It Is the People Who Count in Measurement: The Truth about Measurement Myths

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The most overlooked aspect of software measurement is the effect on the people involved. The introduction of measurement in an organization involves a cultural change, but how much people affect the success of measurement is seldom anticipated or examined.

Here we debunk 10 of the most common management myths related to measurement and look at how people issues can ultimately cripple a measurement program or lead to its resounding success. We also talk about strategies based on our consulting experiences to help readers overcome obstacles in their organizations.

Myth No. 1:

People need only to know about the benefits, and measurement will sell itself.

Fact: Knowing the long-term benefits of measurement is important, but this is not enough to sell measurement in an organization.

Tell people the truth, repeatedly, about the benefits and the obstacles in implementing measurement—and it must be a consistent truth at all levels. Workers are insightful and know when the truth is being obscured.

It is critical that communication be consistent about measurement initiatives, particularly in the following areas.

- The reasons for measurement. Be honest and to the point. If measurement is intended to combat outsourcing threats or to find ways to reduce the work force, say so.
- Realistic time frames. It may take up to two years before the capture and analysis of data yields quantifiable results.
- Staff involvement. What is the expectation for each staff level for each phase of the measurement program? Will overtime be involved? How will their jobs change?
- What is in it for measurement participants? For example, increased estimating accuracy will provide management with realistic schedules and reduce unrealistic pressure on development staff to deliver before the software is finished.

Position measurement as a management tool for improvement, not as a "big brother" tactic to instill fear in the staff. Given the reduction mentality of the 1990s, skepticism and insecurity in information technology is rampant. With the introduction of any change, many people will hear what they want to hear, and some will think the worst. Management may be looking for reasons to outsource or cut back, and it is inevitable that those being managed will ask, "What is in it for me?"

Also, the rapidly changing world of technology leads many to believe that measurement is just another "program of the month" that will go away. Already under pressure to do more with fewer resources, many systems professionals believe time is wasted on activities that do not generate program code.

Another fear—measurement will show that "we are not as good as we have been saying we are or as good as the rest of our industry." It is more important, therefore, that participants receive some practical benefits of measurement, rather than merely being told about them.

Myth No. 2:

The right way to start a measurement program becomes apparent once you identify corporate objectives. Then, you just need to implement it.

Fact: Every measurement program should be aligned with the corporate objectives, but corporate objectives often do not include any "people" factors. Since people are the participants in a measurement program *and* the source of the data, poorly planned or haphazard attempts at measurement may compromise the program and reduce the anticipated benefits.

When planning your measurement program, consider the following to resolve some of the people issues.

- Upper management routinely develops the corporate objectives, but most of those in the organization do not know or understand those objectives. Ensure participants understand what the corporate objectives are and how measurement directly or indirectly links achieving those objectives. Everyone involved in measurement needs to know how their participation will benefit their position or the corporation as a whole.
- Individual corporate objectives often address a singular direction or desired marketplace position and exist to complement other corporate objectives. As such, one objective may indicate that a particular metric is important, without addressing other complementary metrics. One or two isolated measures will not be enough to build a sustainable metrics program.

A good program requires a balanced suite of measures that track achievement toward the critical corporate objectives. In this way, the gains toward one corporate objective are not to the detriment of another.

Myth No. 3:
There always will be people who resist change. Just give them time and they will come around.

Fact: Resisting change is more common than not, and a few hard-core resistors can sabotage an entire measurement program. Some think that anything new cannot be good or necessary. Others revel in the attention that being a detractor can attract. These people will only come around if they receive some benefit in the form of a tool they can use and understand. If they do, they likely will become the program's strongest supporters. It is well worth the extra effort to educate and work with these individuals to plan and implement measurement. Once they have been a part of the process and understand what is in it for them, former resistors often become your best lobbyists for measurement.

Myth No. 4:
Teach people the basics of measurement, then they will not need ongoing presentations.

Fact: Marketing professionals attest that the successful introduction of change relies heavily on frequent, effective presentations. People require many exposures before assimilating information, and measurement and its use are a complex subject.

In the first few exposures, people grasp the minimal information they need to get started. Providing only basic information yields only basic results on most projects. Newer technologies require advanced measurement techniques and better, in-depth use of data. Ongoing training keeps the measurement program in focus and on track, ensuring that changes are quickly disseminated to program participants.

Myth No. 5:
Software measurement is easy.

Fact: It is tempting to say that measurement will be easy and painless, to encourage participation. That is not always true. Such statements could damage the credibility of the entire program.

Software measurement is a complex subject that is pondered, discussed, and debated by some of the best software engineering minds in the world. Good training eases the usage of software measurement, but a few "casebook" systems and even the function-point rules that seem simple to understand are not always easy to apply.

In function-point counting, the counters need to know that even the experts sometimes have questions and that questions are preferable to producing invalid data. Measurement is a discipline that requires both effort and financial investment. There are no simple shortcuts to accurate measurement, but the journey can be rewarding to all involved.

Myth No. 6:
People can manage the start-up of the measurement program in addition to their current job.

Fact: It takes a full-time, dedicated resource to plan, do, check, analyze, report the results, and act on the results of a new software measurement program.

Although the budget cycle and budget constraints of many organizations can make this difficult, a successful, planned measurement initiative *does* require at least one full-time, dedicated resource. This resource also needs management's full support.

Myth No. 7:
Anyone who is available is a good candidate for the measurement coordinator.

Fact: Wrong! To properly introduce a cultural change, such as measurement, requires a change agent with knowledge of the subject and strong communication skills. Measurement programs rely heavily on marketing and require strong skills in human resources, data gathering, analysis, presentation, effective communication, and metrics. The measurement coordinator must balance the measurement program's needs with the measurement participants' readiness to accept and embrace change. This person can make or break the software measurement program.

In addition, the metrics person or function—even in a mature metrics organization—cannot be placed at random on an organizational chart. It is critical to the program's success to place the measurement function under the senior management who endorses and believes in the measurement initiative. More than one measurement program has suffered demise by reorganization.

Myth No. 8:
Measurement data brings its own rewards.

Fact: True to a limited extent. However, an important part of any new program's success lies in recognizing people and their accomplishments. Participants appreciate some acknowledgment of their efforts. Small tokens such as certificates, coffee mugs, ribbons, and thank-you's from management go a long way toward making people feel good about the program. Positive reinforcement of positive actions leads to even greater success.

Myth No. 9:
We will tell people about metrics on a need-to-know basis.

Fact: Corporations where this is a communication policy need to relax it when it comes to metrics and other corporate changes where success is dependent on people. Secrecy breeds notions of conspiracy, especially in an environment rife with downsizing, outsourcing, reengineering, or reorganization.

If your measurement program is truly to measure the process and not individuals, minimize rumors to the contrary by posting the minutes of your metrics meetings. Once the published information concurs with your presentations and with what management is saying, people become comfortable with the measurement initiative. Keeping minutes and plans secret fuels the rumor mill and churns out misinformation.

Remember, perception becomes reality in the absence of facts.

Myth No. 10:
Companies with outsourcing agreements that include measurement are naturals for measurement success.

Fact: Outsourcing arrangements bring their own unique set of people issues, regardless of whether measurement is involved.

Outsourcing agreement terms usually include only vague references to measurement, including what the measures are, how they should be used, which party should be responsible, and what the measurements mean. Often one of the first "projects" following outsourcing is to implement the measurement requirements outlined by the contract. Any measurement initiative can be sabotaged by people who say they understand measurement and its uses and do not.

Conclusion

These management myths are the root of many common people issues in software measurement. This list is not exhaustive. Other myths, such as "we are different; you can't measure us," prevail with development staff. Again, they involve people issues that require resolution. A separate article addressing these developers' myths is available from the authors.

Clear communication with and among people is the most important element in software measurement success. It is the people who count in measurement—recognizing and debunking the common management myths in your organization will take you far on the journey to measurement success. ◆

About the Authors

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