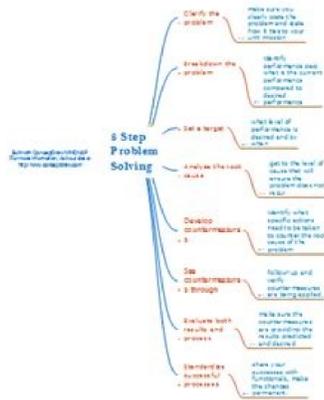


I'm not robot!



Toyota Kata

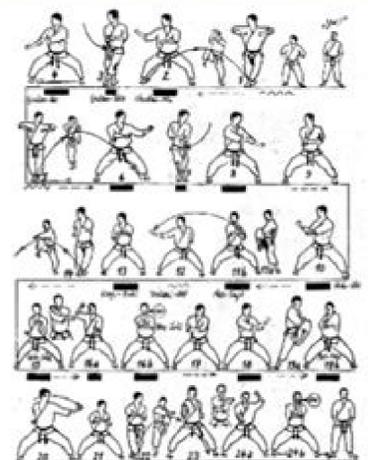
Mobilizing our ingenuity through good management

Mike Rother, February 2010

The practice of kata is the act of practicing a pattern so it becomes second nature.

In its day-to-day management Toyota teaches a way of working -- a *kata* -- that has helped make it so successful over the last six decades.

Toyota's **Improvement Kata** is something we overlook in benchmarking and should learn more about in order to understand Toyota's story.



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Toyota kata examples.

The Toyota Kata in Software Development This blog explains Toyota Kata applied to Software Development as per Jesper Boeg's Level Up Agile with Toyota Kata book. This is a complement to the Level Up Agile with Toyota Kata book notes (read it after this one). I also recommend watching True Continuous Improvement with Toyota Kata by Jesper Boeg and Toyota Kata - Retrospective on Steroids by Håkan Forsås for more background. What is Toyota Kata? A process improvement process. Why Toyota Kata? Why not retrospectives? Jesper Boeg lists the following reasons for "Why do you need Toyota Kata?" in the Level Up book: You focus on the easy changes, not most important. Not look at the effects of improvements. Managers not focused on driving improvements. Daily work is always more important than improvement work. Improvements lacking direction. Too much improvement work in progress. Improvement slow and often on hold. Teams improvements always require escalation. That is spot on my personal experience with Agile retrospectives. Maybe if you are doing Agile retrospectives properly, you do not need Toyota Kata, but for me the key aspects that make Toyota Kata different and interesting are: Focus. Continuous (Daily). Data driven. Focus Your process improvement starts by defining what ultimate capabilities your company needs to deliver at its best. This is your Process Vision. It will guide all the improvement work that the team will be doing. Without it, there is no direction to follow and no way to focus. Some important points about the Process Vision: Years to achieve, or unattainable. It should be what you want, not in what you don't want. Process Vision != Process outcome. Tool, role and practice free.

Once you have the Process Vision, Toyota Kata is series of steps where you continuously narrow the scope and timeframe of the process improvement effort: A Challenge is a subset of the Vision: 2-6 months timeframe. You just work on one Challenge at a time. A Target Condition is a subset of the Challenge: 4 weeks timeframe. You just work on one Target Condition at a time. An Obstacle is one specific issue that does not allow us to reach the Target Condition: Several Experiments timeframe. You just work on one Obstacle at a time. An Experiment tries to overcome an Obstacle: One to ten days timeframe. You just run one Experiment at a time. Part of this process is that you do not create big plans upfront, but you decide on the next steps as needed. For example, you do not plan 3 Challenges ahead. You will just start preparing the next Challenge as you get closer to finishing the current one. Continuous Running Agile retrospectives once a month means that improvement work tends to be important at two points in time: During the retrospective, when you are dreaming of the possible action improvements. Just before the next retrospective, when you realize that you did not find the time for any of those actions. It shouldn't be like this, but Toyota Kata has two practices which their cadence ensures that improvement work becomes a habit: Coaching Kata: Happens 1-2 times per week. Reviews where you are with the improvement work, reminds you why you chose it, and what the next step is. It happens with the Coach, who should be the team's manager, so it is the "boss" the one pushing for the improvement work to happen twice per week! Daily Kata: A daily reminder of the Experiment work that needs to be done. Both practices can help to achieve the Third Ideal: Elevate improvement of daily work over daily work itself. Gene Kim, The Unicorn Project Data Driven When choosing the next Challenge, first you need to decide what metrics (lagging and leading) you are going to track to ensure that the improvement work is achieving the desired effect. Then you need to: Find the current values for those metrics (Current Condition). Decide what are the future values that you want to achieve. All the other work is centered around those metrics: Target Condition is a subset of the Challenge metric improvements. For Obstacles and Experiments, we keep asking how working on them will move the metrics into the right direction. We update and look at the metrics during the Coaching Kata, which happens 1-2 times per week. Data is at the heart of the process. Toyota Kata does not forget that feelings are important and the Current Condition includes a qualitative outcome section to remind us what is painful today and how the future will when we reach the Target Condition. Important note: Every Challenge will have a different set of metrics. Who? There are the roles in Toyota Kata: The Team: in Software Development, the team is the subject of improvement, not the individual. The Process Lead: equivalent of a Product Owner, but for the process. The Coach: helps the Process Lead to learn. Usually the manager. The Second Coach: Coach that coach the Coach on coaching the coachee. How? Steps: Set Vision. Organization level. Same for all teams. Choose Challenge + gasp Current Condition (per team). Process Lead responsible, but can collaborate with some/all from the team. Improvement Kata planning meeting: Choose Target Condition. Brainstorm a few Obstacles and pick one. Brainstorm a few Experiments and pick one. Daily: Execute Experiment. Choose new Obstacle if previous one has been overcome. Choose new Experiment if previous one has been executed. Twice a week: Coaching Kata. Go to step 3 after four weeks. About two weeks before the Team is going to achieve the Challenge, the Process Lead should run step 2 in preparation for step 3. Improvement Board A Mural example (read only) and a Mural template (requires Mural account): Open to create a mural from this template in your workspace. Powered by MURAL Improvement Kata planning meeting Key points: Every 4 weeks. 90 minutes. Team + Process Lead. Coach optional but highly recommended. To plan the next Target Condition, not to argue about the Vision or Challenge. Current Condition data is ready. Default meeting agenda: Did we achieve our last Target Condition? If not, why? What happened? What did we learn? What is the Challenge? What is our Current Condition? Review the updated

Value Stream Map. What is the proposed focus area for the next four weeks? Agree on the next focus area. Identify the Target and Current Condition for the chosen focus area (iterative). Identify Obstacles. Find Experiment Ideas. Find Experiment Ideas. Coaching KataKey points: 1-2 times per week, 15 minutes. Process Lead + Coach. Team welcomed. To learn and reflect. Current Condition data is ready, Improvement Board is up to date. Default questions: What is the Target Condition? What is the Current Condition now? Reflect on the last step: What was your experiment? What did you expect? What actually happened? What did you learn? What Obstacles you think are preventing you from reaching the Target Condition? Which one are you addressing now? What is your next experiment? What do you expect will happen? When can we evaluate the result? What did you learn from this Coaching Kata? Daily KataKey points: Daily, 1-5 minutes. Process Lead + Team. Focus on Experiment. No need to fix all obstacles to reach the Target Condition. Default questions: What did you learn from yesterday? What did you expect? What actually happened? Did we take a step towards removing the Obstacle? Did we move the metrics closer to the target condition? What is/will be our next experiment? What Obstacle will we address and why? How will that moves us closer to the Target Condition? Is it the smallest step? Who is responsible? When can we execute it and when can we evaluate the results? Hope that gives you enough material to understand what Toyota Kata is about, decide if you want to invest more on it, and provide reference information if you decide to implement it. Summary: Improvement Kata is a method where team leaders and members continually practice a kata routine that develops and channels their abilities to solve problems. It's a set of practices outlined in the book Toyota Kata that use experimentation to help work towards a complex goal by breaking it down into smaller, immediate targets. In martial arts, a kata is a choreographed pattern of movement practiced by a disciple to memorize and perfect martial arts movements. This practice of practicing a routine until it became a refined habit now extends beyond martial arts and into business. In particular, the Toyota Motor Corporation developed continuous improvement through practiced patterns. This technique, called Improvement Kata, was discovered and documented in the business book Toyota Kata. Improvement Kata is a method where team leaders and members continually practice a kata routine that develops and channels their abilities to problem-solve. Over time, the practices become second nature. It's a set of practices outlined in the book Toyota Kata that use experimentation to help work towards a complex goal by breaking it down into smaller, immediate targets. The Improvement Kata routine seeks to problem solve in a more creative, directed, meaningful way. It seeks to do so with a four-part model: Understand the direction or challenge Grasp the current condition Define the target destination Move toward the target iteratively, which reveals obstacles to overcome These techniques are particularly helpful when the route to a destination is unclear, as experimentation can help you better understand the problem and find unique solutions. Each step of the Improvement Kata pattern has simple practice routines, called starter katas, that make the pattern easily actionable and teachable. Today's tech environment is incredibly dynamic, and this presents challenges that are more complex than ever. Improvement Kata is a scientific, goal-oriented method of working that enables individuals and teams to tackle these challenges efficiently, and mastery of the technique can offer numerous benefits beyond a structured method of operations. These benefits include: When teams share the same definition of success, there is more collaboration, less confusion, and higher productivity. This is because they understand how they can best contribute to a larger objective, giving teams a greater sense of ownership over their work, strengthening their commitment to the overarching vision, and encouraging proactive decision-making that prioritizes movement towards the end goal. When you know where you want to go but you're not sure how to get there, the first step always seems to be the greatest challenge. However, adopting experimentation as a regular practice can help ease the uncertainty and serve as a vehicle towards your final destination. Make hypotheses about how you can get to where you want to be, and initiate experiments to determine if you're correct. If that's not the correct path, there's no harm in course correcting. In any case, you now have a better sense of what the right direction is. Experimentation is all about learning and resolution. Focusing on small, sustainable improvements can minimize time and energy wasted on activities that don't contribute to the solution. For example, when you review the tasks in your backlog, you should ask yourself: will this bring me closer to my next milestone and overall goal? You can also take this a bit further: given the time I have left in this increment, do I think I have the knowledge to remove blockers and tackle the tasks at hand, or should I defer them? I found this tactic useful to avoid wasting days or weeks on a problem that requires tangents to remove obstacles. Improvement Kata reduces waste for developers, managers, and teams. For example, developers should not focus on building extra features that are nice but unnecessary. A milestone-oriented process can help ensure they're building with intent. Similarly, managers or tech leaders who follow principles of Improvement Kata should be diligent about removing blockers that hinder immediate progress. Finally, Improvement Kata can benefit teams as a whole by promoting constant communication, efficient feedback loops, and continuous delivery. Coordinating between what we think will happen to what actually happens and what is learned from the discrepancies is at the heart of Improvement Kata. While this may seem simple enough, the challenge is that not all of us are wired to think like this. Integrating Improvement Kata practices into your workflow takes consistent, mindful practice. The first step is to clearly understand the direction or challenge. This helps inform the planning and experimentation phases. If you struggle to identify what your North Star is, consider how your team might contribute to your organization's larger goals or how you can leverage your team's strengths to turn a particular vision into a reality. Before you begin working towards your North Star, take time to document current processes and workflows, review where your team stacks up against appropriate metrics, and assess the team's existing knowledge infrastructure. Be honest about what your current condition is so that you can identify meaningful steps towards your ultimate goal. Once you have a clear understanding of current systems and processes, identify the next target condition, or where you want to be after your next iteration. The next target should be a single, tangible change that can be achieved in a matter of weeks/sprints and bring you closer to your North Star. Now that you have a vision of what your next target is, form a hypothesis about how you can get there. Come up with ideas on where to start and what to try, and don't be afraid to fail! Speed is necessary even if it means cutting corners and using clever hacks along the way. You'll either get confirmation early that it can be done, or you find unforeseen challenges to tackle. If it doesn't work, turn it into a learning opportunity. Once you verify it works, move backwards to polish the corners you've cut, and smooth out any rough edges that need to be refined. Say you want to build a new service based on an idea, but you're not sure whether it will work. Rather than trying to get every layer perfectly worked out and incrementally expanding it until it's feature-complete, try picking a target that delivers some value and brings you closer to the system you envisioned. You'll probably have lots of unknowns, but you can learn a lot from challenges, and experiment with different ideas to find one that works. Once it does, reevaluate where you are, pick your next target, iterate, and reflect on your progress. Another example is if you maintain an internal system that needs improvements. Pick one you are ready to tackle and brainstorm some ideas on how to solve it. Experiment with different approaches and try to complete it as fast as possible to start getting some feedback about it. Once things are good enough, move on to the next problem to solve. Kata and lean are different, yet compliment each other. Kata and Lean are different in many ways. Lean refers to processes to be implemented while kata refers to techniques to be practiced. Thus, kata became a mainstream business practice when Toyota adopted it into its lean production system. When combined into a unified approach, these concepts provide powerful results. Both kata and lean principles focus on enabling faster progress, but slightly differ in their approaches.Kata is a set of habits that can be deployed at the individual-level and focuses on continual improvement and learning through experimentation. It is useful for tackling problems with uncertainty, while learning and developing skills to repeat the solutions faster and faster. It helps embracing the unknown, and teaches not to fear challenges and obstacles. Lean principles, such as Lean Portfolio Management, help organizations and teams improve processes and workflows such that the greatest value can be extracted with minimal waste. Once a process is established, the focus is optimizing it to be as fast and efficient as possible. Improvement Kata are habits and techniques that teams can use to reinforce lean principles. While the two approaches focus on different things, they both came from Toyota originally, and can be used well together. For example, the lean philosophy hinges on eliminating wasteful activities so teams can extract and deliver the most value. Improvement Kata supports this goal by minimizing waste through routine experimentation. If one method does not yield expected results, then it is removed from the process. The goal-oriented teachings of Improvement Kata encourage completing a task before moving to the next, so the process is continuously refined until it achieves intended results and thus achieves greater organizational efficiency, yet another pillar of the lean philosophy. Above all else, Improvement Kata offers tools that can be used in the present state to get to a lean future state. Breaking down larger objectives into smaller pieces means that each of those parts will be optimized for its intended purpose. Ultimately, this means that the entire system will thus be able to generate maximum value. Improvement Kata is a valuable tool that supports the goals of the lean philosophy. When employees and teams adopt a goal-oriented approach, they can easily drive incremental change that maximizes the use of limited resources while minimizing waste. Together, Improvement Kata and lean can help organizations be more efficient and develop a culture of innovation. Are you Interested in learning more about Improvement Kata and Lean Portfolio Management? Dive deeper into the fundamentals of Lean Portfolio Management and see how Atlassian's Jira Align supports it:

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