Operational Knowledge Management in the Military

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INTRODUCTION

This article intends to cover operational-knowledge management (KM) as implemented in the military. In particular, it is based on experience and published examples from the U.S. Army and the IDF (Israeli Defense Forces). It concentrates on the characteristics of operational knowledge as the core type of interest for the military due to the nature of the mission. The proxy of human lives and mission success are used vs. the more common currencies in the business industry.

The article covers common vehicles in KM through examples implemented in the military (such as communities of practice in the U.S. Navy, storytelling, and scenario planning), with special attention given to a detailed description of the AAR (after-action review). This is a military-originated KM process now widely adopted by industry. Although all these are familiar KM methods and concepts in industry, their value and uniqueness for military applicability are illustrated.

In the current and future battlefield, knowledge and information are critical resources (both of the enemy and of our forces). Through innovative and dispersed IT systems, KM has transformed the modern battlefield situational awareness, both for the individual soldier and the very core of command and control.

A section is devoted to KM in low-intensity conflicts (LICs) that emphasizes learning throughout fighting due to the unique and asymmetric nature of LIC as the contemporary and most common modern form of warfare. In LIC, the learning cycles are short as opposed to those of classic wars where the main learning is done before and after conflicts. In LIC, as a prolonged process (of varying intensities), learning must be conducted throughout the fighting.

BACKGROUND

Liddell Hart (1991) stressed that throughout history, militaries that should have been organizations of the highest adaptability capabilities (due to the nature of their mission) have been the least flexible, harming their own functioning. This has promoted the adoption, for more than a decade in the military, of the learning-organization concept aimed at transforming the military into a dynamic organization that continuously implements organizational learning. Indeed the learning-organization concept (Senge, 1990) is closely entwined with, and is one of the drivers of, the KM movement.

The concentration of knowledge management is derived from the military's mission and vision. The U.S. Army, in its "knowledge vision" (2004), defines "a transformed Army, with agile capabilities and adaptive processes, powered by world class network-centric access to knowledge, systems and services, interoperable with joint environment." Indeed, a continuum strategy to such vision transforms the Army into "a network-centric, knowledge-based force."

Why Operational-Knowledge Management?

Operational has two different meanings in the military context: a knowledge type, and a level of fighting forces and warfare. This article refers to the first.

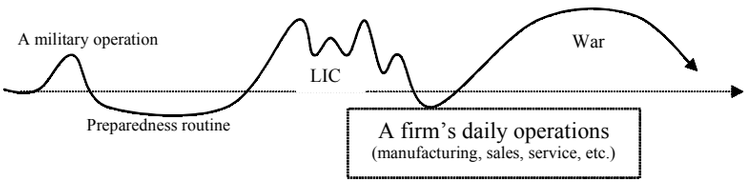
As a knowledge type, operational knowledge has meaning in industry as well. Although operational research (OR) started in the British Military during WWII, it evolved as a discipline into industry and different domains and areas (Keys, 1995).

However, operations are entwined in most organizations on their way to achieve organizational goals. In the military, the operations (in the sense of military operations) are the very core and essence of the organization. A military organization is established and trained toward operations, be it peacekeeping, defense preparedness, or wartime operations. Hence, operational knowledge is a salient.

The characteristics of operational knowledge demand exploration as the core type of interest for the military (due to the nature of the mission). Indeed, this supports the usage of proxy indicators, such as human lives and mission success vs. the more common currencies in industry.

Although various knowledge types exist in the military (e.g., professional or procedural knowledge in different domains), most of these may be differentiated in their

Figure 1. A simplification of a firm's operations compared to the nature of military operations



connection to operations, hence to operational knowledge. Whether knowledge is entwined with the conduct of military operations, or indirectly connected merely due to the eventual goals of a military, makes a difference in the way it is referred to.

The military is a competencies-based, mission-oriented organization, which is operational in nature. Hence, operational knowledge is the very essence of the military. So, we need to focus on managing it first, for more reasons than one.

- It is the best testing ground for KM in the military, rendering the fastest ROI.
- Every operational KM implementation is principally applicable toward other knowledge types in the military (once the methodologies are familiar).
- Since commanders' and sponsors' attention are scarce (as are other resources), it is aimed at the operational goals of the military.

Since operational in this context refers to knowledge type, the discrimination from the analogous military term for a level must be determined. Operational refers in the army command also to levels of forces and warfare (i.e., strategic, operational, tactical levels). However, KM can be implemented at all these levels, aimed at operational goals.

Although presumably KM is more applicable at organizational levels, tactical implementation yields a higher mission success rate. Exploring new operational paradigms is especially crucial for special-operations success (Gagnon 2002), where a clear delineation between essentially tactical missions and possible operational or strategic effects does not exist.

FIRST FOCUS: ADAPTING KM VEHICLES FROM (AND TO) INDUSTRY

Most common KM vehicles implemented in industry are applicable to the military with appropriate adaptation. Furthermore, some KM practices that originated from the military have been adopted by industry. However, the military might have called it by a different name, or did not consider it a KM process. The scope of this article allows a sample of only a few such prominent vehicles, but many more exist, entwined in the daily operations of the military. Even regular officers' gatherings, from the battalion level to divisions, account for such KM processes that aim to create a knowledge-sharing culture as well as sharing specific knowledge.

Since even the titles of these KM processes may differ from those familiar in industry, it is essential to describe their military reembodiment and value. Furthermore, KM in the military context requires adaptations to operational settings, for instance, to "match the pace of operations" (McIntyre, Gauvin, & Waruszynski, 2003, p. 38): "Knowledge management and the knowledge cycle within the context of military operational environments, therefore, require emphasis on these additional requirements of robustness, content and speed."

The current synergy of the military, the academic community, and industry practitioners and researchers promises to benefit the military from the progress of KM.

The After-Action Review

One of the fundamental tools of KM in the Army is the after-action review process. It was developed by the U.S. Army, although it is in use by other militaries as well, sometimes under different titles and a slightly different process (e.g., debriefing). Due to the intense nature of events in the Army, it allows for almost real-time learning in a brief session.

There are four distinct phases in the after-action review.

1. What was supposed to happen? What was the action plan, and what did we aim to do?
2. What actually happened? There is a reviewing and establishing of the facts of the events.
3. What was the gap? What went wrong, causing the gap between 1 and 2?