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Knowledge Retention and Stabilisation within OPRAG: A Management must for the Excellence achievement

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Abstract

Operations consist of the jobs or tasks composed of one or more elements or subtasks, performed typically in one location, whereby resource or data inputs are transformed onwards into desired goods, services, or results, and create and deliver value to the customers. This definition from Nagurney (2012) pleads that such transformation process calls upon the sustainable knowledge as an important factor and trick for the business decision-making process with the view of quality improvement. In this spite, Aiyer (2006) contends that the sharing of knowledge and experiences that veteran employees have acquired over time, is key to bridging the skills and competency gap that could exist within a diverse workforce in charge of the process above-mentioned. Hence, Knowledge Management is part of the winning strategy within the "Office des Ports et Rades du Gabon" (OPRAG) for achieving excellence in its daily management of operations. Still, additional efforts are required in order to build up a strong and stable Knowledge Management System in response to today's challenges.

Keywords
Knowledge Management, Operations Management, Quality and System

1. Introduction
OPRAG is a Gabonese Public Company mandated by the Government of Gabon, to stand in charge of all operations concerning the Gabonese ports and related assets, areas, stuffs and activities. In 2014, a study was conducted by the author of this paper in order to objectively address the gap for a smooth running and great competitive edge. The data for the study were quantitatively obtained from 126 operations managers employed at OPRAG and its companies-partners in Gabon, by means of questionnaire. The data were quantitatively analysed using descriptive and inferential statistical techniques. An entire section of the questionnaire was consecrated to

the Knowledge Management within OPRAG. And, yet, speaking about Knowledge Management, the displayed results show the mitigation in considering facts, factors and concepts practiced daily in the management of the operations of this firm. This situation leads to the thinking of a new Knowledge Management System whereby the retention and stabilization of the knowledge in use will help the management to progressively achieve the excellence and remain competitive both in the local and the global scale. Hereafter are the findings of the study.

2. Background

As organisations started growing larger in the mid-nineteenth century, management became separated from production. With the new challenges entailed by such separation, managers started looking for ways to coordinate and control activities within organisations. Hence, this lead to remove later on the dependence on knowledgeable individuals by embedding knowledge in processes and technology so as to keep it permanently in the organisation even if it happens that the individual who possesses it goes elsewhere (O'Toole, 2011).

So, Martens and Hawamdeh (2010) assert that Knowledge Management is therefore developing nowadays as a separate field with its own concerns. This assertion is also shared by O'Toole (2011), who plead that this requires a combination of essential skills as well as new competencies with a critical impact on organisation learning, competitiveness and future.

Though the mission entrusted to OPRAG at its creation highlights the development, maintenance and modernisation of the ports facilities while improving the ports' competitiveness. This mission statement clearly calls upon innovation.

3. Literature review

Ciptono (2006) considers Operations management in terms of innovation, which creates a resource, specifically intellectual human resources. Therefore, he contends that OM implies the broad managerial, human approach, and technical approaches used to manage repetitive (program) and/or non-repetitive work (project) within the constraint of time, cost, and performance targets.

McInemey and Koening (2011) address the Knowledge Management (KM) as an effort to increase useful knowledge in the organisation in order to make organizational management and operations more effective, of higher quality, and more responsive to constituents in a rapidly changing global environment. Tough, according to Martens and Hawamdeh (2010), Knowledge Management suggests the ability to address a wide variety of information opportunities and threats in a comprehensive and collaborative fashion towards organisations as they discover, create and utilise their formal and informal knowledge resources (Martens and Hawamdeh, 2010). Kao et al. (2011) affirm that nowadays a KMS is one of the most competitive strategies. Hence, according to them, a well implemented KMS is paramount for the organisation.

McIver et al. (2013) acknowledge some of KMS' benefits within organizations such as: improving productivity, increasing agility, maximizing intellectual assets, enhancing innovation and product development, and advancing operational effectiveness and all other important strategic outcomes that KM is likely to yield.

Nejatian, Nejati, and Zarei (2013) contend that the success of companies in the today's competitive markets is highly dependent to the degree to which they create new knowledge. Although, Knowledge creation can be seen as a continuous process in which the knowledge created by individuals comes available, useful and amplified within the organization's chosen and implemented KMS (Nejatian et al., 2013) (Krogh et al., 2012) and stay independently in the knowledge stock of the organisation.

Parise, Cross and Davenport (2006) contend that there are some dynamics which represent a large and growing concern that most companies have failed to address. O'Toole (2011) confirm it and explain that this is all about recalling knowledge of events and how performing actions, knowledge of decision-making and past behaviour, subject-matter expertise, organizational memory of why certain key decisions were made and awareness of past organisation projects (the results of which may never have been documented), etc.

Though, to avoid ad hoc and reactive efforts, Parise et al. (2006) propose one typical approach which includes capturing and storing what a departing individual knows by codifying electronic files and reports, conducting subject matter interviews and capturing lessons learned or best practices from projects in which that departing individual was involved as leader.

By the way, such retention approach is subject to substantial problems: the first problem is about the retrieval, right interpretation and credibility to be used of this just small fragment of all what made the person successful

and knowledgeable (Parise et al., 2006). The second problem is that knowledge-retention approaches do not capture the relational or network-based aspect of the knowledge to be transferred, given the interdependency of the work in today's economy (Parise et al., 2006). Consequently, key knowledge vulnerabilities are identified under two aspects: the individual own knowledge and how that individual's resigning or retirement can affect his professional network.

4. Research methodology

The research is performed by interviews and questionnaires responded to by 126 operations managers on duties or have been serving at OPRAG from 2004 to 2014. The researchers made use of the cross-sectional survey to collect quantitative data for this research.

In order to illustrate transformation processes in the account of OM within some systems, Nagurney (2012) proposes the following table:

Table 1: Examples of some systems and the transformation processes by Nagurney (2012)

Hospital	Patients, medical supplies	MDs, nursing staff, equipment	physiological Health care ()	Healthy individuals
Restaurant	Hungry customers, food	Chef, waitering staff, environment	Well-prepared food, well served; agreeable environment (physical and exchange)	Satisfied customers
Automobile factory	Sheet steel, engine parts	Tools, equipment, workers	Fabrication and assembly of cars (physical)	High-quality cars
College or university	High school Graduates, books	Teachers, classrooms	Developing knowledge and skills (informational)	Educated individuals
Department store	Shoppers, stock of good	Displays, salesclerks	Attract shoppers, promote products, fill orders (exchange)	Sales to satisfied customers
Distribution centre	Stock keeping Units (SKUs)	Storage bins, Stock pickers	Storage and redistribution	Fast delivery, Availability of SKUs

Source: Nagurney (2012)

Nagurney (2012) studies some systems and their operations and comes up with a classification of transformation processes into

- physical process (manufacturing operations, healthcare operations),
- locational process (transportation operations, distribution operations),
- exchange process (retail operations),
- informational process (communication operations, education operations) and
- psychological process (entertainment activities).

Nagurney (2012) proposes a level of operations ranging from operational (short term) to strategic (long term) as listed below:

- The Strategic (Long Term) Level of operation which concerns "Decisions" pertaining to:
  - "product development" (What to make?),
  - "process and layout decisions" (Need to make it or buy it?),
  - "site location" (Where to setup?)
  - and high level capacity decisions (How much capacity is needed?);

- The Tactical level (Intermediate Term) that deals with material and labor resources in respect of some constraints such as:
  - labour planning (the number of needed workers and their period),
  - inventory and replenishment planning (stock management),
  - working hours (shifts and overtime),
  - detailed capacity planning (subcontractors, outsourcing), etc.;

- The Operational Level (Short Term) which deals with the daily, weekly and monthly activities such as: Planning, executing and controlling decisions. For example:
  - the scheduling (what and when to start processing),
  - the sequencing (what is the order in which requirements shall be processed)?,
  - the loading (resources utilization) and
  - the assignments (who does what).

Summarily, the scope of operations management has all to do with the complex environment of operations. The figure below, proposed by Kumar and Suresh (2009), illustrates clearly the nodal points of such an environment.

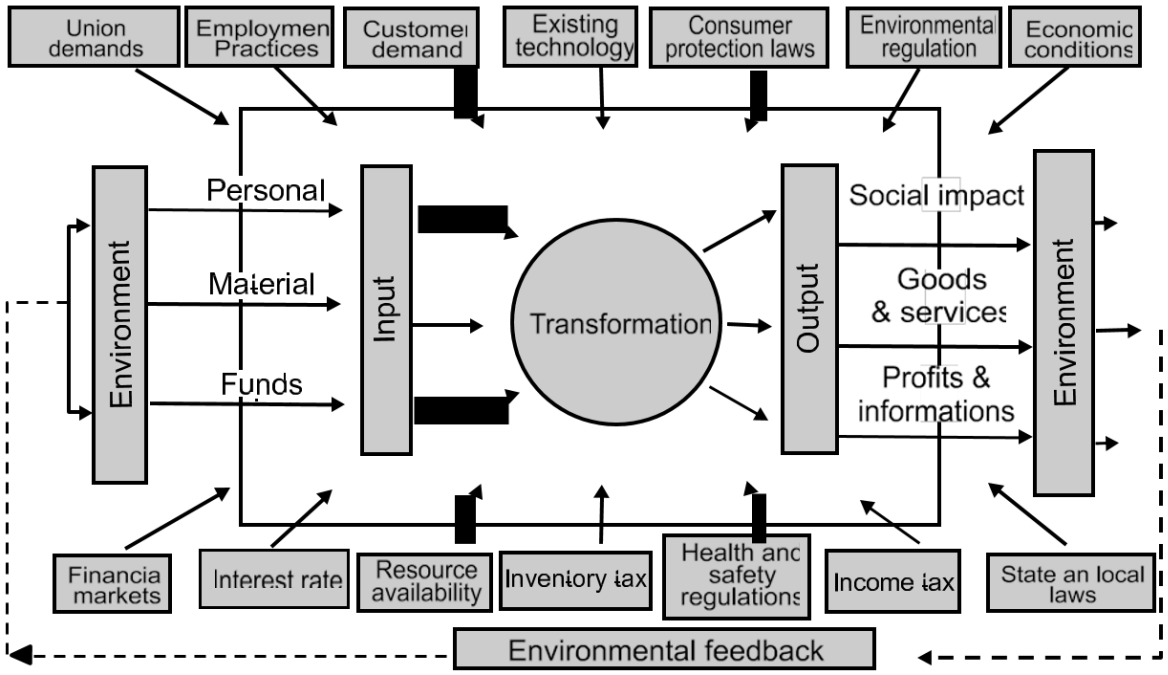

Figure 1: Environment of operations **Source:** Kumar and Suresh (2009)

5. Research findings

In line with the future creation of a powerful KMS which will benefits OPRAG, the author of this paper went through assessing the existing items and tools pertaining to the KM. the following are the results of the survey:

Knowledge creation as source of OPRAG's firm competitive advantage

The overall results revealed that 43.7% of participants disagreed that the competitive advantage of OPRAG is obtained from the rapid creation of new knowledge, followed by 36.3% who either disagreed or strongly disagreed and 23.7% who were neutral.

The ability to explicate and share existing knowledge as a driver of competitive advantage

The research indicates that 30.3% either agree or strongly agree with the contention that the ability to explicate and share existing knowledge drives OPRAG's competitive advantage and 34.0% either disagree or strongly disagree. Results from OPRAG indicate that 30.1% either agree or strongly agree; 37.3% were neutral and either 32.5% disagree or strongly disagree.

The astute protection of difficult to replicate knowledge

30.3% of participants either strongly agreed or agreed that the astute protection of difficult to replicate knowledge is the strength of OPRAG, followed by 32.6% who were neutral and 37.0% who disagreed or strongly disagreed. OPRAG represent 31.7% of respondent who agree or strongly agree, followed by 31.0% of respondents who were neutral. Companies-partners reveal 11.1% who agree, followed by 55.6% who are neutral and 33.3% who disagree or strongly disagree.

Tacit knowledge and knowledge workers effectiveness

Origin of knowledge
At one hand, the results overall reported that 39.7% either agreed or strongly agreed to obtain knowledge from a closer professional network of contacts, 18.3% were neutral and 42.0% disagreed.
At another hand, the results overall reported 33.3% either agreed or strongly agreed to seek knowledge from a distant professional network of contacts, 36.5% were neutral and 30.2% either disagreed or strongly disagreed
Self determination of needed Knowledge
The study reported that 36.5% either strongly agreed or agreed to determine themselves the knowledge they need and where to search for it; 22.2 % were neutral whilst 39.3% either disagreed or strongly disagreed.

Need of new KMS
Speaking about a new KMS, the results overall reported that 48.4% either strongly agreed or agreed that a new knowledge management system must be built to foster active attempts to understand and modify as appropriate the existing knowledge, 23.0% were neutral whilst 28.6% disagreed.

The Knowledge distribution: Retrieval of document needed for work
The results overall reported 32.5% either strongly agreed or agreed that they easily find the documents that they need for their work, 22.2% were neutral and 45.2% either disagreed or strongly disagreed.

The results overall reported 34.5% either strongly agreed or agreed that they easily find the knowledge that they need for their work; 28.6% were neutral and 37.3% either disagreed or strongly disagreed.

Use of the Knowledge: IT and the Knowledge Management Process

Modification, use of knowledge and transfer of experience
The results overall reported 42.9% either strongly agreed or agreed that they modify, use the knowledge and transfer the experience for other to use; 24.6% were neutral and 32.6% disagreed.

Knowledge reused with no record of the modifications
The results overall reported 35.7% either strongly agreed or agreed that there are knowledge reused in various ways with no record of the modifications; 31.0% were neutral and 33.3% either disagreed or strongly disagreed.

The results overall reported 18.3% either agreed or strongly agreed to prefer knowledge obtained with a low cost search even if it does not precisely fit my needs to knowledge that is more precise but would take long to obtain; 30.2% were neutral and 51.5% either disagreed or strongly disagreed. The results overall reported 34.9% either agreed or strongly agreed to trust the knowledge residing in the system even though I do not know the originator, 33.3% were neutral and 31.7% either disagreed or strongly disagreed.

Knowledge sharing

- Stability of the organisation

The results overall reported that 26.2% either agreed or strongly agreed that OPRAG is a stable oganisation where set plans are followed, 41.3% were neutral and 32.5% either disagreed or strongly disagreed.

- Documenting procedures

The result overall reported that 44.4% agreed that procedures of how to perform work have been documented, 38.9% were neutral and 16.6% either disagreed or strongly disagreed.

- Involvement in projects

The result overall reported that 31.7% either agreed or strongly agreed that everyone is involved in decisions and ongoing projects within OPRAG, 34.9% were neutral and 33.3% either disagreed or strongly disagreed with that.

- Rules to manage the unit

The result from OPRAG reported that 38.1% either agreed or strongly agreed that within OPRAG, there exist clear rules to manage units; 32.5% were neutral and 29.4% either disagreed or strongly disagreed.

Channel of communication

- Horizontal sharing

The result overall reported that 27.8% either agreed or strongly agreed that information is shared horizontally, 36.5% were neutral and 35.7% either disagreed or strongly disagreed.

- Vertical sharing

The result overall reported that 30.9% either agreed or strongly agreed that information is shared horizontally within their unit, 37.3% were neutral and 31.7% either disagreed or strongly disagreed.

Amount of information

The result overall reported that 30.1% either agreed that the amount of information is sufficient for them to perform as desired their job; 33.3% were neutral and 36.5% either disagreed or strongly disagreed with that.

Need of further information

The result overall reported that 46.1% either agreed or strongly agreed that they would like to get more information about objectives/mission/performance of the company; 27.8% were neutral and 26.2% strongly disagreed.

Communication with others

The result overall reported that 42.1% either agreed or strongly agreed that they often communicate with other departments; 32.5% were neutral and 25.4% either disagreed or strongly disagreed.

On-the-job training

The results from OPRAG reported 43.7% either agreed or strongly agreed to have received an on-the-job training when they joined OPRAG; 27.8% were neutral and 28.5% disagreed.

Imparting work knowledge

The results from OPRAG reported 43.6% who either agreed or strongly agreed to impart their work knowledge to inexperienced employees; 22.2% were neutral and 34.1% either disagreed or strongly disagreed.

Knowledge sharing & teamwork

The results from OPRAG reported 35.7% either agreed or strongly agreed that knowledge sharing and teamwork are formal measures in their performance contracts; 36.5% were neutral and 27.8% either disagreed or strongly disagreed.

Sharing views about world and life

The results from OPRAG reported 38.9% either agreed or strongly agreed that the work environment encourages people to share their views about the world and life within OPRAG; 34.9% were neutral and 26.1% either disagree or strongly disagree.

Peers assistance through sharing knowledge and experience

The results from OPRAG reported 34.1% either agreed or strongly agreed to feel comfortable to share their knowledge and experiences to assist peers; 39.7% were neutral and 26.1% either disagreed or strongly disagreed.

Ideas sharing

The results from OPRAG reported 38.9% who agreed to frequently be encouraged to share ideas with people they report to; 35.7% were neutral and 25.4% either disagreed or strongly disagreed.

Willing to share knowledge

The results overall reported 54.0% either agreed or strongly agreed that employees have a vast amount of knowledge which they are willing to share; 21.4% were neutral and 24.6% either disagreed or strongly disagreed.

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