

KM-tools alignment with KM-processes: The case study of the Greek public sector

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This paper reports an investigation into the alignment of Knowledge Management (KM) tools with KM processes under the Common Assessment Framework (CAF) implementation. An exploratory case study was conducted to address this purpose by employing literature review methods, focus groups, observation, and document analysis. From the data analysis, we found that in each KM process, both technological and non-technological KM tools were used. However, there were limitations regarding the number of public organizations and the study in the Greek context, which could be addressed with further research that enhances generalizability within different public organizations globally. In summary, the study provides: a) a novel theoretical insight in combining KM tools with KM processes in the public sector, and b) a practical “roadmap” of KM for public sector executives.

Keywords: Knowledge Management (KM), KM tools, Public Sector, Common Assessment Framework (CAF)

Introduction

Knowledge is one of the most important strategic resources for an organization (Drucker, 1993), and its management has become an intriguing, though complex, research issue (Allameh et al., 2011). A variety of KM definitions and KM processes have emerged but most researchers and practitioners regard (Anand & Singh, 2011;

Alavi & Leidner, 2001) KM as the process of K-creation, K-storage, K-dissemination, and K-application.

Early KM publications focused mainly on the private sector, but in recent years there is a burgeoning interest in the public sector as well (Seba & Rowley, 2010; Singh Sandhu et al., 2011; Luen & Al-Hawamdeh, 2001), where KM-based actions, like bench learning, aim to modernize and improve public services (Sotirakou & Zeppou, 2004). In line with this, the European public sector employs a self-assessment and quality improvement practical tool, named the Common Assessment Framework (CAF)(EIPA, 2020; Vakalopoulou et al., 2013), which encompasses the KM process. The employment of such practical tools implies the production of new knowledge, which should be managed to enhance organizational performance (Linderman et al., 2004). However, the proliferation of such models and the growth of prescriptive publications do not affirm their practical contribution to KM's effectiveness (Ragab & Arisha, 2013; Massingham, 2014). Thus, this gap between theoretical and practical endeavours is the motivation for this research, which identifies KM toolkits and studies how they are used in the Greek public sector.

By drawing on existing literature, KM definition and KM processes are clarified and synthesized, becoming the background for the production of KM toolkits, which are aligned with KM processes. This case study involved team members that applied CAF in the Greek public sector. Specifically, eight focus groups from Greek public organizations accepted our invitation and participated in this research. Data collection tools included interviews, observation, and documents, which were analyzed to capture the KM tools applied at each CAF KM process. As a result, the study provides a novel theoretical insight, as it is the first time that researchers collocate KM tools with KM

processes in the public sector. Additionally, it develops a basic roadmap of CAF KM for engaged public sector executives.

The paper proceeds as follows: synthesis of KM definition and KM processes, presentation of KM tools, short CAF presentation from a KM view, description of research methodology, presentation of research findings, discussion of findings, and conclusion.

Knowledge Management (KM) definitions & KM processes

KM is a complex concept in social sciences. Various researchers have conceived it differently (Table 1), generating process-oriented, technology-oriented, people-oriented, and system-oriented conceptualizations of KM (Dzenopoljac et al., 2018; Monavvarian & Kasaei, 2007).

According to the process-oriented view, KM is regarded as a process, activity, set of activities, strategy, knowledge flow, and dimension (Obeidat et al., 2016; Quintas et al., 1997; Bhatt, 2001; Anand & Singh, 2011; Bhatt et al., 2005; Gold et al., 2001). Despite the different terms used, most researchers commit to similar conceptualizations. Mishra and Bhaskar (2011) set a logical connection among them, claiming, “Existing conceptual research in KM field identifies a dynamic set of activities, called KM processes, which improve organizational knowledge flows.” The majority of researchers (Obeidat et al., 2016, Quintas et al., 1997; Bhatt, 2001; Anand & Singh, 2011; Bhatt et al., 2005) accept the term “process” in KM definitions. Therefore, to synthesize a presentative definition, this research employs the term “process”, aligning with the explanation of Mishra and Bhaskar (2011).

The description of the processes characterizes most definitions of KM. Nonaka's seminal work sets the foundations for KM by developing the SECI Model, which describes different patterns of interaction between tacit (uncodified) and explicit (codified) knowledge in a spiral way (Nonaka, 1994; Honarpour et al., 2017):

- 1) Socialization (tacit knowledge converts into tacit knowledge)
- 2) Externalization (tacit knowledge converts into explicit knowledge)
- 3) Combination (explicit knowledge converts into explicit knowledge)
- 4) Internalization (explicit knowledge converts into tacit knowledge)

Since then, several initiatives focus on defining KM. Nonaka and Takeuchi (1995) describe KM as the systematic process of K-creation, K-storing, and K-dissemination, whereas the majority of researchers (Zaim et al., 2020; Latif et al., 2020; AL-Ahbabi et al., 2019; Kantola et al., 2017; Alavi & Leidner, 2001; Mishra & Bhaskar 2011; Gold et al., 2001; Bhatt, 2001) pertain K-application as a generative process to KM. All these processes are parts of a continuous KM cycle, functioning complementary and/or could be categorized as: K-creation (knowledge identification, capture, acquisition, and creation), K-storage (knowledge in tacit form may be codified in an understandable form to the extent possible), K-dissemination (K-sharing K-transfer both explicit and implicit form), and K-application (application and use of knowledge in the organization value-adding process) (Anand & Singh, 2011).

Besides the description of processes, there are also enablers and results informing the definitions of KM in literature. Concerning enablers, three important resources are widely accepted among various researchers: right knowledge, right

people, and the right time (O'Dell & Grayson, 1998). These critical factors facilitate and enhance the K-flow to improve organizational performance (O'Dell & Grayson, 1998; Du Plessis, 2007; Kamara et al., 2002; Martensson, 2000), increase productivity (Eschenfelder et al., 1998), create value for organizations (Yew Wong & Aspinwall, 2004), and enhance innovation (Dayan & Evans, 2006; Martensson, 2000).

According to the people-oriented and technology-oriented views of KM, individuals and technology are regarded as an integral part of the concept. Definitions addressing these views (Haapalainen & Pusa, 2012; Hislop et al. 2018; Frey, 2001; Guns & Va'likanga, 1998; Zack, 1999; Uit Beijerse, 1999; Bennet & Gabriel, 1999) incorporate aspects of an individual's capabilities and information technology in K-creation, K-storage, K-dissemination, and K-application. Specifically, managing personnel knowledge and creating an appropriate environment are regarded as the cornerstone of the KM process. However, according to Monavvarian & Kasaei (2007), the interplay between the KM process and the Organizational Knowledge Management System (including people-oriented and technology-oriented views) can give an integrated understanding of KM. Thus, the system view of KM under the socio-technical perspective is synthesized from the views mentioned above, combining organizational and technological infrastructure, corporate culture, knowledge (explicit and tacit), and people (Meso & Smith, 2000).

Combining all the above, KM might be defined as a continuous cyclical process of K-creation, K-storage, K-dissemination, and K-application, in which the right knowledge flows in the right people at the right time to improve organizational performance (Figure 1).

Identifying public sector contextual factors and motives influencing KM implementation

Various contextual factors are functioning as facilitators or barriers when KM initiatives take place. However, such factors are not being acknowledged in the literature review (Massingham, 2015; Cong et al., 2007; Butler & Murphy, 2007; Seba et al., 2012). This situation is not an absurdity as KM in the public sector is still in the early stage of investigation (Cong et al., 2007). A review of the literature (Massingham, 2015; Cong et al., 2007; Butler & Murphy, 2007; Seba et al., 2012; Pee & Kankanhalli, 2016; Patil & Kant, 2013; Mousavizade & Shakibazad, 2019; Mahmoudsahehi et al., 2012) brought up the following contextual factors:

- leadership commitment
- organizational structure
- internal trust
- user training
- teamwork
- reward and recognition
- IT system establishment
- bureaucratic organizational hierarchy
- accountability to a higher level of government
- voluntary participation
- resources restrictions
- leadership capabilities
- KM project team roles and responsibilities
- formalization
- knowledge networks
- knowledge as a power perception

For example, the factor “voluntary participation” could become a barrier when there is a high volume of organizational environment (Massingham, 2015; Cong et al., 2007). However,

factor “leadership” could facilitate KM when “making time” for effective knowledge dissemination through formal and informal meetings (Seba et al., 2012). Therefore, contextual factors affect KM implementation, either accelerating or delaying its success.

Besides the context, motivation plays a critical role in KM initiation and iteration. However, there are still few studies (Chen & Hsieh, 2015; Amayah, 2013) on public service motivation for the knowledge sharing process. As Chen & Hsieh (2015) found, each individual public sector employee is motivated by both intrinsic (compassion), and extrinsic (self-sacrifice, commitment to the public interest, attraction to public policymaking) considerations. Additionally, Amayah (2013) investigates three groups of knowledge sharing motives:

- community-related considerations
- normative considerations
- personal benefits.

Nevertheless, these approaches focus on the individual level, omitting team and organizational considerations. Moreover, they address only the knowledge-sharing process, discarding the KM cyclical process (additional k-creation, k-storage, and k-application) processes. Therefore, we review previous studies for more analysis.

KM tools

KM tools are regarded as methods, techniques, and practices used by organizations to manage their knowledge. Merono-Cerdan et al. (2007) divide KM tools into technological and non-technological (Table 2). KM technological tools include decision support technologies, groupware, social network services, knowledge bases, digital document management, intranet, and wikis (Honarpour et al., 2017; Merono-Cerdan et al., 2007). KM non-technological tools include spontaneous knowledge transfer initiative, informal talk room, training, mentoring, learning before doing, teams,

community practice, knowledge café, brainstorming, after-action review, storytelling, and knowledge repositories (Honarpour et al., 2017; Merono-Cerdan et al., 2007; Massingham, 2015). In addition, leadership, case study, and benchmarking methodology could be viewed as IT-free KM tools. Extant literature is abundant with publications recognizing and describing KM tools (Merono-Cerdan et al., 2007; Massingham, 2014) but limited attempts combine them with KM processes (Alavi & Leidner, 2001; Alavi & Tiwana, 2003), whereas, there is a gap of such studies in the public sector.

Linking the Common Assessment Framework implementation with KM

CAF is a self-assessment tool influenced by the European Framework of Quality Management (EFQM) and Speyer Standard, promoting public sector change and improving quality and productivity (EFQM, 2019). It was introduced in European organizations in 2000, whereas in Greece, applications started from 2007 onwards (Vakalopoulou et al., 2013). This model includes 9 criteria with 28 sub-criteria. For each criterion and sub-criterion, a structured questionnaire is used in a 5-point Likert scale and appropriate documentation is required to justify choices. This phase is followed by an action plan development that aims to improve low scores in criteria by continuously applying the Deming cycle (**Plan-Do-Check-Act**). Customarily, benchmarking facilitates action plan production, and the whole CAF process provides learning and innovation feedbacks to organizations.

CAF is connected with KM in the following ways (North & Kumta, 2014). First, there is a sub-criterion referring to KM (EIPA, 2019), which allows organizations to assess their KM process and develop relevant improvement plans in this model. Second, CAF implementation favors the production of new explicit organizational Knowledge, initiating the KM process.

Third, KM, like CAF, is a continuous process. Moreover, the key methodology (Benchmarking/Benchlearning) used in CAF is a KM tool that could create, store, disseminate, and leverage knowledge. Furthermore, KM facilitates innovation and learning (Dayan & Evans, 2006; Martensson, 2000), two aspects also found in the CAF model. Therefore, CAF applications are a means for studying KM.

Research Methodology

According to Yin (2018), the research questions show how data is collected and the type of case study employed. In this research, the focus is on the investigation of “What”. This interest points to the direction of an exploratory case study. Apart from that, “How” plays a critical supplementary role in adding richness to the context's depth interpretation.

More specifically, the following methods are used (Figure 2):

- A literature review of KM definitions, processes, public sector organization context, and tools in order to arrive at a representative definition
- Eight focus groups that identify the CAF-KM tools and the way they are used, based on individuals CAF team members' experience
- Observation of each focus group to complement the richness of interpretation
- Document analysis to understand the context and its conditions affecting KM implementation.

The focus group method was employed because it has comparative advantages among the other qualitative research methods, such as individual interviews and the Delphi method (Morgan, 1996). First, the focus group is an innovative research method (Acocella, 2012) that could provide a deeper understanding of the new research area of KM implementation in the Greek public sector and, more specifically, on the CAF self-assessed community that has limited counts of applications. Second, the focus group method could effectively provide detailed and broad data on how people think when observing group discussions and interactions among group members (Wang & Wiesemes, 2012). In addition, participants were more comfortable expressing their opinions and explanations in a group because it allowed them to explore and further develop their views (Wang & Wiesemes, 2012). According to Acocella (2012), participants' interaction is a key point that provides plurality of positions and enhances inter-subjective representations when investigating a new topic, such as KM. Therefore, researchers can understand, interpret, and analyze members' perspectives more quickly, easily, and cost-effectively than other qualitative research methods (Morgan, 1996; Wang & Wiesemes, 2012).

The community under investigation (Figure 3) concerns Greek public sector organizations that employed the CAF model (25 organization-members based on the Greek Ministry of Administrative Reconstruction) as a TQM-KM practice. Each organization-member includes 4 to 20 actors, holding a double role (being public sector executives and members of CAF cross-functional teams). We invited by email all actors to contribute their knowledge and experience. Specifically, we received eight responses from the CAF community (referred to as organization H, R, D, MNA, MNB, MA, MB, and MC). Each focus group varies between 3 and 5 individuals, who received by email

the interview protocol and the informed consent form, which reassured their confidentiality and anonymity. Interviews were conducted in focus groups from September 15 to June 15, 2019, by visiting executives in their workplaces and were tape-recorded in Greek. Besides the interviewees, an experienced facilitator and an observer from the research team participated in each focus group to reassure the quality of using this method by minimizing results bias (Conway et al., 2018). For example, this could be succeeded by:

- using semi-structured interview protocols
- maintaining a balance of members' participation
- maintaining group dynamics
- encouraging interaction between members and providing the opportunity to express their opinion about the topic.

The discussion covered the following main topics:

- Motives for K-creation (CAF)
- What and How KM tools were used at:
- K-creation
- K-storage
- K-dissemination
- K-application
- Which organizational factors facilitated and procrastinated the KM process iteration.

Besides the facilitator, the observer listened carefully to each focus group's discussion, keeping detailed notes regarding body language, layout, place, equipment, and communication between them. Furthermore, participants sent us minutes of meetings, training manuals, and presentations, and reports produced and used during CAF implementation. Additionally, the research team studied all reports of the Greek CAF community accessible by the official platform to review extant literature of KM tools and processes concerning CAF implementation. The updated KM tools list was sent to the Greek CAF community, except for the eight organizations mentioned above, and 35/85 individuals from the rest of the community responded and confirmed its use.

Findings

Through the focus group discussion, several aspects emerged. Motives play a major role in the CAF KM process. Moreover, context influences the process. Among the KM tools projected during the CAF implementation, a distinct form of benchmarking identified as tacit benchmarking informs the list.

Specifically, motivations for starting the K-creation are different among MNA, MNB, MA, MB, and D) were obliged to conform to National Legislation (Law 3230/2004). organizations (Table 3). The majority of organizations (Organizations: However, three organizations (MC, R, and H) were motivated in creating new organizational knowledge by the need for Quality and Productivity Improvement. In addition, transparency (the motive for organization H) and the Greek National Quality Award (the motive for organization M) complemented each other in the K-creation process. Thus, organizations were motivated both from macro-level factors (e.g., Law) and micro-level factors (e.g., their needs).

During CAF implementation, project teams applied specific KM tools for each KM process (Table 4). Specifically, during the K-creation process, the following tools were employed: brainstorming, regular planned meetings, IT, interviews with peers, training (internal or/and external). Moreover, during the K-storage process, technology platforms, databases, and minutes of meetings were used. The K-dissemination process included the use of discussion, database, emails, teleconferences, face-to-face planned meetings, tacit benchmarking, formal events and notifications, and minutes of meetings (planned). Finally, the K-application process contained the use of IT, after-action review, and pilot application.

Regarding the way that the KM tools were used in the CAF KM process, two dimensions are considered: CAF team formation and activities.

Concerning team formation, all organizations, apart from R and H, developed the CAF team using a top-down process. In this process, leadership requested from middle managers to build a cross-functional team through a free participation process. However, two out of eight organizations (R and H) had set specific participation criteria: communication skills, good knowledge of department processes, and IT skills. All CAF cross-functional teams consisted of 4-20 actors assigned, after discussion, roles and duties during the first meeting. Due to daily workload, time restrictions, tiredness, resources deficit, and cultural aspects, mainly 2-3 team actors were engaged in most organizations, whereas the rest were partially involved. Organization MA and MB team members collaborated exceptionally and were fully engaged in the project, regardless of the abovementioned restrictions.

As far as CAF activities are concerned, the following ones took place at CAF teams under study: training, planned and informal meetings, data collection and

documentation, tacit benchmarking, and after-action reviews. Training is a critical first step, in which a team coordinator was trained and then disseminated the knowledge gained to the rest of the team. Then, members planned meetings regularly to discuss their findings and make proposals for the project's progress. Additionally, interviews or/and questionnaires were used to capture departmental knowledge of each process, complemented with adequate and justifiable documentation provision. For the development of action plans, benchmarking was used in six out of eight focus groups with the following types:

- Historical self-comparison of performance indicators (organizations MA, MB, MNA, R, and H)
- Studying and adapting best practices (only organization H). Six out of eight focus groups(organizations MA, MB, MNA, MNB, R, and H) continued applying the CAF cycle, while the rest of them stopped in the report creation phase without completing the after-action review.

Several factors emerged through the focus group interviews regarding the organizational context that enabled and restricted the KM iterative process. CAF team members that applied the iterative process perpetually highlighted the following factors as process facilitators: strong leadership commitment, appropriate training, problem awareness, and solving skills, team-building, trust, and compliance with legislation. Furthermore, various barriers limit CAF KM process iteration, such as political decisions, daily workload, resource, and leadership commitment deficit. Consequently, the abovementioned organizational factors influenced KM process continuation.

Discussion

According to focus groups, bureaucracy, inflexibility, intensive legislative limitations, resource deficit, and change resistance characterize the Greek public sector. These results align with prior studies worldwide (Al-Ahbabi et al., 2018; Liebowitz & Chen, 2003; Syed-Ikhsan & Rowland, 2004), indicating common long-term pathogeneses in the public sector that impede organizational change. However, governments systematically try to modernize public organizations based on European standards. Therefore, they introduce tools, such as CAF, either in a compulsory or motivational way. CAF implementation, in our case, synthesized context-specific dynamics where KM tools were activated in each KM process. From a KM view, the CAF's basic goal is to transform tacit and explicit knowledge into new organizational explicit knowledge. This explicit knowledge is the motive for the next KM process through the after-action review (K-application), where members use their tacit and organization explicit knowledge to achieve the abovementioned goal iteratively. In our case, during the K-creation process, teams planned meetings regularly, where tacit knowledge converted into explicit through minutes of meetings, brainstorming, interviews with peers, and tacit benchmarking. This explicit knowledge became the documentation used for the CAF report. In the phase of K-dissemination, tacit knowledge is converted into tacit knowledge through informal discussions, teleconferences, and face-to-face meetings. This tacit knowledge was codified to explicit knowledge through minutes of meetings and databases. Email, formal events, and notifications were communication tools that disseminated explicit knowledge to the organization. Figure 4 presumably illustrates the roadmap of CAF-mediated KM, which public executives could utilize in their organizations.

Concerning the Greek public sector culture, motives identified in this study could trigger different KM iteration results under specific conditions. For example, when the CAF community focused on sole national legislation compliance, the KM process lost its spiral form, and K-application was completed without an action review. In this case, tacit and explicit knowledge was transformed into new explicit knowledge (CAF report) that remained unused and unexploited within databases or/and minutes of meetings. This motive was reinforced by weak leadership commitment and public sector restrictions (in people, time, and money). Additionally, when the motives of legislation compliance, quality & productivity improvement, and quality award-winning coexisted, KM was continuously implemented, resulting in citizen satisfaction and quality management interest. Finally, when the only motive was quality & productivity improvement, but political conditions changed the organization's structure, the KM process was suspended. Thus, the CAF community's motives played a critical role in the KM spiral form, altering its result according to specific conditions.

Conclusion

Consequently, from a KM view, CAF aims for the continuous creation of new organizational explicit knowledge (CAF report) through the conversion of the team's tacit and explicit knowledge. In this framework, KM tools at each KM process could be used to achieve the CAF goal (see Figure 4). The KM tools list identified in the literature is enriched with tacit benchmarking that emerged from focus groups. Although the abovementioned roadmap is a basic first point of KM, its critical factor is its processual iteration. In this study, the facilitators of KM are leadership commitment,

team building, trust, compliance with legislation, problem awareness, and solving skills and training, and the barriers include daily workload, resource limitations, leadership commitment deficit, and limited iteration. Therefore, taking into account internal and external conditions, KM tools used at each KM process contributed differently to KM's effectiveness.

This work is the first attempt to combine KM tools with KM processes in the public sector and provide a roadmap of CAF mediated KM that can be utilized by public sector executives. Case findings illustrate the Greek public sector CAF community KM process's richness, but further research should be conducted to enhance theoretical generalizability for different public organizations worldwide.

Acknowledgements

«This research is co-financed by Greece and the European Union (European Social Fund- ESF) through the Operational Programme «Human Resources Development, Education and Lifelong Learning» in the context of the project “Strengthening Human Resources Research Potential via Doctorate Research” (MIS-5000432), implemented by the State Scholarships Foundation (IKY)»



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Tables

Table 1:KM Description

<u>KM Definition</u>	<u>Author(s)</u>
“KM is the accessing and utilization of different resources to create an environment where individuals acquire, share and utilize information to build on existing knowledge”.	(Haapalainen & Pusa, 2012)
“KM is an umbrella term that requires systematic efforts of an organization to manage its personnel knowledge through a broad range of direct and indirect methods such as specific types of ICT, management of social processes, structuring of the organization in a particular pattern or via the use of particular culture- and people-management practices”.	(Hislop, 2009),
“KM is the process of capturing, sharing and effectively using knowledge”.	Kantola et al. (2017)
“Knowledge management is ‘the process of capturing, organizing, and storing information and experiences of workers and groups within an	Masa’deh et al.(2016)

organization and making it available to others”.	
“Knowledge management deals with any intentional set of practices and processes designed to optimize the use of knowledge, in other words, to increase allocative efficiency in the area of knowledge production, distribution and use”.	Young (2013, p. 3)
“Knowledge management is also defined as a set of activities organized by which is to find the best combination and linking of information and intellectual resources, by entering a room focused and complex operations, which include access to the underlying and the implicit of the human mind knowledge and turn it into knowledge of the phenomenon can be stored and shared with beneficiaries, and then apply the best, to be the competitive ability of the organization”.	Frey (2001, p.39).
“...assumed as a fact that KM to be the process of apprehend, an organization’s collective expertise and distribute it in order to come up with the best of it as much as possible”.	Hibbard (1997)
“KM is the supervision of creative knowledge to	Tiwana (2010)

<p>place commercial values and lead to a reasonable advantage. KM simplifies the conception, communication, and request of all types of knowledge to attain business objectives”.</p>	
<p>“KM is the management purpose that generates, detects, and manages the idea of knowledge within a society to encompass that knowledge is used efficiently for the long-term benefits of the organization”.</p>	<p>Darroch& McNaughton (2005)</p>
<p>“KM is a policy of granting the right knowledge to the right people in a timely manner to help people share and put that knowledge into action in ways that attempt to expand organizational performance”.</p>	<p>O’Dell & Grayson(2008)</p>
<p>“KM ‘is the process of continually managing knowledge of all kinds to meet existing and emerging needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities”.</p>	<p>Quintas et al.(1997, p. 387)</p>
<p>“KM seeks to facilitate knowledge flows and sharing to enhance the productivity of individuals and hence the enterprise”.</p>	<p>Guns & Va’likangas(1998, p. 287)</p>

<p>“KM requires understanding firstly the organization’s strategy under which knowledge will be developed and exploited; secondly the content and kind of knowledge; thirdly the organizational context ad, finally, the technological context that supports the architecture of knowledge in the organization.”</p>	<p>(Zack, 1999)</p>
<p>“KM is ‘the process that continually ensures the development and application of all kind of knowledge that is pertinent to a firm, with the objective of improving its problem-solving capacity and thus contributing to sustaining its competitive advantages” (Andreu & Sieber, 1999, p. 68).</p>	<p>Lloria(2008)</p>
<p>“Knowledge Management ‘deals with the management of knowledge related activities such as creating, organizing, sharing and using knowledge in order to create value for an organization. It is promoted as an essential cornerstone for companies to develop sustainable competitive advantage and to remain at the forefront of excellence in a level playing field market”</p>	<p>Yew & Aspinwall (2004, p. 44)</p>
<p>“Knowledge management is a rather young discipline promising to maximize innovation and</p>	<p>Dayan & Evans(2006, p. 69)</p>

<p>competitive advantage to organizations that practice knowledge capture, documentation, retrieval and reuse, creation, transfer and sharing of its knowledge assets in a measurable way, integrated in its operational and business processes</p>	
<p>“KM is a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance “.</p>	<p>O’Dell & Jackson(1998, p. 4)</p>
<p>“The most simple and comprehensive definition is: a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance (oDell et al., 1998)”</p>	<p>Ragab & Arisha (2013)</p>
<p>“Knowledge management is a comprehensive process of knowledge creation, knowledge validation, knowledge presentation, knowledge distribution, an knowledge application</p>	<p>Bhatt(2001)</p>

<p>“Knowledge management is achieving organizational goals through the strategy-driven motivation and facilitation of (knowledge) workers to develop, enhance and use their capability to interpret data and information (by using available sources of information , experience, skills, culture, character, personality, feelings, etc.) through a process of giving meaning to these data and information”.</p>	<p>Uit Beijerse(1999)</p>
<p>“KM refers to identifying and leveraging the collective knowledge in an organization to help the organization compete (von Krogh, 1998)”.</p>	<p>Alavi&leidner (2001)</p>
<p>“Knowledge management is the process of creating, capturing, and using knowledge to enhance organizational performance (Bassie, 1997, p. 25)”.</p>	<p>Bennet & Gabriel (1999)</p>
<p>“Knowledge management is the management of the information, knowledge and experience available to an organization its creation, capture, storage, availability and utilization in order that organizational activities build on what is already known and extend it further (Mayo, 1998, p. 35)”.</p>	<p>Bennet & Gabriel (1999)</p>

<p>“Knowledge management is the process of capturing a company's collective expertise wherever it resides, and distributing it to wherever it can help produce the biggest payoffs (Blake, 1998, p. 12)”.</p>	Bennet & Gabriel (1999)
<p>“Knowledge management is about encouraging individuals to communicate their knowledge by creating environments and systems for capturing, organizing, and sharing knowledge throughout the company (Martinez, 1998, p. 89)”.</p>	Bennet & Gabriel (1999)
<p>“KM is a “set of techniques and practices that facilitate the flow of knowledge into and within the firm” Birkinshaw (2001).</p>	Bennet & Gabriel (1999)

Table 2: KM tools types

KM technological tools	KM non-technological tools
decision support technologies	spontaneous knowledge transfer initiative
groupware	informal talk room
social network services	training

knowledge bases	mentoring
digital document management	learning before doing
intranet	teams
wikis	community of practice
	knowledge café
	brainstorming
	after-action review
	storytelling
	knowledge repositories
	leadership
	case study
	benchmarking methodology

Table 3: Motives for starting the KM process

Organization (s)	Motive(s)
MNA	Greek National Quality Award; National Legislation (Law 3230/2004); Organization's Need for Quality and Productivity Improvement
MNB, MA, MB, and D	National Legislation (Law 3230/2004)
MC and R	Organization's Need for Quality and Productivity Improvement
H	Organization's Need for Quality and Productivity Improvement; Transparency

Table 4: KM Toolkits during CAF implementation process

KM process	KM tools used
K-creation	brainstorming regular planned meetings IT interviews with peers training (internal or/and external)
K-storage	technology platforms databases minutes of meetings
K-dissemination	discussion database emails teleconferences face to face planned meetings tacit benchmarking formal events and notifications minutes of meetings (planned)

K-application	IT after-action review pilot application
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Figures

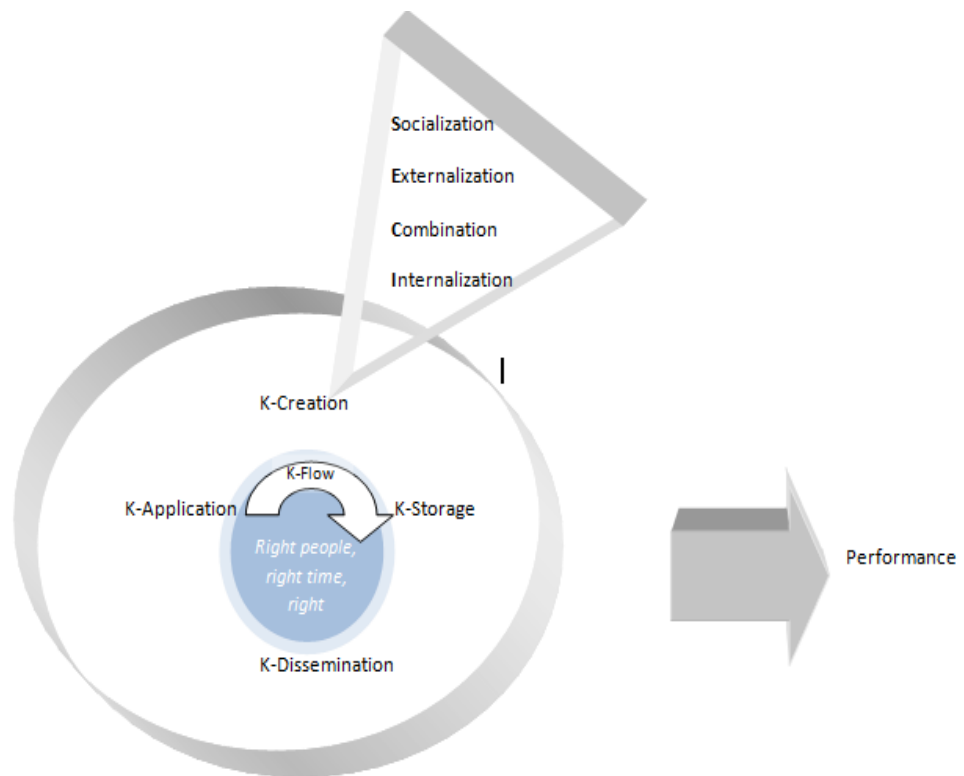


Figure 1: KM definition model

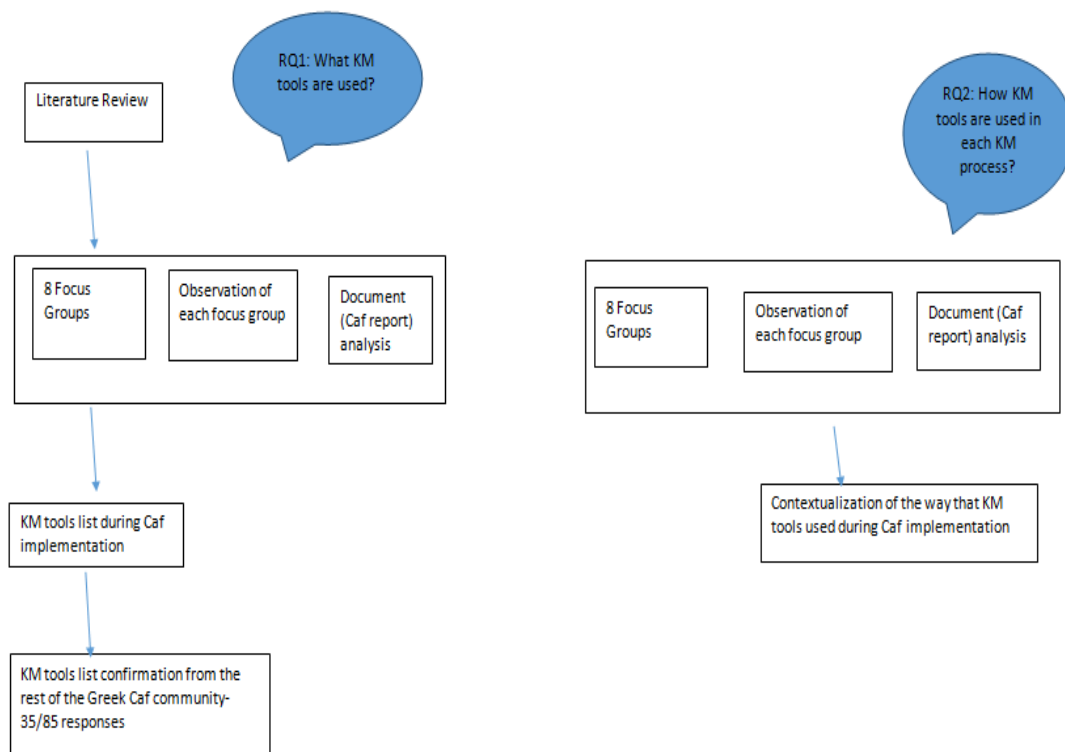


Figure 2: Research Design



Figure 3: Research Informants

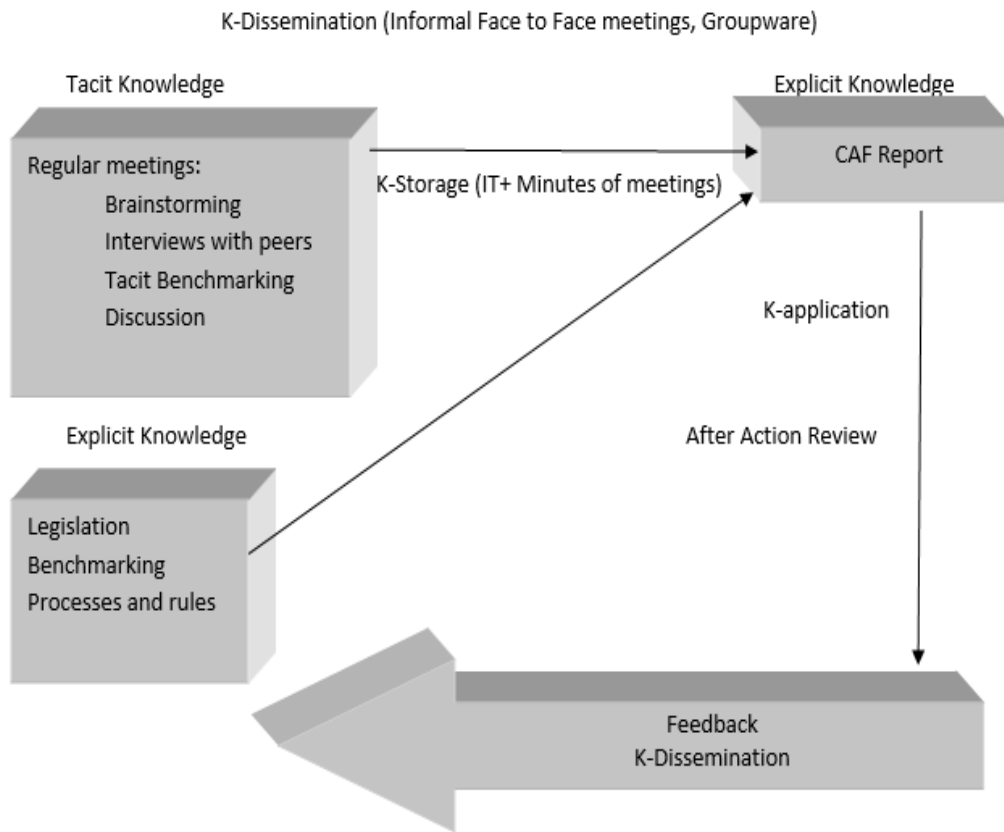


Figure 4: Roadmap of KM implementation through CAF