Setting Accurate and Defensible Labor Standards

Easy Metrics analytics help operations develop fair labor standards, and keep them current as process and facility layouts change.

When approaching your various processes and operations teams, you're looking for efficiency, productivity, and quality—among other things. But how are you defining those terms? What are your metrics for success in each of those areas? How do you determine which processes are effective, and which ones are causing losses? These questions extend to your workforce as well; who is successful, and who needs coaching or training?

To effectively manage the performance of your operation, you need to have steady and reasonable baseline KPIs so you can communicate expectations with your team, and monitor performance. These needs inevitably lead to the creation of labor or performance standards.

The idea is that labor or performance standards will allow you to fine-tune your processes and improve your workers' efficiency by setting a reasonable goal for a specific process, and managing to it.

Where many companies begin to go wrong is in the creation of labor standards. It's not as simple as drawing a line on a graph and saying "this is the standard we expect for our processes". That's a good way to set yourself up for failure.

Setting labor standards used to be the domain of engineers performing time and motion studies. With modern analytics, and data capture systems that can integrate data sources from multiple systems, there are more options. Now, labor standards have moved far beyond manual spreadsheets, and with the click of a button can be created by machine learning.

Determining the metrics for your labor standards, and determining the process with which you set them, are key parts of setting and maintaining labor standards that are accurate and defensible. Unfortunately, the creation of performance standards have traditionally been nuanced and difficult, but today are made much easier with purpose-built tools.

Determining your operational labor standards is a nuanced and technical process, but can be done faster and with better accuracy using modern technology.

Benefits of Labor Standards

Consistency

Standardized performance goals for your processes

Address inefficiencies

Discover areas of low performance and rectify inefficiencies

Management metrics

Set reasonable goals and manage to them.

Drive out waste

Identify potential cost savings in your operation

Method of setting standard	Pros:	Cons:
Existing KPI's	▸ Already have in place ▸ Simplistic single metric goals (units/hr) ▸ Provides a goal to achieve	▸ Based on a single metric and therefore not fair if work tickets have variance ▸ Example: 100 items at one location or 100 items at 100 locations
Engineered Standards	▸ Industry norm for setting standards (a known entity, and perceived as safe) ▸ Accurate based on IE's time & distance studies ▸ Measures each defined process separately ▸ The generally accepted method by unions	▸ Significant upfront investment of both dollars and time ▸ Not highly scalable or maintainable; when a process changes the standard becomes obsolete ▸ Standards are accurate based on subset of what IE saw during limited sampling ▸ Does not factor in what is already being achieved; standard set could be less or equal to current output
Data Driven Standards Using Data Regression	▸ Accurate based on multiple metrics across each individual process ▸ Looks at thousands of data points to gain insight into current output ▸ Cost effective solution & standards can be set quickly ▸ Highly scalable & maintainable ▸ Reasonable & consistent stretch goals are set above current output	▸ Targets are set based on historical data or output. If processes were inefficient to begin with, goals can be set too low ▸ Cutting edge - gaining traction, but not yet the industry accepted method of setting standards
The Hybrid Approach	▸ The data is captured and saved in the system, saving time and reducing the chance of neglected or fringe data sets ▸ The IE can develop standards quickly and accurately using the data captured by the system ▸ The IE can set ranges and limits for each process standard in the system ▸ Standards can be easily updated and refined over time ▸ Low cost ▸ Combines the advantages of Engineered and Data Driven Standards	▸ Requires both an IE and the system capable of capturing and saving the data

Four Ways to Set Labor Standards

When implementing your labor standards, you have four general options: existing KPIs, engineered standards, data derived standards, or a hybrid approach. Each has its benefits and downsides, but one has been repeatedly shown to be a stronger basis for analysis, people management, and growth.

① Existing KPIs

Maintaining your existing KPIs is cheap, because they already exist and set a goal for your team. Simple enough—until you add in any human element or nuance. Because these KPIs are often based on single metrics, you aren't getting the comprehensive view of your processes that standards based on multiple metrics would provide. Single-metric KPIs, due to their limited scope, will often lead to unfair performance judgements that are ultimately useless for holding employees accountable on a daily basis.

Warehouse operations are not factory assembly lines; the work changes in quantity, product mix, and distance traveled per unit. No two orders are going to be exactly the same, and so the data shouldn't be used as if they are. Using existing KPIs is a simple solution to a complex problem, and falls short in the critical areas of accuracy, flexibility, and scalability.

② Engineered Labor Standards

Engineered labor standards are standards designed by industrial engineers (IEs), and are the industry norm for setting standards. The results of these standards will be as accurate as the IEs measurements to create them, at the time they observed them. They are also the method most generally accepted by workers' unions.

Engineered standards are both expensive and time consuming to create. Standards set in this way are neither scalable nor easily maintainable. The IE's measurements will be taken based upon the current process flow during a specific period of time. Changing a process, workflow, product mix, equipment, or location fundamentally requires a new set of standards to be created. Finally, they are built on the limited sampling the IE had access to at the time they measured the process, and they do not factor in changing, dynamic workflow typical in today's operations.

Another potential problem is that there are many metrics Industrial Engineers may want to bundle into a set of engineered standards that don't actually impact the time taken to do the job. It is possible for there to be too many metrics within one labor standard, which generates noise and doesn't positively impact performance in any way. Where single-metric KPIs are ineffective and unfair due to their very limited scope, "noisy" standards add unnecessary complexity without improving the accuracy of the standard. Finding that balance is key for creating fair and effective standards.

Thankfully, today's IE's are supercharged with the advancement of cloud technologies that take the grunt work out of creating labor standards, so that the IEs can make a larger business impact and focus on process improvement and innovation.

③ Data Driven Standards

The tools to develop data driven standards are built into Easy Metrics. We use data regression technology to leverage multiple metrics across each individual process, allowing them to adapt to the unique details within each process and adjust to potential changes. When data driven standards are created they will be set at a level of productivity designed to allow for a stretch goal. We make the option of data driven standards accessible without denying the option of engineered labor standards. Ideally, they could be applied together.

The data driven solution is cost effective, because it's done by computing, rather than manual efforts. This solution can be implemented quickly, is scalable, easily maintained, and takes all historical data into account. Data-driven standards are the easiest and most efficient to re-calibrate when a process or facility changes.

Data driven standards have two primary problems: they are not yet the industry-accepted method for setting standards, and the data by itself is not able to incorporate the insight or long-term goals that an IE or Operations Manager could bring to the table. If you choose to use data-driven standards exclusively, we recommend having a floor level Operations Manager or the Easy Metrics Professional Services team provide input on the key metric ranges that are set in the modeling tool.

4 The Hybrid Approach: Machine + Human Engineer

The hybrid approach aims to balance the accuracy and targeting of data driven standards with the meticulous and expertly-designed engineered labor standards. We've seen that this approach is preferred by our customers that have IEs on staff, and has two primary advantages:

The amount of process data that Easy Metrics can capture and store dwarfs the amount of data an Industrial Engineer can gather via floor observation, which saves time and reduces the chance of neglected fringe/low-frequency data sets. Since data is already stored within Easy Metrics, the IE can develop standards far quicker and more accurately, and easily revise or re-calibrate them in the future.

This hybrid approach utilizes the expertise of an IE familiar with the floor processes and who is familiar with the Easy Metrics analytics. With their understanding of each process, the IE can set ranges and limits for each metric in the system, forcing the data to optimize along reasonable paths. The end result of this is a set of multi-metric labor standards that utilized the extent of the available data and the expertise of the Industrial Engineer.

Of the three, **Easy Metrics highly recommends the hybrid approach**. The power and flexibility of this method is unmatched, and its low cost is a strong selling point. The largest flaw in the data-driven method—the lack of human insight and planning—is corrected by the expertise of an engineer. The largest flaw in the purely Engineered approach—the problems with cost and scalability—are addressed by the constant stream of fresh and accurate data from the systems of the facility. It is the best of both worlds, and has the fewest downsides.

The Advanced Analytics Toolset for Industrial Engineers

Industrial engineers (IEs) are no longer restricted by technology in how they develop their standards. Instead of timing employees on their tasks with stopwatches, they can focus their efforts on real and positive change to the business. They can offer solutions and apply their insights collected from an ocean of connected data and analytics. This allows them to save an extraordinary amount of time creating and maintaining labor standards—which frees them to focus on long-term innovation and improvements for your company.

Easy Metrics automates the drudgery of manual data gathering and spreadsheet wrangling, allowing IEs to deliver a better customer experience by driving out waste and continually optimizing the operation.

Data driven standards require data gathered through integration with your WMS (and other systems) and rigorous algorithm-powered analytics. This is where Easy Metrics can help. Easy Metrics has built-in functionality that creates data-driven performance standards. And keeping them up to date as your operation, or workflow, changes is a five-minute task that happens with a click of a button. Easy Metrics allows you to leverage the totality of your data to determine your outliers and deviations, optimize your processes and metrics, and determine your benchmarked labor standards with ease.

Easy Metrics leverages the large amount of production data in our system to help you develop fair and accurate labor standards. These standards can be easily updated as needed to maintain fair standards in dynamic environments. This modeling can recur as many times as necessary to maintain fair standards as your company grows, expands, and refines its operations. Throughout the data analysis process, we work with you to maintain the integrity of your data and ensure you end up with the best, most accurate labor standards for your operation.

Easy Metrics for Labor Standards

Fair labor standards are the first step to your success, and your success is our success. Work with us to define, design, refine, and implement the labor standards for your workforce.

Learn more about how you can manage your operation with fair and defensible labor standards, and see **examples on our website**. If you're interested in seeing how Easy Metrics creates and reports on labor standards and team performance, or want to learn more about creating the best labor standards in your operation, request a demo today with our sales team.

Request a Demo

About Easy Metrics

Easy Metrics fuels operational excellence in distribution operations.

Operations and finance leaders use Easy Metrics' data integration platform and machine learning to analyze, plan, and forecast their labor spend so they can drive operational speed and efficiency, price their products and services profitably, and drive employee engagement.

With Easy Metrics, they translate raw operations data from multiple data sources into their costs by: activity, process, facility, people, and equipment. They use actionable reports across their network, to optimize labor spend, cut waste, plan facility investments, and drive labor strategies that ultimately fuel the growth of their business.

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To see how you can create and maintain effective labor standards in your operations.