CASE STUDY

COMPANY: Critical Manufacturing

EMPLOYEES: 15,000

MANUALLY FILLING SHIFTS COULD BE COSTING YOU MILLIONS – CONSIDER THESE FACTORS TO YIELD BIG RESULTS

CHALLENGES:

 Manual callout and shift management process was inconsistent with union and workplace agreements and results would vary wildly depending on the supervisor

- Supervisors could not spend most of their time working, instead they were dealing with administrative scheduling issues
- Overtime was not being assigned equitably, causing workplace issues and expensive grievances with the union

Picture a front-line supervisor at a 24-hour manufacturing facility. She's eyeing the coming weekend's shift schedules. Her phone rings, while she gets a text message and an email. The call is from a floor assembly manager who gives her a heads up that two assemblers have called in sick for tomorrow's shift. The email is from her manager. He's asking for an update on the research into a grievance by a machinist who was allegedly passed over on a shift. The text is from an off-duty supervisor. He's wondering if she's found a warehouse associate with the right qualifications to fill a split-shift for a worker on bereavement leave; by walking the floor, the front-line supervisor found someone to take the hours. But she's concerned she might have to offer the slot to a worker with more seniority.

While this scenario is specific to a manufacturer, **any critical infrastructure company running multiple shifts that deploys a union workforce can experience a similar circumstance.**

SOLUTION:

- Implemented an automated callout system with robust shift management capabilities
- Solution automatically adhered to union and business rules across all departments

RESULTS:

- The manufacturer is projected to save more than \$1.5 million dollars a year in administrative fees and lost productivity
- Over \$84,000 in annual overtime grievances will now be avoided
- Plant managers and other supervisory personnel can spend less time on non-value activities and more time on strategic activity



Along with these shift-scheduling challenges, industry supervisors must maintain forced (or mandatory) overtime lists as well as overtime volunteer lists. Managing the rosters and lists is a sizable chore, too, because 24-hour operations always have overtime to dole out. According to the U.S. Bureau of Labor Statistics, the average overtime hours worked by manufacturing employees in December 2018 was 3.6 hours per week.

Other industry surveys of shiftwork and overtime practices at companies maintaining around-the-clock operations have employees who average as much as **500 hours of overtime a year.**

While some employees always want overtime, supervisors have the added pressure of distributing (and accounting for) overtime equitably. Companies usually distribute overtime based on work practices or union contracts. Often, administering the equitable distribution of overtime comes down to a department supervisor recording each employee's overtime hours on a pad of paper or computer spreadsheet. Many plants, then, have contractual obligations to print out and post schedules in a breakroom or service shop.

"There are as many ways to track overtime and schedules as there are companies," said a manufacturing industry consultant who evaluates shift-scheduling software.

WHY NOT AUTOMATE SHIFT SCHEDULING AND OVERTIME?

Challenges like these should easily lend themselves to the application of an automated system for shift swapping, scheduling or resource management. According to Capterra – an online platform for finding business software – there are more than 100 makers of shift-swapping software on the market. In spite of this, experts say only about 50 percent of manufacturers have scheduling software of some kind.

According to consultants who've evaluated implementations of automated scheduling, it is hard to put a value on the benefits the way a company would evaluate, say, an ERP implementation that will save 10 percent in shipping costs. Of the utmost concern for many plant managers and front-line managers is the fact that employees build their lives around their work schedules. In their minds the risk of something going wrong in an implementation far outweighs the benefits from an automated schedule. Managers view anything that could derail scheduling as a massive headache potentially leading to increased turnover, low morale, poor performance, higher costs, and if their plant is unionized, even a strike.

While less than 10 percent of U.S. manufacturing employees are part of a union¹, experts note that even employees in non-union plants build their lives around their schedule, which includes overtime rotations, shift swaps, time off, and much more. Other industry experts say the risks of disrupting scheduling and overtime can also affect productivity.

THE PITFALLS OF A DIY APPROACH TO AUTOMATED SCHEDULING

In order to not break a patchwork scheduling process but also introduce automation, experts say some technologyproficient plant schedulers will build their own program. A scheduler knows his or her plant's overtime rules and shift challenges, so a custom system works for a time. But if the person moves to another role or facility, plant supervisors say these self-built programs eventually collapse.

Plant managers also note that "home-grown systems rarely translate well for another plant because scheduling and overtime – and even the language around scheduling – is unique." For example, while the word layoff at one type of facility would be cause for panic, a worker somewhere else might use layoff as the equivalent of rest day (i.e., I'm taking a layoff for this Friday's shift).

Managing those nuances and complexity, say plant managers and consultants, is why it's been historically so difficult to find and implement a single software solution across multiple plants and manufacturers.

"When asked what the ideal software scheduling system would be, a former plant supervisor near Seattle answered, "The right software is going to address work rules, accommodate business needs and address health and safety issues. Those are the biggies."

FULLY AUTOMATING SHIFT SCHEDULING, CALLOUT AND OVERTIME

However, with a fully automated system like the ARCOS resource management platform, front-line supervisors, HR professionals and overtime administrators can view and print reports and analytics on shift-work, overtime and employee skill sets. Those responsible for ensuring shifts are covered can eliminate callout-related grievances, bypass errors and the time to research employee complaints about the equitable distribution of overtime. For shift workers, the ARCOS platform's mobile capabilities offer a view of their position on a roster or callout list and schedule preferences.

According to the vice president of engineering at a Texas-headquartered manufacturer, the most important person in any plant is the first-line supervisor. These people usually come up through the ranks; they're respected by the workforce, and management leans on them to maintain morale, safety and production."Frontline supervisors do amazing work related to safety and keeping the wheels rolling," remarked the Texas-based engineering vice president. "A lot of times they're wasting hours on the floor or phone because employees want to talk about trading some overtime."

MIDWEST PLANT WILL REDUCE GRIEVANCES, GAIN SITUATIONAL AWARENESS

A Midwest manufacturing plant recently began implementing the ARCOS resource management platform after calculating it would recoup nearly \$5 million over three years by automating its scheduling system and data, which includes shift and overtime assignments as well as callouts. Errors from calling out workers via the plant's manual scheduling system have caused approximately \$84,000 in annual payouts for callout-related grievances. The plant's managers have spent another \$1.5 million annually in salaries for the workers required to research and resolve grievances.

With ARCOS as the engine behind the plant's callout, overtime and shift-swapping process, managers at the plant can load lists of employees by job title, skill set or however front-line supervisors want to divide groups of people. Each roster a supervisor creates in the ARCOS platform will tie back to union or company callout rules specific for each department in the plant. And managers can see callout acceptance rates for individuals or by job classifications ranging from mechanics to warehouse workers. The Midwest plant's management team also agreed they could eliminate time wasted on research by using the ARCOS platform's reporting and call forensics.



After researching the work that the plant puts into maintaining its manual scheduling process and resolving grievances, ARCOS calculated managers were wasting 19,741 man-hours and 9.49 FTEs every year.

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Once implemented at the plant, the burden of collecting and vetting rosters and filling open shifts will go from front-line supervisors to the ARCOS system because list owners will load their workers and rules into the platform. Managers and supervisors will also be able to see days or weeks in advance who is available to work open shifts or split shifts.

This means:

- Plant managers and other supervisory personnel can spend less time on non-value activities like finding people to work and spend far more time on strategic activity that helps build profitability, and customer experience.
- The plant's manager can gain complete situational awareness related to staffing with a few keystrokes.
- Having access to historic results such as recordings of responses to callouts can drastically reduce or eliminate grievances and help identify employees that need coaching or consideration for new opportunities.
- Front-line supervisors can walk the floor to monitor safety and coach workers, while employee schedule preferences and overtime requests run automatically in the background.

GETTING STARTED

Companies that rely on shifts being filled constantly look at ways to streamline techniques and reduce production costs for raw materials, steam, electricity, consumables and shipping. Plant owners invest millions in intelligent plant design. But when it comes to scheduling, plant managers may not see that managing scheduling, grievances and shift-swapping has become a sunk cost. Worse yet, the majority of plant managers may not even see the time it steals from improved production and safety. Scheduling doesn't have to be a sunk cost; it can be a prospective cost, something a plant can save if action is taken.

Putting in place a fully automated resource management system is the action. A resource management platform brings the operational benefits of greater situational awareness, a stronger culture of safety and transparent scheduling for managers and workers. That's innovation worth investing in.

Talk to an expert today at ARCOS by calling 614.396.5500, ext. 2, or visiting www.arcos-inc.com.

[1] U.S. Bureau of Labor Statistics, Table 3. "Union affiliation of employed wage and salary workers by occupation and industry, 2017-2018 annual averages."

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