PART II: Practice Routines for The Improvement Kata

Deliberate practice of the Improvement Kata pattern has the ability to change how we think about and deal with challenges and uncertainty. This section of the Handbook walks you step-by-step through the practice routines for each step of the Improvement Kata.

Each Chapter in this section has two parts: a ‘Concept Overview’ and ‘Practice Routines,’ indicated by these icons:
WHAT PART II IS ABOUT

The practice routines in this part of the Handbook are used to learn the scientific thinking pattern of the Improvement Kata. The practice routines in Part III are used to learn how to teach the Improvement Kata pattern.

The IMPROVEMENT KATA PATTERN
(the scientific approach)

These are specific PRACTICE ROUTINES to acquire / develop the scientific pattern of thinking and acting

(HANDBOOK PART II)

The COACHING KATA is a practice routine for learning how to teach the Improvement Kata pattern

(HANDBOOK PART III)
THE STEPS OF THE IMPROVEMENT KATA BUILD ON ONE ANOTHER

What you do in one step frames the next step

4

Iterate Toward the Target Condition

The more precisely you define the Target Condition, the better and more quickly you can recognize obstacles and Iterate toward it with rapid experiments.

3

Establish the Next Target Condition

The better your analysis of the Current Condition, the more precise your definition of the Target Condition can be.

2

Grasp the Current Condition

The clearer the definition of the Challenge, the more appropriate will be your analysis of the Current Condition.

1

Understand the Direction
THE STEPS OF THE IMPROVEMENT KATA ARE ALSO RECURSIVE

What you encounter in one step may adjust what you learned in earlier steps
PLANNING PHASE
Where Do We Want to Go?

Chapter 4. Step 1: Understand the Direction / Challenge
Chapter 5. Step 2: Grasp the Current Condition
Chapter 6. Step 3: Establish the Next Target Condition
Chapter 4

The Improvement Kata - Planning Phase

Step 1: UNDERSTAND THE DIRECTION / CHALLENGE
ORIENTATION

Understanding the Direction

Grasp the Current Condition

Establish the Next Target Condition

Iterate Toward the Target Condition

What 1-3 year Challenge are we striving to meet?

‘Planning’ Coaching Cycles

‘Executing’ Coaching Cycles

COACH

LEARNER

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LEARNER’S STORYBOARD

Learner and Coach are now concentrating on this field.

Focus Process:  

Target Condition
Achieve by: _______

Challenge: ×

Current Condition

PDCA Cycles Record

Obstacles Parking Lot
Concept Overview
STRATEGY BEFORE GOALS
The Improvement Kata pattern begins with a sense of strategic direction

Based on a graphic by Bill Costantino
SPECIFICALLY, THE FIRST STEP OF THE IK PATTERN IS TO HAVE AN OVERARCHING CHALLENGE

This is the context within which the rest of the Improvement Kata is applied.

Having an overarching challenge is important, so that individual target conditions are seen as meaningful. It’s difficult for us to stay engaged with something that doesn’t have a purpose.

“When people see themselves as components in a system [and] work in cooperation to achieve a shared aim, they feel that their efforts hold meaning. They experience interest and challenge and joy in the work.”

LET’S LOOK AT EACH OF THESE ELEMENTS
LONG-TERM VISION: THE BIG IDEA

A vision is the loftiest goal for your organization. It’s a long-range ideal about value you want your organization to provide for customers, in a broad sense. It’s your dream. For example, a long-term vision for an automobile company might be, “Better transportation for more people.” A vision for a maker of drills could be, “Holes where you want them when you want them.”

A vision is a puzzle from the perspective of current competencies. It’s far away, difficult to imagine and the path to it is not foreseeable.

But a vision is not a good guide for daily improvement efforts. It’s too vague and too far away.
THE MOST IMPORTANT DIRECTION GIVER IN AN ORGANIZATION IS A CLOSER, MORE SPECIFIC, WELL-STATE STRATEGIC CHALLENGE

The Challenge is the context, or “frame,” for the three steps of the Improvement Kata that follow.
WHAT IS AN OVERALL CHALLENGE?
A challenge is a description of success 1-3 years in the future

• A challenge is a new condition that you envision, which will cause you to stretch and grow. As you try to describe your challenge, think of the words: “Wouldn’t it be great if we could…”

• In business organizations it’s a description of a new level or pattern of performance related to better serving the customer, which will differentiate your offering from other offerings.

• It’s something you can’t achieve using the current system or process.

• A challenge is typically 6 months to 3 years in the future. It cannot be reached quickly in a few steps.

• Not easy, but not impossible. Achievable, but we don’t know in advance how we’ll achieve it. Takes a series of target conditions to achieve.

• Does not state how to get there or present a value judgement.
THE ROLE OF CHALLENGE IN AN ORGANIZATION

An overall Challenge is a theme that helps connect strategy with execution

Managers develop people by coaching application practice of the Improvement Kata in the direction of the challenge

Leaders establish the organization’s strategic concept (the “rallying point” or overall direction)

Current Condition

Next Target Condition

Challenge

Distant Vision

Execution

Strategy
WHY AN OVERARCHING CHALLENGE IS SO IMPORTANT

The overall challenge guides every day’s work. Without it:

• An organization is unaligned. Improvement efforts and proposals get ROI-evaluated independently, instead of as part of reaching for something. We tend to use short-term cost/benefit analysis to choose what steps to take, which dangerously keeps us inside our current knowledge threshold.

• We tend to jump from one direction to another in trying avoid obstacles, rather than struggling through the obstacles to achieve the innovations and important competencies of tomorrow.

• Improvement becomes reacting to problems (“troubleshooting” to maintain the status quo) rather than reaching for a new level of performance and the future of our choosing.

Without an overarching challenge teams can get dragged down by problems. With a challenge we can develop a higher energy level.
AN OVERALL CHALLENGE HELPS TO ALIGN AND CONNECT INDIVIDUAL IMPROVEMENT EFFORTS

The overall challenge is used to help ensure that process-level improvement efforts have a focus and fit together.

What’s the direction in which processes should be improved? What is the overarching breakthrough challenge that each process should help achieve?

A challenge typically pertains to more than one process in the organization or value stream.
Practice Routines
CHALLENGE-DEVELOPMENT QUESTIONS

A basic question to ask yourself is:
“Wouldn’t it be great if we could __________!”

1. What is the distant, very long-term vision for our organization? What challenge will now help us move in that direction?

2. What do our customers value that they are not currently getting from us?

3. What special product or service capability do we want to develop?

4. What changes are happening in our environment that could make our current capabilities less special?

5. What does success three years from now look like?
Note:

**EFFICIENCY AND COST CUTTING ALONE ARE NOT A DIRECTION**

Just pursuing low cost is unlikely to be a source of sustained competitive advantage. This can lead you into a commodity trap, where in order to compete you end up pursuing ever-lower-cost inputs and endanger quality. It can easily lead to a static and vulnerable organization.

Rather than managing the operational side of the business simply to be efficient, with the Improvement Kata approach managers guide activities that support a strategic purpose that grows and differentiates the business (which can include efficiency, of course). Strive to better serve customers and distinguish your organization from competitors. Cutting cost and improving efficiency can be done as necessary to achieve this.

Defining a vision or strategic purpose is about building unique value; i.e., distinctive differences that are valuable to customers. This provides qualitative directional guidance for the organization.
YOU CAN ESTABLISH OVERALL CHALLENGE THROUGH A FUTURE-STATE VS MAP

Future-State Mapping at the product-family level can provide the necessary sense of direction and challenge for the IK pattern.

A future-state Value Stream map is sometimes even called a Challenge Map.
WHERE VALUE STREAM MAPPING FITS IN

The 4 Steps of the Improvement Kata

1. Understand the Direction or Challenge
2. Grasp the Current Condition
3. Establish the Next Target Condition
4. Iterate Toward the Target Condition

Diagram by Emiel Van Est
The diagram on the previous page & below depicts how the four steps of the Improvement Kata pattern are utilized at each level of an organization. The diagonal arrows show how the Target Condition at one level becomes the Direction or Challenge for the next level down.

At the value-stream level, current-state value stream mapping is used for the Kata step of grasping the current condition, and future-state mapping is used for the Kata step of establishing the Target Condition.

VSM is then often also used to assess and design value stream loops.
A FUTURE-STATE VALUE STREAM MAP COORDINATES IMPROVEMENT EFFORTS

A future-state map describes in a graphic format how you want a value stream to be functioning in 1-3 years.

The future-state value stream map provides an overarching challenge & coordination for establishing target conditions at the individual loops and processes inside a value stream.

What do the processes inside this VS loop need to work on, to help achieve the future-state value stream design?

See p.86 in *Learning to See*
ONCE YOUR FUTURE-STATE MAP IS DRAWN, WRITE THE OVERALL CHALLENGE AS A STATEMENT

The overall challenge should describe a desired state that people can relate to and rally around, that is measureable in some aspect. But the challenge is not just a number. It should be personally relevant to the members of the organization. A good challenge focuses a team’s attention and effort and is often published as a compact, inspiring challenge statement.

Example Challenges
*Wouldn’t it be great if we could...*

<table>
<thead>
<tr>
<th>Example Challenges</th>
<th>Example Challenge Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ...machine parts 1x1 directly in the assembly process.</td>
<td>“Machine to assemble”</td>
</tr>
<tr>
<td>• ...paint parts 1x1 directly in the assembly process.</td>
<td>“Paint to assemble”</td>
</tr>
<tr>
<td>• ...build one customer kitchen at a time and put it right on the truck.</td>
<td>“Build to truck, kitchen at a time”</td>
</tr>
<tr>
<td>• ...have lab-test results done in 45 minutes, with no errors.</td>
<td>“Know in 45”</td>
</tr>
<tr>
<td>• ...take 7 days from new patient referral to evaluation.</td>
<td>“Just a week”</td>
</tr>
<tr>
<td>• ...assemble the day ordered, and ship the next day.</td>
<td>“Same day, next day”</td>
</tr>
</tbody>
</table>
IS THERE A COMMON, UNIVERSAL CHALLENGE FOR BUSINESS ORGANIZATIONS?

Much of human endeavor involves striving toward what one might call, “1x1 flow at lowest energy” - or - “the customer getting the value that is wanted or needed, when and where it is wanted or needed.”

This can be seen as a general challenge around:

1) Produce to each customer’s order
2) With a short lead time

Of course, each organization would state this challenge more specifically and in a way that fits to it’s customers, products and situation. Notice also that a wide range of improvement activity involving everyone in an organization will ultimately be necessary in striving to get ever closer to this goal.
THERE IS A VALUE STREAM CHALLENGE PLUS A SUBSET SPECIFIC TO YOUR PROCESS

The specific Challenge at your process will come from the Target Condition one level above you. Challenges and Target Conditions should be mathematically linked up-and-down the organization.

Ask: “How does the Challenge for our process relate mathematically to the larger (value stream) challenge?” Write your Challenge on your storyboard.

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**Coach/Learner relationships**

**Organization Level**

**Value Stream Level**

**Process Level**

---

Understand the Direction (from level above) ➔ Grasp the Current Condition ➔ Establish the Next Target Condition ➔ Iterate Toward the Target Condition

---

**Organization’s vision and strategic objectives**

**Challenge**

**Challenge**

---

**PLANNING** ➔ **EXECUTING**
DIFFERENT LEVELS OF CHALLENGE
What coaching to a Challenge looks like

Leadership coaches the next level down in defining an overall Challenge in the direction of the vision. Below that, the Target Condition from the level above becomes the Direction or Challenge for the level below.
LET’S LOOK AHEAD TO THE REST OF THE IMPROVEMENT KATA PATTERN
HAVING A CHALLENGE IS NOT ENOUGH
Having a challenge without the ability to execute is ineffective

Just issuing challenges is not sufficient for achieving improvement, adaptiveness and innovation. People in the organization also need to master a systematic, scientific way of working toward a challenge.

Looking ahead to the rest of the Improvement Kata (where execution takes place) it’s a series of Target Conditions that day-to-day improvement efforts at each level will actually be aiming for.

Having a challenge without the ability to execute is ineffective

Describes the next desired condition, to be reached by a specified achieve-by date.
SOME DIFFERENCES BETWEEN A TARGET CONDITION AND A CHALLENGE

<table>
<thead>
<tr>
<th>TARGET CONDITION</th>
<th>CHALLENGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Is developed in your area</td>
<td>• Comes from the level above you</td>
</tr>
<tr>
<td>Developed by the Learner, guided by the Coach (manager)</td>
<td>• 6 months - 3 years out</td>
</tr>
<tr>
<td>• Achieve-by date is 1 week to 3 months out</td>
<td></td>
</tr>
<tr>
<td>A series of successive target conditions is necessary to meet a challenge. When you achieve one target condition you set the next target condition.</td>
<td></td>
</tr>
</tbody>
</table>
Finally... **Obstacles** to each Target Condition are where **rapid experimentation** takes place

This = iterating (experimenting) toward the Target Condition

---

Here we’ve reached the level where the action of improvement, adaptation, evolution and innovation takes place.

You work on only those obstacles that you successivly find are preventing you from achieving the specified Target Condition.

Through that Target Condition (the **strive vector**) the experiments are linked to achieving the challenge.
A MANUFACTURING EXAMPLE

This team’s Target Condition is in-line paint-drying oven with certain attributes

**VISION** | **1x1 Flow**
---|---
**CHALLENGE OR THEME** | **Paint in Line**
**NEXT TARGET CONDITION** | **In-Line Oven (attributes defined)**
**CURRENT OBSTACLE** | **Chain conveyor is derailing**

**Current Obstacle:**
The chain conveyor derails when parts are hung on it. The team is now experimenting here.

**Detailed Experiments are here**
HOW THE IMPROVEMENT KATA PATTERN ALIGNS WITH THE STEPS OF TRADITIONAL SCIENCE

This Handbook seeks to teach Scientific Thinking in a way that relates to everyday life in business, education, politics and at home. Although the emphasis here is more on ‘striving’ rather than just scientific ‘understanding,’ the Improvement Kata pattern is well aligned with how scientists traditionally work.

<table>
<thead>
<tr>
<th>Traditional Science</th>
<th>Improvement Kata Pattern</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Research Topic”</td>
<td>Challenge</td>
<td>Paint in Line</td>
</tr>
<tr>
<td>“Research Problem”</td>
<td>Target Condition</td>
<td>In-Line Oven</td>
</tr>
<tr>
<td>“Research Question”</td>
<td>Obstacle</td>
<td>Chain conveyor is derailing</td>
</tr>
<tr>
<td>“Hypotheses”</td>
<td>Experiments</td>
<td>Test a different chain</td>
</tr>
</tbody>
</table>
This trajectory goes from more specific & measurable on the lower left, to less specific & measurable on the upper right.

SUMMARY

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Direction

This Chapter

Next 3 Chapters

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Direction

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