Using Metrics to Track Community Outreach Progress

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Use this process to develop metrics to help you understand how well you are implementing your community outreach program as well as how to improve it.

INDUSTRY THROUGHOUT THE WORLD IS recognizing the importance of community outreach. Environmental management programs, such as the Chemical Industry's Responsible Care program, the National Association of Chemical Distributors' Responsible Distribution Process (RDP) code, and EPA's Performance Track, incorporate public outreach and stakeholder communications components.

Determining the effectiveness of these programs is difficult because of the qualitative nature of the communication process. However, measuring effectiveness is an essential first step toward monitoring, assessing and improving community outreach strategies and evaluating compliance with management systems. A set of quantitative metrics would be an extremely useful tool for assessing whether these programs are successful. Such metrics could be used to set reasonable goals and track progress toward these goals.

The American Chemistry Council (ACC) has adopted mandatory commitments to advance performance in a broad range of areas, including environment, health, safety and security for its members. To monitor advances, systems must be in place to measure performance. Performance measures must then be made available to the public for tracking company and overall industry performance.

The ACC's Responsible Care Management System, developed in 2002, specifically requires companies requesting certification by the Responsible Care Program to evaluate stakeholder outreach effectiveness. Currently, however, there are limited tools available to help companies undertake such a quantitative evaluation. The general concepts presented here are intended to be applied in company-specific environmental management systems.

Metrics are part of the Plan – Do – Check – Act (PDCA) management cycle. Metrics are the *Checking,* the bridge between *Doing* and *Acting*. Metrics measure what you do and give insight into how well you are doing it.

When ongoing programs are routinely evaluated and upgraded, this is continuous improvement. This can be accomplished using tools like PDCA and metrics. Continuous improvement is more than just a goal; it is itself a measure of an effective management system.

For example, one of the basic tenets of the Responsible Care program is that "Every Responsible Care company is required to certify that a management system has been put in place and must demonstrate progress toward improved performance." The continuous improvement of a community outreach program begins with measuring the products of that program.

The purpose of a community outreach program needs to be established first, before the appropriate metrics can be determined. Many may consider performing the com-

munity outreach tasks themselves to be the purpose. For example, the purpose may be assumed to be the sharing of information with the public. Sharing information is a means to an end, however, not the final goal. The desired end should be, for example, decreasing community outrage and building trust and credibility. Metrics will measure how well your processes are being implemented, but they do not measure increased or decreased outrage and trust directly.

The focus on the process makes sense, since a company can control processes but not outcomes. The focus on processes versus goals requires faith in the long-term outcomes of your community outreach program. Consider the sports analogy of a football game. If the measurement applied to every play was whether a touchdown was scored, then the conclusion would be repeated failure. However, if instead the team looks at the execution of each play and whether each player is doing his job, the conclusion is repeated success as the team moves down the field to eventually score a touchdown.

Characteristics of a good metric

Some things are more easily measured than others. For example, economic performance can be quantified in terms of quarterly profits and losses, and greenhouse gas emissions can be quantified in terms of tons of carbon dioxide released to the atmosphere.

These metrics share some characteristics of a "good" metric, namely, they are:

Measurable
Easy
Timely
Repeatable
Insightful
Controllable

Measurable. A good metric is measurable — it can be quantified or represented numerically. Measurable metrics have the advantage over qualitative metrics (*e.g.,* yes/no, green/red, or ahead of schedule/behind schedule) in that they allow the tracking of improvements and viewing of trends.

Small changes in the output of a process are more easily detected numerically. For example, the metric "Did you open your facility for a public tour this year?" has only two possible answers: *yes* or *no*. However, if instead you record the number of open houses in a year, then you can see whether the annual frequency has been increasing or decreasing.

Some numerical metrics also produce data that are amenable to statistical analysis. For example, it may be possible to develop measures of central tendency and variation over time, and tracking these measures may provide insight into a company's communication processes.

Easy. Metrics should be easy to understand and apply. Teams may take more time developing and using their metric than actually performing the process. A difficult metric runs the risk of becoming the focus of outreach, as opposed to the outreach itself.

Easy means that the quantitative data needed for the metric are available, and that special data-collection or manipulation techniques are not needed. The relationship between the metric and the process it is measuring should be obvious. In addition, the data collected should be able to be presented using standard and understandable figures or graphics (*e.g.,* pie charts, time plots, etc.).

Timely. A good metric should be timely — that is, the process is being measured as close to real-time as possible. Timely metrics collect information and provide feedback quickly so the process currently in use can be modified. There is less value in adjusting a process that was measured in the distant past (*e.g.,* last year) than one that is subject to real-time measurement. For example, if your process has a monthly cycle and it takes two months to collect and process your metrics, then the process you are measuring is almost three months old and there is less opportunity to modify the outcome. Metrics that are collected and reported on an annual basis may provide an understanding of the performance for that previous year, but will not contribute to improving the performance of the year measured.

Repeatable. A metric should be repeatable. Although there may be variation inherent in the process, the data are collected and used in a consistent way. Repeatability should be a characteristic of both the data collection (*i.e.,* if the data are collected several times over the same time period, the datasets would be the same) and the evaluation/interpretation of the data (*i.e.,* the same metric and conclusion would result from analyzing a single dataset multiple times).

Repeatability is important because it relates to process stability. If the process of collecting data and producing the metric is not "stable," then the process of generating the metric will itself introduce variation into the measurements and make interpretation of the metric more difficult.

Insightful. A good metric is insightful. It should provide knowledge about your process that is not evident while you are performing the process. An insightful metric provides a deeper understanding of how the process works.

For example, if the process involves the collection of much data randomly (*e.g.,* collecting public comments after a community meeting) and the metric is the number of responses, the metric does not reflect how well the

process is working. The responses themselves need to be evaluated and then a numerical estimate of the community response developed. It is the metric that provides the understanding of the effectiveness of the communication. Just knowing the number of responses collected at the meeting is of limited value.

Controllable. A good metric measures something that is controllable. It is a direct or indirect product of the process that is measured.

The number of community meetings held measures a direct product of a community outreach program that is under the control of the process. It is something that you control. It might be tempting to, instead, measure the number of community members attending your meetings. That, however, is not under your control. You cannot force people to attend, although attendance can be influenced through, for example, better advertising of the meeting and notification procedures. Some community outreach meetings have been scheduled at the same time as an important competing event: a graduation, city meeting, religious holiday, sporting event, or some other affair that members of the public would prefer or are required to attend. In such cases, a decrease in the number of community members at your meeting could be incorrectly interpreted as a function of the community outreach process (although certainly selecting an appropriate date is part of a robust process) and could lead to a faulty action (*e.g.*, terminating future meetings because the public is not attending).

Community outreach programs typically have a limited number of controllable products. These products, however, should be the focus of your metrics. Metrics provide a bridge back from the products of your community outreach program (*i.e.*, the process) to the outreach program itself.

Many organizations have difficulty embracing the topic of controllability because the results that they desire, *e.g.*, a community that trusts them, are not under their control. A community outreach program can provide the tools and create the environment that decreases outrage or increases trust, but no program can deliver these results directly.

We need to set realistic expectations of what our community outreach programs can accomplish. Building trust with a community is important, but this typically happens over long periods of time that are marked by a consistent community outreach program. We need to trust that the program will ultimately influence community outrage and trust.

Developing a customized metric

When choosing a metric for your community outreach program, consider the six characteristics previously discussed above, as well as how either public outrage or trust might be affected. The following five-step process is proposed:

1. Develop a flowchart for the process.
2. Identify both intermediate and final products of the process.
3. Identify the quantitative measures of the products that can be made.
4. Apply the six criteria to the product measures and rank them according to how many of the criteria are met.
5. Create a reporting method for the quantitative data collected about the product.

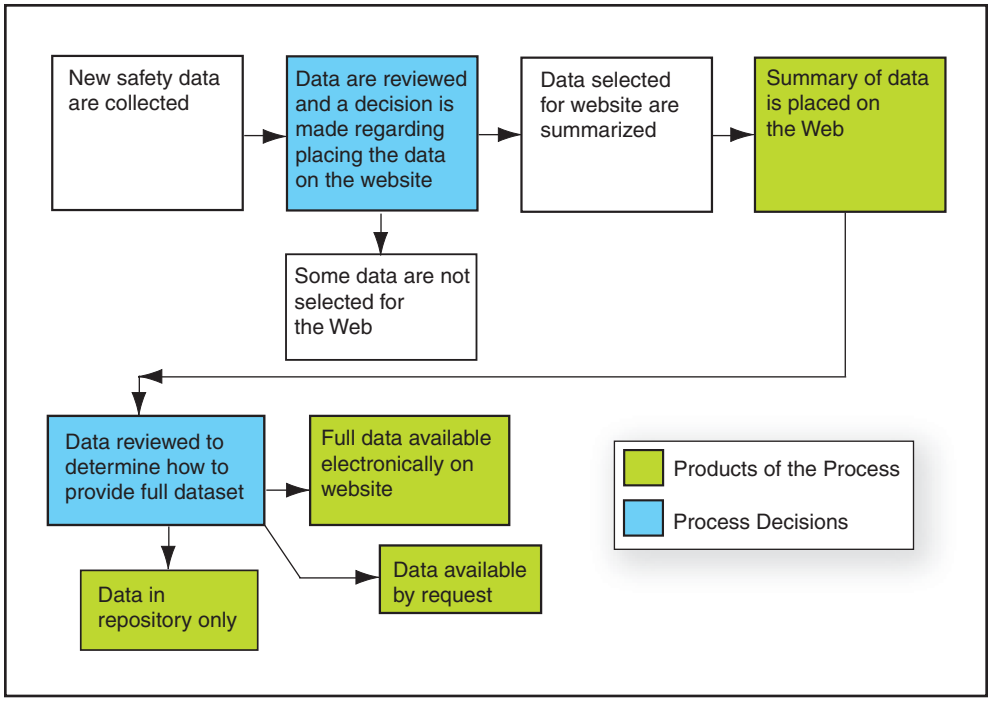

Figure. Nuts and Bolts Company's procedure for determining whether and how to share the safety data it collects with the public.

An example of developing a metric

The Nuts and Bolts Co. is accustomed to using metrics to measure how well its processes make nuts and bolts. Its manufacturing processes are under control and all nuts will fit all same-sized bolts. However, it has not applied the same systems-based thinking to outreach to its community. In fact, the management of Nuts and Bolts believes that if the community is not asking any questions, they should not bother them with information about the factory.

One day a box of nuts and bolts falls from a truck leaving the facility and a passing car gets into an accident after driving over the spilled products. Now, the community is concerned about safety at the facility. After meeting with community leaders, the management of Nuts and Bolts agrees to provide written information about the factory's safety program. Here is how they might consider developing a metric to monitor how well they are sharing information with the community.

Step 1: Develop a flowchart. First, Nuts and Bolts develops a flowchart that shows how it chooses which information to share with the public and how. The figure depicts the process of sharing information with the public via a website.

Step 2: Identify intermediate and final products. Next, Nuts and Bolts identifies the four products of its process (shown in green in the figure) — the data summary, the posted data, the data in the repository and data provided by request. These are the possible outcomes of presenting to the community the data that have been collected. Decision steps in the process are not considered products of the process in this example.

Step 3: Identify possible quantitative measures. Nuts and Bolts then lists some quantitative measures for each of the products identified in the process flowchart, such as:

- number of dataset summaries added to the website
- percentage of dataset summaries added to the website
- relative percentage of datasets posted, in repository, or available by request
- number of datasets not posted.

Many others could also be developed.

Step 4: Apply the criteria and rank the measurements. The product measurements identified in the previous step are now quantitatively ranked. If you have identified many measurements, you could shorten the list for the evaluation.

Table 1 shows how these four measurements stand up in light of the six desirable metric characteristics. The ranking is semi-quantitative, using ++, +, 0 or – to score the measurements. Some of the differences are subtle. For example, the percentage of the total number of dataset summaries added to the website can be misleading. If the goal is to put out the largest number of datasets, then a percentage depends on how many were received for the time period of the evaluation. Is it better to post three of five datasets in a time period or 100% of two datasets in the same time period? The 100% value looks better, but a smaller number of datasets was posted. Each answer has value, but in this case the total number is more insightful.

Table 1. Product measures are evaluated against the characteristics of a good metric.

Metric Characteristic	Number of data summaries added	Percentage of data summaries added	Percentages posted, in repository or by request	Number of datasets not posted
Measurable	+	+	+	+
Easy	+	+	+	+
Timely	+	+	+	+
Repeatable	+	+	+	+
Insightful	0	–	++	–
Controllable	+	+	+	+
Rank (based on the sum of +'s and –'s)	**#2 (5)**	**#3 (4) Tie**	**#1 (7)**	**#3 (4) Tie**

Each product measure can be rated ++, +, 0 or –

Step 5: Create a reporting method for the highest-ranked measures. The highest-ranked product measurement is now the metric. This step develops a reporting method for the measure(s) selected. Graphical methods are preferable, such as a pie chart or a time plot to show trends.

This metric reports that, while posted data on the Web are steady at 10%, the amount of data going to the repository is increasing over the year and the amount available only by request is decreasing. If the goal of the program is to get the data onto the website, this metric suggests a successful program. Note that the metric is only measuring the process of getting information to the public, not the level of public concern about safety at the Nuts and Bolts factory.

Model metrics for a community outreach program

Table 2 suggests some preferred metrics, as well as some less-preferred ones. Use this list to brainstorm possible metrics for your own community outreach program, and apply the process presented here to develop

actual situation-specific and company-specific metrics.

These suggestions should not be interpreted as either absolute recommendations or restrictions on the use of these metrics. The purpose is to compare the pairs of metrics meant to measure the same process, as well as to generate discussion about what the metrics are actually measuring and which measurement is more useful in improving the communication process.

For instance, both metrics in the fifth row (frequency of one-on-one interactions with community vs. percentage of meeting attendees with whom you have one-on-one interactions) measure an important aspect of community outreach: talking with your neighbors. However, frequency is preferred because it gives the number of interactions over time — a trend of decreasing or increasing frequency tells a company how regularly it is talking with its neighbors. The percentage of meeting attendees could be misleading, because a series of results near 100% could result from several meetings with very low attendance and each of the attendees having one-on-one contact. CEP

Table 2. Potential metrics for measuring the effectiveness of a community outreach program.

Preferred Metrics	Less-Preferred Metrics
Number of community meetings held	Number of attendees at the meeting
Number of briefings with the press	Number of positive press articles
Length of time to respond to phone inquiries	Number of phone inquiries
Frequency of written communications to the community	Written communication provided to community (Yes/No)
Frequency of one-on-one interactions with community	Percentage of meeting attendees with whom you have one-on-one interaction
Number of commitments made to community vs. number of commitments completed	Percentage of commitments completed
Frequency of communications not related to specific critical issues (do you communicate only when there is a problem?)	Number of total communications
Percentage of activities where community feedback is requested	Number of community feedback cards received
Number of tours offered	Total number of people attending tours
Percentage of neighbors who file complaints with agencies about, *e.g.*, odor or noise	Number of lawsuits filed
Percentage of prepared "key messages" issued that appear in media coverage	Occurrence of "good" publicity

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