
Overall Labor Effectiveness (OLE): _____
The Business Case for Labor Productivity

Using OLE to find productivity leaks and create profit opportunities

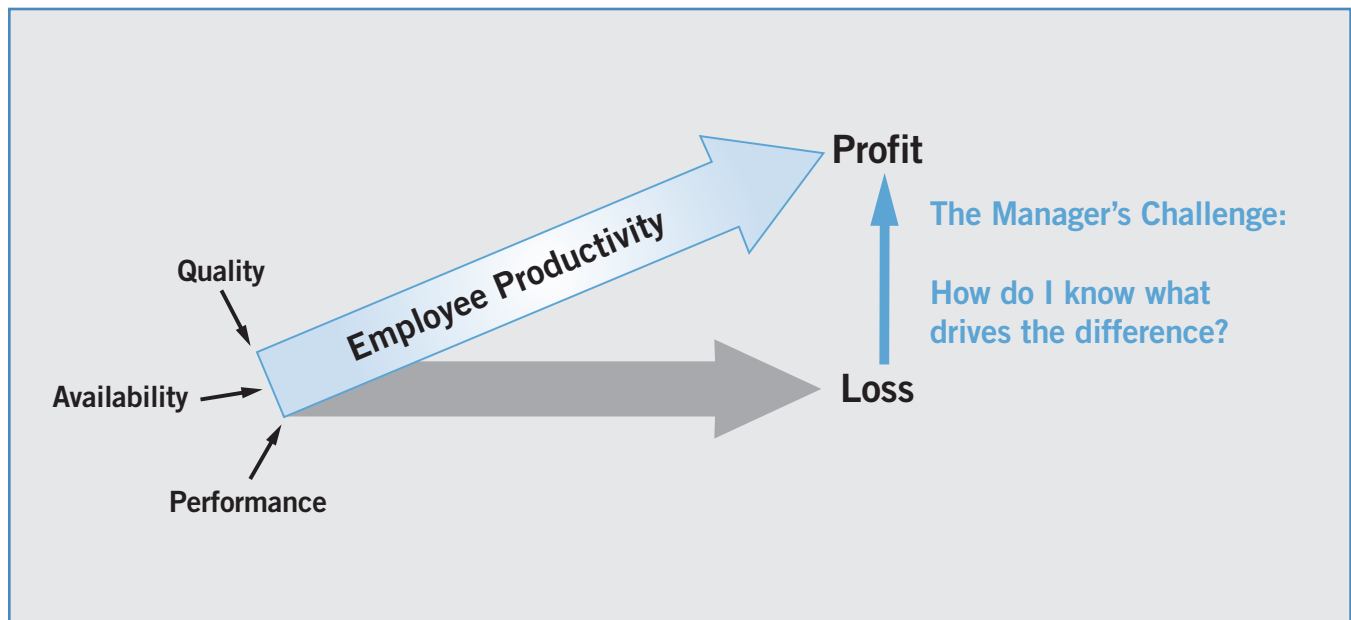
When it comes to workforce issues, perhaps no industry is under more pressure than manufacturing. The challenges include front-page topics such as massive outsourcing to low-cost countries, unions, an aging workforce, and healthcare and family issues.

Having already automated many aspects of production and supply chain operations, manufacturers now recognize that the next frontier for high performance is the workforce. While most companies have automated core HR functions, many are just beginning to invest in strategic applications to rationalize the impact of the workforce on productivity and ultimately, profitability.

Overall Labor Effectiveness™ (OLE), the model and toolset pioneered by Kronos, provides a window into workforce productivity. Kronos OLE tools expose the impact of both direct and indirect labor so companies can take action to reduce costs and identify opportunities for increasing overall productivity and profitability.

OLE gives companies the ability to analyze the cumulative effect of three workforce factors on productive output:

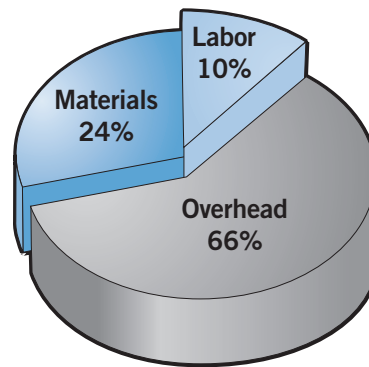
- **Availability:** the percentage of time the workforce spends making effective contributions
- **Performance:** the amount of product delivered
- **Quality:** the percentage of perfect or saleable product produced



Improvements made to any one of these factors can have an enormous influence on profitability. The historical challenge for many manufacturers has been to avoid the unintended consequences that can result when efforts to improve in one area have a rebound effect. For example, an initiative to improve quality might end up impairing output performance by slowing down the production line. OLE helps expose these interrelationships and provide a real-time view of progress, so managers can keep all three measures in balance.

Let's look at an example of how OLE can be effective in diagnosing performance and improving profits.

In preparing an annual budget, a COO started by using current standards to draft plans for projected production volumes. This resulted in cost of goods sold (COGS) of \$116M and an expected gross margin of 6.25 percent. COGS was broken down as shown in the pie chart.



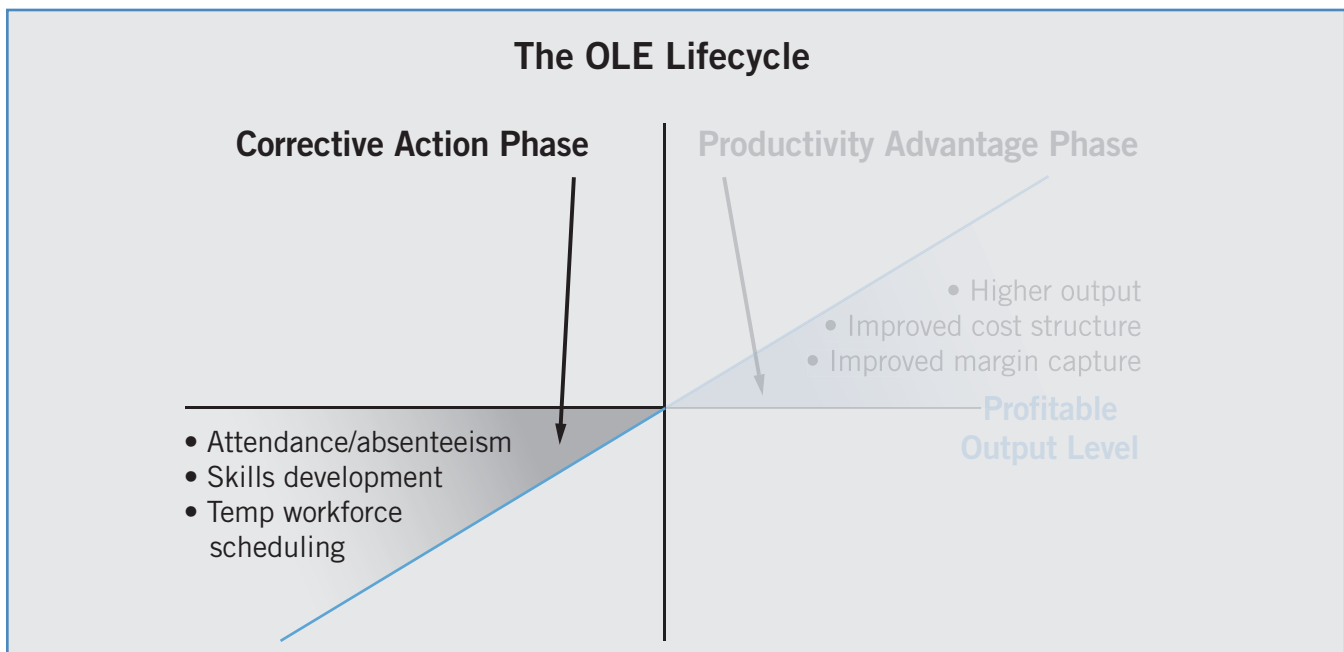
It didn't take the COO long to find that tweaking the numbers for labor availability, performance, and quality by just one percentage point each made gross margin jump to 8.15 percent and profit surge by \$2.5M. The challenge, of course, was to find where the necessary improvements could be made.

The COO knew a reduction in headcount was not the answer; the skills and experience of the existing workforce were far too valuable to lose. He needed to assess performance at every level of the organization, and fortunately he had the tools of OLE to help him identify meaningful opportunities.

The OLE Lifecycle: Corrective action and productive advantage

Attacking labor productivity using the OLE lifecycle typically involves two important phases. First, manufacturers focus on problem areas to achieve at least the current standard or planned output. Next, they strive for productivity advantage in a phase that continues their diagnostic work, fine-tuning the elements of OLE and raising workforce productivity to industry-leading or competitive advantage levels.

From his analysis, the COO knows that small changes can add up fast. Resolving day-to-day issues that may seem minor can make a big difference to productivity and profitability. By quantifying the costs and opportunities of the issues exposed by OLE, improvements to the bottom line can be identified.



Getting started: Identifying productivity leaks creates immediate opportunities

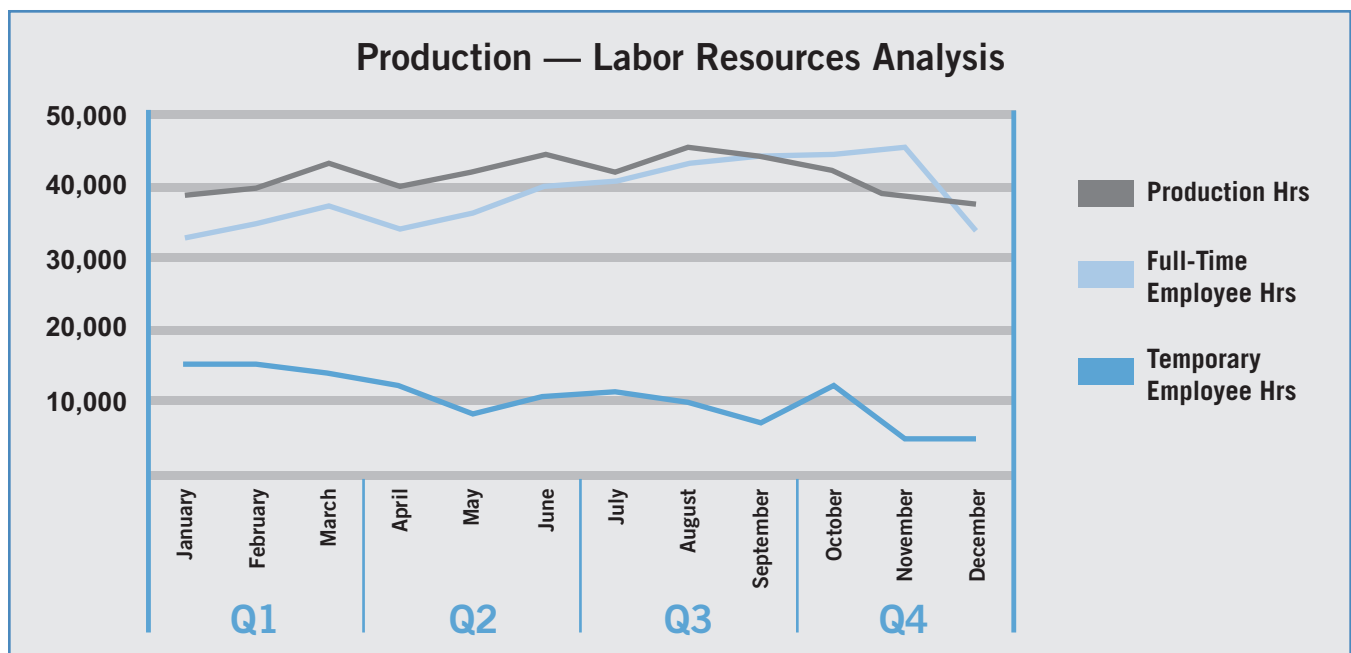
The COO knows that while OLE provides an excellent top-level view of labor effectiveness, its true value is with the underlying layers, where it can be used to help uncover the root causes of productivity leakage. Using Kronos OLE tools, he examines the labor dimension of operations (availability, performance, and quality) at the corporate, plant, department, and operator levels, and compares it to productive output, looking for patterns of inefficiency to surface.

Availability

Availability is the place to start, because the workforce has already been hired. Now the objective is to locate areas where providing and scheduling the right mix of employees will increase the number of productive hours. Having the right people at the right time may seem like a basic point, but without it, all bets are off for the rest of the workforce productivity equation.

The COO looks through time-sequenced Kronos data for evidence of sandbagging — arbitrarily reducing the number of planned productive hours per employee to protect an achievable manufacturing schedule. Next, he examines absenteeism and unapproved leaves. Kronos labor data, when automatically compared to production output, pinpoints differences among production lines. A review of production operations shows that inefficient layout and materials delivery lead some operators to leave their workstations to get materials themselves, cutting into their productive time. Lax supervision that fails to return workers to their workstations promptly after breaks further cuts into availability.

The company relies heavily on temporary labor to deal with substantial seasonal demand changes and unpredictable peaks and valleys caused by new products. By examining Kronos headcount trend data and correlating it to actual production output, the COO finds that the company is keeping temporary workers on board longer than necessary. Further checking identifies an easily remedied information bottleneck that is slowing staffing cuts when demand falls.



The COO’s OLE research also exposes a pattern of unanticipated productivity shortfalls, namely the inefficient use of available resources. A look into the deeper layers of OLE data shows that the leakage is also related to indirect labor activities. There are substantial wait time losses while workers wait for production line changeovers and a safety inspector certifies changed configurations. By talking with floor supervisors, the COO finds that it takes significant management and supervisory attention to get lines changed over or started up, a costly situation given the company’s demand patterns. And these issues often trigger unanticipated overtime expenses. The COO establishes a corrective action project, setting a quantified goal for improving changeover productivity.

By applying his knowledge of the company to the following assumptions, the COO can list and quantify the productivity losses related to availability to be between 1.3 and 2 percent, or an impressive \$1M–\$1.6M.

Area	Availability Factors	Potential Net Benefit
Direct Labor	<ul style="list-style-type: none"> • Low labor standard — schedule protection • Absenteeism • Slow start-up after breaks • Slow release of unneeded temps 	1% –1.5% increase in scheduled productive time
Indirect Labor	<ul style="list-style-type: none"> • Realign material handler tasks • Insufficient safety inspectors • Too much management intervention or approval required for consistent production 	0.3% – 0.5%

Performance: Getting the best output from your workforce

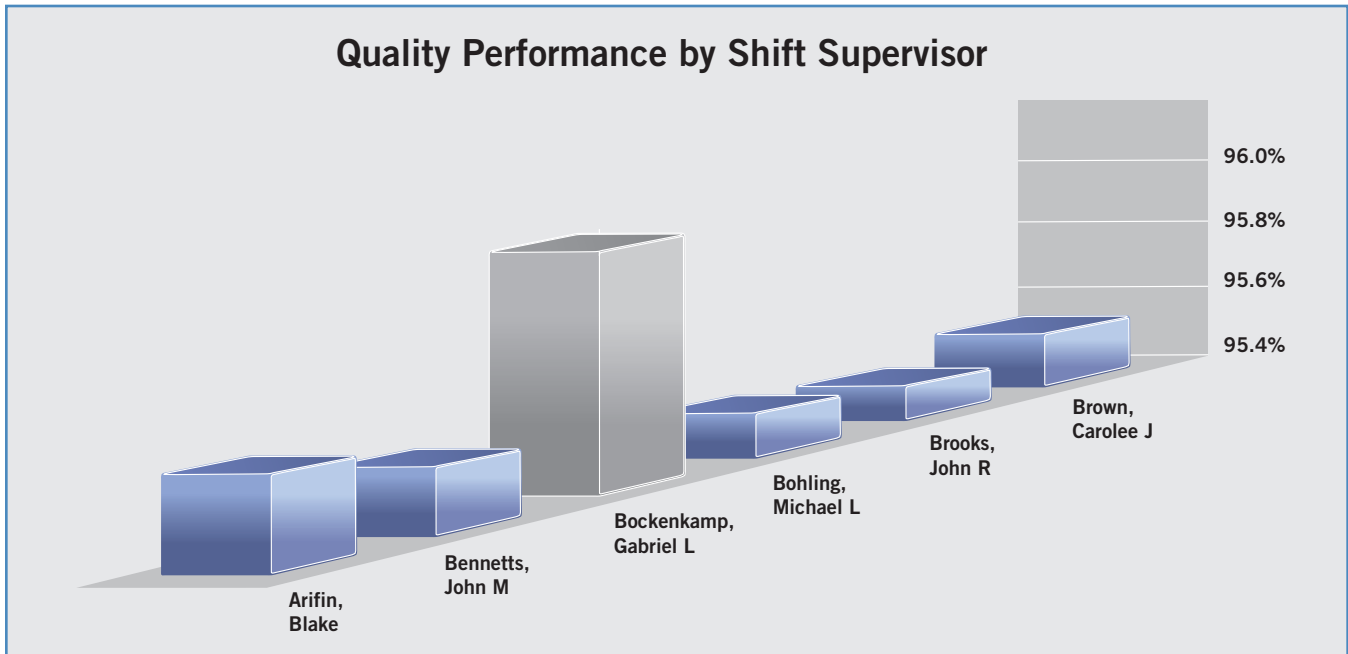
Making the assumption that the right workforce is available and properly scheduled, the COO turns to factors that influence labor performance. Kronos trend data of shift and individual worker performance, when matched through OLE tools to employee training records, can disclose differences in how long it takes new workers to become productive. The data also relates productivity to the timing and content of the training new workers receive and shows that workers on some lines get up to speed faster. This prompts the COO to visit the shop floor, where he finds written work procedures posted at the workstations of the more productive lines. OLE also shows that there are more production stops for in-line test equipment repairs on lines that have newer workers, leading to excessive maintenance overtime and occasional delays on other lines.

Area	Performance Factors	Potential Net Benefit
Direct Labor	<ul style="list-style-type: none"> • Single classroom training vs. multiple OJT task training sessions at workstation • Procedures posted at workstation 	0.5% – 0.8%
Indirect Labor	<ul style="list-style-type: none"> • Production stops due to improper use of in-line test equipment • Production delays caused by broken in-line test equipment • Excessive maintenance overtime 	0.5% – 0.8%

Quality: Ensuring what’s built isn’t wasted

By considering the workforce fully available and capable of sustaining the right output levels, the COO turns his attention to ensuring that workers deliver the highest quality output. Nothing is more wasteful than investing time and material in a product that must be scrapped or reworked.

Production data shows that the overall scrap rate is on target, but OLE exposes that a single shift — one supervised by an employee recently hired from a competitor — is wasting fewer materials at start-up and changeover. The COO calculates the benefit of transferring that process knowledge to all shifts.



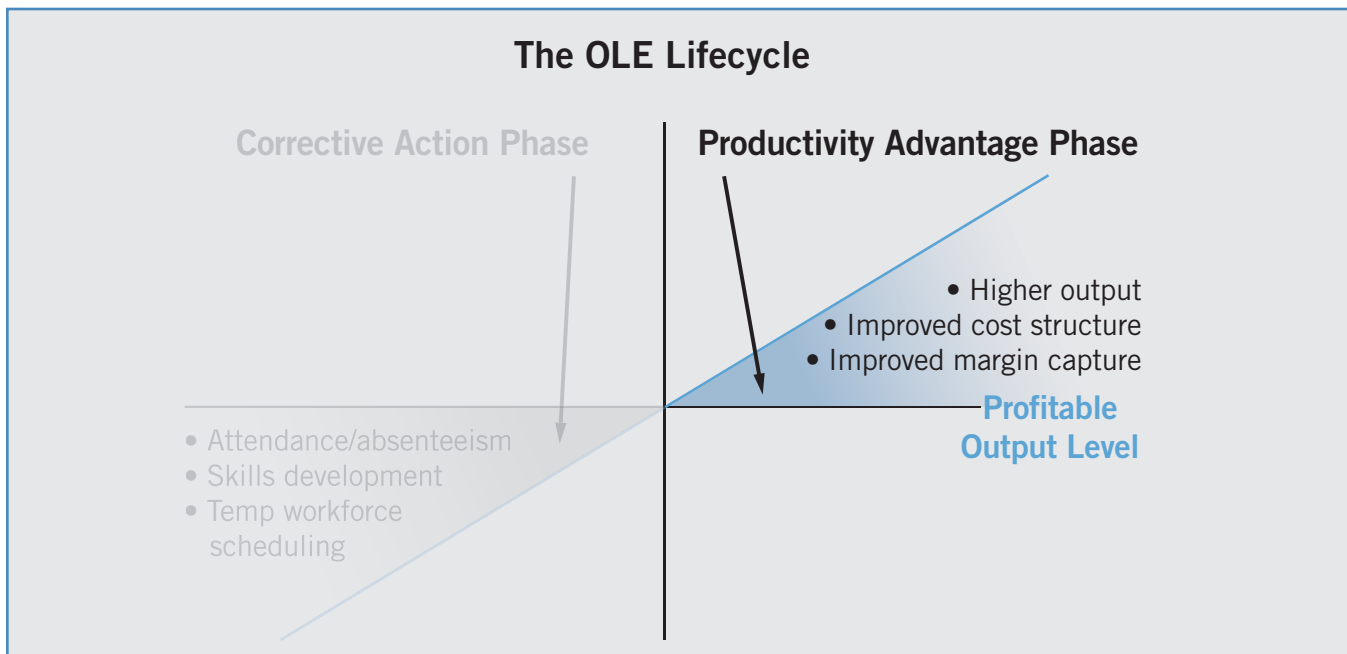
A new test method has been introduced and approved at the plant, in part because it promises faster analysis for quality assurance and requires fewer materials. However, a comparison of individual worker productivity to the phase-in of the test shows that the more complicated test took longer for even the most skilled production workers to complete. Overall, it actually increased costs.

Area	Quality Factors	Potential Net Benefit
Direct Labor	<ul style="list-style-type: none"> Lower scrap rate on all shifts by applying supervisor's process knowledge to all 	0.4% – 0.7%
Indirect Labor	<ul style="list-style-type: none"> Revert to old test method 	0.3% – 0.7%

At this point, the COO has found ways to improve output and quality by increasing the flexibility and cost-effectiveness of the workforce. He has identified corrective actions to bring operations up to standards and in some cases found ways to increase the standards. Overall he has identified a total of 3 to 5 percent improvement in labor costs.

Productivity: Tuning for a profitability advantage

Once an organization has instituted many of the basic changes identified by the OLE model, it can begin looking for opportunities to optimize workforce performance across all manufacturing operations. Kronos OLE tools are an enormous help in identifying productivity leakages, but they bring special power to spotting and correlating more complex labor-related challenges. Advanced application of OLE looks at interdependencies among organizations and processes. The search can uncover specific bottlenecks — third-shift productivity lags when the only certified maintenance technician is absent — or more general problems — employees who regularly attend mandatory training are more productive than those who claim to be too busy to attend.



Identifying productivity improvement opportunities

Because every company is different and faces unique challenges to productivity and profitability, OLE can be used in many ways. In our example, the COO investigated two areas that could lead to better profitability.

Analysis of call center and field service labor data showed that field service costs were unusually high for a particular product line. By relating these unplanned costs to production and design costs, the COO had a clearer picture of product profitability and was able to make better and more strategic product selection and pricing recommendations. He also instituted a program to improve quality at the factory level.

The company had outsourced some of its production operations and, by using OLE tools, the COO learned the outsourcing was not delivering expected benefits. Although outsourced labor rates were excellent, the costs had shifted to the indirect side. The task of managing the outsourcing, including costs for product managers, travel and communication, product transportation, and management attention, were all higher than expected. The COO entered the next round of negotiations armed with much better information.

Summary

Manufacturers have made great strides in optimizing materials usage by implementing powerful supply chain applications, but the labor side of the equation, which concerns a company's most vital and controllable resource, has been largely neglected. Companies have invested in basic HR functionality, but are missing the productivity rewards that can result from optimizing labor availability, performance, and quality of work.

Adopting OLE metrics can give a company the fuel it needs to capture significant cost savings and improve its market competitiveness. OLE brings balance to the manufacturing equation of labor and materials; harnessing information about the interactions between them opens new windows of opportunity.



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