

Organizational Learning – Triple-Loop Experience



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How will “Managing for Quality” change?

- Session 1 Making Quality-Based Executive Decisions
- Session 2 Leading Transformation – Managing Improvement
- Session 3 Designing Quality as an Inclusive Business System
- Session 4 Conducting Executive Inquiry and Formulating Strategy
- Session 5 Understanding Japanese-Style Strategy Management
- Session 6 Organizational Learning – Triple-Loop Experience**
- Session 7 Engineering Management – Designing Future Firms
- Session 8 Understanding the Financial Component of Quality
- Session 9 Reflecting on Strategic Implications of Attractive Quality
- Session 10 Discovering Profound Insights of Operational Excellence
- Session 11 Defining Quality to Apply to Everyone, Everywhere
- Session 12 Managing for Quality Amidst Digital Turbulence

Abstract of Session #6:

This webinar describes the concept of “Triple-Loop Learning” which grew out of the work of Harvard psychologists Chris Argyris and Donald Schön and represents the “reflective practice of management.”

- The first loop occurs as the outcome of work is examined when is nonconforming to its performance expectations. This cycle of learns about problem-solving, standardization, and process control.
- The second learning loop occurs reviews the methods used in the first loop to improve efficiency and effectiveness of work management methods.
- The third learning loop occurs as management examines its business assumptions for driving operational excellence. This webinar describes this process and illustrates it in a case study.

The webinar addresses how profound knowledge is generated through a structured strategic process of organizational learning.

Learning Objectives for Session #6:

Learning Objective 1:

Understand how Profound Knowledge is Gained

Investigate how Profound Knowledge – an ability to understand how the management can shape its future – is gained through a structured way to learn from problems or failures in its operational activities.

Learning Objective 2:

Describe the Strategy of a Triple-Loop Learning Process

Discover the mechanism for operation of the Triple-Loop learning process.

Learning Objective 3:

Discover the Linkage Between Strategic Intent and Learning

Understand how learning enables the achievement of the strategic intent of an organization – the achievement of its long-term vision.

Every teacher must also be a learner:

“Failure is instructive. A person who really thinks learns quite as much from failures as from successes.”

“The great aim of education is not knowledge but action.”

~ John Dewey (1859-1952)

Organizational Learning – The Triple-Loop Experience

Part 1:

Organizational Learning as a Function of the Process of Management

Profound knowledge is the object of learning:

W. Edward Deming's System of Profound Knowledge (see his book *The New Economics* (1994)), identifies "the theory of knowledge" as one of four components that collectively create this degree of knowledge that he calls profound.

Knowledge is an objective that is the result of knowing which is achieved through the process of learning.

Adult learning theory holds that the experience of discovery is the best teacher for adult learners and that grounding new learning in past experience is a solid approach to getting people to learn how to change. Learning involves change-in-particular; it is a continuing process of change within individuals by constantly restructuring experience to create an environment in which people recognize the lessons that they need to learn and apply them within the context of their own need. Learning has become recognized as a process of active, rather than passive, inquiry by the participants. Over the years, the emphasis on learning has shifted from the model where the role of the teacher is "subject authority" to a model where the teacher is the "facilitator of learning."

Organizational learning is the process for the pursuit of profound knowledge:

Learning occurs in the “Check” step of the SDCA/PDCA cycles of daily management and change management.

The “Check” step is where workers and managers reflect upon what is the result of their productive system output and how it may be done in a different way so that the outcomes are improved.

Profound knowledge is the desired outcome: Statistical understanding of the control factors in real-world process behavior so that future states may be predictable with some degree of confidence.

By gaining and increasing profound knowledge an organization can be able to establish a distinctive advantage over its competitors whereby it can operate more efficiently, effectively, and economically and gain a distinguishable performance margin that customers can detect.

Everyone has a “quality job” to perform:

How should the quality roles and responsibilities be defined?

Organizational Level	Primary Objective	Quality Emphasis	Type of Waste	Improvement Projects	Quality Improvement Methods Applied
Senior Executives	Agility	Policy	<i>Muri</i>	<i>Hoshin Kanri</i> <i>Jisu Kanri</i>	Presidential Review S-7 Strategic Methods Cross-Functional Teams Coach: Master Black Belt
Cross-Functional Management	Harmony	Flow	<i>Mura</i>	<i>Kaizen Kanri</i> <i>Hinshitsu Kanri</i> <i>Jisu Kanri</i>	<i>Gemba</i> Walk 5-S for Managers Project Teams Coach: Black Belt
Front-Line Workers	Discipline	Perfection	<i>Muda</i>	<i>Nichijo Kanri</i> <i>Hinshitsu Kanri</i> <i>Jisu Kanri</i>	Self-Inspection 3-S for Workers Quality Circles Coach: Green Belt

How do the roles and requirements for the competence of people change across these organizational levels?

Comparing characteristics of the three gemba:

What distinguishes learning in the operation of the Gemba levels?

Quality Characteristic	<i>Gemba</i> (現場) #1	<i>Gemba</i> (現場) #2	<i>Gemba</i> (現場) #3
Customer Focus	Workers	Customers	Owners
Work Objectives	Work Productivity	Work Priority	Work Profitability
Dominant Function	Perform/Operate	Supervise/Manage	Command/Control
Performance Focus	Flow Efficiency	Productivity	Resource Efficiency
Performance Approach	Quality/Efficiency	Productivity	Financial
Quality Mindset	Right the First Time	Serve the Customer	Get Business Results
Team Approach	Work Group/Circle	Program/Project	Committee/Council

The nature and structure of the Gemba levels change in focus and content; thus their basic development requirements are distinguished and aligned to appropriate learning objectives.

Process maturity requires dedicated learning:

MATURITY LEVEL

PERFORMANCE DESCRIPTION

1	Process Foundation Stage	Processes are identified	Daily Management System
2		Process informally mapped	
3		Processes managed by functional managers	
4		Process owner assigned to cross-functional process	
5	Process Analysis Stage	Process defined and mapped formally	
6		Process measured and related to business results metrics	
7		Work processes are linked to business processes	
<hr/>			
8	System Integration Stage	Process improvement projects charted by management	Hoshin Kanri
9		Business processes improvements are aligned to strategy	
10		Process improvement projects identified in strategic plan	



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What do we need to know?

By what means will we learn?

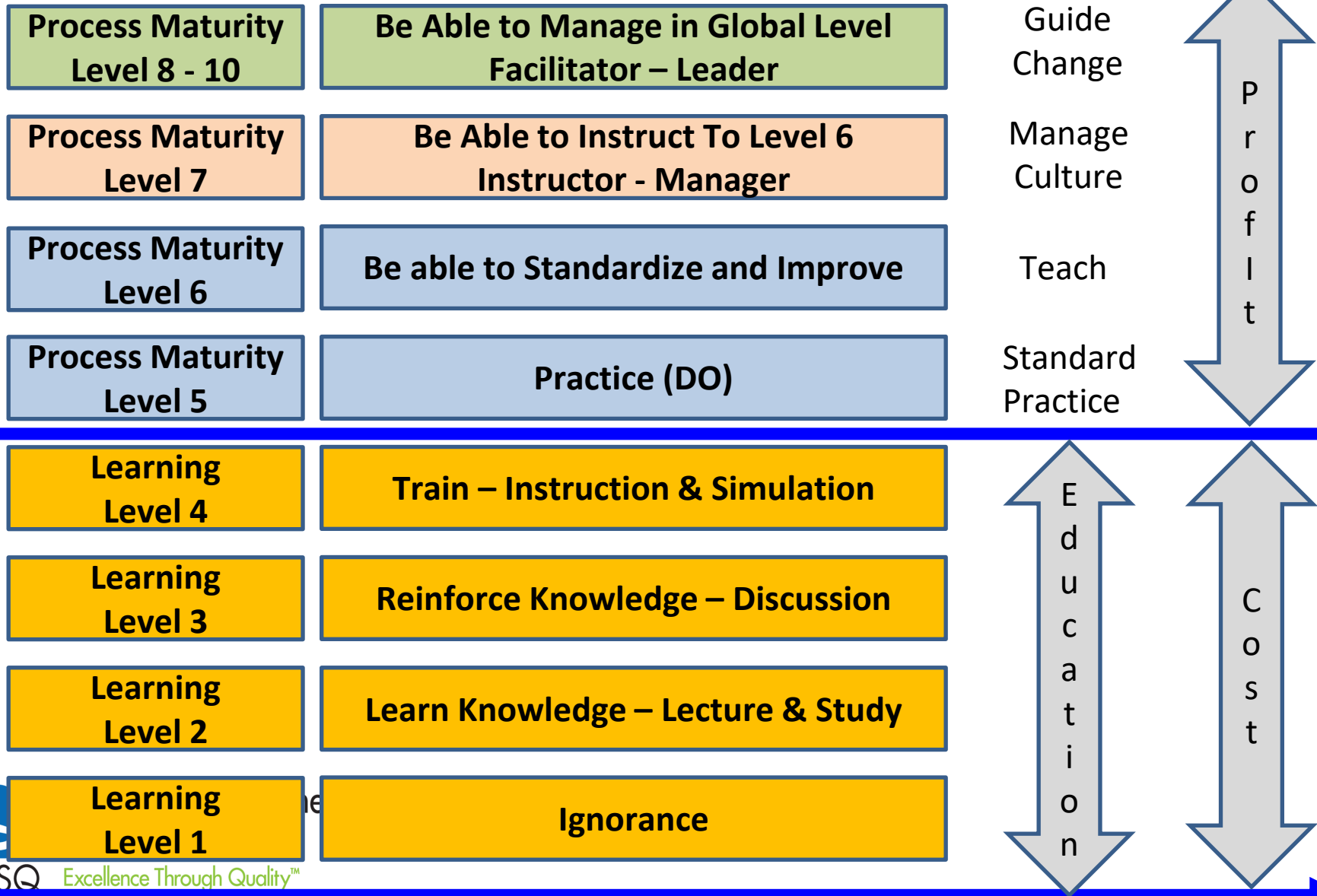
How will we know that we have learned?

Process elements of organizational learning:

Organizations that “manage by process” develop by improvement cycles that result in lessons learned. They learn:

- **How to work together;**
- **How to design structure that allow processes to be integrated into systems;**
- **How to apply a system of measures so that work can be predictive across processes;**
- **How to assign decision-making rights to control performance; and**
- **How to forecast future performance based on the design of their system.**

Toyota develops its process through learning:



Focal points for discovering knowledge:

Approximately 30% of knowledge comes from formal classes for education or training, but 70% comes from the practice of work.

We need to include “reflective thinking” in our work processes so we can stimulate our ability to “learn on the job.”

Learning occurs when we fail and correct mistakes; not when we succeed and do nothing differently.

Therefore we must focus on learning about our processes using evidence-based measurements and accept responsibility for self-development.

What learning needs to occur to really know?

What is profound knowledge? *

Statistical understanding of the control of real-world process behavior so that future states may be predictable with some confidence.

Deming identified four aspects to obtaining **profound knowledge**:

- **System**: understanding the context in which all work is accomplished.
- **Knowledge**: knowledge comes from the observation of work and the definition of a theory that can be scientifically tested and confirmed.
- **Variation**: knowledge of how a system operates must be based upon a study of variation in its historical performance.
- **Psychology**: human behavior must be understood, motivated and coordinated to achieve sustainable cooperative work outcomes.

* W. Edwards Deming (1994) *The New Economics* (Boston, MIT Press).

* Gregory H. Watson (2018), *The Theory and Practice of Profound Knowledge: An Inquiry into Strategy and Quality* (Stillwater, OK: Oklahoma State University).

Organizational Learning – The Triple-Loop Experience

Part 2:

Triple-Loop Learning Process

Observations from Albert Einstein:

- **“It’s not that I am so smart, it’s just that I stay with problems longer.”**
- **“No problem can be solved with the same level of consciousness which created it.”**
- **“A clever person solves a problem; a wise person avoids it.”**

Triple-Loop Learning: Mindful Awareness

Improvement is a learning activity!

The “Check” and “Study” steps of the SDCA/PDCA cycles are the point where reflective practice occurs. The reflective practice is an **internal process of self-control or self-management** where a person believes in constantly learning increasing their knowledge by **thoughtfully considering activities they have accomplished as they are implementing new ideas or concepts**.

This practice has the **capacity to reflect on their own actions as they are conducting work** in order to improve future outcomes.

Reflective practice requires an ability to assess an evolving issue, problem, situation or work outcome, with respect to its **inherent uncertainty**. In effect, it develops insightful observations that are stimulated by a tacit understanding of the situation.

Problems initiate more opportunities to learn:

- If we only have successes, then we will not create the chance to challenge ourselves to learn ways for us to manage things differently.
- Problems arise when there are issues that become realized in our current way of working and created situations that are not tolerable to the recipients of our products or services.
- By investigating problems in a structured way and then doing a sound post-mortem afterwards to learn how the methods and tools operated we can increase our flexibility to address any future systemic disruptions.
- Examining the patterns of disruptions in our operations and the utility of our methods and tools we can determine how to better allocate our resources and decision rights to enable an even more responsive, anticipatory management system.

Peter Drucker started this thinking exercise:

“ We now accept the fact that learning is a lifelong process of keeping abreast of change. And the most pressing task is to teach people how to learn.”
~ Peter F. Drucker

“Management is doing things right. Leadership is doing the right things.”

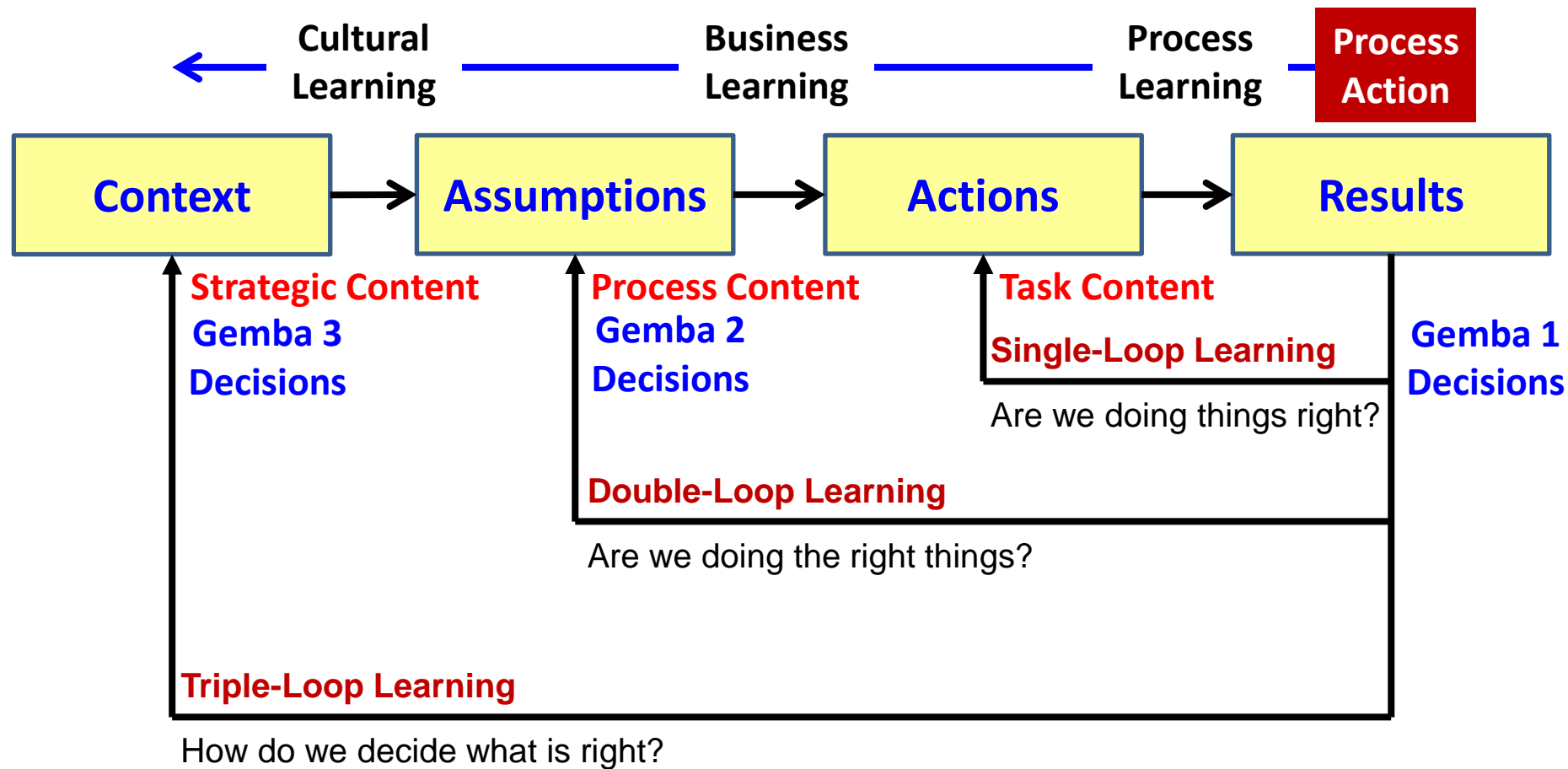
“There is nothing so useless as doing efficiently something that should not have been done at all.”

“It is more important to do the right thing than it is to do things right.”

Four questions for reflection:

- 1. Are we doing things right?**
- 2. Are we doing the right things?**
- 3. Are we doing the right things in the right way at the right time?**
- 4. How do we decide what is right?**

Integrating learning in a process of managing:



The Triple-Loop Learning Experience

Loop 1: Solving the Immediate Problem

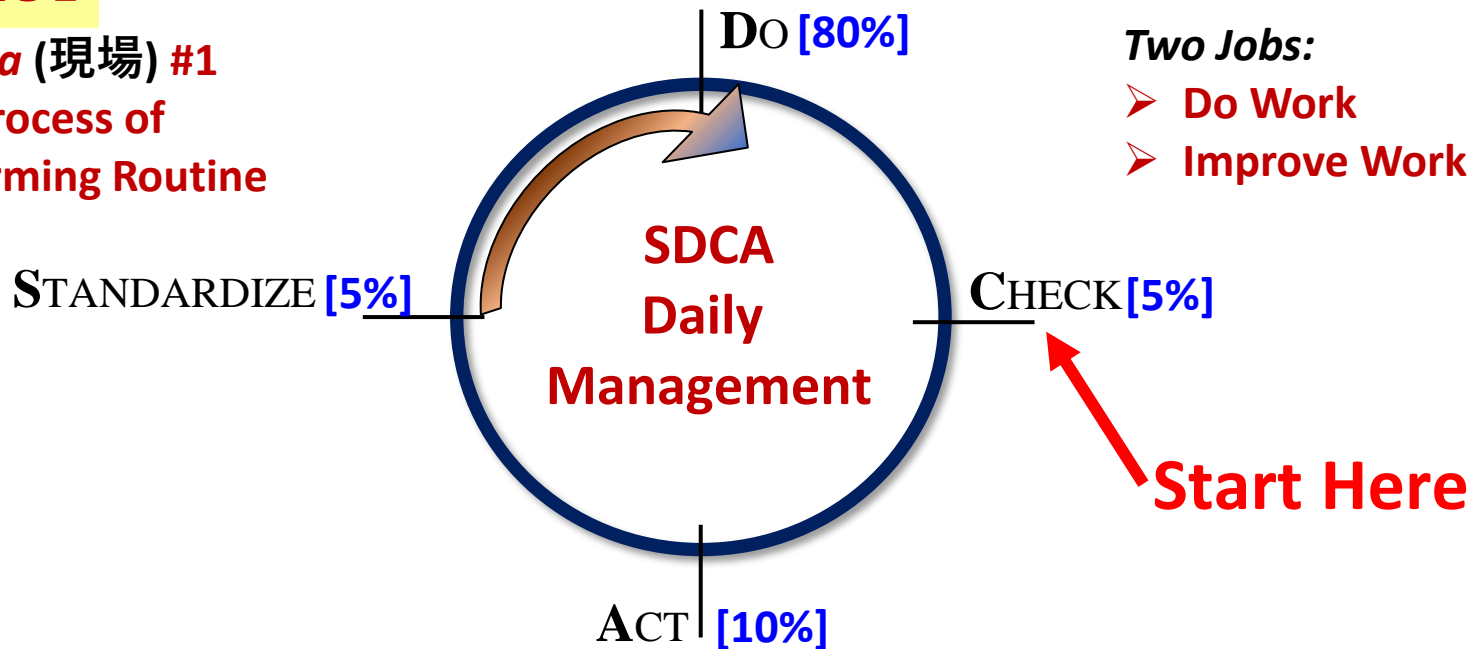
Learning Must Occur at all Levels!

Loop #1 Concentrates on Daily Routine Work:

The first learning loop is executed in the “Check” step of the SDCA Daily Management Cycle.

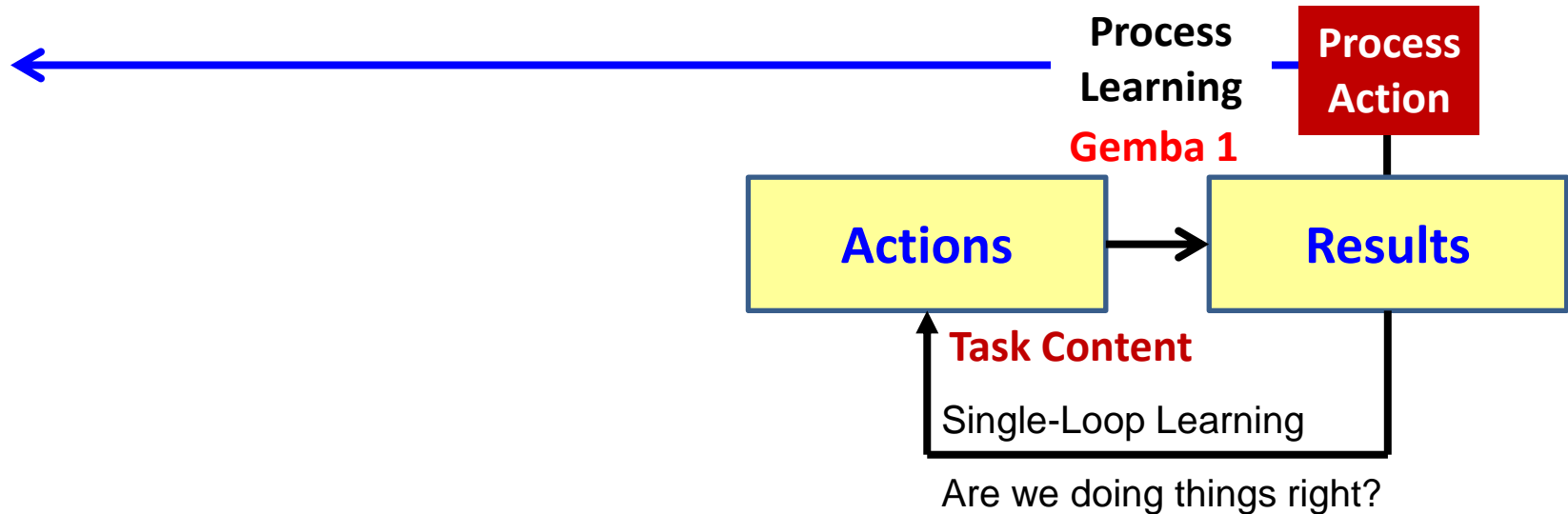
CONTROL

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



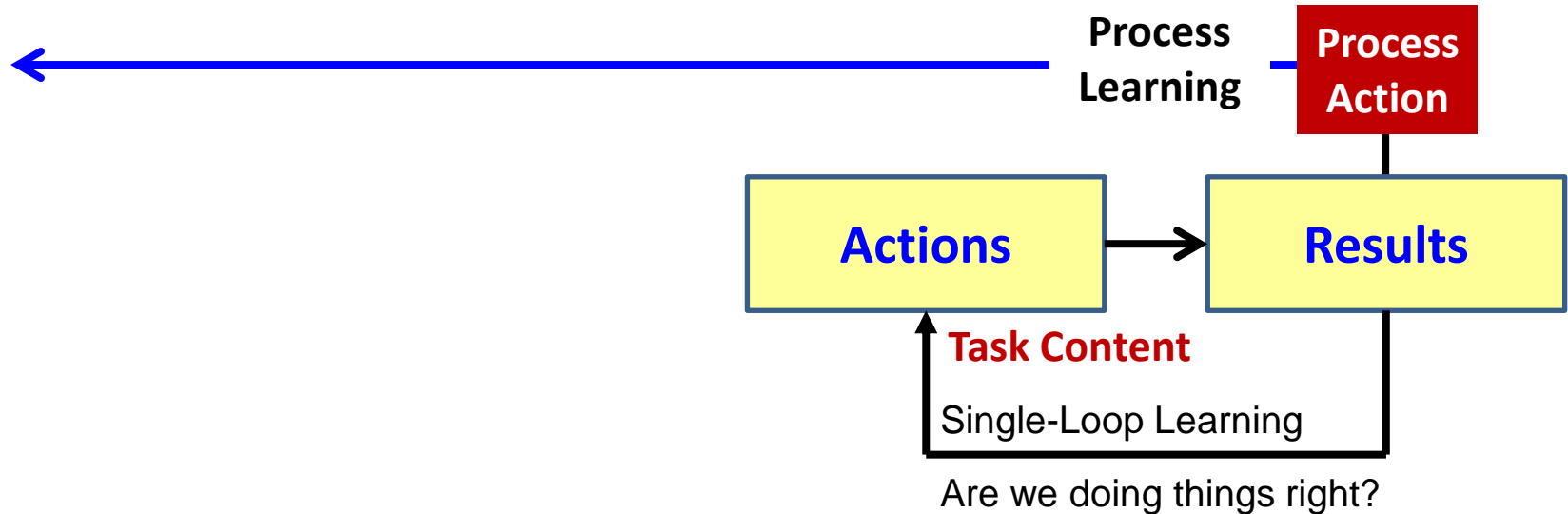
The world of kaizen in routine operations.

Learning about “Gemba 1” losses:



- ✓ Gemba 1 concentrates on “muda” waste.
- ✓ Losses come from quality or flow inefficiency.
- ✓ Internal impact of productive losses is high.
- ✓ Removal of “muda” is delegated to workers.

We learn by managing our work processes:



- ✓ We learn from “working experiments.”
- ✓ We reflect on what we do to find a better way.
- ✓ We reject ways of working that are bad.
- ✓ We embrace ways of working that are good.

Dynamics of structured learning – 1:

Triple Loop Learning: First Loop – Solving the Immediate Problem

Definition: Harvard psychologist Chris Argyus defined “single-loop learning” as the ‘detection and correction of errors’ or learning what to do.

Process Elements of Single-Loop Learning:

- Document the current standard work process.
- Instill discipline of work process measurement.
- Assure quality review of work outcomes or products.
- Implement corrections to assure standard results.
- Design preventive action to eliminate future problems.
- Change the standard work definition to assure quality.

Elements of “Single-Loop” learning:

- **Why:** create consistent, predictable performance outcomes.
- **Who:** all process workers at all levels of organization.
- **What:** standardization, problem-solving and process improvement.
- **When:** daily work process execution.
- **Where:** an integrated system applying to all work processes.
- **How:** work standards, problem-solving methods and continual process improvement methods (e.g., ISO9000, Lean, LSS DMAIC).
- **How much:** eliminate waste and defects in all processes.



Loop 1: Learning about the past and present!

“Without a standard there can be no improvement.”

~ Joseph M. Juran

Experiential learning occurs when knowledge is transferred by a **direct participation in an action learning environment**. Instead of a passive approach – formalized or school-based learning – **a person is confronted by a real-world experience and learns as an outcome of participating in that experience.**

This type of learning occurs in **“on-the-job” learning** where the knowledge transfer occurs as a result of work **done to overcome failures and mistakes** in the performance on the job as a coach guides the result toward a successful outcome.

A **reflective practice** of examining standard work while doing a job is a **cornerstone of Single-Loop Learning.**

The Triple-Loop Learning Experience

Loop 2: The Improvement Process

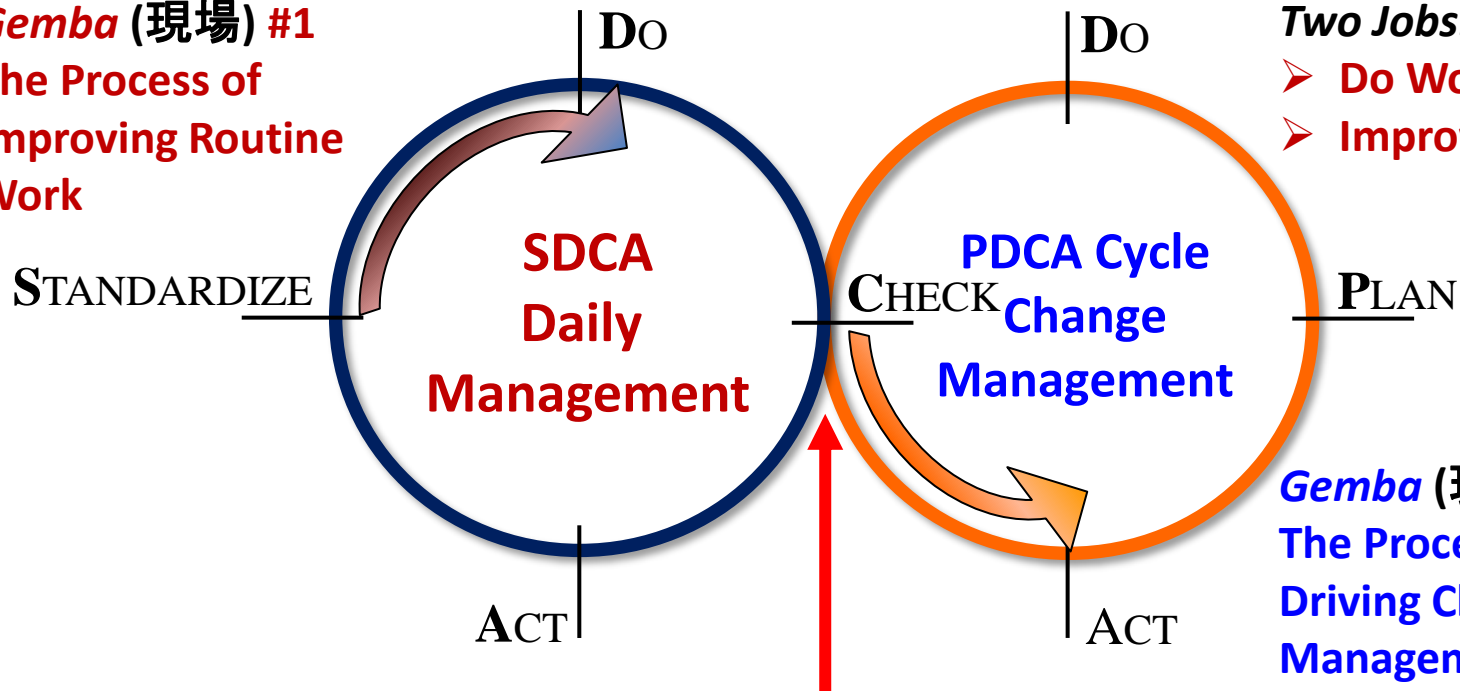
Learning Must Occur at all Levels!

Loop #2 Concentrates on Methods & Tools:

The second learning loop is executed in the “Check” step of the PDCA Change Management Cycle.

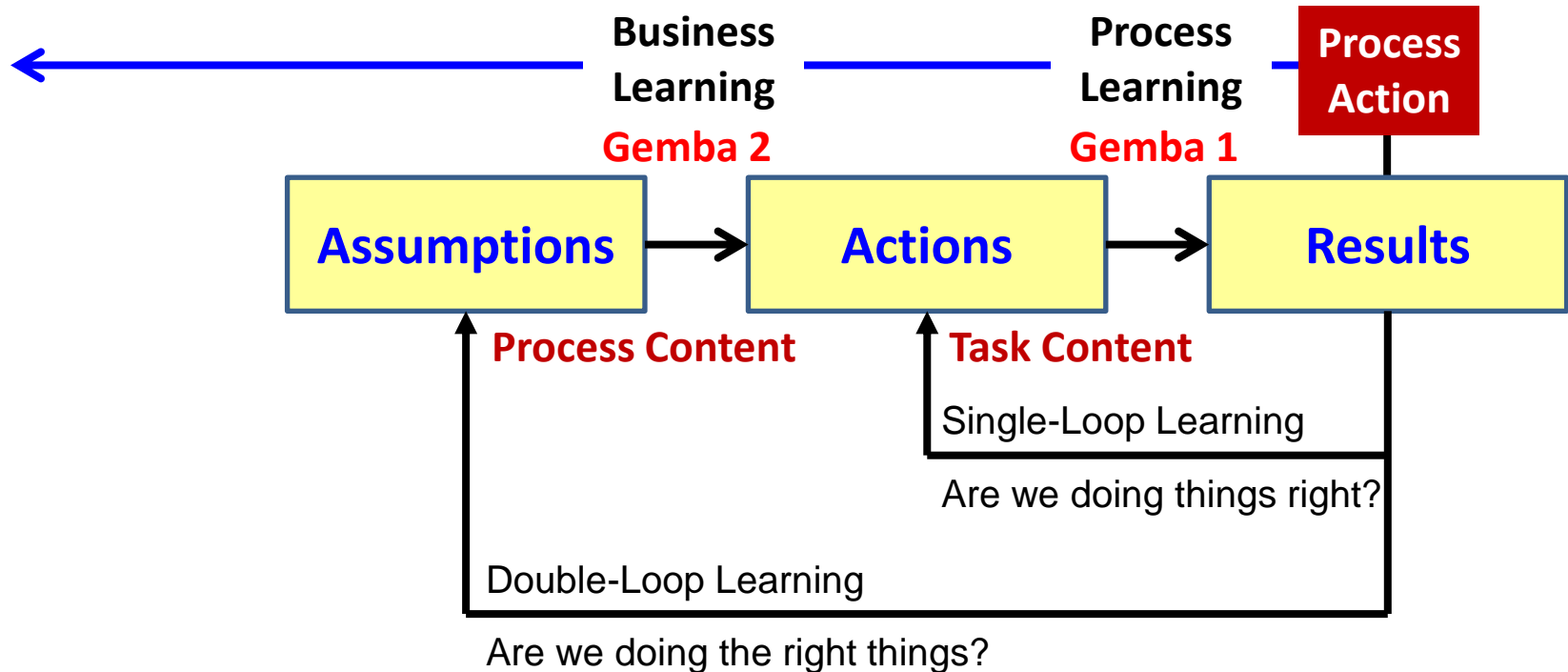
IMPROVEMENT

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



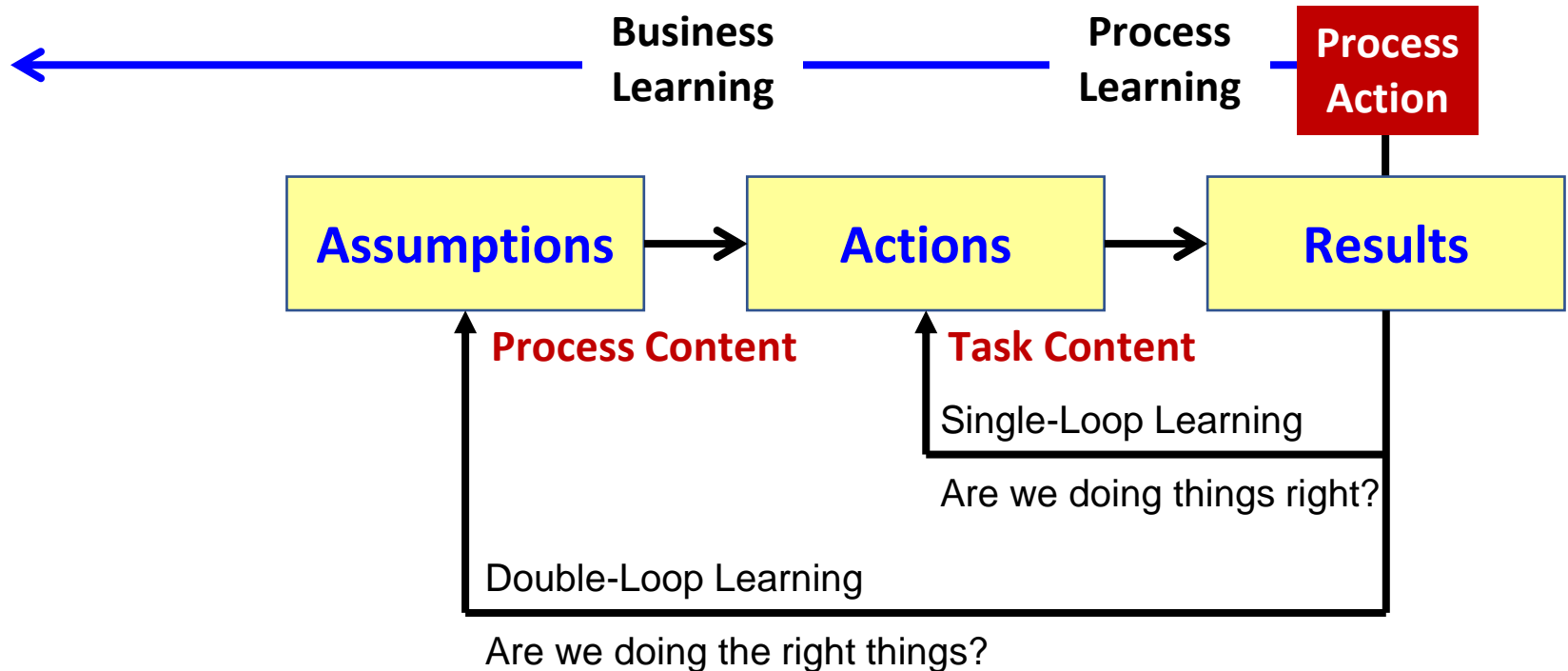
The world of hoshin in change management.

Learning about “Gemba 2” losses:



- ✓ **Gemba 2 losses concentrate on “mura” waste.**
- ✓ **Losses come from non-aligned workflows.**
- ✓ **Removal of “mura” waste is a functional task.**

We examine assumptions and methods:



- ✓ We apply evidence-based thinking.
- ✓ We seek continual improvement.
- ✓ We pursue a total systems approach.

Dynamics of structured learning – 2:

*Triple Loop Learning: **Second Loop** –*

The Improvement Process

Definition: “Double-loop learning” occurs by ‘questioning the system of learning’ resulting in correction of underlying principles, theories, policies of the organization or implementing insights for change that were identified in the detection and correction process.

Process Elements of Double-Loop Learning:

- Developing a standard problem-solving process.
- Developing a standard for risk and failure analysis.
- Developing a standard performance measurement system.
- Developing a standard planning process.
- Developing a standard method for aligning and linking improvement projects
- Developing a standard vision for deploying change.
- Developing a standard processes for change management.

Elements of “Double-Loop” learning:



- **Why:** adjust improvement methods to remain at “state-of-the-art.”
- **Who:** professional staff for project business process management.
- **What:** develop and improve standard for single-loop processes.
- **When:** review regularly (quarterly, bi-annually, annually).
- **Where:** centralized function for standards; distributed for inputs.
- **How:** reviewing lessons learned, best practice and failed projects.
- **How much:** Strive to increase project performance effectiveness.

Loop 2: Learning about the past and present!

“All change occurs one project at a time, and in no other way.”
~ Joseph M. Juran

Improving the methods and tools which are employed in daily work is an important supervisory task – a project that creates a multiplier effect in employee engagement and commitment.

Increasing the ability of workers to do their job by **providing new resources or increasing decision rights** increases a worker's control over how they perform. Managers can encourage **self-generation of productivity** through participative engagement of workers, so they **manage improvement of process capability while increasing their personal competence**.

In this way workers are provided the control that allows them to effectively self-manage their own improvement activities.

The Triple-Loop Learning Experience

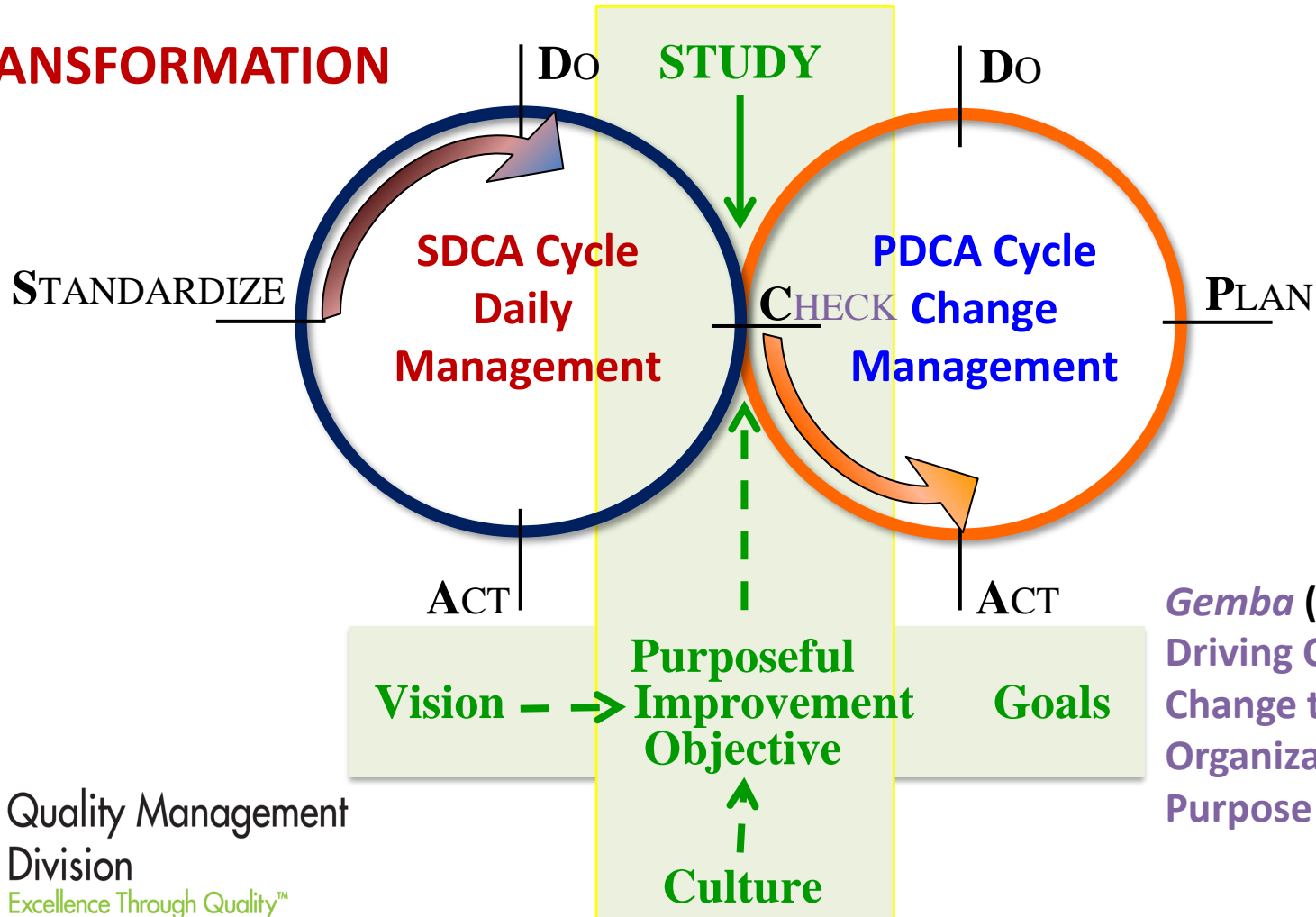
Loop 3: Charting Strategic Change

Learning Must Occur at all Levels!

Loop #3: Concentrates on Strategic Change

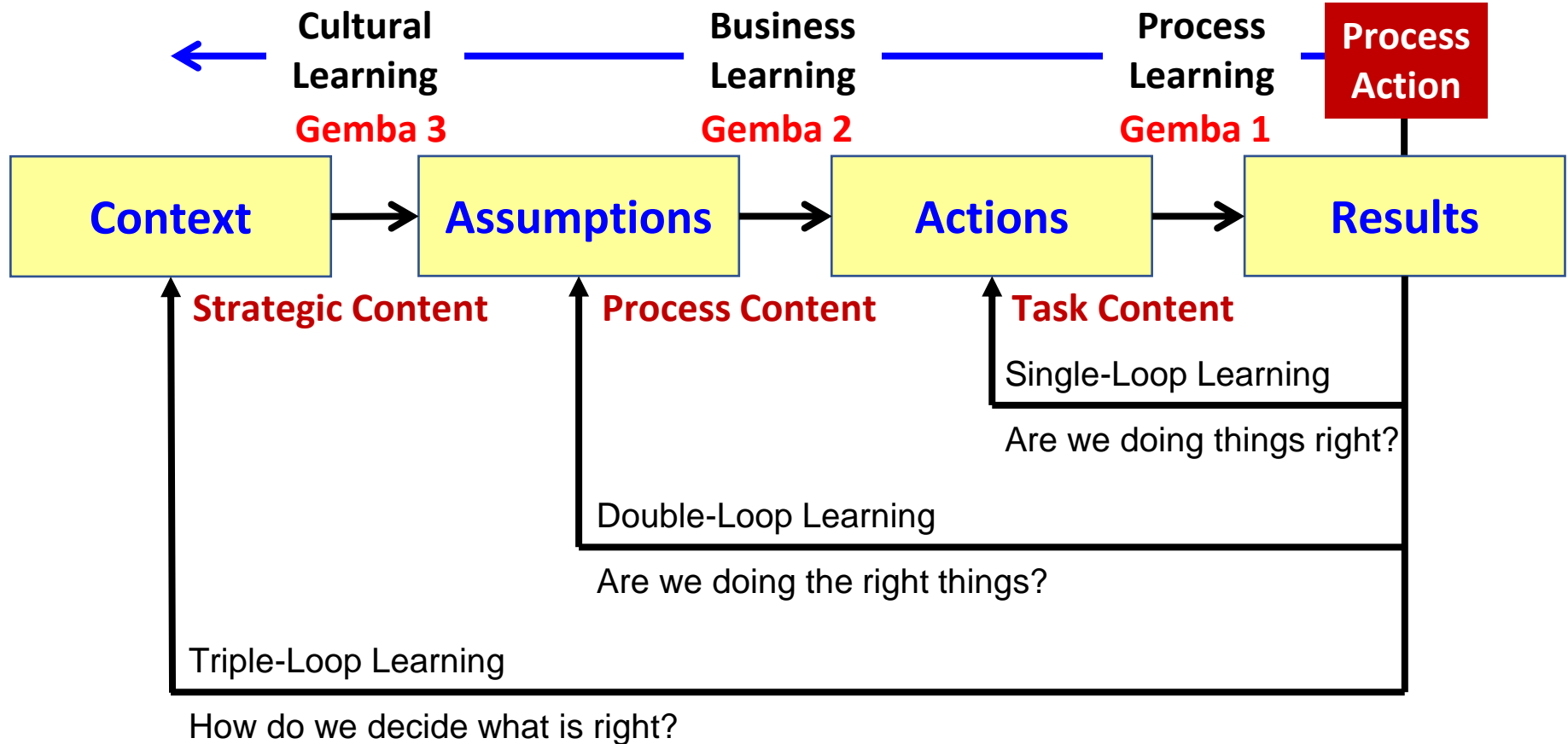
The third learning loop is executed in the strategic “Study” step that is the driver of the hoshin projects in the SDCA/PDCA Cycles.

TRANSFORMATION



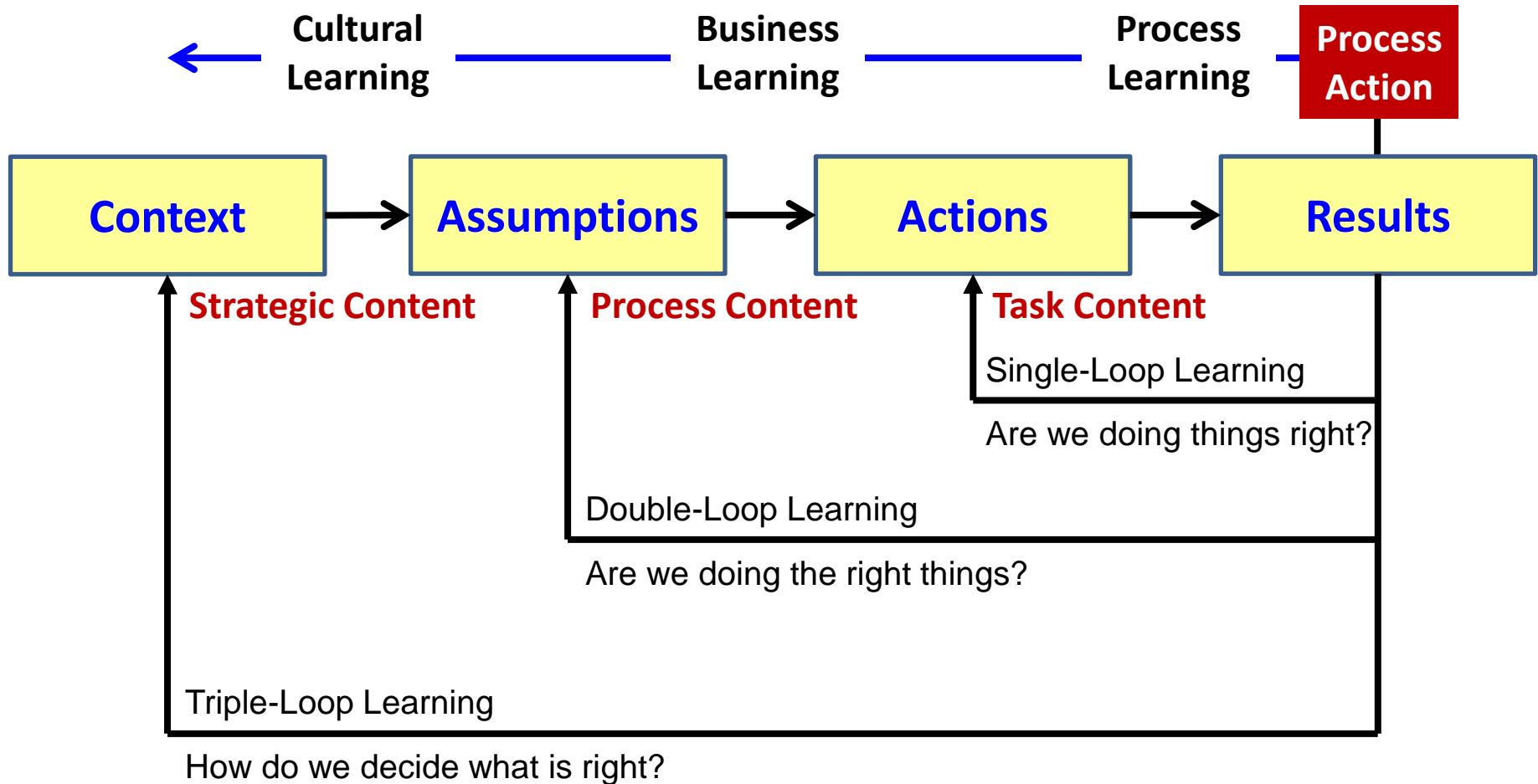
Gemba (現場) #3
Driving Cultural
Change to Achieve
Organizational
Purpose and Goals

Learning about “Gemba 3” losses:



- ✓ **Gemba 3 waste is “muri” waste.**
- ✓ **This type of waste is informally addressed.**

We align actions to achieve a long-term vision:



✓ **We need to build a system of people and processes.**

Dynamics of structured learning – 3:

*Triple Loop Learning: **Third Loop** –*

Charting Strategic Change

Definition: “Triple-loop learning” – learning what we need to learn – learning how to learn differently – permanent learning that changes the way people work at the institutional or cultural level because the change masters have the power to mandate the new processes!

Process Elements of Triple-Loop Learning:

Thus, single loop learning occurs during problem-solving while double-loop learning occurs during management review of improvement projects by integrating lessons into the organization. Triple loop learning occurs through reflective review of change management efforts and by identifying insights into new knowledge for adaptation into the organization’s culture.

Elements of “Triple-Loop” learning:



- **Why:** discover what is important to be learned that influences strategy.
- **Who:** executive management team facilitated by “quality” leaders.
- **What:** focus on developing an organizational process for change.
- **When:** review annually as a prelude to strategic planning.
- **Where:** orchestrated management meeting.
- **How:** self-assessment of maturity and identify projects to improve.
- **How much:** Strive to permit process capability to achieve strategic intent.

Loop 3: Learning about the future!

“One is born with a natural inclination to learn. Learning is a source of innovation.” ~ W. Edwards Deming

Learning about the future requires an innovative approach to **see new possibilities and imagine strategic alternatives, scenarios or options that create future opportunities or threats**. Scenarios can be used to **simulate or test current decisions and determine the range of possibilities that may be generated by pursuing the alternative choices** that will shape different futures.

This method of **designing new capabilities and identifying areas to develop as future competence** which prepare an organization to face the uncertainties that can evolve.

Organizational Learning: The Triple-Loop Experience Take-away Lessons Learned

**“He who has a hundred miles
to walk should think 90
miles is half the journey!”**

~ Zen Buddhist Proverb

Managing a Body of Profound Knowledge:

Knowledge management is a multidisciplinary approach to creating, sharing, using, and managing the organization's body of useful information that has been gleaned from its data warehouses.

This store of “profound knowledge” is gained by:

- **Learning how the end-to-end business system operates;**
- **Discovering the drivers of change in its work processes;**
- **Observing how these work processes may change by the objective measurement of their variation; and**
- **Gaining insights into how people can be motivated to manage change and maintain performance excellence.**

Critical take-away observations:

How will you manage the learning process to develop a body of knowledge that gives your organization a competitive edge?

Profound knowledge is achieved using an organized approach to structured learning based on the intention of management.

This webinar addressed the following learning objectives:

- **Understand how Profound Knowledge is gained**
- **Describe the Strategy of a Triple-Loop Learning Process**
- **Discover a Linkage between Strategic Intent and Learning**

References for Triple-Loop Learning:

- Peter F. Drucker (1956), *The Practice of Management* (New York: Harper).
- Chris Argyris (1957), *Personality and Organization* (New York: Harper Collins).
- Chris Argyris (1962), *Interpersonal Competence and Organization Effectiveness* (Homewood: Irwin).
- Chris Argyris (1964), *Integrating the Individual and the Organization* (New York: John Wiley & Sons).
- Chris Argyris (1965), *Organization and Innovation* (Homewood: Irwin).
- Chris Argyris & Donald A. Schön (1974), *Theory in Practice: Increasing Professional Effectiveness* (San Francisco: Jossey-Bass).
- Donald A. Schön (1983), *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books).
- Chris Argyris (1991), "Teaching Smart People How to Learn," *Harvard Business Review*, 69:3, 99-109.
- Gregory H. Watson (2012), "A Comprehensive Approach to Quality Aims at Inclusive Growth: Part 3: Integrating Innovation into a Process of Management," *Journal of Quality & Participation*, 35:2, 36-38. **



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Thank you

Gregory H. Watson, PhD.

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Future QMD Webinars – 6:00 PM ET

(unless noted otherwise)

Managing for Quality Webinar Series by Dr. Gregory H. Watson:

No. 7: "Managerial Engineering – Designing Future Firms" July 21, 2020

No. 8: "Understanding the Financial Component of Quality" August 18, 2020

No. 9: "Strategic Reflections on Kano's Attractive Quality" September 15, 2020

No. 10: "Insights into the Essence of Operational Excellence" September 29, 2020

No. 11: "Defining Quality to Apply to Everyone, Everywhere" October 14, 2020

No. 12: "Managing for Quality Amidst Digital Turbulence" November 17, 2020

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