

# Impact of knowledge cafes on knowledge sharing within a managed security service provider (MSSP)

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## ABSTRACT

Knowledge sharing has become a vital process in contributing to the success of any organization. So it is essential for any organization to be aware of and to understand the various knowledge sharing techniques that exist. As a result knowledge sharing can be used among experts for organization's mission and purposes. In this paper an in-depth literature review was conducted which focused on knowledge sharing and the various concepts associated with knowledge sharing. In fact the main objective of the study was to evaluate the application of informal networks with emphasis on knowledge cafes as a technique for knowledge sharing within a managed security service provider(MSSP), because beside the formal networks within such a company , also an informal environments such as knowledge cafés are often emphasized as facilitating knowledge sharing. Essentially in this paper we gathered and documented information on knowledge cafés as a knowledge sharing technique and recommended that knowledge cafés can be used effectively as a technique for knowledge sharing within a MSSP, when appropriate criteria and guidelines are applied.

**KEYWORDS:** Knowledge café, knowledge sharing techniques, managed security service provider, informal network.

## 1. INTRODUCTION

Generally, organizational knowledge should be applied in accordance with the products, services, and processes of an organization. If an organization fails to clearly define the right form of knowledge at the right place, it will face problems on competition grounds. In today's world, creativity and innovation pave the way to success and thus an organization needs to apply the right knowledge at the right time. To guide individual knowledge toward organizational goals, organizations should create an environment of knowledge pooling ,sharing, and transferring among their members. Nowadays, information and communication technology (ICT) has made the work environment of stakeholders complex and has defined new tasks for them. Of all the ICT stakeholders, a managed security services provider that offers a variety of consulting and managed security engagements is the most important of them. In such context, traditional processes face limitations and met cognitive thinking is subjected to further studies. According to Daneshyar [1] in such context, individual knowledge is not the only important issue, but also belief sharing, and how, when and with whom this belief and knowledge is shared are also equally important. On the other hand, informal knowledge sharing can occur through different channels such as : Peer assist, intranet, knowledge fairs ,knowledge network ,coaching, formal group-based knowledge sharing , storytelling , mentoring, weblog ,chat, communities of practice and knowledge cafés.

For the purpose of this article a knowledge café method as a face-to-face knowledge sharing method among a managed security service provider will be discussed.

A knowledge café can be defined as a process where individuals with a similar interest or problem get together in order to interact with one another, first in small groups and then as one unit in order to resolve a problem or to gain better understanding. Knowledge cafés are characterized by the following components:

a guest speaker who speaks for five to 30 minutes, an open-ended question which serves as the basis for conversation, small groups of four to five that discuss the topic of the café and finally a large feedback session.

## 2. Objectives

The main aim of this paper is to evaluate the effects of knowledge cafés as a technique for knowledge sharing within a managed security service provider (MSSP). The following objectives are therefore identified:

- Objective one: To discuss knowledge sharing and to create an inventory of the major knowledge sharing techniques.
- Objective two: To assess the effects of knowledge cafés as a technique for knowledge sharing within a managed security service provider (MSSP).

In order to address the above objectives the following research question was asked:

"How effective are knowledge cafés as a technique for knowledge sharing within a MSSP?"

In order to initiate the study process a literature review was conducted to discuss the major knowledge sharing techniques that exist. In conducting the literature review it became evident that there was a lack of information associated with knowledge cafés as a knowledge sharing technique. Due to this fact, during implementation of research methodology it was decided that an in-depth interview as a qualitative method would be conducted in order to gather security experts

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opinions on knowledge sharing within a MSSP, focusing largely on gathering information on the effectiveness of knowledge cafes technique in this context.

### 3. LITERATURE REVIEW

#### 3.1. Knowledge sharing

Sharratt and Usoro [2] stated that “sharing is a process whereby a resource is given by one party and received by another”, in addition to knowledge sharing: “It is the process by which individuals collectively and iteratively refine a thought, an idea or a suggestion in the light of experience, Knowledge sharing can be created in many forms such as: “...a story describing a similar experience whereby a method or technique was developed or used to solve a problem. If unable to provide a solution directly, knowledge may be shared in relation to contacting someone who might know and be willing and able to help”.

In organizations especially a large organization, members may not be aware of someone who would be interested in the knowledge they have or has the knowledge they require. This situation happens, because of the lack of relationship between members of the organization.

Gurteen [3] found five importance values of knowledge sharing:

1. Knowledge is an intangible product which includes ideas; processes and information. These intangible products are taking a growing share of global trade from the traditional, tangible goods of manufacturing economy.
2. Knowledge sharing is important for creating a new knowledge in order to achieve competitive advantage.
3. Knowledge sharing is important because of the increasing turnover of staff. People do not keep the same job for life any more. When someone leaves an organization their knowledge walks out of the door with them. Therefore, sharing has the power to carry on the knowledge.
4. Many organizations have problem of “we don't know what we know”. Expertise learnt and applied in one part of the organization is not leveraged in another.
5. Accelerating change in technology, business and social “50 percent of what we knew 5 years ago is probably obsolete today.”

Sharing knowledge allows both parties not only to retain information but also to amplify and expands it through the exchange process. However sharing of knowledge within organizations provides the opportunity to discuss know-what and know-how practices, to direct the organization towards future development and growth. The act of it transfers knowledge from one person to another or among many people adding value to organizational activities [4]. The Role of Story Telling and Water Cooler Talks Regular meetings for the purpose of discussing work-related experiences provide an avenue for sharing knowledge that generates a collaborative environment and one through which everyone benefits. A valuable avenue for knowledge sharing occurs during social interaction be it in the corridor, or at the water cooler, or a chat over lunch, and it is not uncommon in those discussions for storytelling to be used to illustrate examples of points to be made.

However Mitchell states that good stories should be entertaining and also they should be memorable and people centered. They also suggest that stories, encourage creativity, help in handling emotion, help to make sense of puzzling situations, co-evolve with the organization's culture. The same story repeated often sends signals about the cultural life of an organization [5].

Stories and experience are linked, meaning stories transform into experience and experience turns into stories and says that storytelling goes on almost continually. It is evident from those views that stories carry a tremendous responsibility and not enough attention is being paid to their value. People like to tell stories, and people enjoy listening to them even though there may be doubt surrounding the truth of what is being said. Socializing in a formal or informal way provides opportunities for stories to be told as people relate their experiences and it is through the medium of storytelling that people are encouraged to share knowledge [6].

In a conference paper [6] presented in Auckland it states that the “water cooler” is simply a metaphor for any number of different “talk spaces” where staff can meet and talk informally. That some obvious ways that organization can create such spaces are:

1. Dedicated Talk Spaces: These can be as simple as the areas around the water cooler or coffee pot, or as sophisticated as dedicated “chill out” rooms. The point of creating such spaces is that it provides opportunities for staff to be able to talk with one another in an informal setting. Although much office “gossip” is not about work, a great deal of staff talks about it. The conversations staff have with one another are “the way knowledge workers discover what they know, share it with their colleagues, and in the process create new knowledge for the organization.
2. Smart Office Layout: In some organizations, the need for “talk zones” is obviated by the layout of the office. One organization we work with discovered they didn't need more water coolers or sofas because they were a small team in an open-plan office, with a culture that encouraged mingling.
3. Dedicated Knowledge Sharing Events: Think about organizing a “knowledge fair” or some kind of open forum where staff can share their knowledge. The term “Knowledge fair” sounds extreme but really just means any opportunity for staff to meet and talk to other staff about their work.

4. Knowledge Leaders: No knowledge management initiative will work without someone senior in the organization taking responsibility for it. This is the person who marshals the resources, champions the logic of knowledge sharing, enrolls the participation of staff, and models knowledge sharing behaviors.

As such, the "water cooler" approach to knowledge management not only provides a soft entry option but also the natural starting point for the knowledge management programme. This "water cooler" approach will not deliver a mature Knowledge management culture on its own. Indeed, simply expanding the Informal mechanisms already in place may well necessitate a change in workplace culture.

[http://www.nodoubt.co.nz/pdfs/knowledge\\_management/watercooler\\_km.pdf](http://www.nodoubt.co.nz/pdfs/knowledge_management/watercooler_km.pdf)

### **3.2. Informal Networks**

Failing to take account of the powerful internal forces within organizations, according to Cook is a fundamental weakness in many knowledge management implementation processes.

Informal networks are important devices for promoting communication within and between organizations are viewed as structures that supplement, complement and add value to the formal organization. In sometimes bypassing the formal organization's system of communication Rachman and Mescon [7] suggest that such structures strongly influence the distribution of power and while

The formal organization spells out who should have power, it is the informal organization

That sometimes reveals who actually has it. Whereas formal organizational structures are able to handle easily anticipated problems, when unexpected problems arise, an informal organization kicks in. Often, in the type of work that 'symbolic analysts' perform, frequent and informal conversations are used, as neither problem nor solutions can be defined in advance. Informal organizations are described by Krackhardt and Hanson [8] as being highly adaptive, moving diagonally and elliptically, skipping entire functions to get work done, and by Stacey [9] as the mechanism that people employ to deal with the highly complex, the ambiguous, the unpredictable, the inconsistent, the conflicting, the frustrating, and the alienating.

It should be emphasized that the informal structures that are being referred to in this paper do not directly relate to the informal transfers of tacit knowledge described by Nonaka [10] occurring between employees, (although this type of informal transfer might still occur within an informal structure). Informal networks are relationships developed between individuals independently of any formal structure (although an informal structure might occur within a formal structure), and are not the chance meetings at the water cooler or cafeteria that Davenport and Prusak [11] discuss, but carefully conceived personal "networks of knowing", built up over time and used as complementary knowledge sharing alternatives to an organization's formal strategy. In describing 'the network of social interactions that are not specified by the formal organization, but that develop on a personal level among workers in a company', Wells and Spinks [12] use the term "grapevine". The ubiquitous grapevine, they describe as humanly permanent, extremely fast, highly accurate, providing qualified answers and usually bad news, although obviously also an existing communication network, is also, like the chance meetings at the water cooler not directly related to the informal structures discussed here, but belonging to what might be more accurately described as an unofficial structure.

There are according to BizMove.com [13] three basic channels of organizational communication, "1) Formal – Communication within the formal organizational structure that transmits goals, policies, procedures and directions, 2) Informal – The communication outside the formal organizational structure that fills the organizational gaps, maintains the linkages, and handles the one-time situations, and 3) Unofficial– The interpersonal communication within, (or among), the social structure of the organization that serves as a vehicle for casual interpersonal exchanges, and transmittal of unofficial communications."

In using the term 'quasi-formal' structure, an additional level between the formal and informal structures that is sanctioned by the organization is identified by Schoonhoven and Jelinek [14].

### **3.3. The Role of Informal Networks in Knowledge Sharing**

The literature selected relates specifically to the subject of the effects of informal networks on formal knowledge management strategies and covers three key areas, stakeholders, knowledge requirements and the nature of informal networks.

For the purposes of examining knowledge dynamics within an organization it is important to understand the roles and interactions played by each of the types referred to by Frame [15], in contributing to competence; the individual, the team and the organization.

#### **3.3.1. The individual**

The traditional and popular view is that it is the individuals within organizations, and not the organizations themselves that learn. Although new knowledge is developed by individuals, organizations do play a critical role in articulating and amplifying that knowledge [16, 17, 18, 19].

The role that individual-level processes play in organizational learning is examined by Andrews and Delahaye [20] in terms of how knowledge inputs and outputs are mediated by individuals. Knowledge inputs are discussed in terms of the individuals 'social confidence and their perception of the credibility of the knowledge source. Knowledge outputs are discussed in terms of what knowledge would be shared with whom, determined by the perceived trustworthiness of the recipient. The term "psychosocial filter" is used to describe the cluster of factors that influence knowledge sharing processes, and is described as working at the 'micro-level'.

### 3.3.2.The team

The literature is increasingly discussing the use of “teams” and “communities” according to Ferrán-Urdaneta [21] who discuss the differences between these two types of group. From an organizational learning perspective Andrews and Delahaye also add the group level to that of the individual and the organization. We may, for the purpose of this study, define a team (or community) simply as more than one individual collaborating together. It might however be more contentious to suggest that for knowledge sharing purposes a team need not necessarily be part of the same organization.

### 3.3.3.The Organization

Achieving any quality product or service requires that knowledge workers share data, information and experiences, and in order to optimize knowledge sharing, as well as having a supportive culture an organization must possess a suitable infrastructure.

Successful knowledge sharing practices according to Dixon [22] , requires a complete solution that not merely provides access to information technology and repositories. Because of the high cost of establishing effective knowledge sharing strategies the organization must pay careful attention to

- The design of incentives for contributing to and using repositories
- The roles of intermediaries in developing and maintaining repositories in order to facilitate the process.

### 3.4. Knowledge cafés

One of the major difficulty of this research is the fact that knowledge cafés are an area of research which is fairly new, therefore there is limited literature available, and the literature that is available focuses on the use of knowledge cafés for the corporate world. Anyway we review the existing literature to the extent possible.

In 2002 Gurteen exposed the corporate world to an alternative technique for sharing knowledge; this technique is called a knowledge café [23]. A knowledge café is a process where a group of individuals with a similar problem or interest come together at a specific venue. These individuals are divided into small groups of about four or five. Once the groups have been created, a guest speaker talks for five to 30 minutes at most on a specific topic, ending off his or her presentation with an open-ended question, which will form the basis of the discussions to be held by each group. The small group discussions usually last for 10-15 minutes each, before the individuals in the group are asked to rotate and form new groups to discuss the same topic (Management University of Singapore, 2008: Internet).

However, in 2009, Gurteen (Internet) does state that knowledge cafés can be equally beneficial in the academic realm.

Wyrsh & Partner as Knowledge Café Consulting Services [24] in their website (Internet:2007) describe the knowledge cafés as following:

Knowledge Cafés are modeled after "European café society", friends, colleagues and traveling strangers collectively engaged in lively, cross-pollinating, small group conversations about the most compelling ideas and issues of the time . Knowledge Cafés can be held on almost any topic or set of topics, but should be "questions that matter". It can be used for many different purposes: innovation ;gathering lessons learned, knowledge sharing, relationship building, brokering ,aligning around a course of action or vision, moving from one phase to another.

#### Knowledge Café – the characteristics

- Conversations about most compelling ideas and issues of the time
- Small groups (e.g. friends, colleagues, co-workers)
- Can be held on almost any topic

#### How does a Knowledge Café work?

- Seat four to five people at a small Café style tables or in a conversation cluster.
- Set up progressively (usually three) rounds of conversation of approximately minutes each .
- Question or issues that genuinely matter to your life, work or community are engaged while other small groups explore similar questions at nearby tables .
- Encourage both table host and members to write, doodle and draw key ideas on their tablecloths or to note key ideas on flip chart paper .
- Upon completion the initial round of conversation, ask one person to remain as the "host" while others serve as travelers or "ambassadors of meaning". The travelers carry key ideas, themes and questions to their new conversations .
- The host of the new table welcomes the new guests and briefly shares the main ideas, themes and questions of the initial conversation. Encourage guests to link and connect ideas coming from their previous table conversations. Listen carefully and build on each other's contributions
- By providing opportunities for people to move in several rounds of conversation ,ideas, questions and themes begin to link and connect. At the end of the second round, all tables or conversation clusters in the room will be cross-pollinated with insights from prior conversations
- In the third round of conversation, people may continue to travel to new tables ,leaving the same or a new host at the table. The focus of the last round (usually number three) is after another conversation to define the three most important findings, recommendations, insights, etc. they would like to share with all attendees .
- Adjacent to the last round these results are presented to the audience and build the essence of the Knowledge Café. The results can be e.g. an input for a change initiative, a concept, a solution and many more



**Figure1.** Gurteen Knowledge café

### What is the ultimate value of a Knowledge Café?

There are many benefits you get from a Knowledge Café. The three main beneficial areas are:

- ❖ Organization or group :
  - Have a focused conversation about questions or topic that matter
  - Get all brains involved in a creative way that stimulates the creation of new answers and innovative ideas .
  - Get a common understanding of a topic
- ❖ Individual member :
  - Expand the personal network
  - Learn directly from others
  - See immediately the impact of their contribution
- ❖ Company :
  - Have the employees actively involved in creating new ways to work, new products, new organizational structures and et al.

### What is your investment?

**Time:** A Knowledge Café to run needs about 2 hours. That means it can be easily included in an already scheduled event .

**Location:** A Knowledge Café can be held in any room, but a nice location is always stimulating the conversations. Have some beverages and pastries will also have a positive impact .

**People:** Picking the right people for the topics and question is crucial.

Dr.Nick Bontis [25] in his site ([www.NickBontis.com](http://www.NickBontis.com)) states: “the objectives of the Knowledge Café are:

- 1) To discover shared meaning among your fellow colleagues
- 2) To access the organization's collective intelligence .
- 3) To co-evolve the future of the organization



**Figure2.** Gurteen Knowledge café applications

The main outcome of the knowledge café is a codified summary and outline of next steps in your strategy for leveraging intellectual capital in your organization.

The Knowledge Café is an exciting opportunity for you to experience how a knowledge ecosystem can support the interactions of a learning community. Our learning community, the participants and presenters at this workshop, will collectively explore key topics in the field of knowledge management, organizational learning and intellectual capital. Like the famous cafés of Paris, participants will move from table to table and through the socialization process dialogue, interact, and most importantly learn from one another. You will take away not only an experiential grasp of what a knowledge ecosystem is, but a deeper, more holistic understanding of the subject of the gathering.

These are the proposed 5 themed stations based on the popular choices of previous cafés:

1) Cushioning turnover, 2) Technology recommendations, 3) Leadership evaluation, 4) Worse practices, 5) What's next? Each of the delegates will be randomly assigned to one of five (5) stations which will have coffee, sweets and paper. One (1) facilitator will also be assigned to each of five (5) stations. Facilitators stay at the café for the whole exercise and are like the social waiters of Paris.

Each table will be assigned a theme. Delegates discuss the theme at the table and exchange ideas with one another while the facilitators probe for clarification and codify their ideas on top of the table cloth (paper).

Delegates can also doodle their ideas on the table top as well. After 20 minutes, a bell will ring and delegates randomly scramble to another table which highlights a different theme. This allows delegates to also meet and dialogue with virtually everyone at the event. The facilitator then debriefs the new table of delegates with the earlier highlights and challenges each delegates to push these ideas further. After 3 rotations of 20 minutes each, a wonderful ecosystem of learning will have been developed. The rotations are labeled as follows:

- i) Brain dump – this session is all about ideas and brain storming,
- ii) Edit and delete – this session is about improving on the results of the previous one, and
- iii) Prioritize – this session must select and prioritize the top five (5) ideas from the previous rounds.

Facilitators are then responsible for debriefing the whole audience at the end and can use their table cloths (papers) as illustrations if they wish”.

### 3.5. Managed security service provider (MSSP)

Information security management has become a critical and challenging business function because of reasons such as rising cost of security breaches, increasing scale, scope and sophistication of information security attacks, complexity of information technology (IT) environments, shortage of qualified security professionals, diverse security solutions from vendors, and compliance and regulatory obligations. Firms are responding to information security challenges by increasingly outsourcing IT security operations to managed security service providers (MSSPs). The popular managed security services outsourced include firewall and IDS/IPS, vulnerability management and Security Operation Center (as shown in figure 3), which seeks to protect a firm from security breaches and avoid a potential loss, and security monitoring, which attempts to detect breaches and recover some of the loss.



**Figure3.** Some Managed Security Services

In a word, Managed Security Service Providers can deliver strong value to your security program. A Managed Security Services Provider can enhance organization's security posture, improve security operations efficiency, facilitate compliance efforts and reduce overall security program costs. As in many other outsourcing contexts, lack of a qualified security team is a potential problem in information security outsourcing if a MSSP cannot share security knowledge among security experts in an effective manner.

More recently, Dey et al. [26] examined different types of software outsourcing contracts under information asymmetry. In the information security context, Ding et al. [27, 28, 29] examined the characteristics of optimal MSSP contracts under moral hazard and reputation effects and found that an optimal contract should be performance based even in the existence of a strong reputation effect, and that outsourcing decision is relatively insensitive to variation in

service quality but highly sensitive to bankruptcy risk. Gupta and Zhdanov [30] examined the growth of a MSSP network under a for-profit MSSP monopoly and under a consortium-based market structure. The information security as well as the traditional IT outsourcing literature assumes that there is a single type of service that is outsourced. For instance, information security outsourcing assumes that only prevention services are outsourced and the general IT outsourcing assumes that software development is outsourced.

According to IBM site ([www.ibm.com/services/us/iss](http://www.ibm.com/services/us/iss)), "advanced security practices require highly skilled personnel, who are in high demand and expensive to recruit, hire and retain. According to a Forrester Consulting study, "An alarming 80 percent of security leaders believe that it is difficult or very difficult to find and hire technical security staff that fit all of their requirements. This challenge is even more pervasive in Latin America, where a stunning 96 percent of regional security leaders noted this difficulty."

To support a cost-effective, robust and proactive security posture, more and more organizations are outsourcing portions—or even all—of their IT security programs. These businesses typically:

- Lack the in-house capabilities required to properly manage changing business demands, compliance mandates and emerging threats for strategic implementation of new IT security solutions
- Do not have the capabilities to effectively monitor and manage the security infrastructure to help achieve optimal use of current assets
- Have in-house IT staff members who spend too much time on day-to-day operational security issues versus new strategic projects
- Depend on IT security tools and processes that provide a reactive, rather than a proactive, approach to mitigating risk and reducing data loss and downtime
- Lack the resources and expertise to gather and analyze security intelligence about current and emerging threats
- Are too overwhelmed by the magnitude and complexity of risks to confidently provide an integrated response.
- By outsourcing security operations to a managed security services provider (MSSP), organizations can take advantage of the expert skills, tools and processes that these service providers offer and significantly enhance security without making a large investment in technology and resources.

#### **4.Problem statement**

MSSP team is a group of technical security staff who primarily implements, configure and utilize managed security products and services for a MSSP who provides security services for companies. SO, in today's highly competitive and rapidly changing global environment more and more MSSPs strive to form qualified teams comprised of experts situated in different locations, organizations, countries at any time, all year round(24/7/365).It means, forming such a team that is essentially a result of trained security experts are facing a new challenging environment characterized by globalization, dynamism and increasing levels of complexity due to rapid changes in information technology and intricate security knowledge.

Despite the many technologies that support collaboration among security groups, MSSPs still face difficulties implementing a knowledge sharing approach to improve and update security knowledge among security experts. What is lacking in most MSSPs is a proven technique for identifying individual expertise, skills, and experience, then sharing these knowledge among all of the security experts.

In a word, the main question in this study is "Which one of knowledge sharing techniques is appropriate to acquire and share security knowledge within a MSSP so that gather and analyze security knowledge about current and emerging threats?

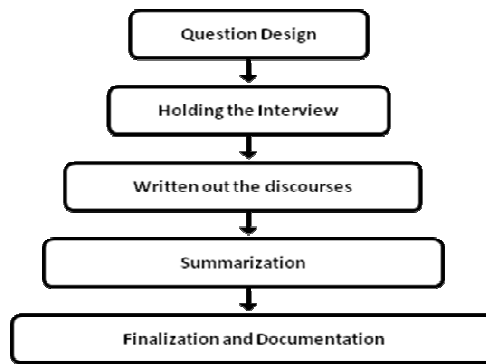
#### **5. The proposed solution**

To solve the problem stated above and in order to answer the main question of this study to achieve our purpose, we conducted an in-depth interview with several security experts working in MSSPs and involving in managed security services, especially who have experienced knowledge café as an informal network in their workplaces. Our purpose of this interviews and face-to-face conversations was to determine the areas where knowledge cafés could be implemented as a tool for knowledge sharing within MSSPs and also among their security teams.

##### **5.1 Interview conduction process**

As mentioned earlier, the objective of this paper is to assess the effects of knowledge cafes on knowledge sharing within a managed security service provider (MSSP). To collect and analyze various opinions, firstly in contact with information technology organization, we provided a list of security expert's publication, some administrators and lecturers who works within MSSPs related to government and private sections, afterward conducted in-depth interview with them to assess knowledge café and its effects on knowledge sharing in MSSPs. We also designed questions that required during interview. In order to better analyze our research, we divided the interview into four steps as shown in figure 4





**Figure4.** steps in Interview conduction process

#### **Step 1: Interviews questions design**

In order to address the stated aims and objectives during the interview, the questions of the interview must be developed according to dimensions of effective knowledge sharing emphasized on knowledge cafés technique. So for our case, the following research question was designed:

Firstly, the main and most important question was: “How effective are knowledge cafés as a technique for knowledge sharing among your MSSP team?”

Secondly, some sub-questions that may be used to address the stated research problem were designed:

- How are knowledge cafés applied as a knowledge sharing technique within a MSSP?
- What are the criteria or guidelines used to implement knowledge cafés effectively?
- What are the attitudes and perceptions of individuals, in a MSSP setting, towards the use of knowledge cafés as a knowledge sharing technique?
- What do you know about knowledge cafes?
- Is it important for your MSSP to set up knowledge café?
- Does your top management support to set up a knowledge café?

#### **Step 2: Holding the interview**

In this step the interviews hold with security experts who work in some MSSPs and during the interview with security experts, discourses are recorded by interviewers somehow, and also, take notes at the same time. For example, in our case, we held interview with 30 security experts who worked in some MSSPs related to government and private sections, then discourses were recorded by digital voice recorder, and also interviews, took notes at the same time.

#### **Step 3: Written out the discourses**

In the third step, interviewers written out the contents of the voice recorder which include the the coversations between interviewers and security experts.

#### **Step 4: Summarization**

In this phase, the contents of recorded discourses and notes are combined, occasionally writing down direct quotes that are deemed especially relevant, then the combination is summarized.

#### **Step 5: Finalization and Documentation**

In this stage as the last step ,findings and results of the interviews are finalized and documented as a proposal, ofcourse with emphasis on positive effects of knowledge cafes within a MSSP from knowledge sharing aspects.

In a word, findings of the interview will be analyzed and proposals made. The aim of this proposal made will be to foster the creation of a knowledge cafe favorable for effective transfer of security knowledge within MSSP and to open an informal environment for further security knowledge sharing. We use the discourse and content analysis techniques in order to analyze collected data

In our case study, based on the topic on actively participate in interview the results of recorded and noted contents show that the following are the areas where knowledge cafés could be implemented as a tool for knowledge sharing within the MSSP:

- Problem-solving: At some point, all MSSPs experience problems. Often the best way to resolve a problem is through conversation. Knowledge cafés, according to, can serve as a platform for knowledge to be discussed among the relevant security staff with regard to how a specific problem can be resolved.
- Strategic planning: Simply put, strategic planning is the process of a MSSP defining its direction. In order for a MSSP to do so, its current position needs to be known. Once this position is known, decisions can be made on the steps that the MSSP should take in order to reach its objectives. For MSSP to maintain competitiveness, it is essential that plans involving strategic direction be created. So knowledge cafés could assist in this matter. Considering that strategy requires employee interaction, this suggestion of utilizing knowledge cafés seems fair.
- Innovation/ implementing new ideas: Ideas often stem from informal conversations; perhaps something said during the course of the day triggers the memory into thinking of a new product or service. An



innovative MSSP is an MSSP that constantly generates new ideas and then implements these ideas successfully. A knowledge café is a technique that can assist an MSSP in generating new ideas and then developing a process to implement the generated idea.

- Developing trust and instilling unity among security staff: knowledge cafés are an effective means of developing trust and instilling unity among security staff. Trust and unity are achieved through communication and the bringing together of individuals.
- Decision-making: One of the ways in which MSSPs gain competitive advantage over other MSSPs is decision-making. The ability to make effective decisions is key, the knowledge cafés are a valuable technique to assist in the decision-making process.
- Team-building: The aim of team-building is to build MSSP spirit and boost security staff morale. Through the process of knowledge cafés, MSSPs can achieve an effective team-building experience. Knowledge cafés are a very good way to connect people.
- Bridging gaps between top management and knowledge workers: Knowledge cafés can assist in bridging gaps between top management and workers by means of connecting individuals through conversation.
- Feedback sessions: Often in MSSPs, Solutions are implemented for various reasons. Knowledge cafés can serve as a technique to give feedback on the successes and failures of these completed solutions.
- Staff orientation: A knowledge café can serve as a platform for orientating security staff with regard to new processes and methodologies. Training on research resources and mentoring of new recruits are functions could be achieved through the use of a knowledge café.
- Rapid transferal of information: Knowledge cafés usually take place on a single day for a certain amount of time. Within this time, a certain amount of information is shared. Because the time frame for sharing information is limited, knowledge café participants can end up sharing their information at a rapid pace.
- New insight: To have insight is to know. In order to function efficiently in the MSSP workplace, one needs to gain new insight on a constant basis. Knowledge cafés allow security staff the opportunity to gain new insight on various work-related topics, through sharing their experiences.
- Debates on various issues: Knowledge cafés serve as a platform for communication on a niche topic. When sharing information with a variety of individuals, consensus is not always reached. This lack of consensus then sparks debates on various issues within the knowledge café.

## 6. CONCLUSION

In this paper, we described the problem of knowledge sharing within managed security service providers (MSSPs) and argued that they have work problems because of reasons such as rising cost of security breaches, increasing scale, scope and sophistication of information security attacks, complexity of information technology (IT) environments, shortage of qualified security professionals.

In this regard, we argued that the perceptions and attitudes of individuals play a large role in the value of any knowledge sharing technique. Once security experts working for managed security service providers or any organization recognize the value of a knowledge sharing technique, only then can it be implemented successfully.

Based on the attitudes and perceptions of the sample group selected from some MSSPs who participated in an in-depth interview in this study, knowledge cafés can be implemented in a MSSP as a technique for effective knowledge sharing. However, in order to take part meaningfully, potential participants should first realize the value of knowledge in general and secondly understand concerning knowledge cafés.

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