



MANUFACTURING

Coleman Consulting helps clients achieve quantifiable cost savings by implementing new schedules for deploying operations, maintenance, and service assets, without sacrificing employees' work/life balance.

Lean Manufacturing has forced excess capacity out of many manufacturing plants, reduced inventories, and forced plants to increase flexibility. In the middle, managers are compelled to change employee schedules to match production cycles and employees often bear the brunt of the negative results.

Traditional scheduling techniques no longer offer the flexibility required in today's business environment. Traditional scheduling techniques match demand primarily in 40 hour increments. A single day shift, followed by an afternoon shift, then a night shift, and finally a fourth shift for a 24 x 7-day operation is usually the progression companies take when they are growing. When workload cycles between the traditional 40-hour increments, managers have to decide to run overtime or overstaff to meet demand. If production demand varies between 130 hours and 150 hours per week, for example, does the management team decide to hire three crews (3 x 40 = 120 hours) and work extraordinary amounts of overtime or does it hire a fourth crew (4 x 40 = 160 hours) and run the risk of reducing its profit margin because employees are less than 100% efficient?

Bridging the gap between reducing cost and increased responsiveness requires a paradigm shift. Managers and employees can no longer view a schedule as simply a day on and day off pattern or a shift length. They have to consider the entire system that allows the workforce to be deployed in a way that demand needs are met. This includes designing work, pay, and coverage policies that allow workforce scheduling to be just as responsive as production scheduling.

The Right Schedule Really Pays

Coleman Consulting specializes in helping companies evaluate their workload, their business goals and their scheduling practices. An effectively designed schedule can save a company millions of dollars by fully utilizing equipment, increasing productive work hours, reducing overtime pay, building-in time to maintain equipment and facilities, and increasing safety measures.

Most plant schedules are either copied from another operation, based on tradition, or the result of a contract negotiation made far from the factory floor. With this approach, the odds of implementing the Best Cost Schedule for your business are remote and costly mistakes are probable.

A Best Cost Schedule is not a pattern of days off or a shift length, it is the most cost-effective method to deploy capital and personnel, and includes employee buy-in as well as specific work, pay, and coverage policies. A Best Cost shift schedule must include business needs, employee desires, and health and safety requirements.

"The financial outcomes of the scheduling project turned all skeptics into believers. An implementation process that carefully blends business needs, employee desires and health and safety generated a 16% increase in labor productivity."

Bill Gentes / Chief Financial Officer / Lane Press

Even though the current schedule is often not the right one for a particular location, management and employees usually become experts at making it work. Management may be lulled into thinking there is no problem. But the expenses can be enormous for lower production, poor capital utilization, (frequently below 50 percent, when looking at all 8,760 hours available each year), lower productivity, high overtime, low morale, and poor maintenance scheduling.

If the total cost from the wrong schedule is significant, you should consider making a change. If not, stick with your current schedule because any change, even a 30-minute change of start times, is likely to be a major (perhaps unpleasant) emotional event at your facility.

If management focuses only on business needs when making a schedule change, however, it probably will fail. Schedules that do not meet health and safety standards can result in catastrophic accidents and environmental damage costing millions of dollars. If the shift workers do not like their shift schedules, they may become unproductive. Shift workers have the ultimate veto power. A systematic, engineered approach that encompasses all these variables will have a good chance of lowering cost per unit.

Health & Safety

Good safety, alertness, and shift work schedules go hand in hand. Safety incidents frequently are the result of fatigued employees making errors. A recent study showed 55 percent of all shift workers in manufacturing operations notice poor safety practices due to sleepiness. Other studies point to a one and one-half to two fold increase in accident risks for work performed during overtime hours compared to work done during normally scheduled, straight time hours. Schedules that allow the body's circadian rhythm to be in synch and minimize the build-up of sleep debt with frequent days off results in the best on-the-job performance.

Employee Desires

When a shift worker is asked what he or she would prefer in a new schedule, the first answer is usually: "Don't mess with my pay, benefits or overtime." Once past these issues, Coleman Consulting's shift worker database, based on thousands of shift worker surveys, suggest shift workers have three primary desires, in order: better days off, better health and alertness, and more predictability in the schedule. After changing schedules, 80 percent of all shift workers typically report improvements in these three areas.

A shift worker's lifestyle can be made as attractive as straight day work, if enough quality time off is built in. After transitioning to a new schedule at one location, a union official reported, "Now we have people transferring from day shift into shift work to get the new schedule. If you come out here and talk about going back to the old schedule, they'll kill you! There's no way you're going to make shift work totally perfect, but we're talking about 95 percent of the folks here that enjoy their schedule."

Implementing Schedules

Coleman Consulting Group uses either a consultative or negotiating approach to implementation. The consultative approach works well in both non-union and union environments, where a schedule change is based on consensus building amongst all levels of managers and shift workers.

Clyde Williams, president of Oil, Chemical and Atomic Workers Local 15, said, "The Coleman Consulting implementation approach was a turning point. I guess that was the first thing union and management ever worked out and talked about outside the contract. We didn't do the schedule change at contract time; we did it while we had a contract. It opened up the avenues of communication, and the relationship with management actually has gotten better and better. I think you need to keep your schedule change off the bargaining table because it's a complicated process. There are too many details that you have to get right. Trying to do it all during negotiations would be difficult and would cloud the whole bargaining process."

Looking ahead, it is very unlikely that traditional schedules will be as prevalent ten years from today. With more competitive pricing and shorter contract terms, the pressure to reduce costs grows. Best Cost Schedules offer the possibility of improving shift work for everyone involved – managers, shift workers, and the shareholders who invest in the corporation.

The following list represents typical improvement opportunities in manufacturing plants:

- Capital Utilization
- Reducing Sanitation/Cleaning Costs
- Seven Day Operations
- Adjusting with Seasonality
- BEST™ Equipment Strategy
- Reducing Idle Time/Overtime
- Minimizing Breakdowns/Shut Downs