

# **How Do You Measure the Knowledge Management (KM) Maturity of Your Organization? Metrics That Assess an Organization's KM State**

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## **1. Introduction**

Knowledge Management (KM) is the art of creating, organizing, applying, and transferring knowledge to facilitate situational understanding and decision making (FM 3.0, 2008). The degree to which an organization effectively applies this art is an indicator of its organizational KM maturity. Measuring the state of KM maturity provides the organization a baseline from which to build KM proficiency. Developing metrics that assess KM impact and value is both essential and difficult. This is a topic that has been studied, written about, and debated, however we have found little in the way of practical methods that are easy to understand and apply. This paper provides practical ways to measure an organization's KM state, and ways to measure KM initiatives and their impact.

This paper explores practical ways to measure the KM state of an organization, examines accepted KM initiatives used throughout the KM community, and identifies useful metrics for those KM initiatives from a military perspective. Civilian organizations will also benefit from this approach. Useful metrics are metrics that a Chief Knowledge Officer (CKO) or Knowledge Management Officer (KMO) can immediately apply to measure the state of KM at his/her organization.

## **2. Metrics/Measures/Key Performance Indicators**

Metrics, also known as "measures" or "key performance indicators" are indicators for assessing the effect of a particular project or activity. The most important characteristic to consider when choosing or defining a KM performance measure is whether the metric indicates if knowledge is being shared and used. For example, a metric for a Best Practice database might be the number of times the database has been accessed. A large number of accesses or "hits" suggest that people are reading the document, but this does not definitively indicate whether it was useful to anyone or whether or not it improved operational efficiency or quality. A better metric would be to track database usage and ask a sampling of the users how it helped them. (MCCES, 2005)

Organizations should measure what matters. Measuring for the sake of measuring is fruitless and a waste of time. It is important that measures and metrics be developed and collected for the purpose of continuous improvement of knowledge management activities. (APQC, 2003) One method is to collect stories that explain metrics. For example – telling a story of how KM improved organizational efficiency by explaining how metrics were developed, collected and analyzed is extremely valuable. After data is collected, it is important to post the results and analyze them. When we can show leaders and employees that KM Initiatives produced results, this will result in greater buy-in to using those initiatives.

## **3. Not All Metrics are Useful**

Not all Metrics are useful. Some metrics don't really tell you anything useful and will lead an organization to false results. This paper also lists metrics that should be avoided so you don't fall into the trap of thinking these metrics tell me my KM initiative is successful. Here is an example:

"Time Savings" is not always a good metric if it doesn't lead to the employee using that "saved" time productively. Typically time savings is calculated as (x hours per employee saved) x (y # of employees) x (cost per hour). Here is how leadership might respond:  
"Saving me 4.6 hours of productivity per employee per week means each employee gets

to duck out of the office at noon on a Friday. Where's the tangible benefit? Unless you show me how this leads to needing less *unit* resources per task and therefore a reduced headcount, I'm not going to see any real savings." (Patel, 2009)

#### **4. What Gets Measured Matters and Gets Done**

Metrics are important, because what gets measured, gets done. Knowledge is an intangible asset, but the impact of KM is measurable. (APQC, 2003) Measures need to link to the organization's strategy. Note: A successful KM program usually involves multiple KM initiatives. There needs to be a blended approach using several of the KM initiatives listed in this paper plus other KM initiatives that are important to your organization.

##### **a. Metric Performance Should be Compared to a Baseline or Benchmark**

Using metrics without a standard (a benchmark or current level of performance) or target (goal) is like driving a car without a map and without seeing the road. Before implementing any KM initiative, key metrics should be developed and a baseline established, against which performance may be measured during and after implementation. Even if metrics development occurs after a KM initiative is underway, you will still need a baseline to answer the common questions: What kind of progress are we making? When can we move to the next phase? What do the users think? As a result, the first metric collections may be expressly to establish the critical baseline for comparisons. However, do not use the fact that you lack a baseline as the reason not to use metrics. Many metrics projects have stalled at precisely this point in the face of the potential effort of establishing a baseline. (AKM, 2004)

##### **b. Know What Your Desired End-state Should be *Before* You Begin Your KM Initiative**

You should already know what your desired end-state will look like before you begin a KM initiative. Why else would you perform the work? Look backwards from that end-state to find the metrics and indicators that will tell you when you have arrived at the destination. Should the indicators increase or decrease, should they go up or down, should they be more or less? Just as having a benchmark provides you a starting point, having an end-state in mind gives you a place to call success.

#### **5. Consider the Culture When You Choose Your Measures**

What type of culture do you work in? Are metrics, measurement, and monitoring part of your organizational make-up? Do you already measure activities, cycle times, expenditures, etc? These questions should be considered when developing ways to measure your KM initiatives and the results of those initiatives. If your organization already has measurement mechanisms in place try to integrate your KM metrics into the existing system. Tying them to a system everyone already understands and is comfortable with will ease the pain of metrics gathering. If your organization does not routinely perform measurements consider ways to gather the metrics that would be most palatable to the organization. Can they be automated, or done as part of an existing process? Also, consider how metrics should be reported. Does your organization value statistics and charts, or does it favor stories and examples that convey the essence of the initiative. Finding the right fit for capturing, analyzing, and reporting metrics is as important as the KM initiative itself, because metrics convey the results of the resources expended to achieve the desired end-state.

#### **6. One Size Does Not Fit All, But....**

A review of the KM metrics literature says that one size KM does not fit all organizations. Research reveals that there are common KM initiatives that most successful organizations with a KM program use. This paper looks at common KM initiatives and metrics to measure those KM initiatives. The KM initiatives listed in this paper are not all inclusive. There are no guarantees that these measures are the most appropriate for your organization. These metrics describe what you can do, not what you must do or even should do. Select the KM initiatives and measures that matter to your stakeholders. (DON, 2001) There are many more additional KM Initiatives that can also be used. See Appendix C for more KM initiatives.

The easiest measures can be attained from process and IT applications, but just because we can easily obtain metrics on a KM initiative, it doesn't mean that metric provides a useful way of measuring the maturity of that initiative.

## **7. Categorizing Measures**

Measures can be categorized as hard (dollar savings) and soft (intangible measures)

### **1. Hard (Dollar Saving Metrics)**

- a. Profitability/ increased revenue/ decrease in maintenance costs
- b. Dollars saved / cost reduction
- c. Time saved
- d. Quality improvements, number of errors avoided, cost avoidance
- e. Increased productivity
- f. Successful mission
- g. Products successfully launched

### **2. Soft (Intangible Measures)**

- a. Cost avoidance
- b. Customer satisfaction
- c. Quick problem resolution
- d. Professional development
- e. Improved employee satisfaction / Morale improvement
- f. Improved knowledge retention
- g. Capturing and retaining at-risk data
- h. Stories related to validated success
- i. Enhanced innovation
- j. Improved skills/competency
- k. Trust

## **8. Common Measures**

These measures can be used for most KM initiatives:

- System Metrics monitor the usefulness and responsiveness of supporting technology. They give an indirect indication of knowledge sharing and reuse, but can highlight which assets are the most popular and any usability problems that might exist and be limiting participation. They are the easiest to collect from software system.
  - Page visits
  - Contributions
  - Number of members
- Output Metrics measure characteristics at the project or task level, such as the effectiveness of lessons learned information to future operations. Direct process output for users provides a picture of the extent to which personnel are drawn to actually using the knowledge system.
  - Replies to discussions (online, e-mails, phone calls)
  - Documents downloaded and used
- Outcome Metrics concern the impact of the KM project or initiative on the overall organization. They measure large-scale characteristics such as increased productivity. (DON, 2001)
  - Time, money or lives saved
  - Injuries prevented
  - Changes in the way we do business

Examples:

<p><b>System</b></p> <ul style="list-style-type: none"><li>▪ Number of downloads</li><li>▪ Number of site accesses</li><li>▪ Dwell time per page or section</li><li>▪ Usability survey</li><li>▪ Frequency of use</li><li>▪ Number of users</li><li>▪ Percentage of total employees using system</li></ul> <p>(see Appendix A for definitions)</p> <p>(MCCES, 2005)</p>	<p><b>Output</b></p> <ul style="list-style-type: none"><li>▪ Usefulness surveys where users evaluate how useful initiatives have been in helping them accomplish their objectives</li><li>▪ Usage anecdotes where users describe (in quantitative terms) how the initiative has contributed to business</li></ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"><li>▪ Time, money, or personnel time saved as a result of implementing initiative</li><li>▪ Cost avoidance as a result of implementing initiative</li><li>▪ Percentage of successful programs compared to those before KM implementation</li></ul>
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## 9. The Army Knowledge Management (AKM) Maturity Indicator

The AKM Maturity Indicator, located on the next page, is a tool used to examine KM maturity from an organizational perspective. It will provide an indication of where your organization stands on a maturity level before you start examining common KM initiatives that promote effective KM programs.

- a. The AKM Maturity Indicator is used to determine an organization's overall level of KM maturity relative to the adoption and use of the AKM Principles.
- b. The Indicator is composed of two axis.
- c. The "X" axis (horizontal) measures an organization's adoption and use of the AKM Principles (People/Culture, Process and Technology) on a five point scale ranging from 1 – KM Novice to 5 – KM Mature.
- d. The "Y" axis (vertical) applies the key elements of an integrated KM program (Culture, Strategy, Competency and Metrics) against the AKM Principles across the maturity level spectrum.
- e. The AKM Principles are both color coded and typed in differing fonts in order for the user to easily determine which of the principles applies.
- f. The AKM Maturity Indicator provides an organization a means to evaluate their overall state of KM maturity.
- g. An organization can use the Indicator to better understand the types of behaviors more KM mature organizations exhibit.
- h. Check the boxes that apply to your organization.

Most would agree that changing an organization's culture towards collaboration and sharing is difficult. That is because changing the culture means changing behaviors. One can get a sense of where an organization is culturally by observing these behaviors:

1. A not invented here attitude vs. a tendency to adopt good ideas no matter where they were developed.
2. The knowledge seeking behavior of the staff. Do they seek answers first and then invent answers if none are found, or do they invent first and tend to recreate the wheel?
3. Do staff tend to think in terms of:
  - a. Only those who need to know get to know.
  - b. Who needs to know what I know?
  - c. I have a responsibility to share what I know so others may find and use it.
4. Do the organization's leaders personally participate in KM?
  - a. Do they value knowledge and innovation or are they more focused on maintaining the status quo?
  - b. Do they personally get involved in KM activities or is that something only done by the staff?
  - c. Do they shape performance by asking questions in a way that provides them understanding of how the knowledge and information was obtained and used to develop answers?
  - d. Are employees rewarded or acknowledged in some way for demonstrating KM behavior? Are they penalized if they hoard or withhold information?

Understanding your culture will focus your attention on those activities that will be accepted by the organization, and will better prepare you to create those change management initiatives that will drive behavior change and increase the organization's KM maturity.

# AKM Maturity Indicator

How KM Mature is Your Organization?

Key Elements of an Integrated KM Program ↓	AKM Principles: <b>People/Culture</b> / <b>Process</b> / <b>Technology</b>				
	<b>KM Novice</b> 1	2	3	4	<b>KM Mature</b> 5
<b>Culture</b>  What is the organization's posture towards adopting and applying the AKM Principles?	<input type="checkbox"/> Knowledge is power attitude <input type="checkbox"/> Little sharing occurs <input type="checkbox"/> <i>Not invented here mentality</i> <input type="checkbox"/> <i>Change is discouraged</i> <input type="checkbox"/> <u>Systems reside in silos</u>	<input type="checkbox"/> Knowledge shared within parts of org. <input type="checkbox"/> Sharing is not taboo <input type="checkbox"/> <i>Process improvements are considered</i> <input type="checkbox"/> <u>Systems begin to open</u>	<input type="checkbox"/> Knowledge sharing exists <input type="checkbox"/> Sharing is encouraged <input type="checkbox"/> <i>Workers want efficient processes</i> <input type="checkbox"/> <u>Systems balance access and openness</u>	<input type="checkbox"/> Knowledge sharing is the org. norm <input type="checkbox"/> Sharing is expected <input type="checkbox"/> <i>Workers seek &amp; champion improvements</i> <input type="checkbox"/> <u>Systems use robust search</u>	<input type="checkbox"/> Knowledge shared is power attitude <input type="checkbox"/> Sharing is rewarded <input type="checkbox"/> <i>Innovation is encouraged</i> <input type="checkbox"/> <u>Systems cross all boundaries</u>
<b>Strategy</b>  How does the organization implement the AKM Principles?	<input type="checkbox"/> No KM strategy or plan <input type="checkbox"/> KM not linked to org. success <input type="checkbox"/> <i>Inefficient processes rule</i> <input type="checkbox"/> <u>IT strategy not linked to user's needs</u>	<input type="checkbox"/> KM strategy emerging and aligning with org. goals <input type="checkbox"/> <i>Process improvement plan developing</i> <input type="checkbox"/> <u>IT strategy considers KM</u>	<input type="checkbox"/> KM plans and governance model developing <input type="checkbox"/> <i>KM process assessments performed</i> <input type="checkbox"/> <u>IT &amp; KM strategies are linked</u>	<input type="checkbox"/> KM strategy tied to org. strategy <input type="checkbox"/> <i>KM action plan developed and implemented</i> <input type="checkbox"/> <u>KM strategy drives IT strategy</u>	<input type="checkbox"/> KM strategic plan in place and in use <input type="checkbox"/> KM drives org. success <input type="checkbox"/> <i>Efficient processes rule</i> <input type="checkbox"/> <u>IT supports workers needs</u>
<b>Competency</b>  How skilled is the organization in applying the AKM Principles?	<input type="checkbox"/> No CKO/KMO <input type="checkbox"/> Little grasp of KM concepts and methods <input type="checkbox"/> <i>Unsure how to encourage efficiencies</i> <input type="checkbox"/> <u>Little KM tool training</u>	<input type="checkbox"/> KM champions emerge <input type="checkbox"/> Interest in KM training growing <input type="checkbox"/> <i>Workers consider process improvements</i> <input type="checkbox"/> <u>KM tool use considered</u>	<input type="checkbox"/> KM champions lead initiatives <input type="checkbox"/> KM Pros complete KM training courses <input type="checkbox"/> <i>Workers apply knowledge to improve processes</i> <input type="checkbox"/> <u>Tool usage rises</u>	<input type="checkbox"/> CKO/KMO lead KM efforts <input type="checkbox"/> KM training available for all <input type="checkbox"/> <i>All workers seek improvements</i> <input type="checkbox"/> <u>KM tool usage routine</u>	<input type="checkbox"/> Org. leaders drive KM adoption and use <input type="checkbox"/> KM training mandatory <input type="checkbox"/> <i>Continuous improvements</i> <input type="checkbox"/> <u>KM tool usage embedded in org.</u>
<b>Metrics</b>  How does the organization measure the impact of applying the AKM Principles?	<input type="checkbox"/> KM is not a factor in org. success <input type="checkbox"/> <i>No metrics to assess KM impact</i> <input type="checkbox"/> <u>Any existing metrics used to measure output not outcomes</u>	<input type="checkbox"/> The need to measure KM is considered <input type="checkbox"/> <i>KM metrics are used to baseline processes</i> <input type="checkbox"/> <u>Metric tracking options considered</u>	<input type="checkbox"/> Metrics are considered vital to KM adoption and use <input type="checkbox"/> <i>KM metrics are used to validate KM initiatives</i> <input type="checkbox"/> <u>Metrics track usage and attitudes</u>	<input type="checkbox"/> Metrics impact KM initiatives <input type="checkbox"/> <i>KM metrics drive process improvements</i> <input type="checkbox"/> <u>Metrics embedded in systems and tools</u>	<input type="checkbox"/> KM impacts org. success <input type="checkbox"/> <i>Metrics are part of KM strategy</i> <input type="checkbox"/> <u>Metrics mostly measure KM outcomes and are leading indicators</u>

# 10. How Do You Measure the Maturity of Your KM Initiatives?

Use the table below to determine the maturity of your KM Initiatives. Each initiative has a scale from 1 (KM Novice) to 5 (KM mature). Subjectively determine the maturity your organization has for each KM initiative/activity. Circle the maturity on each initiative. If the initiative doesn't apply to your organization, don't use it.

If you want more detail, apply weights to the initiatives that are more important to your organization. Communities of Practice might be critical to some organizations, but portals might not. Finding experts quickly might be critical to some organizations, but not to others. Multiply the maturity level rating you gave by the weight and place that # in the total column.

Add up the totals using the table below. Divide by the number of initiatives your organization uses. This will give you a rough idea of the maturity of your organization.

## How Do You Measure the Maturity of Your KM Initiatives?

KM Initiatives	Maturity					Weight	Total
<b>Knowledge Management Program (Overall)</b>	1	2	3	4	5		
<b>People/Culture</b>							
Culture of Collaboration	1	2	3	4	5		
Communities of Practice (CoP)	1	2	3	4	5		
Face to Face/Brown Bag Meetings	1	2	3	4	5		
Online Suggestion Box	1	2	3	4	5		
Capture Knowledge of Key Retiring/Departing Employees	1	2	3	4	5		
Chief Knowledge Officer	1	2	3	4	5		
<i>TBD Organizational KM Initiative</i>	1	2	3	4	5		
<i>TBD Organizational KM Initiative</i>	1	2	3	4	5		
<b>Process</b>							
Efficient Processes	1	2	3	4	5		
<i>TBD Organizational KM Initiative</i>	1	2	3	4	5		
<i>TBD Organizational KM Initiative</i>	1	2	3	4	5		
<b>Technology</b>							
Repository/Content Management System	1	2	3	4	5		
Search	1	2	3	4	5		
Expertise Location System	1	2	3	4	5		
Lessons Learned Management System	1	2	3	4	5		
Best Practices Management System	1	2	3	4	5		
Virtual Collaboration for Meetings	1	2	3	4	5		
<i>TBD Organizational KM Initiative</i>	1	2	3	4	5		
<i>TBD Organizational KM Initiative</i>	1	2	3	4	5		
<b>Maturity Rating (Total divided by # of KM Initiatives)</b>							

To customize the model further, organizations can add other KM initiatives they are using to the table. This list of KM initiatives is not all inclusive. Many more KM initiatives exist. Additional space is provided to add organizational specific KM initiatives. Additional information is listed in the Appendices:

Appendix A lists system metrics examples.

Appendix B lists definitions.

Appendix C lists additional KM initiatives.

Appendix D contains a summary of KM measures.

Appendix E lists additional Army Knowledge Management resources.

**Metrics for Evaluating your KM Program:****System**

- Note: It is difficult for a system to measure a KM program overall. Possible system metric:
  - % of total community that are active contributors (# of members/# of active contributors) to org. portal

**Output**

- # of project teams using KM initiatives/KM approaches
- % of the number of employees actively participating in KM initiatives

**Outcome**

- Reduce (on average) the number of instances of critical incidents due to failed problem solving or knowledge loss (Patel, 2009)
- Improvement in employee's skills
- KM initiative is part of the daily work process of the organization
- Creation of new knowledge/sharing knowledge/ transferring knowledge
- Employee engagement, customer/stakeholder engagement, business process effectiveness

**a. People/Culture****1) Culture of Collaboration**

KM Novice				KM Mature		
Little sharing occurs. Knowledge is power and sharing will threaten my job/rating/salary. There is very little collaboration or team work in the organization. Most workers are individual contributors, and are rewarded as such.				Employees routinely share what they discover, create and produce. Employees routinely ask themselves, "Who else needs to know?" A knowledge sharing culture and environment for KM exists with organizational alignment and is subject to performance monitoring. Knowledge sharing is rewarded as there is an expectation that collaboration, knowledge transfer, and knowledge loss prevention is everyone's responsibility.		

1	2	3	4	5	Weight:
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**Metrics:****System**

- Note: Difficult for a system to track culture of sharing. Possible systems metrics:
  - % of total community that are active contributors (# of members/# of active contributors) to org. portal
  - # of trip reports posted

**Output**

- % of employees that share (gathered in survey)

**Outcome**

- Time, money, or personnel time saved as a result of sharing

**2) Communities of Practice (CoP)**

KM Novice				KM Mature		
No CoPs				Org has multiple, thriving CoP that produce results		

1	2	3	4	5	Weight:
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**Metrics:****System**

- # of unique visitors (only useful if % is a high percentage of total user population)
- % of total community that are active contributors (# of members/# of active contributors)



**Output**

- Usefulness survey (users evaluate how useful the community has been helping them accomplish their objective)
- # of useful knowledge items passed on
- # of problem solved
- # of “back channel events” (lunches, one-on-one meetings, hallway communications)

**Outcome**

- # of lives saved.
- # of useful CoPs that contribute to the mission of the org.
- # of discussions that save members time/improve efficiency or pass on a best practice
- Speed of problem resolution
- Decreased learning curve (measured by increasing the probability of finding experts, mentoring and coaching that goes on inside communities and the context that the community provides for the org as a whole) (Openacademy, 2007)
- Reduction of rework and prevention of “reinventing the wheel” (Measured by re-use of the artifacts in the Community and the connections to the individuals who developed them) (Openacademy, 2007)
- Increased innovation (measured by the # of new strategic initiatives spawned by the community or germinated at community events)
- Decreased attrition rate (measured by comparing the attrition rate of community members versus their counterparts who are not connected to a CoP)

NOTE: Often organizations try to use easily assessable metrics to determine if their CoP is providing benefit. Not all metrics are useful. Here is an example of metrics that are not that useful and the reason why.

System Metrics That Aren't That Useful	Reason Why
# of communities	Doesn't tell us if communities are providing value
# of hits	So what? Doesn't tell if knowledge was exchanged
# of articles	So what? Doesn't tell if articles were read.
# of discussions	So what? Doesn't tell us if what is being discussed helped any one
# of new discussions	More useful than # of discussions, but are new discussions improving the org and are discussions useful
# of community participants	Doesn't tell if users received knowledge. There are a lot of lurkers on communities that provide no value. Often times people join and see no value of participating further, but they remain a member with no logons or posts.

**3) Face to Face/Brown Bag Meetings**

KM Novice				KM Mature		
Org. Does not conduct brown bag lunches, or conducts many face to face meetings				Org. meets face to face and encourages brownbag brain storming sessions		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>System</b>						
<ul style="list-style-type: none"><li>• # of personnel that attend Face to Face/Brown Bag Meetings</li></ul>						
<b>Output</b>						
<ul style="list-style-type: none"><li>• # of brown bags/month where useful info is exchanged</li></ul>						

**Outcome**

- Knowledge exchanged that improved efficiency
- Knowledge exchanged that leads to innovation

**4) Online Suggestion Box**

KM Novice				KM Mature		
Org. does not have online suggestion box for good ideas from employees				Org. has online suggestion box for good ideas from employees. Org. rewards employees that submit good ideas		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>Output</b> <ul style="list-style-type: none"><li>• # of useful suggestions incorporated that org. validates are worth to pursue</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• # of useful suggestions incorporated that improved processes</li></ul>						
System Metrics That Aren't That Useful				Reason Why		
# of suggestions				Some ideas might be redundant, not all ideas will be worthy of implementation		

**5) Capture Knowledge of Key Retiring/Departing Employees**

KM Novice				KM Mature		
No method for capturing knowledge of key retiring/departing employees.				Org. has a process to capture knowledge from departing employees. In-processing personnel can quickly determine their responsibilities.		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>Outcome</b>						
<ul style="list-style-type: none"><li>• # hours saved getting new employee up to speed compared to old method</li><li>• # of smart books transferred</li></ul>						

**6) Chief Knowledge Officer (CKO)/Knowledge Management Officer (KMO)**

KM Novice				KM Mature		
Org. has no CKO or CKO has little authority to institute change.				Org. has a Chief Knowledge Officer who works for the leaders of the organization. CKO has authority to institute change and backing of leadership/middle management and employees. CKO is an integral part of the organization.		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>Output</b> <ul style="list-style-type: none"><li>• # of personnel that are trained in KM</li><li>• Paygrade of the CKO/paygrade of the CKO staff</li><li>• # of KM initiatives originating from the CKO organization.</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• # of KM initiatives that improved the org.</li><li>• # of improved organizational results that could be traced to initiatives or actions of the CKO or CKO staff.</li></ul>						

## b. Process

### 1) Efficient Processes

KM Novice				KM Mature		
Org. has many inefficient processes that waste employee's time.				Org. has many improved processes through re-engineering or automated processes creating efficiencies that save users time.		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• # of processes that saved employees time</li><li>• # of process improvements (cycle time, cost, quality, quantity) attributable to KM practices</li><li>• Enhancements in customer/stakeholder value attributable to process improvements that result from KM behavior</li><li>• % of employees using new processes</li></ul>						

## c. Technology

### 1) Repository/Content Management System

KM Novice				KM Mature		
More than one place to store info. Content is stored in a stovepipe repository and not available for use outside the repository				One web based location to store info and uses DoD or Army standards. Content is 100% extensible, completely federated and automatically shared across the Army and DoD.		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>System</b> <ul style="list-style-type: none"><li>• # of documents/articles with a rating system - other users have graded (e.g. star rating system)</li><li>• % of registered users that uses repository/portal daily</li><li>• # of clicks to find information</li></ul>						
<b>Output</b> <ul style="list-style-type: none"><li>• % of total org. that actively contribute</li><li>• # of users accessing the same information</li><li>• # of employees that use portal features: document libraries/ version control/ workflows/ search</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• Time, money, or personnel time saved as a result of portal use</li><li>• Reduced training time or learning curve as a result of single access to multiple information sources</li><li>• Customer satisfaction (based on the value application) (collected through survey)</li><li>• # of useful documents that improved performance</li><li>• Timeliness (up to date) of documents</li><li>• Speed of problem resolution</li><li>• How easy is it for people to find the info they want</li><li>• Sustainment metric - how well and how often is the content reviewed and sustained</li></ul>						
NOTE: Often organizations try to use easily assessable metrics to determine if their portal is providing benefit. Not all metrics are useful. Here is an example of metrics that are not that useful and the reason why.						

System Metrics That Aren't That Useful	Reason Why
# of hits	So what? Doesn't tell if knowledge was exchanged
# of documents	Having 100,000 documents doesn't mean they are useful.
# of downloads	Having many downloads doesn't mean they were read and knowledge was transferred.

## 2) Search

KM Novice				KM Mature		
Must search multiple locations and using multiple search techniques?				Can find information in less than 3 clicks		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>System</b> <ul style="list-style-type: none"><li>• # of searches</li><li>• % of organization utilizing search</li></ul>						
<b>Output</b> <ul style="list-style-type: none"><li>• Speed of responsiveness</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• Relevance of search results</li></ul>						

## 3) Expertise Location System

KM Novice				KM Mature		
Manual process. Takes a long time to locate experts within the org. Need to ask around the organization.				Users can find experts in org. quickly using a tool. What used to take days or hours, now takes minutes.		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>System</b> <ul style="list-style-type: none"><li>Degree of participation (e.g. at IBM, 111,000 of 350,000 employees registered with their Expertise Location System)</li><li>Frequency of use</li></ul>						
<b>Output</b> <ul style="list-style-type: none"><li>Reduced time to solve problems</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>Time saved finding experts</li><li>Savings or improvement in organizational quality and efficiency</li></ul>						

## 4) Lessons Learned Management System

KM Novice				KM Mature		
Org. has little or no processes to capture goods ideas.				Org. has a formal process to capture lessons learned		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>System</b> <ul style="list-style-type: none"><li>• # of downloads</li><li>• Usability survey</li></ul>						
<b>Output</b> <ul style="list-style-type: none"><li>• Time to solve problems</li><li>• Anecdotes</li><li>• User ratings of contribution value</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• # of lessons that saved lives - E.g. Battle Command Knowledge System (BCKS)</li></ul>						

- Time, money, or personal time saved by applying lessons learned from others
- # of lessons learned implemented in others parts of the org.
- # of lessons learned that improved efficiency
- # of lessons learned that lead to innovation

#### 5) Best Practices Management System

KM Novice				KM Mature		
Org. has little or no processes to capture good ideas.				Org. has a formal process to capture lessons learned		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>System</b> <ul style="list-style-type: none"><li>• # of downloads</li></ul>						
<b>Output</b> <ul style="list-style-type: none"><li>• Anecdotes</li><li>• Usability survey</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• Time, money or personal time saved by implementing best practices</li><li>• # of groups certified in the use of best practice</li><li>• Rate of change in operating costs</li><li>• # of best practices that lead to innovation</li><li>• How frequently is knowledge updated</li></ul>						

#### 6) Virtual Collaboration for Meetings (Web Conferencing)

KM Novice				KM Mature		
Org. does not use any virtual collaboration				Org. uses virtual collaboration tool to conduct meetings. E.g. Adobe Connect (DISA Button 2)		
1	2	3	4	5	Weight:	
<b>Metrics:</b>						
<b>System</b> <ul style="list-style-type: none"><li>• # of meeting conducted virtually from desktop vs traveling</li></ul>						
<b>Output</b> <ul style="list-style-type: none"><li>• \$ saved in TDY travel getting to meeting</li><li>• # of hours saved not traveling</li></ul>						
<b>Outcome</b> <ul style="list-style-type: none"><li>• # of discussions that lead to innovation</li></ul>						

## 11. Now What? How Do You Interpret Your KM Maturity Level Number and Improve KM in Your Organization?

So your KM maturity is a 2.2. What does that tell you? First, look at the AKM Maturity Indicator, page 5, to analyze your maturity number. The KM Maturity Indicator helps you determine an organization's level of KM maturity relative to the adoption and use of the AKM Principles. It will tell you where you need to focus based on the AKM principles.

The next step is to analyze the score of each KM initiative. Below are methods to improve each KM initiative.

### People/Culture

#### Knowledge Management Program (Overall)

- If your organizations needs help getting an indication of their health in terms of knowledge flow, knowledge creation and transfer, and ultimately knowledge management processes, strategies, and approaches, contact BCKS to request a Knowledge Assessment <https://www.us.army.mil/suite/doc/12505065>. The knowledge assessment will most often identify performance gaps between what we are doing and want we should be doing, and highlight the gap between what we know and what we should know to perform at the desired level. The knowledge assessment will lead to a knowledge strategy which in turn helps us develop knowledge management approaches and methods to close the gaps.
- BCKS personnel trained in KM will come to your organization and conduct a KM assessment.
- For a practical KM how to guide, see BCKS Companion Site to FM 6-01.1 Knowledge Management Section Proponent Validated KM "How To" Handbook <https://www.us.army.mil/suite/kc/11032288>

#### Culture of Collaboration

- Changing the culture of an org. will not happen overnight. One way to encourage sharing is create an incentive program that rewards sharing. Monetary rewards are not always possible for military, Army and DoD civilians. Highlight a knowledge sharing team on the organization's intranet / portal or public web site (as long as no sensitive information is shared). Include a picture of the knowledge sharing team and an article/case study of their KM sharing.
- Recognize outstanding individuals, group or organizational efforts that implement the AKM Principles in support of mission goals and objectives by nominating them for the CIO/G6's Army Knowledge Management Awards (AKMA). Army Knowledge Management Awards recognize innovation, and activities that implement any of the 12 Army Knowledge Management Principles to support mission objectives. It is an annual award and one winner will be chosen in each of the 3 Army Knowledge Management Dimensions: People/Culture, Process, and Technology.

#### Communities of Practice (CoP)

- If you need to form a CoP, utilize the BCKS Knowledge Management Section Handbook (Virtual), Chapter 6 KM Processes Section 4, How to Start a Professional Forum. This is an excellent reference to help you start a CoP. <https://www.us.army.mil/suite/collaboration/GetDocument.do?doid=12013219>
- Need better facilitation. See the Army Professional Forum Facilitator Guide <https://forums.bcks.army.mil/secure/CommunityBrowser.aspx?id=689255>
- Browse the 50+ BCKS Professional Forums to see how successful communities operate <https://forums.bcks.army.mil/secure/communitybrowser.aspx?>

### **Face to Face/Brown Bag Meetings**

- Encourage departments to conduct regularly scheduled brown bag lunches where topics are discussed to acquire and share knowledge.

### **Online Suggestion Box**

- Institute a program to capture good ideas. The workforce often has lots of good ideas to improve the organization. They see inefficient processes everyday and have ideas that might make the organization more efficient.
- Defense Intelligence Agency (DIA) instituted a program it calls "Cross Boundaries". <http://www.toffler.com/shownews.asp?newsid=46>. This program encourages the workforce to submit their ideas to solve problems, improve operations and make the organization better.
- The DIA director chairs the monthly meetings. Employees come with an idea to make the organization better. They present their ideas and become the primary advocate and owner of the idea. DIA provides a Cross Boundaries Coach and resources to collaborate and implement their idea.
- Have leadership chair the meetings once a quarter. All ideas are looked at and an incentive program is developed. A committee needs to be established to review the ideas. Resources should be allocated if the ideas are worthwhile. You could have innovator of the Quarter award ceremony for the best idea presented. (Goal could be 4 good ideas a year).

### **Capture Knowledge of Key Retiring/Departing Employees**

- You don't need to capture all the knowledge of key retiring/departing employees, just the critical knowledge they possess. Ideally someone right seat rides with outgoing personnel, but when that is not possible, utilize these methods:
  - Capture key intellectual property from the employees during their daily activities
  - Have employees create Continuity/Smart Books - How I do my job. Establish a short questionnaire that quickly captures some of their critical knowledge before employees depart. This could be a Standard Operating Procedure (SOP) for creating a Continuity/Smart Book for departing employees. This could be part of out-processing (e.g. Provided Continuity book). At a minimum, each departing employee should leave behind the following:
    1. Duty description
    2. Contact list
    3. Goals and objectives
    4. Key projects/deadlines of ongoing projects
    5. Lessons Learned/best Business Practices for making job easier (tips and trick learned)
    6. Key documents on org. portal
    7. Useful web sites (Check favorite book marks)
  - Interview the expert and video the session, make those videos available online.

### **Chief Knowledge Office (CKO)**

- Understand your organizations strategic goals. Develop a KM strategy for your organization based on the Army Knowledge Management Strategy Plan Template <https://www.us.army.mil/suite/doc/15242630> on the Army Knowledge Strong (AKS) Web Site on AKO. <https://www.us.army.mil/suite/grouppage/107678>
- Look for quick wins where KM initiatives will provide real results for your organization. Concentrate on inefficient processes. Become indispensable to your organization.
- Request Basic KM Training from BCKS at Ft. Leavenworth, KS. [https://www.us.army.mil/suite/portal.do?\\$p=297597](https://www.us.army.mil/suite/portal.do?$p=297597)
- Become a member of KMNet. Search the wealth of KM knowledge and share ideas with other KM practitioners. <https://forums.bcks.army.mil/secure/CommunityBrowser.aspx?id=341623&lang=en-US>

- Develop a KM training program where you can train your organization on KM.
- Establish a Knowledge Management Working Group. Develop a KM Working Group Charter. KM working Group should meet quarterly. Members of the KM Working Group should be key leaders in your organization.
- A wealth of information on Knowledge Management is contained on BCKS's AKO site: <https://www.us.army.mil/suite/grouppage/35717>

## **Process**

### **Efficient Processes**

- Conduct a knowledge assessment of your organization. Determine inefficient processes that can be improved. Determine processes that don't need IT solutions and work for non IT solutions such as streamlining those processes. Then work with your IT development in developing solutions to automate inefficient processes. Appendix C lists processes across the Army that need improving:
  - Improve staffing of documents through workflow
  - Automate tracking of tasking
  - Automate significant event reporting
  - Establish a trip report document library
  - Create web based enterprise calendaring
  - Enterprise conference room scheduling

## **Technology**

### **Repository/Content Management System**

- Pick a repository that is Army approved. E.g. Joint Interoperability Test Command (JTIC) approved, has a NETCOM Networkiness certificate and is supported by your IT department. E.g. AKO, SharePoint Portal Server or IBM Lotus Domino Software or other approved portal.
- For AKO training, see the BCKS AKO Administrator Training [https://www.us.army.mil/suite/portal.do?\\$p=557156](https://www.us.army.mil/suite/portal.do?$p=557156)
- For SharePoint training, see the Microsoft's SharePoint Server 2007 training courses at: <http://office.microsoft.com/en-us/training/HA102358581033.aspx>
- For additional SharePoint training go to BCKS's SharePoint training at: <https://www.us.army.mil/suite/collaboration/GetDocument.do?doid=13962175>

### **Search**

- Work with your IT department to work towards one search engine to search across all sources of data.

### **Expertise Location System**

- Work with your IT department to develop an Expertise Location System. Application should provide a free text search and a Subject Matter Categories drop down. Many organizations have an online phonebook system, but it lacks an expertise field. Rather than invest in a new system, modify your existing system to display user's expertise. Allow the user to easily input their expertise. Every 6 months, user's expertise should be updated. A simple email to update your profile/expertise should be sent out.

### **Lessons Learned Management System**

- Work with your IT department for creating a Lessons Learned Management System. Create a process for capturing and approving lessons learned.
- The Center for Army Lessons Learned (CALL) is the great example of a Lessons Learned Management System. CALL collects and analyzes data from a variety of current and historical sources, including Army operations and training events, and produces lessons for military commanders, staff, and students. CALL disseminates these lessons and other related research materials through a variety of print and electronic media, including this web site. The private site which requires a CAC or



password. <https://call2.army.mil/Login.aspx>

- The format for a Lesson Learned is as follows:
  - Title:
  - Observation:
  - Discussion:
  - Lesson Learned/TTP:
  - Recommendations:
  - References:

### **Best Practices Management System**

- Work with your IT department to develop a Best Practices Management System. Develop a process for approving best practices to be posted. Here is a potential format for a Best Practices Management System:
  - Best Practices Title:
  - POC:
  - Categories of Practice
    - People
    - Process
    - Technology
    - Organizational Categories TBD
  - Summary:
  - Situation Before Initiative Began:
  - Process:
  - Results Achieved:
  - Lessons learned:
  - Transferability:
  - References:

### **Virtual Collaboration for Meetings**

- Get familiar with Defense Connect Online (DCO) <https://www.dco.dod.mil/> Adobe Connect/ Button 2
- Attend the DCO Live Training <https://www.dco.dod.mil/public/dsp/liveTraining.cfm>
- Take the DCO On-Demand Training at <https://www.dco.dod.mil/public/dsp/tutorials.cfm>
- Find a classroom in your organization and demonstrate to capabilities of DCO. Train users how to use DCO or IBM Sametime.
- Conduct a pilot with organizations that conducts a lot of TDY. Record metrics to see if the organization saves time and \$ utilizing virtual meeting tools.

## **12. Conclusion.**

The reason to collect metrics is to improve KM in your organization by measuring what matters and whether the metric tells if knowledge is being shared. This paper looks at practical ways to measure the KM state of an organization. By looking at accepted KM Initiatives used throughout the KM community and adding additional metrics based on your strategic objectives, an organization can determine useful metrics for those KM initiatives.

Measurements for KM initiatives, just like KM itself, is both an art and a science. The metrics in the paper are merely a guide. KM leaders will have to apply their best judgment to determine which KM initiative and metrics make sense for their organization. Using common metrics used in the KM community and the AKM Maturity Indicator, your organization will be able get a better measure of the KM maturity of your organization.

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## APPENDIX A. System Metrics Examples

This is a list of system metrics that software applications can track.

1. Number of downloads  
Tools measure the number of items downloaded.
2. Number of site accesses  
Tools can measure the number of site access, it can tell you how many access per user, and where they came from. Results can be: 25 unique users (by IP and username) accessed the KM workgroup page. Note: Not very valid if you set up your computers so your KM site is be everyone's home page, and every time users logged onto their computers, the site gets get a hit
3. Dwell time per page or section  
This can be done with tools also, but could be a deceiving answer. It doesn't know why there is dwell time on a page. Could be the page is interesting, could be the page is hard to understand or confusing, could be the phone rang, etc.
4. Usability Survey  
Send to users in the organization to collect their opinions.
5. Frequency of use  
Tools can tell frequency of use by user or object. Meaning ... User A has accessed page A 100 times and page B 50 times in the last month, or page A has been accessed 1000 times in the last month.
6. Number of users  
Tools can provide this for a period of time, e.g. there were 1500 unique visits during Sep 2006.
7. Percentage of total employees using system  
Tools can provide statistics, e.g. out of 1500 unique visits during Sep 06, 57% of the unique visits came from this location or 20% of all unique visits were to the system. (Chunn, 2006)

## APPENDIX B. Definitions.

**Community of Practice (CoP).** A CoP is a group of people who regularly interact online or offline to collectively learn, solve problems, build skills and competencies, and develop best practices around a shared concern, goal, mission, set of problems, or work practice.

**Lessons Learned Management System.** The Center for Army Lessons Learned (CALL) is the great example of a Lessons Learned Management System. CALL's definition on Lessons Learned: "Validated knowledge and experience derived from observations and the historical study of military training, exercises, and combat operations that leads to a change in behavior at either the tactical (standard Operating procedures (SOP), TTP, and so forth), operational, or strategic level or in one or more of the Army's DOTMLPF domains." Army Definition AR 11-33.

**Best Practices Management System.** Best Practice asserts there is a technique, method, process, activity, incentive or reward that is more effective at delivering a particular outcome than any other technique, method, process, etc. The idea is that with proper processes, checks, and testing, a desired outcome can be delivered with fewer problems and unforeseen complications. Best practices can also be defined as the most efficient (least amount of effort) and effective (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time for large numbers of people. Source: Wikipedia

**Expertise Location System.** IT system that lists the skills and experience of people in the organization.

**Knowledge Management** is the art of creating, organizing, applying, and transferring knowledge to facilitate situational understanding and decision making. (FM 3-0, 2008)

## **APPENDIX C. Additional KM Initiatives**

### **1. People/Culture**

- Conduct AARs immediately after small tasks or projects
- Improve Brainstorming techniques
- CKO quarterly newsletter highlighting KM best practices
- Establish a unit KM advisory board

### **2. Process** (Many military units have similar inefficient processes that can be improved)

- Improve staffing of documents through workflow
- Automate tracking of tasking
- Automate significant event reporting
- Establish a trip report document library
- Create web based enterprise calendaring
- Enterprise conference room scheduling

### **3. Technology**

- E-learning
- Virtual collaboration: Wiki's/Blogs
- AKO
- BCKS (Tomoye)
- Defense Connect Online(Adobe Connect) (Button 2)
- IBM Sametime (E-Collab) (Button 1)
- Army Green Force Wiki
- HARMONIE Web

#### APPENDIX D. Summary of KM Measures

KM Initiative	Metrics
Knowledge Management Program (Overall)	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Note: It is difficult for a system to measure a KM program overall. Possible systems metrics: <ul style="list-style-type: none"> <li>% of total community that are active contributors (# of members/# of active contributors) to org. portal</li> </ul> </li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li># of project teams using KM initiatives/KM approaches</li> <li>% of the number of employees actively participating in KM initiatives</li> </ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>Reduce (on average) the number of instances of critical incidents due to failed problem solving or knowledge loss (Patel, 2009)</li> <li>Improvement in employee's skills</li> <li>KM initiative is part of the daily work process of the organization</li> <li>Creation of new knowledge/sharing knowledge/ transferring knowledge</li> <li>Employee engagement, customer/stakeholder engagement, business process effectiveness</li> </ul>
<b>People/Culture</b>	
Culture of Collaboration	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Note: Difficult for a system to track culture of sharing. Possible systems metrics: <ul style="list-style-type: none"> <li>% of total community that are active contributors (# of members/# of active contributors) to org. portal,</li> <li># of trip reports posted</li> </ul> </li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>% of employees that share (gathered in survey)</li> </ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>Time, money, or personnel time saved as a result of sharing</li> </ul>
Communities of Practice (CoP)	<p><b>System</b></p> <ul style="list-style-type: none"> <li># of unique visitors (only useful if % is a high percentage of total user population)</li> <li>% of total community that are active contributors (# of members/# of active contributors)</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>Usefulness survey (users evaluate how useful the community has been helping them accomplish their objective)</li> <li># of useful knowledge items passed on</li> <li># of problem solved</li> <li># of "back channel events" (lunches, one-on-one meetings, hallway communications)</li> </ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"> <li># of lives saved.</li> <li># of useful CoPs that contribute to the mission of the org.</li> <li># of discussions that save members time/improve efficiency or pass on a best practice</li> <li>Speed of problem resolution</li> <li>Decreased learning curve (measured by increasing the probability of finding experts, mentoring and coaching that goes on inside communities and the context that the</li> </ul>

	<p>community provides for the org as a whole) (Openacademy, 2007)</p> <ul style="list-style-type: none"> <li>• Reduction of rework and prevention of “reinventing the wheel” (Measured by re-use of the artifacts in the Community and the connections to the individuals who developed them) (Openacademy, 2007)</li> <li>• Increased innovation (measured by the # of new strategic initiatives spawned by the community or germinated at community events)</li> <li>• Decreased attrition rate (measured by comparing the attrition rate of community members versus their counterparts who are not connected to a CoP)</li> </ul>
Face to Face/Brown Bag Meetings	<p><b>System</b></p> <ul style="list-style-type: none"> <li>• # of personnel that attend Face to Face/Brown Bag Meetings</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>• # of brown bags/month where useful info is exchanged</li> </ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>• Knowledge exchanged that improved efficiency</li> <li>• Knowledge exchanged that leads to innovation</li> </ul>
Online Suggestion Box	<p><b>Output</b></p> <ul style="list-style-type: none"> <li>• # of useful suggestions incorporated that org. validates are worth to pursue</li> </ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>• # of useful suggestions incorporated that improved processes</li> </ul>
Capture Knowledge of Key Retiring/Departing Employees	<p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>• # hours saved getting new employee up to speed compared to old method</li> <li>• # of smart books transferred</li> </ul>
Chief Knowledge Officer	<p><b>Output</b></p> <ul style="list-style-type: none"> <li>• # of personnel that are trained in KM</li> <li>• Paygrade of the CKO/paygrade of the CKO staff</li> <li>• # of KM initiatives originating from the CKO organization.</li> </ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>• # of KM initiatives that improved the org.</li> <li>• # of improved organizational results that could be traced to initiatives or actions of the CKO or CKO staff.</li> </ul>
<b>Process</b>	
Efficient Processes	<p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>• # of processes that saved employees time</li> <li>• # of process improvements (cycle time, cost, quality, quantity) attributable to KM practices</li> <li>• Enhancements in customer/stakeholder value attributable to process improvements that result from KM behavior</li> <li>• % of employees using new processes</li> </ul>
<b>Technology</b>	
Repository/Content Management System	<p><b>System</b></p> <ul style="list-style-type: none"> <li>• # of documents/articles with a rating system - other users have graded (e.g. star rating system)</li> <li>• % of registered users that uses repository/portal daily</li> <li>• # of clicks to find information</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>• % of total org. that actively contribute</li> <li>• # of users accessing the same information</li> </ul>

	<ul style="list-style-type: none"> <li>• # of employees that use portal features: document libraries/ version control/ workflows/ search</li> </ul> <b>Outcome</b> <ul style="list-style-type: none"> <li>• Time, money, or personnel time saved as a result of portal use</li> <li>• Reduced training time or learning curve as a result of single access to multiple information sources</li> <li>• Customer satisfaction (based on the value application) (collected through survey)</li> <li>• # of useful documents that improved performance</li> <li>• Timeliness (up to date) of documents</li> <li>• Speed of problem resolution</li> <li>• How easy is it for people to find the info they want</li> <li>• Sustainment metric - how well and how often is the content reviewed and sustained</li> </ul>
Search	<b>System</b> <ul style="list-style-type: none"> <li>• # of searches</li> <li>• % of organization utilizing search</li> </ul> <b>Output</b> <ul style="list-style-type: none"> <li>• Speed of responsiveness</li> </ul> <b>Outcome</b> <ul style="list-style-type: none"> <li>• Relevance of search results</li> </ul>
Expertise Location System	<b>System</b> <ul style="list-style-type: none"> <li>• Degree of participation (e.g. at IBM 111,000 of 350,000 employees registered with their Expertise Location System)</li> <li>• Frequency of use</li> </ul> <b>Output</b> <ul style="list-style-type: none"> <li>• Reduced time to solve problems</li> </ul> <b>Outcome</b> <ul style="list-style-type: none"> <li>• Time saved finding experts</li> <li>• Savings or improvement in organizational quality and efficiency</li> </ul>
Lessons Learned Management System	<b>System</b> <ul style="list-style-type: none"> <li>• # of downloads</li> <li>• Usability survey</li> </ul> <b>Output</b> <ul style="list-style-type: none"> <li>• Time to solve problems</li> <li>• Anecdotes</li> <li>• User ratings of contribution value</li> </ul> <b>Outcome</b> <ul style="list-style-type: none"> <li>• # of lessons that saved lives - E.g. Battle Command Knowledge System (BCKS)</li> <li>• Time, money, or personal time saved by applying lessons learned from others</li> <li>• # of lessons learned implemented in others parts of the org.</li> <li>• # of lessons learned that improved efficiency</li> <li>• # of lessons learned that lead to innovation</li> </ul>
Best Practices Management System	<b>System</b> <ul style="list-style-type: none"> <li>• # of downloads</li> </ul> <b>Output</b> <ul style="list-style-type: none"> <li>• Anecdotes</li> <li>• Usability survey</li> </ul> <b>Outcome</b> <ul style="list-style-type: none"> <li>• Time, money or personal time saved by implementing best practices</li> </ul>

	<ul style="list-style-type: none"> <li>• # of groups certified in the use of best practice</li> <li>• Rate of change in operating costs</li> <li>• # of best practices that lead to innovation</li> <li>• How frequently is knowledge updated</li> </ul>
Virtual Collaboration for Meetings	<p><b>System</b></p> <ul style="list-style-type: none"> <li>• # of meeting conducted virtually from desktop vs traveling</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>• \$ saved in TDY travel getting to meeting</li> <li>• # of hours saved not traveling</li> </ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"> <li>• # of discussions that lead to innovation</li> </ul>

#### APPENDIX E. Additional Army Knowledge Management Resources

**Memorandum: SUBJECT: Army Knowledge Management Principles (PDF)**

[http://wiki.nasa.gov/cm/wiki/Federal%20Knowledge%20Management%20Working%20Group%20\(KMWG\).wiki/1001303main\\_MEMO\\_Army\\_KM\\_Principles\\_2008-07-29-1359271.pdf](http://wiki.nasa.gov/cm/wiki/Federal%20Knowledge%20Management%20Working%20Group%20(KMWG).wiki/1001303main_MEMO_Army_KM_Principles_2008-07-29-1359271.pdf)

**Document: Army Knowledge Management Principles (PDF)**

[http://wiki.nasa.gov/cm/wiki/Federal%20Knowledge%20Management%20Working%20Group%20\(KMWG\).wiki/1001304main\\_AKM\\_Principles\\_25\\_JUN\\_2008.pdf](http://wiki.nasa.gov/cm/wiki/Federal%20Knowledge%20Management%20Working%20Group%20(KMWG).wiki/1001304main_AKM_Principles_25_JUN_2008.pdf)

**Document: Developing an Enterprise KM Competency Model**

[http://blogs.nasa.gov/cm/wiki/Federal%20Knowledge%20Management%20Working%20Group%20\(KMWG\).wiki/1001796main\\_Developing\\_a\\_KM\\_Competency\\_Model\\_article\\_Feb\\_3\\_09\(3\).pdf](http://blogs.nasa.gov/cm/wiki/Federal%20Knowledge%20Management%20Working%20Group%20(KMWG).wiki/1001796main_Developing_a_KM_Competency_Model_article_Feb_3_09(3).pdf)

**Website: Army Knowledge Strong (requires AKO/DKO log-in)**

<https://www.us.army.mil/suite/page/411380>