

Quantifying the Cost of Automating Quality Processes

“What’s Important is Rarely Urgent, What’s Urgent is Rarely Important”
(author unknown)

Almost every action can be classified into the following categories.

1. Important and Urgent
2. Important but Not Urgent
3. Not Important and Not Urgent

Category 1 (Important and Urgent), contains the tasks that must be done immediately or in the near future. For example, your engine blows a gasket and needs to be fixed immediately, or you can’t get to work, or you just had an accident and need to go to the emergency room. These situations because of their urgency take precedence over everything else, and procrastination is no longer a possibility. Their effects are felt instantly and can be easily identified (immediate pain).

With Category 2 (Important but Not Urgent), these tasks are usually important but are not urgent. They can be done now, later or never. For example, that special course you’ve been meaning to take to upgrade your professional skills or the article you’ve been meaning to write. These tasks, despite their importance, can be postponed indefinitely and by not doing them, their effects are not easily determined (no immediate pain).

In Category 3 (Not Important and Not Urgent), these tasks may be necessary or desirable, but in the scheme of life would be considered not very important. A

letter that needs writing or a meeting that needs attending would fall in this category. For this article, we will be discussing Category 1 and 2.

Moving from a personal note, these same categories of tasks can be applied to a manufacturing environment. For example, if equipment breaks on the plant floor this would be considered important and urgent (Category 1) and management would immediately take action because the effects are easily determined i.e. high return on investment (ROI). Category 2 on the other hand, usually deals with non-tangible initiatives that occur in an organization. For example, process efficiencies, information management, or employee competency. Action in these areas usually get low priority, and are postponed or overlooked completely because they may not be urgent and the effects are not easily quantifiable.

With information management, some process inefficiencies affect the entire organization. Statistics show that most employees can spend 60% of their time touching, finding, filing, copying or dealing with some form of information (paper or electronic) and yet, somehow, the time spent on these “soft” expenses tends to be overlooked because they are not urgent in nature. For example, a change to a work instruction wasn’t communicated to the plant floor or the company was unable to locate the latest revision of a customer specification.

The **importance** of taking action to improve non-urgent manual quality processes is becoming more obvious to companies who want to compete in today’s global economy. ISO and other standards can help forge a company to the forefront but it can also be a drain on a company’s finances and human resources. If a company would like to automate, the challenge becomes, how do you cost justify funding for something that is difficult to quantify and not necessarily urgent. Middle management realizes the inefficiencies of their staff and bears the burden of this quantification. As a software supplier, we find this to be the single most difficult challenge our prospects face. Justifiably, upper management usually will not allocate funds unless a “*return on*

investment” can be firmly established. If middle managers skip this step (which is tempting because of its difficulty) it usually comes back to haunt them.

In order to help middle managers justify funding to automate a manual process, we found our 5-Step approach to be very effective.

- Step 1 Identify the Problems (be specific)
- Step 2 Quantify the Problems (give examples)
- Step 3 Establish the Budget & Get Approval
- Step 4 Develop the User Requirements
- Step 5 Begin the Selection Process

Step 1 - Identify the Problems or Potential Problems – For example, as a great starting point, we created a “common problems checklist” that bullets the most costly and frustrating problems surrounding information management. The examples given below are geared towards problems surrounding document and training management, but you can create your own “common problem checklist” for any IT technology project initiative.

Here are a few examples:

- Long turnaround time for changing documents
- Employee awareness to changes in documents
- Lack of employee efficiency
- Employee was not properly trained on a procedure
- Risk involved losing accreditation or certification
- Increased exposure to injury due to lack of training
- Lost or inaccessible information

Step 2 - Quantify the Problems – After you identify the problems, you can begin the quantification process. To do this, you need to have an understanding of the full impact of the problem moving forward. Asking the following questions can help put the problem in perspective.

“How often does the problem occur?”

“Will it continue if nothing is done?”

“Will the problem get worse?”

“What will it mean to your organization moving forward if this problem isn’t solved?”

“Does the problem place you at risk for employee injury or litigation?”

“Can you quantify the negative effects of the problems, i.e. any direct costs?”

We recommend providing specific examples to support the problems and any of the quantifiable costs. This gives more credence to the problems and helps upper management get the full picture. To illustrate, below are situations supplied by customers and prospects:

Problem # 1: Long turnaround time for changing documents

Example: It took so long to make changes to documents, that raw materials were receipted against an out-of-date specification resulting in unusable inventory. Cost \$10,000

Example: New product shipments were delayed waiting for finished documents, resulting in a failed advertising campaign. Cost \$100,000

Problem #2: Employee awareness of changes to information

Example: Rework occurred because an employee was not notified of a change to a customer specification. Expense of raw materials; machine hours; delays in other jobs causing backlog, etc.? Cost \$55,000

Problem # 3: Lack of employee efficiency

Example: There are 15 people in the department with an average salary of \$35.00 per hour with overhead and benefits. If they are spending 10% of their time with their manual processes how much does that mean to your organization. $15 \times \$35.00 \times 2000$ (hrs. per year) $\times .10 = \$105,000.00$. If we can improve their efficiency by 50% (this is very realistic), how much would that save the organization? Cost \$ 52,500.00

Visit our website for downloadable cost justification spreadsheets with directions and samples to assist in determining costs.

Problem # 4: An Employee was not properly trained on a procedure

Example, an employee packages a product incorrectly because he was not properly trained on the packing procedure. The customer received broken parts and cancelled the order.

Immediate Cost \$ 65,000 (long-term –substantial)

Problem # 5: Risk involved losing accreditation or certification.

Example: Losing access to a certain market segment because of a lost accreditation could be a major impact on the organization.

Cost (unknown but substantial)

Problem # 6: Increased exposure to injury due to lack of training.

Example: If someone is not properly trained and gets injured, what type of litigation issues and costs might your company incur?

Cost?

Step 3 – Establishing the Budget – To reach this point, you have completed (Step 1) Identified the Problems; and (Step 2) Quantified the Problems. As recommended, identifying specific situations when problems occurred will give more credibility to the numbers and will help management establish the budget. After Step 1 and 2, you may

discover the problems are more annoying than costly. In which case, management can determine if and when to allocate their resources to fix the problem. However, you may have exposed areas that were not previously considered. If the financial impact is significant, you may want to establish a budget and begin looking for solutions to solve the problem. Determining the budget should be a combination of the problems you are trying to solve with the amount your company is willing and able to spend. You don't want to budget \$50,000 for a problem that is costing only \$5,000; on the other hand, you don't want to budget \$5,000 for a problem that has been quantified at \$100,000. The budget can narrow down the search and make effective use of everyone's time.

Step 4 – Develop the User Requirements – This step enables you to identify specific user requirements. You need to make sure for every identified problem; there are software features or functionality that will fix the problem. A priority should be given to each problem determining its impact, cost and risk. This list will help the committee stay focused on the real issues and keep the spotlight on the identified costly problems during the software presentations.

Step 5 – Begin the Selection Process - Once the demo process begins, you may soon realize that all software applications have their pros and cons. Using the list established in Step 4, you will stay focused on the features that address your most costly identified problems. During the software presentations, you can look at a feature and say "WOW, that would be great!" Use caution in selecting an application based on the bells and whistles, you could be paying a lot of extra money for features that do not solve a particular costly problem. Also, make sure that the software presentations cover all identified problems and then compare the features to the problems along with the return on investment.

In summary, in order to compete in today's competitive market, companies should consider taking action to improve their manual processes. In reality however, funding for process improvements are usually based on the middle managers ability to calculate the ROI. This however, can be difficult when dealing with IT initiatives. Our 5-Step approach can greatly increase a company's ability to fund the necessary projects that, even though they may not be urgent, are equally important to the long-term future of the organization.

I leave with one last quote:

“Quality Improvement will result from people improving their processes and management improving the system.” Pyzdek

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