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## Controlling Project Churn: A Case for Reality-based Project Management

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“There is nothing in this world *constant* but *inconstancy*.”  
--Jonathan Swift

Project churn happens, even with the best planning, even in the best of companies, even with well-intentioned managers. When such repetitive, disruptive project change does occur, what is its impact to cost, schedule, and resources? How can one prepare for it? Can it be harnessed?

This article is aimed at enabling the busy globalization or translation project manager to plan realistically for change, and to even embrace change rather than to just brace for it. Identification and control will be shown as real responses to common sources of project change. This article will present a practical approach for quantifying and managing churn. The intent is to equip the language professional to better set stakeholder expectations by more accurately factoring change into pricing, cost, and schedule planning.

As a globalization project manager, I should be accustomed to churn. Call me a control freak, but the fact is I am not used to it. I will never be used to it. I have a real problem with it. To begin with, there's entirely too much churn, and we need to be asking whether it is all really necessary. And be that as it may, churn takes too big a toll on human resources. Does anyone up there know or care about this impact?

Change is all around us. Consider those ever-changing styles of hair, clothing, autos, and just about everything else. What's cool and sexy today looks strange or stupid a few years later. To wit: tall tailfins on autos (which reached their apex around 1957, I believe), beehive hairdos, and flat tops. Never fear, the coolest stuff today becomes fodder for amusement of the next generation...if not sooner. Unless it gets recycled into cool retro.

Once there were Victrolas. Then there were 78-rpm records. Then there were 33.3-rpm LP records. Then there were 45-rpm records. And an 8-track fits in there somewhere. MP3, what's that?

Change happens and its pace seems to be quickening. It seems harder and harder to keep up with the dizzying array of gadgets and software tools to master, the growing collections of user IDs and passwords (seriously, I must have three or four dozen of them), PINs, and other funky features that differ to a frustrating degree from manufacturer to manufacturer. You get my point!

We cope with change--usually. Responses vary with the individual. Some try to live in the past, ignoring change altogether. At the other extreme, some can hardly wait for the next change in style, gadgets, and autos. That's the world in which we live.

And don't look for relief from change at work, since for most of us, things are even worse on the job. In fact, today's typical work environment subjects us to constant change regardless of the field. The workplaces many of us deal with are often downright chaotic. We are forced to deal with kaleidoscopic changes in technology, upgrades, goals, and methodologies.

### Project Churn Happens: Get Over It

But it's not just the times and the technologies that are changing. Projects also change. In his project management classic, *The Mythical Man-Month*, Dr. Frederick P. Brooks, Jr. put it this way: “Not only are changes in *objective* inevitable, changes in development *strategy* and *technique* are also inevitable” (Ref. 1.).

From my own experience, these changes sometimes occur mid-project, invariably when least expected. And just as likely, they occur multiple times during the course of what begins as a totally routine project. And without fail, even just after you have spent considerable time adjusting to the previous set of changes!

We are all familiar with these realities. We also know that this churn takes a huge toll on us mere mortals. It also impacts schedules, costs, and, dare we say it, the quality of our work as well.

Resultant overtime is just quietly tolerated to get the job done and never shows up on anyone's radar screen. Highly touted corporate mantras about balancing work and family go unheeded.

It stands to reason that for the project manager, handling this added load can be tantamount to having an additional project. Yet, the reality is that the proverbial pie remains only so big: there are just so many resources to go around, a finite number of hours in the day.

Less obvious is the fact that the toll of project churn typically goes unaccounted for. Intentionally or not, churn is not tracked nor factored into the scheme of things. In fact, your manager probably has only the vaguest awareness of its impact.

## **A Personal Quest for Churn Containment**

Let me now share with you my personal quest for the control and containment of project churn. I started with these questions:

- Why do we have project churn?
- Is project churn inevitable?
- Can it be measured?
- Can it be factored into project planning?
- Can it be contained?

Also, do we even want to measure, let alone contain churn? I mean, this can entail political ramifications. For instance, being able to quantify project churn may expose inadequate resources to get the job done. In some corporate environments, such additional considerations may not necessarily be welcome up the management chain. The *Book of Genesis* account of Pharaoh and the bricks comes to mind. You will maintain quotas and quality. And, oh by the way, you will do so without the benefit of one of the prime components, straw. Happily, my present employer is not like that!

But some may elect to bury this kind of extra churn-related effort. Do we really want to know? What will change if we can know?

Some industries are more susceptible to churn than others. Driven by short product life cycles, the worst offender is no doubt the software industry, which is where I now work. My present job environment poses a huge contrast to the almost leisurely schedules I often enjoyed in my previous life as a freelance translator in such fields as power plant engineering, pharmaceuticals, and furniture hardware!

I manage internationalization (internationalized product design) and localization of user interface and publications from the U.S. English source language into nine basic languages for assigned projects. In our parlance, internationalization (I18N) plus localization (L10N) equals globalization (G11N). Our key target date is the Release To Manufacturing (RTM) date. By corporate mandate, RTM delivers a simultaneous release of the U.S. English and localized product versions. Deviations are few. Availability of localized publications must follow within 90 days.

Think of the work involved, especially on large-scale projects, when you have to go back and replan and renegotiate the majority or the entire original plan! Consider the hours required to respin the various planning pieces and multiply this by the number of times the project changes.

There is also the energy it takes to go back and redo something I thought I had done thoroughly to begin with! I used to hate reworking a piece of translation after completion. Maybe you can relate to the context switching that compounds an already heavy load of multitasking. I heartily agree with Johanna Rothman that "...context switching demands more time and energy than you think...No matter how efficient you think you are, multitasking comes with a high cost. Because we're people, we don't swap out the content of our brains as easily as a computer does..." (Ref. 3).

And here's another impact: the hit to your reputation as a project manager! Like it or not, you can become a victim of guilt by association. No matter how you explain it, regardless of who is at fault, some of the blame rubs off onto you, calling into question your planning skills and possibly jeopardizing your vendor relationships. After all, why should vendors earmark resources for your next project if your schedules are

never solid? The word gets around amongst translators about a certain company or project, and soon you hear: "I'll only take on that work as a last resort." Sound familiar?

Churn impacts resource planners, project managers, translators, right on down to editors, all trying to allocate their resources and available time. Worst of all, the hapless project manager is caught in the middle. The inescapable irony here, though, is that coping with project churn and producing multiple project respins, should actually have the effect of enhancing one's project management skills!

In his excellent book, *Software Project Survival Guide*, Steve McConnell says: "Because of changing markets and evolving technology, software project feature sets amount to moving targets." (Ref. 2).

Regardless of how susceptible the software industry may be to change, I was convinced that something could be done to mitigate, to gauge the impact, or at least to show that I was not totally misguided in my observations.

## Up from the Victim Mentality

I ran across several timely rays of hope in McConnell's book, "...Some movement is inevitable; other movement can be controlled..." (Ref. 2). It gets better. McConnell actually challenges us to take charge: "...controlling changes as an integral part of project planning is critical to project success...As Gene Forte says, 'change control' is in marked contrast to 'change surrender'" (Ref. 2).

Seen another way, what McConnell is telling us is: Not only *can* we, we *must* control project churn. The project manager cannot afford to be driven along by winds of change. This boils down to: *control* or *be controlled*. It is just that simple.

This reminds me of my flight instructor's stern admonition some time ago: You make this airplane go where *you* want it to go. Otherwise, it will control you. McConnell empowers us to opt for the former. Are we feeling empowered yet?

McConnell continues: "Change *control* allows all necessary changes to be made while ensuring that change *impacts* are understood projectwide [*sic.*]" (Ref. 2).

So, it all comes down to choices: change control is a conscious choice. Choosing to control change puts us into the driver's seat. In turn, this gives us options—we can make necessary changes and understand the impact from these changes. By implication, understanding the impact caused by change may have the effect of curbing the amount of change. We really do need to understand these impacts and to look where we're going!

It is important to remember that each and every time you have to go back and redo, retouch, respin all or part of your plan, there is an impact, a cost. This translates into inefficiencies.

But how can we understand these impacts unless we measure them? Basic to understanding the impact of change is the measurement of its impact to available resources, to the schedule, cost, and to the scope of a project. It follows that ignorance of the impact of change makes us its victim. This is all about shedding the victim mentality.

More often than not, though, we have no tools to gauge the impact of change. Like accident investigators, we have to sift through the wreckage for clues at post mortem time. Our lack of tools leaves us exposed and relegated to a reactive, defensive stance.

## Wanted: A Few Good Yardsticks

Early in my quest, I made the assumption that metrics trump the stopwatch. Let me explain. Obviously, the most accurate way to gauge project churn would be to use a stopwatch or a detailed time log. Every time something about the project changes that requires me to go back and retouch, replan, recalculate, or respin, I would simply measure the time it took me to do this. But the stopwatch approach is completely impractical for the busy project management professional. Besides, since most of us are constantly in multitasking mode, even a so-called efficiency expert would probably be hard-pressed to produce meaningful measurements.

So, driven by a combination of desperation, self-preservation instinct, and more than a little hard-headedness, I set out on my quest for meaningful change metrics. The objective was to determine the *additional* time that would be required to *redo* a task due to project churn, over and above the initial planning cycle. My resources included recently acquired project manager professional (PMP) certification training, consultations with my former PMP training instructor, and heuristics that I collected from globalization project manager (GPM) peers across Tivoli globalization.

## Our Case Study

For this case study, I selected a software globalization project that had been particularly troublesome from early on. The impetus to take a snapshot came after numerous changes to the project's scope and schedule. By that time, I had been the project GPM for well over a year.

Here's the high-level, non-inclusive damage assessment of the selected project taken mid-project. This snapshot shows the level of change accrued up to that point.

RTM dates	1 official, 6 candidates, 1 to be determined
Project slip	7 months and counting
Plan decision checkpoints	3 and counting
Translatable user interface scope creep	2.5 times the original projection

Finally, even the product name changed a few times. By any measurement, this is a lot of churn!

For us, each project change typically involves the following task repeats: going back to get new input from all stakeholders, cross-verifying new dates, confirming available resources internally and with vendors, updating plans and schedules, and finally, going back through formal plan approval processes required by ISO and good project management practice.

## Aux armes, Camarades!

Here's what I did. We had long since captured our globalization management process in a detailed checklist. This checklist resides in a Microsoft Project file. From this rather comprehensive checklist, I selected a subset of 18 tasks from the checklist Work Breakdown Structure (WBS). I then distributed these 18 tasks to GPM peers across Tivoli, asking that they provide their best experience-based estimate of the time that would be required to go back and retouch each one in response to project change. For each task, I asked for *best*, *worst*, and *most likely* time estimates per task. Note, these were not initial task creation times at the project start, but only retouch times.

I averaged their input for each of the three cases by task. This provided an average Best, Worst and Most Likely figure for each task. At this point, I plugged these three cases into Microsoft Project for Program Evaluation and Review Technique (PERT) analysis. PERT provides a weighted average per task. I used the default weighting factors.

## Metrics Reloaded

This provided me with an empirically based time yardstick for each selected task. For example, the derived task time required to respin an overall globalization schedule totaled 1.62 project management days.

From there, it was easy enough to do the math on this project to summarize the cumulative impact resulting from change. To determine the churn impact for our project, I selected only three examples from the larger subset of 18 project management tasks. This was sufficient to make the point.

## Here are the Results (PERT Metrics):

G11N Schedule	1.62 days	7 respins	11.34 days
Planning tool update	2.0 days	7 respins	14.0 days
G11N vendor renegotiation	1.34 days	7 respins	09.38 days
<b>Subtotal</b>			<b>+ 34.72 days</b>

This means **35** extra project management days just for three tasks! One has to wonder about the total impact from 18 or more changed tasks. This is only part of the picture, but you get the point. This is like being responsible for an entire added project, one that is beneath radar detection, out of sight, out of mind so to speak.

## Qualifiers:

- 1) The project chosen for the study is admittedly somewhat atypical, an extreme example which lends it ideally to my quest.
- 2) The project is still not completed; the impacts continue.
- 3) Our study captured only a subset of a subset of the project management tasks.
- 4) Our study did not address the impact of *initial* planning, only re-work.
- 5) Our study addresses only G11N. Impacts to such areas as product planning, marketing, documentation, and testing are not reflected.

I should hasten to add that valid technical reasons drove much of the churn with this leading edge technology.

## Application

That was our initial project study. Where do we go from here to apply this metrics tool? One possibility is to fold it into an existing G11N project management tool that exists in another IBM division. To that end, I am currently working with my counterparts in the other division.

But this metrics tool has applicability beyond globalization. A broader benefit is evident. In fact, it is applicable to *any* project management activity.

As a globalization or translation project manager, as a project coordinator, as a translator, whatever your role, if your projects are constantly changing under you, you need to understand the impact. Why? You can factor it into schedule and cost planning. This knowledge also empowers you to set realistic expectations with all stakeholders, especially your customers.

Your first job is to generate a WBS task list, then plug in your heuristics, run your numbers, and then survey your piece of the damage. No doubt, you will be as surprised as I was.

This exercise may even help you get those additional resources that you sense you need, but are unable to justify. I had the blessing of management because they needed facts for realistic headcount projections. This may not always be the case, however. In some environments, there are political ramifications in that attaching numbers to project churn may expose the fact that inadequate resources were allocated to get the job done.

Lastly, it may be that determining the facts about your extra efforts will produce changes to your environment. But at a minimum, you will derive some measure of satisfaction. It should enable you to reset your own expectations to more realistic levels. In turn, this should help reduce frustration and stress levels, while providing a sanity check.

## Surrender is Not an Option

Let me close with a parting comment from our friend, Steve McConnell: "...controlling changes as an integral part of project planning is **critical to project success** [emphasis mine]" (Ref. 2).

You must control. And in order to control, you must measure. Good luck!

## Notes:

1. Frederick P. Brooks, Jr., *The Mythical Man-Month*, Addison-Wesley Publishing Company, 1982, p. 117.
2. Steve McConnell, *Software Project Survival Guide*. Microsoft Press, 1998, p. 74.
3. Johanna Rothman, "Multitasking Overhead." *Software Development*, August 2003, p. 44.

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