

Working Group 1&3

Interim Report for AKAC 2021.

2021.08.26

Chair of WG 1&3

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Schedule of WG 1&3 in the half of the year 2021

Date	Ageda	Outcome
19/01/21	2 nd Meeting to share the current situations <u>focusing on the certification system</u>	Shared data and information
16/02/21	3 rd Meeting to share the current situations <u>focusing on KPIs</u>	Shared data and information
17/02/21- 16/03/21	Implementing 3 rd assignment <ul style="list-style-type: none"> ➤ Reviewing the findings reported in the previous 2 meetings (2nd and 3rd) ➤ Identifying the difficulties/existing problem to set up the certification system and to apply common KPIs in each country ➤ Brainstorm the way forward 	
17/03/21	4 th Meeting to discuss findings and challenges specified in the previous 2 meeting and discuss the	Consensus
20/04/2021	5 th Meeting to deepen the discussion of common KPIs, focusing on the current situation about KPI in each country	Idea to move forward was shared and agreed, while the current status of KPIs in each country is shared.
25/05/2021	6 th Meeting to discuss the methodology to express the Kaizen effect by financial figures	4 methodology was suggested and 2 among the four was selected.
17/06/2021 And 03/08/2021	7 th and 8 th Meeting to discuss the format to express Kaizen effect by financial figures	The formats to express Kaizen effect by financial figures was explained and agreed.

Theme (WG) 1: Certification System

1. We have summarized the current status of Certification system in each country by making the chart and waiting for the several rest countries will reply.
2. Regarding the certification system, after the summarization, we need to decide the pilot country to be assisted for setting up the certification system by the scheme of JICA survey.
3. Based on the pilot activities in the selected pilot country, we will decide the contents of the “guideline” for AUDA-NEPAD.
4. However, it might be still difficult to start the pilot activities soon because of COVID-19. Maybe from autumn?
Therefore, we agreed that we will concentrate more on the discussion about KPI for the time being.

Expected Monitoring system of Common KPIs by JICA survey team

	In Companies	In Countries	Transcontinental
Actor	Kaizen consultants of each country	Kaizen promotion organization officers of each country	AUDA-NEPAD officers
Content of collected data	<ul style="list-style-type: none"> Labor productivity (person-hours) in model area Defective rate Yield rate On-time delivery rate Waste reduction volume 	Aggregates the raw data for the five indicators at left and Kaizen rates for each by sector	Aggregates the data in a format that is easy to use for AUDA-NEPAD advocacy such as by sector, by regional economic communities (RECS), by SDG theme, etc.
	<ul style="list-style-type: none"> Monetary amounts directly linked to enhancing added value that can be converted into monetary value 	Aggregates the data at left by sector	
Frequency	Sequentially after completion of each company's Kaizen implementation	Once every six months (discussions necessary in the same span)	Once every year (discussions necessary in the same span)
Method	Transition from submission of Excel files through individual emails to submission via a simple data base using G-Suite		
Recording/reporting format	After compiling the Kaizen results sheets, enters data into Excel files for reporting (or into the database after its creation).	Aggregates and edits the Excel forms used for the reporting at left ⇒ Aggregates and edits through the database after its creation	Aggregates and edits the Excel forms used for each country's reporting ⇒ Aggregates and edits through the database after its creation
Feedback method	<u>Includes Kaizen results sheet in company reports</u>	<u>Creates annual Kaizen reports</u>	<u>Creates the African Kaizen White Paper</u>

Theme (WG) 3: Common KPIs

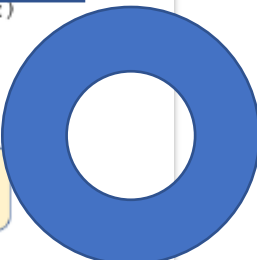
-How to express the Kaizen effect by financial figure-

1st approach to see the Kaizen effect for the profit.
- If we can know the Gross Profit, we can calculate the profit improvement -

Approach 1
Productivity Improved ratio
x Cover Ratio x GP

(Total impact to entire company) X (Total GP) = (Total Improved Profit)

Point 3
Can we get Gross Profit of the company?
Pouvons-nous obtenir le bénéfice brut de l'entreprise?




2nd approach to see the Kaizen effect for the profit.
- If we can know the Wage Rate, we can simply calculate the profit improvement!

Approach 2
WAGE Rate

Point 4
It's difficult to get Wage Rate. (Usually, small company does not have...)
Il est difficile d'obtenir le taux de salaire. (Habituellement, une petite entreprise n'a pas...)

Wage Rate: Added value amount that direct workers should create per...
Wage Rate = (Yearly Marginal Profit) / (Yearly total direct worker's M...)
(Marginal Profit : Net sales - variable cost)




Approach 3
Productivity Improved ratio x
Unit Price

Increased productivity, -
Augmentation de la productivité.

Unit price
Unit price x sales = sales
\$10.0 x 1,200 = \$12,000
\$4.0 x 24,000 = \$96,000


Point 5
1. Actually, there is a limit to demand, so productivity improvement does not always contribute to sales improvement. It is far from the increase in profit.
2. Even if it contributes to sales improvement, it is far from the increase in profit.
3. Knowing the unit price is difficult.
4. You are not in a position to control the unit price.
5. Controlling the unit price is difficult.



Approach 4
GP/M-H

4th approach to see the Kaizen effect for the profit.
- If we can get the GP improvement ratio, we can see the Kaizen contribution for entire company -
- If we know the unit price, we can calculate the Kaizen effect for the profit.
- If we know the unit price, we can calculate the Kaizen effect for the profit.

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
GP	100	100	100	100	100	100	100	100	100	100	100	100	100	100
M-H	100	100	100	100	100	100	100	100	100	100	100	100	100	100
GP/M-H	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GP/M-H	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
GP/M-H	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
GP/M-H	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22



It's difficult to obtain required unit price

There are factors other than Kaizen effect

Format to calculate automatically into the Kaizen effect by financial figure

Company Information						
	Name	CODE				
Country	Republic of Tunisia	33				
Company	AAA company	33-00001				
Sector code	Manufacturing	1				
Manufacturing Subsector Code	Electronics	16				
Service Subsector Code	Service Subsector Code	Code				
	Item	Difinition				
Basic Condition	Minumum Wage/Hour	legal minimum wage	100	TND		
			3,934.00	JPY		
	Pilot Line coverage ratio	Gross profit base or Sales base	30%			
	Yearly Gross Profit	last year actual	1,000,000	TND		
Field	Item	Difinition	Condition Before Kaizen	Condition After Kaizen	Improvement ratio	Output/Input Units
Key Indicators of Pilot Line	Output	Qty',Number of Customer,CS,Sales etc.	800	1,200		Daily
	Input (M-H)	Man-Hour(M-H)	200	180		Daily
	Productivity(Output/M-H)		4.000	6.667	66.7%	
	Defect(%)	(Number of defect product/ Products Quantity)	5.50%	1.40%	-74.55%	
Sub indicaor of Pilot Line	Used Space	M ²	300	250	-50	
	Space-Productivity		2.67	4.00	133.3%	
						Time unit
	Lead Time(Factory-in to Factory-out)	Second,Minute,Hour,Day	7.200	2.880	60%	PLS INPUT
	Lead Time(Line-in to Line-out)	Second,Minute,Hour,Day	80	35	56%	PLS INPUT
	WIP(Qty')	The average number in the line	100	50	50%	
7200	OEE	AvilabilityxPerformance xQuality	68.00%	83.00%	22.06%	
Company -wise Sub indicators	Inventory (from B/S)	Inventory Amount in B/S	500,000	230,000		
	Yearly Net Sales	Net sales	2,000,000	2,000,000		
	Inventory Turnover(D/S)		91.3	42.0	54.0%	
	Return ratio(%)	The number of return product/shipped Qty'	8.50%	2.30%	72.94%	
	ES score(point)		45	65	44.4%	
	Yearly Incident	The number of insident in work site	10	2	80%	

GEMBA KPI

Pilot implementation of the format in the 3rd quarter

KPI & Sub Indicator list				
	name	Code	Sector Code	Subsector Code
Country	Republic of Tunisia		33	
Company	AAA company	33-00001		1 16
Category	Item	Figure		
KPI A-1	Financial Improvement by Kaizen	472,080 JPY		
KPI A-2	Financial Improvement by Kaizen	7,868,000 JPY		
			Improvement ratio	
Key Indicator of Pilot Line	Productivity Improvemen(per M-H)	66.7%		
	Defect ratio improvement	74.5%		
Sub indicaor of Pilot Line	Productivity improvement(per Sapce)	60.0%		
	Lead time Reduction-1(F-in to F-out)	56.3%		
	Lead time Reduction-2(L-in to L-out)	50.0%		
	WIP Reduction			
	OEE improvement	22.1%		
Company -wise Sub indicators	Inventry Reduction	54.0%		
	Return Ratio	72.9%		
	Employee Satisfaction	44.4%		
	Incident(safety)	80.0%		

Financial effect of Kaizen