NARS

Developing a Culture of Continuous Improvement

October 6, 2020
What is the purpose of your organization?
To serve your customer
What does the customer need?
To eliminate poverty and hunger
How are you going to eliminate poverty and hunger?
Continually improve the productivity of key crops.
Continually improve agronomic management processes.
Develop a Culture of Continuous Improvement
Identify Customer Needs and Deliver Value
“The world we have created is a product of our thinking; it cannot be changed without changing our thinking.” ~Albert Einstein
“When you change the way you look at things, the things you look at change.”

Wayne Dyer
Change starts from the inside. If you want your outside life to change, you first have to start with your mindset. Start learning how to learn, form new habits, learn new skills, and stop repeating what’s not working.

Albert Einstein
What does a continuous improvement culture look like?
Culture eats strategy for breakfast.

- Peter Drucker
Core Elements of a Continuous Improvement Culture

- Leadership commitment
- Organizational commitment
- **Focus on customer needs**
- Improvement Strategy
- Training, equipment, physical environment
- Standard work
- The people performing the work are involved in improving the work
- Personal accountability/Everybody everyday
- Change management
- Performance management/metrics
Improvement Methodologies

- Toyota Production System
- Lean
- Six Sigma (SS)
- Theory of Constraints (TOC)
- Systems Thinking
- Total Quality Management (TQM)
- Agile
- Triz
Lean is a system for developing a continual improvement way of thinking.
Lean is an organizational growth strategy based on satisfying the customer by delivering quality products and services that are just what the customer needs, when the customer needs them, in the amount required, at the right price, while using the minimum of material, equipment, space, labor, and time.
Lean is unique as a management approach because it doesn’t aim to tell people what to think or what to do but how to think about things so they come up with their own ideas, insights and initiatives.

*Michael Ballé, lean author, executive coach and co-founder of Institut Lean France*
The best people to improve the process are the people working in the process
What is Lean?

Lean is a continuous, evolutionary process of change and adaptation, not a singular, idealized vision or technology-driven goal state.
Goals of Lean

- Improve Quality
- Eliminate Non-Value Added (Waste)
- Reduce Lead Time
- Reduce Total Costs
5 Principles of Lean

1. Define Value
2. Map the Value Stream
3. Create Flow
4. Establish Pull
5. Seek Perfection
Principle of Lean – Define Value

1. Define Value
   - Voice of the Customer VoC
   - Problem Statement
   - Project Charter
   - Purpose Statement
   - Critical to Customer/Critical to Quality
Principle of Lean – Map the Value Stream

1. Define Value
2. Map the Value Stream

- SIPOC
- Flowchart
- Swimlane Chart
- Top Down Flow Chart
- Current State Value Stream Map
Principle of Lean – Create Flow

1. Define Value
2. Map the Value Stream
3. Create Flow

- Spaghetti Diagram
- Collect and analyze data
- Identify Waste
- Fishbone
- 5 Whys
- Analyze causes of waste
- Visual Management
- Mistake Proof
- Cellular Design
- 3P
- Load Leveling
- 5S
- Point of Use
- Ideal State VSM
- Cycle Time/Process Time/Lead Time
- Value Added/Non Value Added time
- Setup Reduction
- Employee Activity
Principle of Lean – Establish Pull

1. Define Value
2. Map the Value Stream
3. Create Flow
4. Establish Pull

- Pull
- KanBan
- Visual Management
- Cross Training
- Takt Time
- Batch Delay
- FMEA
- Lean Action Plan
Principle of Lean – Seek Perfection

1. Define Value
   - Standard Work
   - Lean Action Plan
   - Control Plan
   - Metrics
   - Kaizen
   - PDSA

2. Map the Value Stream

3. Create Flow

4. Establish Pull

5. Seek Perfection
Continuous Improvement

Current Condition

Next Target Condition

Vision

Problems and Obstacles
PDSA – the Scientific Method

Continuous Improvement

Adjust

Plan

Study

Do

Standard

Process Quality

Excellence in Breeding PLATFORM

CGIAR
1. Define Value

**Customer**
- Hybrid rice team
- Field Technicians
- ZES
- CCO
- SHU/ Regulators

**Critical to Customer (CTC)**
- Timely delivery
- Meet expectations on the deliverables
- Schedules/ deadlines
  - Reporting
  - Cost efficiency
  - Reliability
  - Reputation
- Seed contamination/ diseases absent or below threshold

**Critical to Quality (CTQ)**
- Trained staff with the right skills set
- State of the art machinery and equipment
- Effective planning
- Availability of resources
- Accuracy and quality of data
- Validated SOPs
2. Map the Process
3. Create Flow – Eliminate Waste

- Equipment
  - Long waiting time
  - Long authorization channels

- People
  - Lack of trained people
  - Bureaucracy

- Materials
  - Cost

- Methods
  - Long procedures

- Environment

- Lack of equipment maintenance

Fish-bone diagram
# LEAN ACTION PLAN

<table>
<thead>
<tr>
<th>PRIORITY RANK</th>
<th>PROGRAM</th>
<th>TASK / ACTION</th>
<th>WHO</th>
<th>STATUS</th>
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</thead>
</table>
| 1            | Planning and Unified OCS Requests | • Dedicated committee to create a template form to capture all relevant information (Checklist) and to provide sharing instructions  
• Share with customer for review, approval and implementation. | Jun, Ben, Rhulyx, Martina | 30 d   |
| 2            | GK Service Agreement              | • Identify/List of non-critical activities                                    | Jun                 | 30 d   |
|              |                                   | • To identify control points (CTQ and variations) (implement mistake proofing) | Shery, Vel          | 60 d   |
|              |                                   | • Learning and development plan by GK                                         | Ed / Jaesel         | 90 d   |
| 3            | RT Trainings                      | • Prepare training material                                                  | Gids, Ben, Sheryl, Roy/Anna | 30 d   |
|              |                                   | • Classroom training on Quality control points                               |                     | 60 d   |
|              |                                   | • Schedule season long training on rice seed production and seed quality mgt. |                     | 120 d  |
| 4            | Disease Management                | • Create proposal of measures to implement (ZES+CCO+HRC)                      | Ben, Gids, Rhulyx, Roy | 30 d   |
|              |                                   | • Meeting with experts to assess proposal and generate final document        |                     | 30 d   |
|              |                                   | • create SOP/WI                                                              |                     | 60 d   |
The Eight Wastes

**Transportation** – Movement of materials or people that does not add value

**Inventory** - Supply beyond the volume need for smooth flow through the process.

**Motion** - Movement of people or resources that does not add value.

**Waiting** - Idle time when productivity comes to a halt.

**Overproduction** - Making more than required by the next process.

**Overprocessing** - Extra effort that creates little or no value.

**Defects** - Errors causing rework, incorrect information or poor reports.

**Underutilized Talent** - Not deploying people to the best of their abilities.
The Waste of "Transportation"
The Waste of “Inventory”
The Waste of “Motion”
The Waste of “Waiting”
The Waste of “Over Production”
Water-White Corn Syrup

Definition of *water-white*
approaching water in colorlessness and clarity
The Waste of “Over Processing”

“What We Dream Up at Kickoff:
- Long Range Super Sonic Antenna
- Titanium Plated Nose Cone
- Titanium Fins
- Nuclear Plated Rockets

“What We Settle For at Launch:
- One Way Mirror
- Titanium Placed Twin Side Boosters

“What The User Needs:
- Bicycle
- Ramp

“Over-engineering problem from software developer and product manager perspective” (respectively)
The Waste of “Defects”
The Waste of “People”
How can we support National Programs in Continuous Improvement?
Current Resources

Continuous Improvement Tools and Methods

- Project Management
- Project Charter
- A3
- Introduction to Operational Excellence and Continuous Improvement
- Team Building
- Define Value
- Process Mapping
  - Value Stream Mapping
  - Flow Charts
  - SIPOC
  - Spaghetti Diagram
- Non Value Added/Waste Identification
- Root Cause Analysis
- Data Collection and Analysis

- Improve Flow
  - 5S
  - Set up reduction
  - Employee Activity
  - Batch Delay
  - One Piece Flow
  - Cell Design
  - Point of Use
- Pull Replenishment, Kanban
- Kanban
- Load Leveling
- Standard Work
- Mistake Proof
- Visual Management
- Action Plan
- FMEA
- Control Plan
- Kaizen Event
- Storyboard
Resources Coming Soon

- Access to online learning modules in the LMS (Learning Management System)
- Monthly learning topics
- Learning Videos