



INDEAVOR

**The 5 Levels of Schedule Automation:
From a Manual Task to a Business-Driving Differentiator**





Table of Contents

- 03** **Your Employees Are Your Most Valuable Asset**
- 04** **Level 0 – Level 1: Manual Processes**
 - Level 0: Paper or Excel
- 05** **Level 0 – Level 1: Manual Processes**
 - Level 1: Templated Base Schedules
- 06** **Level 2 – Level 4: Schedule Generation Algorithms**
 - Level 2: Basic Demand-Driven Scheduling Algorithms
- 07** **Level 2 – Level 4: Schedule Generation Algorithms**
 - Level 3: Multi-Stage, Custom Demand-Driven Scheduling Algorithms
 - Level 4: Multi-Stage, Custom & Configurable Demand-Driven Scheduling Algorithms
- 08** **Level 5: True Automation**
 - Level 5: Automation of Straight Time, Overtime & Regeneration Scheduling Processes
 - The 6 Tenets of Scheduling Nirvana
- 09** **Level 5: True Automation**
 - Real World Use Cases for Indeavor Schedule
- 10** **Level 5: True Automation**
 - Real World Use Cases
- 11** **About Indeavor**

Your Employees Are Your Most Valuable Asset

The shift schedule is the most important, and usually the first, point of contact between the employer and worker. After all, if the right employees aren't in the right place at the right time, how does a job or task get accomplished? Since shift-based environments rely on their hourly employees, the agility of your scheduling process can help predict your organization's success.

To help measure the value your scheduling process is providing your organization, this report will explore the 5 levels of schedule generation.



Level 0 – Level 1: Manual Processes

Treating scheduling as an administrative task.

Level 0: Paper or Excel

This level takes a bare minimum approach to scheduling, yet a shocking majority of large organizations are still relying on outdated, time-consuming manual processes to create their shift schedules.

We surveyed nearly 150 schedulers across complex, shift-reliant industries. More than half of the respondents surveyed claimed they were stuck using paper or spreadsheets to schedule employees and shifts. The results show just how complicated the daily nuances of scheduling can be when done manually. 34% of those relying on paper or spreadsheets are spending over 5 hours creating shift schedules each week—and that's just the straight time schedule. 28% are also spending over 5 hours each week dealing with overtime coverage alone.

So, why stick with manual processes and create such a hassle?

Typically, the process is something the scheduler "owns" and is very comfortable with. They likely created these spreadsheets years ago, and it was a giant improvement at the time. It becomes easy, almost a given, to rely on one person's tribal knowledge; they can spend time doing this complex thinking in their head surrounding each employee's qualifications, hours worked, and availability, and then feel accomplished hours later when they solve the puzzle.

But this can create seriously negative business consequences.

Relying on the tribal knowledge of one or a few individuals means that trouble starts as soon as they resign. Or are out sick. Or need to train another employee on all the complicated information that they have stored in their head and across disparate locations.

There are no cost or compliance control capabilities. The inflexibility of paper leaves you vulnerable to errors like unexpected vacancies that hurt operational efficiency, inadequate rest periods that increase compliance risk, and unbudgeted overtime spend. While using paper and spreadsheets costs less than investing in a software upfront, there are plenty of missed opportunities for controlling excess costs that may end up making paper the more expensive choice.

**34% of those
relying on paper
or spreadsheets
are spending over
5 hours creating
shift schedules
each week.**

Level 0 – Level 1: Manual Processes

Treating scheduling as an administrative task.

Level 1: Templated Base Schedules

While still an exclusively manual process, Level 1 is a slight upgrade from paper and spreadsheets. Your scheduler has created some basic templates, most likely in a simple online tool, that contain pertinent information for each employee, like on/off patterns and their default job and default shift.

The limitations are basically the same as Level 0—inflexible, a reliance on tribal knowledge, and no cost or compliance control. If there is a change to the status quo (AKA the base schedule template), it requires manual entry.

This is similar to a time and attendance system that simply tracks when an employee punches in and out. T&A tracks that employees are (or are not) at their base job and base shift; that doesn't really do much for instances that disrupt the status quo. With every change to the real-time facility schedule—employees swap shifts, someone calls out sick, etc.—someone is responsible for updating the T&A schedule so that the right people get paid for time worked. Once the schedule is pre-set, it's static until someone initiates a change. The same can be said for templated base schedules.

The limitations are basically the same as Level 0 – inflexible, a reliance on tribal knowledge, and no cost or compliance control.

Level 2 – Level 4: Schedule Generation Algorithms

Treating scheduling as a tool that keeps up with demand.

Level 2: Basic Demand-Driven Scheduling Algorithms

These organizations understand that scheduling processes can be leveraged to keep up with demand needs... if they take a proactive approach, like with these scheduling algorithms. Labor demand and employee qualifications are part of the rule logic, albeit in a simple way.

Level 2 algorithms would assign employees to their home job on their home shift if demand requires. For employees that are not put into the schedule, they either stay unassigned or are placed in a labor pool for manual intervention to take place.

In less complex environments where staffing is more predictable and static, the algorithm might be able to achieve 80% accuracy of the straight time schedule. It's certainly a start on the demand-based scheduling journey, but there are many roadblocks on the way to reaching a place of true nirvana: being staffed to match only what you need, consistently, and in accordance to complex industry, union, and state rules.

The obvious limitation is that manual intervention is almost always necessary. While your schedulers may be equipped with great plug-and-play "rule sets" that assign employees to each required job based on their qualifications, your front-line supervisors need to step in during real-time disruptions. If, for example, two employees call out an hour before their shift is due to start, the managers have to call or text employees frantically. Not only is this a waste of their time, but it is also negating the efforts of building compliance rules into the algorithm. In reality, is that manager considering the qualifications of the employees they are reaching out to, or are they dialing just about anyone to fill in the gaps?

Another restraint is that overtime scheduling is typically done with various unconnected tools; tools that do not consider the algorithm at all. Therefore, the OT shifts may be completely overstaffed because demand needs aren't considered.

**Manual
intervention is
almost always
necessary.**

Level 2 – Level 4: Schedule Generation Algorithms

Treating scheduling as a tool that keeps up with demand.

Level 3: Multi-Stage, Custom Demand-Driven Scheduling Algorithms

A vastly improved version of demand-based scheduling algorithms, this is where a vendor gets involved and builds custom algorithms based on an organization's unique rules. We see the upfront costs increase here, but as previously discussed with Level 0, not investing in any form of automation has its own hidden expenses.

Your organization can achieve around 95% automation of straight time and overtime scheduling processes. The issue is that the custom rule sets are inflexible to any changes long-term. If company working rules change, or the state you live in cracks down on laws surrounding overtime and fatigue management, those pre-built algorithms are essentially useless.

That isn't the way that you can never make changes; it would just require an entirely new algorithm—and, therefore, a new contract and added expense.

Such advanced, configurable algorithms can actually help keep your employees satisfied.

Level 4: Multi-Stage, Custom & Configurable Demand-Driven Scheduling Algorithms

Extremely similar to Level 3, except the algorithms are configurable as opposed to some sort of plugged in code extension. If scheduling rules change, the updates can be done easily and transparently without paying the vendor for an entirely new statement of work.

What's better is that these algorithms can usually accommodate for more complex logic, like upgrading. Ever have a situation where there is an open, high-paying job, but you do not know how to fairly "open up the playing field"? With upgrading logic, this backfilling process is automated. The jobs are ranked by pay, and the most senior employee—who is both available and qualified—would be offered to take that job instead of their normally assigned job.

Such advanced, configurable algorithms can actually help keep your employees satisfied. With paper and basic Level 2 processes, you would not be able to leverage scheduling as an opportunity to boost employee satisfaction.

Level 5: True Automation

Treating scheduling as a business-driving solution that increases productivity and cost savings.

Level 5: Automation of Straight Time, Overtime & Regeneration Scheduling Processes

You deal with minor, if any, manual scheduling—for straight time, overtime, and even those pesky unforeseeable real-time management incidents.

By achieving 99% automation with all your complex scheduling needs, your schedulers and front-line supervisors are equipped to handle any known or unforeseen circumstance. Someone call in sick last minute and a replacement is required? An event occurs that significantly changes your production plans, like a machine breaking mid-shift? Do any of these operational hiccups cause a ripple effect where many assignments need to be moved around as a result?

No problem. The re-adjustment of the schedule is done automatically with just a few clicks of a button, putting managers and hourly employees on the same page.

Your organization has achieved scheduling nirvana. With full scheduling automation for ALL scheduling-related issues, supervisors will no longer need to rely on exhaustive manual processes—while still ensuring rules are followed.

The 6 Tenets of Scheduling Nirvana Processes



Keep operations running smoothly—automatically schedule only qualified employees in accordance with your staffing standards



Save time and money on violations and grievances with consistent compliance to your scheduling and union rules



Ensure schedule fairness with proper distribution of overtime, rest periods, and days off



Free yourself from paper forms and empower your employees to request leave, volunteer for overtime, and bid for open jobs with our mobile app



Give employees more control over their work/life balance and improve morale



Eliminate excess labor costs that arise from over/understaffing, distributing unnecessary overtime, and backfilling with higher cost resources

Level 5: True Automation

Treating scheduling as a business-driving solution that increases productivity and cost savings.

Real World Use Cases for Indeavor Schedule

Indeavor's automated employee scheduling and absence management solution can provide your organization Level 5 capabilities. Our scheduling method builder tool allows us to configure complex algorithm logic that you can use long-term.

We optimize scheduling based on your specific needs, whether it's scheduling by seniority, getting volunteers into job bids first, or offering overtime to those with the least amount of OT first. Maximizing how many employees you can have on the straight time schedule, therefore reducing overtime spend, is referred to as "accommodation". Indeavor specializes in automating the accommodation process.

Without automation, front line managers are stuck making accommodations manually. Doing so is extremely error prone, especially while attempting to adhere to your scheduling rules. When mistakes happen, like an employee consistently being passed up for OT opportunities, this leads to an employee grievance. Not only does this negatively impact their satisfaction, but it can also lead to fines if you are failing to meet state labor laws or stipulations in a union contract.

Some organizations simply don't have accommodations. This leads to two outcomes: gaps in production that create overtime overruns, or filling said gaps with an inefficient resource (i.e., higher cost or burned out employee).

Before partnering with us, a current customer had OT hours account for 25% of their labor. We are now reducing their overall OT by 10%.

Level 5: True Automation

Treating scheduling as a business-driving solution that increases productivity and cost savings.

	Without Our Module	With Indeavor Schedule
Last Minute Call Outs	Front-line managers call or text employees. This can lead to mistakes concerning efficiency and/or cost. If you fail to consider each employee's skillset as you scramble to reach out, that can impact production cycles or cause a task to be completed poorly. If you don't know each employee's hours worked for the week, you risk offering unnecessary (and therefore unbudgeted) OT.	Indeavor's Smart Backfill™ module automates the call out process and mitigates these mistakes, letting you fill vacancies quickly and accurately. An automated call reach-out to qualified employees, based on your pre-set compliance rules, happens in minutes. To eliminate grievances, an automatically generated audit log lets you see why a person did or didn't get offered an assignment.
Unexpected Incidents on the Floor Change the Schedule	Displaced employees would have to go out of their way to volunteer for shifts in the event that their regular job is not available. This is extra frustrating when an employee shows up to work and is told they are not needed. The scheduler also has to spend multiple hours correcting the schedule in order to ensure that it adheres to union and plant rules. This is equally as frustrating for them, as it is time consuming and error prone.	Our de-crewing algorithm takes displaced employees and assigns them to other available jobs they are able to work, so they do not lose out on the shift. Since there is no manual volunteering and the checks and balances are already in place to ensure the employee is qualified, managers can push a button and focus on other important tasks. Meanwhile, employees are taken care of in the process.
Forced Overtime	Employees do not like required overtime; they prefer being able to volunteer for it on their terms. Without accommodations, forced OT becomes necessary.	The more employees can volunteer for OT, vacant jobs, or last-minute replacements, the more you increase morale. The Indeavor Engage mobile app gives the power to do that.

About Indeavor

Indeavor's solution offers clients an end-to-end, cloud-based employee scheduling and absence management system. By integrating with your human capital management and enterprise resource planning systems, you can leverage a robust platform that provides you with real-time employee data. Relieve your supervisors of manual tasks and the constant mental fatigue brought upon by scheduling changes by automating the entire process, connecting the data to all of your existing corporate systems, and ensuring you always have the right qualified employee in each position.

Interested in partnering with us to achieve Level 5 scheduling capabilities?

Go to indeavor.com and request a demo.

