



THE TRUTH ABOUT BUILDING AND MAINTAINING SUCCESSFUL COMMUNITIES OF PRACTICE

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Communities of Practice (CoPs) are often described as *self-organizing/self-generating* entities (Davenport & Prusak, 1998). However, our first-hand experience demonstrates that successful communities are more likely to emerge when there is a systematic process for establishing, growing, and sustaining CoPs in a business setting; and viable CoPs in the workplace need structure, direction, and help to set a solid foundation for success. As expected, potential members and business leaders expect CoPs to support real business needs prior to investing their own time and organizational resources to support the communities. If CoPs are properly implemented, benefits to the organization are faster and better-informed decision-making and a workforce that has access to knowledge at the point of need.

The authors of this paper have over 20 years' experience between them using knowledge sharing to improve organizational performance and have worked extensively on the mechanics of building effective Communities of Practice (CoPs). In addition, they actively engage in establishing, building, and operating communities of practice; and they also support the Acquisition Community Connection (ACC) (<https://acc.dau.mil>), a large umbrella system that includes 25 nested communities and 280 collaborative workspaces for the Department of Defense (DoD) Acquisition, Technology, and Logistics (AT&L) workforce.

Their efforts have also resulted in the development of a CoP implementation guide to support DAU and the associated ACC. The intent at the onset of developing the guide was two-fold. First, based on the experienced team we brought together, we recognized the need

and value of documenting a repeatable process to develop and support communities and to guide our target audience through the process of standing up formal collaborative spaces. Second, formulating a document such as this represented an opportunity for the team to share lessons learned at a variety of organizations that we previously supported, and to reach consensus on a standardized approach to growing the ACC. The resulting DAU *Community of Practice Implementation Guide* is a reference that has been repackaged by many other organizations to support their own communities, along with a process that has helped the ACC grow into a resource that now supports over 280 collaborative spaces to meet the needs of the acquisition workforce (DAU, 2003).

WHAT VALUE DO COMMUNITIES OF PRACTICE BRING TO THE AT&L WORKFORCE?

There is an enormous volume of information available in today's workplace, more now than at any point in history. In an attempt to put as much information as possible at the fingertips of decision makers, we have created an information overload that exceeds the capacity of one person to comprehend and synthesize. In today's complex environment, decisions must be made more quickly than ever; and as a result, more and more decisions are, effectively, being made at lower levels within the organization by decision makers who are drowning in information and are hungry for answers. Clearly a better alternative is needed to support an environment conducive to making faster and better-informed decisions.

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To be truly useful, information must have context, obtained through interaction between individuals who bring their tacit knowledge, skills, and unique experiences to a situation to better understand and effect a desired outcome. Agile organizations must be able to quickly learn and disseminate new knowledge within the organization to improve performance and increase value. To stay competitive, organizations cannot continue to make the same mistakes over and over again. Group and individual *know-how* must be transferable and usable across all parts of the organization.

Sifting through the volumes of available information and making sense of it requires a new level of collaboration in the workplace. Unlike the situation found in organizations 20 years ago, we now have a smaller workforce functioning in an environment where it is not unusual for individuals to be physically separated from their peers and in some cases even their own organizations. In addition, there is seldom overlap between outgoing workers and their replacements, and far too often, new workers have little idea where expertise resides

in the larger organization. As a result, it is becoming increasingly difficult to collaborate in person, so it is essential to leverage new ways to connect our workforce to know-how. In these cases, effective communities represent a viable way to provide a knowledge-sharing environment that facilitates the context building and interaction essential to move beyond piles of information and into the realm of synthesis, action, and organizational learning.

The CoPs also represent the potential to extend the reach of Subject Matter Experts (SMEs) supporting the workforce. A simple story illustrates the tremendous power and exponential reach of a community. Over the span of 17 months, a Defense Acquisition University (DAU) instructor developed six Earned Value Management (EVM) learning modules ranging in length from 38 to 68 minutes. The EVM modules are advanced presentations (developed with Microsoft Producer). Each model provides very detailed/systematic overviews and is posted on the EVM community Web site for easy access to members. Collectively, the modules shared with the community provide an overview from basic to advanced EVM concepts and knowledge. Over a 16-month period, the modules were viewed a combined 40,385 times. Given the nature of the information contained in the six contributions, we conservatively estimated that each of these views was equivalent to a minimum of 15 minutes of instructor time by any other form of *touch* (telephone calls, email, etc.). Based on these numbers, the total contact time would be equal to one full-time person working 252 weeks (almost five work-years of effort) without any breaks. The instructor spent a total of 21 weeks developing the material, a relatively low investment of time considering the 12-fold return on investment to date. And to put this in even greater perspective, these represent just six of over 40,000 contributions in a nest of communities supporting the acquisition workforce—clearly an indication of extended SME reach in support of the workforce.

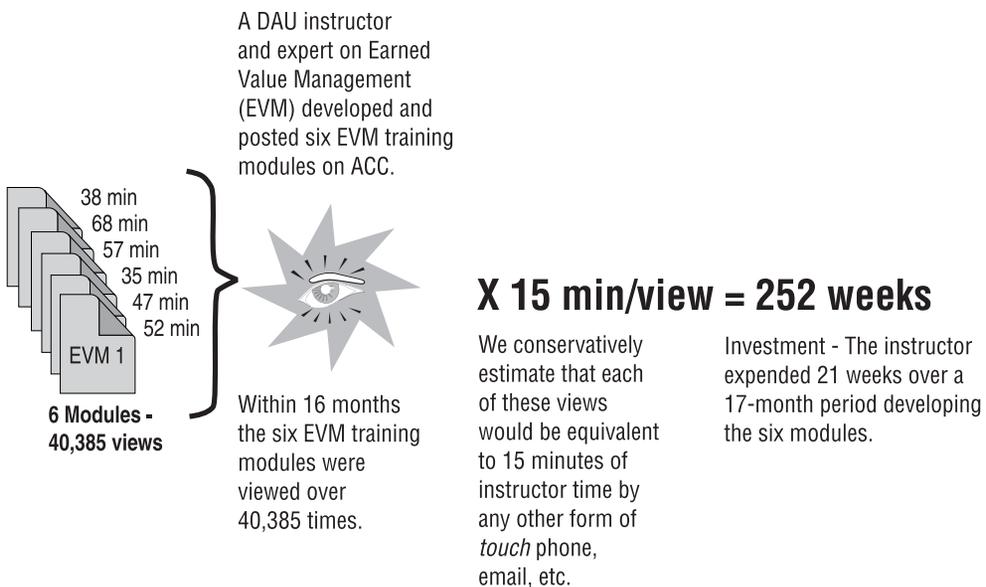


FIGURE 1. VALUE ADDED EXAMPLE

Communities of Practice Value Proposition

- ◆ Facilitates the rapid identification of individuals with specific knowledge/skills;
- ◆ Fosters knowledge sharing across organizational boundaries (*boundary spanning*);
- ◆ Promotes and facilitates the capture and reuse of existing knowledge assets and retention of organizational memory;
- ◆ Provides a safe environment to share problems, challenges, and test new ideas;
- ◆ Facilitates collaboration across different time zones;
- ◆ Fosters innovation (within and across organizational boundaries);
- ◆ Facilitates faster, better-informed decision making;
- ◆ Reduces learning curves for new employees;
- ◆ Improves the quality of products developed;
- ◆ Fosters interaction between new/more junior employees and senior/more experienced practitioners;
- ◆ Facilitates the building of mentor-protégé relationships.

FIGURE 2. COMMUNITIES OF PRACTICE VALUE PROPOSITION

While there is a consensus that communities and other collaborative workspaces *can* improve workforce and organizational performance, the thinking around building effective communities is divergent. Successfully implementing CoPs is a difficult prospect, and many start-up efforts without a viable plan of attack simply fail. It is easy for product marketing materials, magazine articles, and the like to describe the CoP concept as something relatively simple and naturally occurring; however, the fact is that organizations need to approach CoPs for what they are—*hard work*! The return on CoPs is clearly worth the effort if done right, but leaders need to understand that there is an up-front investment of commitment prior to standing up a community. It is imperative that leaders weigh realistic expectations against honest, up-front cost projections in the decision process.

IS THERE A PROVEN PROCESS FOR STANDING UP COMMUNITIES OF PRACTICE?

There are tried and true steps to ensure that organizations are successful in their community development efforts, and this article addresses four critical components within the process of establishing effective communities of practice:

- Clarity of community purpose and core membership.
- Healthy infrastructure.
- Community-building process.
- Measuring results.

CLARITY OF PURPOSE AND CORE MEMBERSHIP

Clarity of purpose is the first critical element needed to establish an effective community of practice. It is not enough to state that CoPs are part of the way the organization operates and to set up communities around core business needs. Everyone involved (including senior leaders) has to have a clear vision of why communities are being introduced into the workplace, how CoPs will be used, and what realistic outcomes are expected. Core members forming the community have to understand their individual responsibilities and consent to the necessary level of participation. While there is no one right answer to the purpose of all CoPs, the key is to ensure each individual community has consensus of intent, and such purpose is in some way codified through the use of charters, memoranda of agreement, guides, and even a simple purpose statement posted on the community Web site itself.

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of practice.***

However, the involvement of core members representing the critical mass of knowledge (stakeholders and SMEs) is also critical to successfully standing up a community of practice. More often than not, we have found that individuals looking to stand up a CoP will walk through our door without any thought behind who needs to participate if the community is to be a success. In addition, the foundation of a successful community—including the right core membership from the onset of planning—is an important element in earning that kind of trust. The target membership of the community needs to have confidence that the community in which they are investing time to participate has the right membership base to provide value, to validate or dispute contributions, and to guide discussions. Core community members are so important to the success of a CoP that our community-building process recognizes their identification as an important first step.

Therefore, CoP leaders should carefully think through the selection of necessary core members to be included in the follow-on planning workshop, which usually represents the first opportunity for such a comprehensive group from the community to come together. In nearly every case, a properly planned core planning workshop results in a healthy

discussion of issues, and there is finally an enhanced understanding at a level of inclusion that would otherwise not have occurred. The challenge is to keep the core members focused on the purpose of the community being developed. However, the purpose of a CoP is not to be a single, all-inclusive resource for everything—it is not the information management system. The most successful communities tend to evolve from key issues/concepts, ensure a clear understanding of the audience targeted for participation, and align with the larger organizational goals and objectives.

HEALTHY INFRASTRUCTURE

Our definition of a healthy infrastructure addresses three components: people, process, and technology. On the people side of infrastructure, we have identified six different roles within a community that function to support the implementation and operation of CoPs. The intent is not to imply that every role requires a different individual, and in many communities, a single person may handle multiple roles. Instead, the point is that there must be a plan for how to support all of these very necessary roles.

- **Community Sponsor:** “The Sponsor provides high-level sponsorship and support for the community at-large and acts as the champion for the community. Sponsors promote the value of membership across an organization, thereby encouraging community growth and commitment of organizational resources” (DAU, 2003, p. 15).
- **Community Leader:** “The Community Leader, an active member of the community, serves an integral role in the community’s success. The Leader helps to guide the community’s purpose and strategic intent, energizes the process, and provides continuous nourishment for the community” (DAU, 2003, p. 15).
- **Subject Matter Experts:** “Subject Matter Experts are knowledgeable and experienced members of the community who use their knowledge of the discipline to judge what is important, groundbreaking, and useful, and to enrich information by summarizing, combining, contrasting, and integrating it into the existing knowledge base” (DAU, 2003, p. 16).
- **Content Editor:** “Content Editors are responsible for the content within their respective area(s). Manages the process for review and approval of member contributions and, as appropriate, works with SMEs to validate and approve member contributions” (DAU, 2003, p. 16).
- **Facilitator:** “The Facilitator provides an essential function for the community by fostering and facilitating member interaction. Facilitators can ensure that community forums are productive for all members by acting as a broker and independent community process expert” (DAU, 2003, p. 17).
- **Community Member:** “Membership is voluntary rather than prescribed. Members participate because *they get value* from their participation” (DAU, 2003, p. 18).

In addition to the roles delineated above, CoPs operating in a business environment need a dedicated support team to aid community development and growth. As new theory emerges around the concept of CoPs, an increasing number of organizations that we encounter in government and industry are recognizing a need for such a team. This team supports the community-building process, assists community leaders, monitors activities in the community, and provides the training and consistency of the process needed to preserve the integrity of communities. The size of the support team will vary based on the scope of the community and may be a single individual; but when this function is designated entirely as a collateral duty to someone with other higher priorities, it is difficult to sustain a viable CoP.

The process piece of the infrastructure provides the structure and support needed to get communities started down the right path. An established, proven, and repeatable process provides a consistent methodology for ensuring all aspects of the community's development are well thought out—objectives identified, roles designated and properly aligned to organizational goals.

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The technology piece of the infrastructure is important to the extent that it enables and facilitates knowledge exchanges. Critical considerations of this component are the capabilities and functions the tool provides the end user, hardware and connectivity capable of scaling to the intended audience, and its ease of use. Successful communities are much more than the software solution or a virtual space void of personal interaction; they are fueled by the participation of the membership. Ironically, it seems as if the vast majority of CoP start-up efforts focus entirely on products. The key here is to conduct an effective needs assessment up front, then to match the results to available technologies. Are there in-house tools that are sufficient to initiate a community without additional initial investment? If so, then a 70- to 80-percent solution capable of supporting the initial momentum while detailed requirements are further assessed, might be the best starting point (as long as the existing technology is capable of migration to another solution at a later date).

COMMUNITY-BUILDING PROCESS

In support of the ACC, we have implemented a 14-step process to initiate, build, and operate communities of practice. The collective experience of our entire knowledge support team leveraged over 40 years of knowledge management experience at a variety of organizations to reach consensus and to document the processes that are critical to the success

of an emerging CoP effort. The intent was not to create a process void of flexibility. We recognize the fact that every community is different; therefore, this process is intended to serve more as a guide than a mandate. Similarly, we do not suggest this process as a cookie-cutter approach to CoPs in all organizations; however, we do firmly believe that successful community building in any organization is enhanced by a documented, repeatable process to stand up collaborative efforts. The chart below illustrates the kind of growth in collaborative spaces that the ACC has experienced since the development of the June 2003 implementation guide mentioned earlier in this article (see Figure 3).

The community-building steps and related outputs in the 14-step process for CoP development are brief and to the point (see Figure 4). Still, some aspects not discussed earlier in this article are worthy of expanded discussion, beginning with the implement-and-build phase. Establishing the online community structure is a step that represents a challenge that we have found many core groups struggle with initially. Lacking the proper guidance, core members tend to develop a CoP structure based on their own understanding of the community, which may differ from the perspective of the membership. An effective CoP structure and the content that populates it must support the knowledge needs of the target audience and should be tied to the significant issues and challenges in the community. We recommend structuring the content around the critical issues or challenges identified by the core group in the workshop. The content has to be perceived as valuable to the target audience. Value to the average worker means that it is relevant, informative, and accurate to help them with their day-to-day work. We never recommend going public with a CoP until the core membership has ensured enough quality content to be of value to the workforce at the time of the launch.

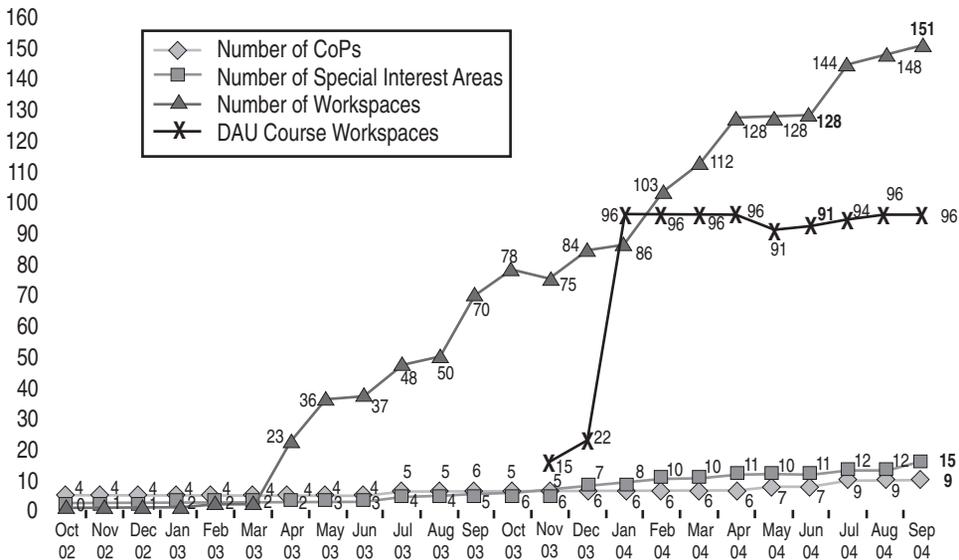


FIGURE 3. COPS CHART

Community Building Steps	Output
Get Started	
<p>STEP 1 - Initial Concept Meeting to Identify and establish core group of community stakeholders/ subject matter experts. Form a team that will serve as the catalyst for standing up the community. This core team will help to initiate the planning workshop by developing an agenda, identifying who should be at the session (usually, including themselves) and ensuring a good representation of the community.</p>	<ul style="list-style-type: none"> ◆ List of core members / Subject Matter Experts (SME's); ◆ Workshop date; ◆ Agenda; ◆ List of <i>right</i> invitees.
<p>STEP 2 - Conduct core planning workshop. The workshop brings together a diverse set of community stakeholders (OSD, Services, DoD agencies, industry, DAU, academia) to discuss the community concept and to begin to formulate the purpose and intent of the community.</p>	<ul style="list-style-type: none"> ◆ Community purpose and objectives; ◆ List of types of problems group is trying to solve; ◆ List of critical business issues; ◆ List of community stakeholders and target audience for community; ◆ List of community resources and roles, i.e., who will dedicate time and energy to establish the community, what monetary resources are available to support the community; ◆ List of preliminary knowledge assets, i.e., what sources of information are available to populate the community site, where does the information reside; ◆ Type of virtual collaborative work environment that is the best suited for the objectives of the community.
<p>STEP 3 - Draft community charter. It is recommended that each community establish a charter to address the items listed in Step 2 above. A draft charter has been created.</p>	<ul style="list-style-type: none"> ◆ Community charter.
Implement and Build	
<p>STEP 4 - Establish community structure. A logical organizing structure is the cornerstone for building content that is useful and intuitive for the users. Great care should be taken to establish a viable structure, while still leaving room for growth.</p>	<ul style="list-style-type: none"> ◆ Community structure.
<p>STEP 5 - Inventory knowledge assets. Knowledge mining and/or mapping is used to determine where the knowledge nuggets reside, who are the keepers of the keys, etc.</p>	<ul style="list-style-type: none"> ◆ In-depth knowledge map.
<p>STEP 6 - Organize the content. Once you have created an organizing structure and determined where the knowledge resides externally, you must decide where each contribution belongs internally within the community. If an item could easily fit within more than one topic area of the structure, you must choose a primary residence, then you can cross-reference it to other topic areas.</p>	<ul style="list-style-type: none"> ◆ Knowledge contributions created and housed within the community structure.

FIGURE 4. THE 14-STEP PROCESS

Community Building Steps	Output
Implement and Build cont...	
<p>STEP 7 - Identify and develop any content engineered specifically to support the community. Often during the needs analysis and knowledge mapping process, the core members will identify knowledge gaps or areas where further instruction would be beneficial. This content can be created (frequently by Instructional System Designers) and submitted as FAQs, learning materials or other forms of content.</p>	<ul style="list-style-type: none"> ◆ Knowledge contributions created and housed appropriately, within the community structure.
<p>STEP 8 - Identify Content Editors for the community. Content Editors are responsible for monitoring both existing and new content: reviewing it, approving or denying it, featuring items to draw attention to them, checking for outdated or inaccurate materials, etc.</p>	<ul style="list-style-type: none"> ◆ Names of Content Editors.
<p>STEP 9 - Train Content Editors on the use of the Acquisition Community Connection Tool. To perform their job effectively, Content Editors must be trained how to use the CoP tool. In addition, they must learn the basics of content management.</p>	<ul style="list-style-type: none"> ◆ Training date(s); ◆ Trained Content Editors.
Operate Community	
<p>STEP 10 - Manage the content. Operating a community is an iterative process. Content Editors must continually monitor both existing and new content; review it, approve it or deny it, feature items to draw attention to them, check for outdated or inaccurate materials, etc.</p>	<ul style="list-style-type: none"> ◆ Validated, current content with proven value to the users.
<p>STEP 11 - Facilitate the interaction within the community. The Facilitator is primarily responsible for encouraging the formation of relationships between community members. The Facilitator will help to arrange and run community meetings; make sure that discussions, once posted, are answered; and put those with problems together with those who have answers.</p>	<ul style="list-style-type: none"> ◆ Mentor / protégé relationships formed; ◆ Discussions posted and answered; ◆ Community meetings held.
<p>STEP 12 - Market the community. Marketing the community can be accomplished in a variety of ways, from telling a friend, to passing out brochures at a conference, to e-mailing a news group, etc. Every member, and especially those assuming leadership roles, serves as an ambassador for his/her community. Spread the word!</p>	<ul style="list-style-type: none"> ◆ Increase exposure for the community; ◆ Increase membership; ◆ More viable communities
<p>STEP 13 - Keep Content Current/Relevant. As the community evolves, new issues arise and areas of focus may change. Part of the role of the community leader and Content Editor is to keep the community relevant to the members. Step 7, above, will be repeated continuously. Another method of keeping content current/relevant is through research-related endeavors.</p>	<ul style="list-style-type: none"> ◆ Validated content to help guide users through unfamiliar tasks, learn new ways of doing old jobs, etc.

FIGURE 4 (continued). THE 14-STEP PROCESS

Community Building Steps	Output
<i>Operate Community cont...</i>	
<p>STEP 14 - Determine the effectiveness of the community. Each community may have a different method of determining the value or success of its endeavors. At some point, each community must take time to re-evaluate what has been accomplished – does it meet the community’s stated purpose and objectives?</p>	<ul style="list-style-type: none"> ◆ Metrics based on the community’s objectives and how it defines success; ◆ Feedback from the community.

FIGURE 4 (continued). THE 14-STEP PROCESS

Content editors are an absolute necessity for a business-oriented community of practice. As mentioned earlier, the initial content editors are likely to come from the core group of members and are also the SMEs. At the onset of a new community, this group is usually sufficient to manage content, but as a CoP grows so will the need for additional editors. The ideal scenario is to empower SMEs as editors with the appropriate rights and responsibilities to manage subtopics in their areas of expertise. The SMEs are capable of reviewing contributions and guiding discussions without the need for extensive research. Content editors’/SMEs’ roles are almost always collateral duties for individuals, so recruiting the right individuals for the right subtopics is an important step in minimizing the burden of such a responsibility.

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Steps related to operating the community require constant attention and are a primary reason why we suggest that there is an absolute need for dedicated CoP support. Any organization that initiates CoPs without taking the time to establish processes and dedicate support to help manage the content, facilitate interaction around the content, and ensure that the content remains current/relevant, will see the value of CoPs quickly diminish. In the case of the ACC, even the most successful communities find a need to restructure the focus and content around the two-year point or sooner.

MEASURING RESULTS

How do communities measure their effectiveness? Metrics, both quantitative and qualitative, can assist community leaders in determining how effective the community is in reaching and providing value to the members. Communities are encouraged to use and monitor metrics to track their effectiveness and help take positive action to build and improve the community. Quantitative measures, like number of page views, number of times a document is viewed,

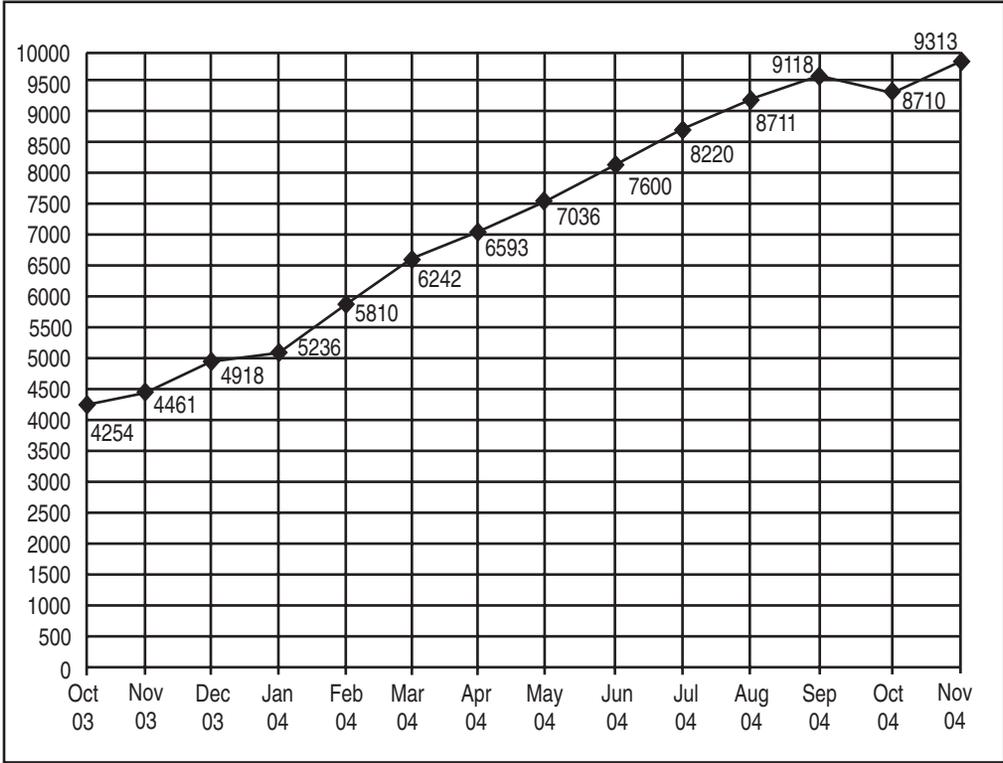


FIGURE 5. ACQUISITION COMMUNITY CONNECTION (ACC) GROWTH IN MEMBERSHIP

number of new discussion threads, participation in community meetings, and number of new contributions speak to the vitality of a community and are indicators of its use. Qualitative measures, like surveys and unsolicited feedback from members provide a better indication of value and how effective the community is in meeting its intended objectives. We find that feedback from our users is often the most valuable indicator that we are achieving our intended purpose. For example, feedback from one member stated: “The systems engineering community members were very helpful either supplying me vital information or putting me in contact with others who had the data that I needed. This made life much easier for me.” This kind of feedback is a clear indication that our formal processes are keeping our CoPs on track, given that the real purpose of CoPs is to connect the membership to know-how.

Another indicator of the viability of communities is their sustained growth, both in terms of membership and contributions. The ACC, using a formal process, continues to grow at a steady rate of 300–600 members per month and its contributions grow at a rate of 2000–3000 knowledge objects per month. Figures 5 and 6 illustrate the growth trends. (Note that the dip in membership in October 2004 is the result of a scrub of the membership numbers, which purged inactivity or outdated account information.)

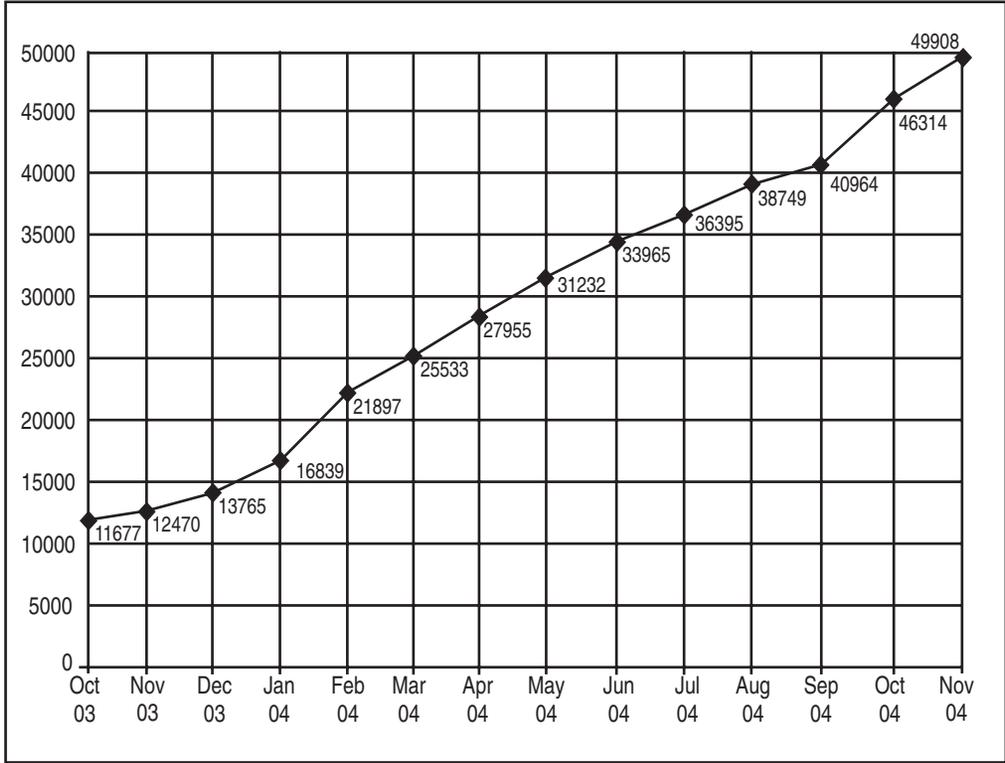


FIGURE 6. ACQUISITION COMMUNITY CONNECTION (ACC) GROWTH IN CONTRIBUTIONS

SUMMARY

We have suggested fundamental components required to build an effective CoP, based on firsthand participation in a variety of community of practice implementations in the DoD. The intent was not to provide a textbook solution that would work in every scenario; in fact, the reality is that every implementation will be different and requires adaptation to fit its unique environment. The key takeaway is that business-related CoPs require a very different approach, which involves a greater level of structure, guidance, and formal processes from the approaches we have found described in other publications on the topic. The CoPs are not only a viable option to enhance individual and organizational performance, they are a necessity to provide knowledge at the point of need in support of faster and better informed decision-making. The 14-step process provided is a recommendation for any organization with an interest in establishing communities. The process can be adapted and modified to meet the unique requirements of an organization, and, in fact, the larger *DAU CoP Implementation Guide* has already been leveraged in many other organizations with success. Though there are many more elements to consider when developing communities, we believe that these four areas are fundamental to establish, grow, and sustain CoPs. The au-

thors are available for comments and questions if there are members of the acquisition workforce with an interest in exploring more about CoPs.



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