

Information Security as a Community of Practice

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INTRODUCTION AND BACKGROUND

This entry concerns a live application in which the principles of communities of practice have been used to supplement the delivery of a critical business process. The company concerned is a multinational pharmaceutical organization with annual sales in the order of £20bn and a workforce of 100,000 employees worldwide.

One of the more critical IT services provided is that which defends the organisation's computer systems against attack by malicious software (commonly called computer viruses). This service draws significant direct and indirect resources to provide an acceptable level of defence for the organization. The service manages the provision of this defence from the gathering of intelligence concerning latest threats through deployment of protective measures to reporting of metrics showing service performance and adequacy of defences.

SERVICE DELIVERY THROUGH A COMMUNITY OF PRACTICE

The service is delivered through a retained team who provides the core service management capabilities. This is supplemented by a number of nonretained people who provide some aspect of the wider service. These can be categorized as follows:

1. **Local Representation:** Provide service capabilities locally such as training, reporting, remediation, and incident management.
2. **Other Services:** Make a contribution to the Malicious Software Service. For example, server operations provide infrastructure that hosts deployment and reporting; personal computer operations provide deployment of updates driven by the malicious code service.
3. **Business Representation:** Provide conduit between business and service.

The core and extended service fora are summarized in Table 1.

Table 1. Core and extended service fora

<i>Forum</i>	<i>Purpose</i>	<i>Membership</i>	<i>Size and Structure</i>
Core Team	Provide core functions of the service	Employees dedicated to fulfilling core service functions	Formal, 8 people
Extended Service Group	Provide elements that make up end to end service		Disparate, approx. 500 people
Governance Board	Provide direct resources Approve strategy	Line management	Formal, 15 people
Steering Group/ Customer Board			Community of Practice, 15 people
Project Teams	Deliver a specified service improvement within agreed time scales and cost		Formal, varies but typically 5 to 10 people
Users	Derive benefit from the service Ultimately sustain resource for the service		Informal, approx. 100,000 people

The Steering Group/Customer board comprises representation from all three categories above and also from users and representation from the body corporate. The group establishes the broad direction for the service including new technologies and significant updates to existing technologies. Many of the defences managed by the service are highly labor intensive. The steering group provides a forum through which experiences are shared and expertise continually improved and developed. As would be expected in a multinational corporation, the group is not sited in a single country. Therefore, extensive use is made of collaborative IT tools and telephone conference capability. Despite the geographical diversity, no location dominates or is considered the core location of the group. This is a good indication of the maturity of the group and a community of practice.

CONCLUSION AND FUTURE TRENDS

The group provides a rapid flow of information which has proven to be very effective. A similar membership forms the core of the organisation's incident response team which has become a highly competent command and control capability. The group provides a fast and effective route to innovative solutions through brainstorming and similar but more informal exchange of ideas. In most cases, issues are resolved quickly and effectively. This has materialized through a shared and common understanding of the aims and objectives of the service.

Members of the group have developed a means of communicating, which continues to mature through language shortcuts such as acronyms and jargon, providing a rapid means of framing problems and communicating solutions.

One of the strongest characteristics of the group is a very wide acceptance of the competencies and specializations of the various members. As the group has matured, the roles of individuals have become firmly embedded in its operation. This broad competency base very effectively overcomes many deficiencies that are evident in the formal service but are difficult to adequately formalize.

Already, other CoPs have been formed to address critical issues affecting the business which have proved intractable when approached by traditional means. The learning derived from this process has enabled us to consider CoPs as part of an overall strategy, as complementary to other approaches to managing the business.

KEY TERMS

Critical Business Process: An operation, or group of operations, within an organization that is key to its effectiveness.

Information: Knowledge acquired through experience or study.

Malicious Software: Generic term for a variety of well-known and less well-known means of disrupting or damaging computer systems and users.

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