



Bangalore Chamber of Industry and Commerce

## "Kaizen e-Library" Initiative

- Kaizen by everyone & everywhere

### (Kaizen Outline)

#### I. What is Kaizen ?

- ◆ Kaizen (Ky'zen) (A Japanese word)
- ◆ "Kai" means "change"
- ◆ "Zen" means "good (for the better)"
- ◆ Gradual, orderly, and continuous improvement
- ◆ Ongoing improvement involving everyone

#### II. History ?

Modern Kaizen is based on the principles of the Toyota Production System (TPS).  
TPS is a system used in repetitive manufacturing, but the philosophy can be applied to all operations.

#### III. How to do the Kaizen ?

- ◆ Identify the Customer(Project)
- ◆ Deming or PDCA cycle



#### IV. What is MUDA (Waste)

Waste is anything other than minimum amount of equipment, Materials, Parts & Working Time which is absolutely essential to add value to the product or Service.

#### V. Kaizen Philosophy



Increase Value Added work by Reducing Muda (Waste) & Supplementary work for Productivity Improvement

#### VI . 7+1 Types of Waste in Lean Manufacturing

Defects	Efforts caused by rework, scrap, and incorrect information.
Over- production	Producing more than is needed or before it is needed.
Waiting	Wasted time waiting for the next step in the process.
Non- utilized Talent	Underutilizing people's talents, skills, and knowledge.
Transportation	Unnecessary movements of products / materials.
Inventory	Excess products and materials being processed.
Motion	Unnecessary movements by people.
Extra Processing	More work or higher quality than is required by the customer.

Lets Eliminate MUDA to achieve the competitiveness!!!

## FOREWORD:

Since the onset of Pandemic, industry has faced several challenges at regular intervals. The manufacturing operations were affected in several ways due to the pandemic leading to low-scale operations, and thereby a reduction in output. This adversely affected the turnover and revenue from operations. However, with the slowing down of the pandemic and industry having learnt to cope with the situation, both production and sales have picked up. On the other hand, Steep rise in input cost like material cost, Fuel cost etc. is being seen and has thrown additional challenge towards achieving cost competitiveness and maintaining profitability in the business.

In this context, it is essential to remain committed in seeking better solutions and constantly innovating to eliminate MUDA (waste) by promoting the Kaizen culture among MSME's which will eventually support in becoming cost competitive.

To build and enhance Kaizen culture among MSME, the BCIC Manufacturing Expert Committee, has taken the initiative to develop Kaizen e-Library for the benefit of BCIC members.

The committee will not only be recognising the best Kaizens through a review process but also sharing them across all industry members to study & check the Horizontal deployment possibility of the Kaizen or Kaizen essence and there by multiply the benefits of the Kaizen.

We are confident that such initiatives will bring value to the esteemed members of BCIC.

Thanking you.



**Mr. K R Sekar**, President BCIC



**Dr. L Ravindran**, Sr.VP-BCIC



**Mr. B R Indushekar** VP - BCIC



**Mr. T R Parasuramam**

## MANUFACTURING EXPERT COMMITTEE :



**Mr Prakash G, Chairman**  
VP-Technical  
Toyota Kirloskar Auto Parts



**Mr. V Sivaganesh, Co Chairman**  
Head FA Sales & Applications Fanuc  
India



**Dr. S Devarajan, Mentor**  
Sr. Vice President Prodn.  
Engineering  
TVS Motor Co Ltd

## CORE COMMITTEE FOR DEVELOPING E-KAIZEN LIBRARY



**Mr. Bharth Ram, Member**  
VP-Production  
Toyota Industries Engine India



**Mr. Ashok, Member**  
Manager - Manufacturing  
Toyota Kirloskar Auto Parts




**Mr Dinakar Murthy,**  
Advisor  
Managing Founder Partner  
**Samuthána** Consultancoaching  
LLP



**Dr. A Balamurugan,**  
Advisor  
Independent Dir, Process /  
People Excellence Coach  
Growth Hacking Partner &  
Straighttegitic Solutions



**Mr Haridas, Member**  
AGM-Maintenance  
Toyota Industries Engine India




**CURTAIN RAISER**  
**e-Kaizen**

EVENT NO. 084/2021-2022

**January 08, 2022**  
**10.30 am to 12.30 pm**




**L.E.A.D - Learn, Engage, Adopt, Disseminate**

**Special Address**



**Mr. A N Chandramouli**  
Chairman  
Industry 4.0 Expert  
Committee, BCIC

Initiative under the aegis of Manufacturing Expert Committee, BCIC

<p>Chairman</p>  <p><b>Mr. G Prakash</b> VP - Technical Toyota Kirloskar Auto Parts</p>	<p>Co-Chairman</p>  <p><b>Mr. V Sivaganesh</b> Head FA Sales &amp; Applications Fanuc India</p>	<p>Mentor</p>  <p><b>Dr. S Devarajan</b> Sr. Vice President Prodn. Engineering TVS Motor Co Ltd</p>	<p>Member</p>  <p><b>Mr. Bharath Ram</b> VP - Production Toyota Industries Engine India</p>	<p>Member</p>  <p><b>Mr. Ashok S</b> Manager Manufacturing Toyota Kirloskar Auto Parts</p>
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**Background /Preface**

In order to build and enhance Kaizen culture amongst MSME, the Manufacturing Expert Committee, BCIC has taken the initiative to develop Kaizen e-Library for the benefit of BCIC members in general and manufacturing organizations in particular.


The Curtain raiser event will be followed in the coming months by the recognition of best Kaizen through a process self-declaration and then a walk in audits for selected companies.

A Panel of Experts will be releasing the evaluation criteria and a Kaizen Guideline Handbook to enable all MSME to participate and take part in the event.

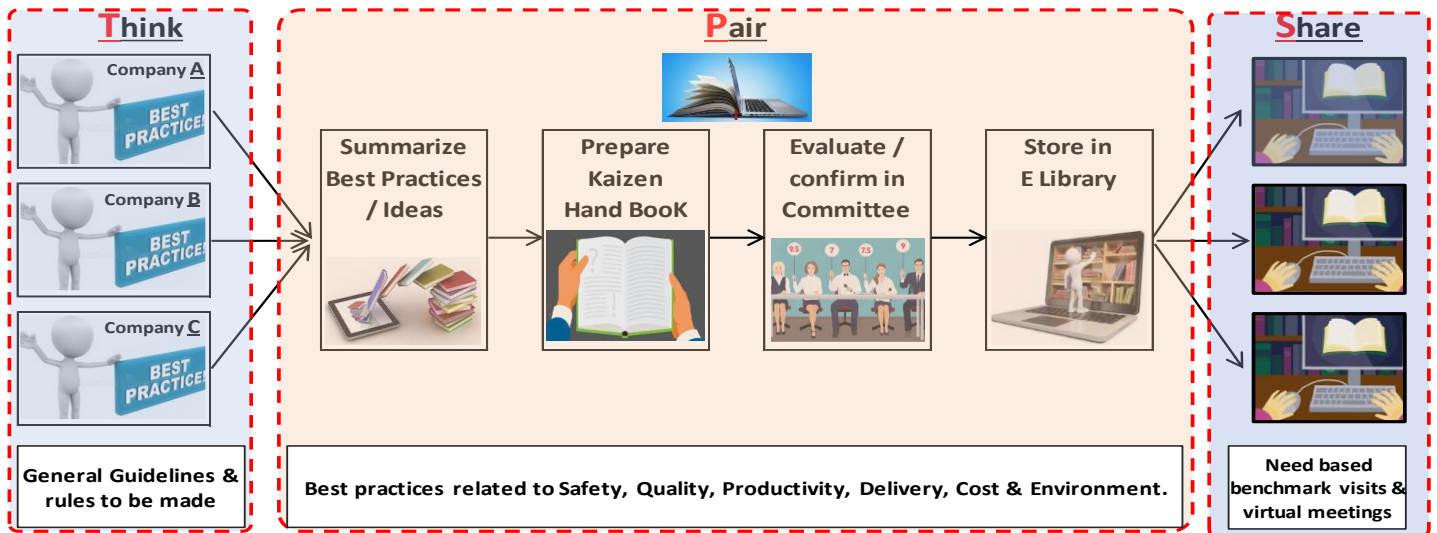
**CLICK HERE TO REGISTER**

Launch of e-Kaizen  
Curtain Raiser Event  
with Special Session  
and Address by

**Mr A.N. Chandramouli .**



## CONCEPT & ACTIVITY FLOW (TPS – THINK, PAIR & SHARE) :



## KAIZEN CHAMPIONSHIP SYSTEM :

Cycle 1						Cycle 2					
Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22
<p><b>Proposal &amp; Finalize the Methodology</b></p>	<p><b>Develop Evaluation Criteria &amp; Share</b></p> <p>Relevance Sustainability Efficiency Effectiveness Design Quality Innovation</p>	<p><b>Kickoff Meeting</b></p>	<p><b>Self Evaluate &amp; Submit to BCIC</b></p>	<p><b>Recognize &amp; Reward</b></p> <p>Store Kaizens in E Library</p>	<p><b>User Download &amp; start implement in their company</b></p>	<p><b>Each Company Self evaluate &amp; submit the best practices thru E Library</b></p>	<p><b>Summarize &amp; Evaluate by BCIC Experts</b></p>	<p><b>Recognize &amp; Reward</b></p>	<p><b>User Download &amp; start implement in their company</b></p>		

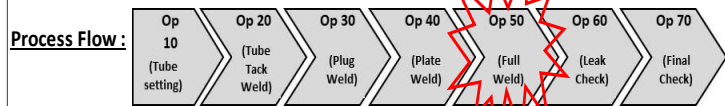


# KAIZEN EXAMPLE 1 :

Company Name & Logo	***** Pvt Limited						Team Name	PHOTON								
Activity Period	From:	15	3	2019	To:	30	3	2019	Members	Mr. A (Mfg)	Mr. B (Mfg)	Mr. C (Maint)	Mr. D (Engg)		----	----
Theme	Increase Productivity (OA) by eliminate part set fault alarm						Kaizen KPI (Tick)	Safety	Quality	Productivity	Cost	Environment	Others (Mention)			

## Understanding the situation / Situation Analysis :

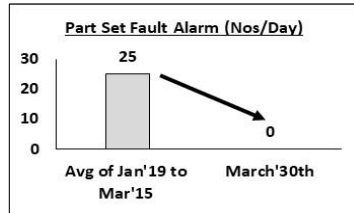
Work Area : Welding Line



Problem Occurance Point : Operation 50

## Target Setting :

What	Eliminate part set fault alarm in Op 50
How Much	100%
By When	Mar-19



## Countermeasure Implement :

Manual Confirmation : ❌



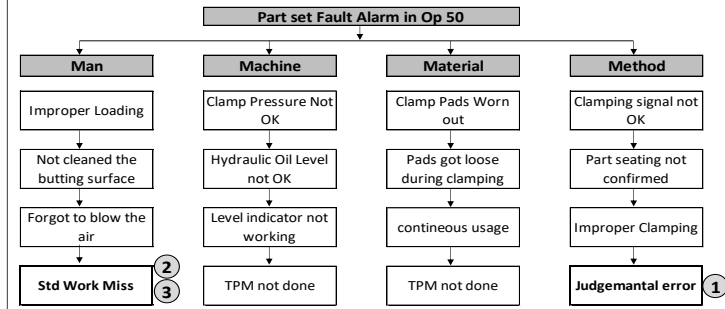
Improper clamping of part on fixture due to Improper seating

Pokayoke Provided : ✅

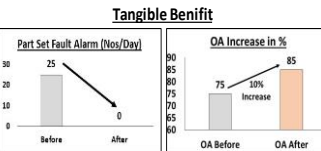


Proper clamping of part on fixture ensured by providing photo sensor

## Root Cause Analysis :



## Check Results :



### Intangible Benefit

- (1) TL can concentrate on other Improvement points.
- (2) TM's Standardized work Compliance improved.

## Standardization & Training :

### Standardization

- (1) Photo Sensor Specification (\*\*\*.LMN) updated in Maintenance Manual.
- (2) Spares regularizd with Min Stock in Stores.
- (3) Added in Daily TPM Check Sheet.

### Training

- (1) Training given to all maintenance team on how to replace sensor in case of breakdown.
- (2) Std Work retraining given to all Mfg Team for effective air cleaning.

## Countermeasure Plan & Evaluation :

SI No	Countermeasure Plan	Evaluation					Team Conclusion
		Expected Effect	Expected Cost	Lead Time	Effect on Others	Overall Evaluation	
1	Clamping Confirmation Pokayoke to be done	Large	Low	Short	Nothing	Possible	Can be Done "O"
2	Std Work Retraining to all	Large	Low	Short	Nothing	Possible	Can be Done "O"
3	Auto Air Blowing for butting surfae cleaning	Large	Low	Short	Nothing	Possible	Can be Done "O"

## Essence of Kaizen :

- (1) Automation to ensure proper part clamping.
- (2) Muda in Manual confirmation eliminated.

ABC D

Prepared By


PQR

Checked By

XYZ

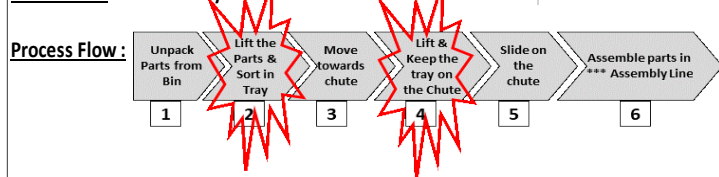
Approved By

## KAIZEN EXAMPLE 2 :

Company Name & Logo	**** Pvt Limited						Team Name	LOGITECH								
Activity Period	From:	1	6	2020	To:	15	6	2020	Members	Mr. A (Mfg)	Mr. B (Mfg)	Mr. C (Logistics)	Mr. D (Engg)		-----	-----
Theme	Reduction of touch points in Part feeding to Assembly Line						Kaizen KPI (Tick)	Safety	Quality	Productivity	Cost	Environment	Others (Mention)			

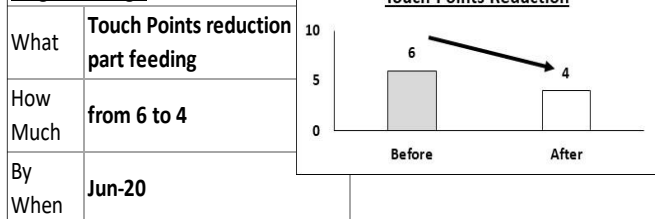
### Understanding the situation / Situation Analysis :

Work Area : \*\*\* Assembly Line

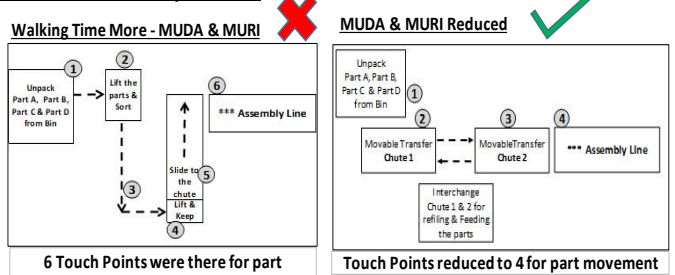


Problem Occurance Point : Touch Point 2 & 3

### Target Setting :



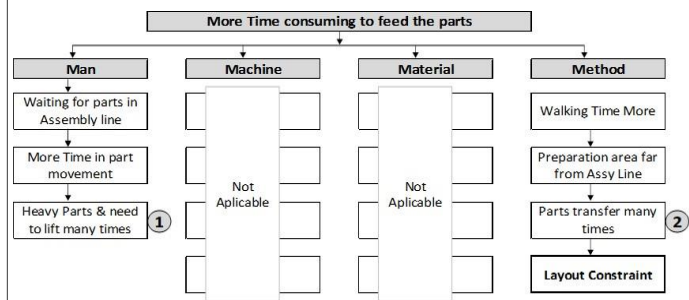
### Countermeasure Implement :



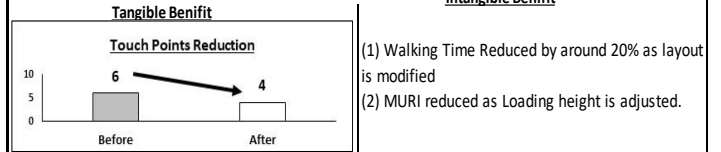
### Countermeasure Horizontal deployment :

- Can be Horizontally deployed in
- (1) B1 Sub Assembly Line
  - (2) Machining Line A for Part movement from Logistics to Machining Line.

### Root Cause Analysis :



### Check Results :



### Standardization & Training :

- Standardization**
- (1) Layout Modification & Approval.
  - (2) Chute Drawings & Spares standardized.
  - (3) SOP for part movement updated & approved.
- Training**
- (1) Training given to all the related people as per new SOP.

### Countermeasure Plan & Evaluation :

SI No	Countermeasure Plan	Evaluation					
		Expected Effect	Expected Cost	Lead Time	Effect on Others	Overall Evaluation	Team Conclusion
①	Lifting Height to be reduced to match at Sliding & Unpack area	Large	Low	Short	Nothing	Possible	Can be Done "O"
②	Transferable chute type to be done for part feed to Assy	Large	Low	Short	Nothing	Possible	Can be Done "O"
③	Optimise the walking distance by modifying the part movement layout.	Large	Low	Short	Nothing	Possible	Can be Done "O"

### Essence of Kaizen :

Need to consider this thinking way during design of layout

<b>ABCD</b>	<b>PQR</b>	<b>XYZ</b>
Prepared By	Checked By	Approved By

For any Details regarding e Library, Clarification about Kaizen details, Pls contact

1. Mr Niranjn, Asst General Secretary , BCIC [niranjn@bcic.in](mailto:niranjn@bcic.in).
- 2.
3. Mr Ashok S. [sashok\\_73@tkap.co.in](mailto:sashok_73@tkap.co.in)
4. Mr Haridas [srharidas@tiei.toyota-industries.com](mailto:srharidas@tiei.toyota-industries.com)

# KAIZEN NEVER ENDS

