

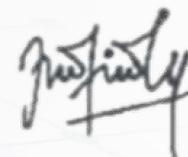
Machinery & Equipment Productivity Nexus Work Groups 2

Preliminary Productivity Report

Coraza Systems Malaysia Sdn. Bhd.

11 November 2020

Disahkan Oleh:



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Timbalan Pengarah

Report Content

1. Executive Summary
2. Profile of Company
3. 5-year Business Measurements (2015 to 2019)
 - 3.1 Profitability
 - 3.2 Growth
 - 3.3 Productivity
 - 3.4 Efficiency
4. Observations & Recommendations
5. Appendix

Executive Summary

The purpose of Preliminary Productivity Report

- Constructs an initial appraisal of the company's overall "performance" & "health", from a productivity angle
- Deploys metrics, to measure productivity and utilization of key resources e.g. manpower, financial, fixed assets
- Graphical representation of trends over a 5-year period
- Serves as "starting point" for company to decide to conduct further diagnosis, suggests options for possible improvements
- Enhance understanding and cooperation between Malaysian private and public sectors to improve productivity growth

Recommendations & Next Steps

- Company and MPC/MEPN mutually agree and determine scope of follow up actions
- Construct a productivity improvement plan, determine resources and assistance available to execute plan that is consistent with Malaysia Business Excellence & Industry4WRD frameworks
- Assist with incentives available under MPC/MEPN initiatives
- Build case study as "success story"

Executive Summary

Productivity Report – Historical trends

Company Performance & Health (2015 to 2019): -

- Operating profit margins declined from 11% to 8% (average 11%)
- Labour Productivity (AV/No. of Employees) overall CAGR -5.7% p.a.
- Returns on Assets stood at 7.3% in 2019 c.f. average 10.7%
- Revenue Growth – healthy at CAGR of 17%
- Average Labour Cost (Cost/Employee) remains steady over 5 years
- Labour content (labour distribution rate) grew at CAGR 6.2% p.a.
- AV/Fixed Assets grew modestly with CAGR 1%
- Fixed Assets/Employee declined with CAGR -7% p.a.
- Capital & Fixed Asset T/O remained stable

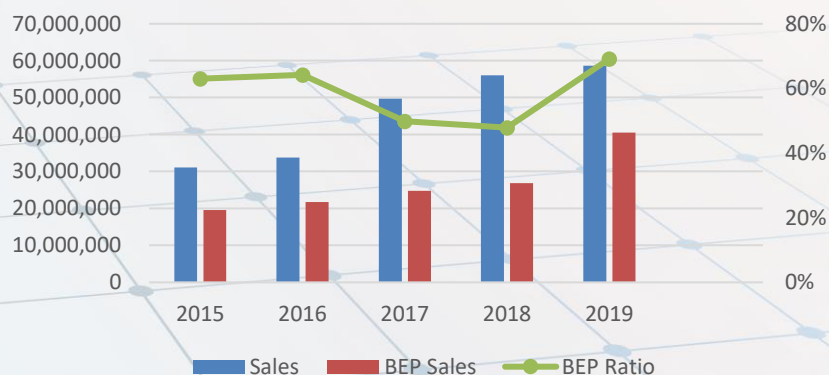
Additional information received: -

- New category of product (frames and structures) introduced in 2019
- Incurred high development costs in 2019
- Write off taken on aged inventory in 2019

Executive Summary

Factors	Summary of Findings
Profitability	<ul style="list-style-type: none"> Added Value registered a declining trend since 2017, needs to implement plan to reverse trend Operating profit also recorded a reducing trend Labour cost per employee remain almost constant
Growth	<ul style="list-style-type: none"> Revenue growth is healthy at 17% CAGR
Productivity	<ul style="list-style-type: none"> Labour productivity declined marginally Labour distribution % is up slightly, indicating higher labour content
Efficiency	<ul style="list-style-type: none"> Inventory turn declined between 2017 to 2019 (higher level of inventory)

BEP Analysis



- Return on Asset for 2019 is significantly lower compared to 2018
- Recommend to conduct “deep dive” to identify options to improve returns and overall business excellence

	2015	2016	2017	2018	2019
ROA	10.55%	7.98%	13.44%	14.35%	7.29%

Preliminary Productivity Report

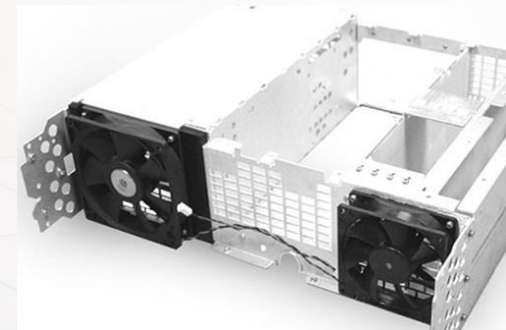
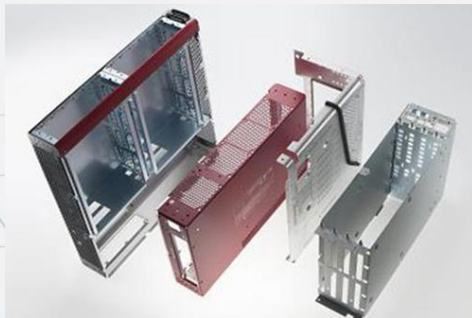
Profile

Coraza Systems Malaysia Sdn. Bhd.

Coraza Systems Malaysia Company Profile

Coraza Systems Malaysia Sdn. Bhd.

- Established in 2001, a Malaysian company involved in high precision metal fabrication, machining and assembly
- Total Value Chain – conceptual development, design, prototyping, production and assembly
- Operates from a 74,000 sq ft modern factory, located in Nibong Tebal, Penang
- ISO 9001:2015, ISO14001:2005, ISO 45001:2018, AS9100 certifications
- Finishing & coating processes – powder coating, wet painting, sand blasting, anodizing, zinc plating, laser marking and silk screening
- Sample of products & services: -



Productivity Report
for
5-Year (2015 to 2019) Period

5-Year Business Measurements

This productivity study covers several areas that contributes to overall the enterprise “Health” & “Performance”, essential for long term business sustainability: -

Factors	Measurements
Profitability	Company’s ability to add value, creating wealth and profits in a sustainable manner
Growth	Ability to sustain and grow company’s sales and profit in an evolving market environment
Productivity	Various ratios, measuring effectiveness in managing people, capital, assets to produce goods and services
Efficiency	Ability of company in use of resources to generate income

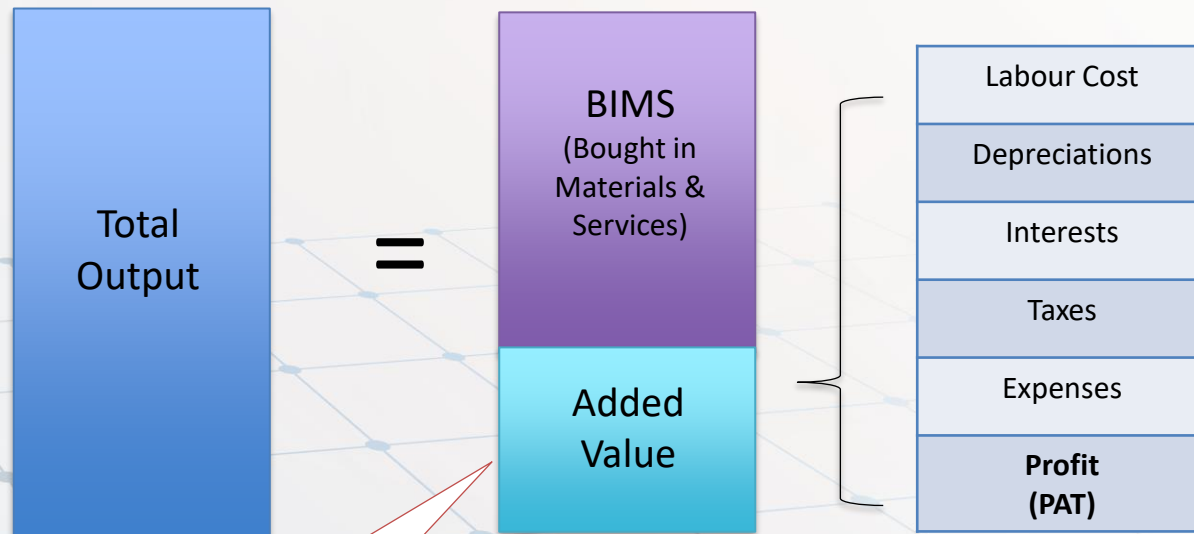
Profitability – Added Value

Company creates wealth and profits by “adding value” with its products and services

“**Wealth Creation**” capacity of a business enterprise is commonly represented by “**Added Value**”, typically calculated as: -

$$AV = \text{Total Sales} - \text{Bought in Materials \& Services}$$

- Profit After Tax (PAT) is one of the components included in the Added Value
- Each business enterprise must maintain an appropriate Added Value content in order to sustain its business profitability



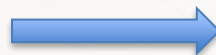
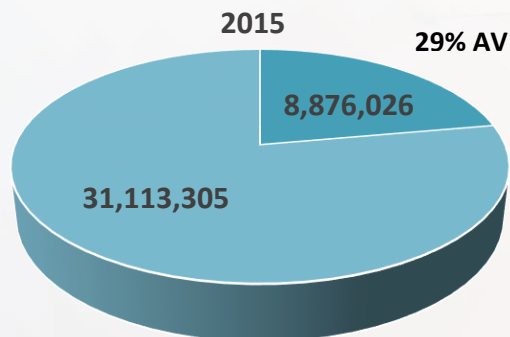
Represents
“Wealth Creation”

Wealth Distribution

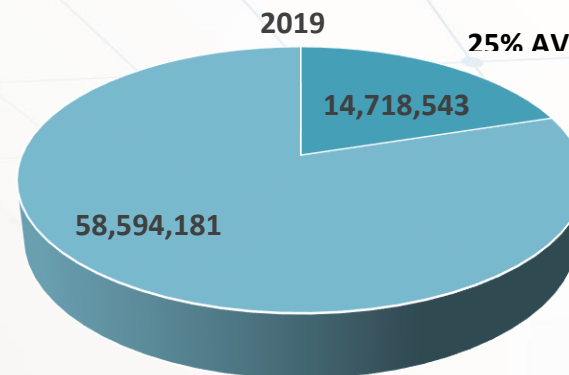
Added Value “Snap-shot”

Wealth Creation

Coraza Systems Added Value



Coraza Systems Added Value

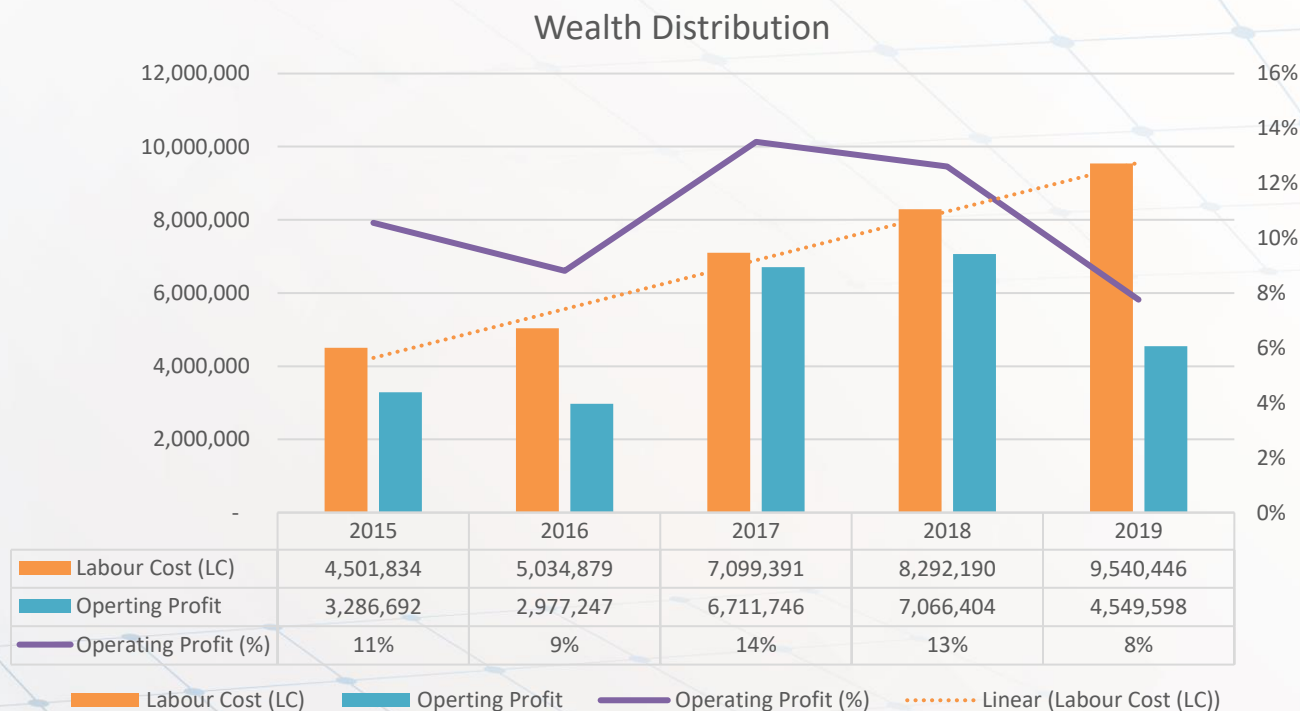


	2015	2016	2017	2018	2019	CAGR
Added Value (AV)	8,876,026	8,307,557	13,366,230	13,541,924	14,718,543	13%
Total Output (TO)	31,113,305	33,791,527	49,672,795	56,023,436	58,594,181	17%
AV %	29%	25%	27%	24%	25%	

- “Wealth creation” declined by 4 percentage point from 2015 to 2019 where “AV” stood at 25%
- In terms of actual value, revenue grew at CAGR of 17%, while AV grew at lower rate of CAGR of 13%

Profitability “Snap-shot”

Wealth Distribution – Labour Costs and Operating Profit



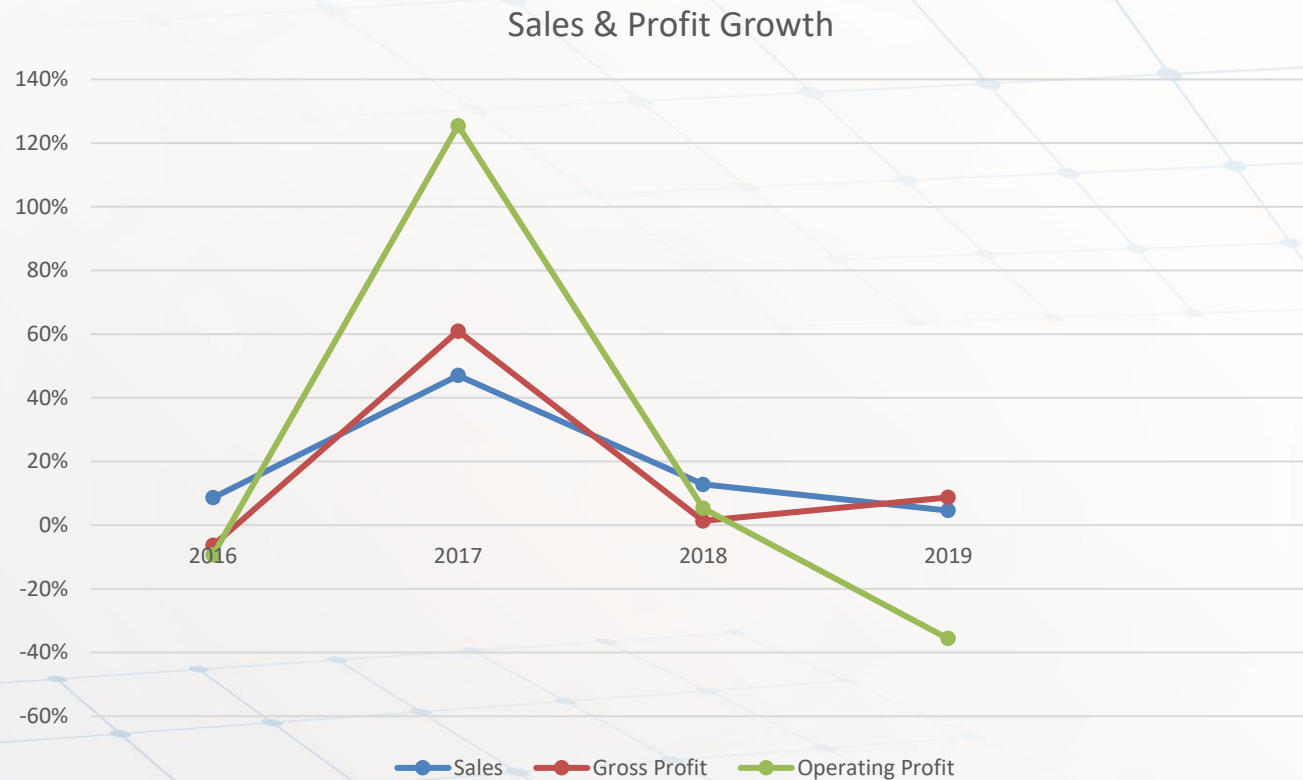
In the period between 2015 to 2019

- Total Labour cost grew at CAGR 21% p.a., sales revenue grew at a lower rate CAGR 17%
- Operating profit % declined in 2 consecutive years from 2017 (13%) to 2019 (8%)

Possible reasons: -

- Significant change in product or service mix
- Price – positioning decision in response to market environment or competition

Growth “Snap-shot”

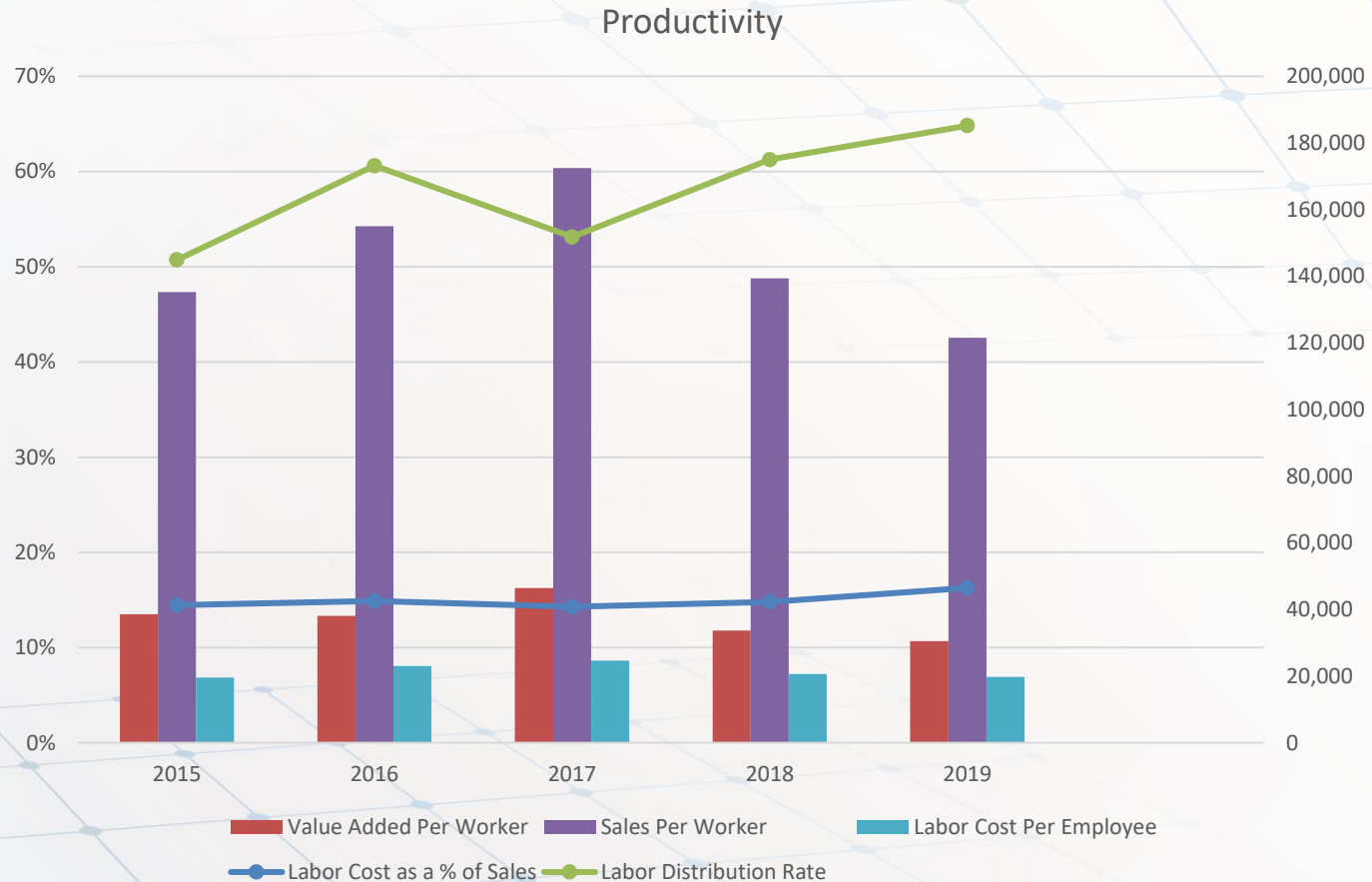


- Year-on-Year Sales & Profit growth peaked in 2017, moderated in 2018
- Gross profit growth recovered from 2018 to 2019
- Operating profit – needs to determine cause and action to restore growth trajectory

Productivity Indicators

1. Labour Productivity
 - a) Added Value per Employee (AV/E) #5
2. Labour Cost Competitiveness
 - a) Added Value/Labour Cost (AV/LC) #1
 - b) Labour cost per Employee (LC/E) #2
3. Capital Intensity
 - a) Fixed Assets per Employee (FA/E) #9
4. Capital Productivity
 - a) Added Value/Fixed Assets (AV/FA) #7
5. Process Efficiency
 - a) Added Value/(TO – BIMS)
6. Profitability
 - a) Operating Profit/Total Output (OP/TO) #11

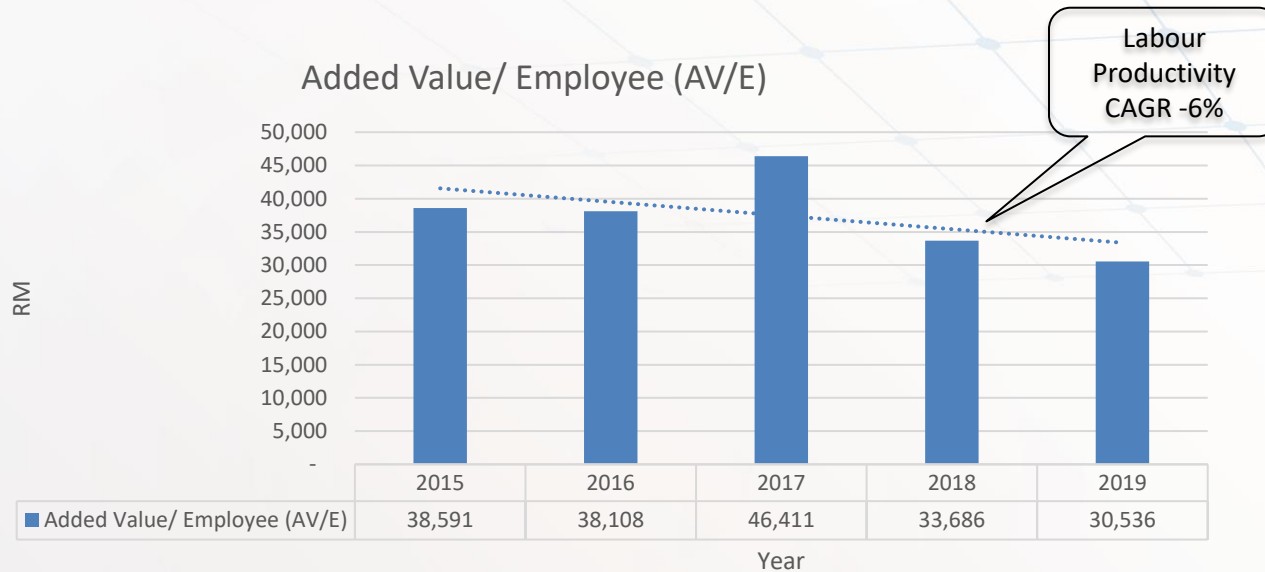
Summary of Productivity Indicators



- Average labour cost per employee remains relatively stable
- Sales & Value Add per employees requires further investigation to reverse trends

Productivity “Snap-shot”

Labour Productivity (#5)



- Company Labour productivity declined at CAGR -6% over the last 5 years
- Need to identify reason and execute appropriate countermeasures e.g.
 - Product mix
 - Worker training
 - Higher labour content in work done

Productivity “Snap-shot”

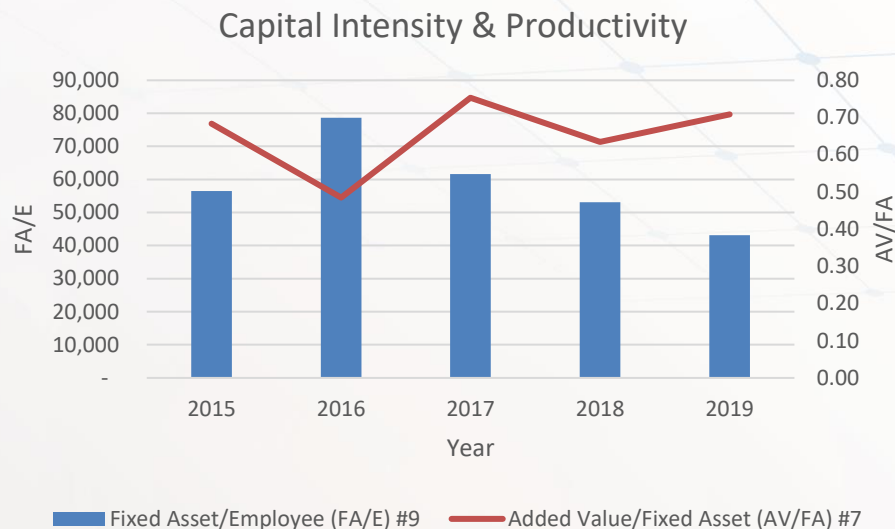


	2015	2016	2017	2018	2019	CAGR
Added Value/ Labour cost (AV/LC) #1	1.972	1.650	1.883	1.633	1.543	-6%
Labour cost/Employee (LC/E)#2	19,573	23,096	24,651	20,627	19,793	0%
Added Value/ Employee (AV/E)#5	38,591	38,108	46,411	33,686	30,536	-5.7%

- Added Value/Labour Cost declined at 6% per year
- Labour cost per employee grew modestly from 2015 to 2017, and reverted to 2015 level by 2019 – check for possible “skill dilution” among workforce?
- Negative trend, company achieved slightly less value added for each ringgit spent on employees

Assets & Capital Productivity

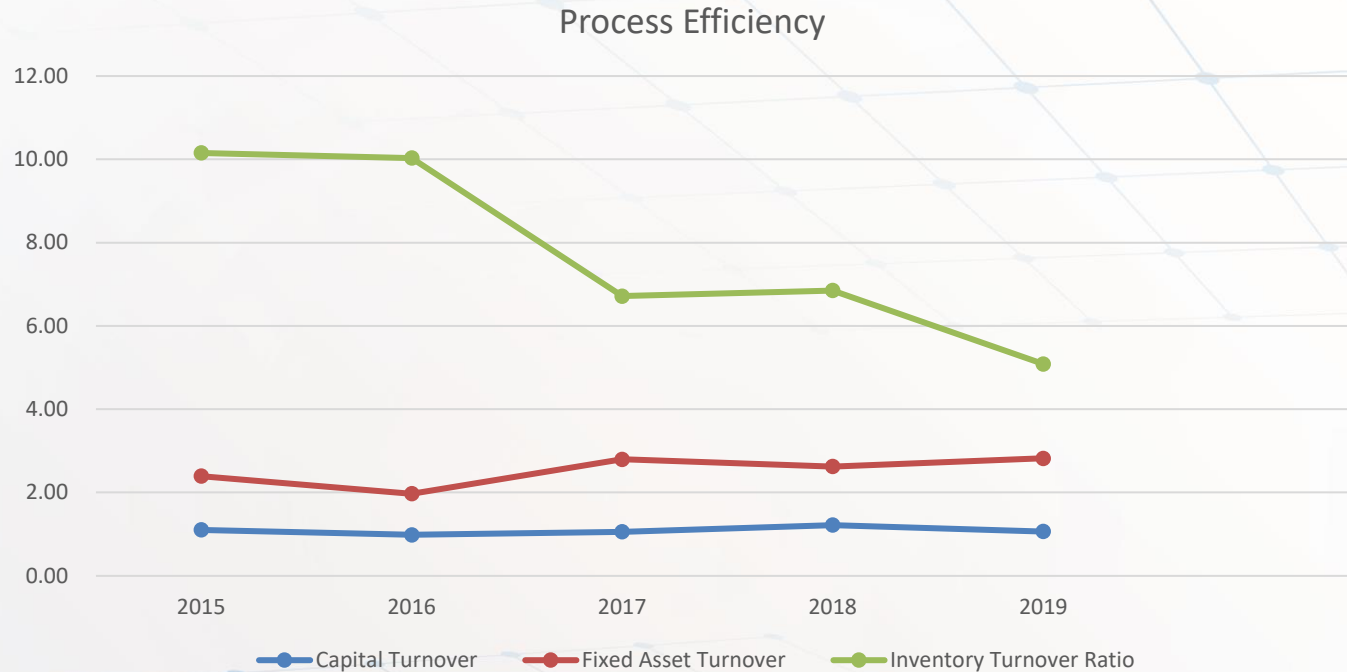
Capital Intensity (#9) & Capital Productivity (#7)



	2015	2016	2017	2018	2019	CAGR
Fixed Asset/Employee (FA/E) #9	56,525	78,633	61,649	53,143	43,126	-7%
Added Value/Fixed Asset (AV/FA) #7	0.68	0.48	0.75	0.63	0.71	1%

- Fixed Asset per Employee is lower compared to 5 years ago
- Added Value/Fixed Asset registered a slight improvement with CAGR 1%
- Company registered a overall positive trend, after a decline from 2015 to 2016; suggesting better utilization of fixed assets to generate added value
- Implies company is able to “sweat the assets”

Process Efficiency

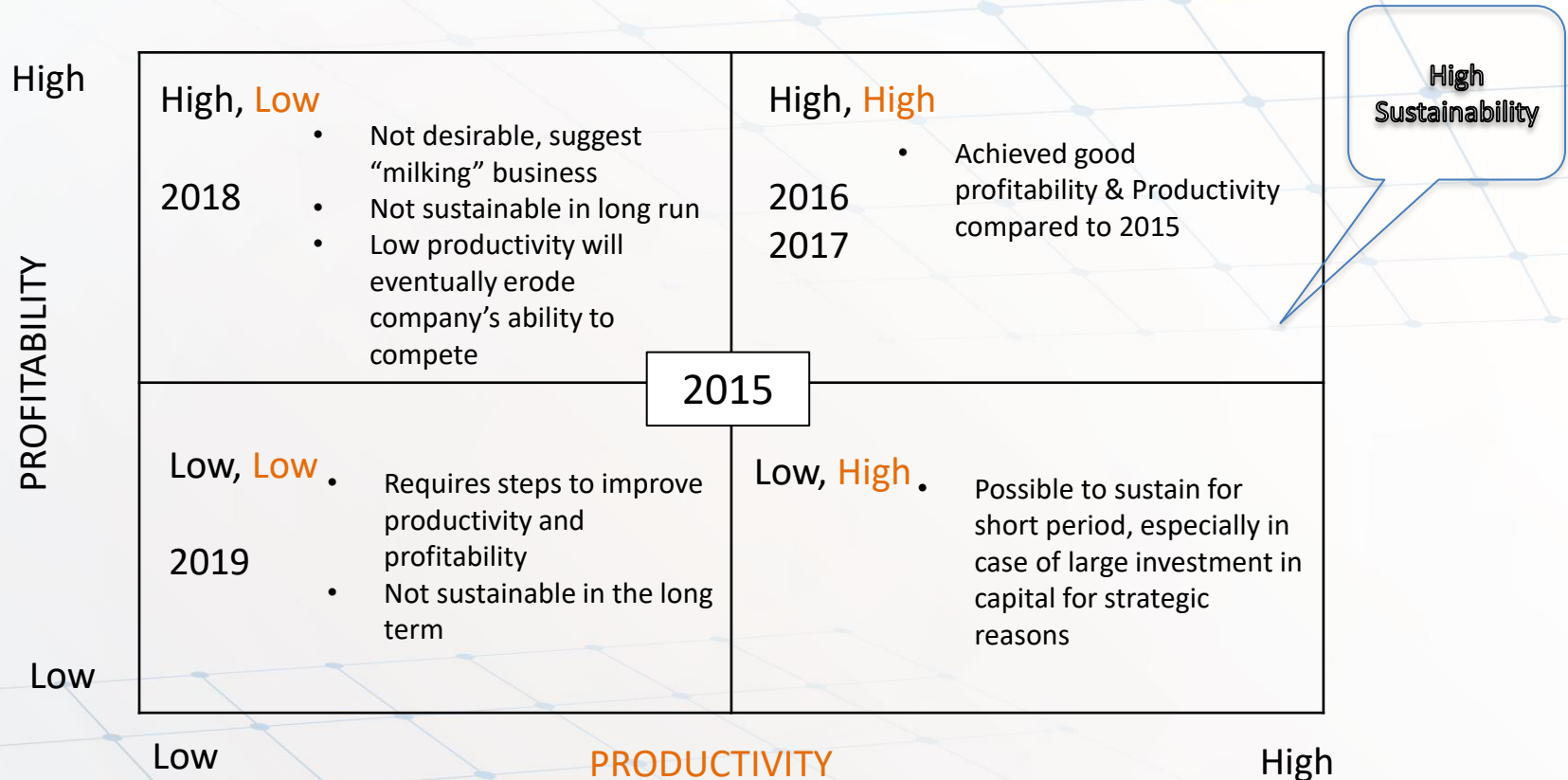


- Capital turnover has been steady over last 5 years
- Fixed asset turnover improved marginally over the same period
- Inventory turnover declined significantly since 2016, requires further investigation to formulate intervention, if necessary

Productivity Report

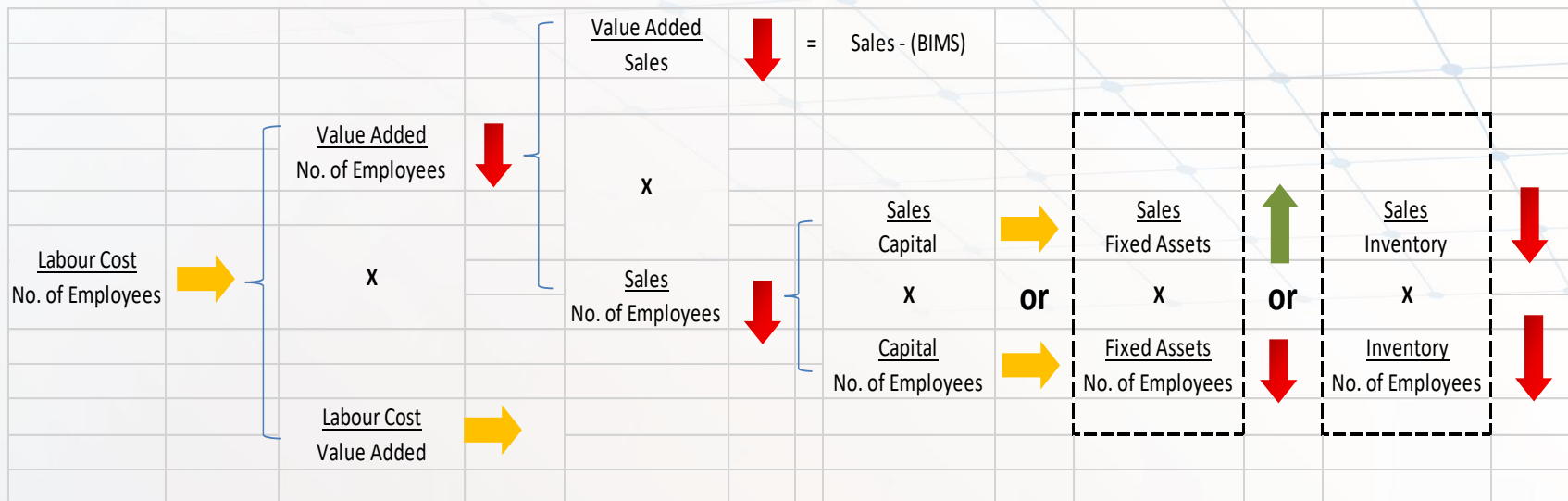
Observations & Recommendations

Profitability - Productivity



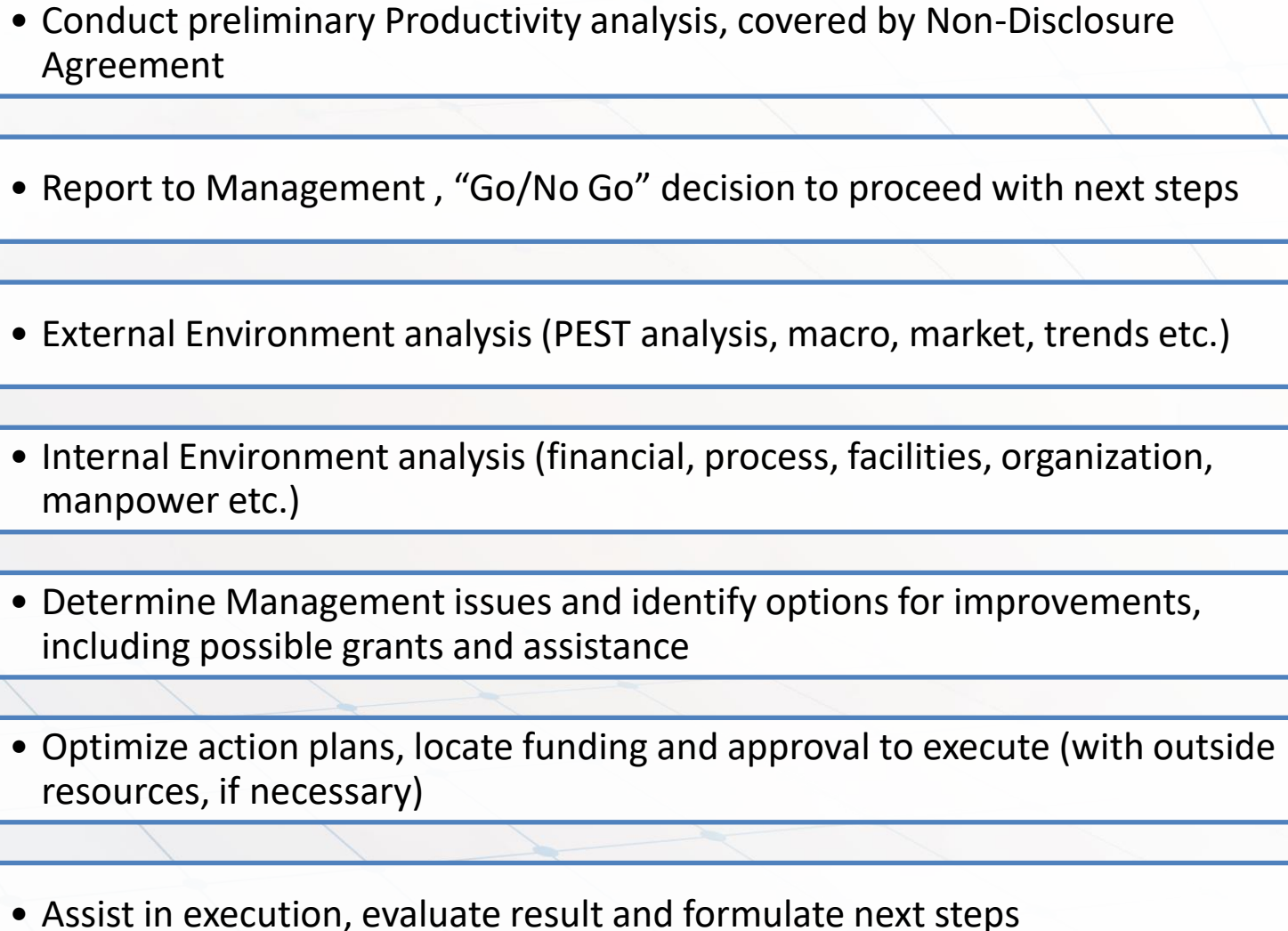
- “Top – Right” quadrant is most desired i.e. highly sustainable

Overall “Snap-shot”



	index	formula	2015	2016	2017	2018	2019	2020	trend
1	Labor Productivity	Value added/No.of employees	38,591	38,108	46,411	33,686	30,536		Down
2	Value added ratio	Value added/Sales amount	29%	25%	27%	24%	25%		Stable
3	Sales per person	Sales/ No.of employees	135,275	155,007	172,475	139,362	121,565		Not Stable
4	Capital turnover	Sales/Capital	1.10	0.98	1.06	1.22	1.06		Down
5	Capital intensity	Capital/No.of employees	122,922	157,869	163,450	114,515	114,496		Down
6	Fixed assest turnover	Sales/Fixed asset	2.39	1.97	2.80	2.62	2.82		Up
7	Fixed asset intensity	Fixed assest/No.of employees	56,525	78,633	61,649	53,143	43,126		Down
8	Inventory turnover	Sales/Inventory	10.15	10.03	6.72	6.85	5.09		Down
9	Labor distribution	Labor cost/Value Added	51%	61%	53%	61%	65%		up
10	Avarege wage	Labor cost/No.of employees	19,573	23,096	24,651	20,627	19,793		Stable
11	Avarege wage	Inventory/No.of employees	13,323	15,454	25,682	20,340	23,906		up

MEPN WG2 – typical intervention process

- 
- Conduct preliminary Productivity analysis, covered by Non-Disclosure Agreement
 - Report to Management , “Go/No Go” decision to proceed with next steps
 - External Environment analysis (PEST analysis, macro, market, trends etc.)
 - Internal Environment analysis (financial, process, facilities, organization, manpower etc.)
 - Determine Management issues and identify options for improvements, including possible grants and assistance
 - Optimize action plans, locate funding and approval to execute (with outside resources, if necessary)
 - Assist in execution, evaluate result and formulate next steps

MEPN WG2 – questions leading to next steps

- Which areas Coraza would like to focus on to achieve improvements?
 - Reducing production costs?
 - Ability to meet delivery deadlines?
 - Labour content appears to have gone up in recent years?
 - Investment of fixed assets appears slower than number of employees, intentional?
- What is Coraza's overall strategy in automation?
 - Is this an area of priority?
 - Backroom vs shopfloor?
 - Industry4.0 agenda?
 - Maintenance and downtime management?

MPC

- Productivity Improvement for Enterprise (SPPE) scheme

Steinbeis Malaysia Foundation

- Development of Strategic Plan, execution details and CSFs

MATRADE

- Export and market research & development

MITI/MIDA

- Matching grants & tax incentives