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Tackling Turnover: Using Computer Automation To Improve Employee Retention In Manufacturing

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Nov. 8, 2006 -- You can't blame line workers at a Midwest manufacturing plant for being frustrated. They miss family celebrations and postpone vacations in order to work the overtime required to meet production. Sure, management is scrambling to recruit and train new workers, but it's slow going.

How did this company, known for its efficiency, get caught in this predicament? One reason is the chaotic or inequitable workforce scheduling which contributes to the turnover problem plaguing U.S. manufacturers.

As senior workers retire, the company finds itself with a shortage of new employees. Senior workers -- protected by a union contract -- get first call on bid jobs. Since many junior workers are not sure if they will be working at the plant from day to day this forces them to make ends meet by getting second jobs elsewhere. What's worse, some quit.

Turnover is currently running 14% per year or higher according to U.S. Department of Labor statistics. One cause is attrition as older workers retire. But turnover can also be traced to employees who quit in frustration over what they consider to be inequities in work assignments. Not a good scenario for manufacturers already hit with a shortage of skilled workers.

One solution making its way into large-scale manufacturing operations of 300-plus employees is automated workforce scheduling.

Manual Scheduling

In an era when computer automation is ubiquitous on the manufacturing floor and the front office, it's hard to believe that the majority of large-scale manufacturing companies still rely on human workforce schedulers. Armed only with clipboard and spreadsheets, depending heavily on their own memory, they fill hundreds of job assignments every day. They must remember details -- skill levels, vacation days, seniority, time spent on that job, union rules to name a few -- for hundreds of employees and hundreds of jobs.

When combined with changing production requirements or crewing systems that rotate employees through shifts and jobs, scheduling becomes extremely complex. Given all the rules involved --- seniority, first-come-first-served, time off, right to refuse, time since last worked --- most schedulers are easily

overwhelmed. The junior employee's goal is an opportunity for work with equal and fair treatment. The harried scheduler's goal is to fill all jobs and to minimize overtime.

Overtime

Aware that under-manning can result in reduced product quality schedulers strive to balance over or under-manning. Some employees covet while others try to avoid overtime. Senior workers may hoard it or opt out when they prefer time off, like when hunting season starts. With too much overtime, workers can suffer burnout, adding to the retention problem.

Morningstar Foods in California equalized its overtime through automation. With an automated workforce-scheduling program, the company posts overtime opportunities on kiosks that are available 24/7 to all. With employees volunteering at a kiosk and with the software enforcing rules objectively, overtime is distributed equitably. And, since senior and junior employees share desirable and undesirable jobs, everyone is protected from overtime abuse.

Seniority And Tracking

Senior workers -- some 20 to 30 years on the job -- can perform most jobs and have job rights protected by a union contract. As the manufacturer mentioned earlier knows, these workers get first call on bid jobs. If it turns out the bid job is not on the schedule that day -- perhaps blueberry waffles are running instead of plain ones -- they can bump junior workers from their slots. This means junior employees may or may not have work. At times, says one scheduler, it's musical chairs.

As an ongoing cost of operation, all plants train their employees. However, if the newly qualified workers never get on the schedule because senior workers get the preferred jobs, that training time is wasted and the junior employees start looking elsewhere.

Automated Scheduling: The Last Efficiency Frontier

Most world-class manufacturing companies have honed their operations to a high level of efficiency. Their last efficiency frontier is fine tuning workforce scheduling. Reducing employee turnover is only one of several goals. Training new people only to see them quit from frustration eats company profits, no matter how efficiently machinery puts out products. Inequitable, inefficient workforce scheduling creates a domino effect; substandard products, some products in short supply or oversupply of the wrong products.

Automated scheduling changes the paradigm for the whole plant. Indefatigable, non-subjective, and consistently equitable, it works especially well in just-in-time operations where workforce changes can be made up to the final minute to meet demand or surplus.

When scheduling is computerized, "gaming" the scheduling office disappears. Record keeping, validations, and enforcement processes are performed by software that is always available, won't play favorites and never gets tired.

The job improves for skilled scheduling managers as well. When software manages complex and overlapping rules, drudgery and guesswork disappear from the scheduler's workday.

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