



THE
TWO-TEN
INCENTIVE
STRATEGY

BY TIM STANSFIELD

*Enabling employees to drive
sustainable improvement*

the two-ten incentive strategy

SUSTAINABLE PERFORMANCE IMPROVEMENT IS a critical role for leadership in any business. While the programs of lean, Six Sigma and other improvement initiatives have directed waste elimination designs, the significant improvement opportunity remains in the control of the humans involved with the process. Research of more than 200 manufacturing organizations has indicated that an average of 48 percent of improvement remains in the hands of the personnel involved in the process. This research presents a strategy to provide an incentive system that helps the necessary leadership role. This solution ensures significant and sustainable improvement and a leadership role that provides long-term fulfilling results. This revolutionary system has been labeled the two-ten incentive strategy and, if appropriately applied, can drive the competitive strategy for any organization.

The basics of 'two-ten'

A common question in all businesses is, "How can we significantly improve performance to ensure long-term competitiveness in today's global market?" If you have just 10 years of experience in business, you have already seen many answers to this question. They include lean, Six Sigma, theory of constraints, focused management or any combination of these. Anyone involved with any of these solutions can attest to the obvious improvements in reduced wastes, reduced variability, bottleneck elimination and improved asset utilization. Often these solutions become the new focus of improvement achievement, and performance is measured on events, inventory levels, incidents and training levels.

The resulting level of productivity leaves a challenge for the workers and management team alike; our research has indicated an average performance level of 52 percent to 78 percent of a true production capability. This often becomes the new level of expected and planned performance and day-in and day-out is the actual level of performance. It then becomes the challenge of back-room meetings to determine methods to drive toward the true 100 percent overall equipment effectiveness (OEE). Unfortunately, predictable results of these meetings include new programs, temporary tough management practices and more meetings.

The challenge is to determine how much of this can be continuously improved by the workers and how much needs to be addressed by engineering and management. This has created a new level of operator involvement and motivation that can step beyond waving the company flag, new languages of improvement and temporary supervisory interventions. It must offer a true incentive to sustainable improvement and

can result in significant levels of higher competitive performance. It must go beyond the pay-for-performance plans of the past that have been difficult to manage and sustain. The contemporary incentive for workers is time, particularly blocks of time, which allows them to enjoy other activities that are important to them and their families.

The use of a two-ten shift schedule in production is not a new concept. The use of a two-ten shift strategy as an incentive to performance is revolutionary. A brief explanation of the current use of two-ten shift schedules will reveal the side benefits to this proposed strategy. Two-ten shifts are presently used to allow for the ability to adjust total work hours for a given period, often weekly. Rather than the production schedule based on three eight-hour daily shifts over five days to fill a normal workweek, the two-ten option offers the ability to work two daily shifts of 10 hours each, completing a 40-hour workweek in four days. Adjustments can be made to run the fifth, sixth or seventh day as required. This adjustment can simplify the planning process and drive performance toward a true variable cost.

The few hours between shifts can allow for daily preventive maintenance. These activities can drive line performance up but not disrupt the actual production process. It is also accepted that the two-ten shift schedule offers a competitive advantage to keeping employees who prefer a workweek that may offer overtime but free weekends (Saturday and Sunday). It has created a positive work environment and driven employee retention to higher levels. Our measurement of performance after a controlled implementation of this program has seen an average improvement level of 29 percent, plus all of the other benefits of a two-ten shift schedule system. The controlled implementation of this concept will be referred to as the two-ten incentive strategy (TTIS) for production.

The TTIS offers employees the opportunity to work a four-day workweek, possibly as much as 25 percent overtime, and still not work the weekend. This is a tremendous incentive to the team. The performance is measured on a timely basis and the 10-hour shift is applied when performance measures are met. When performance measures are not met for a period of time, usually a weekly average, then the team will be responsible for meeting production requirements on an eight-hour per day, five- or six-day workweek.

The benefits to employees are obvious in terms of blocks of time away from work and opportunity for scheduled overtime without working six or seven days a week. The benefits to the company go beyond the productivity gains. The production system is now capable of flexing to requirements on a weekly basis. This benefit drives the total production system toward

true variable costs that can have a tremendous impact on the bottom line. The improved performance impacts all support services for the targeted production area. This will include supervision, material handling, materials control, maintenance, quality control, process engineering and any other support group. They should be included in the team to ensure performance targets are met. In addition, production planning can count on a much more predictable and stable level of performance from the production system.

The research data

The research is based on direct observation and statistical measurement of manufacturing operations of more than 1,000 shift studies in more than 200 different production facilities, including assembly, processing, running equipment, warehousing, distribution and packaging. The specific observation method followed a fixed-interval work sampling technique that covered entire shifts of performance for a wide sampling of operators. This sampling includes multiple lines and processes, varied shifts and schedules, mixed mode and dedicated work areas, continuous and discrete processing, and various performance measurement systems. Every one of our observed production situations had some level of experience in an improvement process prior to our observations and measurement. Figure 1 depicts a summary of the studies.

While our sample of organizations and operations crosses a wide range of markets and situations, the objective was to determine the potential improvement impact of the workers specifically associated with the processes. A very clear result from this collection of studies is that significant performance improvement is in the hands of the operators associated with

the processes. Observations and data collected clearly indicated that when production operators are working on their primary task, performance is at a high level and often near 100 percent performance. This falls apart during any primary task interruption. These interruptions are specific to the production situation but can include shift changes, breaks and lunch time, production changeovers, maintenance issues, mechanical and electrical breakdowns, meetings, material delays, quality issues, line imbalances, varied operator roles and new operator learning curve. Most of these disruptions are expected as a part of the normal production planning process and are considered acceptable. The ensuing impact of these disruptions becomes a factor in a daily performance level expectation and ultimately a new daily production standard or expectation.

The obstacles to current performance improvement

1. Perceived equity in performance and effort. Management and engineering spend tremendous time and effort ensuring the standard production operations are equitable, safe and efficient in order to ensure performance. They must rely on line balance, smooth motions, limiting ergonomic challenges and appropriate capital support. When a nonroutine assignment is required on the line, the management effort to ensure these important factors is reasonably limited. These nonroutine tasks require experienced and trained operators to be more responsive and often lead to the appropriate responsive actions. The nature of nonroutine work design requires these lead operators to perform tasks while the rest of the team may be less productive or even idle. Often these idle operators

SOURCE OF STUDY

Item number	Production type	Facilities observed	Shifts of observation	Average value added or performance
1	Assembly	41	478	56%
2	Warehouse/distribution	18	142	48%
3	Processing equipment	27	205	50%
4	General production	88	921	58%
5	Production support	28	288	58%
Totals		202	2,034	54%

Figure 1. The authors researched more than 1,000 shift studies in more than 200 production facilities. This figure is a summary of those studies.

the two-ten incentive strategy

could provide support, but the effort and motivation seems like a challenge not worth the effort. This imbalance of necessary effort will create a perception of inequity for the team.

2. Measurement of nonroutine activities. The measurement of performance of production operations is critically needed to establish goals, provide feedback and identify obstacles to competitiveness. These measurements usually include time for the repeated actions and tasks and allowances for the nonroutine tasks and interferences. Traditional allowances accounted for minor disruptions to the operations and would only account for a 10 percent to 15 percent factor. As the contemporary production requirements require mixed-mode production, low inventory and frequent changeovers, reasonable breaks and lunch periods, constant material movement and flow, and a wide range of complexity, the nonroutine activities account for a much larger factor in today's production systems. These allowance factors now account for as much as 50 percent of the OEE. Timely measurement of these factors often requires more time and effort than it takes to perform the activities and is therefore ignored.

3. Tomorrow is just another workday. This is an interesting observation made during our studies and interviews with production personnel, especially during peak work periods when overtime and performance pressure were highlighted by management. The general attitude of production personnel becomes one of moderate performance and almost a defeated attitude. Personnel have a mindset of "let's just get through it," and the necessary effort and motivation of improved performance is lost.

4. Nonroutine activity imbalance. When a disruption to the steady-state process occurs within an active production operation, the response requires a different level of experience and expertise. The experienced personnel in the production area immediately take on added responsibility and the managerial efforts of work balance are lost. Although there is an opportunity to watch and learn and for on-the-job training for the next time this interference occurs, it does require self-motivation on the part of less skilled personnel. This opportunity tends to be overlooked, and imbalanced routines and roles are established for the team.

5. This is just another program that only benefits management. A lot of cynicism was observed in organizations that have seen a series of lean initiatives, Six Sigma training, kaizen events and other management programs. While most production operators understand the importance of these tools, they also understand that these tools are not the end-all solutions to the changing challenges of meeting customer demands. When the focus becomes the application

of the tool and not the outcome of the improvement process, the production team appropriately questions management motives.

6. Expectations are too high to achieve on a regular basis. A critical component of successful goal-setting is to ensure goals are attainable. The specific goals must be attainable within the time frame of measurement. If the goals established are not achievable, even on an infrequent basis, the motivation is lost and can actually become counterproductive. Management must truly understand the human rates of performance, the mathematical variation of interferences, the statistical impact of that variation over the measurement period, and the true influence of the team on this performance.

7. Measurements are too complicated. An incentive system that is based on the cumulative effect of a wide range of changing factors and measurements that require lengthy training to establish the process will result in a team that is suspicious of the incentive system. Often the system becomes bogged-down with layered audits to look at many performance measures, complicated feedback boards, and charts and graphs of historical performance that can become a distraction to the primary goal of the line, which is customer service measured by true productivity performance.

8. A program lacks leadership commitment and buy-in. The management team that drives the improvement process through seminars, lunches, banners and certifications will not see the long-term bottom-line implications that should be expected. While all of these tools enable change and the process of improvement, the production team will easily see the difference between business strategy and the flavor-of-the-day program.

Critical principles of success

1. Educate the team at every level. The two-ten incentive strategy is a relatively simple concept, but the application and continued success must be carefully understood at all levels within the company. The production team that is being measured, and adjusting its work schedule accordingly, must be able to see the cause and effect. They must understand the targets for achievement, reasons for past shortcomings, the measurement system, weekly adjustments, individual and team roles, and the need for change. This strategy gives the team the opportunity to understand and align goals of performance.

Middle management must support the team to ensure success. They must understand and believe the incentive model and clearly support the team's decisions for interference reaction and responsibility. They will maintain the continued role as problem solver but will adjust to the new role as moti-



vator. They also will experience new pressures from both sides to perform.

Upper management has the role of ongoing support and challenge while ensuring the opportunity for success. Upper management also must deal with the rules of seniority, equity of measurement, and equity of the TTIS opportunity for the entire enterprise. There will be challenges. Some processes simply must run continuously and do not fit with the two-shift schedule. Management must ensure these processes are not candidates for this option and develop hybrid TTIS opportunities for these situations.

2. Clearly and accurately identify the current state.

Every manager observing a process can identify improvement opportunities. This can include the obvious wastes of inventory, motions, line disruptions, line imbalances, bottlenecks, etc. The difficult task is objectively and accurately depicting the specific opportunities that are or could be under the control of the operating team. Dedicated observation and measurement of the current state by trained professionals will ensure this current state opportunity can be identified and established as improvement within the TTIS. This current state measurement looks beyond historical performance trends that can often cloud the real opportunity.

3. Prepare a flexible scheduling plan that will work.

Production planning professionals spend a significant amount of effort developing production schedules based on leveled demand. It can be due to equipment capacity constraints, labor constraints, working capital limitations, customer

requirements or unpredictable demand requirements. The TTIS offers the opportunity to put some of this demand variation reaction within the responsibility of the weekly adjusted schedule. The key is to understand the schedule requirements to hit levels of production based on four days per week, four and a half days per week, five days per week, etc.

4. Develop professional engineered standards. The opportunity to launch this program comes only once. It is critical that professional standards are developed and applied across the appropriate mix of demand and work requirements. Simply rolling current standards forward with a hopeful improvement add-on is really reducing the true opportunity for this program. Relying on historical performance can greatly diminish the opportunity for this improvement initiative. Professional standards will ensure balance, flow, challenge, contingency plans, appropriate allowances and simplicity in their application. The experience to date has shown approximately a 20 percent improvement over historical performance as an acceptable goal for management and an achievable goal for the production team. Incremental improvement beyond that should be reviewed and adjusted on a quarterly basis.

5. Keep the measurements simple and pure. Hourly performance boards require operator interaction, timely performance computation and cumulative goal attainment status for the entire team. They are somewhat custom to their specific applications but must include and be limited to timely goals, timely actual performance, cumulative performance and goal conformance status. The concept must remain simple.

the two-ten incentive strategy

It must provide goal-setting and feedback to the production team on how its performance is affecting its incentive. Everyone must understand it and compute it quickly. The tool should be a visual reference for the team, management and other production areas.

6. Do a pilot program. A pilot program with a fixed duration can give the organization an opportunity to test all of the variables of the specific application and refine all of the necessary tools of successful implementation. This can begin with the definition of the team that can become convoluted when support personnel are responsible for varied production areas. Should the incentive be based on an individual shift performance or a combined shift performance? Friendly competition is a good motivator, but working together and ensuring smooth shift transition may be critical as well. Are the standards effective in terms of getting the necessary results and are they attainable by the team? Is the measurement system simple? An effective tool of pre- and post-pilot team surveys may be an opportunity to determine the necessary adjustment for a successful rollout to other areas.

7. Prepare a rollout plan. The TTIS is going to be successful, so be prepared for the rollout to other areas of the plant. Recognize that different production areas will require different expectations, standards, tools and results. The incentive for this type of work schedule becomes contagious, and the expectation should be to roll through all of the production systems, which may include some challenges. The rollout plan should include all intended areas of the plant that will eventually be running under the TTIS system, timing for all systematic implementation, team composition and leadership assignments.

8. Ensure opportunity for continuous improvement. The demise of any financial incentive program is that, after a few years, performance reaches a plateau and the required effort and enthusiasm is diminished. The team must recognize that improvement in performance and support to drive increased output must continue and that the team will maintain the same role of execution — a fact that must be emphasized during the education phase of the program. The move back to a five-day, 40-hour workweek plus weekends will have become a significant threat to the team for many years.

9. Be prepared to take the incentive away. It will typically only happen a few times, but the incentive will become an entitlement if not properly administered. Therefore management must be prepared to adjust timely schedules based on performance and provide the necessary support for mixed shift schedules for periods of time. The management of support groups will become a bit more difficult and may require addi-

tional overtime for these groups. It can be such a big benefit to all employees, however, that the effort to perform will reduce the need for this step and will ultimately result in a temporary adjustment.

10. Roll this into your current programs of improvement. The TTIS is not intended to compete with lean initiatives, Six Sigma training and other improvement programs, but it will enable bottom-line results of these efforts. Maintain these programs and tie the TTIS to these measures of success, if appropriate. The efforts will support and enable the success of each and will create an atmosphere that embraces the change.

Conclusions

Several of the organizations that successfully implemented the TTIS tied other performance factors into the measurement system, which included inventory levels, 5-S initiatives, attendance, safety, quality levels, etc. These important factors will affect customer service and satisfaction. However, all of the other measures will ultimately contribute to daily productivity performance, and that measure must be central to driving this program to bottom-line results. The performance of the line should be evident to anyone observing the production area without an effort of digging for or computing the information. Although the concept is simple, the appropriate implementation requires careful planning, assessment, education and commitment. ✎

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On the Web

FLEXIBILITY = HEALTHY EMPLOYEES

In an evidence review, researchers at Durham University in England found that giving employees more flexibility over their work schedules is likely to boost their health as judged by measures like blood pressure and stress. However, employer-motivated interventions such as cutting hours had no effect or a negative effect on employee health.

www.iienet.org/magazine/jul10/flexibility