developed in the forum supports organizational goals.

Membership composition in the forum is rated “Green” when forum members represent 51% or more of the target audience and the large majority of forum members (85%+) are from the target audience. The members participating in forum activity is assigned “Green” status when the large majority of posts (85%+) to the forum is contributed by target members.

The ability to identify experts in the forum earns “Green” status when the majority of forum members (90%+) provide their biographical information, particularly areas of expertise and past experience, and when forum members’ ratings of the ability to find experts in the forum are high.

The facilitation of connections in the forum is rated “Green” when the forum support personnel (i.e., Core Group members and facilitators) report having a connection to an expert in 90+% of the content topics in the forum, and when 90% or more of forum members report that their posts were immediately followed up by some form of acknowledgement by a facilitator or Core Group member.

The quality of connections in the forum earns “Green” status when forum member ratings of the speed and thoroughness with which their questions were addressed are high, when member ratings of the staying power of the connections developed via the forum are high, and when member ratings of the utility of the connections developed via the forum are high.

**Table 5. Context**

Context Characteristics	Status		
	Red	Amber	Green
Shared Narratives			
Shared Codes and Language			

Shared context facilitates the development of intellectual capital by (a) providing cognitive access to individuals with knowledge to share; (b) fostering expectation that knowledge exchange will be useful; and (c) enabling the conceptual overlap that makes

knowledge exchange possible (Nahapiet & Goshal, 1998). Shared context may be facilitated through restrictions on membership in the SPF and/or it may grow out of activity in the forum.

The degree to which the forum fosters the development of shared narratives is rated “Green” when there are opportunities to participate in shared experiences via the forum (e.g., book reviews, collaborative exercises, meetings, etc.), when forum members make use of opportunities to participate in shared experiences, and when forum members’ reported feelings of having shared experience via the forum are strong.

The status of shared codes and language present in the forum is rated “Green” when forum members’ reported confidence that they understand the content of the postings is high (e.g., one can locate branch-specific information in the forum).

**Table 6. Content**

Content Characteristics	Status		
	Red	Amber	Green
Contributing Members			
Content Synthesis			
Content Organization			
Content Activity			
Content Quality			
Professional Links			

It is absolutely key that content in an SPF be actionable. Actionable knowledge is timely, relevant, and contextualized (Dixon et al., 2005). Because knowledge is not inherently actionable (i.e., it may be actionable for some but not for others), criteria for evaluating content in an SPF must focus on the conditions for generating actionable knowledge, such as who is contributing knowledge, the degree to which knowledge is contextualized, etc.

The status of members contributing knowledge is rated “Green” when the majority of knowledge (90%+) is contributed by forum target members.

The status of content synthesis is rated “Green” when 90% or more related posts have links to one another and when summarizations of the majority of conversations (85%+) are provided.

Content organization in the forum is rated “Green” when 90% or more of forum members rate the organization of the content in the forum as easy to understand and in line with how they think about what they know/need to know.

Content activity earns “Green” status when the majority (90%+) of content categories and subcategories feature new knowledge posts every 12 hours and when at least half of the content postings are downloaded by at least half of the forum target members.

Content quality earns “Green” status when knowledge posts are sufficiently contextualized to support their use, when the majority of content posts (90%+) are aligned with the key challenges faced by forum target members on the job and when 90% or more of the member ratings of the utility of the content featured in the forum are high.

Professional links is rated “Green” when the forum allows access to educational courses, leader development activities, and leader-team collaborative exercises/vignettes designed to fill professional knowledge gaps and help leaders move to higher levels within their organization.

**Table 7. Conversation**

Conversation Characteristics	Status		
	Red	Amber	Green
Participating Members			
Conversation Activity			
Conversation Quality			

Conversations are the means by which a sense of trust and community develop and by which new knowledge is generated (Dixon et al., 2005). Without conversation, an SPF would simply be a searchable database of information. However, conversation, like content, must ultimately provide actionable knowledge and foster a sense of mutual obligation among the target members in order to achieve its intended purpose of sharing knowledge and building community.

The status of members participating in conversation is rated “Green” when the majority of discussion posts (90%+) are contributed by forum target members.

Conversation activity earns a “Green” status when 90% or more of the initial posts in the forum are followed by a meaningful response (i.e., not simply an acknowledgement) within 24 hours and when time lag between succeeding conversation posts is 24 hours or shorter.

Conversation quality earns a “Green” status when there are no incidents of unprofessional commentary (i.e., no complaining, backbiting, or personal attacks) or when incidents of unprofessional commentary are removed within 8 hours, when 90% or more of succeeding

discussion threads build meaningfully on the initial conversation post, and when 90% or more forum members report finding discussion threads useful.

### **PROPOSED APPROACH FOR ASSESSING SPF IMPACT**

To assess the impact of an SPF on individual, unit, and organizational effectiveness, it is critical to identify those performances that social and intellectual capital developed in the forum can reasonably be expected to influence. These are performances that are under the control, or largely under the control of the members of the forum. It is also critical to identify those performances that are of the greatest interest to the institution. These are performances that require improvement and/or are critical determinants of organizational excellence. As this paper is intended to discuss the evaluation of SPFs in general, we do not provide specific metrics, but rather describe an approach for determining what metrics should be used to assess impact and how they should be captured.

#### **Leader Competence and Professionalism**

Assessment of the impact of SPF activity on individual leader competence and professionalism requires identifying the general-level competencies that give rise to effective performance in the jobs of the forum members. It also involves identifying how the Army defines professionalism as it relates to the target members of the forum. Army values and certain other personal characteristics specified in doctrine represent a significant component of what it means to be an Army professional and are applicable across SPFs. The Army's overarching framework of "Be, Know, Do" (FM 22-100 – *Leadership*) captures what it means to be an Army professional in terms of personal characteristics, competence, and action.

In order to manage the scope of the impact assessment, one should target those personal characteristics, competencies, and actions for which common or persistent problems have been identified in the target membership. These are the areas where one can expect to see improvement due to an intervention because performance is not already at ceiling. These are also the areas where performance improvement is most badly needed, so impact in these areas is most likely to be aligned with organizational objectives.

There are multiple ways to assess whether SPF activity has had an impact on the personal characteristics, competencies, and actions selected. Ideally, one would develop and administer in a quasi-experimental setting valid, reliable special-purpose assessments to capture

leader competence and professionalism both before and after becoming a member of an SPF. Growth in these areas could be compared to the growth occurring in these same areas for SPF non-members with otherwise similar characteristics (e.g., years in the Army, participation in institutional instruction, etc.).

Given that leaders do not typically become members of an SPF *en masse*, and that the construction and validation of the required special-purpose measures would likely necessitate a nontrivial research effort of its own, the feasibility of the quasi-experimental approach is highly questionable. A reasonable proxy is to evaluate whether or not the content and discussion in the SPF addresses the key problem areas in leader competence and professionalism identified in the initial analysis. Using the social and intellectual capital assessment criteria described in the previous section of this paper, SPF functional effectiveness in the key areas of interest could be evaluated. For assessing aspects of community development and professionalism, it would be feasible to survey SPF members and non-members, asking them to provide self-reports of community and professional identity.

#### **Organizational Effectiveness – Unit**

To identify targets for impact assessment at the unit level, "unit" must be defined in terms of the SPF members. For example, if the SPF is geared toward company commanders, the unit should be defined as a company with special emphasis on the interaction between the company commander and his or her platoon leaders. If the SPF is geared towards staff executive officers, the unit should be defined as the staff. Defining "unit" in this way ensures that unit performance falls largely within the sphere of influence of the forum member rather than external factors, which is required for a fair assessment of impact.

As with assessing leader competence and professionalism, key problem areas in unit performance (once "unit" has been defined) should be identified in order to manage the scope of the impact assessment. Similarly, assessing organizational effectiveness at the unit level should also focus evaluation on these key problem areas.

Assessment of unit effectiveness ideally involves observation of the unit performance of SPF members and non-members. Unfortunately, as with assessing leader competence and professionalism, assessing unit performance would require the development and validation of unit performance measures, not to mention significant logistical and administrative challenges. A reasonable proxy would be to compare

the unit performance of SPF members and non-members as assessed by observer/controllers when the units rotate through combat training centers. An alternative proxy is to evaluate whether or not the content and discussion in the SPF addresses the key problem areas in unit performance identified in the initial analysis. Here too, one could use the social and intellectual capital assessment criteria to evaluate the SPF functional effectiveness in the key areas of interest.

### Organizational Effectiveness – The Army

In one sense, identifying targets for impact assessment at the organizational level is simple; the Army seeks to reduce costs while at the same time improve capability. These broad goals may be accomplished, for example, by improving retention, a matter of critical importance to today's Army, streamlining the transformation effort, and maintaining high levels of professionalism in a time of great flux in roles and responsibilities.

The difficulty in assessing impact at the organizational level lies in the fact that one SPF can only reach a small fraction of the Army's leaders. Moreover, it may take several years to see impact as junior members of an SPF work toward positions of authority in the organization. It reasonably may be expected that multiple SPFs are required to make a demonstrable difference at the organizational level in the broadest sense.

That said, it may be possible to capture the potential organizational impact of a single SPF by identifying the implications of organizational initiatives, such as transformation, for the jobs of the SPF members. Job demands placed on SPF members by organizational initiatives should be addressed in the forum in order for the forum to have an impact on the performance of the organization as a whole. In addition, knowledge sharing and discussion in the forum should support continual development in support of organizational goals, including increased sense of commitment to the organization and enhanced capability to make learning a lifelong endeavor.

### CONCLUSIONS

The present study represents an initial effort to understand how to capture the effectiveness and impact of SPFs. In this short, 6-month project, we identified several candidate metrics for assessing the effectiveness of SPFs, which serve as a foundation for identifying impact, and we determined a general method for assessing impact at the individual, unit, and organizational level. Because data do not exist to

validate the proposed percentage cutoffs for several of the proposed metrics, research must be conducted to determine the links between specific forum-effectiveness metrics and impact. The validity of percentage cutoffs across SPFs must also be determined.

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### REFERENCES

- Bobrow, D. G., & Whalen, J. (2002). Community knowledge sharing in practice: The Eureka story. *Journal of the Society for Organizational Learning*, 4(2).
- Cianciolo, A. T., Antonakis, J., & Sternberg, R. J. (2004). Practical intelligence and leadership: Using experience as a "mentor". In D. V. Day, S. Zaccaro, & S. Halpin (Eds.), *Leader development for transforming organizations – Growing leaders for tomorrow* (pp. 211-236). Mahwah, NJ: Lawrence Erlbaum Associates.
- Dixon, N. M., Allen, N., Burgess, T., Kilner, P., & Schweitzer, S. (2005). *CompanyCommand: Unleashing the power of the Army profession*. West Point, NY: Center for the Advancement of Leader Development and Organizational Learning.
- Kendall, R. E., & McHale, K. J. (2003). *Evolution: Advancing communities of practice in naval intelligence*. Unpublished Master's thesis. Naval Postgraduate School, Monterey, CA.
- Crager, J., & Lemons, D. (2003). *Consortium Learning Forum best-practice report: Measuring the impact of knowledge management*. Houston, TX: American Productivity & Quality Center.
- Lesser, E. L., & Storck, J. (2001). Communities of practice and organizational performance. *IBM Systems Journal*, 40(4), 831-841.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- Schweitzer, S. J. (2003). *Discussion forums: The core of online communities of practice*. Retrieved March 17, 2004 from [http://java.cs.vt.edu/public/classes/communities/uploads/schweitzer597\\_project.pdf](http://java.cs.vt.edu/public/classes/communities/uploads/schweitzer597_project.pdf).
- Smith, R. (2005). *The Army Modular Force*. Retrieved from April 25, 2005 from

<http://www.army.mil/professionalvideo/movies/modular.html>.

- Snyder, W. M., & Briggs, X. (2003). *Communities of practice: A new tool for government managers*. IBM Center for the Business of Government.
- Stuckey, B., & Smith, J. D. (2004). *Sustaining communities of practice*. Paper presented at the International Association for the Development of the Information Society (IADIS) International Conference: Web-Based Communities, Lisbon, Portugal.
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice*. Boston, MA: Harvard Business School Press.
- Woodie, T. E. (2005). *Learning together: The role of the online community in Army professional education*. Monograph of the School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, KS.