

Managing for Operational Efficiency:

Turning the SDCA Cycle for Daily Management



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Turning the SDCA Cycle for Daily Management Abstract

This second lecture describes how daily management operates as a system to deliver consistent performance of quality while managing cost. As Taiichi Ohno commented, the “lowly work standard” is the key ingredient in managing at Toyota. Operational efficiency is assured through merging a 3-S system (*seiri*, *seiton*, *seisō*) to the Standardize-Do-Check-Act process while its consistency is assured through the operational roles of supervisory management. Acts to improve work are conducted through activities of *kaizen*, *seiketsu*, and *shitsuke*. A time-based management system operates as the *nichijo kanri* visual management system by integrating material flows, production flows, and information flows into a comprehensive Factory Management System. The Factory Management System combines Total Quality Management and Total Preventive Maintenance activities into its Total Productive System. It operates as a *kanri-of-kanri* or system-of-systems to assure that the highest level of performance – *dantotsu*, or best-of-the-best – is delivered.

Learning Objectives for this Webinar:

1. Discover how a daily management system (*nichijo kanri*) works to deliver standardized work that meets requirements for the daily control of quality (*hinshitsu kanri*) through a combination that integrates personal quality responsibility (*jisu kanri*) with ownership of work (*ji kotei kanketsu*).
2. Discover the elements of the SDCA cycle for standardized work operates in relationship to the PDCA cycle for continual work improvement and the PDSA cycle for work transformation.
3. Learn how front-line management activities combine to control the way that the daily management system operates through applying a system of team-based work controls.



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**Discovering the secret methods of
Japanese quality management.**

Ohno's Advice: Pay Attention to Standard Work:

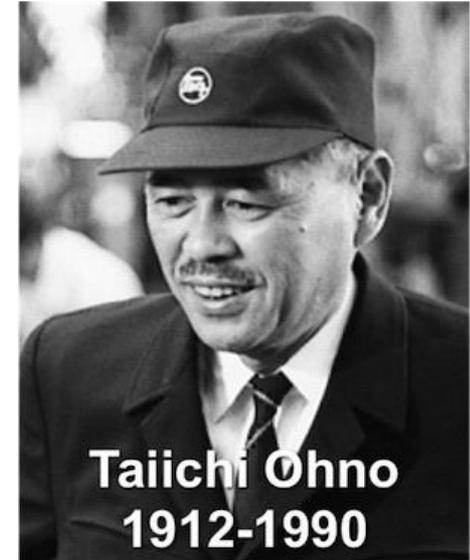


“People need to follow the standards.”

Workplace Management, p. 15

“Insufficient standardization and rationalization creates waste (*muda* (無駄)), inconsistency (*mura* (無斑)), and unreasonableness (*muri* (無理)) in work procedures and work hours that eventually leads to production of defective products.”

Toyota Production System, p. 41



Workplace Management
(WM-1982)

Toyota Production System
(TPS-1978 (Japanese/1988 English))

“Lowly work instructions” manage all the change processes at Toyota.



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What is Daily Management?

- Daily management uses work standards; without standard ways of working as a base, there is no way to judge if improvements are efficient and effective.
- Daily management includes all activities to maintain or enhance a job: to make it both more efficient and effective.
- It is the job of all employees to do their jobs professionally and enable changes that improve routine practices in their job. It encourages daily enhancements and developing an attitude of continual improvement among everybody in everything and across every area where work is done.
- Daily management improvement must be purposeful and acted on with a sense of urgency, coordinated across all stakeholders.
- Daily management ensures improvements that have been done and that work will not slide backwards to older, ineffective, and inefficient ways of working.



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Nichijo Gemba Kanri (日常 管理): Daily Work Management

* Japanese Society for Quality Control Standard 32-001[E]2014, Guidelines for Daily Management.

Deciphering the maze of Japanese work terms:

What Japanese words are used to explain the gemba (現場)?

Muri

Seiri

Kanri

Mura

Seiton

Jishu

Muda

Seisō

Nichijo

Hansei

Seiketsu

Hoshin

Jishuken

Shitsuke

Kaizen

Ji Kotei Kanketsu

Wa

Dantotsu

Monozukuri

Hitozukuri

Kotozukuri



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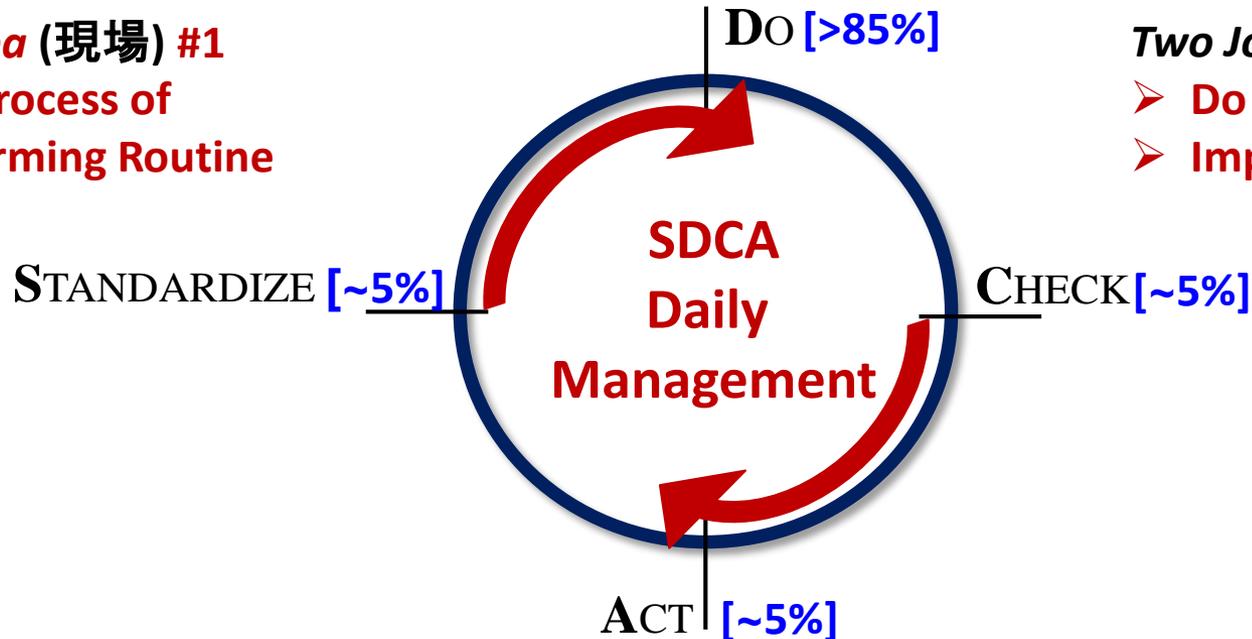
“Step-by-step walk the 1,000-mile road.”

**~ Miyamoto Musashi
The Book of Five Rings**

What is the SDCA Cycle?

“Without a standard there can be no improvement.”
~ Joseph M. Juran

Gemba (現場) #1
The Process of
Performing Routine
Work



Two Jobs:

- Do Work
- Improve Work

Activities Perform Work – Improve Work

Controls Work Standards – Worker Training – Self-Inspection

Measures Input Quality – Workflow – Output Quality
Worker Safety – Transaction Cost



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Insights into Japanese ideas about waste:

What is waste? Waste is any activity that adds cost or time and does not add value or that increases risk to employees through hazardous work conditions.

- **Muri (無理):** No waste from bad thinking – irrational waste. This type of waste arises from poor decision-making.
- **Mura (無斑):** No waste from unbalanced working – flow waste. This type of waste arises from poor integration.
- **Muda (無駄):** No waste in work discipline – process waste. This type of waste arises from poor operations.

“Executive muri (the waste associated with irrational decisions at the highest levels of the organization) can create a state of systemic mura (waste in the flow of processes and systems) which generates localized muda (waste in the workplace activities) that workers cannot eliminate.” ~ Gregory H. Watson (2015)



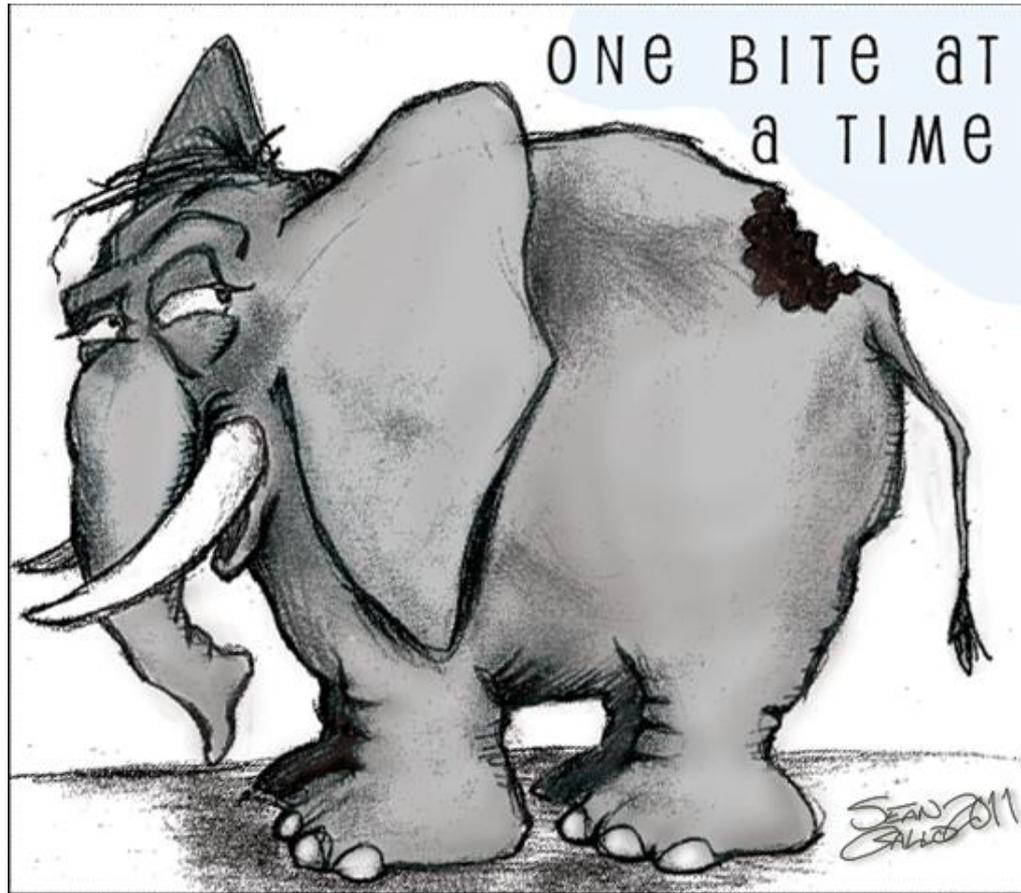
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How do you approach a big issue or problem?

Problem: How do you eat an elephant?



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**All will be demystified by the end of this
webinar series ...**

Turning the SDCA Cycle for Daily Management

Learn how the concepts defining the Toyota Production System operate in a team-based environment to deliver *hinshitsu kanri* through the integration of *nichijo kanri* and *jisu kanri*, applying *ji kotei kanketsu*.



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Standardization:

“A standard” says the Century dictionary, “is that which is set up as a unit of reference; a form, type, example, incidence, or combination of conditions accepted as correct and perfect and hence as a basis of comparison. A criterion established by custom, public opinion or general consent; a model⁶¹.” We must note particularly that the standard is a “unit of reference,” that it is a “basis of comparison,” and that it is “a model.” These three phrases describe the standard in management, and are particularly emphasized by the use of the standard in Scientific Management.

Lillian M. Gilbreth (1912), “Psychology of Management – VII: Standardization,” *Industrial Engineering and The Engineering Digest*, November, v. 12, n.5, pp.199- 204.

Standards Derived from Actual Practice.—Management derives its standards not from theories as to best methods, but from scientific study of actual practice⁶². As already shown, the method of deriving a standard is (1) to analyze the best practice known into the smallest possible elements; (2) to measure these elements; (3) to synthesize the necessary standard elements into the standard; and (4) to adopt the least wasteful elements as standard elements.

A standard remains fixed only until a more perfect standard displaces it. The data from which the standard was derived may be reviewed because of some error, because a further subdivision of the elements studied may prove possible, or because improvements in some factor of the work, *i. e.*, the worker, material, tools, equipment, etc., may make a new standard desirable.



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This is not a new science!

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Early influences developed gemba quality:

- Mid-1950s: Training within Industry (TWI) defined standard work using work instructions, checklists, and inspection as a Quality Assurance (QA) check on process deliverables.
- Late-1950s: W. Edwards Deming's lectures on Statistical Process Control (SPC) introduced objective quality measurement system control for daily work processes.
- Mid-1960s: Bridgestone developed a multi-tiered Flag System for organizing its fundamental business metrics:
QCDMS – Quality – Cost – Delivery – Motivation – Safety.
- Late-1960s: Joseph M. Juran's managing for quality lectures introduced a two-tier system of managing for breakthrough (Big Q or Business Excellence) and continual improvement (little q or Operational Excellence).

Japanese management evolved over a number of decades to the level it is operating at today.

Quality requirements in standard work:

- Question: **How can managers hold employees responsible for the quality of their work?**
- How much work is determined by theoretical learning, education in the principles and theory, compared to discovery by practical learning on-the-job?
- Peter Drucker in *The Practice of Management* (1956) described an approach that is based on three capabilities that must be learned by workers:
 1. People must know what is expected of them, have targets to achieve agreed results and measures that monitor progress.
 2. People must be given resources required to meet these targets and have the personal competence to perform their work.
 3. People must be given authority to self-regulate and control performance outcomes and achieve the desired results.

People need to be led: an act that requires implicit permission – not managed – an act of control.



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Daily work creates order out of chaos:

“Years ago when I first started out as a consultant, I had to learn how to tell a well-managed industrial plant from a poorly managed one – without any pretense to production knowledge. **A well-managed plant, I soon learned, is a quiet place. A factory that is “dramatic: in which the “epic of industry” is unfolded before the visitor’s eyes, is poorly managed. The well-managed factory is boring. Nothing exciting happens in it because the crises have been anticipated and have been converted into routine.”**

~ Peter F. Drucker

The Effective Executive (1985)



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Monozukuri (物造り): An Art, Science and Craft

Monozukuri is “the art, science, and craft of making things” as defined by Professor Takahiro Fujimoto of the University of Tokyo (it has a purpose of delivering value to customers).

- **Art:** art is a product of conscious application of human creative imagination to express a conceptual idea through the technical proficiency in applying an artistic media.
- **Science:** is a systematic approach to building and organizing a body of knowledge in the form of testable explanations and predictions about its particular object of study.
- **Craft:** a profession practiced by skilled laborers who gained the special knowledge by informal tinkering and trials to determine a best way of doing something to meet their own standard.



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A journey from “*mono*” (物造) from producing value from things for customers to “*koto*” (事作) producing value from knowledge for society.

Where did the 5-S concept originate?

5-S for workers came from TPM-based daily management:

1. Takashi Osada (1991), *The 5-S's: Five Keys to a Total Quality Environment* (Tokyo: Asian Productivity Organization). [Conceptual focuses on philosophy and integration of 5-S into Total Quality Management.]
2. Hiroyuki Hirano (1995), *The Five Pillars of the Visual Workplace: The Sourcebook for 5-S Implementation* (New York: Productivity Press). [Emphasis on “visual workplace.”]
3. Hiroyuki Hirano (1996), *5-S for Operators: 5 Pillars of the Visual Workplace* (New York: Productivity Press). [A condensation of Hirano’s 1995 book simplified to support worker implementation of 5-S. This book popularized 5-S methods as applied to workers.]

Japanese Term	English Term	Meaning of the Step
Seiri (整理)	Sort	Remove the unnecessary
Seiton (整頓)	Systematize	Place work into order
Seisō (清掃)	Sanitize	Clean the work tation
Seiketsu (清潔)	Standardize	Develop standardized work
Shitsuke (躰)	Sustain	Maintain the standard

Understanding the meaning of “5-S’s” in “5-S:”

Do we really understand the basics of what is called “5-S”?

The first four terms in 5-S all begin with the term “*sei*” in the *romaji* text.

BUT

The *kanji* indicates that there are two different characters are used to create the same term.

整

This “sei” means to “turn chaos into order.”

清

This “sei” means to make something “pure.”

Discovering the true Meaning: Perhaps we have been just a little too fast in making judgements about translations into English!



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Let's discover the meaning behind the characters!

What is the meaning of seiri?

Understanding Seiri (整理):

整

This “sei” means to “turn chaos into order.”

理

plus “ri” is a thinking or cognitive process.

Seiri (整理) describes a *method applied or “how” to make order out of chaos through application of a thinking or cognitive process* of setting items into logical categories and making decisions about what to do about them or making up rational sub-groups to understand the nature of things. This rationalization or “streamlining” of work to make it operate in its most simple state or condition. But, in English this term is reduced to meaning “sort and remove” the unnecessary things. ***Seiri is a “muda-detector” that analyzes routine daily work to eliminate waste and assure discipline is achieved.***



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Let's discover the meaning behind the characters!

What is the meaning of seiton?

Understanding Seiton (整頓):

整

This “sei” means to “turn chaos into order.”

頓

plus “ton” means “immediately available.”

Seiton (整頓): This “sei” is the same as in “Seiri” but, the second term has changed to “ton” (頓). “Ton” has a medical meaning and refers to medicine that is *able to have an “immediate” effect* – taken together this means that work should be organized so that necessary things can be accessed immediately. However, in English the meaning is reduced to “organize” or “set in order” and the sense of urgency is lost. ***Seiton acts as a “daily organizer” for structuring the routine work that is to be accomplished as priority activities that day’s management.***



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Let's discover the meaning behind the characters!

Is 5-S a linear process for working?

In Japan they say: **Seiri-Seiton (整理整頓):**

整理

Seiri – rational order

整頓

Seiton – close at hand

Students learn from school teachers that they must keep their work in order: “*seiri-seiton.*” ***They are not told to “seiri” then to “seiton” their work.*** This is an external stimulus that encourages the change. Taiichi Ohno said the job of supervisors to teach the workers so worker harmony may grow. Thus, supervisors act as teachers of the work process. **This role of supervisors begins in a step preceding the first “S” in “5-S,” where they observe and reflect, learn, and plan where to focus efforts to standardize, improve, and control the daily work.**



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Let's discover the meaning behind the characters!

What is the meaning of seisō?

Understanding Seisō (清掃):

清

This “sei” means “purity” or “spotlessness.”

掃

plus “sō” means “sweep, exterminate, or clear.”

Seisō is typically translated as either to “sweep” and “sanitize” or “clean and inspect” but this misses what is its deeper meaning. *In cleaning a house there are typically two levels of cleaning:* a rough-cut cleaning or sweeping out the major dirt (e.g., what is brought in by children on a muddy day) or sweeping away the debris after a party. **This is the type of cleaning that is implied in seiso – removing the waste and debris that accumulated across the course of a day’s work.**



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Let’s discover the meaning behind the characters!

3-S is the daily discipline of standard work:

Applying Seisō (清掃):

Persistence of the 3-S activities: Standardization Activities

- **Seiri-Seiton:** The morning meeting begins the organization of each workday. Seiri finds the waste; seiton plans its elimination.
- **Seisō:** The discipline of seisō begins as a stand-alone operation at the end of each day where seisō removes waste produced or scattered and it gradually expands in scope to include deeper cleaning levels leading to autonomous maintenance and TPM. Seisō removes the waste.

Seiri acts as a muda-detector. Seiton acts as a work organizer. Seisō assures that the attention to detail in work will increase as time continues: a forcing act for kaizen.



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What is the meaning of seiketsu?

Understanding Seiketsu (清潔):

清

This “sei” means “purity” or “spotlessness.”

潔

“Ketsu” means “sanitary, virtuous, or immaculate.”

Seiketsu (清潔): “Sei” means a state of being “pure” but is combined with “ketsu” (潔) which also means cleaning but in a deeper and more hygienic sense: sanitary, virtuous, immaculate. It is a medical term that means sanitization as in decontaminating and sealing of medical instruments, so they are sterilized and ready for the next operation. But it is translated “standardize” meaning developing work standards. It has a deeper meaning likened to “spring-cleaning” after winter. **Seiketsu is continual improvement – a discipline of pursuing 3-S with increasing intensity that results in development of a mature TPM method.**



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Let's discover the meaning behind the characters!

What is the meaning of shitsuke?

Understanding Shitsuke (躰):

躰 “Shitsuke” means “discipline, training, or teaching manners.”

Shitsuke (躰): the final “S” in the “5-S” system, implies concepts of **discipline, training, and teaching manners**. This is usually translated as “sustain” and implies a state of constant altering between performing and improving. Again, this misses the mark as kaizen is not limited to one step but is itself **a dynamic cycle that integrates the Standardize-Do-Check-Act (SDCA) process of daily management with a Plan-Do-Check-Act (PDCA) change management process**.

Therefore, **shitsuke must be interpreted as a practice of kaizen** because it is synonymous with applying kaizen activities.

The 5-S activities go beyond housekeeping:

Applying Seiketsu (清潔) and Shitsuke (躰):

Reinforcement of the 3-S activities: Kaizen activities

- **Seiketsu**: The disciplined persistence of the 3-S process. As 3-S practice deepens it evolves to a deeper level, transiting to TPM. Seiketsu reinforces the practice of 3-S in more diligent ways.
- **Shitsuke**: The sustained improvement of the 3-S process as a principal **kaizen** activity for Daily Management. Shitsuke acts to train and encourage workers in the discipline of improvement.

Ratcheting upward the performance of standard work and holding the resulting gains through disciplined work.



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Beware purveyors of 4th generation *sushi*!

This story from Noriaki Kano provides us with a humorous warning that we must be alert to sources of information that we use to discover the “facts” about the way things “really” work.

- First generation *sushi* was prepared by a Japanese chef in Japan.
- Second generation *sushi* was prepared by a Japanese chef in America (**shu** (守) to keep or follow the way of the master independently).
- Third generation *sushi* was prepared by an American chef in America (**ha** (破) to adapt a master’s teaching to your own style or culture).
- Fourth generation *sushi* is prepared by an American chef in Japan but using with beef instead of fish! (This is **ri** (離) or to break away from a master’s standard to develop a new, creative method).

Take care not to lose any significant information as we develop work improvement methods. We must not over-simplify in our rush to improve!



Fine adjustments drive continual gains:

“The term ‘**fine adjustment**’ has a hidden meaning that should be understood, especially by top management. Everyone knows that things do not always go according to plan. But there are people in the world who recklessly try to force a schedule even though they know it may be impossible. They will say “It’s good to follow the schedule” or “It’s a shame to change the plan,” and will do anything to make it work. But as long as we cannot accurately predict the future, our actions should change to suit situations. In industry, it is important to enable production people to cope with change and think flexibly.”

“Wait for the right opportunity.”

“The Toyota Production System is still not perfect. More development is needed on fine adjustments.”



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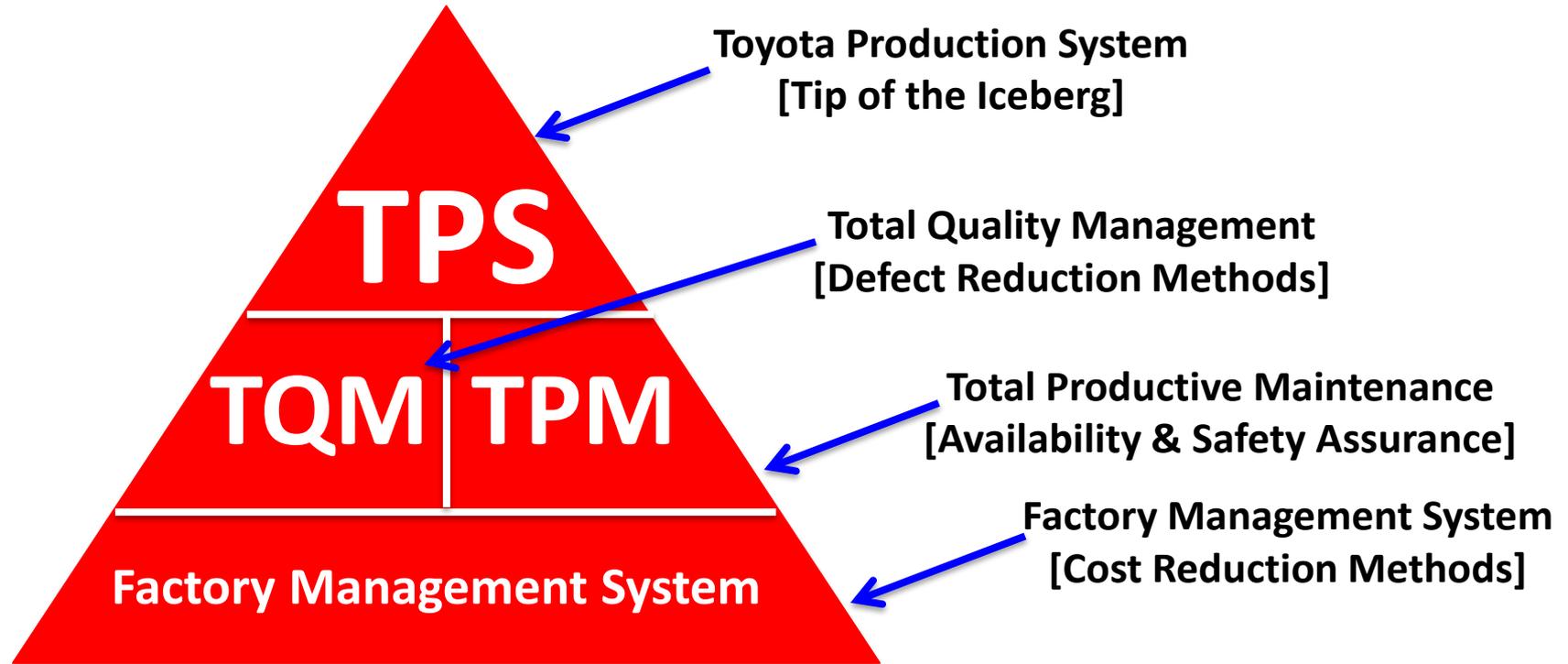
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~ Taiichi Ohno

Workplace Management

Learning how a holistic system operates:

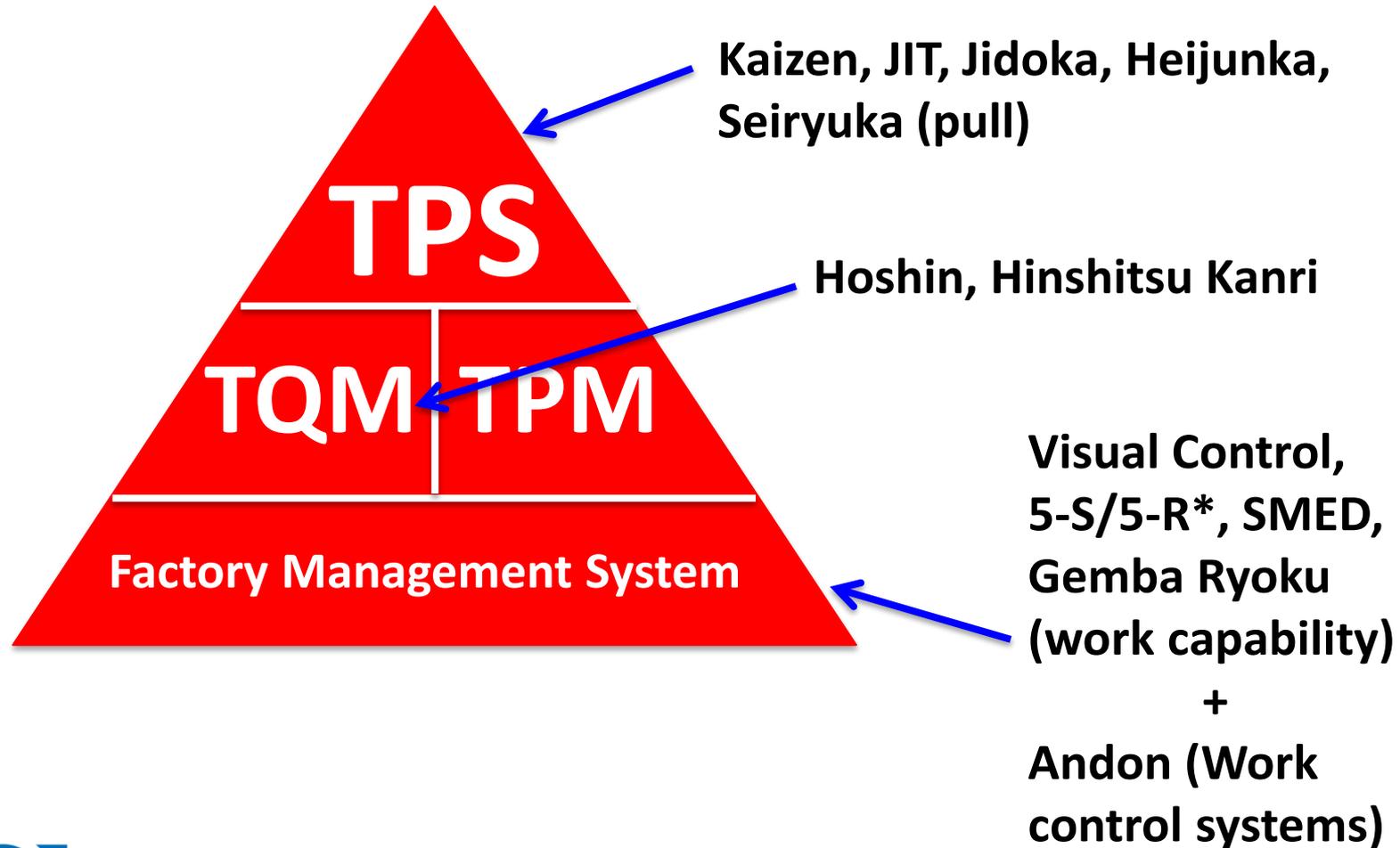
Putting together a business architecture for Toyota's Production System.



What are these other two layers and how do they operate in a Daily Management System?

* Courtesy of Koichi Kimura, Factory Management Institute

There is more detail to learn in this triangle!



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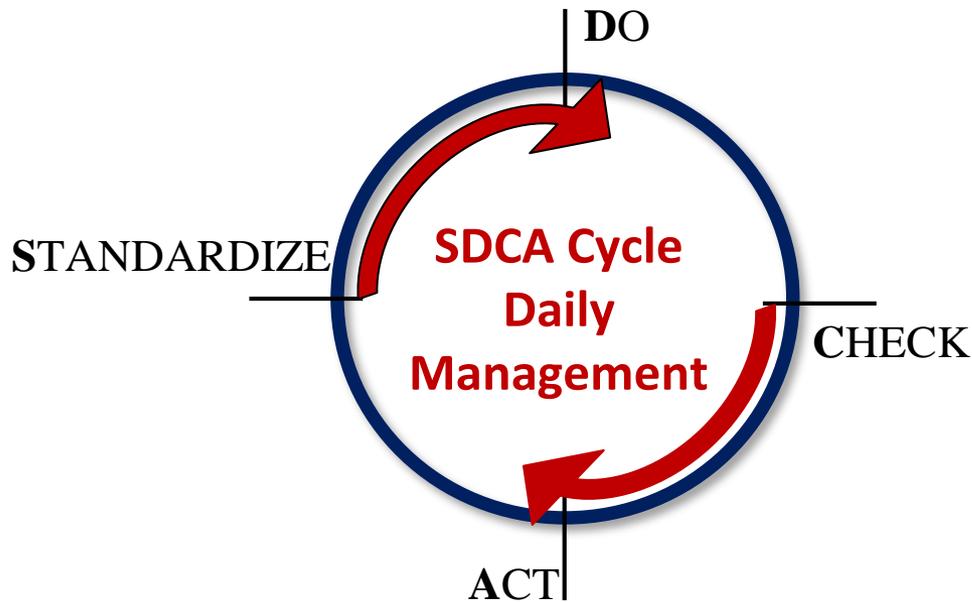
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***5R = Make Rule – Teach Rule – Keep Rule – Check Rule – Change Rule**

* Courtesy of Koichi Kimura, Factory Management Institute

The process for developing standard work:

“3-S is executed daily in all Toyota work activities:



“When creating standard work, it will be difficult to establish a standard if you are trying to achieve “the best way.” This is a big mistake.

“Document what you are doing now. If you make it better than now, it is *kaizen*.

“One way of motivating *kaizen* is to create a poor standard. But don’t make it too bad.

“Without some standard, you can’t say, “We made it better.””

~ Taiichi Ohno

Workers define standards; supervisors assure performance and train workers; workers check the quality of their own work and improve the standards.

“Before you say you can’t do something, try it.”

~ Sakichi Toyoda (1867-1930)



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Summarizing daily management:

- Daily management dynamically administers routine work of an organization to comply with laws and regulations, perform work procedures, achieve financial targets while realizing its customer's requirements and expectations.
- Daily management combines disciplines of regulatory compliance, documented work procedures, continual improvement activities for tasks and activities, with skills development that increase the efficiency and cost-effectiveness of all processes.
- To succeed in daily management requires processes be properly documented, measures accurately reported for the status of work progress, and that performance monitor, review, and reporting be conducted with integrity to assure the status of performance is visibly evident to senior management.



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Daily management must meet and anticipate the information needs of decision makers to guide the organization's strategic direction.

Turning the SDCA Cycle for Daily Management

Discover how a set of rule-based activities defines daily work: Make Rule, Teach Rule, Keep Rule, Check Rule, and Change Rule establishes a structure for the management cycle of daily work – SDCA.



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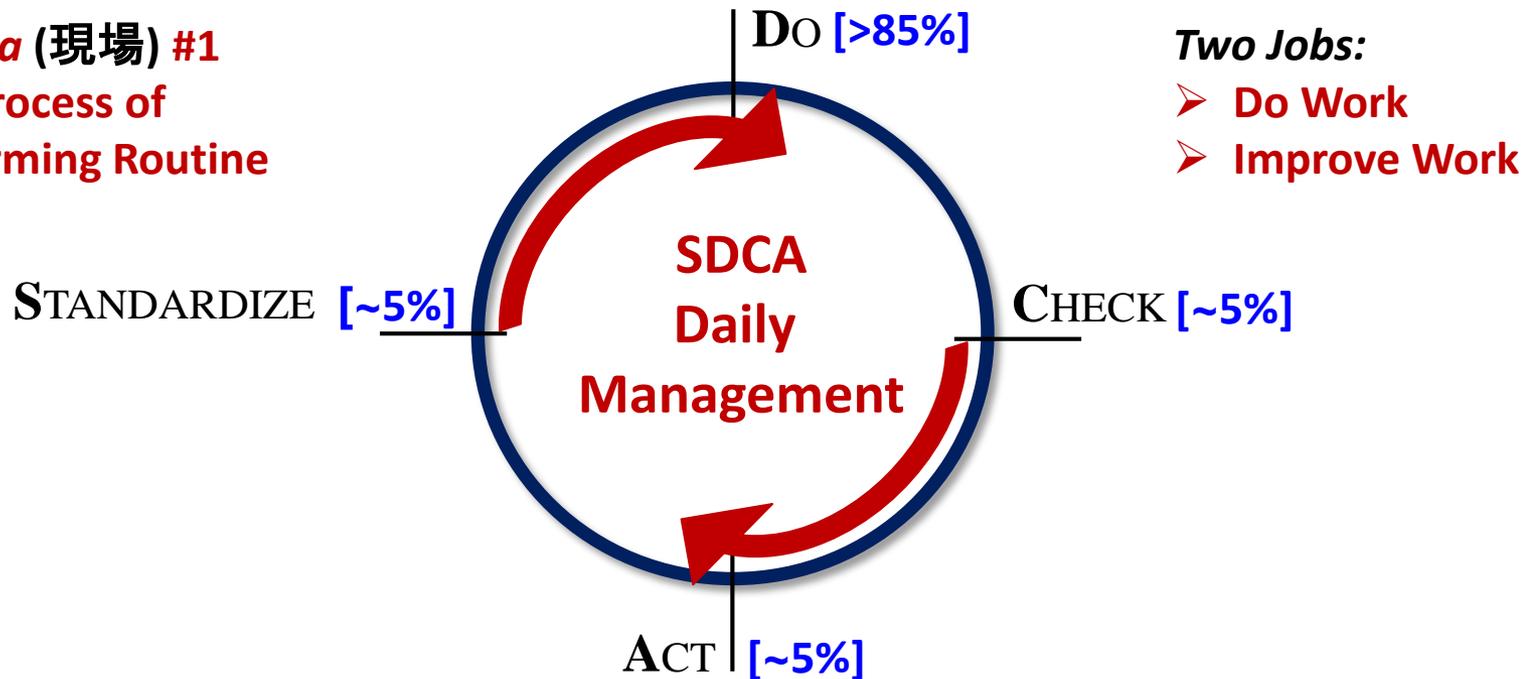
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Standardizing requires cycles of learning:

Developing standard work occurs one step at a time and uses a trial-and-error approach to incrementally define tasks.

Gemba (現場) #1
The Process of
Performing Routine
Work



Value-adding work is performed in the “Do” step of SDCA.



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“Thieves may be able to follow the design plans [to] produce .. but we are modifying and improving .. every day. They do not have the expertise from the failures it took to produce the original. We need not be concerned. We need only continue as always, by making our improvements.”
~ Kiichiro Toyoda

Why is “Check” such an important step?

“Check” is the pivot point between the standardization process and the process of change management.

What happens in the “Check” step of SDCA-PDCA?

- **Performance is evaluated** against standards, historical records, and targets.
- **Reflection occurs** regarding learning how process performance really works.
- **Problem-Solving is conducted** to evaluate issue causality from measures.
- **Experiments are made** to define the performance boundaries and ability to meet expectations implicit in operational performance hypotheses.
- **Decisions are made** to start Improvement projects applying new resources.

If an “out-of-control” (OOC) condition is detected then workers must ask two questions: Do we have the ability to control this activity? Do we have sufficient resources to make changes? If the answer is no to either, then the situation requires escalation to management for ***hoshin kanri* planning – PDCA!**



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Check provides time for reflection and fine adjustment.

Deriving value from a Gemba Walk experience: Genichi genbutsu (現地現物) – Go and see for yourself!

Gemba (現場) – the real place

Genbutsu (現物) – the real thing

Genjitsu (現術) – the real facts

Genri (原理) – real reason

Gensoku (原則) – real control

Understanding the five “gen’s:” Go to the real place, observe the real thing, and get real facts. The three “gen’s” (現) describe the process to seek or discover the result. The last two “gen’s” (原) define the desired state to discover the real cause or reason and to obtain real control.

Methods and tools for “walking the gemba” include: the “five why’s,” spaghetti diagrams, the 7 M’s that identify data and define a process, affinity analysis, and the 5W + 2H problem description.



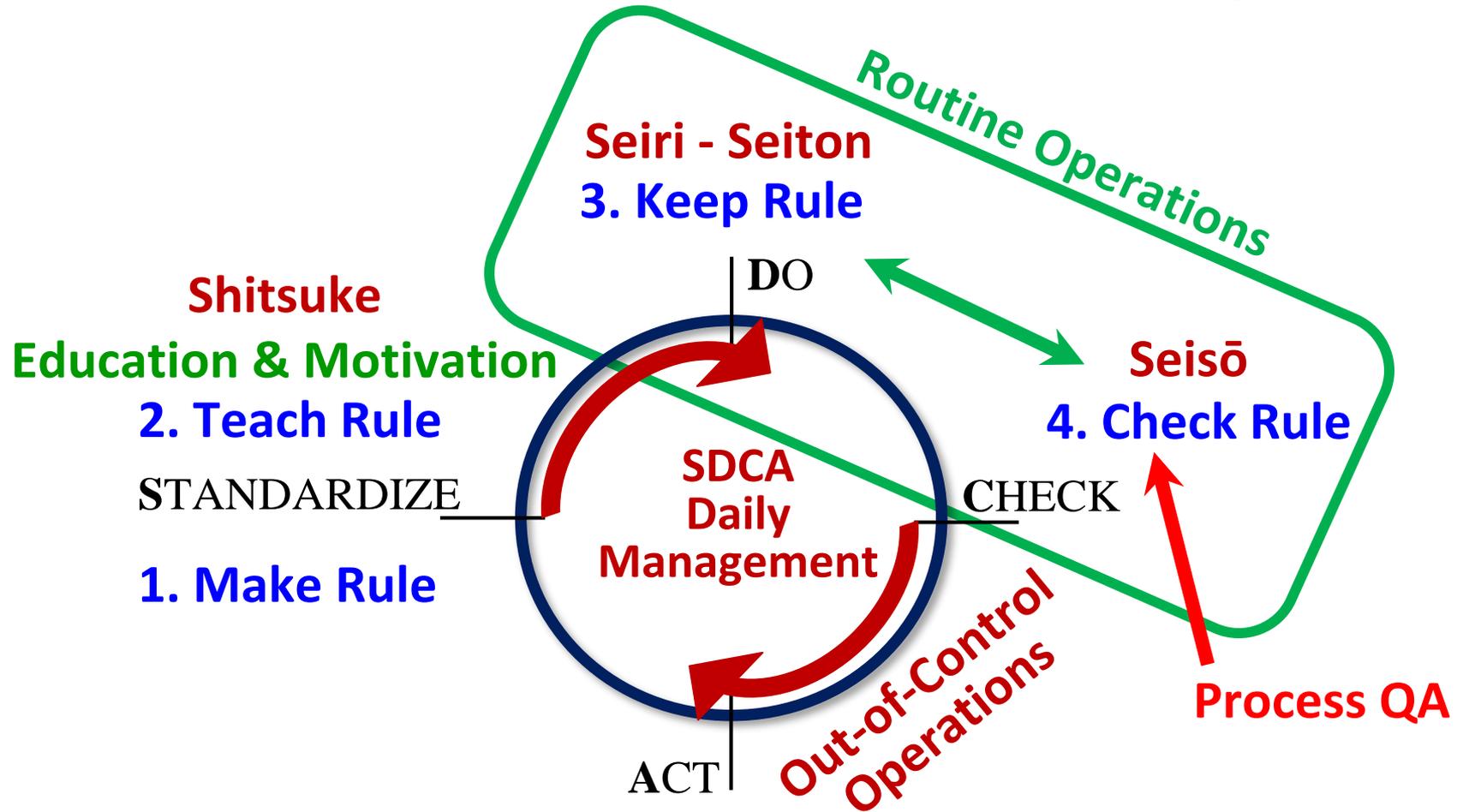
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“Seeing for yourself” requires that managers use probing questions, active listening, and provide reliable responses to reasonable requests.

Normal work follows the “Do-Check” cycle:



5. Change Rule
Seiketsu = Kaizen

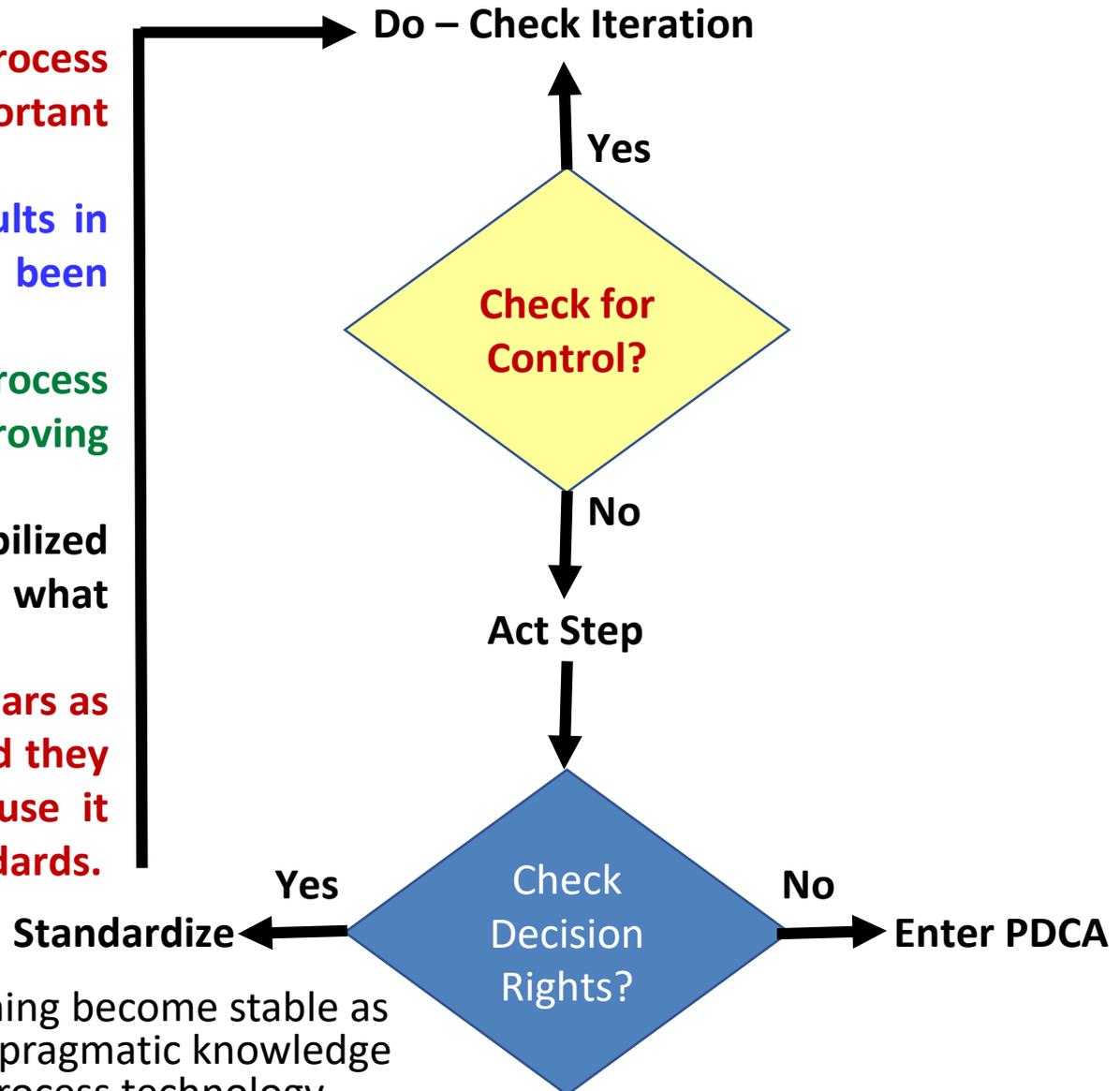
Assigning Rules Creates Standard Work.



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SDCA “disappears” as workers are empowered:

- The initial “turn” of a SDCA process results in understanding important work that needs to be done.
- A second “turn” of SDCA results in documenting work that has been improved and accomplished.
- The third “turn” of a SDCA process initiates “kaizen” activity improving documented work standards.
- When a work standard is stabilized then “Check” step monitors what happens next.
- To the worker their tasks appears as a basic “Do-Check” activity and they detect change as PDCA because it requires introducing new standards.

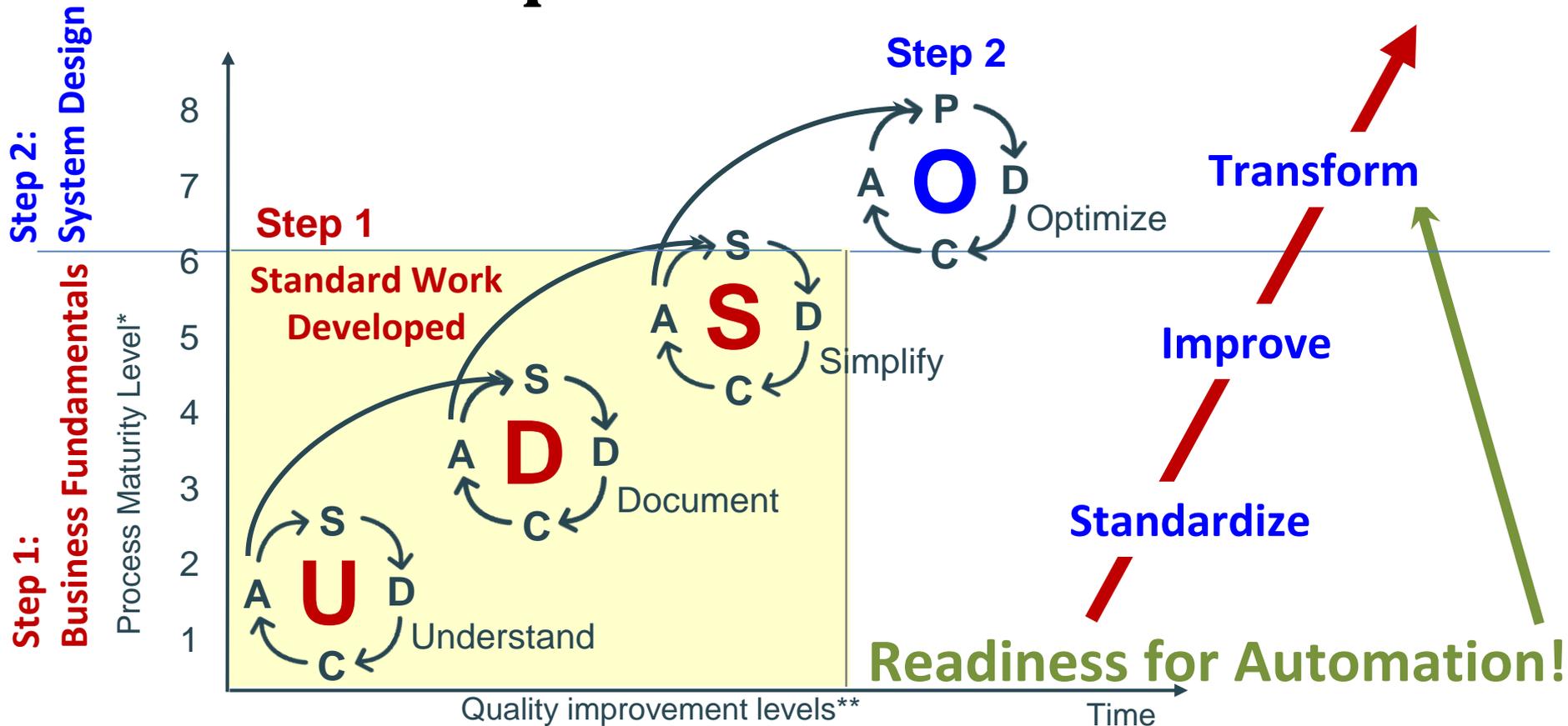


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Cycles of learning become stable as workers build pragmatic knowledge to maximize process technology.

UDSO – The Sequence to Create a Standard:



Capacity to Automate: This approach seeks to understand the nature of work, then document standard work, and finally simplify it for automation.

Quality 4.0



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* Gregory H. Watson, (2011), "Process Management to Enable Growth," *Journal of Quality & Participation*.

** Gregory H. Watson (1994) *Business Systems Engineering* (New York: Wiley).

Gemba 2 reviews Gemba 1 for big changes:

Gemba (現場) #1

The Process of
Improving Routine
Work

Two Jobs:

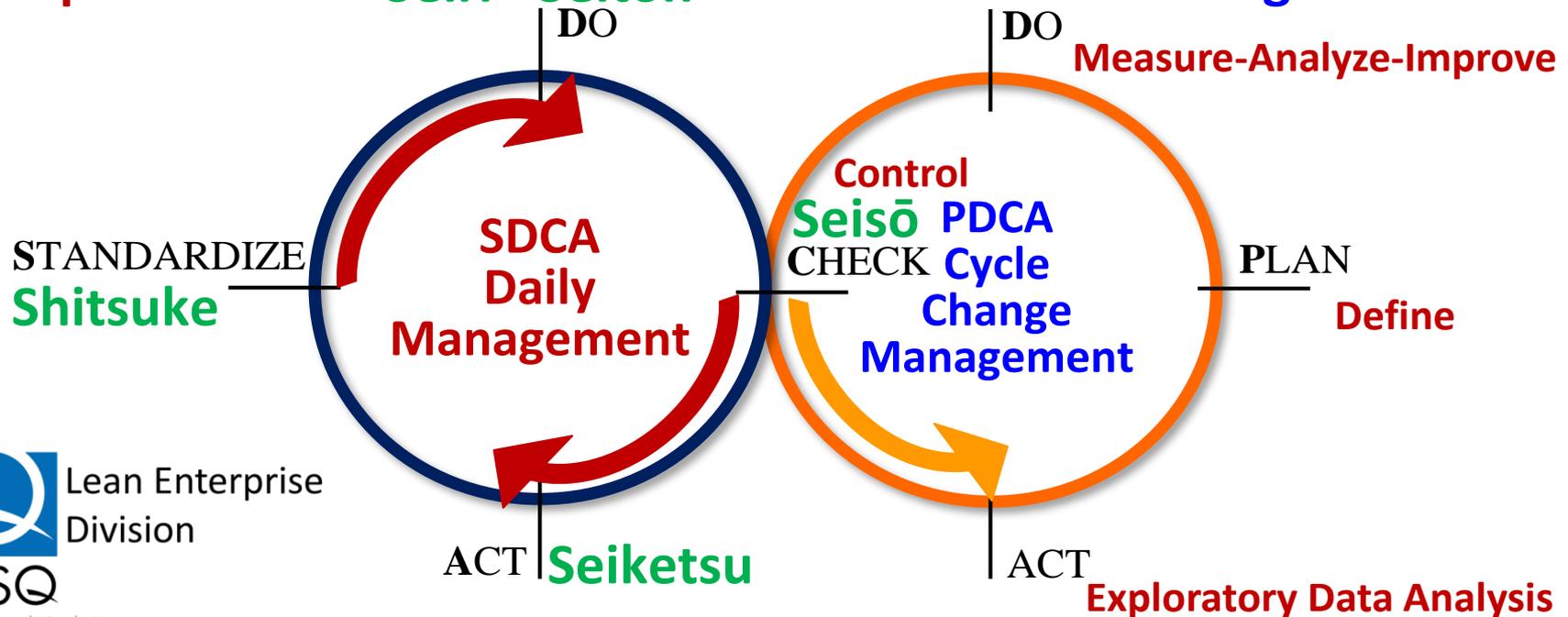
- Do Work
- Improve Work

Gemba (現場) #2

The Process of
Managing Projects for
Work Breakthroughs

Two Jobs:

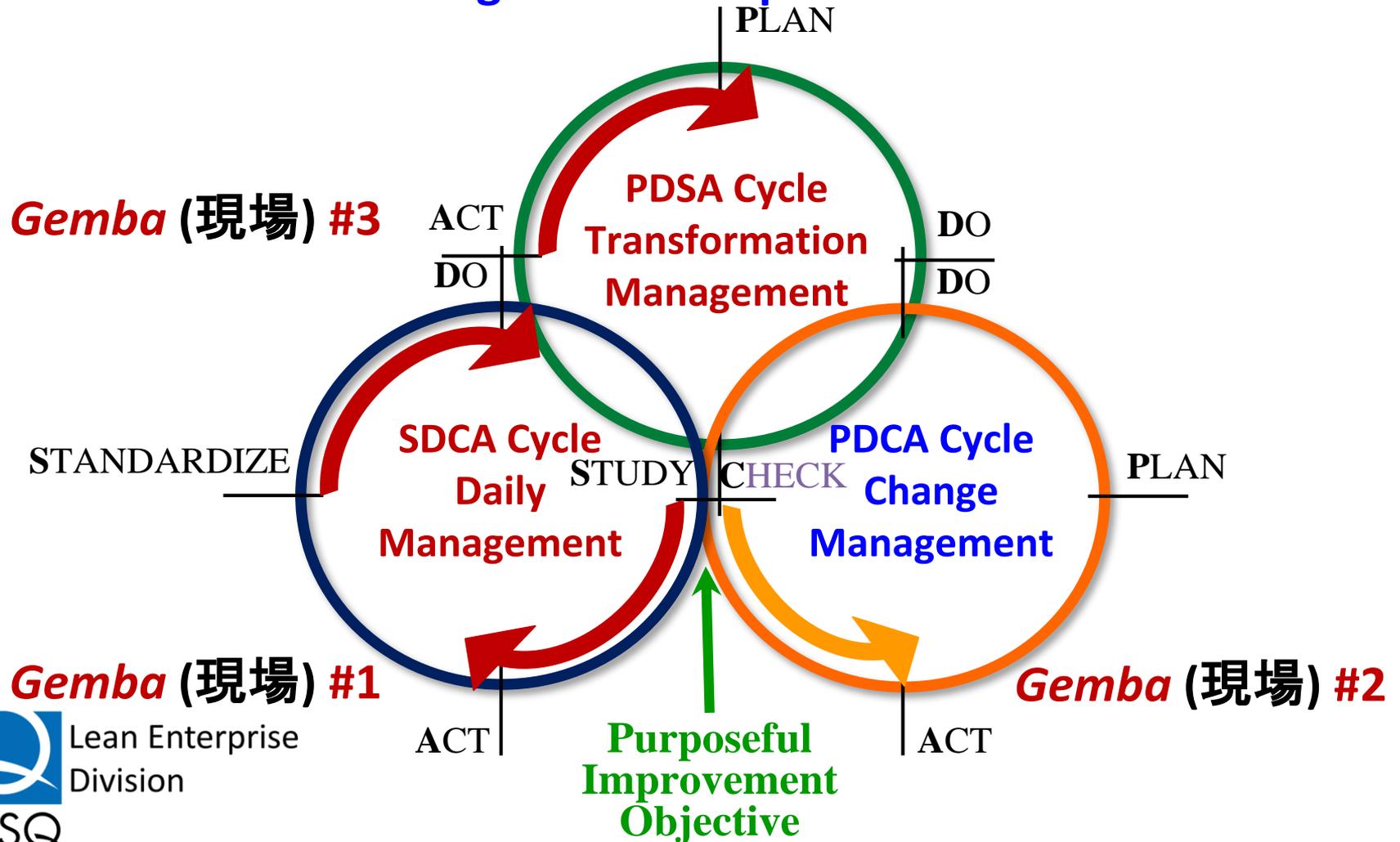
- Train Workers
- Manage Flow



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Improvement requires a process of learning:

“Cycles of improvement” provide opportunities for overlapping reinforcement and integration of improvements.



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Turning the SDCA Cycle for Daily Management

Learn how front-line management activities combine to control the way the daily management system operates through applying a system of team-based work controls.



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Create value-adding work – eliminate waste!

How is change focused to improve routine work processes?

Nichijo Gemba Kanri (日常現場) – Daily Work Management:

Nichijo is ‘daily’ so ‘*nichijo gemba kanri*’ (NGK) is ‘daily management’ of the *gemba*. This approach to managing routine work provides the focus for the *hoshin kanri* (方針管理) improvement projects. **Hoshin projects will improve a process, or system of processes, in the daily management system where the process owners and functional managers do not have the resources or means to achieve the desired change.** A daily management system is typically documented using standard work instructions, tables of business fundamental measures (using the QCDSM metrics) and implementation plans which document the *hoshin* and *kaizen* improvement projects.

The “Hard stuff” of change (technologies, software, systems, processes, methods, tools, goals, milestones, and financial systems) must be integrated with “soft stuff” (the people) to achieve systemic change.



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Empowerment for enlightened growth:

Shu-Ha-Ri: Enlightenment to advance beyond the standard.

- **Shu** (守) “**keeping**” achieves stability as work standards are improved to the point of perfection and the **kata** (型) may be followed in disciplined “**way of working**” documenting what a master has done (acting to understand, document, and simplify).
- **Ha** (破) “**breaking**” the *kata* occurs as workers accept personal responsibility for the quality of their work and are delegated the decision rights enabling self-management of their *kata*, so they change their job by analyzing and improving it based upon their own initiative, making it better or more applicable to their own needs
- **Ri** (離) “**going away**” occurs by reforming and extending the master’s *kata* or standards as an innovative breakthrough that creates new philosophy or inventive methods for adding value.



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Let's discover the meaning behind the characters!

Three ingredients control daily management:

To control daily work requires workers to manage themselves, effective supervision and training, and acceptance of personal responsibility for quality by everyone. The job of the supervisor is to train the workers.

Worker self-management, includes monitoring their own quality performance according to measureable standards, seeking ideas for improving their methods, equipment capability, conditions of safety and ergonomics, and knowledge of related processes. This is done through skill training and taking examinations to qualify for additional responsibilities and competencies.

Workers are expected to learn how their equipment works and to help maintain production equipment in good operating order.

A self-regulated management system operates by trusting workers to make decisions about all aspects of their daily work that they can control.



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Nature of the supervisory function:

- Supervisors must be engaged in daily work practice and encourage workers so they are enthusiastic about work and able to contribute their imagination for innovative problem-solving that advances the performance of the job. Workers must develop ‘performance pride’ as well as “joy in work.” Stimulating worker desire to work is what the best supervisors do to create harmony in work.
- The job of the supervisor is to train the workers in all fundamental skills required to do the job at a level of competence where it can be done with the required quality.
- Supervisors must assign responsibility to workers and provide them with the resources to do their jobs properly.

Japanese supervisors have very different job descriptions than their Western counterparts.



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How education and training combine:

- Workers are educated in basic skills and trained to the level of proficiency that is required for their job. Workers take a state-sponsored skills examination for an independent validation of their capacity to perform the work.
- Workers are monitored by supervisors and the “water-beetle” assistant to assure that they are following standard work and to collect their ideas for improvement. Supervisors will lead workers to test their ideas for inclusion in standard work.
- Whenever workers have problems with following standards a supervisor will take them to a training workstation where they relearn the skill and practice it until they can demonstrate they have the ability to perform it flawlessly and then they go back to work.

Approximately 70% of the effectiveness of the worker’s training comes from on-the-job work activities that reinforce education.



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Ownership of work creates worker pride:

Change worker attitude from “doing a job” to “producing value.”

- **Monozukuri** (物造り): the basic activity in manufacturing is to produce value from things for customers.
- **Hitozukuri** (人作り): the way to achieve improvement in a daily work process is by producing value in people – or by developing the potential of the worker. This is the required step in organizational transformation beyond production of things by “pairs of hands” or “fast hands” to applying all human capabilities in an imaginative way of working.
- **Kotozukuri** (事作り): the desired new productive state is to produce value from knowledge for society.



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THE GOAL:

Transform from “*mono*” (物造) to “*koto*” (事作).

Take-Away Learning Summary

“If you are out there observing the *gemba*, do something for them. If you do, the workers will think, “He’s watching us, but he comes up with some good ideas.” That way when the workers see you, they will look forward to your help again, and as a result they will begin telling you what makes the work hard to do and ask you to think of ways to make it better.”

“When you enter the factory, you should walk in a way that takes you hours to go 100 meters. If it takes you no time at all to go 100 meters, that means no one is relying on you.”

~ Taiichi Ohno



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Summary of learning objectives:

Module #2:

Turning the SDCA Cycle for daily management performance.

1. Learn how concepts defining the Toyota Production System operate in a team-based environment to deliver *hinshitsu kanri* through integration of principles of responsibility, ownership, and discipline into the workplace.
2. Discover how five rules define daily work: Make Rule, Teach Rule, Keep Rule, Check Rule, and Change Rule in the context of the SDCA daily management cycle.
3. Understand assigning workers responsibility and ownership assures productive workflow across the end-to-end operational sequence of routine work activities and this maintains productivity at the highest levels.



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Next Lesson – Module #3:

The management roles of front-line leadership.

ASQ LED “Managing for Efficiency” Webinars:

Gregory H. Watson, PhD., EUR. Ing.

- **Understanding Japanese Management: A Tale of Three Gemba:**
Webinar #1: March 25, 2021, 1500 CST
- **Turning the SDCA Cycle for Daily Management**
Webinar #2: April 29, 2021, 1500 CST
- **Exercising Management Roles of Front-Line Leadership**
Webinar #3: May 27, 2021, 1500 CST
<https://register.gotowebinar.com/register/9092562451817950732>
- **Elevating Individual Responsibility through Motivation**
Webinar #4: June 24, 2021, 1500 CST
<https://register.gotowebinar.com/register/3135797679643844364>
- **Building Cross-Functional Links to Align Objectives**
Webinar #5: July 29, 2021, 1500 CST
<https://register.gotowebinar.com/register/5423648280580621068>
- **Designing an Executive’s Quality Management System**
Webinar #6: August 25, 2021, 1500 CST
<https://register.gotowebinar.com/register/6895493028428554764>



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Register at the Lean Enterprise Division myASQ website.



Thank you!

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