

Diagnostic Questions:

1. Do leaders have standard work? Do they follow it? Do you carry it with you as a routine? Do you have it with you now?
2. Is leader standard work regularly reviewed for updating? Has it been updated recently; when was last time?
3. Are standard work documents used as working documents, as a diary of the day? Are the leader standard work documents reviewed daily by leaders' supervisors? Weekly with the subordinate?
4. Is there a regular place where completed standard work documents are stored? Is it visual? Is a leader standard work form available for all to see?
5. Has leader standard work been used in this area in transitions between leaders?

Progress		Notes
<b>1</b>	Pre-implementation	No leader standard work is in evidence.
		Some leaders have heard of the idea of leaders standard work.
		Most leaders see standard work as applicable to production jobs only.
<b>2</b>	Beginning implementation	Leader standard work exists for a few isolated positions.
		Where it exists, leader standard work is carried some of the time and filled out irregularly.
		Leader standard work has not been revised. Most leaders talk about it as a compliance, check the box exercise.
<b>3</b>	First recognizable state	Standard work is in place for all leaders in the value stream, team leads through value stream manager. The standard work for all leaders has been revised once.
		Most leaders carry their standard work with them, follow it, and use it as a working daily document.
		Most leaders understand the benefits of standard work and can give examples of how it has helped them.
<b>4</b>	System stabilizing	All leaders carry and follow leader standard work and use it as a working daily record.
		All superiors regularly review subordinates' standard work documents daily.
		All leaders can identify how standard work benefits them. Standard work is regularly reviewed and revised.
<b>5</b>	Sustainable system	Standard work is regularly reviewed daily by the next level as a monitoring and communication vehicle. It is reviewed weekly jointly by subordinate and supervisor for patterns, revisions.
		Completed standard work documents are visually maintained by day of week for each leader. A blank copy of leader standard work is posted in the area.
		All transitions between leaders include review and walkthrough of leaders' standard work. All new leaders follow standard work from day one on the job

Diagnostic Questions:

1. Are there documented plans for improvement visible in each area - at least each department?
2. Are current process improvement activities visual in each area?
3. Are value stream maps used to identify and track process improvements?
4. Are value stream maps available for current and future state?
5. Do future state maps show planned kaizens, completion status of kaizens, and specific targets for improvement in measures of process performance?
6. Who prepares value stream maps for the area? How many of the area's leaders are proficient value stream mappers?

Progress		Notes
<b>1</b>	Pre-implementation	Value stream maps are not in use, or were used once but are out of date. They are not part of the area's approach to improvement.
		Few people if any in the area are proficient at value stream mapping.
<b>2</b>	Beginning implementation	Value stream maps can be seen posted in the area, may once have been used as an improvement planning tool, but they are out of date.
		Some technical specialists (engineers, lean leads) know how to map value streams. Most line manufacturing leaders do not.
		Value stream maps, when present, show the current state only. Or, if future state maps are present, they are out of date.
<b>3</b>	First recognizable state	Most areas have visible plans for improvement; many of these shown as current and future state value stream maps with kaizen bursts showing planned improvements and reflected on A3s.
		Some of the future state maps show planned improvement in specific value stream process measures (such as lead time, %VA time, yield, productivity, uptime, changeover times).
		In areas with current value stream maps, supervisors and superintendents are proficient value stream mappers and drew their own maps.
<b>4</b>	System stabilizing	All value streams display current state and 90-day future state maps showing improvement goals (measures) and activities (kaizens).
		All supervisors in the value stream are proficient value stream mappers, draw their own maps, use mapping to systematically understand opportunities large and small.
		Completion status of kaizens is shown on the value stream maps, linked to A3 boards, and reflected in status of progress against 90 day goals.
<b>5</b>	Sustainable system	Value stream maps are regularly used in the area's communications. Front line leaders teach value stream mapping.
		All zone leaders are proficient value stream mappers. All departments and teams use posted value stream maps to show their improvement plans
		Each area's performance (down to the team) is reflected in the current state measures summary on its value stream map (e.g., lead time, %VA time, yield, productivity, uptime, changeover).

Diagnostic Questions:

1. Are visual controls in evidence for production processes in flow and pull areas? Are they current?
2. Are reasons for misses or flow interrupters described clearly and specifically enough to decide what next steps to take?
3. Are visuals regularly reviewed and used to drive improvement? How? Are improvements stimulated by visuals limited to crisis situations, or are there many, often small, improvements driven by visuals?
4. Are visuals in regular use for out-cycle tasks like waterspider routes, operator-based maintenance tasks, etc.?
5. Are visuals revised and changed as conditions change and issues either emerge or are resolved? Example?
6. Are visuals regularly signed off / initialed by leaders in the area?
7. Are visuals self-documented with "who does what here when" information at or on the visual controls themselves?

Progress		Notes
<b>1</b>	Pre-implementation	There are no visual controls in evidence.
<b>2</b>	Beginning implementation	Production tracking charts are posted in flow area only.
		Production tracking charts complete for few days or intervals of observation. They are often filled in irregularly with a focus on production numbers only. Reasons for misses are absent or too vague for action.
		There is no or only irregular daily review of production visuals; response to information on the visuals is either absent or irregular. Visuals are a check the box activity.
<b>3</b>	First recognizable state	Production tracking charts in flow areas are filled out regularly.
		Most reasons for misses are specific and actionable.
		Visuals are reviewed daily, and most of the time drive specific action assignments on an identified major interrupter or problem.
<b>4</b>	System stabilizing	All reasons for misses are clear and actionable.
		Visuals are reviewed daily, and regularly lead to specific action assignments on small as well as large flow interrupters and other problems.
		Tracking charts are in use at pacemaker, in flow and in pull areas. Visuals are added and discontinued as needs change.
<b>5</b>	Sustainable system	Visuals are in regular use for out-cycle tasks throughout the value stream.
		All production charts are initialed several times daily by department and value stream leaders, and occasionally by plant managers and executives.
		Visuals are regularly analyzed to identify most frequent interrupters or problems, which then drive problem solving and improvement implementation.

Diagnostic Questions:

1. Are visuals in evidence for non-production processes such as labor planning, 5S, etc.? Are they current?
2. Can leaders explain how actual versus expected performance can be visually controlled in non-production tasks?
3. Is review of non-production visuals included in the appropriate leaders' standard work?
4. Are improvements stimulated by visuals limited to crises or are there many improvements, small as well as large?
5. Are visuals regularly reviewed and used to drive improvement? How? Example?
6. What visuals are used to display and monitor TPM schedule and performance, SPC charts, daily calibration, quality checks, etc?

Progress		Notes
<b>1</b>	Pre-implementation	No visuals exist.
		Monitoring and reports of production support activities, if any, are on IT systems, in rarely-referred to books, or in local, informal, undocumented systems.
<b>2</b>	Beginning implementation	Some leaders understand it is possible and the reasons for applying expected-versus-actual visual tracking for non-production processes.
		Initial visual controls are posted for a few processes, but completion and review of them is irregular. <small>from <i>Creating a Lean Culture</i>, 2<sup>nd</sup> ed.</small>
<b>3</b>	First recognizable state	Many visuals are in evidence, most are current.
		Most visuals are monitored and reviewed regularly as defined in leader standard work.
		Reviews of the visuals drive action on some major issues.
<b>4</b>	System stabilizing	Charts and tracking processes are in place for all recurring production support activities.
		Reviews regularly lead to actions on small as well as large issues.
		TPM tasks, schedules, and assignments visually displayed using heijunka methods, and TPM performance is visually displayed either at the machine, at the TPM heijunka, or both.
<b>5</b>	Sustainable system	There is immediate (one-day follow up) on lapses in maintaining production support visuals.
		Tracking data from production support visuals are regularly analyzed for trends to identify opportunities for improvement.
		All problems identified in production support visuals are followed up for root cause solutions.

Diagnostic Questions:

1. Do regular meetings focus on the status of processes as well as on results? How often?
2. Do start up meetings have clear purpose and agenda beyond today's production requirements / issues? Examples?
3. Do regular meetings result in task assignments to improve processes, and follow up past assignments currently due?
4. How are improvement assignments managed: visually, or by spreadsheet or list?
5. Do visual control charts results in task assignments to address interruptions?
6. How many leaders are familiar with basic project management techniques such as job breakdowns, and use them regularly? Examples?
7. How well integrated are support groups in value steam improvement activities? Examples?

Progress		Notes
<b>1</b>	Pre-implementation	Daily plant, value stream meetings focus only on traditional production / shortage issues.
<b>2</b>	Beginning implementation	Team start-up meetings are held sporadically at the floor, department, and value stream levels.
		Team start-up meetings often lack a clear purpose. Meeting agendas mostly focus on the production numbers, schedules, and hours.
		Team, dept., VS meetings regularly held but few tasks assigned or followed up at department, value stream meetings. Attendance inconsistent. Many task assignments incomplete, many moved from original due date.
<b>3</b>	First recognizable state	Most team, dept., VS meetings regularly hold. Most use task assignments; follow up occurs at department and value stream meetings. Attendance is consistent. Most assignments are completed, most stay on the original date.
		Task assignments are mostly made in response to major disruptions. The work breakdown approach is used in making some task assignments.
		Many leaders consistently use the green / red color coding convention.
<b>4</b>	System stabilizing	Meeting agendas are regularly followed, attendance is faithful.
		Review of prior day's visuals results in assignments on small as well as large items (some of which are converted to A3 projects). Task assignments from many sources, not just visuals.
		Green / red coding is a regular practice. Task notes stay on original due dates. Many completed tasks reflected in positive trends in value steam's measures.
<b>5</b>	Sustainable system	Accountability is routine; boards and green / red coding are used effectively for long and short term assignments.
		All supervisors grasp, regularly use basic project management tools in determining task assignments.
		Appropriate support groups routinely participate in value stream accountability meetings and are integrated into value stream improvement activities.

Diagnostic Questions:

1. Are there documented definitions for all production and production support processes? Where is the documentation located?
2. Is the documentation current; does it match actual practice?
3. Is standard work available for production tasks? For how many levels of takt time? Is it posted?
4. Are operator balance charts available, for each takt, and posted in the areas they reflect?
5. Are definitions available, and posted, for tasks in the management process (e.g., who fills in charts, standard meeting agendas, etc.)?
6. Are job breakdown sheets used for process documentation? For training? Who maintains them? Are they current? Examples?

Progress		Notes
<b>1</b>	Pre-implementation	Process documentation is either in books or in IT systems.
		Most process documentation is out of date and does not match actual practice.
<b>2</b>	Beginning implementation	There is evidence of discussions in progress to replace obsolete definitions with lean visuals for process controls, process tracking, work instructions, training documents.
		Operator balance charts are present in a few flow areas, though few if any are current, and few if any represent multiple takts.
		Standard work is posted in flow work stations for one takt time.
<b>3</b>	First recognizable state	Assembly processes are defined by standard work charts.
		Standard work charts are for one level of takt in areas that operate at multiple takt times.
		Most other processes are documented; or visual documentation is present in most.
<b>4</b>	System stabilizing	Areas that produce at multiple takt have operator balance charts and standardized work for each level of takt.
		Definitions are in place for all production and management processes.
		Process definitions are kept at the point of use or application and are up to date with actual practice.
<b>5</b>	Sustainable system	Expected performance for all processes has been defined, documented.
		Actual practice matches process documentation.

Diagnostic Questions:

1. Are defined processes regularly followed (e.g. 5S, punctuality, non-cyclical audits, PPE, etc.)?
2. Do crisis situations result in short cutting processes (e.g., production tracking, rotation, kanban triggers, etc.)?
3. Are manufacturing process audits carried out? Are support process audits carried out? By the leaders in the area or by outsiders?
4. When audits or tracking turn up noncompliance or misses, are problem-solving tools used?
5. To what degree does process focus lead to process improvement activity? Is there observable visual evidence?
6. How regularly do leaders conduct gemba walks to teach as well as to inspect? How many leaders do so?

Progress		Notes
<b>1</b>	Pre-implementation	Leaders' attention is mostly on expectations for results.
		Lack of consistent discipline is evident in production scheduling, 5S, punctuality, material control, and most other processes.
<b>2</b>	Beginning implementation	Processes followed when things run smoothly, but abandoned when problems arise.
		A few leaders can speak to the lean rationale for process discipline and sticking with it.
<b>3</b>	First recognizable state	Most leaders focus on obvious processes, e.g. standardized work, production tracking and pitch attainment.
		A few leaders focus on other processes such as TPM, 5S, pull systems, punctuality, labor planning.
		Most areas are doing a good, clear, specific job of recording why interruptions or misses occurred.
<b>4</b>	System stabilizing	Process focus includes non-cyclical areas such as standard work in PIC, waterspiders' reasons for missing pitch, visuals for scheduled maintenance as well as operator maintenance.
		Routine audits on health of pull systems, actual versus expected changeover times, water spider routes, and other processes.
		Most leaders using process tracking data to identify and act on improvement activities.
<b>5</b>	Sustainable system	There are regular and frequent reviews of all production and related processes, including routine audits to maintain processes (i.e., 5S, pull systems, TPM, labor planning).
		All process misses beyond production tracking produce task assignments for improvement.
		Paretos of "top three" misses across all processes drive improvements.

Diagnostic Questions:

1. Who usually gets involved in process improvement: technical types, leaders, IT, other support groups, suppliers, workers, etc?
2. Who would most leaders say are the people most responsible for process improvement?
3. How are assignments made for process improvement tasks? Are the assignments and their status visually maintained?
4. How typical is it for improvement assignments to end up with actual improvements having been made?
5. Are kaizens a regular part of the improvement process in the area? For what kind of things? Who participates; who leads them?
6. Does improvement work focus mostly on big, technically-led projects or are small improvements also pursued?
7. Is there a regular way for employees to suggest improvements? What percentage of employees make suggestions? How many are implemented (few, some, most, all)?

Progress		Notes
<b>1</b>	Pre-implementation	Improvements are made by formal project teams, or in response to catastrophic failures.
		IT, Finance, HR, other support groups lead improvement projects
<b>2</b>	Beginning implementation	Project teams make small improvements based on feedback during initial debugging
		Most leaders see improvement as responsibility of technical groups like IT, finance, HR.
		Suggestion systems may be introduced but are not sustained.
<b>3</b>	First recognizable state	Most leaders see process improvement as an area for their involvement. Some line leaders are actively involved in supporting improvement activities in their areas.
		Most value stream managers and some other leaders are using daily accountability boards to drive improvements with green/red coding. Some tasks are completed on time, result in improvement. Some use A3 boards for larger-scale improvement projects.
		Most leaders have participated in kaizens, a few have led kaizens. Few or none are qualified to facilitate kaizens.
<b>4</b>	System stabilizing	Most leaders clearly see process improvement within their responsibility and can give examples of their involvement. All leaders have participated in kaizens; most now regularly lead kaizens.
		Most leaders are effectively using daily task assignment boards, weekly A3 reviews as demonstrated by audits of the process, the boards, and the completed tasks.
		Some leaders experimenting w/ employee process improvement suggestion systems.
<b>5</b>	Sustainable system	Task assignments from regular stand up meetings regularly result in small and large improvements.
		Visual employee suggestion systems are established, sustained w/ steady input of ideas, output of implemented improvements. Improvement plans and targets visibly displayed at value stream, department info centers.
		Many leaders qualified kaizen facilitators. Plants have lean resource teams to support local improvement activities and train employees in lean through rotational assignments for interested individuals who meet qualifications.

Diagnostic Questions:

1. How often are workarounds used instead of investigating and resolving underlying causes of problems?
2. How often do leaders rely on data and analysis to attack a problem vs. gut feel, intuition, or impression?
3. To what degree do leaders expect changes will expose previously unseen problems that cannot be specifically anticipated, but proceed anyway?
4. How frequently do leaders ask why something happened vs. just asking what will we do to get back on track?
5. How frequently are leaders involved in leading problem solving efforts?
6. How well understood and widely used are problem-solving tools such as 5-whys, 8-step problem solving? Do leaders teach problem solving?
7. How frequently do leaders raise expectations for process performance in order to uncover the next level of process interruption or problem?

Progress		Notes
<b>1</b>	Pre-implementation	Problem solving only focused on workarounds, not on finding what caused problems.
		Where cause analysis problem solving is used, it is in formal technical project teams.
		Leaders can't describe a problem solving process, or if they can, rarely if ever follow it.
<b>2</b>	Beginning implementation	Leaders have begun using visuals to collect problem data but place little emphasis on pursuing cause analysis.
		The most common response to problems is still to workaround and cover the cause with buffers of inventory, hours, etc.
		Evidence of one or a few attempts at systematic problem solving.
<b>3</b>	First recognizable state	Leaders beginning to ask why and pursue root causes for major problems.
		Workarounds are recognized as such; evidence of problem solving methods used to understand and attack need for workarounds.
		Uncovering production interrupters still viewed as troubling surprises
<b>4</b>	System stabilizing	Many leaders now asking why and pursuing root causes for problems small and large and beginning to use some form of structured problem solving, at least the 5-whys.
		Leaders expect to surface rocks with process changes and to resolve them at a root cause level.
		Many leaders are seeking to improve their processes.
<b>5</b>	Sustainable system	Leaders regularly expect cause analysis and pursuit of root causes for problems large and small.
		Routine, systematic use of problem solving tools to seek root cause solutions.
		Process designs and measurements tightened up to uncover next level of problem: stated ultimate goal is to have perfect processes.