IMPROVEMENT *KATA* AND COACHING *KATA*

The Improvement *Kata* and Coaching *Kata* method enables organizations to develop a culture of scientific thinkers who practice continuous improvement.

FOR ACCOUNTING PROFESSIONALS

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Are you looking for a way to develop your organization's culture into one of daily improvement using a systematic, scientific approach? Then Improvement *Kata* and Coaching *Kata* may be the answer for you, especially if you would also answer "yes" to any of these questions:

- Do you want to improve the accuracy of your accounting systems and processes?
- Do you want to decrease the time needed for accomplishing routine accounting tasks?
- Do you want to reduce the time needed to close the books each month so leadership can improve decision-making?
- Do you want to get everyone aligned to the specific challenges of your organization and systematically achieve those goals?
- Do you want to engage process owners in daily continuous improvement to accomplish meaningful challenges for your organization?

What is the Improvement *Kata* and Coaching *Kata*?

It is not the solution to a problem, per se, that makes (or keeps) an organization suc-

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EXHIBIT 1 The Four Steps of the *Kata* Methodology
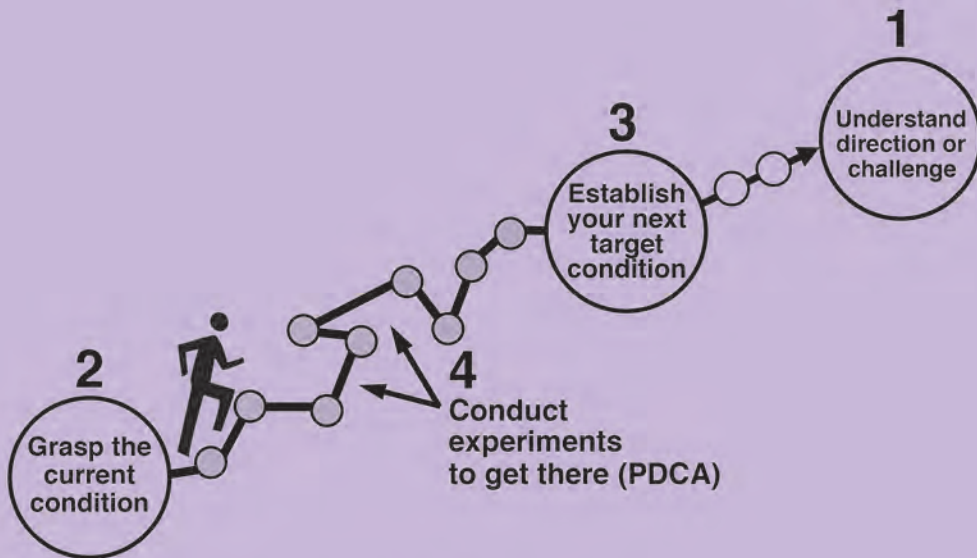
Source: Rother, M., *The Toyota Kata Practice Guide*. (New York: McGraw-Hill Education, 2017).

cessful. It is the ability to regularly develop solutions for constantly developing process issues that allows an organization to thrive. Nurturing and maintaining this ability to practice daily continuous improvement is a core responsibility of a company's leadership team.

Improvement *Kata* and Coaching *Kata* are the two parts of a method to develop scientific thinking and practice daily continuous improvement within organizations. The method can transform your culture by developing meta-habits throughout your company. Mike Rother first presented this four-step method in his book *Toyota Kata* in 2008 (Exhibit 1).

The four steps of the *Kata* method are outlined in the following sections:

Step one: Understand direction and challenge. This is the step in which the organization clarifies a strategic challenge that needs to be met over a one to three-year time frame. It is a description of a new level of performance the organization needs to achieve to better serve its customers and/or differentiate its offerings. Striving for a significant challenge provides context for making improvements. The challenge should answer the question "Wouldn't it be great if…?" For example, "Wouldn't it be great if by December of next year, the accounting month-end process only took half a day?"

Step two: Grasp the current condition. This is where the organization conducts in-depth process analysis on a focus area to truly understand how the work is actually done and how the current process is performing as it relates to the challenge. The goal is to collect facts and data to describe the current situation. Understanding the gap between where we are and where we need to be is a prerequisite for the next step of setting a target condition. For example, "The accounting month-end process currently takes five days, and we have made a process map showing the steps people take to perform the month-end process."

Step three: Establish the next target condition. This is a small incremental step toward achieving a challenge. It will take several target conditions to eventually achieve a challenge. The target condition describes where you want to be next in relation to all the current condition elements, not how to get there. The "how" will be discovered through application of scientific thinking. For example, "One month from today, we want the accounting month-end

process to take 4.5 days using the same resources. We have made a target condition process map showing a new sequence of steps to be taken to perform the month-end process in the targeted time frame."

Step four: Conduct experiments using the plan-do-check-act (PDCA) process. The PDCA process embodies the core thinking pattern of the scientific method. Scientific thinking is a deliberate practice of comparing what one thinks will happen (the hypothesis) to what actually happens (the real data) and making adjustments based on what one has learned from the difference. Someone utilizing this method strives to conduct daily experiments that are very small. Doing quick daily experiments on improvement will force the person to learn what true obstacles he or she needs to overcome to actually achieve the target condition. This is not solutions-based thinking, but rather learning what works and eventually learning the combination of real solutions that results in overall improvement.

These four steps constitute the Improvement *Kata*. The Coaching *Kata* supports the whole method by reinforcing the Improvement *Kata* steps using five repeatable core questions:

1. What is your target condition?
2. What is your actual condition now?
3. What obstacles are preventing you from achieving your target condition?
4. What is your next step?
5. When can we go see what you have learned?

The first three Improvement *Kata* steps prepare the user for practicing the PDCA process by thoroughly understanding (1) one's expectations, (2) the scope of the goal, (3) the current condition using appropriate metrics, (4) the current pattern of work, and (5) a set of target elements describing a near-term target condition for a selected process. Once these are achieved, the PDCA process can begin. The PDCA steps guide the users through running quick improvement experiments using scientific thinking. The aim of the Improvement *Kata* and Coaching *Kata* method is to break challenges into very small incremental steps that users strive to achieve quickly through experimenting with improvement ideas that eliminate obstacles along the path to true solutions.

The Coaching *Kata* supports the whole method and is used during all four steps of the Improvement *Kata*. A coach uses the five core questions to understand how a learner is thinking and discover his or her knowledge threshold so that mentoring can begin. The coach assists the learner with what he or she needs to learn to keep moving forward. The coach's role is to develop the thinking skills of the learner.

By following the *Kata* process in a structured, disciplined manner, leadership teams practice a consistent method that develops a culture of scientific thinkers. Engaging people in practicing a daily method of relentlessly working toward accomplishing significant challenges is a critical role of the leadership team.

The point of the *Kata* method is to create a sustainable culture of daily continuous improvement through the use of simple routines that take human behavior into consideration.

What are the benefits of using the *Kata*?

Benefits of using the *Kata* include the following:

- It is a systematic, scientific routine that can be applied to any problem or challenge;
- It is a standard method of development for people within an organization;
- It is a process for migrating managers toward the role of coach and mentor by practicing structured coaching sessions;
- It is a framework for practicing the PDCA process in a way that helps people to take small steps every day;
- It creates a culture of scientific thinkers; and
- It establishes a process for daily continuous improvement.

How the *Kata* method is used in industry

It is important to recognize that practices in industry are directly applicable to accounting practices. The *Kata* method and scientific thinking are content-free methods that are focused on how we think and do. They are independent of specific content. *Kata* usage is equally at home in a tool-and-die shop

THE POINT OF THE KATA METHOD IS TO CREATE A SUSTAINABLE CULTURE OF DAILY CONTINUOUS IMPROVEMENT THROUGH THE USE OF SIMPLE ROUTINES THAT TAKE HUMAN BEHAVIOR INTO CONSIDERATION.

EXHIBIT 2 *Kata* Storyboard

Improvement *Kata* Storyboard

Team Name:

Focus Process: Accounting Month-end Process

Challenge: 2 business days to close accounting month-end and complete variance analysis by 11/31/2017 (6 months)

Target Condition by 6/30/2017

Outcome Metric Process Metrics & Pattern of Work TBD

Current Condition (Forms/Graphs):
Last Update: 5/31/2017

10 business days to close accounting month-end and complete variance analysis

Process Analysis TBD

PDCA Cycles Record:

PDCA CYCLES RECORD *(Each row = one experiment)*

Process:			Obstacle:	
Learner:		Coach:		
Date, Step & Metric	What do you expect?		What Happened	What We Learned

Do a Coaching Cycle / Conduct the Experiment

© Mike Rother / Improvement Kata Handbook   Appendix - Forms

Perceived Obstacle Parking Lot

WHAT IS YOUR PERCEIVED OBSTACLE?	HOW WILL YOU MEASURE IT?

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as it is in the office of a CPA. Any content can be filled into the steps of the method. It is about how we think and overcome obstacles to solve problems or improve upon processes that drive cost and lead time.

A broad range of organizations are successfully applying the Improvement *Kata* and Coaching *Kata* method, including in manufacturing, health care, government, service, and education. The types of processes that are being impacted include accounting, treasury, production, customer service, human resources, inventory management, engineering, and strategic planning.

Organizations practice the *Kata* by posting a visual storyboard in a focused work area. The storyboard captures the team's progress toward achieving target conditions and, eventually, a long-term challenge.

The layout of the storyboard guides a coach and learner through practicing the *Kata* in a consistent manner. Following the *Kata* routines develops the skill and behavior of the learner and coach so that it becomes second nature or a natural way of thinking and approaching improvement.

Organizations implementing the Improvement *Kata* and Coaching *Kata* method have used it to:
- drive the organization in new directions based on customer wants and needs;
- achieve very challenging cost-reduction goals;
- reduce lead times for products and services (e.g., getting quicker lab results for blood draws);

EXHIBIT 3 Month-end Process Chart

Month-end process chart (sequential order):
1. Close access for users to compile data
   a. Current process time = 15 minutes
   b. Takt time = 1 minute
2. Compile data needed to close accounting books
   a. Current process time = 2 days
   b. Takt time = 4 hours
3. Complete work papers necessary for accounting month-end closing entries
   a. Current process time = 3 days
   b. Takt time = 4 hours
4. Complete accounting month-end closing entries
   a. Current process time = 1 day
   b. Takt time = 2 hours
5. Compile and complete variance analysis
   a. Current process time = 2 days
   b. Takt time = 4 hours
6. Complete additional accounting month-end entries post–variance analysis
   a. Current process time = 1 day
   b. Takt time = 1 hour
7. Validate adjustments and month-end activities are completed
   a. Current process time = 1 day
   b. Takt time = 1 hour
8. Notification of month-end completed
   a. Current process time = 15 minutes
   b. Takt time = 1 minute

- reduce the time used to do month-end book closing;
- reduce inventory levels;
- achieve annual strategic goals;
- develop employee's skills in practicing daily continuous improvement;
- develop management's skills in leadership, coaching, and mentoring;
- reduce the time from receipt of order to cash;
- engage the organization with daily improvement actions; and
- reduce errors in purchase orders and posting.

Improvement *Kata* example. For accountants, closing the month-end process is a stressful process. Any improvement in this process is welcome within any organization. This fits with the purpose of the Improvement *Kata* as providing a systematic way to strive toward and meet challenges. In our example in Exhibit 2, the CEO and board of directors have incorporated a vision for the organization to become an operational excellence organization. The

direction is to incorporate operational goals to be considered a best-of-breed in the industry. For the accounting department, the goal of taking only two business days to close the accounting month-end process and provide variance analysis is needed to provide management with the proper financial information to make business decisions. The time frame to implement this structural change is six months.
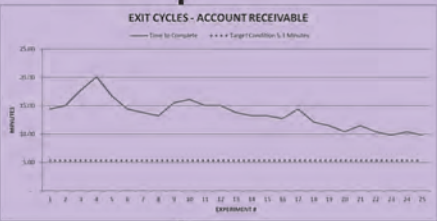
In its current condition, our organization takes 10 business days to complete all month-end activities. The goal to bring this accounting month-end process to two business days is an 80 percent reduction. Since the process is executed only once per month, achieving the goal in six months will only provide six month-end opportunities. This is limiting for experimentation, improvement, and success. An alternative approach is to experiment on individual task elements of the entire process, thus breaking up the whole process into independent tasks. Identified improvements can be incorporated into the current process

EXHIBIT 4 Storyboard Accounts Receivable

Improvement *Kata* Storyboard

Team Name:

Focus Process:
Accounting Month-end Process

Challenge: 2 business days to close accounting month-end and complete variance analysis by 11/31/2017 (6 months)

Target Condition by 6/30/2017

Accounts Receivable Work Paper Task #3:

Takt time = 4 hours

# of papers = 45

CT = 5.3 minutes/workpaper

# of people = 2

Current Condition (Forms/Graphs):
Last Update: 5/31/2017

10 business days to close accounting month-end and complete variance analysis

Pattern of Work for close accounting month-end

| Step 1 pt=15m | Step 2 pt=2 day | Step 3 pt=3 day | Step 4 pt=1 day |

| Step 5 pt=2 day | Step 6 pt=1 day | Step 7 pt=1 day | Step 8 pt=15 m |

Pattern of Work for Step 3

Accounts receivable work paper

| Task 1 | Task 2 | Task 3 |

Takt time = 3 days

# of papers = 45

CT = 13.6 minutes/workpaper

# of people = 2

PDCA Cycles Record:

Perceived Obstacles Record

1) Timing of the data
2) Receipt of the data
3) Manpower scheduling

EXIT CYCLES - ACCOUNT RECEIVABLE

EXHIBIT 5 Current Process Map

CURRENT PROCESS MAP: ACCOUNTS RECEIVABLE WORK PAPER		
LIST LAST 10 INVOICES ISSUED FOR THE MONTH	VALIDATE PROPER SALE WITH DOCUMENTATION	ADJUSTMENT FOR ANY INCONSISTENCIES
PROCESS MAP STEP #1	PROCESS MAP STEP #2	PROCESS MAP STEP #3

to validate the movement toward the goal of two business days.

In our example and for many accounting tasks, there is no calculated takt time, but a planned cycle time is known. In our case, the planned cycle time is the goal of two business days; either we complete the accounting month-end process within the time frame or we do not. We now document the current process. This is a complete listing of each process task step, which will include their individual takt time or planned cycle time along with a basic process map of the steps needed for completion. When this is compiled, the full process can be understood from the standpoint of potential improvement. In our example, we identify eight overall process steps for the accounting

EXHIBIT 6 Exit Cycle Chart

EXIT CYCLES: ACCOUNTS RECEIVABLE

—— Time to complete   • • • • Target condition (5.3 minutes)
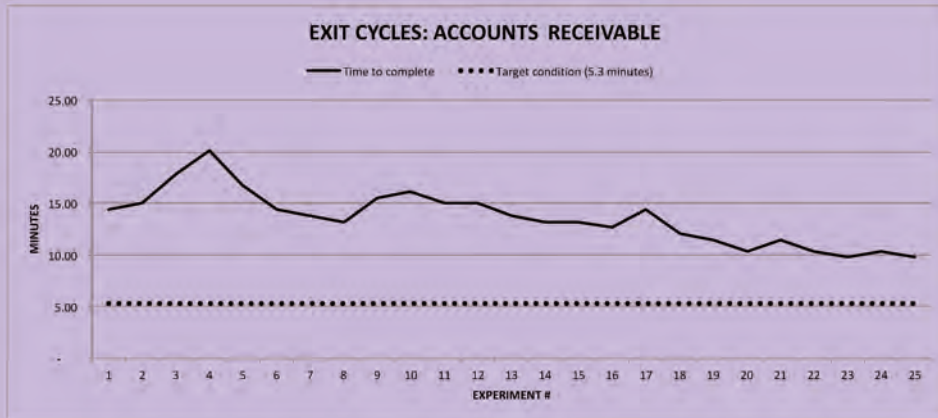
EXHIBIT 7 PDCA Cycle Record

EXPERIMENT #	DATE	PROCESS MAP STEP#	METRIC	WHAT TO EXPECT
19	12/11/17	2	TEAM MEMBER 1 OBTAIN SHIPPING DOCUMENTATION	IMPROVE OVERALL TIME
20	12/11/17	2	TEAM MEMBER 2 OBTAIN SHIPPING DOCUMENTATION	SAME IMPROVEMENT AS LAST EXPERIMENT
21	12/11/17	2	TEAM MEMBER 1 VALIDATE SHIPPING DATE	IMPROVE OVERALL TIME
22	12/11/17	2	TEAM MEMBER 2 VALIDATE SHIPPING DATE	SAME IMPROVEMENT AS LAST EXPERIMENT
23	12/11/17	2	TEAM MEMBER 1 VALIDATE SHIPPING DESTINATION	IMPROVE OVERALL TIME
24	12/11/17	2	TEAM MEMBER 2 VALIDATE SHIPPING DESTINATION	SAME IMPROVEMENT AS LAST EXPERIMENT

EXPERIMENT #	TIME COMPLETED (MINUTES)	TARGET CONDITION	WHAT HAPPENED	WHAT WE LEARNED
19	5.00	5.30	IMPROVED BY 0.5 MINUTES FROM #18	SOME TEAM MEMBERS HAVE DIFFERENT PROCEDURES FOR THIS TASK
20	6.00	5.30	LOST 1.0 MINUTE FROM #19	INCORPORATE TEAM MEMBER 1'S PROCEDURES FOR THIS TASK AS STANDARD
21	4.00	5.30	IMPROVED BY 1.0 MINUTE FROM #19	SOME TEAM MEMBERS HAVE DIFFERENT PROCEDURES FOR THIS TASK
22	4.00	5.30	IMPROVED BY 1.0 MINUTE FROM #19	SAME PROCEDURES AS TEAM MEMEBR 1
23	4.50	5.30	LOST 0.5 MINUTES FROM #22	TEAM MEMBER 1'S PROCEDURES NOT AN IMPROVEMENT
24	4.00	5.30	REPLICATED BEST TIME FROM #22	TEAM MEMBER 2'S PROCEDURES ARE AN IMPROVEMENT

month-end process with time durations. Next, we will review the third step, completing the work papers necessary for accounting month-end closing entries. See Exhibit 3.

Within the organization, all process steps will be reviewed for improvement. During the review of the third process step, it is determined that the organization completes 45 work papers, accounting for three days of activity. To achieve our goal of two business days, this process needs time reduction. An individual current status storyboard and exit cycle of past performance will be created for each of the 45 work papers. For our example, we select the accounts receivable work paper for improvement. The target condition is to complete the work paper in the planned cycle time of 5.3 minutes. This calculation is based on the fact that the overall step three process has four hours, or 240 minutes, of time planned for all papers. With 45 work papers

to complete, the calculation for planned cycle time for each paper is 5.3 minutes. The target condition is two team members working with the detail as identified by the automated report and reviewing the detail attached with the invoice for proper treatment within the planned time of 5.3 minutes. See Exhibit 4.

After the storyboard is completed for the individual process step, the current condition is reviewed. This includes the current process map of the steps utilized. See Exhibit 5.

After the current process is documented, a chart of the results is created to determine the process' stability. Since the system can generate the report daily, the organization instructs the team members to repeat this exercise daily during the month to validate the current condition. Team members note improvement during this period and incorporate some initial improvements and document obstacles

EXHIBIT 8 Exit Cycle Chart 2

EXIT CYCLES: ACCOUNTS RECEIVABLE
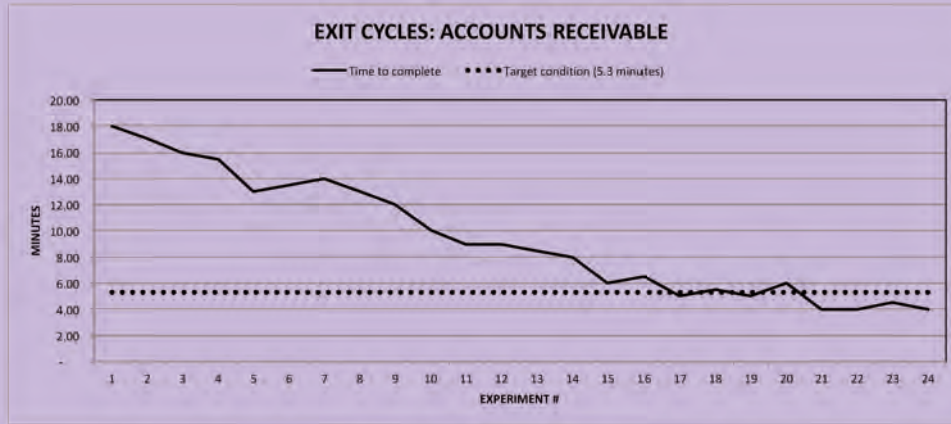
preventing further time reductions. See Exhibit 6.

After reviewing the current condition, the team can brainstorm ways to overcome the obstacles. This forms our list of changes to incorporate with each experiment to document our results. As improvement is recorded, new approaches will assist with additional improvements; thus, a cumulative effect is earned as we reach the target condition. Some of the obstacles include the timing of the data and receipt of the data to perform analysis.

The PDCA cycles record will document our experiments, one variable at a time. Our example indicates we can easily replicate the experiment hourly due to the volume of invoices, representing 6 experiments a day, or 30 per week. The test will have the two employees working to complete the work paper along with a timer and an observer-documenter of the experiment and storyboard. This represents a total of four team members participating.

Setting up each experiment with only one variable to change is up to the team. Ideas for improvement are generated through the obstacle list from the storyboard or current and past experiences by team members. For each experiment, we define what we expect to happen, define what we will measure, observe what actually happens, and reflect and adjust accordingly. See Exhibit 7.

Experiments 19 through 24 are displayed in Exhibit 7. The experiments are based on Process Map Step #2, "Validate Proper Sale with Documentation" (Exhibit 5). In these experiments, each team member is asked to only perform one of the tasks within the process step, which includes getting shipping documentation, validating the shipping date, and validating the shipping destination. We list what is expected for each experiment, which is either improvement or matching improvement. The results are not consistent, which is typically found. While reviewing experiments 19 and 20, it is learned that each team member was asked to solely obtain all the shipping documentation for all the invoices. The observer noted that Team Member 1 was using different procedures for finding shipping documentation than Team Member 2, resulting in improved time. This improvement is now added to the procedures and used consistently for all team members. In experiments 21 and 22, each team member was asked to solely validate all the shipping dates for all the invoices. The observer noted that both team members used the same procedures and completed the overall task in four minutes, for an improvement of one minute from the previous best time of five minutes from experiment 19. This is also recognized and adopted into the new procedures. In experiments 23 and 24, each team member was tasked to solely validate all the shipping destination information for all invoices. The observer noted that Team Member 2 was using different procedures for validating shipping destination information than Team Member 1, resulting in a time of four

minutes. This indicates no reduction of performance from the best time in experiments 21 and 22. This is also recognized and adopted into the new procedures. The graphical documentation of the experiments is incorporated in the exit cycle charts on the storyboard (Exhibit 8).

As each round of experiments is completed, the results are posted on the storyboard and reviewed by the Improvement *Kata* coach for the team. The coach's role is to provide feedback to the team for improvement. The coach asks the team the five core Coaching *Kata* questions discussed previously:
1. What is the target condition?
2. What is the actual condition now?
3. What obstacles do you think are preventing you from reaching the target condition? Which one are you addressing now?
4. What is your next step (or your next PDCA experiment)? What do you expect?
5. When can we go and see what we have learned from taking that step?

As the team answers the five questions, the improvement process and experiments will continue until the target condition is reached. Continuing our example, the coach discusses the five questions with the team after each round of experiments. In this case, we will use experiment 23:
1. Our target condition is 5.3 minutes per work paper.
2. Our actual condition after experiment 23 is 4.5 minutes.
3. Current procedures for Team Member 1 are not improving the process. We are validating the shipping destination.

4. Our next step is to utilize Team Member 2's process to validate the shipping destination to improve the process time of four minutes.
5. We will implement the experiment in the next hour.

After the target condition is achieved, the team identifies the next objective they want to achieve before the goal date. In our example, the task for the accounts receivable was able to perform better than the target condition, so we can move on to improving the other 44 out of 45 work papers for the third step of the month-end process chart (see Exhibit 3).

After the third step is complete and can meet the individual goal, we move to the other steps and repeat the Improvement *Kata* method until we complete the overall goal of closing the accounting month-end process and completing variance analysis within two business days. During this journey and most Improvement *Kata* initiatives, we might have several target conditions due to the difficulty of the goal. In our example, we had only one target condition.

Conclusion

The Improvement *Kata* and Coaching *Kata* method is a systematic, scientific, and standard routine for organizations to develop a culture of scientific thinkers who practice continuous improvement. Applied to any problem or challenge, this easy-to-implement framework can be utilized in every industry and every department for organizations to achieve their goals. ■