

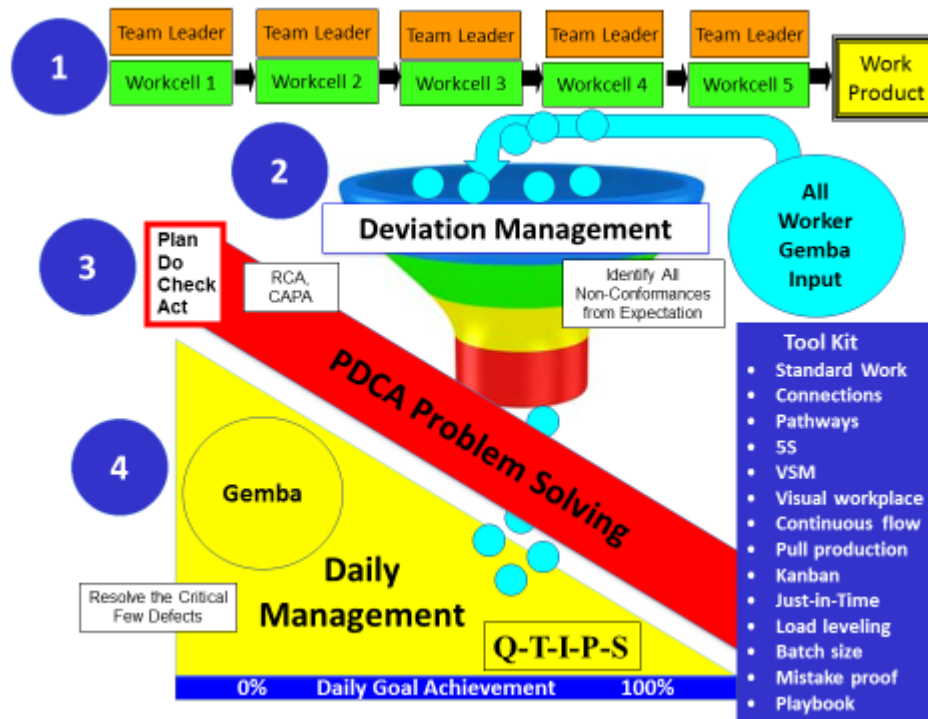
Daily Management (DM) as a Key Driver of Process Improvement, Consistency and Reliability at the Level of the Work

Summary:

DM is the key accountability sub-system for managers to continually improve their operations in a structured and visible manner with their teams by reflecting on metrics of select processes that are a priority but have failed in the prior 24 hour cycle.

Daily Management as a Management System

Numerous work and management systems have been created over the past 13 years to sustain our Lean culture of continuous improvement in these Henry Ford Laboratories, whose credo is “relentlessly pursuing perfection.” These include 4 key management subsystems that create structure for consistent behaviors that enable continuous improvement and create process stability at the level of the work. These are diagrammed in the figure below as 1) Team Leader System; 2) Deviation Management System; 3) Improvement Management System (PDCA); and 4) Daily Management System. Each is integral to a highly functioning Lean system. Note, the Tool Kit is only consistently functional in the hands of trained carpenters who follow the Lean discipline defined by the systems to solve problems.



In any organization, progress toward goal achievement can come from above through major executive-directed change initiatives and technologic innovations, but progress toward daily goal achievement must come from below at the level of the gemba by managers and teams who are empowered and accountable to understand and improve the quality of their work product or service. Just how this is accomplished at the level of the work and aligned with the organization’s goals in a Lean culture is the subject of this piece.

The simplest definition of DM was offered by Liker and Convis in their book *The Toyota Way to Lean Leadership* (2012) as “the process of checking actual versus target results and engaging the team in

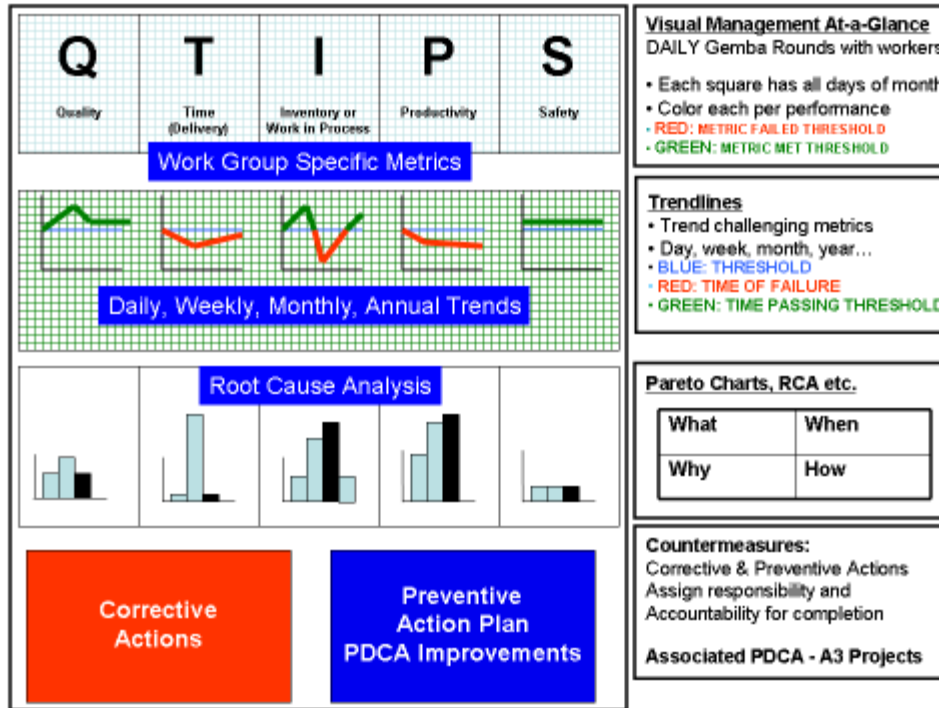
creative problem solving.” But their reflection that “the goal is as much to develop people as to get the results” is key in understanding how DM reinforces the cultural expectation of continuous improvement at the ground level of any organization. The concept and practice of DM may, therefore, be viewed differently based on maturity levels of Lean adoption, so I will frame this discussion along several lines as DM is a management subsystem for leaders, managers, and the workforce to promote engagement and continuous improvements aligned with corporate goals.

The prerequisites are a trained workforce who understands the goals and rules of continuous improvement and the establishment of a blame-free culture that enables work defects to be consistently identified and analyzed as the basis for daily improvement at the level of the work site. The last element is a dedicated and aligned manager without whom the DM process may die on the vine.

Function of DM

The DM subsystem visually holds managers and teams responsible for executing their piece of the strategic plan at the local level by providing structure and discipline for managers and work teams to link work group performance to departmental metrics and organizational objectives. The business systems of advanced and successful Lean corporations like Toyota and Danaher rely on DM to make visible each team’s contribution, success, or failure in achieving corporate goals so that adjustments and countermeasure solutions derived from sound problem solving can be addressed sooner and in a locally meaningful way.

One of the most important structures for continuous improvement from the base of the organization is a daily visual management system. For example, the Toyota Floor Management Development System focuses the current performance of the work group relative to expected targets organized by major key performance indicator categories of Safety, Quality, Productivity (delivery, service), Cost, and People (human resource development, engagement). The DM boards of Danaher Corporation’s business entities revolve around Safety, Quality, Delivery, Inventory, and Productivity. Through our interaction with Danaher, we evolved the DM system of the Henry Ford Production System laboratories to focus process improvements in the categories of Quality, Time (delivery), Inventory (work in process, batch size, instrument or equipment availability), Productivity (may capture elements related to cost), and Safety. These DM measures are represented by the acronym QTIPS.



What DM Is

DM is a powerful visual management subsystem that provides managers and teams with local structure, alignment, focus, and accountability for continuous improvements of their group's product or service. When structured by sequential workstations along the path of workflow, DM serves to make visible defective work design resulting in substandard quality. In this fashion, DM also serves to break down barriers of control and isolation that preclude the achievement of continuous flow that is so vital to Lean success.

What DM Is Not

DM is not a display of stable production or operational efficiency numbers or a posting of weekly collected data measures. DM is a daily problem-solving tool for managers and teams to identify daily countermeasures and opportunities to eliminate work problems that miss local area targets through data-driven problem solving. Therefore, philosophically, DM measures should not be fixed but should change as teams identify opportunities, understand root causes, improve, and bring the situation under control to stability. The visual trend of "red" days transitioning to "green" is the simplistic signal to all that strategically aligned goals have been achieved in a stable work system. This simple color-coded designation of a successful "green" day allows all to visually know immediately at a glance whether the operation is stable or requires intervention, a "red day."

DM Metrics

Before jumping into DM, consideration should be given to what critical process is failing and then what measure within a 24 hour period would most accurately reflect the performance failure(s) so that root causes can be assessed. The nature of the measure is important, as described below, as is participation by all team members in the process of identifying incidents, root causes, interventions taken to correct and finally process changes adopted by the group that improves the condition as reflected in the daily measure.

Criteria for Healthcare Specific Metrics for Daily Management

1. The metric should be customer focused in a hospital setting, this would imply patient care focused and a reflection of your unit's value.
2. The metric should be easy and not time-consuming to gather and collate.
3. The metric should reflect the process instability in the past 24 hours.
4. The metric should be amenable to objective measurement and not susceptible to personal bias or subjectivity.
5. The metric should preferably be a leading one rather than lagging so that intervention can more readily influence improvement.

DM Standardizes How Managers Manage

Of the main subsystems that drive quality from top to bottom in a Lean enterprise, DM is targeted to managers who are directly responsible for work outcomes. In effect, DM, if properly structured, defines the “standard work” of the managers and assists them in succeeding not only as leaders but in achieving corporate and departmental goals that are cascaded to them. The managers’ role in Lean is to understand the reliability and consistency of their work product or service and to know the variability or lack of control in their processes and then how to right that condition.

DM provides managers with structure for tightly managing areas within their control by assessing performance compared with benchmark goals within a 24-hour framework. Close examination of critical elements of performance allow for better analysis of root cause, implementation of immediate countermeasures to correct the deficit, shared accountability with the workforce, and development of team-based PDCA process improvements as corrective and preventive actions whose impact can be assessed and sustained.

We have found that DM is a superior system of management in that it provides a daily visible update of an area’s progress toward goals and objectives to all who pass by the board. The state of affairs of a work area is apparent at a glance as to whether the problem is an opportunity for improvement being addressed by a countermeasure and the current stage of problem ownership and resolution. We have designed our DM system to incorporate documentation of corrective/preventive actions and PDCA problem solving to assist managers in engaging and developing their employees in Lean thinking and ownership of local problems within the day.

DM and Continuous Improvement (Kaizen)

The vital role of DM in continuous improvement is best grasped by understanding the culture of Toyota. According to Liker and Convis, “Toyota believes that improvement cannot be continuous if it is left to a small number of process improvement experts working for senior management. Continuous improvement is possible only if team members across the organization are continually checking their progress relative to goals and taking corrective actions to address problems. Continuous improvement starts at the work group level, where value-added work is done. At Toyota, that is at the level of work teams, where group leaders and team leaders facilitate daily kaizen.”

According to Liker and Convis, kaizen is often misunderstood as a special project team using technical approaches to improvement (Lean or Six Sigma) to address a problem or a weeklong kaizen event staffed with select members to “make a burst of changes.”

Kaizen, according to Liker and Convis, consists of two types that require daily activity: maintenance kaizen and improvement kaizen. Our approach to DM and the boards we have created support both types of daily improvement activities at the level of the work.

Maintenance kaizen is the initial assessment of success or failure in daily adaptations or reactions to unpredictable work variations. These are the metrics of daily work stability of performance that we have categorized on our DM boards as Quality, Timeliness, Inventory, Productivity, and Safety.

Immediate and urgent countermeasures (corrective actions) taken to bring the work system back to stability are documented on the board and then followed by a root cause analysis with the intent of preventing recurrence (preventive actions).

We have integrated into our DM boards the second type of kaizen, improvement kaizen, based on PDCA problem resolution that is intent on preventing the work problem from occurring or testing innovations that raise the performance bar. In truth, the improvement kaizen is rarely a daily accomplishment, but the presence of this category on the board maintains the team focus on the ultimate goal of problem elimination through PDCA-based change.

Role of Leaders in DM

In a Lean culture, the role of leaders is to support daily kaizen—to add energy, to ask questions, to encourage, and to coach without taking over. In this manner, the leader, by coaching the team through the improvement process and recognizing that the answers lie with those doing the work, develops the abilities of his or her people and reinforces the approach to problem solving. The conversations of effective coaching become easier for leaders who understand the work, and we have found that daily rounds at the DM board are the perfect place for leaders to gain that deeper understanding and to support daily improvement efforts of staff.

DM and the Gemba Walk

Gemba is a Japanese word that means the real place where value is created and the work activities are actually done or products are used. In manufacturing, that is known as the shop floor. In the laboratory, that may be any- where along the production line from specimen collection, transport, accession, processing, testing, and report generation and transmittal. In other areas of health care, that place may be closer to the patient at the registration desk, the bedside, the clinic, the operating room, and so on. To offer another manufacturing analogy, all along these processes in all aspects of health care, there are handoffs between “customers” and “suppliers” that can be redesigned and continually improved using Lean principles. The idea of Lean design is that the problems in the gemba are made visible, and therefore the best improvement ideas will come from going to the gemba to see.

The DM board provides visible and strategically meaningful opportunities for leaders to build stronger relationships with managers and team members by engaging them where they work in conversations about their work processes, by coaching for deeper Lean thinking, and by praising them for work well done.

Consistently high levels of quality depend not only on defect-free tangibles related to product or service but probably, even more important, on the invisible intangibles involved in local problem solving and decision making.

Here is where DM excels as an opportunity for leaders and managers to educate the workforce to see and clarify issues, as well as identify those that need to be addressed by an immediate countermeasure and those that must be resolved and eradicated using systematic, data-driven PDCA problem solving.

Gemba walks are an opportunity for those leading a Lean enterprise to go and see to observe in order to become better leaders by promoting managerial accountability and employee engagement in the continuous process of improvement in the Lean culture.

The fine distinction in this walk is that it is not the leader's job to fix the problem. Walking the gemba is part of the leader's participation in the "Check" aspect of PDCA. On the gemba walk, the problem review is prompted by the leader with involvement of the manager and the team. In this process, the leader can assess how well the teams can see, analyze, and clear issues using root cause analysis and testing countermeasures to solve problems based on data.

The weaknesses identified in this gemba walk dialogue are the leader's opportunity to now teach. Leaders should consider the gemba walk as the physical and mental examination to check on the health of the management system and a human development opportunity.

DM serves as the data-driven conversation for leaders on their regular gemba walks to develop people and reinforce Lean thinking and behaviors for continuous improvement with simple questions such as, "What happened here? What are you doing about it now? What more do you need to know about it? How do you propose to eliminate that root cause?"

Potential Challenges Addressed

As with any new behavior, there is an adaptation phase to DM as managers and employees became comfortable with a daily exposure of their work system failures. This requires the blame-free Lean culture to be functional in every work area so that challenging metrics (failing measures) can be chosen as a visual focus for the work team to direct improvement efforts.

Strong managers who engage their employees and are adept in team-based approaches to improvement adapt to DM as an immediate problem-solving tool quicker than those who prefer the comfort of offering mostly "green day" metrics. These strong managers are more likely to select new metrics throughout the year as previous problems become resolved. Most adopt a rule that 3 months of all "green" days signals problem resolution and stability so that the metric can be retired. Work systems that perform their work in a serial structure of hand-offs connected along the path of workflow and should consider co-locating their DM metric boards to more readily work together in a true customer-supplier fashion.

Let me address the perception that a process of daily rounding may be too time intensive. If left to an unstructured process, that may be the case. The approach to DM that I describe provides a structure and process to a daily rounding or huddle at the DM board that is overseen by the manager/supervisor and engages those with delegated authority for daily analysis and presentation of select metrics.

Several expectations contribute to brevity. First, a successful metric (a green day) is not discussed, just noted. Second, the meeting is conducted standing up as a rapid visual team review in front of the DM board with a goal of quickly documenting and assessing failures in key processes within the previous 24-hour interval. These DM process requirements maintain a focus on rapid meeting closure. Our experience is that the average DM meeting time expended is 2 to 10 minutes per day per DM board.

Time variation in DM discussion is attributed to the number of unstable and failed processes that may require further sharing of information or questions that arise at the DM board with initial conversations about next steps or subsequent root cause analysis or interventions to be tested. In addition, senior leaders who incorporate the DM board meetings into their gemba walks may prolong the regular daily huddle with additional conversations with the staff.

References:

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