Lean Lessons in Exceeding the Status Quo

SAME Omaha Post
September 12, 2019

Teresa Hay McMahon
Iowa Lean Consortium
CIRAS Mission:
Enhance the performance of industry through applied research, education, and technical assistance.

GROWTH
B2B Networking
Exporting
Government Contracting
Marketing Strategy

LEADERSHIP
Culture
Innovation
Management Systems
Strategy

PRODUCTIVITY
Lean
Operational Excellence
Operations Management
Quality

TECHNOLOGY
Digital Manufacturing
Emerging Technologies
Engineering
Testing

WORKFORCE
Economic Development
Hire a Student
K-12
Workforce Strategies

IOWA STATE UNIVERSITY
Center for Industrial Research and Service
$2.6B of Client Results Over Five Years

IOWA STATE UNIVERSITY
Center for Crops Utilization Research
Center for Nondestructive Evaluation
Department of Economics
Department of Environmental Health and Safety
Engineering Career Services
Extension and Outreach
Iowa Grain Quality Initiative
Meat Science Extension
Polymer and Food Protection Consortium
Structural Engineering Research Laboratory
A dynamic, member-driven organization dedicated to advancing Lean in all sectors of the economy.

A leading resource to Midwest organizations who seek to improve their operational effectiveness and efficiencies.
Lean is...

...both an improvement methodology and a management system, that aims to produce the best safety, quality, on-time delivery, and cost, doing so by engaging everybody in the improvement process, treating people with respect, and focusing on customer needs for the long-term good of the organization.
Will it work in...?

1. Do you have people in your organization?
2. Do you have processes that create outputs, services, or products?
3. Do you experience problems?
4. Do you aspire to align to a purpose/strategy?
Business Process Givens

- All business processes are invisible
- All business processes typically start with incomplete and/or inaccurate information
- All business processes are NOT synchronized
- All business processes have institutionalized & formalized wasteful practices because of the above
Levels of Process Understanding

What you THINK it is:

What it ACTUALLY is:

What it SHOULD be:

What we strive for…
Where we started

- Tools: 90%
- Culture: 10%
A Sampling of Tools

- Kaizen
- Value stream mapping
- 5S
- Standard work
- Visual management
- MDI
- A3
- Leader standard work
- Kata
Our Challenge

- Lean is a proven, successful model.
- Many have tried to adopt and adapt it, some successfully, **MOST** not.
- Why?

*John Shook, LEI*
The Right Balance

Culture 90%
Tools 10%
Typical approaches to Lean

Train the masses – hope that they apply it

Events, events, events - hope that they keep it going
Typical approaches to Lean

Typical approaches are ‘episodic’ – occurring periodically

– Fact: knowledge and skills quickly ‘fade’
Creating a culture of Continuous Improvement

Requires CI skills in methodology, tools
  - Minimum of 4-7 repetitions to begin skill development (short term memory)

Culture = Habit
  - Minimum of 17-27 repetitions or 1-2 months to begin to create a habit

Mastery? Requires thousands of hours of practice. Let’s just worry about competency for now!
Creating a culture of Continuous Improvement

Additional opportunities to practice are needed (near daily improvement)

![Diagram showing Kaizen Events #1, #2, and #3 with time progression]

IOWA STATE UNIVERSITY
Center for Industrial Research and Service
**Starter Kata** are structured practice routines that put you on the road to learning fundamentals and developing new patterns of thinking.

Practicing Starter Kata increases the speed of learning and is particularly helpful when you want to create a shared way of thinking and acting in a group of people, because everyone starts with the same basics.

For scientific-thinking skill, begin by practicing the Starter Kata presented here and in the *Toyota Kata Practice Guide.*
It’s About Developing Some New Patterns in Your Thinking

Information entering our mind self-organizes into the existing patterns of our neural library.

Toyota Kata is about practicing scientific patterns of thinking. Those patterns are embedded in the Starter Kata.

Practice the Starter Kata, internalize their patterns, and you’re on the way to greater scientific thinking.

Then you can apply that new skill to whatever goals and challenges you have!
The Improvement Kata Pattern

A pattern of scientific thinking to improve in the direction of a challenge

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

Planning Phase
Executing Phase

This is the pattern of scientific thinking we are trying to teach
There are Starter Kata for each step of the Improvement Kata pattern, and for the Coach.

The Improvement Kata Pattern:

- Understand the Direction or Challenge
- Grasp the Current Condition
- Establish the Next Target Condition
- Experiment Toward the Target Condition

Please start practicing this way:

STARTER KATA for the learner

STARTER KATA for the coach
The Toyota Kata Starter Kata

Instructions for these Starter Kata are in the Toyota Kata Practice Guide (TKPG)
Aids for practicing scientific thinking

**Starter Kata** are basic routines to practice at the beginning, to help you learn fundamentals of a new skill. It’s like playing scales in music.

The **Starter Kata** in this slide deck are for practicing the scientific pattern of the Improvement Kata (shown here).

For instructions, use the *Toyota Kata Practice Guide* (2017, McGraw-Hill)
It’s easy to get started

One of the best places to practice scientific thinking is where you work. There are real processes you can improve and persons to coach one another. Establish some competence (and confidence) with the pattern and starter routines of the Improvement Kata, and then apply your scientific-thinking skills wherever you want.

- Select the learner, coach, and second coach.
- Select the learner’s focus process.
- Schedule the daily coaching cycle.
- Make a blank learner’s storyboard.
- Print some five question cards.
Best wishes for your practice

The research report
2009

Instructions for practicing
2017
Thank You

Teresa Hay McMahon
thmc@iastate.edu

www.IowaLean.org