Employee Scheduling for Manufacturing

A Best Practices Guide to Increasing Productivity and Reducing Costs

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Introduction

Central to a manufacturer's operational success is its people: the dedicated production and warehouse staff, and the operations management teams who work tirelessly to support them. For these frontline contributors, the employee schedule serves as the central conduit connecting business operations to the people who get the work done.

Today's operations managers rely on sophisticated technologies that produce vast amounts of data to help them plan and optimize production. But the same cannot be said for how those organizations plan, monitor, and optimize labor—an equally important aspect of operational excellence.

Because of the unique complexity of workforce management in manufacturing, the planning and scheduling of employees often relies on manual processes. Using hands-on approaches—such as wrangling spreadsheets and updating breakroom boards—to create and communicate

work schedules prevents manufacturers from realizing the powerful benefits of workforce scheduling optimization.

As manufacturers continue their digital transformation, strategic employee scheduling with automation is poised to emerge as the key to reducing labor costs, improving employee satisfaction, and enabling more streamlined, flexible, and efficient operations—all of which lay the groundwork for manufacturing organizations to thrive in 2021 and beyond. In fact, global organizations, including many Fortune 500 companies, have reduced labor costs and improved their overall operations through this approach: AK Steel (acquired by Cleveland-Cliffs) reduced absenteeism by 38 percent, and a "Big 3" automaker saved $1.5 million in overtime costs the first year.

In this ebook, you will learn six best practices manufacturers are leveraging to increase productivity and reduce costs with better staff scheduling strategies.

Best Practice 1

Increase Profitability with Improved Labor Forecasting

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Increase Profitability with Improved Labor Forecasting

Accurately planning and then assigning labor to meet production goals in the 60-120 days before the work gets done is a highly complex process to balance. The stakes are high to get it right: Missing production goals due to understaffing may mean missing customer commitments, while incurring higher labor costs resulting from overstaffing can take a significant toll on the bottom line.

The reality is that constantly changing production requirements drive highly variable labor needs—and that's difficult to predict. For example, manufacturers who produce several products and are changing the production level mix frequently may have different staffing needs for each production line, each of which may require specialized skills or qualifications. Similarly, shifts in overall production levels may drive staffing changes not only within production, but downstream as well, in packaging or the warehouse.

Many manufacturers perform basic labor planning using manual tools such as Excel. While this approach is manageable at the outset, as the day-of work gets closer and the velocity of change increases the process breaks down. This is especially true when trying to predict labor needs and labor capacity at the department level, which is key to accurate labor planning.

To improve the accuracy of mid-range labor planning, operations leaders need access to tools that can provide real-time data insights about the business (sales trends, weather predictions, seasonal production fluctuations, and more) and their workforce (employee pay rates, scheduling rules, availability, etc.).

Some manufacturers have data teams devoted to these analyses, while others use automated platforms to help. The important thing is to identify the most predictive leading indicators for the business so managers get a "big picture" view of upcoming labor resource needs compared to availability. Accurately aligning labor capacity to meet production goals—down to the department level—can be a game-changer for optimizing workforce operations.

ⓘ How Technology Helps

Improving labor forecasting with software that automates mid-term labor planning not only optimizes workforce operations but also frees up schedulers to tackle unforeseen, day-to-day scheduling fluctuations effectively.

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Best Practice 2

Control Labor Costs with Responsive Scheduling Practices

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Control Labor Costs with Responsive Scheduling Practices

Big opportunities exist for plant and operations managers to better control labor costs with improved employee scheduling strategies. Understanding the real underlying drivers of labor costs offers a smart starting point to reevaluate the employee scheduling workflow and associated scheduling policies. Here are three suggestions to consider as you examine cost control opportunities.

Don't Throw Labor at the Problem

At a basic level, excessive labor costs could simply be a symptom of inaccurate mid-range labor planning as this impacts the short-term labor scheduling that happens several weeks before the work is performed. This is a critical time frame in the scheduling lifecycle because it's when managers commit to a particular level of workforce capacity and publish work schedules accordingly.

Not having the necessary staff needed to meet production goals during a given point in time—and then "throwing labor at it"—is a costly strategy. Better mid-range labor planning is essential for labor cost control. With improved accuracy, managers can avoid costly overtime by fine-tuning the labor plan to support last-minute requirements using day-of scheduling strategies such as flex pools or cost-effective temp resources.

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Optimize the Schedule for Cost

Understanding the cost implications related to shift assignments can help control labor costs. Use workforce data to respond strategically to operational changes such as sudden spikes in demand or unexpected worker callouts. By having visibility into information about workers' base pay rates, overtime status, recent work history, or other pay rate triggers, managers can schedule the most cost effective, qualified workers for each role. Leveraging labor cost insights during the scheduling process is an excellent way to reduce wasteful overtime, avoid overstaffing, and create an optimized schedule.

Plan for the Unexpected in the Short-Term

A high incidence of short-notice worker callouts during the pandemic amplified the need for more strategic scheduling practices. One cost-effective strategy for responding to last-minute worker callouts is to build a flexible workforce. Flexible scheduling strategies, which we cover in detail in the next section, help facility managers control labor costs in the face of unexpected change by giving them the visibility needed to assign the most cost-effective workers to fill open shifts. With real-time data insights and the right automated processes in place, schedulers can tap hidden workforce capacity to quickly backfill shifts while taking into account other critical factors like compliance and potential overtime costs.

How Technology Helps

In much the same way as plant managers use sophisticated ERP technologies and data to plan production, employee scheduling software exists to enable data-driven decision-making for workforce operations. This results in more accurate labor planning, efficient labor utilization, and daily operational resilience—critical factors in keeping labor costs under control.

After improving their workforce scheduling practice, a "Big 3" automaker with over 100,000 employees in North America saved $800 per employee per year on grievances associated with wrongful overtime assignments.

Best Practice 3

Disruption-Proof Operations
with a Flexible Workforce

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Disruption-Proof Operations with a Flexible Workforce

A top goal for operations managers is to ensure all critical job openings are filled—manufacturers simply can't run production lines or fill orders without the necessary people to do the work required. This challenge can be very stressful for schedulers to navigate, especially during times of peak demand.

Building flexibility into your employee scheduling workflow is key to avoiding operational disruptions. Here are three flexible scheduling strategies manufacturers use to keep the frontlines running.

Leverage Flex Pools

Flex pools are a useful strategy to leverage when unplanned events impact production volume and labor demand. The structure of flex pools varies by plant and facility—some companies create flex pools organized by role, production line, or department. Others create flex pools to address a particular challenge, such as workers who are eager to volunteer for overtime. The common attributes of flex pool employees are that they possess versatile skill sets and have flexibility in their work schedules.

Some manufacturers staff their flex pools in-house, leveraging part-time workers or full-time employees, while others include contingent labor sources. Regardless of the labor source, real-time visibility into workers' qualifications, overtime status, and availability is essential to this strategy's success.

ⓘ How Technology Helps

Improving employee scheduling processes through automation can help organizations meet operational needs while providing their workers with greater control and flexibility over their work schedules.

Customers reported an 86 percent improvement in shift coverage rate.

2021 Shiftboard Customer ROI Survey

Offer Self-Serve Scheduling

Production facilities typically create schedules using a top-down approach, with work schedules set far in advance. However, other scheduling strategies can be used for short-range scheduling. For example, adding in bottom-up scheduling—self-serve scheduling where workers pick up the shifts they want to work—is a complementary strategy used in tandem with traditional top-down scheduling to fill coverage gaps with qualified, eligible, and willing workers.

Self-serve scheduling strategies also have the added benefit of improving job satisfaction because they provide workers with the ability to pick up or sign up for open shifts themselves, giving them more autonomy over their work-life balance. Findings from Shiftboard's 2019 Hourly Worker Research Report revealed that 87 percent of hourly workers consider it extremely important to control their work schedules, and 55 percent say they'd likely leave their job if they lacked some measure of control over their schedule. Supervisors are relieved of the administrative burden related to managing these schedule changes, employees feel more empowered, and businesses see operational benefits.

Adjust Shift Patterns and Durations

Plant operators can create more flexibility by changing how they structure shifts. For example, one of the largest chicken processing plants in the United States created alternate shifts—shifts cut into shorter periods—to expand their workforce by attracting workers in need of flexible schedules. The plant was able to structure mini-shifts to accommodate these workers and keep operations running smoothly.

Other strategies include adjusting shift start, stop, and break times to coordinate with workers' personal demands, such as transporting children to and from childcare, home, or school. Adjusting shift lengths, patterns, and break times provides employees greater flexibility to manage work with life—and does so without interfering with plant productivity.

"At LUSH we are aiming to create a highly dynamic scheduling environment, so having real-time scheduling capability can be highly beneficial for us."

Alan Nair
Labor Scheduling Project Lead
LUSH Fresh Handmade Cosmetics

Best Practice 4

Boost Retention with Worker-Centric Scheduling

Best Practice 4

Boost Retention with Worker-Centric Scheduling

Most organizations understand work schedules play a role in employee productivity and turnover, yet they underestimate the extent to which schedules impact employee job satisfaction. More importantly, most employers aren't aware of their potential to create work schedules capable of meeting individual employee needs.

Work schedules heavily influence employee satisfaction and retention because they impact life more acutely than any other aspect of work: earning potential, parenting schedules, social lives, and quality of life, just to name a few. In other words, the work schedule has a huge impact on how people manage their time—a key component of work-life balance. In fact, according to Shiftboard's research, 77 percent of the hourly workers polled ranked work-life balance as necessary for high job satisfaction. This is rather surprising when you consider work-life balance ranked even higher than being paid well (66 percent), having a good working relationship with a boss (64 percent), working in a convenient location (62 percent), or doing enjoyable tasks or projects (58 percent). The findings strongly suggest the key to hourly employee job satisfaction is tied to the degree that workers feel empowered to balance work with life.

These findings uncovered the need and opportunity that exists to change the way work is scheduled. The task is especially acute in the manufacturing industry where highly skilled labor is employed—and the replacement cost tied to turnover is high. Here are two strategies you can use to improve job satisfaction and retention at your facility.

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Empower Workers to Influence Their Schedules

Worker-centric scheduling considers worker preferences and empowers employees with more autonomy over their work schedule. Allowing workers to communicate their availability, self-schedule, trade shifts, or volunteer for overtime can dramatically improve their perceptions about job satisfaction.

In Shiftboard's study, 89 percent of hourly employees wanted the ability to select their shifts rather than having them assigned at random, and 83 percent found it important to be able to swap shifts once the schedule was posted. An astonishing 93 percent said they would be willing to work overtime but didn't want to be required to do so.

It seems the relationship between scheduling, productivity, and job satisfaction is almost inseparable. When asked, 80 percent of the hourly workers we surveyed stated their work schedule impacts the quality of work they do and their productivity levels, and 79 percent said their work schedules affected their ability to do a good job. The research is clear: work schedules can directly impact top-line revenue and bottom-line profits.

Tied to employee satisfaction, 85 percent of the workers surveyed reported their work schedule affects their happiness on the job. Further, 74 percent said their schedule impacted their relationships with co-workers, and 80 percent stated their work schedules influenced their likelihood of seeking other employment opportunities.

"Several years ago, we launched a strategic employee scheduling initiative to leverage our employees' preferences while increasing productivity and retention numbers. The initiative has helped create a healthier, more productive workplace while also saving our organization time and money."

Wes Swearingen
SVP of Operations
Medline Industries

Try and Test Self-Serve Scheduling

In response to these drivers of job satisfaction, some manufacturers have had great success with innovative, self-serve strategies such as voluntary overtime. When one medical supply manufacturer implemented an all-volunteer overtime policy—where employees just signed up if they wanted overtime—the results were surprising. The company was able to increase the fill rate of overtime shifts to almost 100 percent every single week. This is an excellent example of a win-win—the company got overtime filled, and the employees who wanted to work extra got the overtime hours.

Another benefit of these kinds of self-serve strategies is transparency. When transparency is built into the scheduling process, workers understand how shift assignments are made and trust the scheduling process. While it is almost impossible to make everyone happy with a work schedule, involving employees in the process and ensuring they understand the rationale behind scheduling decisions will significantly improve retention efforts.

How Technology Helps

Employee scheduling solutions fill shifts with qualified staff while prioritizing worker preferences and enabling bottom-up scheduling. This results in organizations attracting and retaining the skilled labor instrumental to success in the manufacturing industry.

Customers reported an 83 percent improvement in employee satisfaction.

2021 Shiftboard Customer ROI Survey

Best Practice 5

Ensure Safety with Adherence to Scheduling Rules

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Ensure Safety with Adherence to Scheduling Rules

Production lines and warehouses are inherently dangerous work environments. Every time a worker steps on the floor, their health, safety, and well-being are on the line. It's not just the physical conditions that put them at risk: a chaotic, overly taxing pace and employee scheduling issues also play a role. But they often go unrecognized amid the challenges of hitting quotas and keeping customers satisfied.

Staying compliant with dozens of labor regulations, from the federal level to union agreements and local labor laws, is a complex process to manage. In 2021 and beyond, that task becomes even more challenging, as managers now must take into account COVID-19 protection for employees.

Although time-consuming when managed manually, having processes in place to continually check your employee schedule against all established rules requirements—especially when the schedule changes—helps ensure a fully compliant schedule is maintained (and that workers are safe). Having access to real-time data insights can also help managers understand the tradeoffs between shift coverage needs and compliance requirements so that scheduling decisions can be justified with confidence.

"A huge benefit of using Shiftboard's SchedulePro software is being able to identify potential grievance situations before assigning shifts to our employees. One of the built-in reports can analyze our entire schedule, allowing us to re-arrange the shifts before finalizing and distributing it to our employees. The ability to systematically check for compliance has been the main factor in reducing the number of union grievances."

Plant Manager
"Big 3" Automaker

Manufacturers spend millions annually to ensure a safe working environment for their frontline workers. Yet aligning employee scheduling strategies with their safety initiatives is often overlooked. Relying on manual employee scheduling methods such as spreadsheets can introduce unintended errors that impact safety and make, making the workplace itself more dangerous and in potential violation of safety compliance regulations and policies, such as:

- Scheduling a worker without required credentials or required training for the job.

- Scheduling a worker for multiple shifts without proper time off in between shifts.

- Putting workers into OT conditions that may significantly increase fatigue.

- A new scheduler or manager unfamiliar with all the scheduling rules who violates important scheduling regulations without realizing it.

Investing in improvements to your employee scheduling workflow can ensure the required scheduling rules are followed, preventing numerous risks such as violations to rules, CBA commitments, worker fatigue regulations, and other labor laws. Building in governance over credentials and trainings also provides visibility for employers to keep certifications current, eliminating costly day-of disruptions due to unqualified workers being unknowingly scheduled for a shift, which then must be filled in last-minute by an employee with valid credentials.

(i) **How Technology Helps**

Intelligent employee scheduling technology can ensure a safe workplace by automating rules compliance during schedule creation throughout the scheduling lifecycle, ensuring only qualified, eligible workers are assigned to shifts.

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Best Practice 6

Optimize Labor by Connecting Daily Operations to Workforce Capabilities

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Optimize Labor by Connecting Daily Operations to Workforce Capabilities

Employees perform much better in shifts and roles that they are qualified for or that they select themselves. That's why managers need a process for understanding, and tracking, how various worker attributes factor into scheduling decisions—across all labor pool resources (full-time, part-time, contract labor, etc.).

One strategy for gaining a holistic view of labor resources is to create and maintain a central database with detailed employee profiles. Armed with insights into individual worker attributes such as work preferences, overtime status, schedule flexibility, credentials, and productivity by role, among others, managers can schedule workers strategically to drive higher productivity and avoid unnecessary overtime.

Connecting daily operations with the labor resources available is a complex and ever-changing aspect of manufacturing. With data-driven decision making and real-time communication tools, managers can achieve higher workforce capacity and efficient labor utilization while ensuring workers' needs and preferences are considered throughout the scheduling lifecycle.

"To develop successful strategies to retain employees and maximize productivity, employers first must understand their hourly worker needs, while also recognizing these needs will vary."

Rick Webb
Director
Grit Studios

Customers experienced a 55 percent improvement in employee productivity.

2021 Shiftboard Customer ROI Survey

How Technology Helps

How Technology Helps

Organizations can put themselves in the driver's seat when solving the enduring human capital problem of managing and scheduling their workforce. Fueled by employee scheduling technology, operations leaders can effectively scale operations while keeping an eye on bottom-line profits and employees' well-being.

Employee scheduling technology automates the scheduling lifecycle using data-driven tools designed to create optimized schedules each and every day. From accurate labor forecasting to assigning the best workers to managing change efficiently and ensuring labor compliance, intelligent, automated technology is key to realizing the powerful benefits of workforce scheduling optimization.

Learn more about employee scheduling software at shiftboard.com.

"Enterprise companies have complex employee scheduling needs and require solutions that are both highly configurable and easy to use."

Frank Pereira
Managing Partner
Coleman Consulting Group
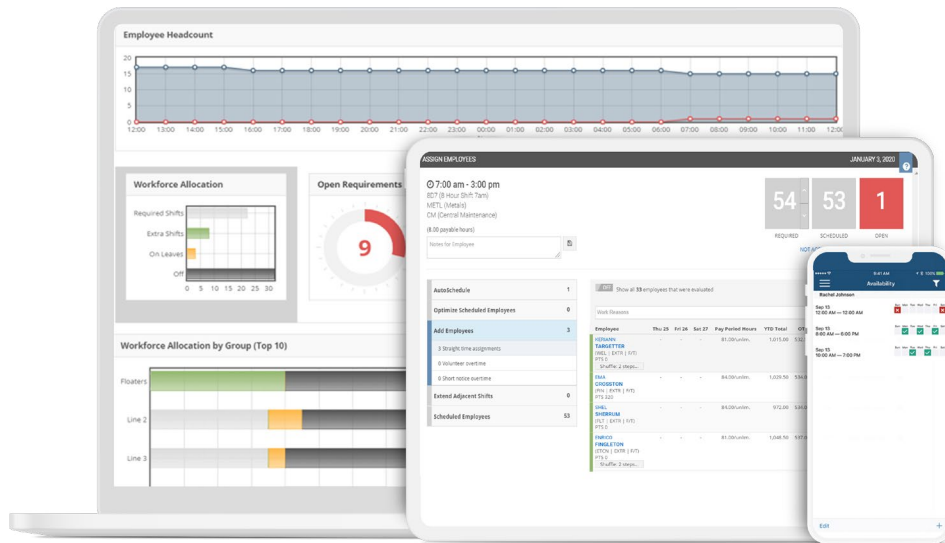
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About Shiftboard

Shiftboard is a global, leading provider of workforce scheduling solutions for organizations with continuous and mission-critical operations. Backed by Shiftboard's innovative technologies, organizations can optimize their workforce scheduling practice to lower labor costs, improve efficiency, comply with labor regulations, and create a better employee experience. To date, Shiftboard has supported over 265 million scheduled shifts for thousands of customers, including Fortune 500 companies, providing the employment pipeline for over $9 billion in wages earned. For more information, please visit shiftboard.com.

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