Toyota’s Obeya Management System
Day 1

TOYOTA’S ENGINE FOR LEADERSHIP & OPERATIONAL EXCELLENCE

Sam MacPherson
Founder,
The Lean Leadership Academy
Faculty Fellow, The Shingo Institute

sam@theleanleadershipacademy.com
@TheLeanLeaderWay
(910) 217-LEAN
WHAT WE WILL COVER IN OUR TIME TOGETHER TODAY

• Introductions and Objectives
• The Philosophy behind Toyota Management Approach
• Management by Objective vs. Management by Exception
• Abnormality Management
• Leadership Roles Ideal Daily Management
• True North, Standards, Problems, Kaizen and Hoshin
• The Four Types of Problems
• Introduction to Obeya Management
• Obeya Culture
• Types of Obeya
• Obeya Layouts
• Obeya Management and Visual Management
• Your Questions
• Reflections
Understanding Toyota’s Management Philosophy
A Company in Crisis 1950

- Large numbers of employees were laid off due to the worst sales in Toyota's history
- Labor unrest and conflict with management
- Kiichiro Toyota, the Founder of Toyota Motors, resigned and handed over control to Taizo Ishida.
- Toyota had to rebuild mutual trust through one-on-one communication between management and team-members

Workers rally in front of the former head office
Kiichido Challenges Eiji Toyota

- During WWII, Kiichiro’s JIT Flow production system was completely dismantled by the government.

- Following the WWII and prior to the outbreak of the Korean War, Eiji Toyota was brought over from Toyoda Boshoku (Toyoda Automatic Loom Works) to take over and revive the Toyota Motor Manufacturing Corporation.

- While working in the machine shop, Eiji recruited Taiichi Ohno to work under him to improve the efficiency of operations in order to meet the challenge of productivity.

- Eiji studied the Ford Production System under Henry Ford II around 1950.

- “Bring up Toyota’s workers to American Standards of Productivity.” Kiichiro’s

- Taiichi Ohno used Industrial Engineering methods introduced to Japan by Ueno Yoichi and pioneered by Frank and Lillian Gilbreth and to discover that the difference is that Japanese workers and American workers, is that they have too much waste in their work!
“The Purpose of a Business is to create a customer.”

“A business must make a Profit in order to survive.”

Drucker on Profit
“A product is not quality or of value because it is hard to make and cost a lot of money. Customers pay only for what is of use to them and gives them value. Nothing Else Constitutes Value!”
Customer First; 
Built-in Quality with Ownership 

DNA = “Quality Must Be Build-in at Every Process” 

JKK Mandate: Build an Operational Structure that Guarantees Quality is Created by Every Process
The Basic Purpose of Toyota’s Management was Formed on the Foundations of TPS, TWI, & TQM

Because of the devastating events of the 1940’s and 50’s, for Toyota, survival is their number one priority.

We are reminded by Dr. W. Edwards Deming that “change is not mandatory and survival is not essential.”

1. **The Company:** *Toyota must make a profit in order to continue to exist.* After the post-war bankruptcy, Profitability in order to secure Toyota’s survival became a core value in its culture.

2. **The Employees:** Security for the Workforce

3. **Society:** Contribute to the betterment of the community and country you are located in. Strive to become a “beloved” part of the community.

4. **The Dealers and Customer:** Provide our customer the Highest Quality product, at the lowest possible cost, in the shortest possible time.
Our Strategic Pillars – Culture of Collaboration

The Voices of Our Stakeholders
Going Places Together;
Pursuit of Perfection in Stakeholder Relationships
Toyota’s Profit Formula

Profit = (Sales Price – Cost) x Volume

• The sales price of a product is determined by the customer and market. In addition, customers demand yearly price reductions and have come to expect special incentives.
• In order to maintain margins and profits and acquire new customers, we must master this formula.
• If we do not, we will price ourselves out of our market and threaten our survival as a company.
Cost Plus: Price = Cost of Goods Sold + Profit

Profit

- Waste
- Labor
- Utilities
- Waste
- Materials
- SG&A

$Cost$

$Price$
Price – cost thinking begins by understanding that the market sets the price and that profit can only be increased by subtracting cost from the price.

At Toyota, we can guarantee that we can make a profit by continuously reducing cost through the elimination of MUDA! 

\[
\text{Profit} = \text{Price} - \text{Cost}
\]
Toyota believes the Waste Elimination is the way to Increase Profit

Toyota believes:
‘Without Waste Reduction there cannot be true cost reduction. Without cost reduction there cannot be a profit increase!’
Muda, Muri, Mura

**Muda:** Any form of waste in the process!

**Muri:** Unreasonable burden on people or machines!

**Mura:** Uneven or unlevel workloads across people or machines
The Three Levels of Muda

The Japanese language has four written alphabets: Romaji (English characters); Hiragana; Katakana; and Kanji.

- **Muda expressed in Hiragana** is considered work-level waste and should be eliminated through “point kaizen”

- **Muda expressed in Katakana** is process and system level waste and requires root cause investigation and deliberate recurrence prevention countermeasures to eliminate the waste.

- **Muda expressed in Kanji** is Management Waste! This is waste created by poor leadership, poor decisions, and poor policies. This form of waste requires deep Hansei and recurrence prevention countermeasures to eliminate this Chief Form of Waste. **Remember, the shop-floor is a reflection of this form of waste!**
Toyota defines Lead-time from the time when the customer places the order, this includes production planning, manufacturing, logistics, and receivables processing, and ends when payment is received and posted in Toyota’s account.

Lead-time is made up of two components:

- **Processing Time** which adds value
- **Stagnation Time** which adds cost, ties up cash, and erodes customer satisfaction

Reducing stagnation time is the key to reducing Lead-time.
Taiichi Ohno, founder of TPS, said it even more succinctly:

“All we are doing is looking at the time-line from the moment the customer gives us an order to the point when we collect the cash. And we are reducing that time-line by removing the non-value-added wastes.”

— Taiichi Ohno, 1988
And Toyota assumes that there is Muda, Muri, and Mura Everywhere!
So What is True North? Is it Hoshin?

**Arubeki Sugata / Ideal State**

**Critical Concept:**
What We *Should* Do
Not What We *Can* Do

<table>
<thead>
<tr>
<th>Critical Concept: How We <em>Should</em> Do It</th>
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</thead>
<tbody>
<tr>
<td>Not How We <em>Can</em> Do It</td>
</tr>
</tbody>
</table>

**Kaizen / C.I.**
- 100% quality
- 100% value add
- 100% on time, in sequence, batch of one capability

**Respect for People**
- Physical & mental safety
- Security
- Professional challenge

**Everyone**
Every minute
Every day

**Current Condition**
TPS – Toyota’s Operation System

Goal: Highest quality, lowest cost, and shortest lead time

Just-in-time
- Takt time
- Continuous flow
- Pull system

Jidoka
- Stop and notify for abnormalities
- Separate human and machine work

Heijunka
- Standardized work

Kaizen
- Stability
Learning To See

In order to eliminate waste, **You need to change how you look at things**; you must develop eyes to see waste.

**You must change the way you think.** Think of how you can “relentlessly” eliminate the waste that you see. Eliminate Muda, Muri, and Mura Completely.

**You must continuously repeat this process, forever and ever, neither tiring nor ceasing.**”

Taiichi Ohno – Father of the Toyota Production System
The Obeya and the Leader’s Role in Creating Culture

“The most important work a leader will ever do, one which cannot be delegated, is to build a sustainable culture of excellence, based on principles.”

- Robert Miller
Principle Advisor, Arches Leadership LLC
1. Always be faithful to your duties; thereby contributing to the Company and to the overall good.

2. Always be studious and creative, striving to stay ahead of the times.

3. Always be practical and avoid frivolousness.

4. Always strive to build a homelike atmosphere at work that is warm and friendly.

5. Always have respect for God and remember to be grateful at all times.
Toyota’s Global Management Philosophy and Approach

1. Toyota Way 2001

2. Toyota Business Practices (TBP)

3. Hoshin Kanri

4. On-the-Job Development (OJT)
The "Real" Toyota Way Starts with Our Core Values

**Continuous Improvement**

- **Challenge**
  Form a long term vision, meeting challenges with courage and creativity to realize our dreams.

- **Genchi Genbutsu (Go See)**
  Practice Genchi Genbutsu.....go to the source to find the facts to make correct decisions, build consensus and achieve goals at our best speed.

- **Kaizen**
  We improve our business operations continuously, always driving for innovation and evolution.

**Respect for People**

- **Respect**
  Respect others, make every effort to understand each other, take responsibility and do our best to build mutual trust.

- **Teamwork**
  Stimulate personal and professional growth, share the opportunities of development and maximize individual and team performance.
Use the Obeya System to Build Your Culture

- Culture of Contribution
- Culture of Excellence
- Culture of Innovation
- Culture of Engagement
- Culture of Commitment
- Culture of Trust
- Culture of Burden Reduction
- Culture of Safety

Start-up Culture
“Our basic pillars of the Toyota Way is Respect of People and Continuous Improvement and that’s really the foundation we do our daily work from.”

Jeff Hurst, Manager, Powertrain, TMMK
The Toyota Way and Sakichi’s Precepts
Redefined at TIEM
Now, It’s Your Turn
Toyota’s Cycle of Continuous Improvement and Evolution

1. Establish Standards as a basis for comparison
2. Use Lean Problem Solving to eliminate gaps between the current state and the current standard
3. Kaizen to create the New Standard
4. Hoshin to Breakthrough
Continuous Improvement (3 Types of Problem Solving)

Type I: Actual performance has fallen below proven standard (capability)
Type II: Develop a better method to perform work repeatedly
Type III: Breakthrough or major system advancement
At Toyota, Everything Starts with Standards

A process is standardized and it shifts smoothly and continuously.

Level of Operation

Time Function

Improvement of operating process

Daily maintenance and small improvement of job

Hoshin Kanri

Daily Management

Standardization
How Can We Tell Normal from Abnormal…Quickly?
Can We Still Tell Abnormal from Abnormal?
Can We Still Tell Abnormal from Abnormal?

No organization

Inventory

- Good or bad?? Unclear
- No standard or basis for comparison

Now We Know
What “Right” Looks Like!

<table>
<thead>
<tr>
<th>Type</th>
<th>Type W</th>
<th>Type X</th>
<th>Type Y</th>
<th>Type Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>Min = 1</td>
<td>Min = 1</td>
<td>Min = 1</td>
<td>Min = 1</td>
</tr>
<tr>
<td>Max</td>
<td>Max = 4</td>
<td>Max = 3</td>
<td>Max = 3</td>
<td>Max = 2</td>
</tr>
</tbody>
</table>

Max.

Min.

- Normal vs. Abnormal clear
- Standard basis for comparison
Understanding Toyota’s Obeya Management Principles

Management By Objective
= Command & Control

VS.

Management By Exception
= Focus on Problem Solving
the Ideal Situation
And the Current Situation
Management by Objective
Sometimes, MBO can be too top-down driven and Command and Control, regardless of the indicators.
Management by Exception
Management by Objective vs. Hoshin Kanri

<table>
<thead>
<tr>
<th></th>
<th>Typical MBO</th>
<th>Hoshin Kanri of Toyota Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Object of Assessment</strong></td>
<td>Result</td>
<td>Result and Process</td>
</tr>
<tr>
<td><strong>Indicators of Assessment</strong></td>
<td>Financial Indicator Quantitative Indicator</td>
<td>Financial &amp; Non-financial Indicator Quantitative &amp; Qualitative Indicator</td>
</tr>
<tr>
<td><strong>Viewpoint of Assessment</strong></td>
<td>Mainly short term</td>
<td>medium &amp; long term</td>
</tr>
<tr>
<td><strong>Mgmt Approach</strong></td>
<td>Usually Top-down</td>
<td>Integration of top-down &amp; bottom-up, Involvement of all members</td>
</tr>
<tr>
<td><strong>Activity Style</strong></td>
<td>Start from scratch generally / Cycle of PDC</td>
<td>Continuous Kaizen Cycle of PDCA</td>
</tr>
</tbody>
</table>
Abnormality Management
Is
Problem Solving Management!
# Ideal Daily Management Process
## From the Genba to the C-Suite

### Ideal Daily Management Process by Management Level

<table>
<thead>
<tr>
<th>Role Relationship</th>
<th>PLAN</th>
<th>DO</th>
<th>CHECK</th>
<th>ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manager</strong></td>
<td>Secure Conditions for Ideal Production</td>
<td>Production Management</td>
<td>Hoshin Mgmt</td>
<td>Strategic Activity</td>
</tr>
<tr>
<td><strong>Asst. Manager</strong></td>
<td>Secure Conditions for Ideal Production</td>
<td>Production Management</td>
<td></td>
<td>Abnormality Management</td>
</tr>
<tr>
<td><strong>Group Leader</strong></td>
<td>Ensure Basic of TPS</td>
<td>Secure conditions for Ideal Production</td>
<td>4M Change Point Management</td>
<td>Standardized work Management</td>
</tr>
<tr>
<td><strong>Team Leader</strong></td>
<td>Secure Pre-Conditions for Ideal Production</td>
<td>Maintain Ideal Production</td>
<td>Ensure Standardized Work</td>
<td>Three Pillar Mgmt</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td>Align Ideal Processes</td>
<td>Determine Knowledge and Skill</td>
<td>Practice Role Skill with OJD</td>
<td>Assess</td>
</tr>
</tbody>
</table>
The Toyota Way of Management is Abnormality Management:

3 Subjects for Abnormality Management are:

1. Physical Environment through 5S Control and Visual Standards
2. People and Processes through Standardized Work
3. Information and Management through Progress to Targets
Problem Solving versus Kaizen – There is a difference

Corrective Activity vs. Proactive Activity

Event Created Gap To Standard

Problem Solve (TBP) to Return to Standard and Prevent Recurrence

Setting Created Gap from Standard

Standard Or Target Condition

Non-Standard Current Condition

Problem = Gap From Standard

Problem Solve (TBP) to Return to Standard and Prevent Recurrence

Kaizen To Set New Standard
The Four Types of Gaps: Problems vs. Kaizen vs. Hoshin

Type 1: Immediate corrective action oriented with minimal root causal analysis
- Operators and Team Leaders

Type 2: Rapid corrective oriented oriented with stronger root causal emphasis
- Team Leaders & Supervisors

Type 3: Future oriented with a new target or ideal state emphasis
- Sr. Experts, Supervisors, and Managers

Type 4: Future oriented with a broader view for problem resolution
- Sr. Experts, Managers & Above

- **Trouble-shooting**
  - Urgent

- **Gap from Standard**
  - Lower

- **Target Setting**
  - Time to resolve

- **Vision Oriented**
  - Complexitiy of problem

- **Target / Standard**
  - Higher

- **Time to resolve**
  - Longer
Problem Solving versus Kaizen – There is a difference

- When we achieve The Target and Stabilize the Standard
- Setting Created Gap from Standard

Corrective Approach
Problem Solve (TBP)

Event Created Gap To Standard
Corrective Activity

Hoshin By Level
Main KPI's
Sub KPI's Activities
Sub KPI's Results
Main KPI's Trends

When We Don’t Achieve The Target

Kaizen To Set New Standard
Leading Toyota Business Practice In the Obeya

**Values**
- Customer First
- Always Confirm the Purpose of Your Work
- Ownership and Responsibility
- Visualization (MIERUKA)
- Judgment Based on Facts
- Think and Act Persistently
- Speedy Action in a Timely Manner
- Follow Each Process with Sincerity and Commitment
- Thorough Communication
- Involve All Stakeholders

**Actions**
1. Clarify the Problem
2. Break Down the Problem
3. Target Setting
4. Root Cause Analysis
5. Develop Countermeasures
6. See Countermeasures Through
7. Monitor Both Results and Processes
8. Standardize Successful Processes

Concrete Actions & Processes

Drive & Dedication

Toyota Way
Abnormality Management and Control
What Happens When There Is a Problem
**Shop-Floor Management is Problem Solving Management**

<table>
<thead>
<tr>
<th>Level</th>
<th>Area “Problem Rate”</th>
</tr>
</thead>
<tbody>
<tr>
<td>組長  Group Leader</td>
<td>25 ~ 125+ Per Day</td>
</tr>
<tr>
<td>班長  Team Leader</td>
<td>5 ~ 25+ Per Day</td>
</tr>
<tr>
<td>技能員 Team Member</td>
<td>1 ~ 5+ Per Day</td>
</tr>
</tbody>
</table>

![Image of production information board](image-url)
Toyota Business Practice:
Building People; Closing Gaps

Step 1. Clarify the Problem
- Goal
  - Ideal situation
  - Problem
  - Current situation

Step 2. Break Down the Problem
- Problem
  - Prioritized problem
  - Problem
  - Problem

Step 3. Set a Target
- [Target]
  - How much
  - By when

Step 4. Analyze the Root Cause
- Prioritized Problem at the Point of Occurrence
- Root cause

Step 5. Develop Countermeasures
- Countermeasures
  - Priority
  - Effectiveness
  - Cost

Step 6. See Countermeasures Through

Step 7. Evaluate Both Results and Processes
- [Results]
- [Processes]

Step 8. Standardize Successful Processes
Problem Solving Management in the Obeya

<table>
<thead>
<tr>
<th>TBP 8 STEPS</th>
<th>PROCESSES</th>
</tr>
</thead>
</table>
| **Step 1. Clarify the Problem** | 1. Clarify the “Ultimate Goal” of your responsibilities & work  
2. Clarify the “Ideal Situation” of your work  
3. Clarify the “Current Situation” of your work  
4. Visualize the gap between the “Current Situation” and the “Ideal Situation” |
| **Step 2. Break Down the Problem** | 1. Breakdown the problem  
2. Selective problem in pursuit  
3. Specify the point of cause by checking the process through GENCHI-GENBUTSU |
| **Step 3. Target Setting** | 1. Make the commitment  
2. Set measurable, concrete, and challenging targets |
| **Step 4. Cause Analysis** | 1. Consider causes by imagining the actual situation where the problem occurs  
2. Based on facts, gathered through GENCHI-GENBUTSU, keep asking “Why?”  
3. Specify the root cause |
| **Step 5. Develop Countermeasures** | 1. Consider as many potential countermeasures as possible  
2. Narrow down the countermeasures to the most practical and effective  
3. Build consensus with others  
4. Create a clear and detailed action-plan |
| **Step 6. See Countermeasures Through** | 1. Quickly and as a team, implement countermeasures  
2. Share progress by following the correct reporting, informing, and consulting communication procedures  
3. Never give up, and proceed to the next step quickly |
| **Step 7. Monitor Both Results and Processes** | 1. Evaluate the overall results and the processes used, then share the evaluation with involved members  
2. Evaluate from three key viewpoints: Customer’s, Toyota’s, and Your Own  
3. Understand the factors behind the success or failure |
| **Step 8. Standardize Successful Processes** | 1. Structure the successful processes (Standardize)  
2. Share the new precedent through YOKOTENKAI  
3. Start the next round of KAIZEN  
4. Create & Update the Standard and True affected parties  
5. Communicate to larger audience – Single Point Lesson & Story Board |

If any part of the Defined Timeline for Problem Solving is missed, a SC must be completed and approved by Supervisor and Operations Control Center Director