



**The Focused Fire Newsletter - Copyright © Affinity Systems LLC, March, 2016 Issue 35**

For the next three months, the Focused Fire Newsletter will discuss the shop floor, a favorite place for the author.

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| <b>March</b> | <b>Shop Floor Perspective</b>                  |
| <b>April</b> | <b>Shop Floor Tour</b>                         |
| <b>May</b>   | <b>Shop Floor - Is your ERP System Broken?</b> |



## **Shop Floor Perspective**

They once called people who spent a great deal of time in operations "shop rats," some in a derogatory context, others with great affection. Operations are a world of productive people making things, and contributing to a competitive America. It is where manufacturing and distribution companies make their money, and a place easily forgotten when drinking coffee in the comfort of one's office.

Shortly after discharge from the military, I was a machine operator for a manufacturing company. The equipment was old, incapable of holding tolerances, and ran piles of scrap, but the only thing management worried about was output. The job lasted three months, when the company reduced production schedules and laid off most of the workers.

In the years that followed, educated in computer technology, I had the pleasure of working in multiple vertically integrated industries, including forest products, electric motors, and generators. As corporate materials manager for a large multi-plant manufacturing company, I worked on ERP systems, and many customer/supplier relationship programs, including quality and product development with Dow Chemical. Time was spent programming computers, managing IT, and attending meetings. I had the whitest and best-pressed shirts, and stylish attire. There was always a cup of coffee for this corporate animal.

Given the managerial experience, the company provided me an opportunity to be the Manager of Shop Operations for a 250-employee fabrication complex. It had a union workforce with a piecework pay system. The building included a foundry, multiple punching operations, annealing, aluminum die-casting, a large machine shop, tool and die shop, and a laboratory. These were familiar operations from a material's management, process, and ERP perspective.

The "old guys" in the machine shop understood my limited machining knowledge, and liked to raze "the greenhorn." The solution was learning directly from them, and going to NCTI, our local technical Institute, to study the principles of machining, fixture design, and tool and die making. The machinists would call when they were doing something new or different.

Working with these old-timers, with tough exteriors and hearts of gold, built trust as well as knowledge. A business situation would test that confidence.

The economy took a dramatic upturn, and new orders flowed in without anyone checking for capacity constraints. Replacement workers filled most of the open positions, but new experienced machinists were non-existent. There was no time to train, so the machine shop worked excessive over-time hours, destroying the budget, as late orders piled up. The pressure from executive management was unrelenting, while customers threatened to cancel orders.

It was the current practice to give the machinists only the daily part of the schedule. They were accountable for running parts in strict accordance. One Monday, the staff discovered the scheduler and supervisor had worked all weekend unsuccessfully sequencing the shop. We had to break the paradigm, and without higher approval, I called the machinists together and said, "Here are your complete schedules. Run them in the most optimal way." They knew the best way to run the equipment, all the overlaps, and the sequences for setup optimization. Back on schedule, they continued to manage their operations. When I left the complex, the new manager reversed the decision.

Reviewing the situation, several points were obvious. Executive management could not solve the problem, and along with peer management, were unhelpful. The workers in the machine shop, who management thought needed constant direction, were the only ones capable of solving the complex production problem.

It was an epiphany moment. Organizations are actually intellectually flat, and the ones doing specific jobs, whether blue-collar or white, are the real experts. The reality is that all are equal, just in different ways. This experience reinforced a core belief in the principle of self-managed teams and an empowered work force.

Several years later, the entire executive and management staff attended total quality management and business transformation classes. The objective was to find ways to change the organization and empower the people. The management group, each heading up process improvement/research teams, was given a book written by Tom Peters and Robert Waterman, Jr. titled In Search of Excellence-Lessons from America's Best-Run Companies. Our report outs would be the basis for an "honest" discussion with the President and CEO on the barriers to changing the business culture.

One of the stories at the time involved a young lineman, who in the middle of a blizzard, rented a helicopter, dropped into the snow, repaired a vital power line, and returned home. Lacking the authority to hire the helicopter, the company fired him. The moral of the story was the eternal oxymoron. That empowerment is wonderful as long as it takes place under bureaucratic control.

Tempered in the fire of the shop floor experience, the report to executive management was short. Holding up a toy helicopter purchased for the occasion, I stated that top management was the first to shoot down our helicopters of innovation. The response, given the format, was restrained. This event probably greased the skids for the eventual loss of my corporate job, and entry into the wonderful world of entrepreneurship.

As an ERP/Lean consultant, I have enjoyed touring and working in many plants and distribution centers of all types and sizes. They included research facilities, massive oil and steel companies, very high-tech companies with more robots than people, and small custom manufacturing organizations.

Only one shop gets a failing grade, related to culture, not process. In China, a company making frames for TV screens was running coil steel at high speed without operator safety equipment. When asked, "What if someone loses an arm?" The shop manager shrugged his shoulders, "we hire someone else."

Life as a systems consultant has been a rewarding experience. Part of the success is attributed to the tough old machinists. They taught the greenhorn what really happens on the shop floor, how to deal with contention, and who to count on when the bullets fly. It was not just shared knowledge, but trust, making good things happen. They also provided status; the greenhorn became a proud shop rat.

From time to time, I see some of these retired machinist friends and warmly joke about the past. Because of them, my favorite shops are small enough to interrelate with the operators. Some are barely out of their teens, interacting with robots. They are impressive, detailed, and passionate about getting the job done correctly. Occasionally, I find the President/CEO working on the shop floor. They are leaders, even when wearing jeans and boots.

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**Building the SMART Enterprise**

**ERP Lessons  
Learned**

# **Structured Process**

**Strategy**

+

**Business Assessment**

+

**Gap Analysis**

+

**Future State**

+

**Software Selection**

+

**Implementation**

**Wayne L. Staley**