

Worked Up!

#9

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Defuse the 'Process Bombs'!

The directive was clear, "You have a week to find a way to defuse our 'process bombs.'" This was the challenge put out by the new Vice President at a Fortune 200 company upon inheriting a business process fraught with delays and errors.

It is amazing what a sense of urgency and an aggressive deadline will do to focus one's thinking and prioritization of work. The rapid assessment started on a Monday morning, and the findings were delivered on Friday ... there were 122 process steps, with 42 'process bombs,' and the opportunity to save 15-20% of the labor costs.

by
Kelvin Cross

In one week, find and quantify the impact of 'defusing the process bombs'



“How are we going to do that?”

“You can ‘skip’ DMAIC [Six Sigma process improvement rigor] when quick fixes are adequate, or the solution is legitimately obvious. There’s nothing in the Six Sigma philosophy that requires you to ban forever the Nike advertising approach to business improvement (‘Just Do It’) when it’s warranted.”

- *The Six-Sigma Way - Pande. et al*

The VP was not kidding. He wanted answers next Friday.

That call took place a number of years ago now. Yet, I remember when we accepted the challenge and got off the conference call, ... and thought, “How are we going to do that?”

We were asked to be the ‘bomb squad’ with limited resources, no knowledge about the organization or its processes, and limited time to act. We had to find a way to spend a few days where we might have spent weeks in other situations.

Since then, the one-week ‘bomb squad blitz’ has become routine, not just for us, but for the people who have been through it with us. They have been able to run with the approach and attack other deficient processes, and obtain similar results.

The trick is to:

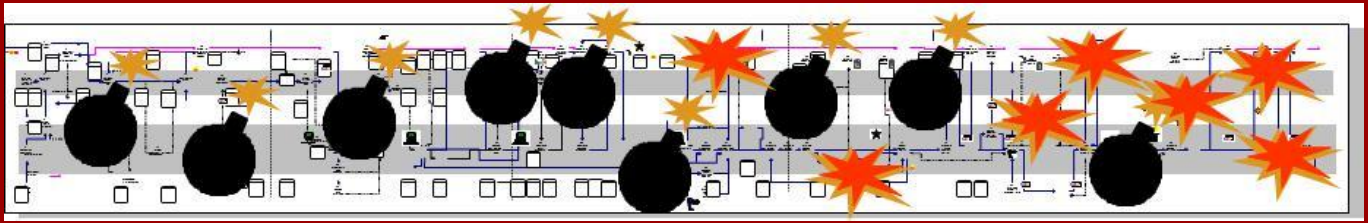
1. Avoid getting lost in too much detail or dogmatic rigor,
2. Engage people who work in the process, and
3. Adhere to a clear, yet flexible, plan.

In one week, you can deliver a rapid process assessment that will identify the major ‘process bombs,’ the key opportunities for improvement, and quantify the impact of ‘defusing the bombs’ and capitalizing on the opportunities.

Here is how to find and defuse the ‘process bombs.

Avoid too much detail or dogmatic rigor

A one-week blitz is typically done on a process that is ripe with opportunities for improvement. Many times there are ongoing explosions of problems and delays, that even thinking about defects-per-million is a dream for the future.



The issue is to quickly find why the explosions occur, and where the fuses are lit.

Typically the fuses are lit upstream in a process, only to explode later (e.g. a bill is disputed when expectations were not managed about a certain charge).

It does not take huge analytical rigor to assess the situation, the opportunities, and to be directionally correct. It just takes a framework for engaging those who do the work.

Engage people who work in the process

The people who work in the process are all too familiar with the problems, the likely causes, as well as other opportunities for improvement. They either have not been asked, or not asked in an engaging way.

Only a few need to be asked. In most cases we rely on 3-6 participants from the workforce approximately half-

time during the course of the week. They may engage others, as needed, to answer questions or provide data along the way.

We also look to the director, manager, or supervisor as a co-project manager. He or she solicits/assigns the participants, handles the logistics (e.g. conference room for the week), as well as providing data, soliciting (and questioning) input from the participants, along with providing constructive critique of the analysis and conclusions.

Lastly, you will need two people in the role of consultants/facilitators (you and a colleague, your internal process improvement people, or outside consultants) to do the heavy-lifting: to obtain, process, analyze, and package the information.

For the facilitators it can be a grueling, but very rewarding, week. For the other participants it is somewhat less grueling, but equally rewarding. One participant emailed us, saying "The mapping work could have been dreadful, but you made it fun, and we

all felt very productive at the end of the week."

Adhere to a clear, yet flexible, plan for the week

Basically the plan is to lay the groundwork, then hit-the-ground-running, and don't let up. The blitz can be done in six steps over six days: a day of pre-visit preparation, plus the intensive five days of on-site work.

The six-step plan:

1. Prepare for the Work Week
2. Map the Process (Monday)
3. Quantify the Process (Tuesday)
4. Model the Process (Wed.)
5. Analyze the Process (Thursday)
6. Present the Findings (Friday)

Prepare for the work week

The facilitators will want to review any documentation that can be provided in advance of the one-week visit.

Following is a 'wish list' (not a 'must have') of facts and figures that may be available.

1. Descriptions and quantification of workload (e.g. studies, reports), to understand factors such as:

- Types of work units (small, large, simple, complex, etc.)
- Number of work units by type (per month, per year, etc.)
- Labor time by type (e.g. person-days by discipline)
- Elapsed time to execute implementations (e.g. fastest, slowest, averages, etc.)
- Types & extent of failures/fixes/rework
- Number of resources / FTEs used to execute & manage the process

2. Brief descriptions of the process

- The process begins with...
- The process ends when...
- The outcomes of these processes are...
- Groups/roles involved in the process
 - Customers: who, where?
 - Frontline: functions that touch the customer of the process & where located
 - Technology: core apps and key ad hoc Excel spreadsheets, Access DBs and the like
 - Backroom: support organizations/functions & where located
 - Suppliers: any organizations paid to do work on your behalf as part of the process

3. "Top 5" known issues or problems with current process ... e.g. ...

- Poor quality output (outputs which don't meet customer needs or expectations)
- Takes too long
- Too many errors and rework
- Too expensive
- Compliance risk

Obtaining this information prior to the visit enables the facilitators to prepare a template for a process map, and a foundation for the quantification and modeling. Yet, be flexible. If the data is not readily available, estimates may be obtained during the work week.

Map the Process (Monday)

Hit the ground running. Spend, at most, from 8 am to 9 am on the formalities (e.g. tour of the facility, introductions, etc.). At 9 am dive right into developing a map of the process. Begin by being clear on the boundaries of the mapping effort (e.g. the process in question, and therefore the map, must encompass activities from initial inquiry to first payment).

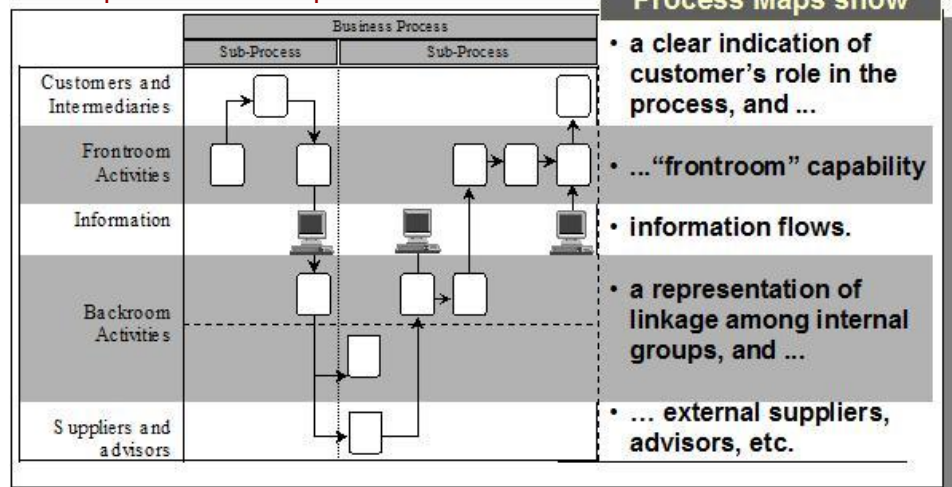
Next, set up a wall in the conference room on which to construct a first-pass process map. You can use the 'white board' or place flipchart paper on the wall. Either way, you will want to prepare horizontal bands, and be clear about the functions within each band.

Perhaps most important, we depict activities done by the customers of the process on the top horizontal band. On the second band from the top, we have 'front room' activities encompassing the high-customer-contact functions, such as sales and customer service. With this service orientation, these maps illustrate the customers' experience across the complete life cycle of encounters. Plus all the internal hand-offs (e.g. information flows from person-to-person) are depicted.

A business process map is essentially a type of flowchart to depict how work gets done. It shows the activities, various paths, and sequence (in the form of a timeline from left to right) required to deliver value to the 'customer' of the process.

Then, with this framework prepared, plan on depicting a 100-200 step process with Post-It notes. Facilitating the session is relatively straightforward; just start at step

The process map framework:





A first-pass business process map

one and keep asking “What happens next?” Each activity is noted on a Post-It note, beginning with a verb (e.g. “Prepare Form,” “Review Payment,” etc.).

One facilitator works with the group, the Post-It notes, and develops the process map on the wall. At the same time, the other facilitator prepares the process map in Visio. Doing the map in Visio at the same time forces questions of clarity and understanding on-the-spot.

In three to five hours you should have a complete first-pass view of the process.

These maps serve three purposes: (1) maps provide a great diagnostic tool, (2) maps provide the foundation for quantifying and modeling the process and therefore a basis to assess the impact of changes, and (3) the interviews/discussions required to produce a map are enlightening in

themselves. This last point is key.

Talking with people about the flows of work for the purpose of developing a process map is a great catalyst for gaining quick insights into issues and opportunities. The discussion of the step-by-step sequence of activities will bring out the key ‘process bombs’ – the key points in the process where ‘fuses are lit’ – to create an explosion of problems and delays later in the process.

Be sure to note each ‘explosion’ (where something goes wrong), and each ‘process bomb’ (the root causes, where the fuses are lit).

One ‘explosion’ at the end of the process will likely be created by

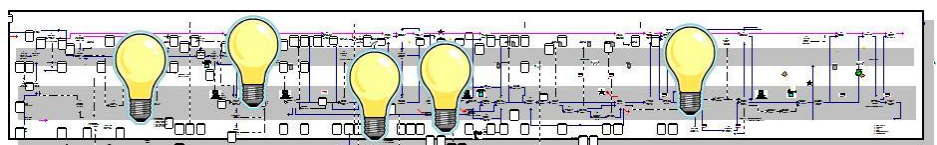
multiple ‘process bombs’ upstream. Therefore we have found it helpful to number each ‘bomb’ and then place the numbers of the relevant bombs next to each ‘explosion.’

Perhaps most important, we have found that the discussion of ‘bombs’ and ‘explosions’ is engaging and fun; much more engaging than talking about ‘root cause analysis’ and the like.

Sometimes it is not just about problems, but it is about opportunities. Good ideas to implement, or at least investigate, are likely to crop up as well. Capture the ideas too.

Quantify the Process (Tuesday)

Tuesday usually begins with a map review session. A few copies of the Visio rendition of the process map are rolled out (like a scroll) on the conference table for review. We walk through the process step-by-step clarifying descriptions of activities and sequence, as in ‘what happens next.’ It is not unusual to make a number of corrections, and insert a number of new steps into the process at this stage. This review takes about two hours with one facilitator.



Show the opportunities and ideas

At the same time, the other facilitator may be off collecting additional basic data that may not have been included in the prep work. As with most business challenges, we believe the place to start is with the key constituencies of the process, in this case, the various customer segments. For each customer segment, we define the key units of work/inputs to the process and develop valid workload profiles. A 'workload profile' encompasses the characteristics of the work described in the pre-work list (e.g. the number, frequency, and types of work being processed, their respective sizes, elapsed times, and any rework incurred).

With a cleaned up process map, and some basic data in hand, the next step is to quantify the process map. We sit down with the participants and walk through the revised map one more time. Essentially this means estimating how much work is routed to each path, how long it takes on the path, etc. In addition, we will quantify the amount of time needed to process the work at each step of the process.

We have found that estimates are good enough and that the resulting models are reasonable and directionally correct. For example, we just want to be able to distinguish the steps that take an hour from the steps that take a few

minutes. So we avoid discussions, such as "Is this a four-minute step, or a five-minute step?"

Model the Process (Wednesday)

The map and workload profile provide the foundation for quantifying and modeling the process. Using the model we can develop a prioritized view of the few key steps (or portions of steps which consume the most labor). We can then also determine the labor impact of the various improvement ideas and operating scenarios (how many people will be impacted by changes in various functions and roles).

The mechanics of this work include exporting the Visio activities to Excel, and then building a model (or populating a pre-built template).

The model contains:

- Work volumes (e.g. units/week)
- Routing volumes (% units/step)
- Processing times (time/per step)
- Productivity factors (e.g. utilization, attendance, etc.)

Analyze the Process (Thursday)

The map and model work to provide two key inputs to the analyses: 1) a profile of where value is lost (non-value steps and time), and 2) a clear hierarchy of the labor-consuming steps.

Although early on it is sometimes difficult to tell if an idea is significant or not, relative to other ideas and priorities which will show up later. However once the model is working it becomes possible to see the labor savings potential of various ideas. For example, when working on a human resource department's workforce transition (layoff) process, we assessed the degree to which the 121 steps add value (or not).

We found that six steps (out of the 121 steps we depicted on the map) consumed 51% of the processing time, and only one really adds value. Four steps (highlighted) relate to set-up and moving materials, and consume 35 percent of the labor time.

Value	Step #	Step Name	% of time	cum %
Move	39	Arrange for Delivery	10%	10%
Set-Up	70	Collate Pkgs & Prepare for Delivery	10%	20%
Set-Up	110	Perform SAP Data entry	10%	31%
Move	115	Prepare UPS Overnight mailing (Signature required)	10%	41%
Value	30	Run WFT Program Calculations (Severance)	5%	46%
Set-Up	38	Collate and Fulfill individual employee pkgs (Package	5%	51%

Six (of 121) steps consume 51% of the effort

With a sense of priority, it is then possible to sort through the notes related to the 'bombs' and ideas and select/define potential solutions. So for this HR process, where multiple mailings consumed an inordinate amount of time, we found an idea.



The idea was to utilize a UPS labeling application, tied into the company's HR system, to automate much of the current manual effort.

With a quantified process, it is then possible to define, select, and know the impact potential solutions.

The model is then used to evaluate labor content, before and after solutions are applied.

We can assess various 'what if' scenarios and determine the impact of eliminating 'process bombs' and implementing ideas.

In this case, with reduced hand-offs and opportunities for errors, the elapsed time to process mailings would be reduced by one-day, and labor reduced by 15-20% (1/2 the 35% spent on mailings).

	Issue	Process Step	 Opportunity
7	Currently, an excessive amount of Team time is spent: <ul style="list-style-type: none"> ■ Locating missing employee addresses (50/174) ■ Contacting employee for a non PO Box delivery address ■ Looking up missing zip codes (Not in HR data systems) ■ Typing UPS labels 	39	Utilize UPS labeling application : <ul style="list-style-type: none"> ■ Receive an upload of Address Book Data ■ Maintain separate Address Books for each layoff "wave" This will reduce the amount of time spent mailing each of the 3 Packages sent to employees as part of the layoffProcess.

'Process Bombs' and Opportunity Log

Present Findings (Friday)

For the presentation of findings, conclusions and recommendations we want to link the week's work to the final presentation. So, if some steps can be eliminated, we will graphically depict the opportunity in the presentation (and on a revised Visio map on the wall).

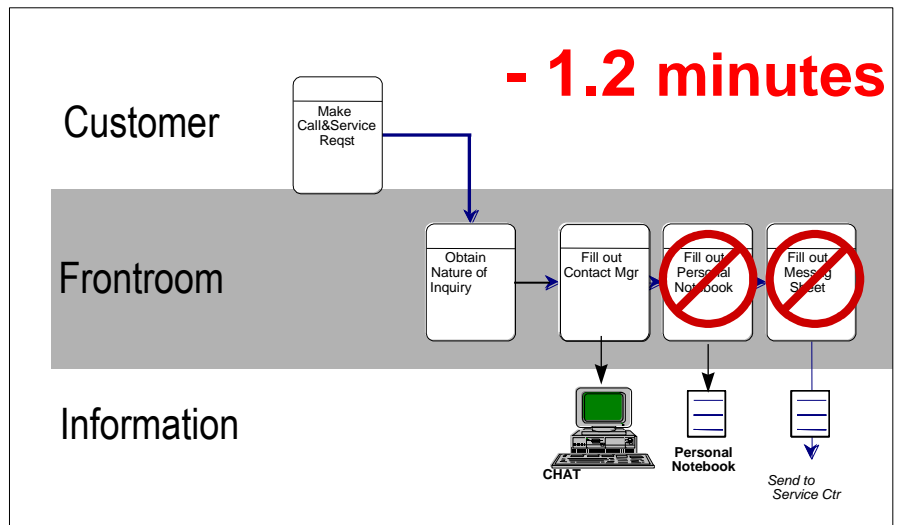
For example, the map portion below shows that if two steps are no longer needed, an additional 1.2 minutes become available (per unit of work processed at that step).

The next slide would depict the overall impact.

In this case we calculated a savings of roughly seven full-time equivalent people.

The rough calculation is:

- 1.2 minutes x 2000 units = 2400 minutes per day
- One person works for 480 minutes per day, but @ 70% utilized = 336 minutes available
- 2400 minutes per day divided by 336 minutes available per person = 7 FTEs



Eliminating Manual Data Entry Eliminates Time

So by the end-of-day Friday, the deliverables will include:

- (1) The Baseline Analysis: output from the baseline fact gathering and analysis:
 - ✓ Map of the current process, and
 - ✓ A basic Excel-based labor model of the current process.
- (2) Recommended Actions: in the form of a PowerPoint file, will contain the following:
 - ✓ A high-level assessment of workload/workflow problems;
 - ✓ Suggested improvement actions (as related to process and organizational changes)
 - ✓ Impact assessment: the calculated impact on service performance, and on staffing and related costs

Mission accomplished

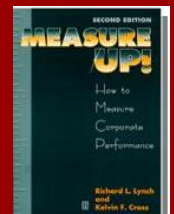
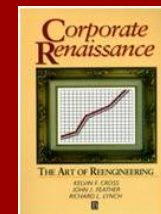
After three separate one-week assessments on various processes, a director of operations at a leading utility company, emailed us saying "We continue to make improvements to our various processes and the maps have helped in so many ways. You are legends here." They got it, and went on to do the follow-up implementation work. And they also went on to do their own 'bomb detection' work on other processes.

So before embarking on a willy-nilly idea-generation brainstorming exercise, to solve process problems, consider the one-week blitz approach outlined here. This approach has proven very effective at focusing and expediting such an effort. The 'bomb squad blitz' outlined here provides the means to:

1. Quickly find and defuse previously hidden or ignored 'process bombs,'
2. Generate relevant and significant ideas, and
3. Achieve buy-in that leads to rapid and successful implementations.



Kelvin Cross,
President
Cross-Rhodes Associates, LLC.
is a business process innovation leader, consultant, lecturer, and author. His most recent book is *Quick Hits*.



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CONTACT: kelvin@cross-rhodes.com 617-275-3007

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