

## **CYCLE TIME REDUCTION: YOUR KEY TO A BETTER BOTTOM LINE**

You know how it goes: your company is always trying to find a way to achieve a better bottom line -- less wasted time, lower costs, more effective employees. Sometimes it seems like every month management sends down another "flavor of the month" -- time management studies, sensitivity training, bottom-up reviews, recycling, and flowcharting. Not surprisingly, your company hasn't achieved its goals with this mishmash of management theories and psychobabble. Realizing the need for an effective, yet easy to use methodology, Motorola University has innovated a tool that is useful in any type of organization and in every department -- from accounting to marketing to new product development.

This tool also combines the two keys to every successful relationship: communication and teamwork. Cross Functional Process Mapping (CFPM) focuses on cycle time reduction (CTR) -- reducing the time it takes for one cycle to be completed (for example, from the time a customer orders to the time that payment is received). Reducing cycle time has obvious benefits in both cost and efficiency. As an added benefit, it **EMPOWERS EMPLOYEES AT ALL LEVELS TO BE personally RESPONSIBLE FOR CUSTOMER SATISFACTION.**

What makes this methodology better than the many others that your company has tried and tried again? Results! Dramatic results occur with committed and creative teamwork. "By changing the way we process our taxes, we have cut overall preparation time from 6-9 months to less than two months. This is a big reduction in cycle time and wasted activity. In another area of the company we must regularly de-scale our tanks because of scale build-up. Before CFPM, it would take 15-20 days to clean them, which we now expect to cut down to 10. This saves an enormous amount of downtime; and therefore, money," said Leigh Dyson, Quality Development Manager for ALCOA in Western Australia, the largest alumina (raw material) and aluminum producer in the world.

The key to Cycle Time Reduction is determining which steps in your process add value in the eyes of the customer. Using a customer driven approach changes both perspective and solutions. "It enables the whole team to see the entire process and how it relates to the customer. This tool is so useful, we will certainly continue to use it in the future," said Peter Burgess, Marketing Manager for ALCOA.

Focusing on the customer does not mean adding or deleting steps that you think might be important to your customers. One of the first steps involves taking the time to survey your customers and find out what they really want. Luke Keighery, Quality Manager for Australian-based CSR Softwoods, said, "our customers wanted one contact for all house materials. They didn't want to talk to a different person in every department that they needed help in. Through CFPM and the use of computers, we have been able to make the divisionalization in our departments appear transparent."

"The strength of this methodology is that it forces a company to look at the way it does business from the customer's viewpoint. This creates different answers from the traditional approach. Through CFPM, we have cut the number of steps in our process from 82 to 50," said Mick Draper, Project Leader at CSR Readymix, part of CSR Limited, a diversified Australian company with sales in the vicinity of \$5 billion. Graham Madsen, Group Manager of Quality for CSR Limited, added, "this tool is customer focused, supportive of people, strives for relentless improvement and innovation, and allows you to understand what quality is and how to achieve it. It shows you where you are going instead of only looking in your rear-view mirror. By taking out waste and rework, you can continuously improve."

By looking at what IS important to the customer, your company can create satisfied customers -- the mainstay of any business. Burgess commented, "Our goal was to reduce the time taken to prepare and send shipping documents. In surveying our customers, we found that they felt that shipment information took too long to get to them. Through CFPM, we were able to reduce our cycle time from 11-12 days to 5-6 days."

Dramatic results are possible if you have total management support. Dyson said, "This is a brilliant tool for identifying issues and problems. The hard part, of course, is getting the projects done. Of course, it is also important to have the skills already in place to complete the action items. We have applied CTR in many of our business processes. The best results were achieved in areas that had committed managers."

Just as important as the "why" (customer satisfaction) is the "how" of Cycle Time Reduction. Cycle Time Reduction is achieved through a methodology innovated by Motorola in response to its own customer complaints about time-related issues. With an eye on cost and profit considerations, Motorola initially focused on the manufacturing process. Motorola's goal was to get significant results while not increasing capital expenses. Although successful in this realm, Motorola soon realized that only a small segment of customer complaints were being addressed.

This research led to Cross Functional Process Mapping to reduce total Cycle Time. After achieving significant results within their own company, Motorola knew that other businesses would also benefit by learning this methodology. Motorola University's Consulting and Training Team was formed to facilitate and teach Cycle Time Reduction through Cross Functional Process Mapping.

The first step is the "As is" map which details every step and identifies all of the issues in the current process. Typically lasting three days, this session is led by two trained Motorola ACT facilitators. "This is an incredibly valuable tool that can be used anywhere within the organization to drive improvement and to increase a company's commitment to improvement," said Keighery.

Keighery added "We used CFPM in four different processes. At first, I thought that it was only a slight improvement on flow-charting. Now, I realize that the power of CFPM comes through its ability to knock down functional barriers by cutting across departments instead of being sent downwards from management." Added ALCOA's Dyson, "the mapping process is a focused and efficient way to get everyone's ideas in 3 days. It is a very simple but powerful participatory technique that has a long lasting impact and usefulness. By powerfully cutting across organizational boundaries, you can improve both within and across departments thereby effecting a culture change."

The "As is" map documents every step in the process as it is currently done. "The "As is" map helps you understand the issues, determine where to go, and allows you to close the gaps," said Madsen. Unlike reengineering, as defined by Michael Hammer, which tries to start over from scratch, Cycle-Time Reduction builds on past successes and strengthens or deletes weaker parts of the process.

At times, CTR is used to implement procedures for a process that worked well on a small scale, but became unwieldy and inefficient as the operations grew. Draper said, "With divisions in different states all over Australia, our purchase order to payment system was fragmented. Every region had a different approach and as only the payment system was computer based, understanding what was purchased was a difficult and time-consuming operation. One of the end results was that we were paying the suppliers poorly. Through the Cross Functional Process Mapping, we now have a standard national approach that has prepared us for a fully computerized system. In a worst-case scenario, we would have invoices that were six months overdue. Now we have improved dramatically with one region recently achieving 95% on time payment."

Bruce Munro, General Manager of Personnel and Quality for Australian-based CSR Sugar, added "We were working on keeping tabs on the ownership of the four ton bins of sugar cane as they were harvested. We were processing 10,000 bins a day, and didn't have the procedures in place to keep track of each bin. With CFPM, we've taken the nonsense out and simplified the whole process and have now achieved a 60 -70% improvement."

The mapping itself is done by a cross functional team made up of employees from every department involved in the process. "We had 25 people on our team. Creating the "As is" map allowed them to extract all of the issues and to verbalize all of their frustrations. After we did the mapping they could see the overall process. Now, they have more respect for each other and understand each others' role in the process," said Munro.

CTR's strength is working with the people who are actually involved in the process. Dyson supports this, saying, "traditionally, changes were sent down from the top, by professionals and experts from both inside and outside the company. This did not allow employee ownership. Now that team members are part of the solution, they take pride in their work. CTR also gives everyone a view of the big picture. I've found that many times, people only know what is happening at their part of the process - not what is upstream or downstream of them."

The unique perspective achieved by involving employees who work in the "field" but are not necessarily trained in problem-solving results in solutions that save time and money. "One of the great strengths of this tool is the involvement of the "hands-on" employees. It takes the existing process and uses creative solutions to cut out issues and streamline the process. Cycle Time Reduction also tries to force people to think out of the box," said Munro. Ian Scott, SAP Project Manager for Australian-based ICI Explosives, added that CFPM "is a mechanism for the introduction of significant change within an organization by involving people at a grassroots level. In doing so, it breaks down barriers between the various functional parts of the organization while helping to ensure that everyone understands the ultimate goal of the process and their role within that process. Not only is it a mechanism for continuous improvement, it is a catalyst that keeps people focused."

After the "As is" mapping, employees go back to their departments to mull over the issues and find out if others in the department have additional issues. About a month later the original team and the Motorola facilitators return for a "Should be" mapping session. "Should be" is the level of performance that could be expected given today's investment in people, capital and facilities. It often approaches best in class without the addition of new people or capital expenditures.

Three more days are spent on detailing each step in the improved version of the process. During this mapping session, a list of action items is created which define what needs to be changed in order to move from the "As is" state to the "Should be" vision.

The Action Item Owner forms the sub-teams, which complete the action items. A list of any "stoppers" is also created. "Stoppers" are the items that the team thinks might prevent them from implementing the full "Should be" action items. All stoppers become the senior management's action items.

There are four types of team members. The project champion provides resources and removes barriers. A team leader is chosen to organize and conduct the meetings and to ensure that information exchange occurs. Team Members and Action Item Owners complete assigned tasks.

The smaller sub-teams mainly consist of employees not on the original team. This helps gain wider employee support of the new process. "This tool is directly applicable to any business process within a company because it involves all levels and departments by giving them ownership," said Draper.

Action items are prioritized to ensure that they are completed in the most effective manner. Upon completion of all action items, the company will have achieved their "Should be" vision. To help team leaders implement the "Should be" map, Motorola has created the Team Leader's Guide. Full of tips, maps, forms, and examples of each step, it is an invaluable resource for the person leading the implementation process.

Even more helpful than this guide, Motorola provides live technical support through the facilitators who are always available by phone. Impartial facilitators are a must because they have no loyalties to the current process. This makes it easier for them to point out things that might seem unchangeable and to ask difficult questions. To keep motivation and progress high, one of the Motorola facilitators returns for frequent progress meetings.

New solutions and time and money savings are an obvious benefit. More subtle, but no less important; however, is the change found in employees' skill level and enthusiasm. "Now ICI Explosives' employees have a stronger process focus; they no longer look from within the confines of their function alone, they recognize that they are part of a series of events toward delivery of output," said Scott. "The amazing thing about CTR is the effect on the people involved. They become empowered and interested in finding solutions to create a better process. Many of the people never had this kind of authority before nor had the opportunity to offer solutions and actually have them considered. With the skills and confidence gained from being on a team, they are now better employees who will continue to use the skills that they have built on this project. In fact, the team involved in the equipment de-scale project is going to a national quality competition as a result of their work on their project," added Dyson.

Inherent in CTR/CFPM is a corporate culture change. Everyone must play a part in working towards solutions and everyone has an active role. While this is an excellent tool on a project-by-project basis, it should also become an important part of every employees' problem-solving tool kit. "The great thing about this is that now, when problems are encountered, there tends to be a stepping back into the CFPM mode to solve those problems. Now everyone focuses on getting teams working together rather than trying to tackle problems individually," said Scott. Added Dyson, "By building teams and teaching them Cross Functional Process Mapping you give people a simple technique that anyone can learn and use to work out problems. It is fundamental to identifying how to improve."

Employees can also use this process in other aspects of their job. "This methodology is very generalizable. CFPM is now a part of the vocabulary of CSR employees -- on all levels and in all departments. I was part of an internal review in regards to quality, and was surprised at how all levels contributed and used CFPM," said Keighery.

Anyone can see the benefits of improving the company's bottom line -- more effective employees, higher profits, and less time and money wasted. The benefits achieved with Cross Functional Process Mapping can also extend beyond the company. " we even used CFPM in working with our customers and our suppliers. CFPM created a link between all sides and helped us to develop a strong strategic alliance," remarked Keighery.

As you can see, Cycle Time Reduction through Cross Functional Process Mapping has obvious benefits when implemented properly and supported by management. This tool, which saves both time and money while empowering employees, is a must for every corporate toolbox.

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