

TITLE: "ESTIMATE TO DO VS. PERCENT COMPLETE"

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Since 1971: *"Software for the finest computer - the Mind"*

"We accomplish projects through people."

- Bryce's Law

INTRODUCTION

Some time ago I was visiting with a government agency in the western United States who was developing a new system for modeling highway construction. When I asked the Project Manager about the status of the project, he told me they were stuck in the development of a key sub-system that maintained the files, but his people assured him they were 90% complete and expected to overcome this hurdle shortly. I returned about four months later and met with the Project Manager again who told me they were still 90% complete. This surprised me and I asked, *"Wasn't this where you were four months ago?"*

He informed me the project team had run into some technical glitches but assured him everything was back on track and they were 90% complete.

I didn't visit the agency again for quite some time, about a year. When I returned, the Systems Manager told me the project had stagnated and, as such, he had to shake up the project team, including the appointment of a new Project Manager. I met with the new Project Manager who proudly informed me the sub-system was 90% complete.

Last time I checked with them, which was a few years ago, the sub-system was still 90% complete.

This story illustrates the problem with reporting project status using the "Percent Complete" technique. The project may be 90% complete, but that last 10% will kill you.

The fact that we are using a percentage implies some form of calculation. Regrettably, "Percent Complete" is

reported as a wild guess (a primary value) as opposed to any precise computation. It also implies "Percent Complete" is not a realistic means of reporting the status of a project, phase, or task; it is simply "guesswork."

MINI-PROJECT MANAGER CONCEPT

I have discussed the concept of the use of time and the "Mini-Project Manager" concept in past bulletins; see:

No. 09 - *"Managing from the Bottom-Up"* - Jan 31, 2005
<http://www.phmainstreet.com/mba/ss050131.pdf>

In essence, the concept seeks the active participation of the individual worker in the preparation of estimates, the execution of their duties, and the reporting of time. Employees are empowered with project activities and held responsible for their actions. This is a "bottom-up" approach to management as opposed to "top-down" where the worker's input is not solicited. Under this scenario, the workers prepare the estimates for their project assignments, thereby expressing a personal commitment. This estimate is then used to calculate schedules and resource allocations.

As workers proceed with their assignments, they should report the time expended and periodically (e.g., weekly) assess the remaining time to complete the assignment or as we refer to it as "Estimate To Do" (ETD). This ETD is their personal assessment of the remaining work and it is not automatically deduced by subtracting the time worked from the original estimate. Perhaps this will be the case, perhaps it will not. Let's demonstrate how this works in practice:

Original Estimate: 100 hours

Time Reported for Week: 30 hours

Perhaps the worker will have 70 hours remaining on the assignment, and perhaps not. Perhaps the worker will find the assignment is more difficult than originally anticipated and declare there is 136 hours remaining. $136 + 30 = 166$ hours total which will, in all likelihood, have an adverse effect on the worker's schedule (which may, in turn, effect other worker's schedules - a "chain reaction"). Conversely, the worker may find the assignment easier than anticipated and declare there is only 20 hours remaining. $20 + 30 = 50$ hours which will also affect the worker's schedule (and others). Obviously, if the "Estimate to Do" becomes larger or smaller than anticipated, the original estimate should be revised.

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SAMPLE TIME SCREEN

RE-00037 ANDERSON, MICK Week Ending Date: 12/13/05

PROJECT	RESOURCE	PHASE	ACT	OPT	FUNC	D/M/U	MON-07	TUE-08	WED-09	THU-10	FRI-11	SAT-12	SUN-13	TOTAL	EST TO DO
PD-004560	3102	3	C	SE	D		4	2						6	0
PD-004560	3102	3	D	SE	D					7				7	0
PD-004560	310202	42	A	PE	D						8			8	13
PD-004560	3102	3		PM	D		1							1	0
PD-004560	3103	3		PM	D		2							2	5
PD-95001		ASST			I			4		1	2			7	
PD-95001		PERS			I		1	2		1	1			5	
PD-99601		VACN			U				8					8	
DIRECT							7	2	0	7	8	0	0	24	
INDIRECT							1	6	0	2	3	0	0	12	
UNAVAILABLE							0	0	8	0	0	0	0	8	
TOTAL							8	8	8	9	11	0	0	44	
EFFECTIVENESS														66%	

In this example, the worker defines the time spent on the various project assignments by Project/Phase/Activity/Operation/Function. Notice that in some instances, the project key includes the information resource to be worked on (the deliverable). Time is allocated based on "Direct" time spent on assignments, "Indirect" interferences, and "Unavailable" time to perform work (such as vacations). The ratio between Direct and Indirect time is referred to as "Effectiveness Rate" which is used for scheduling purposes and controlling the work environment (it is most definitely not a measurement of efficiency but rather an analysis of the worker's use of time). Note that "Estimate to Do" only pertains to Direct assignments (not Indirects or Unavailables). Also, a time stamp is applied on the day when the worker zeroes out the "Estimate to Do" on an assignment, thereby defining the date when the assignment was concluded.

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What makes this work is to delegate authority and have the worker prepare responsible estimates, accurately report time, and carefully provide an assessment of the remaining work. If this is done properly, we can then accurately CALCULATE "Percent Complete": (Time Spent X 100) / Estimate

DEFINING PROJECT ASSIGNMENTS

This brings up another important point: Never devise a project assignment without a measurable deliverable to substantiate completeness. It has either been done, or it hasn't.

"It ain't over till it's over"
- Yogi Berra

Wishy-washy defined assignments will produce wishy-washy results. If you cannot substantiate the deliverable, you will never know if it has been successfully completed. For example, if a computer program needs to be produced, spell out its specifications. A worker can hardly be expected to produce an accurate estimate based on vague generalities.

CONCLUSION

Today, there are several Project Management packages on the market. Many offer fine facilities for defining work breakdown structures and dependencies, scheduling, and project reporting. But be wary of those packages that record "Percent Complete" as a primary field entry entered by the worker. This will lead to erroneous conclusions in terms of project status.

The "Mini-Project Manager" concept is concerned with creating responsibility and gaining commitment from workers. As such, it is more conducive to a Theory Y participatory management philosophy as opposed to a Theory X dictatorial approach. It seeks to empower workers and create a sense of project ownership. This is done by having workers participate in the estimating process, reporting time, and assessing the remaining work effort. If we want workers to behave like responsible professionals, we have to treat them as such. But it all begins with a simple premise, that the worker is mature enough to assume responsibility. Bottom-line, we have to recognize that we accomplish projects through people. Further, a project will only be accomplished if the individuals performing the work want to do it. If we engage the worker in the planning and execution of the project, the

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greater our chances are for success. This can be accomplished simply by asking the worker, *"What do you think?"*

For additional information, see:

No.17-*"Taking the Mystery out of Estimating"*-Mar28, 2005
<http://www.phmainstreet.com/mba/ss050328.pdf>

"PRIDE" Project Management
<http://www.phmainstreet.com/mba/pride/pm.htm>

END

About the Author

Tim Bryce is the Managing Director of M. Bryce & Associates (MBA) of Palm Harbor, Florida and has 30 years of experience in the field of Information Resource Management (IRM). He is available for training and consulting on an international basis.

"PRIDE" Special Subject Bulletins can be found at:

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<http://groups.yahoo.com/group/mbapride/>

You are welcome to join this group if you are so inclined.

The "Management Visions" Internet audio broadcast is available at:

<http://www.phmainstreet.com/mba/mv.htm>

Also, be sure to read Tim's Blog at:

<http://blogs.ittoolbox.com/pm/irm/>

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