The Tyranny of Deadlines

Rob Newbold, CEO, ProChain Solutions, Inc.

Introduction

Most people agree that speed is good. They also agree that deadlines are good, because ability to hit deadlines is considered to be a sign of good management. It's a better worker who can consistently make and meet her deadlines; it's a better company that has excellent due-date performance. What people rarely realize is that deadlines often conflict with speed. They cause project organizations to add safety time and then use it up. They promote multitasking. Overuse of deadlines can cripple your ability to Advance effectively towards your goals.

The three sections of this paper discuss how deadlines can be bad, why the problems aren't recognized, and what can be done to fix them.

The Problem with Deadlines

For purposes of this paper, I will call a "deadline" any date that you really don't want to miss. Deadlines can be set for individual tasks or entire projects, they can be formal or informal. I have seen them used for projects as diverse as construction, drug development, and aircraft engineering. In fact, I have very rarely seen a project organization in which deadlines did not form an important part of management's tracking and measuring system. Project health, from a time perspective, is translated as "are we going to hit our deadline?" Wall Street rewards predictability and punishes instability; individual workers are rewarded for hitting deadlines and punished for missing them.

Deadlines come with the expectation that unless something goes drastically wrong, they should be achieved. The promise of deadlines is extremely simple and logical: if everyone hits their individual deadlines, the projects will hit their deadlines. But let's explore what really happens.

Work has variation. That is not a bad thing; one way that organizations create value is by handling variation (Reinertsen, 1997, 16). The many unpredictable occurrences, from weather to creativity to individual productivity, may affect how long things take. Therefore, in order to set deadlines that we can achieve with a reasonably high probability, our tasks and projects must contain a certain level of safety time. Otherwise too many deadlines will be missed.

That safety time creates a conflict between individuals and the organization. Customers (and managers) want an earlier commitment, because faster is better than slower; workers want a later commitment, in order to have a good chance to make their deadlines. Workers can expect safety time to disappear if they acknowledge it, so typically they don't. In fact, **workers often experience an actual conflict of interest**: being transparent about how long things take and how much uncertainty there is, versus keeping it hidden in order to preserve safety time. Date discussions are rarely about what is real and credible, but about what compromises people think they can live with.

The effects of this conflict can be seen, for example, in the prevalence of "**schedule chicken**": a process of "contagious schedule slips" (Schedule_chicken, 2019, ¶2) stemming from a reluctance to report that

© 2019, ProChain Solutions, Inc. Originally published as part of 2013 Scheduling Conference Proceedings – Orlando, Florida

you're going to miss your deadline, instead hoping that someone else will have to report a delay first and thereby take the blame.

But there's an even bigger problems: **deadlines encourage multitasking**. For example, suppose you have a task that should take about two weeks to complete, and you've been given four. If someone asks you to do something else, why not agree? You have time. To say "no," you would have to be unresponsive, which is never a good idea. And multitasking creates inefficiency and increased cycle times (Goldratt, 1997, 125-127; Newbold, 2008, 43-47).

That leads to another issue: **deadlines skew priorities**. If you have a deadline that you're about to miss, chances are you'll try to hit it. But suppose you're also assigned to work on a much more important project, with a less urgent deadline. Where do you put your time—on the task that will allow you to hit your deadline, or on the project that's more important to the company?

And finally, **deadlines inhibit early completion**. The more safety time you add, the more you use, and the more you need. Here are a few reasons tasks and projects are rarely completed before their deadlines:

- If you deliver early, the next time you negotiate for safety time you will be given less.
- If you're on track to deliver on time easily, there are probably other things–for example, other dates–that appear to be more urgent.
- Other people base their actions on your deadline, and won't be ready to move the work forward until that date. Sometimes they're even upset when you deliver early.
- When requirements are unclear, work can easily be handed off on a date rather than when it is "done." Of course, this pushes problems downstream, where the cost of fixing them becomes dramatically greater (see, for example, Boehm, 1986, 15).

All these problems—multitasking, poor priorities, safety time—lead to longer, slower projects and decreased efficiency. They also lead to decreased transparency and therefore decreased predictability. As a result, in the end, new deadline dates end up being based on what happened in the past, which means improvements in speed are somewhere between difficult and impossible.

Deadlines have an impact on work life as well. They create stress, frustration, and mistrust. And ironically, management's typical reaction to poor results is to emphasize deadlines even more, locking in the vicious cycle.

An obvious retort is that some expert project managers use milestones and have excellent track records. To answer what's going on there, I have one word: homeostasis.

Deadline systems tend to be *homeostatic* relative to their deadline dates. They seek equilibrium around those dates. If a project or task is late, people work hard to get it back on track, sometimes working weekends and evenings to make it happen. If a project or task is early, people relax, maybe shuffling resources to something more urgent. There are pressures that move things earlier *and later*. Most project organizations are self-correcting as they try to hit their dates. Speed—above whatever is needed to hit deadlines—is agonizingly difficult.

Good project managers rely on good scheduling as an early warning system in case things go wrong. They are adept at motivating their teams, grabbing additional resources, and stashing away safety time. Poor project managers may take some time to recognize when things have gone wrong. Most organizations have some range of project managers, meaning that—while projects are rarely very early—

© 2019, ProChain Solutions, Inc. Originally published as part of 2013 Scheduling Conference Proceedings – Orlando, Florida

they are frequently late. In other words, the true homeostasis point, the equilibrium reached relative to deadline dates, averages somewhat later than the deadline dates. On average, projects tend to be late. Better project management unquestionably makes a difference. However, in a deadline system, true speed is rare. In my experience, that's true even in well-managed project organizations, whether they schedule using CPM, critical chain, or something else.

In summary, the "deadline promise"—make all your deadlines and the projects will finish on time—often doesn't work. A focus on dates brings longer cycle times, low efficiency, high variability, and high stress; making it harder to deliver early. Deadline management doesn't achieve its intended effects.

Why the Problems Are Not Recognized

The next logical question would be: if this is such a big deal, why don't we talk about it? There are several reasons.

Deadlines are a given, so we don't talk about them. We look at due-date performance, but we rarely look at the actual distribution of the completion dates. If we did, it would show the homeostasis I'm talking about. Consider the Standish Group's Chaos Report, that often-cited biennial survey of IT project health. These reports talk about projects that are cancelled, challenged, and successful. Many people have expressed reservations about their methodology. Here's mine: it's based on a binary picture. Early-late, cancelled-not cancelled. Statistically, there is a huge piece missing: how early and how late those projects are. Some companies have R&D projects that have value of a million dollars or more for every day they can be delivered early. How can that be unimportant?

Customers assume deadlines. In fact, sometimes funding is not available to support early delivery. That doesn't necessarily mean that there is no advantage to finishing earlier. It does mean that once deadlines are assumed, discussions of "whether" or "why" are usually over.

People don't understand the cause-and-effect relationships that lead from deadlines to missed dates and poor productivity.

Deadlines can be very convenient, because they eliminate the tiresome need for credible schedules and detailed priorities. For example, suppose you are assigned task A for project X and task B for project Y. Which do you work first? If the tasks have deadlines, that solves the problem: work whichever task is most in danger of missing its deadline. Maybe you multitask to make sure that each task continues to present minimal risk. But suppose task B is driving project X's completion, and task A is not driving Y's completion. Do you work X, to the detriment of a milestone on Y? Suppose completing project A has a hundred times the value of completing project B—what then?

Organizations that have neither speed nor predictability tend to value predictability. They assume that predictability must come first, as a sign of good management. They intend to push for speed when good management is in place. Unfortunately, better management is often taken to mean more and more emphasis on due dates, which makes the problems worse. In fact, predictability and speed are both results of good management.

The level of lateness is sometimes hard to identify clearly, because when it's clear that dates will be missed, they often change. We're no longer considered late if the date is moved out. There are many justifications for this "moving finish line" syndrome: changes to scope, acts of God, vendor problems,

© 2019, ProChain Solutions, Inc. Originally published as part of 2013 Scheduling Conference Proceedings – Orlando, Florida

and so on. Given the emphasis on deadlines, it isn't surprising that people would want to point fingers away from themselves when deadlines are in jeopardy.

The Solution

People use a relatively small number of reasons to explain why they can't avoid deadlines:

- Deadlines are an essential means of dealing with customers.
- Dates are how people communicate and interact inside a company.
- Dates are how we measure people, projects, and organizations.
- There is no real problem with deadlines; we don't want to be late on our promises, and if we're early, that's fine.

These reactions are truly difficult to overcome. Getting rid of deadlines would upend the universe as people usually understand it. It would require major changes to culture and systems. Because of this, and despite everything written above, *I do not recommend getting rid of dates*. Instead, I recommend *putting them in context*. Consider an organizational value expressed in the same way as the Agile Manifesto (Beck et al, 2001): **we value speed over deadlines**. It's not that we don't value deadlines; it's that we value speed more. Deadlines must be put in a context of speed. In fact, let's give it a little more emphasis:

We value speed over deadlines.

Deadline dates are fine until they conflict with speed. As a simple thought experiment, suppose you have a project worth $1,000 for each day it is delivered early, and another that is worth $100,000 per day. Finishing the first on time is fine – *as long as the second is moving as quickly as possible*. If you are familiar with agile or lean methodologies, this will seem perfectly normal. However, beware: while agile approaches emphasize speed, too often they still create short-term deadlines or "sprints" that add, and then use up, safety time. Too often they also sacrifice longer-term transparency in the name of shorter-term flexibility.

Here are a few ideas you can promote to help people in valuing speed over deadlines:

- Communicate dates sparingly, preferably only for key deliverables. ***Use schedules and precedence-driven, value-based priorities.***
- When you have commitment dates, work to beat them. Make on-time performance a necessary condition and speed a competitive edge. You still have the deadline, but ***speed is even more important.***
- Think of dates as ranges. You can do that by creating explicit "buffers" (Newbold, 2014, Chapter 6) to track safety time. The end of the buffer is the commitment date, but you want to minimize consumption rather than consume it all. When we have date ranges based on credible project schedules, we can have ***scrutiny without negotiation or recrimination.***
- "Deadline conformance" is not a good measurement of people if the dates are arbitrary, or negotiated, or conceal a lot of variability. Instead, learn to ***measure people based on how they really perform.*** Are they capable? Do they produce good quality and speed? Do they have a good attitude?

© 2019, ProChain Solutions, Inc. Originally published as part of 2013 Scheduling Conference Proceedings – Orlando, Florida

- It's ok to value quality over speed, just don't work to dates. ***Work to "done."***

If you still think deadlines aren't a problem, I urge you to contemplate them next time you're waiting in a doctor's office at 10 a.m. for a 9:30 appointment. Is that a homeostatic system? Is it chronically late? Do you think your doctor multitasks?

References

Beck et al. (2001) *Manifesto for Agile Software Development.* Retrieved March 2019 from http://www.agilemanifesto.org/.

Boehm, B. W. (1986) *Understanding and Controlling Software Costs* [Electronic Version]. Retrieved in March 2019 from http://csse.usc.edu/csse/TECHRPTS/1986/usccse86-501/usccse86-501.pdf.

Goldratt, E. M. (1997) *Critical Chain.* Great Barrington, MA: North River Press.

Newbold, Rob and Bill Lynch (2014) *The Project Manifesto: Transforming Your Life and Work with Critical Chain Values.* Lake Ridge, VA: ProChain Press.

Reinertsen, D. G. (1997) *Managing the Design Factory*. New York: The Free Press.

Schedule_chicken. (2019, March). In *Wikipedia, the free encyclopedia*. Retrieved March 2019 from http://en.wikipedia.org/wiki/Schedule_chicken.

© 2019, ProChain Solutions, Inc. Originally published as part of 2013 Scheduling Conference Proceedings – Orlando, Florida