Chapter 6

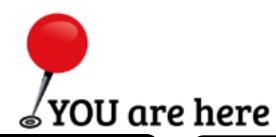
The Improvement Kata - Planning Phase

Step 3: ESTABLISH THE NEXT TARGET CONDITION

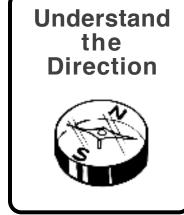
Practice this Routine

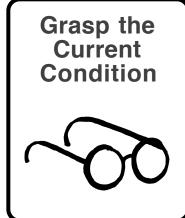


ORIENTATION



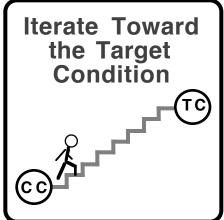
















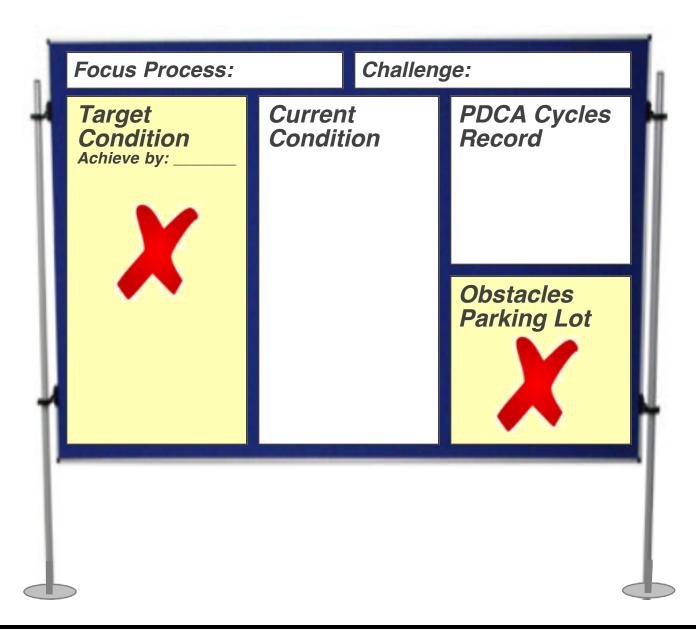
'Planning' Coaching Cycles

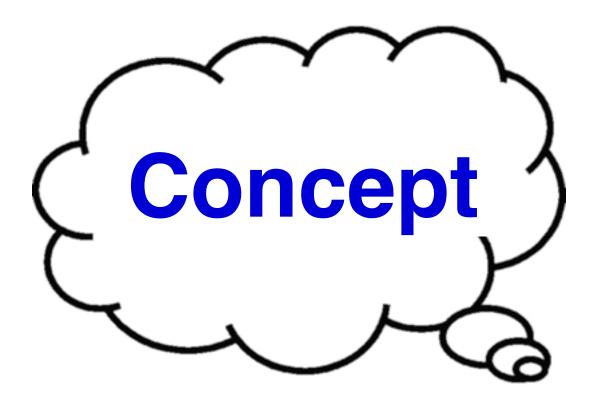


LEARNER'S STORYBOARD

Learner and Coach are now concentrating on these two fields X

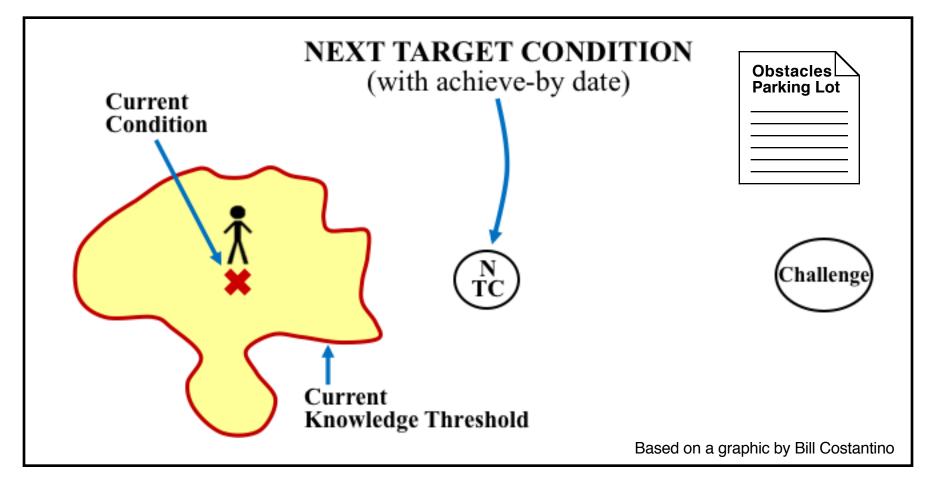






WHAT IS A TARGET CONDITION?

A target condition <u>describes a desired future set of circumstances</u> that lie beyond your current knowledge threshold (meaning you don't yet know how you will get there). A target condition has a specified achieve-by date, which is often between 1 week and 3 months out.



NOTE that a target condition is a description of where we're going to be, <u>not</u> of how to get there

A TARGET CONDITION IS AN ESSENTIAL ELEMENT FOR ACTIVATING HUMAN INGENUITY



A target condition is a key element of the creative process.

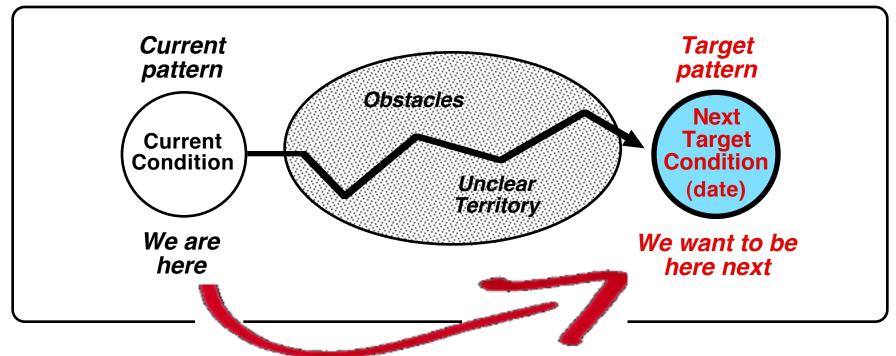
A target condition is a forward-looking new goal (a positive future projection) rather than a backward reflection of problems. It's about moving toward something as a path to achievement.

A target condition prompts us to consider a different set of circumstances from those that currently exist.



ESTABLISHING A TARGET CONDITION IS LIKE TIME TRAVEL

If we fast forward to the achieve-by date and look at the focus process, the target condition is your description of what we would see



A target condition answers questions like:

- What do we want this process' operating pattern to be by (date)?
- How do we want this process to be functioning by (date)?
- What functionality do we want to have by (date)?
- · Where do we want to be next? What is the target pattern?

THE BASIC ELEMENTS OF A TYPICAL TARGET CONDITION

Focus process and the achieve-by date

Task unit + demand rate or time to complete one unit

Desired pattern of operating (eg: steps, sequence, times)

What does the customer want?

This is often a sketch of the 'idealized' desired situation (on the achieve-by date)

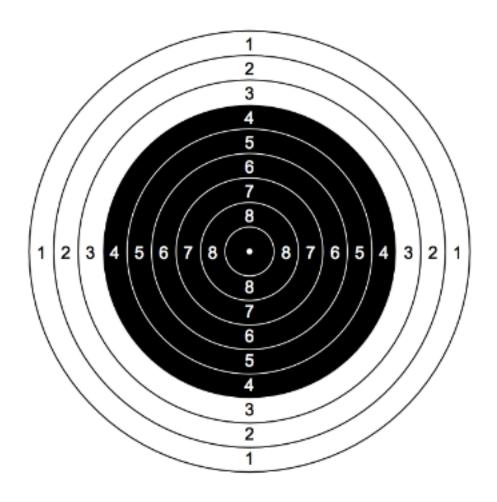
Process Metric (measured in real time)

Outcome Metric (measured periodically)

How you will measure the effect of rapid experiments

How you will measure the performance of the process

THINK OF A TARGET CONDITION AS A TARGET PATTERN YOU'RE AIMING FOR



A Target Condition describes an operating pattern that you predict will deliver a desired outcome

The "construction site" is here
Focus your efforts here and
you'll get the desired outcome!

TARGET CONDITION An operating pattern/functionality	OUTCOME METRIC A result or score	
Desired pattern for how to shoot basketball free throws Desired pattern of how math and science are taught. Desired pattern of student practice.	80% of basketball free throws made All 6th grade students in our school passing the standardized test for math and science	
This is actionable We predict that operating in this pattern will generate	A number that can't be achieved directlythis outcome / result	

DON'T LIMIT YOUR TARGET CONDITION TO WHAT YOU ALREADY KNOW HOW TO DO

The statement "Beyond your knowledge threshold" means you don't already know how you will reach your next target condition.

As you define a target condition, you should not yet know exactly how you will achieve it. This is normal, for otherwise you would just be in an *implementation* mode rather than a creative *improving and innovating* mode

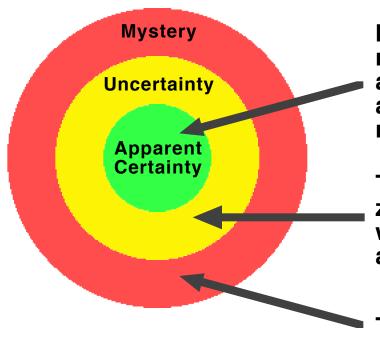
A target condition that you can already or quickly see how to reach - one that involves little trial and error - is not a good target condition. A good target condition requires experimentation and learning to reach it.

"The greater danger for most of us lies not in setting our aim too high and falling short; but in setting our aim too low, and achieving our mark."

~ Michelangelo

THE TARGET CONDITION SHOULD BE CHALLENGING

A target condition should be in the yellow "Uncertainty Zone"



In this zone you're only reshuffling things you already know. You can already see how to reach the goal.

True improvement. In this zone you have to develop new ways, by thinking creatively and experimenting.

Too difficult for today.



A target condition is <u>not</u> about the highest payoff or lowest-risk option. It's something you need to strive for on the way to meeting the overarching challenge.

Don't utilize cost/benefit analysis (ROI) to determine what a target condition should be. Using cost/benefit analysis in this way means you're only operating within the scope of what you already think you know; within your current knowledge threshold. You can't really assign a cost to what you don't yet know.

In other words, don't use cost-benefit analysis to determine where to go. First determine where you want or need to be next—the target condition—and then you can utilize cost/benefit analysis along the way to help you determine how to get there.

What you are doing is defining the next target condition you need to achieve in order to move toward the challenge, and then working iteratively to achieve it within budget and other constraints. A target condition should be achieved within target cost, of course, but it usually takes ingenuity & resourcefulness along the way to achieve the goal within that constraint.

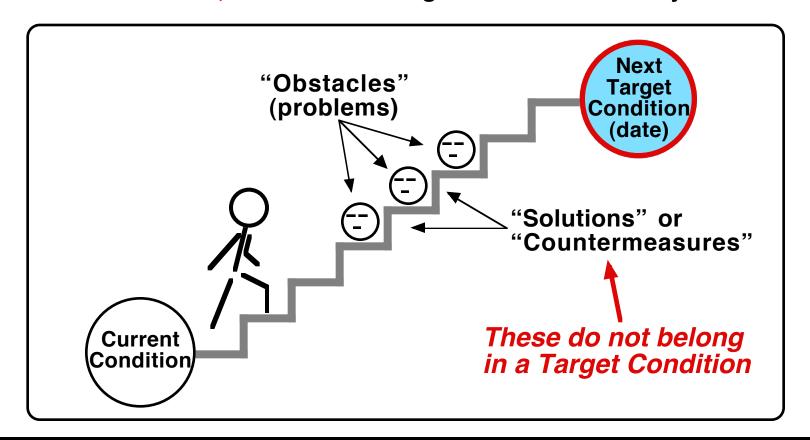
In this managerial system, cost/benefit analysis is used less for determining direction and more for helping to definine where we need to get creative in order to achieve a desired condition.

A tricky part of establishing a Target Condition: DON'T THINK MUCH ABOUT SOLUTIONS AT THIS STEP

It's too early. First just describe the situation you want to reach.

A *Target Condition* is not a *solution*. It's a description of set of circumstances you want to reach by a specified date.

What you do <u>later</u> (in the 'Executing' phase of the Improvement Kata) is work iteratively to overcome *obstacles*, or *problems*, on the way to the target condition by developing and testing *solutions*, or *countermeasures*, to make the Target Condition a reality.



A TARGET CONDITION LEAVES LOTS OF UNCERTAINTY ON THE TABLE

As you establish a target condition, people on the team will often already have ideas about how it can be reached. It's important to recognize that these are only theories about the potential path, and that they should not be included in the target condition. What may seem like a direct path will not be.

At this point you're only describing a desired set of circumstances. Formulate them in a way that leaves you open to solutions other than those you might currently think will get you there. Describe the target condition in a way that allows course corrections to be made as you iteratively figure out how to get there by experimenting in the upcoming Executing phase.



NOTICE THE DIFFERENCE BETWEEN "TARGET CONDITION" AND "SOLUTIONS"

PLAN

TARGET CONDITION

A description and

operating pattern

want a process or

system to have on

specification of an

or functionality you

A prediction of the steps that will be required to achieve the target condition.

(Any plan is only a hypothesis)

The actual steps, techniques and countermeasures necessary to achieve the target condition.

SOLUTIONS

Solutions are determined through experiments on the way to the target condition



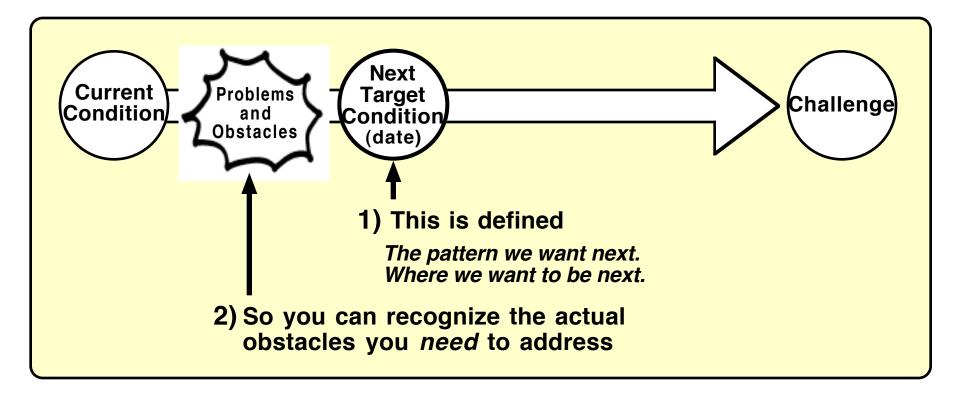


The actual path that gets you to the Target Condition will only be known in hindsight



A TARGET CONDITION IS A SET OF CONSTRAINTS THAT HELP YOU WORK SCIENTIFICALLY

By setting a defined objective and then trying to hit it, you learn why you cannot. That tells you exactly what you need to work on.

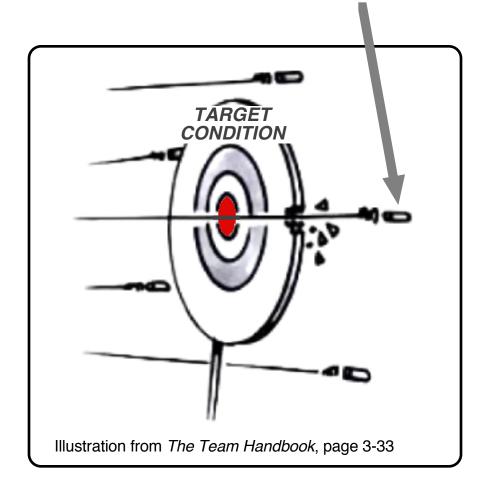


The Improvement Kata involves going after only the *right* problems one at a time, i.e., those obstacles you actually find are preventing you from getting to the specific target condition you're striving to reach. There will be many things you *don't* work on.

WORKING SCIENTIFICALLY

A target condition is an overall objective - a set of constraints - that you repeatedly test against in order to reveal key obstacles that you *need* to work on, by using this question:

"What is now preventing us from achieving the target pattern?"





A TARGET CONDITION ENABLES TEAMWORK

Mutual effort toward a mutual end

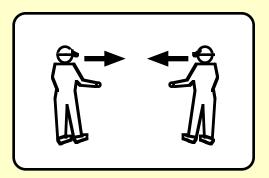
WITHOUT a Target Condition

Disorganized discussion about solutions.

Exchange of opinions. Debate about my idea versus your idea. "Who's right?"

Prioritization by dominant individuals.

No experimentation.

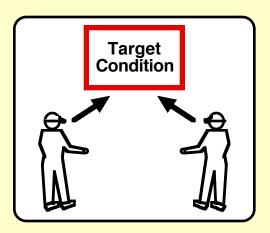


WITH a Target Condition

Structured discussion about next experiment.

What do we need to test next to reach our objective?

Moving forward scientifically.



Once you've experienced the role of a Target Condition you'll find it difficult to work without one!

A TARGET CONDITION HELPS YOU BEAT ENTROPY

Without something to strive for, any process will naturally tend to degrade



It is estimated that 80-95% of the variation in a work process is random, or common cause variation. These are systemic problems. Although problems are occurring, the process is actually statistically stable. These problems are normal for the way the process is currently being operated.

In the case of systemic problems, examining each failure and searching for the root cause in order to solve the problem ("troubleshooting") is the wrong approach for continuous improvement. All you're actually doing is trying to stay in place, which entropy says is not possible.

In order to take action against the results of common cause variation, the performance of the system itself must be changed. A systemic improvement is needed.

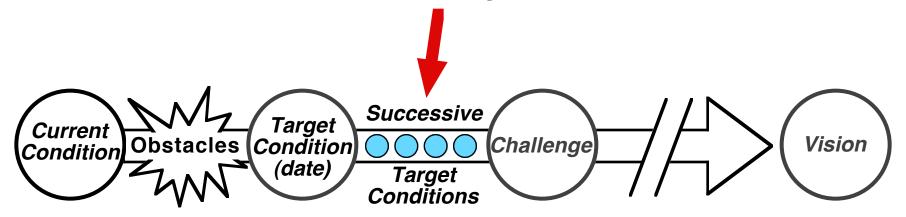
That's exactly what a target condition represents.



KEEP IN MIND THAT YOU DON'T NEED TO REACH THE CHALLENGE IN ONE LEAP

There will be several target conditions on the way to the challenge

The exact series of target conditions required to meet the overarching challenge can't be defined in advance. When you reach one target condition you'll know a lot more about what the next target condition should be.

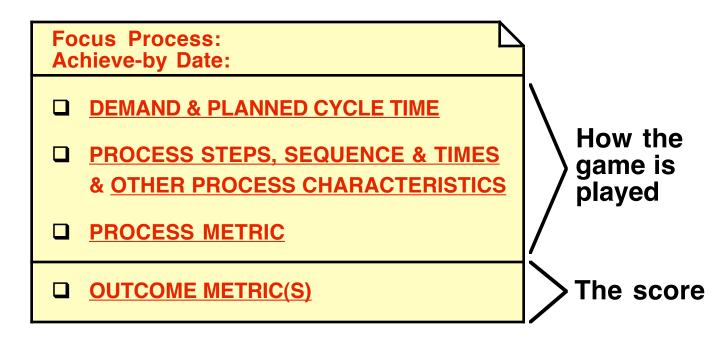


What's in a Target Condition



THE INFORMATION IN A TARGET CONDITION

A target condition should name the focus process, specify the achieve-by date and include these categories of information





A target condition is a multifaceted description of a desired condition. You want these conditions to exist *simultaneously*.





That makes the target condition a learning task

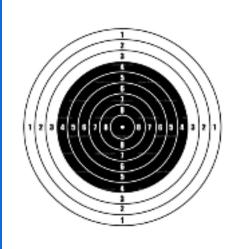
EXAMPLE TARGET CONDITION CONTENTS

Focus Process: Achieve-by Date: (1 week - 3 months in the future) **CUSTOMER DEMAND & PLANNED CYCLE TIME** The task unit and the time to complete it **DESCRIPTION OF PROCESS STEPS, SEQUENCE & TIMES** The pattern or functionality of how you want the focus process to be operating How the & OTHER PROCESS CHARACTERISTICS game is Quality Target cost Number of people Number of shifts **Examples:** Quality Amount of cycle fluctuation played Inventory amounts Production sequence & lot sizes Changeover time Where 1x1 flow is desired · Amount of downtime PROCESS METRIC(S) An aspect you can experiment against in real time Examples: • Time for each step, piece, pitch, etc. Degree of time fluctuation from cycle to cycle **OUTCOME METRIC(S)** - A measure of process performance The **Examples:** Number of pieces per hour or shift score Overtime Productivity

A TARGET CONDITION IS NOT	WHY	
A target condition is not about avoiding negative outcomes.	A target condition is about achieving new outcomes.	
A target condition ≠ setting a stretch goal and then just letting people struggle with it.	The Improvement Kata is about giving people challenges <i>and</i> coaching them in an effective way of meeting them.	
A target condition is not an either/or choice between existing options.	A target condition represents a new situation that did not exist previously. A target condition lies beyond what you can see and is part of the Improvement Kata's scientific process that ventures into the unknown.	
A target condition is not something that comes out of brainstorming.	A target condition should be mathematically consistent. The Learner should be able to explain the rationale for the target condition mathematically.	

A TARGET CONDITION IS NOT	WHY	
Words like these shouldn't be in a target condition: "Minimize" "Reduce" "Improve" "Increase"	No verbs in a target condition! That's for how to get there, which comes later. A target condition describes a desired pattern at a future point in time, not actions. Transport yourself to the future and state the target condition as if you are already there.	
These are not a target condition: > Apply 5S (Housekeeping & workplace organization) > Install a barcode system > Change the layout	These are countermeasures, which should not be confused with a target condition. First describe how the process should operate. Countermeasures are then developed as needed as you strive to reach that target condition.	
These kinds of statements alone ≠ a target condition: "A pull system" (kanban) "Milk-run material delivery"	Not enough detail. A kanban or material- delivery system can be a target condition, but you need to describe the pattern of how you want it to operate.	

Steps to Establishing a Target Condition

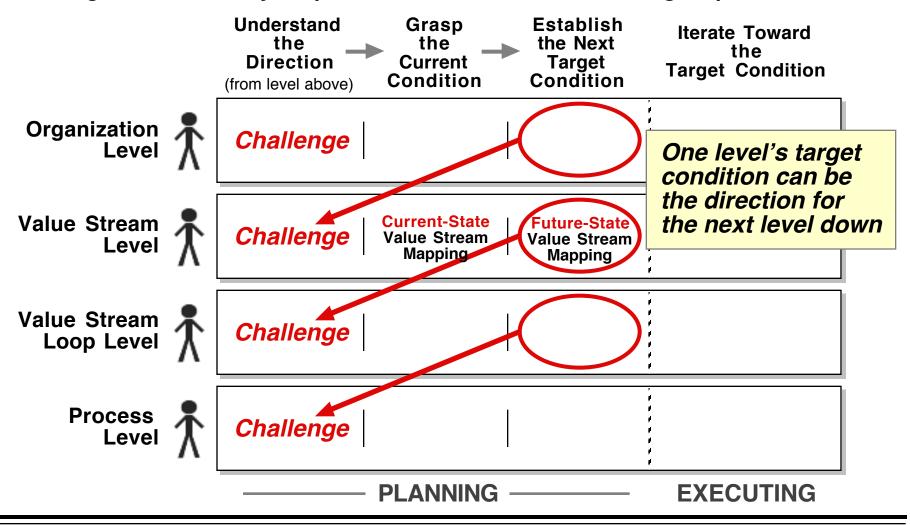


- 1. Review the challenge
- 2. Coach sets achieve-by-date
- 3. Learner develops, proposes and iteratively fine tunes the target condition
- 4. Learner starts an 'Obstacles Parking Lot'

1st STEP: REVIEW YOUR CHALLENGE

Unless you're a beginner just getting some initial practice with the Improvement Kata pattern, you should not establish a target condition without first understanding your challenge. The challenge is the framework within which a target condition is defined.

Often the target condition from the level above you will be the direction in which you should design your target condition. Is there a future-state value stream design? What does your process need to do to make that goal possible?



2nd STEP: AGREE ON THE TC ACHIEVE-BY DATE

The <u>Coach</u> proposes an achieve-by date (level of difficulty) for the Learner's next target condition based on the Learner's Improvement Kata skill level. This table is a general guideline.

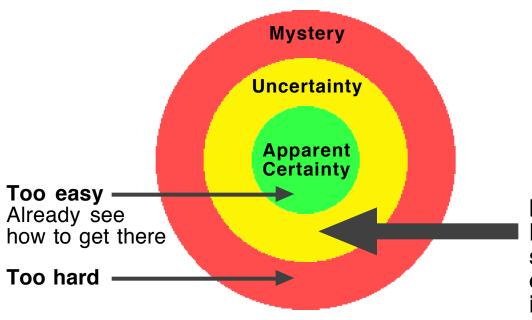
In the begining shorter is better for learning because then there will be more repetitions of the Improvement Kata pattern.

Target Condition Degree-of-Difficulty Guideline			
Learner's Skill Level	Characteristics of the Skill Level	Target Condition Achieve-By Date	
Expert	No longer relies on rules / guidelines / maxims Grasp of situations & decision making intuitive Vision of what is possible	??	
Proficient	Sees what is most important in a situation Perceives deviations from the normal pattern Maxims vary according to situation	Target condition ≤ 3 months out	
Competent	Copes with crowdedness Sees actions partially in terms of LT goals Has standardized and routinized procedures	Target condition ≤ 1 month out	
Advanced Beginner	Action based on attributes or aspects Situational perception still limited All aspects are given equal importance	Target condition ≤ 2 weeks out	
Novice	Adherence to rules or plans Little situational perception No discretionary judgement	Target condition 1 week out	

DO NOT DEFINE A TARGET CONDITION THAT'S EASY OR COMFORTABLE

The Coach decides how much of a stretch the next target condition should be, trying to have the Learner practice just over the edge of their capability. A good target condition brings the Learner and process team to the limits of their knowledge and compels them to learn, grow and adapt.

Learning a new skill requires stretching and experiencing small failures along the way. That's normal.





It's important that the Learner is challenged, so s/he experiences a sense of accomplishment and an increase in self-efficacy.

LEVEL OF TARGET CONDITION DIFFICULTY

When defining a target condition, consideration is given to both the Learner and the Coach's current Improvement Kata skill level

LEARNER'S SKILL LEVEL

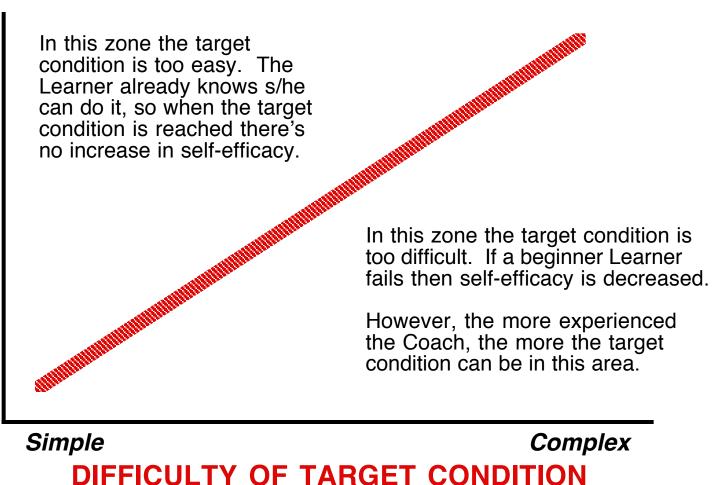
Expert

Proficient

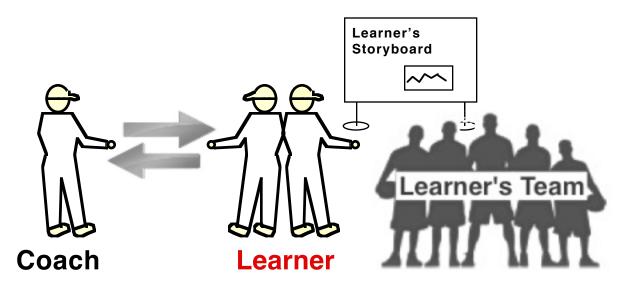
Competent

Advanced Beginner

Novice



3rd STEP: THE LEARNER DEVELOPS, PROPOSES AND FINE TUNES THE TARGET CONDITION



People confuse a target condition as a management target, or a stretch goal set by management, or something that comes out of brainstorming. A target condition is not any of these things.

Designing the next target condition is part of the Learner's process, done in collaboration with the Coach and the Learner's team. The Learner, leading the team, develops the target condition in an iterative dialog with the Coach.

The Learner presents the target condition to the Coach, receives feedback and fine-tunes the target condition. This process repeats until Coach and Learner agree on the target condition. The Learner may have to rethink and adjust the target condition several times.

IT'S AN INTERATIVE, BACK-AND-FORTH PROCESS BETWEEN LEARNER AND COACH

The Coach will ask you to use the right side of the Current Condition / Target Condition form that you used in the process analysis, to now describe how you would like the focus process to be operating on the achieve-by date.

This is usually just the first of several iterations going backand-forth between you and your Coach, until you reach consensus on the target condition.



HOW CAN I DEFINE A TARGET CONDITION WHEN I DON'T KNOW HOW I WILL GET THERE?

You should work hard to grasp the current condition and make informed choices in defining the target condition, but do not make up things you don't yet know. Here are two ways to deal with this dilemma:

(1) You can start with a skeleton target condition and fill in the details as you learn more.

Once a target condition and its achieve-by date are set they shouldn't be changed. But it is OK to add details to a target condition as you work toward it and learn more. It's fine for you to leave out some details and add them later. At any point in the Improvement Kata you can conduct quick experiments to test ideas and see further, and then incorporate what's learned into the target condition.

(2) Don't worry.

Developing a good target condition is a skill that comes with experience, and your first target condition probably won't be the best. Since the achieve-by date for a beginner's first few target conditions is short (1-2 weeks) it's OK if you make some mistakes in establishing the first target condition. This will quickly become apparent, be corrected when you establish the next target condition. It's a good learning experience.

TARGET CONDITION PLANNING FORM

Three versions of the Current Condition / Target Condition form are on the next pages

Referring to the Current Condition summary on the left side of the form:

- --> What you will keep the same?
- --> What do you want to change?



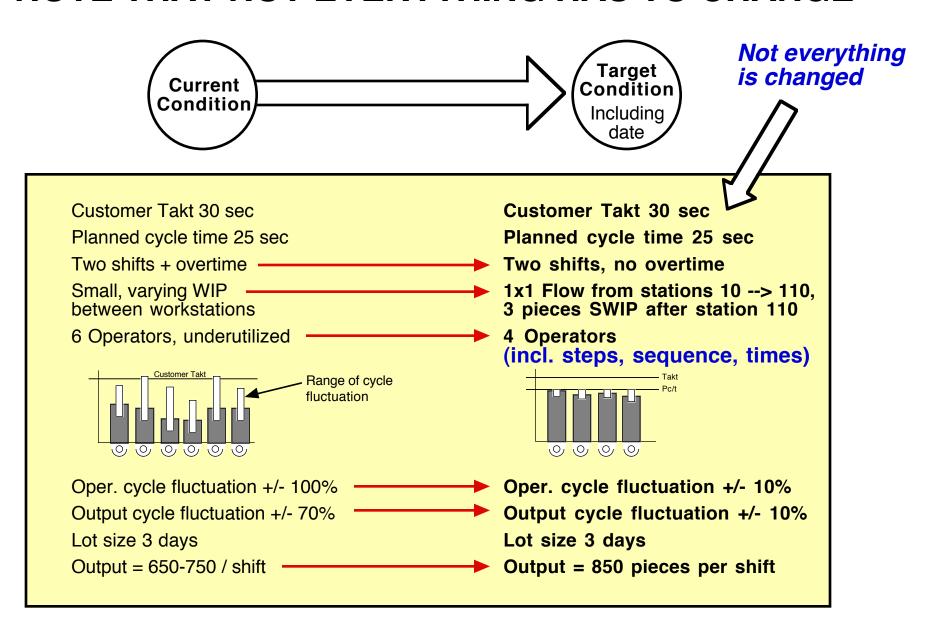
Upon completion, you can cut the form where indicated and post the right side of the form in the "Target Condition" field of your storyboard.

			√	
CURRE	NT CONDITION	/ TARGET CONDITION /	Overarching Breakthrough Challenge	
Learner: Coach:		Process:		
(Categories	Current Condition Date	Target Condition Achieve-By Date	
1	Takt time			
Task unit & time to	Pc/t			
complete	# of Shifts			
2 Current	Process steps and sequence	show block diagram	show block diagram	
Current operating	Batch size			
pattern	Where WIP Accumulates Number of			
	operators % exit cycle (at end fluctuation of line)	+ show all run charts		
	Process metric			
	List other observations about the current operating pattern			
Capacity	Machine capacity chart	show chart	show chart	
4 People required	Calculated number of operators			
5	Actual output / shift	show run chart		
Outcome metrics	Overtime?			

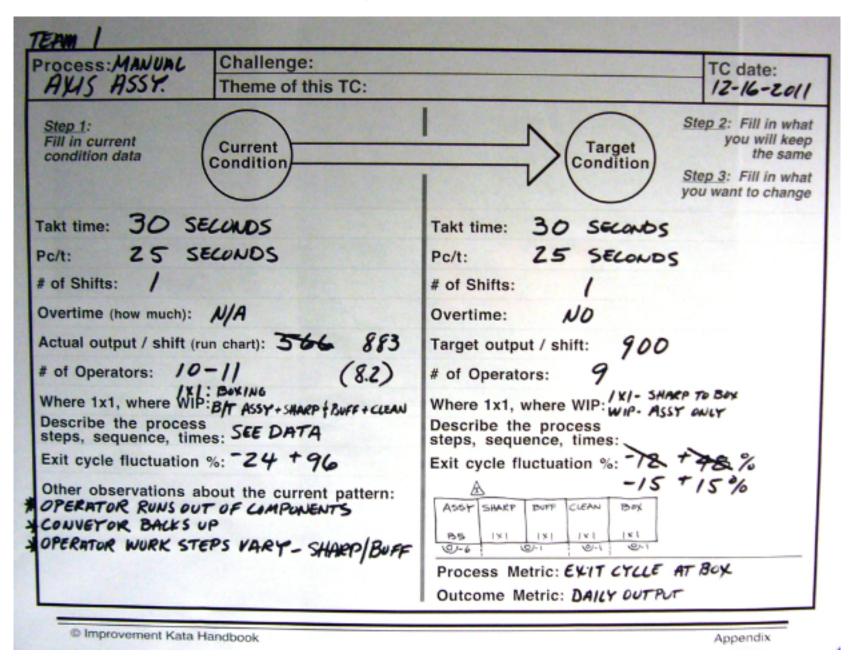
C	CURRENT CONDITION / TARGET CONDITION Challenge:						
Learner: Coach:		Process:		Outcome Metric	Process Metric		
	Categories	Current Condition	Date	Target Condition	n Achieve-By Date		
1	Task unit and time to complete						
2	Current operating pattern						
3	Equipment capacity						
4	Number of people required						
5	Outcome metrics (performance data)						

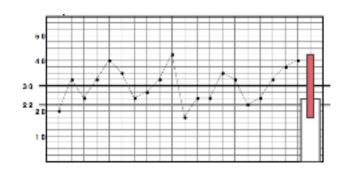
CURRENT CONDITION / TARGET CONDITION Challenge:					
Learner: Coach:	Process:		Outcome Metric	Process Metric	
Categories	Current Condition	Date	Target Condition Achieve-By Da		

NOTE THAT NOT EVERYTHING HAS TO CHANGE



A MANUFACTURING EXAMPLE





ABOUT TARGET CONDITION CYCLE FLUCTUATION

There are a few different ways to give a numerical value to the fluctuation / variation you find in process cycles. What's most important is that you can quantify the following:

- a) Where you are (taken from an exit-cycles run chart)
- b) How much fluctuation / variation you want to have next

In response to (b) the Learner may say "zero," but that's not possible. Better to say something like:

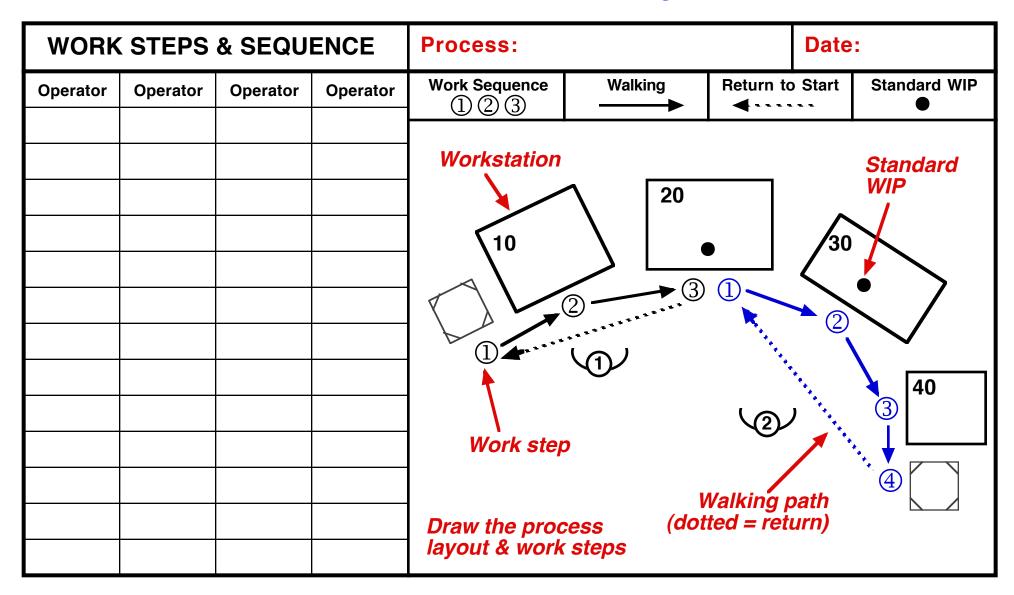
- a) "We currently observe -61% / +24% variation in the process exit cycles"
- b) "By (achieve-by date) we want the varation to be within +/- 15%"

This sets the Coach and Learner up to go through the Five Questions daily and engage in purpose-driven improvement.

Notice that this is not about in-control / out-of-control -- as in statistical process control -- but simply, "What variation do we currently have?" and "What variation do we want next?"

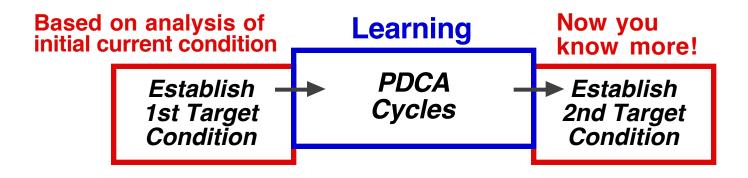
YOU SHOULD DEFINE THE DESIRED PROCESS STEPS, SEQUENCE & TIMES AS MUCH AS POSSIBLE

Use this form, or a swim-lane diagram, etc.



BUT YOU MAY NOT YET HAVE ALL THAT DETAIL

Many details come from the PDCA cycles in Step 4 of the Improvement Kata. Your knowledge increases on the way to the target condition.



Don't make things up based on intuition or conjecture ("I think..."). It's better to say "I don't know" or "not sure" and see further by quickly experimenting in the PDCA phase of the Improvement Kata.

The target condition can be fleshed out with additional detail as you experiment and your knowledge of reality increases. For example, you might define operator steps, sequence and times via a time study or a predetermined motion-time system like MTM, but that's only a hypothesis and beginning point.

ONCE THE TARGET CONDITION IS SET IT SHOULDN'T BE CHANGED

Once a target condition is established, its content and achieve-by date should not be changed



This is done so we take time to analyze the current condition, think carefully about the target condition and, when the going gets tough, work hard to understand and with creativity get through the obstacles that arise step by step. This way you achieve a new level of system performance, rather than simply altering the target condition.

Do or do not. There is no try. ~ Yoda

However, remember that it's fine to add details to the target condition as you work toward it.

4th STEP: THE LEARNER STARTS THE 'OBSTACLES PARKING LOT'

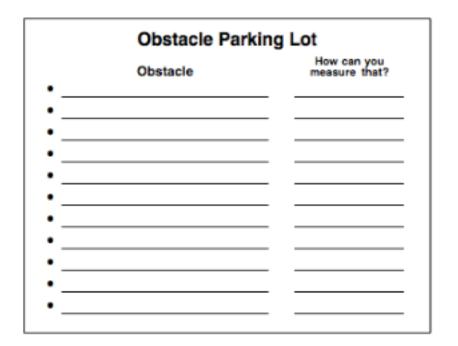
Obstacles relative to the Target Condition

As you establish the target condition you'll start to gain insight into obstacles that are in your way. Start a list of obstacles that you think are preventing you from reaching the target condition. These are <u>not</u> general observations about opportunities for improvement, but only issues that *specifically* appear to be preventing you from reaching the target condition.

A photocopy-ready OPL form is in the Appendix. You'll continue to update this list on your storyboard as you learn more in the 'executing' phase of the Improvement Kata.

Obstacle Parking Lot				
	Obstacle	How can you measure that?		
_				
		_		
		_		
		_		

PURPOSE OF THE OBSTACLES PARKING LOT





Do not Pareto this list and do not turn it into an action-item list! It's simply a place to note and hold perceived obstacles, which you may or may not address. The obstacles you actually work on and the steps you actually take come out of the PDCA cycles.

The purpose of the obstacles parking lot is:

- 1) To help you and your team see the limits of predictions and perceptions.
- 2) To prevent you from going after several issues or ideas at once.

Target Conditions for Office & Service Processes



ESTABLISHING A TARGET CONDITION FOR OFFICE AND SERVICE PROCESSES

Suggestions for processes where the work content varies

- Keep in mind that all you are trying to do is define a pattern of working to then iteratively (scientifically) strive to achieve.
- In administrative processes the sequence and volume of work is often variable. A useful tactic is to set a "pitch" as a framework. This means establishing a target pattern by fitting work into consistent-sized time increments at set times (a "pitch").

For example, instead of releasing work to an administrative process by natural customer orders -- whereby the amount and timing of work can vary greatly -- release work in equal portions to fill that consistent, scheduled time increment or "pitch."

The pitch is not a "takt time" calculation, but simply an intelligently-selected time increment. An example might be three applications processed every day from 1-2PM.

 Note that this is not something to simply be implemented or forced on the operators, but a target condition you work toward iteratively by seeing and overcoming obstacles to it. You're establishing what you want to be happening in that pitch increment, so you can see what you need to work on to get there.

ESTABLISHING A TARGET CONDITION FOR OFFICE AND SERVICE PROCESSES

(continued)

- One tactic is to classify work by type and only do one type per pitch, or release a mix that fits the time-frame of the pitch increment. Three categories, small/medium/large or regulardaily/project/sporadic are often sufficient.
- Your initial target condition doesn't have to be perfect. Once you have a first basic target pattern, it's a matter of applying PDCA (coached daily with the 5 Coaching Kata Questions) to find and break through obstacles that are preventing you from getting there.

As you do that you'll learn more about the patterns in the work, which you can integrate into the next target condition. Eventually, after you discover and remove enough obstacles that cause variability, you may be able to better understand patterns in the customer demand and even calculate a takt time for this work.

Office & Service Processes DEFINE A TARGET PATTERN OF TIME/WORK PITCHES

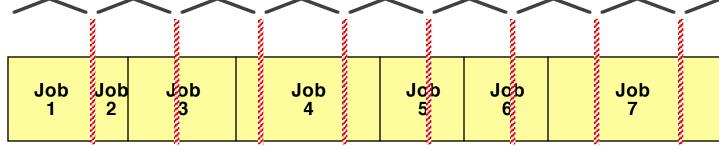
Pattern hard to see. Random chasing after problems. No target condition to strive for.

How the work arrives

	Job 1	Job 2		Job 4	Job 5	Job 6	Job 7
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A daily pitch pattern to iteratively strive toward.





Don't worry about the increments being perfect at the start. Define a target increment, make that part of your target condition, and start asking the Five Coaching Kata Questions.