

When Good Numbers Go Bad

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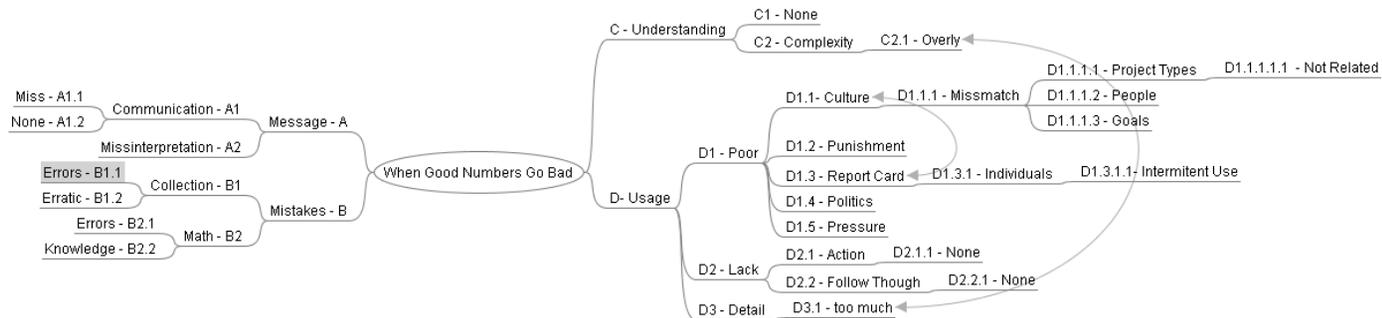
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The Basics

- All numbers begin life as good and useful tools until a combination of mistakes, misunderstandings; organizational politics and poor usage interact to cause 'Good Numbers to Go Bad'.
- One of the roles of function point specialists, project managers or metrics gurus is to act as a steward of the numbers and a high priest of information.
- The world in which we live is information rich with very little structure and few filters to help sort fact from fiction.
- We are stuck in a position in which we must pay attention to everything (an affliction known as Continuous Partial Attention), measures and metrics are tools to combat the symptoms of 'CPA' (however, used incorrectly they could also make it worse).
- Defining what is important to the organization and what to measure is critically important, but can not be a truly democratic event.

Four Major Prescriptions For 'GNTGB'

- Message Messes
- Mistakes, Errors and the Like
- Lack of Understanding
- Lack Of Use or Poor Usage



Message: Communication

- Communication
 - Field of Dreams: Unvalidated vision
 - Monologues: Unidirectional communication
 - Beliefs: Powerful filter

‘A metric program is ineffective unless it is linked directly to a set of goals, mission or vision.’

Michael Sanders, past CIO of Transamerica Life

Solutions:

- Validate how goals have been translated into metrics.
- Actively address misinformation and interpretations by providing neutral interpretations.
- Involve measurement users in analysis, interpretation (take a page out of Web 2.0).

Message: Misinterpretation

- Misinterpretation
 - Lack of education and knowledge: Missing the know how or frame of reference to analyze or interpret metrics data
 - Active dissemination: Making up a story . . .

It is of paramount importance for an organization to ensure that the proper decisions are made based upon the best (most accurate) data available.

David Herron, David Consulting Group

- Communicate and educate early and often.
- Deal with misinterpretations as soon as they are identified.
- Keep interpretations neutral.

Mistakes: Collection

- Collection
 - Errors: Collecting the wrong information or not collecting it at all (including all of their variants ‘garbage in, . . . ‘).
 - Erratic: Collecting data when the urge (or boss) hits you.

In order to capture metrics the procedures, guidelines, templates, and databases need to be in sync with the standard practices.

Donna Hook, Medco

- Do not sweep problems under the rug.
- Make sure data specification is at a level that will allow you to actually collect it correctly.
- Collect data as specified in the measurement plan.

Mistakes: Math

- Math
 - Errors: Mistakes happen in logical definition of the metrics (enforced covariance), the data collected (wrong information reported) and the equations (poor usage of EXCEL).
 - Knowledge:
 - ‘I never took statistics in college but the graph looks pretty’ syndrome
 - ‘I can prove anything by number syndrome’
 - ‘Equation exhaustion’

“We accidentally used \$88 instead of \$66. Now our stakeholders ask for a second source.”

Rob Hoerr, Fidelity Information Services

- Have a professional statistician (or trained amateur) review your graphs, equations, assumptions and logical use of math.

Understanding: None

- None
 - Assuming: Don't make the assumption that users and providers understand what is being measured and know how to use the measures, or the data are contributing will be used for.

‘What many people fail to realize is that metrics need to be tracked over time and ANALYZED.’

Iris Trout, Bloomberg

- Communicate and EDUCATE early and often. Remembers awareness does not equate to knowledge.
- Use case studies to train your users and contributors.

Understanding: Complexity

- Complexity
 - Overly Simple: Failure to ensure explanative power of the measures and metrics
 - Overly Complex: ‘Baffle them with bulls... syndrome’

"Keep it simple. Ensure that the measurement is meaningful to both process actors and managers."
S J Sanders, BOT International

Solutions:

- Leverage a statistician to review your graphs and equations. Are they explanative? Are they predictive?
- Simplify, simplify then do it again, but do not violate step one.
- Involve metrics users in the analysis of the metrics and measures.

Usage: Poor

- Poor
 - Culture
 - Mismatches: Measures and metrics linked to unrelated items combined with the logical backing of studious people resulted in an at best interesting ramifications. Type of mismatches include:
 - Types of Work
 - People
 - Goals

Good numbers go bad when, 'middle management dictates what the metrics program will report in order to improve or make a less than stellar project look better than it really is.'

RaeAnn Hamilton, TDS Telecom

Solutions:

- Review the measures you are accumulating and reporting. Ask the following questions:
 - Do the measures work for all the types of work they are measuring?
 - Do the measures address all of the roles that participate in the work?
 - Are the measures and metrics aligned?

Usage: Poor

- Poor
 - Punishment: Leads to risk aversion or worse.
 - Report Cards: Comprehensive or jaded view? Team level measures to measure individuals.
 - Politics: “We can’t challenge that, it is too political”,
 - Pressure: Can incent behavior outside of the norm of common ethics (think ENRON)

One characteristic of a bad metrics program is to “Beat People Up” for reporting true performance.

Miranda Mason, Accenture

Solutions:

- Recognize the level of granularity each measure can be used for (person, team or organization).
- Create balanced scorecards linked to business goals and the behavior you want people to exhibit.

Usage: Lack

- Lack of:
 - Action: Data is collected, then nothing. Someone forgot that the “Some action is required here” block on the flow chart.
 - Follow Through: Inaction is a message about the perceived importance of the behavior being measured.

The key is that there is no point to taking measurements and deriving metrics if they aren't part of some (planned) decision making process.
Jack Hoffman, Wolthers Kluwer

Solutions:

- **USE THE DATA YOU ARE COLLECTING.**
- Report the measures (publicly) and take actions based on the data.

Usage: Detail

- Detail
 - Too Much: ‘If a little information is good, then more is better’
 - Information Overload: Contributing to organizational ADD (Continuous Partial Attention, CPA).

I believe regular customer review and involvement will significantly increase the chance that we will provide what our customer(s) want.
Mark Smith, Diebold

- Link information needs to your organizations business goals as an anchor to collect and report only what is required.
- Discipline is required to make business goals an anchor.

Summary

- Good numbers do not go bad all by themselves. Problems can stem from many sources including:
 - Lack of planning,
 - Lack of knowledge (on many fronts),
 - Politics and/or
 - Mere mistakes.

In the short term, it might be easier to let your numbers go bad, even to run wild. In the long run, planning and discipline are the only way to maximize the value of your metrics investment. Do not wake up late one night to see your numbers featured in a good-numbers-go-bad infomercial.