

Metrics in Knowledge Management

White Paper

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The issue of measuring Knowledge Management (KM) is a live issue, and much debated. While there are many empirical based metric systems available online, or from consultants, others believe that, because knowledge is intangible, Knowledge Management cannot be measured.

However we believe that what cannot be measured, cannot be managed. Over the years we have seen some very successful metrics applied to KM. In this white paper, we discuss some of the principles of metrics as applied to KM. Based on that experience we suggest a four-fold approach to metrics

- A gap assessment, to plan your KM campaign
- A deployment metric, to measure deployment of your KM approach
- An activity metric, to measure usage of the KM approach
- An outcome metric, to measure the difference that KM is making.

Metrication principles

Any system of metrics system should be designed to answer one or more questions. Therefore you need to, get clear on the questions you want the metrics to answer. Metrics can help answer several questions, as shown in the text box, and there may be more than one stakeholder who has questions to be answered. For example, the KM implementation team would like the answers to questions 2,3 and 4 in the sidebox, in order to focus their work, and reward and recognise the right people. Senior Managers want the answers to questions 1 and 5, to guide investment. One single metric is unlikely to answer all the stakeholder questions.

There needs to be some logic to the metric system as well. There are many competing empirical metric systems, where a set of success factors are ranked against a maturity scale. Use of these metric systems is only as good as the factors chosen, and these need to be based on theory as well as experience.

Finally, most metrics will require a baseline to measure against. Frequently people want to know the improvement rather than the single point measurement. Without this baseline, measuring the improvement due to KM is hard to quantify.

Which question will your metrics answer?

1 Does KM add value to the organisation? If it does, we will invest in KM implementation.

2 Do we have all the components that will allow us to do KM? If not, what's missing?

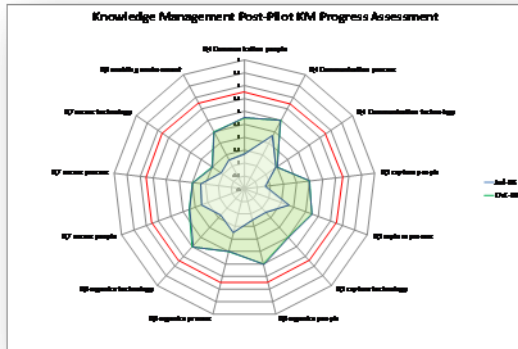
3 Is KM implementation on track? If not, what needs to be fixed, and where?

4 Are people doing KM? Who is doing well, who is not doing well?

5 Is our approach to KM delivering value? Because, if it isn't, let's stop (or find a better way)

Gap Assessment

This is an early measurement you will want to make, which is to find out whether you have the required elements of a systematic approach to KM, and if not, which are missing. This is an area where metrics are probably at their most empirical. We try to avoid this, and look at a combination



of the four boxes of the Nonaka/Takeuchi SECI model, with the three enablers of People, Process and technology. This gives 12 factors to evaluate. However even with this more logical approach, we still need a more empirical approach to measuring the governance aspects, such as leadership expectation, rewards and recognition, and KM support. Also at this stage you need to separate outputs from inputs. Culture, for example, is an output. If the culture is not supportive to KM, then something else is missing in terms of inputs - something in the leadership and governance area.

The users of this metric will be the KM implementation team, as their implementation plan will be focused on filling the gaps.

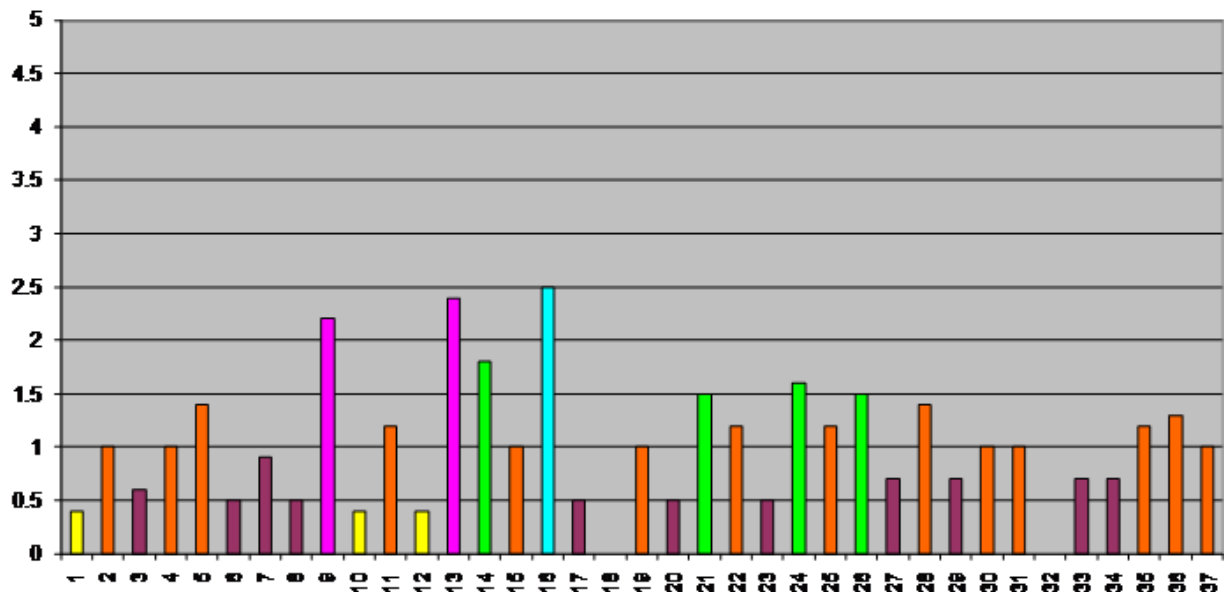
When you run your gap assessment at the start of KM implementation, you will develop some baseline metrics and allow you to establish future targets which you can measure improvement against. As the gaps are closed, rerunning the assessment should show progress. The green shading on the spider plot to the left shows the progress of a company a year after the initial assessment (inner line) as it progresses towards the target red line. This metric is useful to show to management, to demonstrate that progress is being made.

Measuring KM deployment

During the early stages of KM work, you will develop a model for what the components of KM look like in your organisation. We call this a KM “framework”. There is likely to be one framework for project teams, and one for Communities, as in the example below.

Framework for project teams	Framework for CoPs
Each project will have a KM plan	Each CoP will have a leader and a sponsor
Each project will have a KM champion	Each CoP will develop an online presence using the standard collaboration functionality
Each project team will be trained in KM principles	Each CoP will develop a charter, which contains
Each project will capture lessons as follows
Each project will follow the corporate file plan in its IM structure	

These frameworks need to be deployed across the organization. People need to be trained, roles need to be in place, wikis need to be set up, plans and charters written. You can measure this deployment team by team, and measure the completeness of KM provision at team level.



The plot above is a plot used by one client to measure KM deployment across their business units, and allowed them to track the early adopters and the laggards. This plot was used by the KM implementation team not only to report progress, but also to plan and prioritise their interventions.

Measuring KM activity

Once Teams and Communities have the toolkit or framework they need to deliver KM, then you can measure activity levels (there is no point in measuring activity levels before the toolkit is in place). Again, activity measures for teams are likely to differ from those for Communities. Team metrics will focus on knowledge identification and storage. Community metrics will focus on knowledge sharing activity, and on the growth of the Community Knowledge Base. Team and community metrics are shown in blue and red respectively on the sidebar.

If your intention is to recognize and reward good KM performance (while recognizing and supporting poor performers) then you need some activity measures, so you can recognize where performance is good. In addition the KM champions and community leaders can use these metrics to monitor and steer KM activity in their own team or community.

Measuring business outcome

Possible KM activity metrics

- Questions asked per month on a Q&A/discussion forum
- Answers per question on a Q&A/discussion forum
- Number of users of knowledge base
- Frequency of update of wiki
- Number of wiki editors
- Number of community members
- Number of active community members
- Lessons per month identified by team
- Best practices submitted per month to best practice sharing system
- Frequency of AARs
- Number of open/closed lessons
- Time taken to close lessons
- Number of people being trained in KM
- Documents filed per month
- Frequency of update of best practices
- Frequency of update of SOPs based on new lessons

KM is not introduced for its own sake, it is introduced for sound business reasons. Therefore introduction of KM should result in visible improvements to the business, such as improved efficiency and effectiveness, and in changes in culture and behaviours. You need to be able to measure these changes and outcomes, for two reasons.

In the early stages of implementation, demonstration of value may be needed to gain the full support from senior management. They will need to make some investment decisions in order to fund KM implementation, and they want to be sure their investment will be worthwhile. Therefore during the early stages of implementation you may wish to select an area of the business that is struggling through poor KM, take a baseline metric, you introduce KM through a pilot project, and then measure how much the metric improves from the baseline.

It is also possible, though more tricky, to continue to measure value during KM operation. Ford, Shell and Conoco Phillips do this through putting a monetary value on learning interactions. In their business areas, it is possible to measure the increases in efficiency generated by improvements in process. Where these improvements are then shared with, and taken up by, other teams, value is delivered and can be recorded and tracked.

At a macro level, if KM supports efficiency and effectiveness, then as you deploy and apply KM, the more efficient the business should become. You need to track this, using whatever business metrics are used as efficiency measures. This is not to say that all efficiency improvements are a direct result of KM, but if you are introducing KM and business efficiency is not improving, then something is going wrong somewhere, and you need to find out why. You need not only to be tracking business efficiency metrics, but seeking to link those, through story and anecdote, with your KM interventions.

Not all business outcomes will be financial. Your KM program should result in cultural changes as well. Cultural attitudes to KM can be measured in surveys (perhaps included in an annual staff survey) and a baseline survey is needed prior to the start of implementation.

The primary audience for business outcome metrics is senior management, who wish to know whether the investment in KM has been money well spent.

Summary

It is hard to measure all aspects of KM implementation in a single metric. The metrics described above are introduced in stages, and each stage represents a progression in KM maturity, as follows.

- Gaps identified
- Gaps filled, and KM framework introduced
- KM framework being used
- KM framework delivering value.

Our recommendation would be to apply these metrics in a staged way, to answer the specific stakeholder questions. Some need to be applied at the organizational level, others at team and community level, to track KM deployment, activity and value generation across your organisation.