Ten Tips to Prematurely Terminate Your Measurement Process

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The Ten Tips

- **Serve ambivalent leadership**
- **Nurture a culture of indifference**
- **Focus on budget and schedule**
- **Punish people for poor measurement results**
- **Take inappropriate corrective action around special and common cause variation**
- **Refuse to own it**
- **Decorate the walls with progress and operational metric charts**
- **Use inconsistent measurement definitions across teams**
- **Vacillate measurement interest**
- **Focus on tools and technology**
- **Ignore the psychology of estimating and decision-making**

1 – *Serve Ambivalent Leadership*

- **Attitudes may include:**
  - **Make me look good (I want to be a "poster child")**
  - **Make us look good (but I still want to be the "poster child")**
  - **Provide me with the numbers (that support my personal goals)**
- **They don't know that they don't know what they don't know**
- **May believe their last fix in their last position will work here without considering the "new" context**
- **May not realize that the results they seek won't likely occur immediately, though behaviors may change (to appease)**
- **Ignore Deming's "constancy of purpose" (see Deeper Reading)**

Deeper Reading: www.strategicinventorymanagement.com/1/post/2010/05/demings-point-1-create-constancy-of-purpose.html

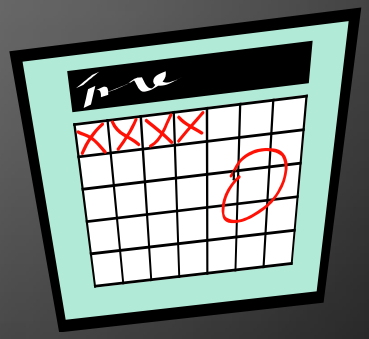
2 – *Nurture a Culture of Indifference*

- **Spend inordinate amounts of time on teaming, trust, and offsite meetings while avoiding the challenges of the organization**
- **Develop a management team that accepts unevidenced subjective reports as authoritative**
- **Run with the "upper right" quadrant of solutions from well-known consulting companies without matching "profiles" (or, are we really like them?)**

3 – *Focus on Budget and Schedule*

- **Don't resource, manage risk, or assign responsibility (3Rs) for measurement and improvement (like a real project)**
- **Ignore the business case**
- **Organizations tend to "manage what they can" vs. manage "that which provides insight"; as a result they ignore**
  - **Size**
  - **Quality**
  - **Risks**
  - **Consistent measurement**
  - **Lessons ~~learned~~ observed**
  - **Standard measurement definitions**

- **"Reach" for something (anything) different after reading Chaos reports**
- **Minimize the use of "actual" data during project execution; sustain limited estimating capability (Scrum teams)**



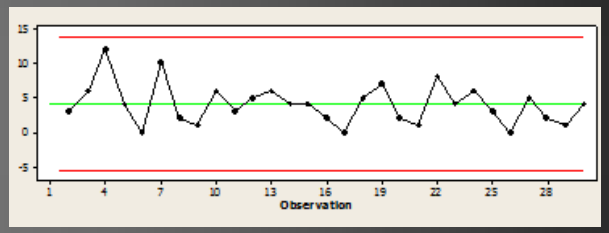
4 – *Punish People for Poor Measurement Results*

- **Repudiate the team that finds the most defects (or reward the team with the fewest!)**
- **Punish the team with the highest cost per defect metric (see Jones' work on diminishing returns)**
- **"Disincent" teams that spend too many hours in peer reviews (vs. known 2, 3, or 4:1 returns)**
- **Chastise teams for spending too much time in customer or phase-end or gate-exit reviews**

Deeper Reading: *The Economics of Software Quality*; Capers Jones; 2012
Drive; Daniel Pink

5 – *Take Inappropriate Corrective Action Around Special and Common Cause Variation*

- **Special / assignable cause variation reflects how well the *process is performed***
- **Common cause variation reflects how well the *process performs***
- **Use qualitative data while dismissing quantitative data**
- **Prematurely take corrective action on non-existing trends**



Deeper Reading: *Understanding Variation – The Key to Managing Chaos*; Donald Wheeler; 1993

6 – *Refuse to "Own It"*

- ***Outsource*** **the implementation and management of the measurement program**
- **Hire a consultant to do it *to you*, or *for you*, but not *with you***
- **Delegate the ownership to an unempowered committee**
- ***Insource*** **the measurement program to a *quality group* that is not in a position to influence outcomes (historically, a minority percentage of organizations have a quality group[1])**
- **Don't talk the talk or walk the walk**
  - **Avoid measurement and process improvement discussions during organization-wide meetings**
  - **Improvise in small groups and send mixed messages regarding commitment**
  - **DO talk about non-standard processes when the opportunity presents itself**
  - **Recognize those using non-standard processes; treat them like "heroes"**

Deeper Reading: [1]**CIO, By the Numbers, December 1, 2003, pg 28**

7 – Decorate the Walls with Progress and Operational Metric Charts

- Give stakeholders the impression that measures are meaningful
- Don't use those measures for decision-making
- Allocate time to keeping the wall current
- Surround the measures with pictures of leadership receiving rewards
- Keep data collection current but stagnate its use

8 – *Use Inconsistent Measurement Definitions Across Teams*

- **Allow teams to define only their own measures (what's important to me / them)**
- **Collect measures that are inconsistent across the organization (story points)**
- **Allow teams to retain their own measures and report them as needed to a measurement group (filtering and inflationary effects)**
- **Alter "scorecards" to increase "green" dots, minimize "yellow" dots, and eliminate "red" dots**

Deeper Reading: CMMI-DEV® - Process area: Measurement & Analysis

5 C's of Sizing Measures

Complete
- Captures all of the product delivered to the customer
- Doesn't capture "hows" but rather the whats

Correct
- Captures the measure
- Doesn't allow for manipulation of base measures

Consistent
- Captures clearly defined measures similarly for all
- Doesn't facilitate "local" massaging before entry

Current
- (Repository) differentiates between recent and ancient values
- Doesn't incorporate irrelevant measures for predictive models

Connected
- Measures are linked to organizational objectives; project measures to the organization's measures
- Doesn't allow measurement providers to create (and interpret) their own measures in place of organizational measures

Deeper Reading: : *Size - The Forgotten Measure*; SEPG North America; Albuquerque, N. M.; March 15, 2012

Use Case Points, Story Points, Function Points; What's the Point?

Characteristic	Function Points	Use Case Points	Story Points
Useful at the project level for estimating or planning	With historical FP data	With historical UCP data	With historical SP data
ISO / Standards based	ISO 20926	no	no
Captures customer view	Expected	Expected	Definitely
Useful for benchmarking outside the company	Could be	Could be	Less so
Easy to calculate	Less so	More so	Yes
Easy to validate for repeatability / consistency	More so	More so	Less so
Objectivity	More so	More so	Less so (team / team member variability)
Technologically independent	Yes	Yes	Maybe
Functional measurement to customer	Yes	Yes	Not exclusively (may include refactoring, design, and other work)

Deeper Reading: article by the same name as the slide awaiting publication by CrossTalk; March 2012

9 – *Vacillate Measurement Interest*

- **"Swing" from measuring nothing, to measuring everything**
- **"not everything can be measured, not everything that can be measured should be" – Einstein**
- **Pages is a good example (next slide)**

Deeper Reading: *Size - The Forgotten Measure*; SEPG North America; Albuquerque, N. M.; March 15, 2012

Page Size Variations

	Margins	Font	Font Size	Spacing	Bolding	Char. Per page	% Content Loss
Initial settings	.3 top & bottom; .4 sides	Times New Roman	10	Single	none	7584	0
	1”					5450	28
		Verdana				5686	25
			12			5177	32
				Double		4353	43
					ON	7185	5
Initial settings	1”	Verdana	12	Double	ON	1403	83

- Read “% Content Loss” (last column) as *variation*!
- Cumulative difference of one page to almost six
- Consider still larger font, font size, spacing, charts, diagrams, pictures, etc.
- **Impact on PMC SP1.1** – Monitor actual values of project planning parameters against the project plan.

Two·of·the·purposes·of·“counting”·in·the·software·development·world·are·to·provide·insight·for·the·awaiting·customer·and·improvement·across·various·development·activities.··Use·Case·Points,·Story·Points,·and·Function·Points·are·three·techniques·that·can·provide·measurement·insight·for·software·projects.··It’s·less·obvious·that·each·of·these·provide·similar·value·to·the·customer·or·organization·for·scheduling.··Perhaps·the·“maturity”·of·the·organization·and·the·culture·defines·the·“tolerance·level”·(adoptability?)·of·organizational·measures.··An·absence·of·relevant·comparisons·has·been·published·thus·far;·rendering·the·verification·of·relevant·measures·difficult.··It’s·too·early·to·suggest·that·valid·comparisons·or·the·emergence·of·preferences·among·these·measurements·are·unlikely,·but·they·are·made·more·difficult·by·the·lack·of·a·industry·standards·for·Use·Case·Points·and·Story·Points.··

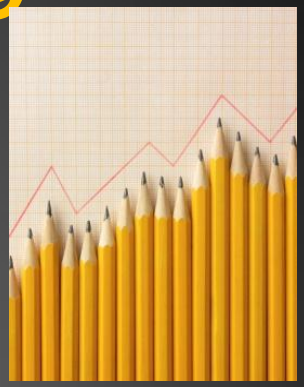
Two·of·the·purposes·of·“counting”·in·the·software·development·world·are·to·provide·insight·for·the·awaiting·customer·and·improvement·across·various·development·activities.··Use·Case·Points,·Story·Points,·and·Function·Points·are·three·techniques·that·can·provide·measurement·insight·for·software·projects.··It’s·less·obvious·that·each·of·these·provide·similar·value·to·the·customer·or·organization·for·scheduling.··Perhaps·the·“maturity”·of·the·organization·and·the·culture·defines·the·“tolerance·level”·¶

10 – *Focus on Tools & Technology*

- *A fool with a tool is still a fool* (btw, a tool is not required to play the fool!)
- Delay measurement collection until you have the right tool, interface, database, "benchmark data"
- Develop tool expertise rather than measurement expertise
- Make promises based on the "next release"
- Make more promises on getting "the tool right " the next time
- Shift blame for lack of progress to the tool implementation schedule and setbacks

Deeper Reading: www.flickr.com/photos/tcagley/243237097/

10 – *Ignore the Psychology of Estimating & Decision-Making*



- ***Set aside published research that examines biases***
  - ***Over-commitment*** **due to own ego or credibility**
  - ***Confirmation bias*** **– focus on information that confirms your beliefs**
  - ***Self-serving illusions*** **– tendency to cloud own judgment for personal stake**
  - ***Optimistic over confidence*** **– underestimating the difficulties associated with your preferred course of action**
- **Software and measurement professionals have demonstrated that estimation results—which weren't very close originally—often grow worse when subjected to competition and pressure to succeed.**

Deeper Reading: *The First 90 Days*; Michael Watkins; 2003

See also: Ricardo Valerdi's extensive research and publications on this topic

Closing Thoughts

- **Were you keeping score?**
- **How many of these sound familiar? Too familiar?**
- **Did you re-order these as we went through them; that is, what's your #1, 2, and 3 takeaway?**
- **How might you approach some of these ailments upon your return?**
- **Which of your favorites are missing?**

Topic Proposal

Key concepts to be presented

Successful measurement programs have essential elements for organizations. Measurement programs can be sabotaged using a number of techniques. Which of these are present in your organization today?

Learning Objectives (What participants will learn)

- **Establishing a culture for measurement**
- **Developing a measurement program that provides value to the business**
- **Managing the momentum for sustained measurement progress**

TOPIC
(Please limit to under 500 words)

A very small percentage of software measurement programs survive budget cuts, restructures, or the life of their sponsors. Yet a wide consensus of management teams favor the monitoring and tracking of projects and progress. What's up with that? This session is intended to be revealing, interactive, and therapeutic.

Keeping Score (yours!)

Tip #	Applies (Y/N)	Comment	My Priority	Forget it!
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
10				
mine				

Additional Readings

- *Underestimation in the "When It Gets Worse Before it Gets Better" Phenomenon in Process Improvement*; Valerdi
- *Measurements, Biases, Judgments: Understanding Variations for Reliable Estimates*; Keynote Address - Sao Paulo, Brazil; Brazilian Software Measurement & Analysis Conference; November 11, 2011; Joe Schofield
- *Size - The Forgotten Measure*; SEPG North America; Albuquerque, N. M.; March 15, 2012
- 80 other "related" presentations and publications @ joejr.com