**Successes and Failures of Knowledge Management:**

**An Investigation into Knowledge Management Metrics**

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**Abstract**

In reviewing the literature and industry reports, a number of organizations have approached KM metrics from a Balanced Scorecard, Intellectual Capital (e.g., Skandia’s Intellectual Capital Navigator), Activity-Based Costing, or other borrowed approaches from the accounting and human resources disciplines. Liebowitz in his edited book, *Making Cents Out of Knowledge Management* (Scarecrow Press, 2008), shows case studies of organizations trying to measure knowledge management success. A few methodologies have examined ways to measure return on knowledge, such as Housel and Bell’s Knowledge Value-Added (KVA) methodology (Housel and Bell, 2001). Liebowitz analyzed over 80 publications on knowledge management metrics, whereby KM metrics can be divided into system measures, output measures, and outcome measures.

**A Look at KM Metrics**

Susan Hanley and the U.S. Department of Navy-CIO (2001) highlight some of these measures in their publication, *Metrics for Knowledge Management Guide*. System measures deal with analytics associated with system-derived measures. Output measures relate to outputs associated from the use of the system. Outcome measures, which are the most meaningful, deal with outcomes as associated with the strategic goals and mission of the organization that result from the use of the knowledge management application.

Based on Liebowitz’s external review of KM metrics, Figure 1 shows the resulting concept map based on system, output, and outcome measures. CMAPTools, from the University of West Florida, was the concept mapping software applied to generate these figures.

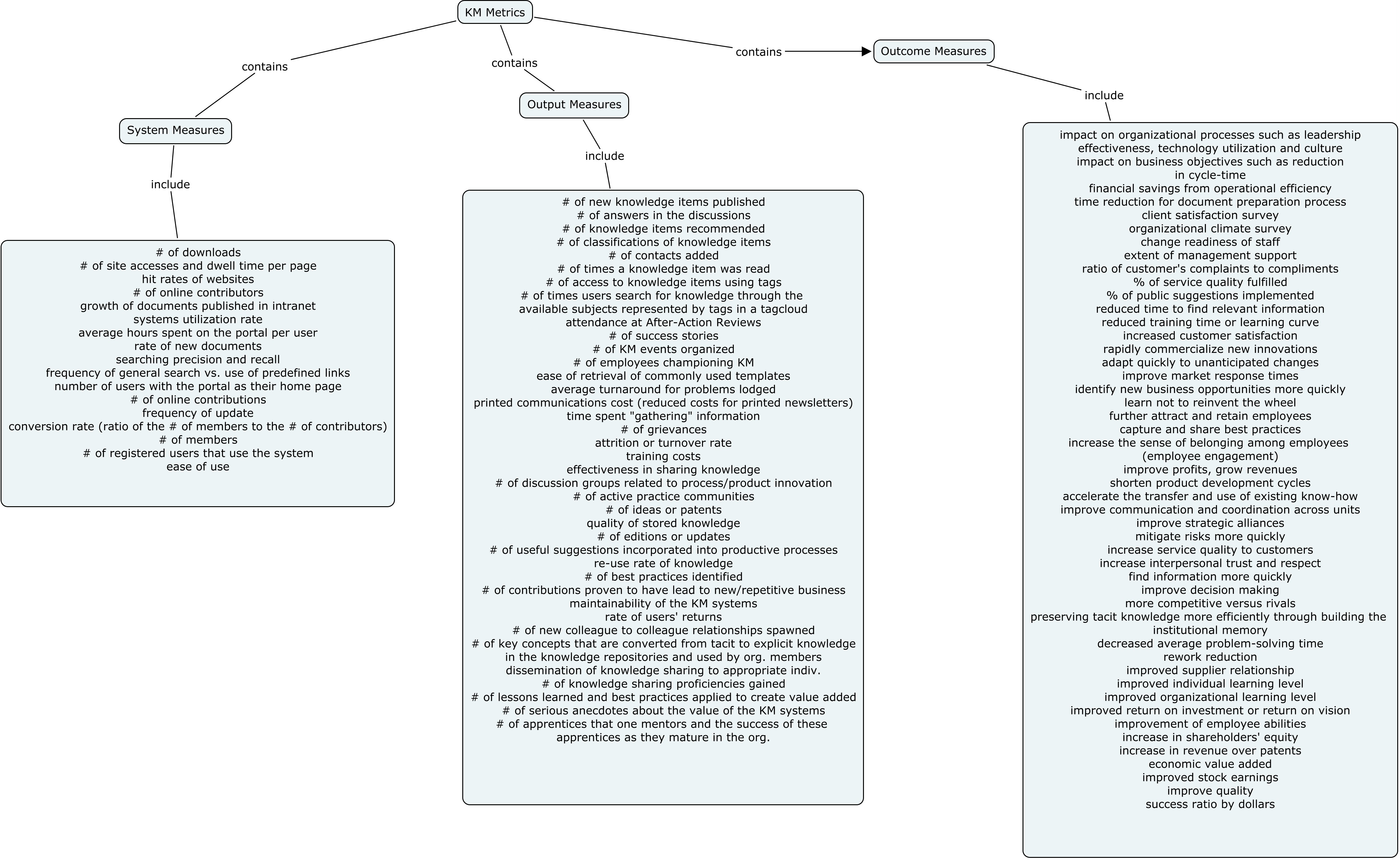


Figure 1: Concept Map of KM Metrics Based on a Review of the Literature

Figure 1 shows an increasing number of KM metrics from system to output to outcome measures. As related to outcome measures, Liebowitz previously examined KM value-added benefits and found that most organizations use KM for five reasons: adaptability/agility; creativity; institutional memory building; organizational internal effectiveness; and organizational external effectiveness.

According to the literature (Liebowitz, 2012), if KM initiatives fail, it is usually due to two reasons: either the KM strategy (and resulting measures) wasn’t strategically aligned with the overall organizational strategic goals, or the KM implementation plan was poorly designed. In order to mitigate these risks, the KM metrics should map back to the organization’s strategy, goals, and objectives.

**Sample KM Metrics**

Many organizations are interested in using various KM applications for capturing, sharing, applying, and generating knowledge. Some sample KM measures for typical KM activities are:

*Expertise Locator System:*

* Impact on business objectives such as reduction in cycle-time based on being able to locate the right person on a timely basis through the expertise locator system
* Financial savings from operational efficiency due to forming the right project team due to capitalizing on selected skills and availability resulting from using the expertise locator system
* Improved ratio of customer’s complaints to compliments (i.e., increased customer satisfaction) due to knowing the right person to contact to address customer’s concerns as a result from using the expertise locator system
* Reduced time to find relevant information because the expertise locator system allows the quick identification of the right person who would have the information
* Reduced training time or learning curve
* Increase the sense of belonging and community among employees for improved employee engagement (the organization can list hobbies, home town, etc. in the expertise locator system to develop and strengthen employee bonding)
* Improve decision making due to knowing the right person to address the questions from the expertise locator system
* New ideas generated from reaching out to others resulting from use of the expertise locator system
* Decrease average problem-solving time due to use of the expertise locator system
* Rework reduction
* Improve quality due to knowing the right person to contact through the expertise locator system.

*After-Action Reviews (AAR)*:

* Accelerate the transfer and use of existing know-how through the AAR
* Reduced training time or learning curve
* Improve organizational decision making through capturing and sharing best practices/lessons learned
* Time reduction for document preparation process due to learning from others via the AAR
* Increased customer satisfaction due to learning from previous successes and failures and reacting expeditiously
* Improve quality of products through learning from others.

*Lesson Learned System*:

* Ability to quickly capture lessons learned (LL) in the system
* Ability to improve performance and decision making through the embedded LL process
* Quality of the knowledge captured
* Amount of knowledge captured
* Ease of use in both incorporating LL into the process, as well as in accessing the LL
* Adaptability of the approach in terms of how generic is the methodology as applied to other domains
* Ease of archival and maintenance of the LL process
* Flexibility of the approach in terms of getting LL to the right user at the right time and in terms of searchability of the LL

*Task Reference Guides*:

* Reduction in cycle time
* Decreased learning time for job position
* Consistency in performing job duties for improved quality

*Forums*:

* Improved customer satisfaction by having forums for dialogues between the organization and customer
* Decreased average problem-solving time
* Increased trust and belonging among employees and customers

*Knowledge Capture Interviews*:

* Building the institutional memory of the organization to not reinvent the wheel
* Accelerate the transfer and use of existing know-how for increased learning
* Improvement of employee’s abilities

*Knowledge Nuggets*:

* Reduced rework through learning from others
* Increasing recognition for improved employee engagement
* Improve new hire retention rate through learning from others

*Knowledge Cafes/Online Communities*:

* Stronger sense of belonging and trust
* Innovations and creativity increased through knowledge sharing
* Improve decision-making time due to knowing others in your area (met through the knowledge cafes)

*Wikis*:

* Building the institutional memory for reducing individual/organizational learning time
* Work more efficiently by establishing project team wikis
* Reduce time to find appropriate information and knowledge

*Blogs:*

* Adapt quickly to unanticipated changes through real-time dialogue
* Improve communication and coordination across units
* Percentage of public suggestions implemented

**Sample KM Metrics Applied to Public Health and International Development**

Some sample metrics for knowledge management in the public health and international development arenas are shown in Figure 2.

|  |  |  |
| --- | --- | --- |
| System Measures | Output Measures | Outcome Measures |
| Number of instances of products or services developed or disseminated with partners | KM Capacity Strengthened | Performance Improved (Policy and advocacy; programs and practice; training and education; research) |
| Number and type of capacity building efforts | Service Utilization Increased | Health Systems Strengthened |
| Number of times the knowledge has helped to solve problems | Number/percentage of users using an information product or service to improve their own practice or performance | Behavior Changed |
| Timely completion of projects | Number/percentage of users who report knowledge gained from a product or service | Innovations derived from KM products or services |
|  | Decrease in new product development cycle time by KM | Improved trends in disease mortality/morbidity and health behaviors |
|  | Willingness of employees to share knowledge | Metrics encompassing mental and physical health, social determinants, and physical aspects of community environments that promote or adversely affect health |

Figure 2: Sample KM Metrics in Public Health and International Development

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