

# CONTINUOUS IMPROVEMENT AT NWA ATLANTA

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## 1.0 BACKGROUND

The Northwest Airlines Atlanta Maintenance Facility is a division of the Minneapolis-based airline's Technical Operations Department. The base of approximately 1,500 employees has the responsibility for Douglas DC-9 reliability through 4 periodic check lines, Pratt & Whitney JT8D engine repair and overhaul, and support shops that provide repaired products supporting both product lines. These product lines became the responsibility of Atlanta following the 1986 merger between Republic Airlines and Northwest Orient Airlines.

During the 1987 production year, data collection quickly revealed that production performance would never meet production capabilities. That data collection proved to be true. Periodic check performance barely met 33% of its on-time production capability with post-maintenance discrepancies averaging above 10 discrepancies per aircraft. Engine production data revealed the same information; approximately 63% of capability with some engines staying in the repair or overhaul process for as many as 100 days or more. Test cell acceptance rate was approximately 65%.

The most important item tracked in that year was on-the-job injuries (OJIs), which averaged 17 per 100 employees per month, and were among the worst for a department within the entire airline.

I personally feel there were two major contributors to this poor performance:

1. The 1986 merger of the two carriers brought two entirely different maintenance programs together with no plan as to which program would continue to be used. This led to a large degree of confusion among maintenance personnel.
2. There was a degree of animosity between Republic and Northwest Orient employees after the 1986 merger that caused morale and attitudes to plunge.

The stage was then set and the base was ready to venture into something that would lead them out of this disastrous position.

In late 1987, the Senior Management Team began to plan and implement a Continuous Improvement Process. Year-end data for 1991 revealed that the plan has been working. 1991 periodic check performance improved to 95% of on-time production capability with an average of fewer than five post maintenance discrepancies and engine production increased to 77% with test cell acceptance rate above 85%.

## 2.0 NWA'S SEVEN STEPS OF CONTINUOUS IMPROVEMENT

The steps an organization takes toward implementation of a Continuous Improvement process may vary, depending on size of the organization and the items of focus. Our organization utilized seven.

First, we knew we had to re-educate our employees. Not only did we have to conduct recurrent technical and on-the-job training, but also realized an emphasis had to be placed on non-technical skills as well.

Before we could get started with our education plan, we made absolutely sure that all employees understood what a Continuous Improvement Process was, and what it would take by all to make it a success. We explained that Continuous Improvement simply means small, positive, incremental changes, that helps save time and money; i.e., reducing OJIs means having more employees on the job, reducing cycle time of product production means saving money by not having products out of service for extended periods of time, doing a job right the first time means reduced rework and that saves dollars, having aircraft available for operations on time means happier customers due to less delays, and the list goes on.

We began our education step by teaching and reinforcing to our employees the Mission of the Corporation, (To Be The Airline of Preference), and the Technical Operations and Atlanta role in contributing to that corporate mission (To consistently provide safe, clean, technically sound aircraft to support on-time operations). We, then, began to work with our administrative and hourly personnel on "soft skills," (public speaking, improved reading and comprehension techniques, listening skills, presentation techniques, Principle Centered Leadership, data collection and analysis, and many others). This education process continues today.

Secondly, an assessment of our base activities was taken by all employees. One day, in December, all employees were asked to go to one of several base meetings, conducted at our Training Center Auditorium. Questions were not only asked in regards to product line productivity, but how we, as a management team, could help our employees do a better job. (NOTE: I recommend you not take an assessment unless you truly want to hear what your employees have to say about you and fellow management team members, and you have an honest commitment to turning problems into opportunities for improvement.) When assessments are given, and if you listen, employees will tell you what their needs are, what his/her wants are, what they are thinking, and what they want changed.

Next, steps three and four coincide together. The base senior management team developed a base Strategic Plan with tactics to focus on in order to meet that plan. Business Unit managers then developed Tactical Plans with their partners that would support and contribute to the base achieving their targets. Without a Strategic Plan, to show all employees where an organization plans to be within a certain time frame, "achievements" become only "desired outcomes."

Business Unit Tactical Plans are the actual steps that a particular area or department will take in order to contribute to the base wide Strategic Plan.

Once Strategic and Tactical Plans are developed, everyone begins to work (#5) to achieve those targets. After work has started, evaluation (#6), begins on targets. Data collection (evaluation) is very important, in that early in the process trends can be established and determinations can be made to make changes to get processes back on track.

The final step is adjust and/or refine. To be able to adjust and/or refine you must get intimate with the process. At this point, teams become a part of the process. Teams come in many sizes and from many departments. They can be cross-functional (which is cross-departmental), only functional (which is within the department), or corrective action (which works to solve and address problems of urgency). We must remember, these steps must become institutionalized. They are the beginning of a never ending cycle.

### 3.0 KEYS TO SUCCESSFUL IMPLEMENTATION

There are several keys to successful implementation, and, as the steps, they will also vary, according to the needs of the organization.

First, targets should be selected that are urgent and will show quick results, but that will also stretch your organization. This will get employees acclimated to Continuous Improvement processes and will convince "doubters" that this is not something that should intimidate anyone. EXAMPLE: Safety. This is an item that can be tracked daily, weekly, monthly, etc., and can show quick results. Regardless of whether the information is good or not, you quickly identify problem areas, pockets of concern, or areas that need quick attention.

Secondly, expectations must be specified. It is very important that all employees know and understand the targets that the corporation expects us to meet, all the parameters that will be involved, and what impact non-compliance will have on the overall operation.

Next, and most important as we all know, is effective communication. You can never over communicate, and the means of communication will vary. One key tactic to our communication process was the institutionalization of crew meetings. Crew chiefs, foremen, managers, directors, and the base vice president have established crew meeting schedules. This was a direct response to a recommendation by our Atlanta Base Planning Team, comprised of one director, one manager, and approximately ten employees from a cross section of our work force. Other communication tools implemented in Atlanta were a monthly newsletter and an every-other-month video (produced in-house), both of which discuss the activities of our base, including production, process improvements, milestones reached, innovation, recognition, etc.

### 4.0 BARRIERS TO PROGRESS

We all know that for every step to improve a procedure, implement a new process, or a new philosophy of business strategy there will be many barriers.

First and foremost of the barriers is that most business units, and individuals, are results oriented. Whenever you focus only on results, you lose focus of what is driving those results. Our organization made a shift to process orientation. To understand the process means to reveal methods by which a particular function is performed, and if a process is improved, the desired results will occur. Process orientation produces the desired results with a better understanding of how we produce products.

Secondly, as we all know, "old school" managers and task performers simply resist change. That's just human nature. We found that technically experienced personnel had been successfully performing tasks a certain way and did not want to change. Ironically, we discovered that administrative personnel and staff personnel were more reluctant to change than task performers. Traditionally, task performers know the product, for which they are responsible, better than the support or engineer groups. This is because a product that is worked daily by an employee becomes a part of that employee.

Another barrier that we faced was that managers felt they were giving up authority by having decisions made at a lower level. The fact is, managers never had that authority to give up. It was already down to the task performer level. Managers also dreaded anticipated resentment, or resistance to change. The truth is, as previously explained, task performers welcomed the change more than others.

Another barrier to overcome was the pockets of administrative and labor groups misunderstanding of what Continuous Improvement meant. We didn't explain it well enough and some became doubters about its success without even giving it a chance to succeed. These pockets felt improvement to a process meant less cycle time to a product which meant less need for all personnel which meant job loss. That is incorrect. We had to convince these people Continuous Improvement means you can now take extra resources and redeploy them to other tasks. It really means more work. You can now bring other work in rather than send work to a vendor or outside entity.

## 5.0 REMOVAL OF BARRIERS

All the steps to implementation and understanding what the barriers one may face will not amount to any positive changes unless leaders remove some barriers. Removal of insecurities is vital to success. We, as leaders, had to, and must continue to, assure our peers and subordinates that we are here to help and work together. When we have failures or setbacks, we have to go to root causes and resolve or correct those causes. Make it understood that it is not the who for setbacks, but the what that caused the setback. Learn from the mistakes of others and help others become successful.

We must also show sincerity towards the Continuous Improvement process. When we began re-education and training classes were held. Administrative and staff personnel (i.e., directors, managers, foremen, engineers, etc.) sat in seminars and training sessions with task performers such as cleaners, janitors, inspectors, stockroom personnel, mechanics, etc. This developed an atmosphere that we were truly in this business together. Remember, as leaders, we are the people others look to for help. Supposedly, we are put in place to lead and for that reason we are kept under a watchful eye to assure we provide that leadership.

Finally, we must maintain sincerity and high ethical and moral values. If you, as a leader, do not have these high ethical values and standards, you certainly can't expect your teammates and subordinates to have them. If you don't have the sincerity to "Walk The Talk" and to do "What's Right," no Continuous Improvement process will survive.

## 6.0 CONCLUSION

I will be the very first to admit, Continuous Improvement is a new philosophy that is met with a great deal of resistance and skepticism. We have to work at changing that philosophy every day. It's tough, but it is very rewarding when you see it work.

Remember, the driving force to Continuous Improvement is, it's not a we-they, it's us together, trying to achieve one common goal: **TO STAY IN BUSINESS AND BECOME THE LEADER IN THAT BUSINESS.**