

## **Introduction**

In the Deming's Quality, Womack's Lean model, and Vitalo and Bujak's Life Enabling commercial models learning is the ultimate means to business success. Learning powers improvement with better solutions that accelerate an organization's progress in achieving its goals. Continuous improvement generates offerings that win ever-greater market share. In applying these models, optimize your generation of learning by making every instance of performance—whether personal, team, work unit, or business-wide—a fountain of learning.

### **The Default Approach to Learning Is Not Sufficient**

Trial and error is the most common way people learn. We do a task, experience a result, and adjust our approach one way or another. With many repetitions, we progressively shape our behavior to better produce the result we seek. It requires no training, as the trial and error approach occurs automatically. It is inborn. It produces well-entrenched new behaviors that activate reflexively in response to situations that appear similar to the ones in which we learned. But, this essentially biological approach to learning is slow and inefficient, as learning usually requires many repetitions of errors before success is realized. Each repetition is waste. Also, trial and error is risky when the consequences of error are high. Finally, as with all biological methods, it is limited in its value-added contribution in that what we learn is locked up in ourselves. We can tell other our solution or demonstrate it, but we cannot explain how we developed it or why it works. We are, therefore, limited in our means for transferring it to others. We can say, "Watch me," but that requires visual contact between the learner and us. It also forces the learner into a trial and error learning approach with all its inherent waste and risk.

### **The Mining Learning From Performance Approach**

Rather than using the default approach to learning, use the mining learning from performance tool, SRLD, to maximize your learning and its value to your organization. SRLD guides you in extracting learning from every performance whether you succeed or fall short of your goal. Use the tool to help you analyze information from our last performance of a task and generate ideas that will guide a better next effort. SRLD produces explicit knowledge you can immediately share with others. What people learn is not locked within their behavior; it is transferable to others by many means. For example, you can incorporate it into written standardized work documents, performance guides, workplace visual aids, or existing training programs. You can share it findings as part of your weekly organizational updates or distribute it through your best practice information system. With regard to the last option, SRLD is a preferred source for your best practice information systems because it supplies usable content. Its systematic process and standardized format for expressing learning avoids a common problem of these systems—namely, being clogged with contents that range from mere observations to speculative musings all mingled together.

## Mining Learning From Performance

Also, you can do SRLD as a team. When done as a team, it provides a means for engaging and involving people in generating learning together. This sharing further enriches the source material from which you derive your learning and the value-adding benefits it generates.

SRLD is based on the work of Dewey (1910), Gilbert (1978), and Carkhuff (1983) and is fully consistent with an emphasis on eliminating waste and maximizing the value-added contribution of everything we do. As a documented methodology, you can teach SRLD to others thereby promoting learning by every member of your organization. Since the method is both public and reproducible, others can review how a particular learning was generated and verify it using their own skills. This allows everyone to develop his or her own conviction about a learning's correctness.

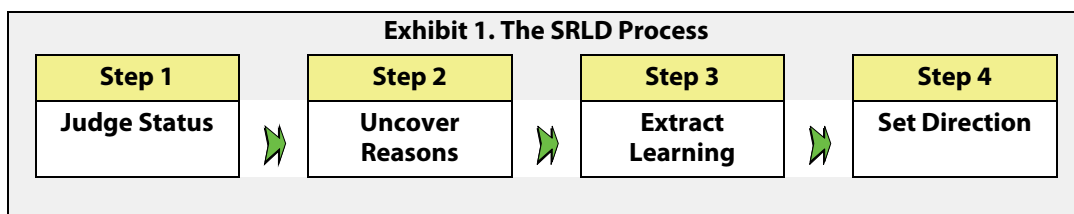
### Advantages of the SRLD Method

Using SRLD speeds the cycle time of learning, reduces the risk of errors, focuses attention on all factors that can affect a performance outcome, and offers other benefits such as the following.

- Uncovers a more exhaustive set of root causes for an observed performance outcome
- Produces learning that one can test using experiments or through the use of a pilot study
- Produces learning using a process that is shareable with all members in a cooperative endeavor
- Heightens participant buy-in on new ideas because it provides them the fact base they can use to evaluate the validity of its findings
- Enables team-based learning
- Generates knowledge that can be documented and retained for use by future members of an organization

### Status, Reason, Learning, and Direction (SRLD)

The acronym SRLD stands for tool Status, Reason, Learning, and Direction. It is a simple four-step process for generating and its use. The four steps are—(1) Judge status, (2) Uncover reasons, (3) Extract learning, and (4) Set direction for improved performance (Exhibit 1).



The SRLD tool is an engine of continuous personal development when applied by the individual. It works as an engine of a periodic renewal process for accelerating the advancement of initiatives performed by teams and organizations.

## **Mining Learning From Performance - Raphael L. Vitalo and Joseph P. Vitalo**

Below, we provide guidance in how to use SRLD. We do this in the context of applying it to resolving a problem experienced by everyone who implements improvement programs—namely, the failure of improvements to sustain once they have been made.

### **Tackling the Problem of Sustainment**

Some time ago, a company we encountered began a major Lean initiative in its Manufacturing area. We were visiting the company in response to their request to learn more about the continuous improvement approach known as “Kaizen” (Vitalo, Bujak, and Vitalo 2003). During that visit, we uncovered that the company had undertaken a Total Productive Maintenance (TPM) initiative some years prior with a focus on preventive maintenance (PM). It also had broadly implemented a 6S initiative. Curious, we asked how they were received. We were told that they had been received well by employees and had produced important benefits for the company at the time. We asked, “What was happening with them currently?” In response to this question, we learned that the follow through on both initiatives was poor. This provoked two obvious questions that we raised. The first was, “Why was follow through poor given people’s positive response to these initiatives?” The second was, “How are you ensuring that the new initiative you are thinking of undertaking does not end up the same way?”

We raised these questions based on an obvious concern. “If the business was not able to sustain its last effort to continuously improve, why should management believe that its new effort would sustain?” This is a question every company can and should raise. Decade after decade, we have business replace one improvement flatlining initiative with another never questioning why the previous initiative did not last. We have many tools and lots of energy for uncovering opportunities and making improvements (Quality Planning, Process Charting, Value Stream Analysis, Gemba Kaizen events, Quick Change, Quality Circles, team problem solving, suggestion systems, etc.). We seem, however, to have few if any tools and little excitement for ensuring that the improvements we develop sustain.

In response to our questions, management admitted that they were uncertain why the use of PM and 6S had waned and they had no plan for ensuring that their new initiative would. They asked our help in creating one. We suggested a simple solution—“Let’s conduct a Mining Learning From Performance session with the people knowledgeable of what happened with PM and 6S improvement initiatives. We could use what we learn to ensure that your future improvements efforts do sustain.” The company agreed. We share the results of this effort with you because, in retrospect, the findings seem to fit many companies we have encountered.

### **Using SRLD to Improve Sustaining**

We gathered together a team of knowledgeable people to complete the SRLD session. The team included frontline worker, supervisors, and managers. We trained the team in the use of the SRLD method. The team defined its goal and set some ground rules for extracting and applying

## Mining Learning From Performance

what it would learn. Its focus was to uncover why the preventive maintenance (PM) and 6S programs had not sustained and how the company could ensure that future improvements would. As to ground rules, the team adopted some commonly used rules (e.g., one speaker at a time, leave nothing unsaid, use *Working With Others* skills at all times in relating with each other (Byron and Vitalo 2003)).<sup>1</sup> The team added a few specifics rules for this assignment. First, we would each assume responsibility for checking the facts with others not in the room. This meant that time would be set aside between discussions so that team members could speak with employees in different work areas and at various job levels (managers, supervisors, and nonsupervisors) who were not part of the team. We all agreed that the problem was broadly based and needed all the perspectives we could gather to ensure that we understood the facts correctly. Second, we would push for quantitative information, not just opinion. This too was important as it would ensure some level of validity to the information with which you work. It also provided a factual basis for deciding among conflicting perspectives.

### Judge Status

The first step in judging status is to document that task that was to be accomplished. In this case, it was to “sustain the application of the preventive maintenance (PM) and 6S programs” (Exhibit 2). Once you have documented the task, you record the target result you were to realize and what result you actually produced. Originally, management had not defined an explicit target for the sustainment of these improvement initiatives. Everyone agreed, however, that the implicit expectation was 100% compliance—meaning, 100% of the PMs performed as scheduled and 100% of the designated work areas maintained to 6S standards. Next, we recorded the results achieved. Compliance with 6S can be measured using simple observations, but we also wanted to know whether everyone saw the same thing. For example, if there was a discrepancy between people’s perceptions that 6S was being done when in fact it was not being done. This would tell that one reason it was not being sustained was that people did not understand what constituted a 6S maintained workplace. As it turned out, perceptions about 6S were on the mark. People did understand what a 6S maintained workplace should look like. The team then confirmed through direct observations that not more than 30% of the designated work areas were maintained to 6S standards.

As to PMs, we encountered an unusual situation. The department had an accounting system that tracked and reported the completion of PMs. It consistently reported that PMs were completed 100% of the time. In contrast, the estimates of completion by people on the shop floor

<b>Exhibit 2. Status of the Sustaining Task</b>	
<b>Task</b>	Sustain the application of preventive maintenance (PM) and 6S
<b>Target</b>	<ul style="list-style-type: none"><li>■ 100% of scheduled PMs completed as scheduled</li><li>■ 100% of designated work areas have 6S implemented</li></ul>
<b>Results</b>	<ul style="list-style-type: none"><li>■ 30% of scheduled PMs completed as scheduled</li><li>■ 30% of designated areas have 6S implemented</li></ul>
<b>Judgment</b>	Performance of task is below expectations

<sup>1</sup> The *Working With Others* skills are clarifying, confirming, constructive criticism, and hitchhiking. They ensure that each person is heard and understood, that differing opinions are offered in a constructive manner, and that a person’s effort to improve an offered idea first recognizes the value of the idea they are attempting to improve.

## **Mining Learning From Performance - Raphael L. Vitalo and Joseph P. Vitalo**

averaged around 30%. In this instance, the formal accounting system turned out to be wrong. Our first-hand observations on the floor confirmed the 30% estimate. A closer look at the accounting system revealed that the system simply counted the number of PM authorization sheets returned with “Done” checked off. It did not audit the performance of PMs. People were simply checking the box “Done” irrespective of whether a PM had or had not been completed.

Once we had the task, target, and results documented, the team judged how well the task was accomplished. A task may be judged as performed to expectation, above expectation, or below expectation. If a scale defining levels of success exists, then include with the judgment the scale value that the observed performance matched. Clearly, success in sustaining the application the performance of PMs and of 6S was below expectations (Exhibit 2).

### **Uncover Reasons**

With the status of the task clarified, each team member contacted various other employees to share the perceived status and solicit their thinking about two questions. The first question was, “What are the reasons we did as well as we have done in sustaining improvements?” The second question was, “What kept us from doing even better?” We always pursue both tracks no matter what judgment we conclude as to status. The reason is simple. It is just as important to continue to do what worked as it is to replace what did not work. Do one without the other and you compromise your learning and your chances to improve your next performance.

When the team members reassembled, they shared what they learned from others as well as what they understood based on their own experiences. We used a set of factors that affect the outcomes of human performance to prompt thinking and organize the reasons the team uncovered (Exhibit 3, next page). Together, these factors are the basic reasons why human performance succeeds or fails. We organize these factors into three groups. The first group relates to the Person(s) doing the task. The second group relates to the Work Process used to complete the task. The third group relates to the Work Setting in which the task was performed. We developed these sets of factors based on the prior work of Gilbert (1978) and Carkhuff (1983) and incorporated our own experience as performance technologists.

#### **Person**

The “Person” factors affecting performance include the performer’s motivation, competency, capacity to do the task to expectation, correct and positive self-appraisal of abilities, and freedom from distraction. Motivation refers to both the level of effort applied to doing the task and its sustainment until the task is completed. Competency refers to the person’s possession of the knowledge and skills required to accomplish a task at the level proficiency required for success. It also includes those “other personal characteristics” needed for success, sometimes referred to as *traits*. One example is ‘cooperativeness’ especially if the task is being done in a team context. Capacity refers to the person’s capability to handle the physical, emotional-interpersonal, and intellectual demands of the work. Physically, do people have the strength, endurance, flexibility, or other fitness qualities needed to do the work?

# Mining Learning From Performance

## Exhibit 3. Factors That Help or Hinder Success

### Person(s)

- Self-appraisal of capabilities (Accuracy, Positive/Negative)<sup>1</sup>
- Freedom from distractions that compromise performance (self-doubt, stress, illness, etc.)
- Competencies (Possession of the KSAOs<sup>2</sup> and their proficiency levels required for task success)
- Motivation
  - Level of effort applied to doing a task
  - Sustainment of effort until the task is completed.
- Capacity (Physical, emotional-Interpersonal, Intellectual)<sup>3</sup>

### Work Process

- Prescribed method exists
- Prescribed method is effective
- Documentation of Method is:
  - Complete
  - Correctly documented
  - Current
  - Understandable for average performer
  - Inclusive of think and do steps
  - Contains metrics and a method for gauging progress and results
  - Available to performer

### Work Setting

- Resources
  - Adequacy of workspace, utilities, tools, equipment, and other materials required for the task
  - Quality of inputs and logistics
  - Availability of coaching from an expert and other performance support resources
  - Lack of task-required information (e.g., customer requirements, quantity to produce)
- Expectation/Feedback
  - Completeness of assignment information provided (e.g., task, objective, product, process, schedule, performance criteria that the worker must satisfy)
  - Adequacy of achievement information provided (e.g., timeliness, accuracy, and feedback addresses both approach and results)
- Incentives
  - Sufficiency of recognition or rewards for correct performance
  - Sufficiency of consequence for incorrect performance
  - Presence of recognition or rewards for incorrect performance
  - Alignment of rewards and consequences to measures of tasks performance
- Coordination
  - Adequacy of execution of interrelated tasks by others (timeliness, correctness, consistency)
  - Alignment of perspectives among all involves decision makers

<sup>1</sup> Refers to a person's belief in his or hers ability to complete tasks and attain goals. Bandura (1982) labels this "self-efficacy." That judgment may be accurate or inaccurate. If accurate, it may be positive or negative. When accurate and positive, one's sense of self-efficacy enhances success. When one's sense of self-efficacy is inaccurate, it undermines success by leading to misjudgments about one's capabilities and failure. When it is negative, it retards future learning because it renders one hesitant to undertake new activities.

<sup>2</sup> KSAOs is the acronym for knowledge, skills, abilities, and other personal characteristics. Other personal characteristics are sometimes referred to as traits that one needs to succeed.

<sup>3</sup> Physical refers to one's strength, energy, endurance, flexibility, etc. Emotional-Interpersonal refers to the number and intensity of relationships a person can effectively sustain. Intellectual refers to one's ability to handle single activity sequentially executed task, activities with multiple tasks managed concurrently, and multiple activities handled concurrently.

## **Mining Learning From Performance - Raphael L. Vitalo and Joseph P. Vitalo**

Emotionally-interpersonally, are they capable of sustaining the number and complexity of relationships required to coordinate the task to expectation? Intellectually, can they manage the multitasking or concurrent processing demands the work requires, if such is required to complete the task to expectation?

Two other critical factors are the accuracy and positive or negative status of a person's judgment about his or her abilities (self-efficacy) and the person's freedom from distraction due to physical, psychological, or social problems. Inaccurate assessment of oneself leads to misjudgments that affect performance—e.g., assuming that one can handle a situation that, in fact, he or she needs support to handle. A negative self-assessment leads to hesitant investment and uncertainty in decision making. Distraction hinders the expression of a person's capabilities.

### **Work Process**

Unless the individual is a freestanding professional, management prescribes the work process the performer uses. That method may not be effective—that is, even if one implements it exactly as prescribed, the process may not be capable of producing the results the organization seeks. With regard to preventive maintenance and 6S, both have proven methods for accomplishing their purposes.

Even if a process is effective, it may or may not be documented. Without documentation to refer to, what does a performer use to ensure he or she is doing the process correctly? Even if it is documented, that documentation may not be complete, correctly recorded, current, understandable by the average performer, or available to him or her. It may not contain both “think” and “do” steps. “Think steps” tell you how you can check to see if you are doing an action correctly or how to avoid doing it wrongly. “Do steps” tell you what action to take. The documentation also may not contain metrics and a method for gauging progress and results. This leaves the performer guessing about how he or she is progressing and whether he or she got the results that were desired.

### **Work Setting**

All work is done in a particular setting. That setting includes a workspace, tools, materials, inputs, and all other wherewithal needed to accomplish a task as prescribed. We group these factors under the subheading, “Resources.” The adequacy of a workspace; its utilities; the machines, materials, inputs provided; the supply management and transport of needed materials (logistics); and the availability of coaching from an expert and other performance aids are all potential reasons for a performance problem.

The work setting also embraces the support one receives from others whose work affects the work of the performer. We group these factors under the subheading, “Coordination.” They include the adequacy of execution of interrelated tasks by others (timeliness, correctness,

## Mining Learning From Performance

consistency) and the alignment of perspectives among all involved decision makers. If multiple decision makers direct a worker in different ways, no performer can succeed.

Every performer needs to understand what he or she is expected to produce and how he or she is doing in satisfying that expectation. We group these goal and progress information factors under the subheading, "Expectation/Feedback." With this information, the performer can focus his or her efforts and regulate his or her actions to better achieve what is expected. Expectation/Feedback factors include the completeness of assignment information provided to the performer (e.g., task, objective, product, process, schedule, performance criteria that the worker must satisfy) and the adequacy of the achievement information provided (e.g., feedback on both approach and results, correctness of feedback, and timeliness of feedback).

Finally, for performers who are extrinsically motivated, the incentives the work setting provides affect his or her performance. Is correct performance recognized and rewarded? Is poor performance pointed out and are consequences forthcoming if not corrected or are poor performers sometimes rewarded? Are rewards and consequences aligned with measures of tasks performance? These factors are included under the subheading, "Incentives."

### What We Found

The team uncovered 14 reasons why sustaining PMs and performing 6S did as well as it did and why it ultimately failed. Here are the highlights.

#### What Enabled Sustaining

Initial success was driven by the energy and desire of performers to improve their work settings. Employees were enthusiastic about having an opportunity to influence their work and the initial commitment of employees was reinforced by experiencing a direct and immediate benefit from sustaining the improvements. Specifically, they worked in a clean and organized area and experienced less frustration in doing their jobs. Employees were skilled in doing the processes they needed to sustain. They were trained in 6S and in implementing their preventive maintenance tasks and attained the proficiencies needed to do them correctly.

Initially, there was good vertical alignment as to the importance of continuing to do PMs and 6S. Upper management was involved and concerned. Supervisors worked alongside line personnel and helped solve problems and obtain resources. They also scheduled time for the improvement tasks to be performed.

Two activities workers included in their implementation of improvements also were credited with helping early success. One was that workers in each shift kept notes about problems discovered and the fixes put into place for future reference and the other was their sharing of these notes across shifts so that problems uncovered and corrections made in every shift were passed along.



## Mining Learning From Performance - Raphael L. Vitalo and Joseph P. Vitalo

Another enabler factors was the delegation of authority to the workers to fix problems when they were uncovered and for them to have a say in the way their work areas were organized.

### What Hindered Sustaining

The key factor that unraveled sustaining was the breakdown in alignment between frontline workers and management concerning the importance of continuing to implement PMs and 6S. Management priorities, as expressed in their feedback to supervisors, changed. Over time, they no longer addressed whether sustaining 6S and PMs was happening. Rather, management narrowed their focus to getting product produced. With this shift, supervisor support for workers doing the sustaining tasks evaporated. Throughput was prioritized. Time was no longer allocated to the improvement tasks. Resources were not provided and the opportunities for cross-shift communication fell away. This shift in emphasis by management, in effect, revised the incentive system operating in the workplace. The new incentives reinforced a return to the way things operated before the improvements were introduced. Consequently, the information system reporting the status of preventive maintenance became a “check-off the box” exercise that was perceived to have no value. Monitoring of the performance of 6S and PM was no longer a valid reflector of actual work. Hence, the feedback loop on performance was eroded.

While management seemed unaware of their change in priorities, that change undermined the motivation of performers. They read the change as meaning that sustaining was no longer a real concern. Adding to this disincentive, employees increasingly encountered frustration with regard to getting the time and resources needed to continue their 6S and PM tasks.

A subtler factor was the failure of managers to detect and address what was happening. Management continued to want the 6S and PMs done. On the one hand, they sensed that there was a drop off in sustaining each. Yet, they did not systematically investigate why the drop-off was happening nor explore how to correct it. Neither did they appear to recognize that their push on supervisors for production volume affected how supervisors promoted and supported sustaining 6S and performing PMs. They assumed that supervisors would continue with the prior goals as they pursued the new priorities. They also expected the supervisors to “push back” if what they were asked to do was not feasible. Managers did not read their supervisors correctly. And, perhaps doubting their own influence, supervisors failed to push back. Supervisors assumed that management would not listen to them or that speaking up might be negatively received. As a result, supervisors read management’s return to old priorities as a message that sustaining PMs and 6S was no longer important. Workers read this message from their supervisors and de-prioritized doing 6S and PMs.

### Extract Learning

In the SRLD method, each reason for the results realized and not realized is converted into a learning. We define a learning as the *advice you would give someone else doing the same task so*

## Mining Learning From Performance

*that they succeed.* A useful statement of learning must have three elements: the advice, the reason why it is important to apply, and what benefit it will produce (Exhibit 4). The “advice” component tells what you should do to be successful. The “reason” component tells the advantage doing it will produce. The “benefit” component tells the improved outcome that advantage will generate. The statement of benefit provides a measurable reference for checking whether the learning is valid. To make generating learning easier and to produce consistently complete items of learning, we use a standard format. Exhibit 4 includes an example of a complete statement of a learning.

<b>Exhibit 4. A Complete Statement of a Learning</b>		
<b>Components</b>		
<b>Advice</b>	<b>Reason</b>	<b>Benefit</b>
Tells what you should do to be successful	Tells the advantage implementing the advice will create	Tells the improved outcome that the advantage will produce
<b>Format</b>		
[State advice] "Do... [State reason] because... [State benefit that will result] and that will..."		
<b>Example of a Learning From Analyzing the Sustaining of 6S and PMs</b>		
"Make sure that performers of a task experience an immediate benefit from doing the task because that will sustain their motivation and that motivation will drive continued task performance."		

Exhibit 5, next page, lists the team’s findings and the learning formulated from each. While of the extracted learning contained a few surprises, what was most important was each learning was based on a systematically developed factual grounding. This made the finding and its learning much more persuasive to decision makers. As well, its explicit documentation—as opposed to the usual “discuss and move on”—increases its likelihood of use in improving the organization’s subsequent performance. One fact you will note as you review the learning is how interconnected the factors are across categories. Each factor interacts with other factors having a reverberating effect.

### Set Direction

You leverage your learning from SRLD in two ways. First, you specify how you will apply it to produce better success at your task (the “D” in SRLD). The second is to share across your organization what you have learned.

In our example, the team chose to apply their learning by creating and using a check sheet. The items on the check sheet expressed the learning the team generated from its SRLD exercise. The checklist is used to proactively ensure that decisions and actions taken are likely to support sustainment. It ensures that future sustainment efforts fully incorporate the learning the team produced.

## Exhibit 5. A Complete Statement of a Learning

### People

1. The experience of immediate benefits (e.g., greater say in issues that affect them; improved work settings) ignited and sustained people's energy and desire to do 6S and PM and sustain their use.  
**Learning:** Make sure that the improvement being sustained provides an immediate benefit to the people implementing it because the direct experience of a benefit motivates their investment in sustaining the improvement.
2. Competence in implementing PMs and 6S ensured that the investment of effort by performers resulted in success and success drives continued use.  
**Learning:** Make sure that the people implementing the improvements have the knowledge and skills needed to do their tasks because without these competencies they cannot succeed and success is required for the improvement to sustain.
3. Managers failed to detect when sustainment in improvements had gone awry and did not act to uncover and correct why it has happened.  
**Learning:** Make sure that managers have the competence and motivation needed to detect problems in sustainment and uncover and correct why they are happening because when barriers to continuance are not removed sustainment fails.
4. Supervisors did not feel free from fear of reprisal for speaking up so they failed to push back when management decisions or actions threatened to undermine management's stated goal to sustain the use of 6S and PMs.  
**Learning:** Make sure that the relationships between supervisors and their managers allow the sharing of issues and concerns without reprisals because absent such relationships, problems in sustainment will go unreported and the effort will fail.

### Work Process

1. The effectiveness of the 6S and PM work processes ensured that people who executed them correctly produced the results and benefits expected from 6S and PM.  
**Learning:** Make sure the method you document for doing an improvement actually produces the result that is desired because if it does not, it will waste people's energy and undermine their investment in continuing to use the method.
2. Reporting the completion of 6S and PMs initially worked to monitor sustainment and ensure that it continued.  
**Learning:** Make sure that monitoring of the continued use of improvements has a built-in audit component because without that component, you will not detect when what is reported is not valid and not act to correct a failing sustainment of improvements.

### Work Setting

#### Resources

1. When work time was not allocated to do the improvements, improvements stopped.  
**Learning:** Make sure time is officially allocated for doing the improvement because without this resource the work is unlikely to be done consistently and that will lead to the end of sustainment.
2. The delegation of authority to the workers to fix problems they uncovered in implementing improvements enabled them to keep sustainment moving forward.  
**Learning:** Make sure that the people responsible for implementing improvements have the authority needed to get the task done correctly because without that authority, there will be delays, aborted efforts, and other waste of resources that will undermine sustainment.
3. When Supervisors worked alongside line personnel and helped them solve problems in implementing improvements and obtain needed resources, they strengthened the sustaining of PMs and 6S.  
**Learning:** Make sure that the supervisors provide line workers the support they need to overcome problems in implementation because, absent that support, the execution of improvements will be less successful and less rewarding, and that will undermine sustainment.

#### Expectations/Feedback

1. Management never explicitly set a target for performance of PMs and 6S.  
**Learning:** Make sure that the responsibility for sustaining improvements is explicitly stated and complete. It should specify who is responsible, for doing what (the Task), and what criterion defines success (Target). The absence of an explicit statement of expectation leaves uncertain what management seeks and that uncertainly undermines focused and consistent performance by the people who must accomplish the task.
2. When management shifted their emphasis from sustaining the use of PMs and 6S to another priority, demanded results on that new priority, and failed to provide the resourcing needed to permit the pursuit of sustainment *and* the new priority, they forced supervisors to shift their focus to the new priority and undermine sustainment.  
**Learning:** Make sure that managers do not undermine the continuance of improvements by overriding the importance of the task with new priorities that take resources away from sustainment because supervisors will be forced to shift the work of their people away from sustaining prior improvements to accomplishing the new priority.

*Continued ...*

## Mining Learning From Performance

### Exhibit 5. A Complete Statement of a Learning (continued)

#### Incentives

1. When management shifted their focus away from sustainment and ceased to resource it, they disincentivize sustainment of improvements.

**Learning:** Test whether the effect of each management decision or action against whether it signal a reduced importance is sustainment because such a signal deinceivizes the continuance of improvements and undermines sustainment.

#### Coordination

1. The initial alignment with regard to the importance of 6S and PMs between management, supervisors, and frontline workers strengthen sustainment.

**Learning:** Be sure to monitor the continued alignment between management, supervisors, and frontline workers regarding the importance of sustaining an improvement because that alignment may shift and, if undetected and uncorrected, sustainment will be undermined.

2. Sharing learning across shifts by keeping notes about problems discovered and the fixes put into place increased the success of sustainment and elevated the results and benefits derived from it.

**Learning:** Be sure to build-in opportunities for people to share their learning about how to successfully sustain an improvement because that sharing propagates solutions across performers and reduces the likelihood of others encountering problems that undermine their success in sustaining an improvement.

We hitchhiked on the team's work by adding a simple six-step process to guide sustaining.

1. Document the actions you will take to ensure that improvements made sustain.

**Tip:** Record what is to be done, when, by whom, where, how, and why. Test the method first using the sustainment checklist. Your method should address each item listed on the checklist to maximize the likelihood of sustaining your improvements. Adjust the method to incorporate any missing feature. Next, test the method by asking performers to provide feedback on its completeness, effectiveness, and ease of implementation. Use this feedback to fine-tune the method and your guidance for doing it.

2. Support people in sustaining improvements

**Tip:** Prepare people to sustain the improved process. Make sure everyone is aligned with and motivated to support sustainment. Ensure that they have the personal resources to do their roles well. Make certain that your enabling systems (e.g., performance management, measurement, and feedback systems; recognition and rewards and incentives systems) also are aligned with accomplishing this task. Be certain that time, materials, authority, information, and other required assets are supplied as needed. Check your readiness by applying the sustainment checklist. Correct any deficiencies you uncover.

3. Measure sustainment and its results and periodically audit your findings.

**Tip:** Measure both the continued use of the improvements and its results. Post the status on each so that all people involved in sustaining improvements can track their progress. Be sure to build in a periodic audit using direct observations to verify that the measurement system is functioning correctly.

4. Recognize achievement.

**Tip:** Credit real performance fairly. Build on the positive—meaning, recognize whatever is accomplished even if it is less than desired.

5. Remedy shortfalls in sustainment.

**Tip:** Detect failures in sustainment. Involve all parties in uncovering it causes and generating remedies. Act quickly to remove barriers to success.

## Mining Learning From Performance - Raphael L. Vitalo and Joseph P. Vitalo

### 6. Continuously improve sustainment.

**Tip:** Establish periodic renewal sessions to reflect on how well you are sustaining improvements. Use the SRLD method. Do this quarterly at first. Later, a semi-annual or yearly session may be sufficient. Involve all the people responsible for sustainment. Use these session to extract new learning, set directions for improved achievement, recycle commitment, elevate overall approach, and sustain align and energy.

### References

- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147. Retrieved 3/10/2020, from <https://pdfs.semanticscholar.org/8bee/c556fe7a650120544a99e9e063eb8fcd987b.pdf>
- Byron, J.S. and Bierley, P.A. (2003). *Working With Others*. Hope, ME: Lowrey Press.
- Carkhuff, R.R. (1983). *Sources of human productivity*. Amherst, MA: Human Resource Development Press, Inc.
- Dewey, J. (1910). *How people think*. Retrieved December 11, 2007, from [http://www.brocku.ca/MeadProject/Dewey/Dewey\\_1910a/Dewey\\_1910\\_a.html](http://www.brocku.ca/MeadProject/Dewey/Dewey_1910a/Dewey_1910_a.html)
- Gilbert, T.F. (1978). *Human competence*. New York: Mc Graw Hill.
- Malhotra, Yogesh (1998). Business process redesign: an overview. *IEEE Engineering Management Review*, Vol. 26, no. 3, Fall.
- Saks, A.M. (2002). So what is a good transfer of training estimate? A reply to Fitzpatrick. *TIP* (quarterly news publication of the Society for Industrial-Organizational Psychology), Vol. 39/No. 3 January 2002, available on-line at <http://siop.org/TIP/backissues/TIPJan02/06saks.htm>.