

# Managing Variable Workloads

## Flexibility Tools for 24/7 Operations

Expert guidance from consultants who have worked with hundreds of 24/7 operations.

SHIFTWORK SOLUTIONS LLC

Guide 4

### WHO WE ARE

Shiftwork Solutions LLC is a leading U.S.-based management consulting firm specializing in shift schedule design, workforce engagement, and operational optimization for 24/7 industrial operations. For over 30 years we have helped hundreds of manufacturing plants, distribution centers, mines, utilities, and processing facilities across more than 16 industries build better schedules, reduce costs, and create workforces that stay.

### OUR PROCESS

1

#### Assess

We start by understanding your operation, schedule, costs, and workforce composition.

2

#### Design

Schedule options built for operations AND people — with full cost and coverage clarity.

3

#### Deliver

Rollout support, employee education, policy development, and ongoing guidance.

4

#### Sustain

Post-implementation survey, results review, and adjustments to ensure it holds.

### OUR EXPERIENCE

30+

Years of dedicated shiftwork consulting

Hundreds

Operations helped across North America

16+

Industries served in every engagement

Fixed

Fee model — no hourly billing surprises

Ready to discuss your operation? The conversation is free.

(415) 265-1621 [Contact@shift-work.com](mailto:Contact@shift-work.com) [shift-work.com/contact](http://shift-work.com/contact)

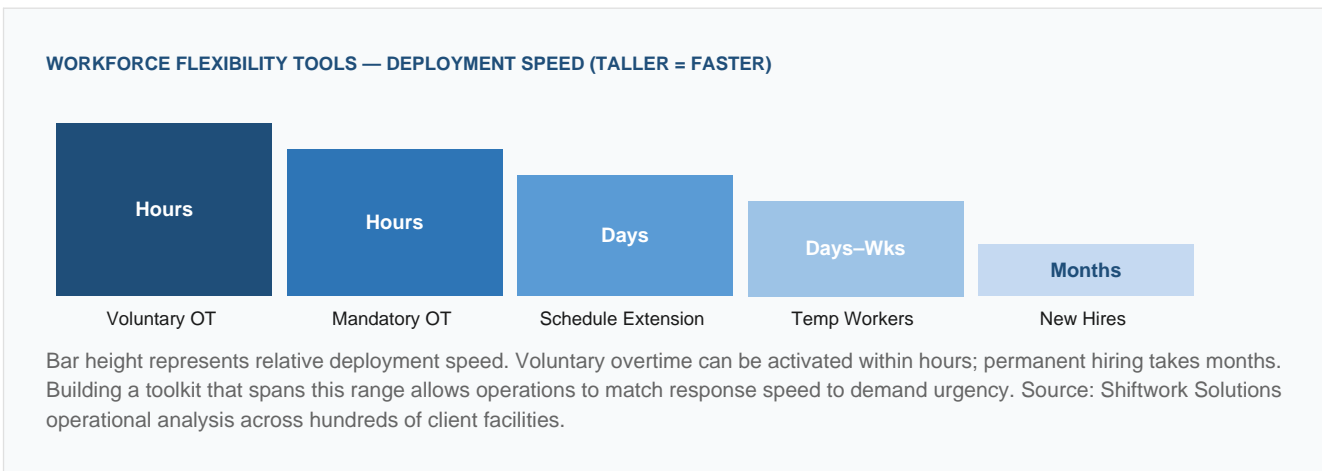
INTRODUCTION

## The Core Tension in Variable Operations

Customer demand rarely follows a predictable pattern. Orders spike before holidays, drop during slow seasons, and fluctuate week to week based on factors beyond your control. Yet most shift schedules assume steady, uniform workloads. This mismatch creates a fundamental challenge: how do you maintain adequate coverage during peak demand without paying for idle capacity during slow periods?

The answer lies in building flexibility into your scheduling strategy. Variable workloads require variable responses. Facilities that treat staffing as a fixed constraint struggle with either chronic overtime during busy periods or expensive idle time when demand drops. Operations that build adaptability into their scheduling approach can match labor supply to actual demand while maintaining workforce stability.

This distinction matters more than most leaders realize. A level-coverage schedule that looks efficient on paper can cost 15% more than a variable-coverage approach designed around actual demand patterns. The complexity lies in creating flexibility without sacrificing predictability for employees or operational control for management.



THE ECONOMICS

## The Economics of Workload Variability

Consider a common scenario: demand varies by 30% between your busiest and slowest periods, but your schedule provides level coverage throughout the year. During peak periods, you cover the gap with overtime. During slow periods, you either send people home early or find make-work activities to keep them busy. Neither approach is economically sound.

Hiring enough employees to cover peak workload requirements creates an expensive problem. When demand drops, you either lay workers off or retain them during periods when they provide no operational value. The cost penalty for overstaffing typically runs ten times higher than the penalty for understaffing covered by overtime.

The mathematics become clearer with a concrete example. Imagine your busiest day requires 100 workers while your slowest day needs only 52. A level-coverage schedule staffed to 83% capacity would provide adequate coverage most days while relying on overtime for peaks — but still leaves significant white space. A variable-coverage schedule designed around actual demand patterns can eliminate most of that waste, delivering the same output at substantially lower cost.

## THE TOOLKIT

# Four Tools for Managing Variability

Effective variable workload management combines multiple approaches. Each tool addresses different aspects of the flexibility challenge, and the right combination depends on your specific demand patterns and workforce characteristics.

## 1. Planned Overtime

Overtime remains the most flexible option for handling workload variability. It allows you to increase coverage from a fixed employee base without committing to permanent headcount increases. The incremental expense is substantially lower than maintaining excess permanent staffing during slow periods.

The limitation emerges when overtime exceeds sustainable levels. When overtime surpasses 20% of total hours for extended periods, expect adverse effects on morale, safety, and productivity. Strategic overtime means using it deliberately for predictable demand spikes rather than as a default response to chronic understaffing.

## 2. Temporary and Contract Labor

A buffer of temporary workers covering 10% or more of your labor requirements provides capacity to flex up and down without affecting your permanent workforce. The ability to economically adjust capacity by 10% without permanent hiring or layoffs represents genuine strategic value.

This approach works best for positions where skill requirements permit faster onboarding. Highly technical roles rarely benefit from temporary staffing, but operations with substantial semi-skilled positions can leverage temporary labor effectively. Always calculate cost per unit of output, not just hourly rate.

### 3. Discretionary Work Management

Every facility has work that must be done but offers flexibility regarding timing. Training sessions, maintenance projects, equipment upgrades, and deep cleaning activities can be scheduled during slow periods rather than competing with production during peak demand. The goal is converting potential idle time into productive activity.

Suppose demand drops significantly around the holiday period in December and January. These months become ideal for training that works best when entire crews can participate. Special maintenance activities that require equipment downtime fit naturally into slow seasons. The key is identifying discretionary work in advance and building it into your annual planning cycle.

### 4. Planned Time-Off Management

Employees take vacations and floating holidays representing more than 5% of scheduled work hours annually. During peak production periods, time-off typically requires overtime coverage. During slow periods, encouraging time-off reduces idle capacity without layoffs.

Three approaches help align time-off with workload patterns: restrict vacation availability during peak seasons while loosening restrictions during slow periods; schedule plant shutdowns during slow months and require unnecessary personnel to take vacation; and proactively schedule vacation for employees who have not selected dates that align with business needs.

**~14%**

**True OT cost premium**

When fully loaded costs are compared, overtime costs only about 14% more than straight time — the most cost-effective fast-response tool for short-duration peaks.

**20%**

**OT sustainability threshold**

When overtime surpasses 20% of total hours for extended periods, expect adverse effects on morale, safety, and productivity. Use overtime strategically, not chronically.

**10%**

**Temp buffer target**

A buffer of temporary workers covering 10% or more of labor requirements provides meaningful capacity to flex up and down without affecting your permanent workforce.

**MULTIPLE SCHEDULES**

## When Multiple Schedules Make Sense

One of the most common questions in scheduling involves whether a single site can operate multiple schedules simultaneously. The answer is yes, and it may represent the optimal solution when different areas of your operation face different coverage requirements.

Consider a facility with two production lines. One line needs continuous 24/7 coverage while the other requires only five days a week with occasional weekend overtime. Implementing different schedules tailored to each area's actual requirements avoids both overstaffing and chronic overtime.

Multiple schedules introduce complexity — supervision across schedule groups, overtime distribution between groups, and policy alignment. But multiple schedules can be tailored to fit both operational requirements and diverse employee work-life balance preferences. When weekend overtime is needed, employees from both schedule groups can share the burden voluntarily.

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#### GROWTH AND CONTRACTION

## Scaling Up and Scaling Down

Growth creates different challenges than seasonal variation. Ramping up production requires adding coverage hours, which typically follows a progression: weekday single shift, weekday overtime, adding evening shift, weekend overtime, adding night shift, moving to continuous operations. The key is having schedules ready before you need them.

Scaling down presents different challenges, particularly when the reduction may be temporary. The instinct to simply reduce headcount creates problems when demand returns. Skilled employees lost during downsizing must be replaced and retrained during recovery. Slow periods also create opportunities: maintenance projects deferred because equipment couldn't be taken offline, upgrades awaiting downtime, training sessions requiring full-crew participation.



Customers drive production levels, not internal preferences. If your customers need product Tuesday through Saturday but production runs Monday through Friday out of habit, you have misalignment that shows up as excess inventory, expedited shipping costs, or missed opportunities.

— Jim Dillingham, Shiftwork Solutions

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#### THE FLEXIBILITY EQUATION

## What Flexibility Means for Shift Workers

For shift workers, schedule flexibility means something specific: the ability to get extra work when they want it while counting on scheduled time off when they expect it. These two desires — optional overtime availability and predictable time off — drive workforce satisfaction with flexible scheduling arrangements.

The most valuable schedule flexibility feature may be eliminating mandatory overtime entirely. When employees work overtime only on a voluntary basis, those seeking additional income can find it while those preferring time off can protect it. Achieving this requires either accepting occasional productivity losses when volunteers are insufficient, or maintaining enough staffing that coverage remains adequate even without volunteers.



The schedule tells you when overtime occurs but not how much. That is a function of staffing. Get the staffing right, and flexibility follows.

— Dan Capshaw, Shiftwork Solutions

#### AVOID THESE MISTAKES

## Common Mistakes in Managing Variable Workloads

### 1 Treating All Variation as Temporary

Some demand changes represent permanent shifts rather than seasonal fluctuation. Responding to permanent changes with temporary measures creates chronic problems. The overtime intended for seasonal peaks becomes a year-round burden. Distinguishing between temporary variation and permanent change determines whether flexibility tools or schedule redesign provides the appropriate response.

### 2 Ignoring the Workforce Dimension

Variable workload strategies that look elegant mathematically often fail in practice because they ignore how employees experience them. A schedule that varies workers' hours unpredictably may match workload perfectly while destroying morale. Flexibility tools only deliver their promise when implemented thoughtfully with genuine workforce engagement.

### 3 Assuming Level Coverage Is Simpler

Level-coverage schedules appear simpler to administer but often hide substantial costs. The 15% premium for level coverage compared to variable coverage represents real money lost to inefficiency. Complexity in scheduling can pay for itself many times over through labor cost reduction.

**Important:** Variable workload strategies require ongoing adjustment. Demand patterns shift, workforce preferences evolve, and approaches that worked last year may underperform today. Build regular review cycles into your scheduling practice to ensure your flexibility tools continue matching actual conditions.

#### BUILDING YOUR STRATEGY

## Building Your Flexibility Strategy

Effective variable workload management begins with understanding your actual demand patterns. What does your weekly, monthly, and annual demand profile look like? Where do peaks and valleys occur, and how predictable are

they? Historical data provides the foundation for any flexibility strategy.

Next comes evaluating which flexibility tools fit your operation. Not every facility can use temporary labor effectively. Not every workforce will accept aggressive time-off management. Not every operation has sufficient discretionary work to absorb slow periods. The right combination depends on your specific circumstances.

Variable workloads represent a permanent reality for most 24/7 operations. The question is not whether you will face demand variation but how effectively your scheduling approach responds to it. The gap between understanding these principles and successfully implementing them is where expertise delivers disproportionate value.

**Ready to build a variable workload strategy for your operation?**

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