



Operational Excellence & Continuous Improvement Program

Executive Summary



About SSCX INTERNATIONAL

SSCX helps Corporation and Organization to Improve Efficiency, Effectiveness, Productivity and Scalability through Continuous Improvement in: People, Process & Technology

Our Client



And many more ...



700+
Clients



1000+
Improvement
Initiatives



1000+
Training,
Seminar, Webinar



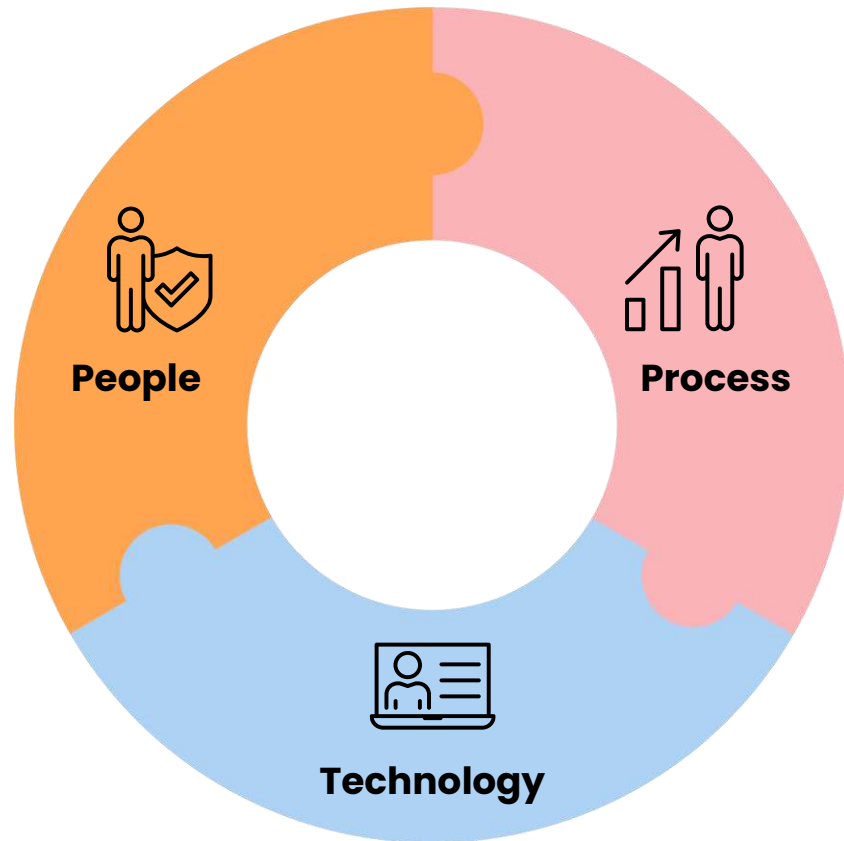
Financial Benefit

>USD 1 Bio
Bolder Result!

Bolder Result!

SSCX Program & Services

Behavior Change



People

- Management Value Survey
- Senior Leader and Managerial Behavior Profile
- Management Alignment
- Continuous Improvement Culture and Organization Climate
- Behavior Change Program
- Standard Work Implementation

Process

- Lean
- Six Sigma
- Lean Six Sigma
- Total Productive Maintenance
- Productivity Improvement Program
- Business Process Management
- Business Process Reengineering

Technology

- Overall Equipment Effectiveness Analytics
- Equipment Management System
- Operational Automation / Robotic Process Automation
- E-Quality Management System
- System Island Integration

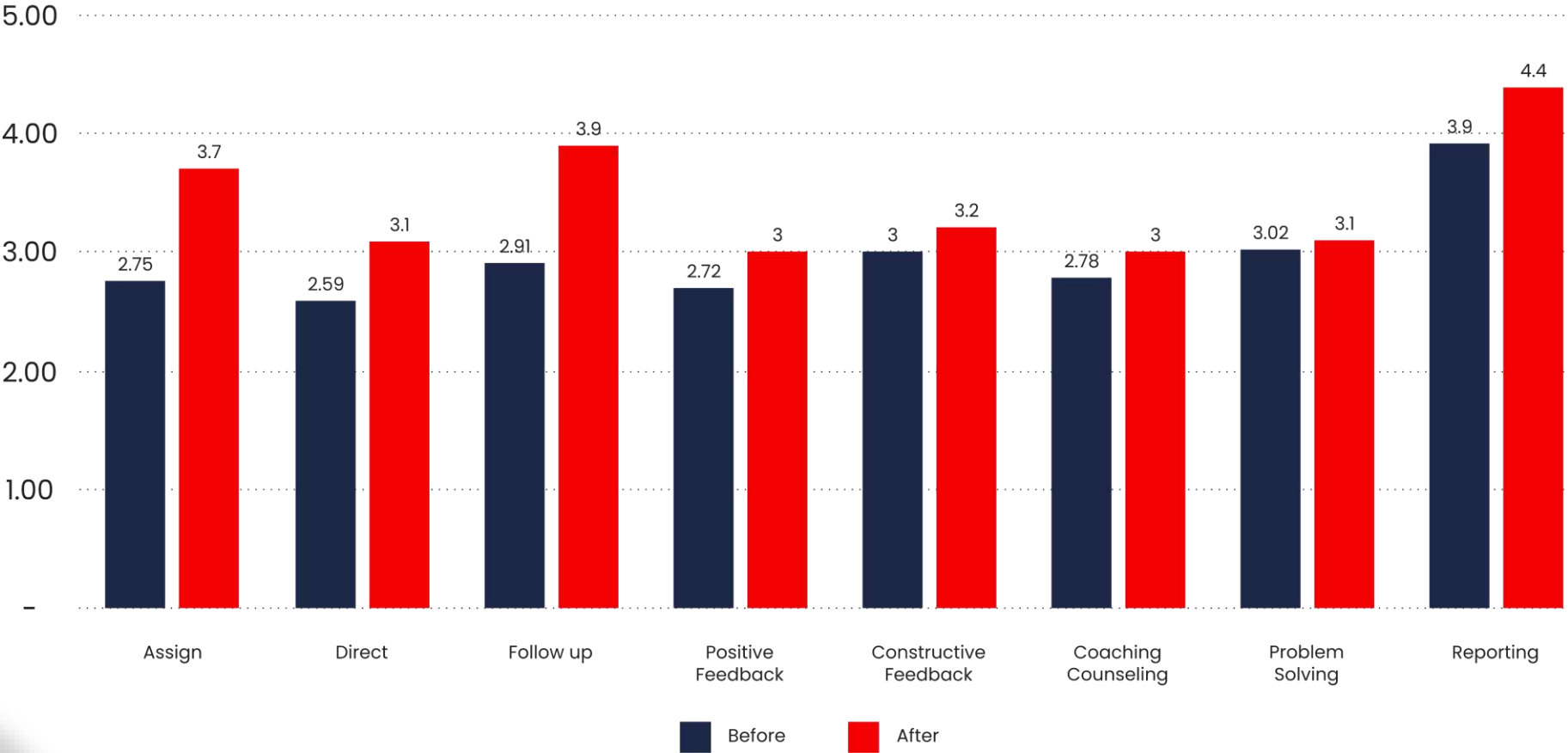
World Class Best Practice Deployment

- Lean Enterprise Deployment
- Lean Six Sigma Deployment
- Total Productive Maintenance Deployment

SSCX Program & Services

Behavior Change

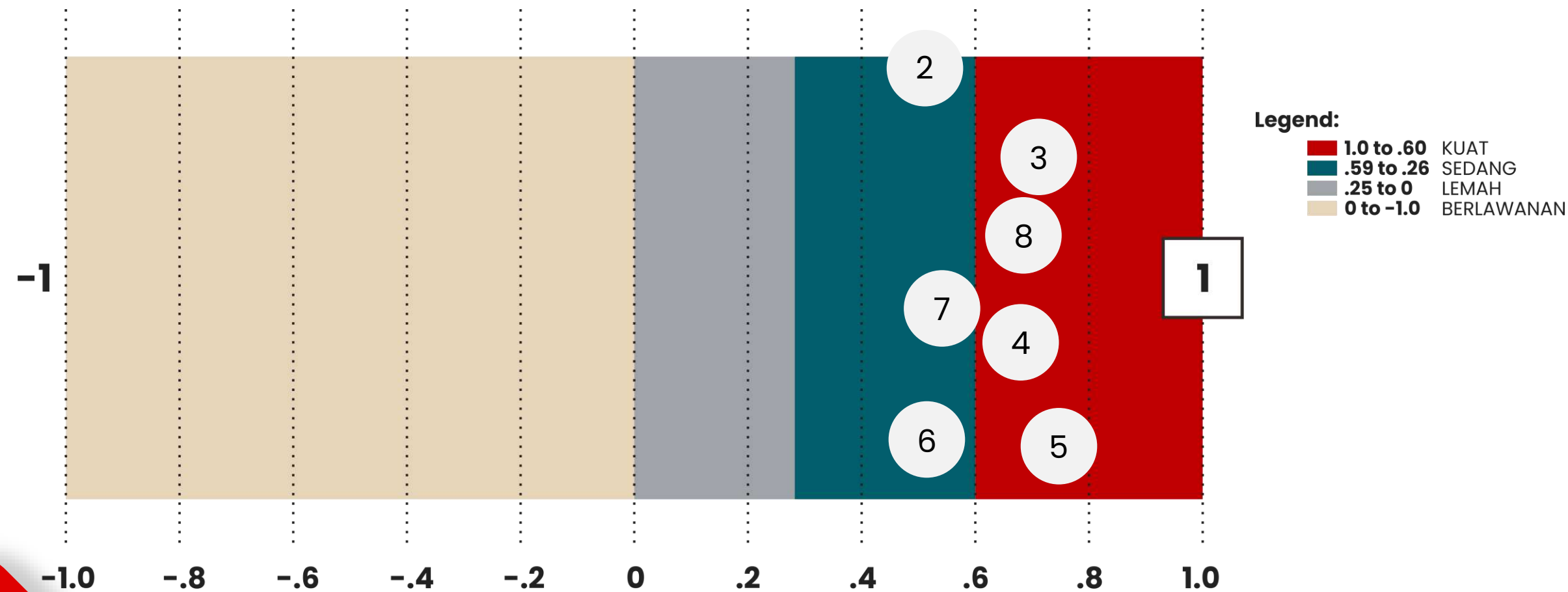
Managerial Behavior Profile



SSCX Program & Services

Behavior Change

Q-SORT SUMMARY

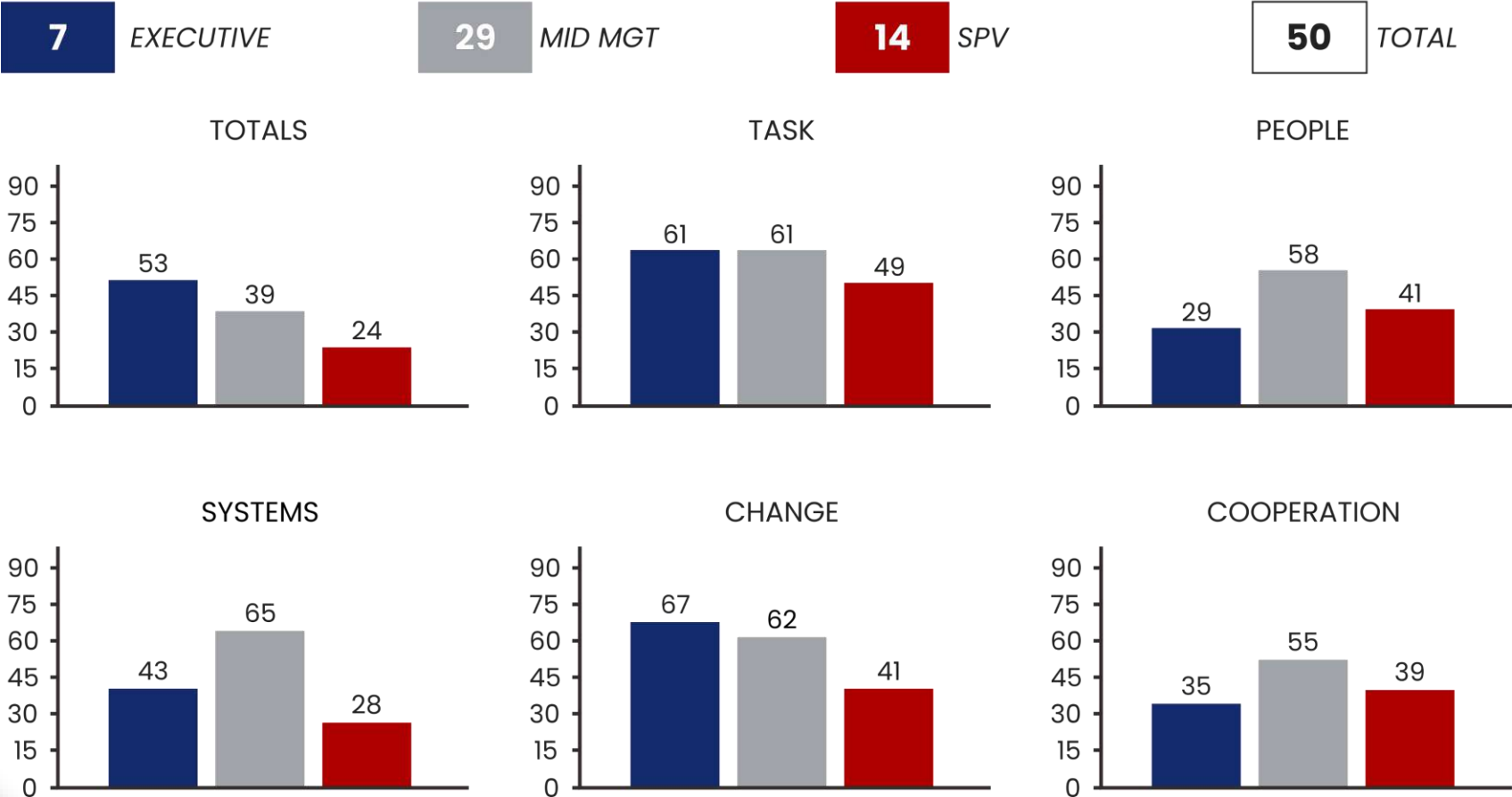


SSCX Program & Services

Behavior Change

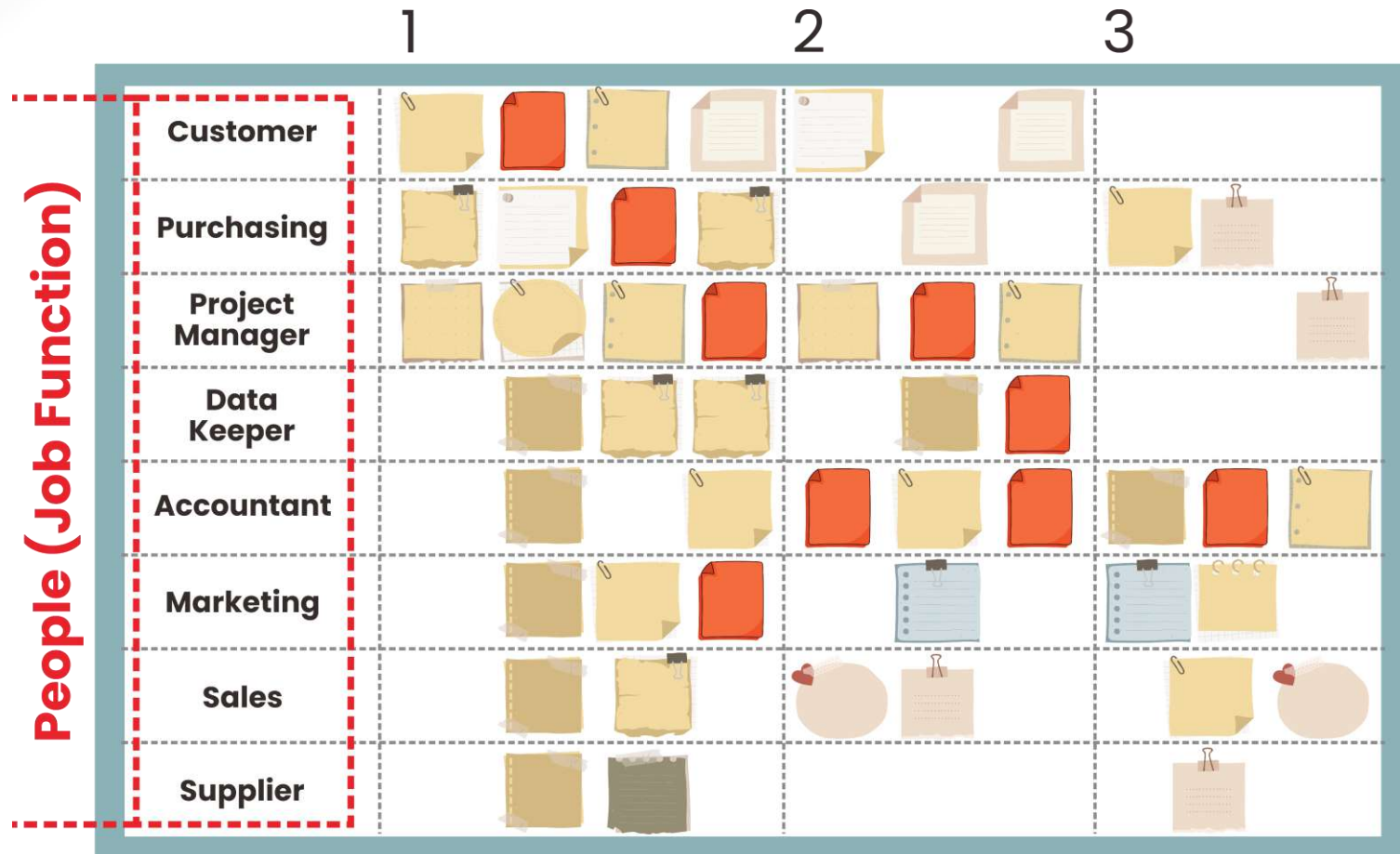
Management Value Survey

Appropriate Response



SSCX Program & Services

Process Improvement – Service Example



Time: Process Lead Time, Demand Time, Preparation Time, Waiting Time, Availability Time

SSCX Program & Services

Project Identification



Quick Wins

Tasks that provide the best benefits with the least effort required to complete them

Major Projects

Large-scale initiatives that require more effort to accomplish but ultimately offer long-term benefits

Fill-ins

Low-effort tasks that do not provide significant value

Time Wasters

Activities that take a lot of time to complete while offering minimal benefits

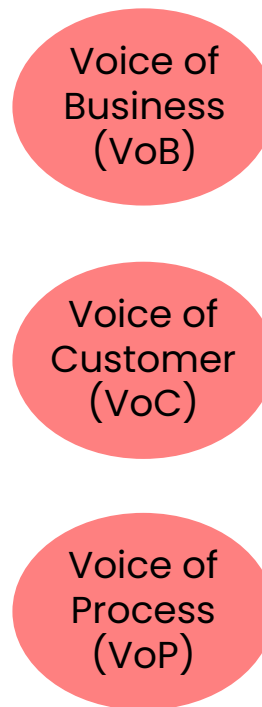
SSCX Program & Services

Project Identification

Sources



Three lenses/Tools



Performing Financial Analysis identifies Gaps in performance to generate project ideas

Identifying gaps in meeting customers needs (critical customer requirements) provides ideas for projects

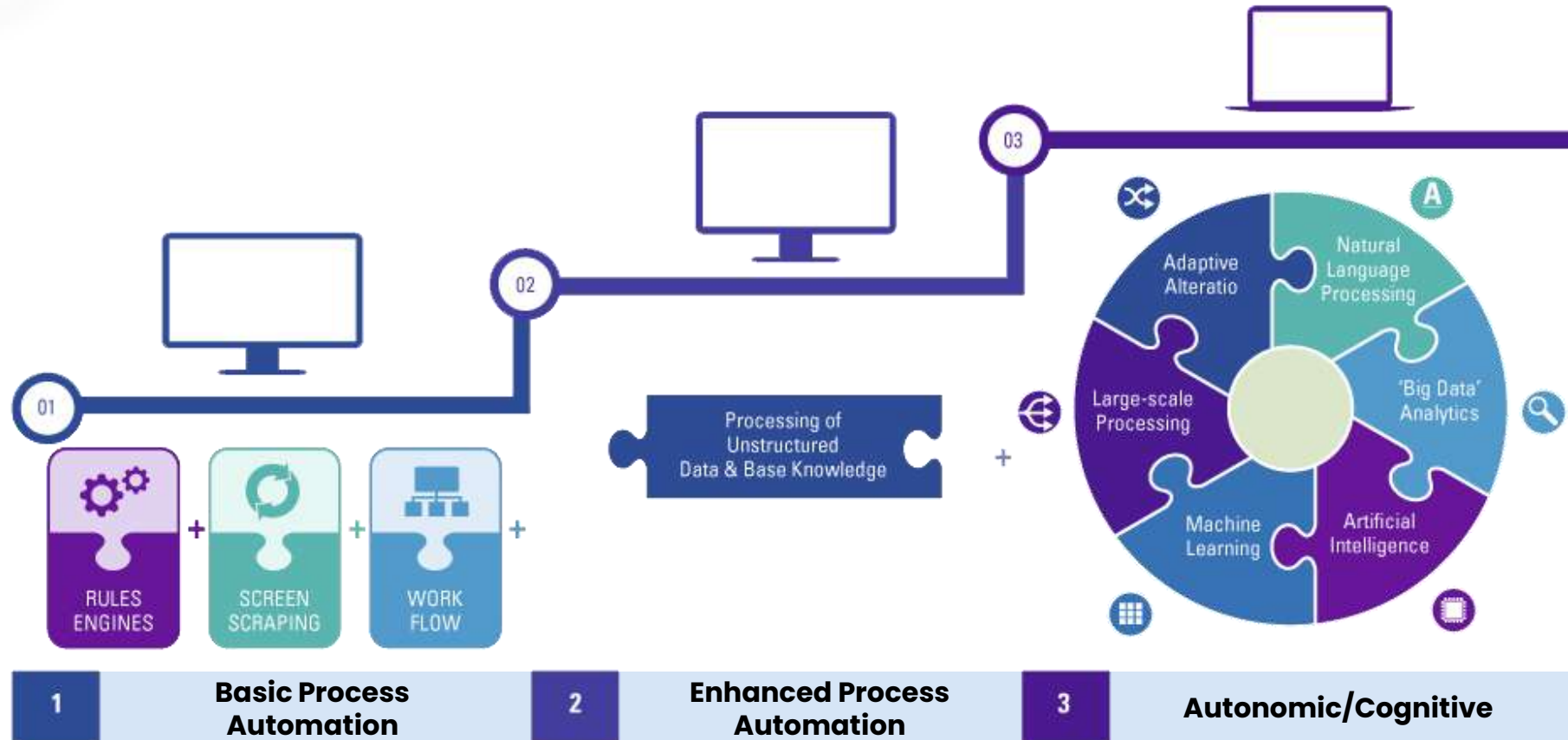
Process analysis links the business by oricess (versus function) and gives perspective on project ideas

Long-List of Potential CI Projects

<p>General CI Projects (Applicable Across Industries)</p> <ul style="list-style-type: none"> Reduce lead time for customer service response Improve accuracy of demand forecasting Standardize work procedures for efficiency Minimize waste in procurement and inventory Optimize scheduling and workload balancing Reduce rework and defects in operations Enhance supplier performance and relationships Improve employee onboarding and training processes Increase compliance with regulatory requirements Implement an effective knowledge management system Manufacturing Sector Reduce machine setup and changeover time (SMED) Implement Total Productive Maintenance (TPM) Optimize production line balancing Reduce material waste and scrap rate Improve first-pass yield in production Reduce downtime and unplanned maintenance Improve warehouse and inventory management Reduce energy consumption in operations Implement predictive maintenance for equipment Improve workplace safety and ergonomics Financial Sector Reduce loan approval processing time Improve fraud detection and prevention Optimize customer onboarding for banking services Reduce claim processing time in insurance Improve accuracy of financial reporting Streamline credit assessment procedures Reduce errors in transaction processing Enhance digital banking and mobile app performance Optimize investment portfolio management Improve customer service handling efficiency Energy Sector Reduce energy consumption per unit of output Optimize maintenance scheduling for power plants Improve fuel efficiency in operations Reduce downtime of energy distribution networks Improve power grid reliability Enhance safety protocols in high-risk operations Reduce non-revenue energy losses Implement IoT for real-time monitoring Optimize energy storage and utilization Increase efficiency of renewable energy integration Agriculture Sector Optimize fertilizer and pesticide use Improve irrigation efficiency Reduce post-harvest losses in the supply chain Enhance productivity of farming operations Optimize logistics for agricultural produce distribution Reduce equipment downtime in farming operations Improve seed selection and yield prediction Reduce costs in livestock management Implement precision farming techniques Improve cold chain management for perishable goods Mining Sector Reduce ore processing time and waste Improve equipment utilization and maintenance Enhance mine safety and risk management Reduce environmental impact and compliance costs Optimize transportation of raw materials Improve workforce productivity and training Reduce fuel and energy costs in mining operations Streamline supply chain for spare parts and consumables Implement automation for drilling and excavation Reduce water usage in mining operations 	<p>Logistics & Supply Chain</p> <ul style="list-style-type: none"> Optimize warehouse layout for efficiency Reduce freight and transportation costs Improve on-time delivery performance Reduce inventory holding costs Implement real-time tracking for shipments Minimize order fulfillment errors Streamline supplier onboarding and evaluation Improve forecasting accuracy for demand planning Reduce stockouts and overstock situations Enhance reverse logistics and return handling Healthcare & Pharmaceuticals Reduce patient waiting time in hospitals Improve medication error prevention Optimize hospital bed management Enhance supply chain efficiency for pharmaceuticals Reduce administrative burden on healthcare professionals Improve compliance with medical regulations Reduce waste in medical supplies and consumables Implement Lean processes in patient care workflows Optimize operating room scheduling Enhance telemedicine services for remote care Retail & E-commerce Improve checkout speed in physical stores Reduce online cart abandonment rates Optimize inventory replenishment cycles Improve supplier order accuracy Enhance product return and exchange process Reduce stock discrepancies between online and physical stores Improve customer support response time Optimize warehouse pick-and-pack efficiency Increase personalization in digital marketing Reduce logistics costs for last-mile delivery
---	--

SSCX Program & Services

Technology – Robotic Process Automation



Macro-based applets
Screen scraping data collection
Workflow
Visio-type building blocks
Process mapping
Business process management 'BPM'

Built-in knowledge repository
Learning capabilities
Ability to work with unstructured data
Pattern recognition
'Reading' source data manuals

Artificial Intelligence
Natural language recognition & processing
Self-optimization/self-learning
Digestion of super data sets
Evidence-based learning

Manufacturing Industry

Continuous Improvement Initiatives

SSCX International has helped both private and state-owned manufacturing companies to improve their business process that has resulted in billions of Rupiah of efficiency per year.

Some of highlighted continuous improvement initiatives:

1. Reduce defect / waste quantity & percentage
2. Reduce process lead time of manufacturing value stream
3. Reduce down time of equipment and due to engineering loss time
4. Reduce setup time of machine
5. Reduce inventory
6. Improve internal chemical production capacity to support core processes
7. Reduce chemical cost
8. Improve production capacity
9. Behavior Change



IDR 370 BIO
Financial Impact



Energy Industry

Continuous Improvement Initiatives

SSCX International has helped state-owned energy industry company to improve their business process that has resulted billions Rupiah of efficiency per year

**USD 8 Mio
/ Year Savings**

Some of highlighted continuous improvement initiatives:

1. Speeding up the troubleshooting time for a faulty KWH meter in technical services by 80%
2. Improved Connection Speed and Accuracy < 41,500 VA Power Change by 50% (from registration until validation)
3. Acceleration of service for Installing New Prepaid Electricity Power by 95 %
4. Speeds up the Registration Process of prepaid meter numbers for new installs
5. Reduce number of trip in GT XX
6. Reduce vibration level of MCW pump
7. Reduce number of false alarm in GT XX
8. Improve effectiveness and efficiency of Bio - fueling system
9. Reduce coal consumption in power plant
10. Analysis and Improvement of Lube Oil Gas Compressor Quality Degradation Block XX
11. Improve speed of procurement (PR to PO)
12. Reduce starting failure by 25%



Mining Industry

Continuous Improvement Initiatives

SSCX International has helped both private and state-owned mining industry companies to improve their business process that has resulted in billions of Rupiah of efficiency per year.

Some of highlighted continuous improvement initiatives:

1. Total Productive Maintenance maturity assessment
2. Optimize mining plan and effectiveness of cost control
3. Reduce heavy equipment rental cost
4. Reduce fuel consumption
5. Improve capacity and process control in coal handling area
6. Improve equipment reliability
7. Reduce penalty of demurrage time in port
8. Reduce chemical consumption
9. Improve availability of machine
10. Reduce variability product size to maximize extraction result
11. Operation behavior change program

**USD 50 Mio
/ Year Savings**



**PT FREEPORT
INDONESIA**



**PAMAPERSADA
NUSANTARA**



BukitAsam



anTam



Agriculture Industry

Continuous Improvement Initiatives

SSCX International has helped Agri company to improve their business process that has resulted billions Rupiah of efficiency per year

Some of highlighted continuous improvement initiatives:

1. Reduce Free Fatty Acid (FFA) percentage
2. Improve yield of harvesting
3. Increase Oil Extraction Rate (OER)
4. Increase availability of Dump Truck
5. Increase Machine Availability at Mill
6. Reduce Oil Losses at Mill
7. Optimize spare part inventory
8. Reduce PR to PO lead time
9. Increase utilization of automatic fertilizer
10. Reduce restan percentage

IDR 80 BIO
/ year in the First Wave of Improvement Initiative

Financial Industry

Continuous Improvement Initiatives

SSCX International has helped both private and state-owned financial industry companies to improve their business processes that has resulted in billions of Rupiah of efficiency per year.

Some of highlighted continuous improvement initiatives:

1. Reduce turn around time at funding, lending and back office area
2. Increase work capacity at funding, lending and back office area
3. Optimize cash inventory level for treasury optimization (atm, branch, and treasury)
4. Work area management and visual management implementation
5. Improve SLA achievement at Customer contact center (email and call contact center)
6. Improve HRIS data accuracy
7. Improve process effectiveness in underwriting division
8. Workload analysis and optimization



**Billions Rupiah
Efficiency in Many FSI
Clients**



Pharmaceutical Case Study

- 01 Problem and Challenges**
- 02 SSCX Approach**
- 03 Root Cause Identification**
- 04 Field Validation**
- 05 Steps and Recommendations**
- 06 Benefits**

Client Case Study

Well-Known Pharmaceutical Company in Indonesia

Client Problem and Challenges on the Shop Floor

1. Time Efficiency: High amount of time spent on documentation and coordination, especially during shifts 1 and 2.
2. Cleaning Processes: Significant time spent on major and minor cleaning at various stages of production.
3. Setup and Changeover Time: Considerable time spent on setup and changeover (C/O), particularly in the coating and imprinting processes.



Client Case Study

Well-Known Pharmaceutical Company in Indonesia

SSCX Approach

Lean Methodology and Analytical Tools:

1. **Value Stream Mapping (VSM):** To identify and eliminate waste in the production process.
2. **5S:** To enhance efficiency and reduce time spent on non-productive activities.
3. **Kaizen:** For continuous improvement through employee suggestions and participation.



Client Case Study

Well-Known Pharmaceutical Company in Indonesia

Root Cause Identification

Analysis of Main Causes:

1. **Manual Documentation:** Manual documentation processes lead to high time consumption.
2. **Inefficient Coordination:** Lack of an integrated coordination system results in high time spent on internal and external coordination.
3. **Suboptimal Cleaning Processes:** Inefficient cleaning procedures cause prolonged major and minor cleaning times.



Client Case Study

Well-Known Pharmaceutical Company in Indonesia

Field Validation

Proof and Confirmation Process:

1. **Observation Data:** Using shop floor observation data to confirm the time spent on each activity.
2. **Value Analysis:** Identifying which activities are value-added, enablers, or non-value-added to streamline processes and eliminate waste.
3. **Experiments:** Conducting experiments by implementing small changes and measuring their impact on production time and efficiency.



Client Case Study

Well-Known Pharmaceutical Company in Indonesia

Improvement Steps and Recommendations:

- 1. Implementing New Batch Manufacturing and Packaging Record:** After reducing non-value-added (NVA) activities, implement a new batch record system to streamline documentation before digitalization.
- 2. Digital Documentation:** Implementing an electronic documentation system to reduce time spent on manual documentation.
- 3. Optimized Cleaning Processes:** Reviewing and optimizing cleaning procedures to reduce time spent on major and minor cleaning.



Client Case Study

Well-Known Pharmaceutical Company in Indonesia

Final Results / Benefits

Impact of Solution Implementation:

1. **Increased Productivity:** Reducing time spent on documentation and coordination, increasing available production time by **34%**.
2. **Operational Efficiency:** Reducing setup and changeover times, as well as cleaning times, improving overall operational efficiency by **16%**.
3. **Waste Reduction:** Decreasing non-productive activities and waste, enhancing efficiency and product quality by **23%**.





Mining

Case Study

- 01 Problem and Challenges**
- 02 SSCX Approach**
- 03 Root Cause Identification**
- 04 Field Validation**
- 05 Steps and Recommendations**
- 06 Benefits**

Client Case Study

Well-Known Mining Company in Indonesia

Client Problem and Challenges in Mining Operations

1. **Cost Efficiency:** High operational costs, particularly in fuel usage and equipment rental.
2. **Process Effectiveness:** Inefficiencies in mining processes and equipment utilization.
3. **Behavioral Issues:** Need for improvement in supervisory behavior and team management.



Client Case Study

Well-Known Mining Company in Indonesia

SSCX Approach

Lean Methodology and Analytical Tools:

1. **Value Stream Mapping (VSM):** To identify and eliminate waste in the mining process by mapping out all steps in the value stream and highlighting non-value-added activities.
2. **Logic Tree / Fishbone Diagram:** To systematically identify root causes of inefficiencies and high costs by breaking down problems into smaller, manageable components.
3. **Statistical Data Analysis:** To analyze data trends and variances, providing a quantitative basis for decision-making and identifying significant factors affecting performance.
4. **Piloting:** To test proposed solutions on a small scale before full implementation, ensuring feasibility and effectiveness while minimizing risks.

Client Case Study

Well-Known Mining Company in Indonesia

Root Cause Identification

Analysis of Main Causes:

1. **High Fuel Consumption:** Inefficient use of fuel in heavy equipment identified through VSM and statistical analysis.
2. **Equipment Downtime:** Frequent breakdowns and maintenance issues leading to high downtime, identified using Fishbone Diagram and statistical data.
3. **Behavioral Gaps:** Lack of effective supervisory skills and team management, identified through observation and feedback analysis.



Client Case Study

Well-Known Mining Company in Indonesia

Field Validation

Proof and Confirmation Process:

1. **Observation Data:** Using shop floor observation data to confirm the time spent on each activity and identify inefficiencies.
2. **Value Analysis:** Identifying which activities are value-added, enablers, or non-value-added to streamline processes and eliminate waste.
3. **Experiments and Piloting:** Conducting small-scale pilots to test the impact of proposed changes and measure improvements in production time and efficiency.



Client Case Study

Well-Known Mining Company in Indonesia

Improvement Steps and Recommendations:

- 1. Optimizing Fuel Usage:** Implementing measures to reduce fuel consumption by at least 3 liters per hour for heavy equipment.
 - Pilot Results:** Initial tests showed a 5% reduction in fuel usage, leading to significant cost savings.
- 2. Reducing Equipment Rental Costs:** Minimizing the number of rental hours for auxiliary equipment by at least 10 hours per month.
 - Pilot Results:** Reduced rental hours by 12 hours per month, resulting in notable monthly savings.

Client Case Study

Well-Known Mining Company in Indonesia

Improvement Steps and Recommendations:

3. **Increasing Equipment Productivity:** Enhancing the productivity of coal loading equipment by XX tons per hour and self-managed excavation equipment by YY BCM per hour.
 - **Pilot Results:** Achieved a 10% increase in productivity, reducing operational delays.

4. **Improving Loading Efficiency:** Ensuring compliance with SOPs for train loading times to meet agreed standards with PTKAI.
 - **Pilot Results:** Reduced loading times by 15%, decreasing demurrage costs.



Client Case Study

Well-Known Mining Company in Indonesia

Improvement Steps and Recommendations:

5. **Enhancing Conveyor and Facility Efficiency:** Reducing conveyor breakdowns and improving the efficiency of coal handling facilities.
 - **Pilot Results:** Decreased breakdowns by 20%, improving operational continuity.

6. **Behavioral Training:** Conducting supervisory behavior training, including role modeling, effective communication, and time management.
 - **Pilot Results:** Improved supervisory skills led to a 5% increase in team productivity.

Client Case Study

Well-Known Mining Company in Indonesia

Final Results / Benefits

Impact of Solution Implementation:

- 1. Increased Productivity:** Reducing time spent on non-productive activities, increasing available production time by **25%**.
- 2. Operational Efficiency:** Improving equipment utilization and reducing downtime, enhancing overall operational efficiency by **20%**.
- 3. Cost Reduction:** Lowering fuel consumption and rental costs, reducing overall operational costs by **18%**.





Agriculture Case Study

- 01 Background**
- 02 Problem and Challenges**
- 03 Continuous Improvement Initiatives**
- 04 Benefits**
- 05 Improvement Summary**

Client Case Study

Well-Known Agriculture Company in Indonesia

Background:

A large group of oil palm plantation companies operates across the value chain, from plantation to crude palm oil (CPO) processing in the mill. The plantations include company-owned estates and plasma plantations, which source from surrounding communities as part of their corporate social responsibility (CSR) initiatives. Management has identified significant deviations from operational standards and numerous inefficiencies within their processes. They have requested a comprehensive improvement initiative targeting the core value chain—encompassing plantation operations, transportation, and mill processing—utilizing the Lean Six Sigma methodology.

Client Case Study

Well-Known Agriculture Company in Indonesia

Client Problem and Challenges in Agriculture Operations

- 1. Customer Penalties:** Penalties imposed by customers due to high Free Fatty Acid (FFA) levels, resulting in significant price deductions per ton and reducing direct revenue substantially.
- 2. Below-Standard Harvest Yield:** The current harvest yield remains below the expected standard, impacting overall productivity.
- 3. Poor Harvest Quality:** A significant portion of the harvested fruit is substandard, including underripe and overripe fruit, leading to quality concerns.
- 4. Low Oil Extraction Rate (OER):** The Oil Extraction Rate is not optimal, reducing the efficiency of oil production.
- 5. Low Transportation Equipment Availability and Utilization:** Dump trucks used for transportation, hauling, and other operational needs suffer from low availability and poor utilization rates.

Client Case Study

Well-Known Agriculture Company in Indonesia

Highlighted Continuous Improvement Initiatives:

1. **Reducing** Free Fatty Acid (FFA) percentage
2. **Improving** harvest yield
3. **Increasing** Oil Extraction Rate (OER)
4. **Enhancing** availability of dump trucks
5. **Increasing** machine availability at the mill
6. **Reducing** oil losses at the mill
7. **Optimizing** spare parts inventory
8. **Reducing** PR to PO lead time
9. **Increasing** utilization of automatic fertilizers
10. **Reducing** restan percentage



Client Case Study

Well-Known Agriculture Company in Indonesia

Final Results / Benefits

Increased Productivity

- **Availability & Utilization:** Improved from XX% to YY%, resulting in savings of > IDR 5.2 Bio.
- **Fruit Quality:** Increased ripe fruit percentage from XX% to YY% and loose fruit from AA% to BB%, resulting in savings of > IDR 3.6 Bio
- **Yield Improvement:** Yield per hectare increased from XX to YY resulting in savings of > IDR 3.18 Bio

Client Case Study

Well-Known Agriculture Company in Indonesia

Final Results / Benefits

Operational Efficiency

- **Turnover Reduction:** Reduced turnover and improved labor fulfillment, resulting in savings of > IDR 3 Bio
- **Productivity Improvement:** Increased productivity in harvesting, loading, and transport from XXX kg/HK to YYY kg/HK, resulting in savings of > IDR 2.5 Bio
- **Fertilization Application:** Improved fertilization application to 100% in pilot blocks, resulting in savings of > IDR 233 Mio.

Client Case Study

Well-Known Agriculture Company in Indonesia

Final Results / Benefits

Cost Reduction

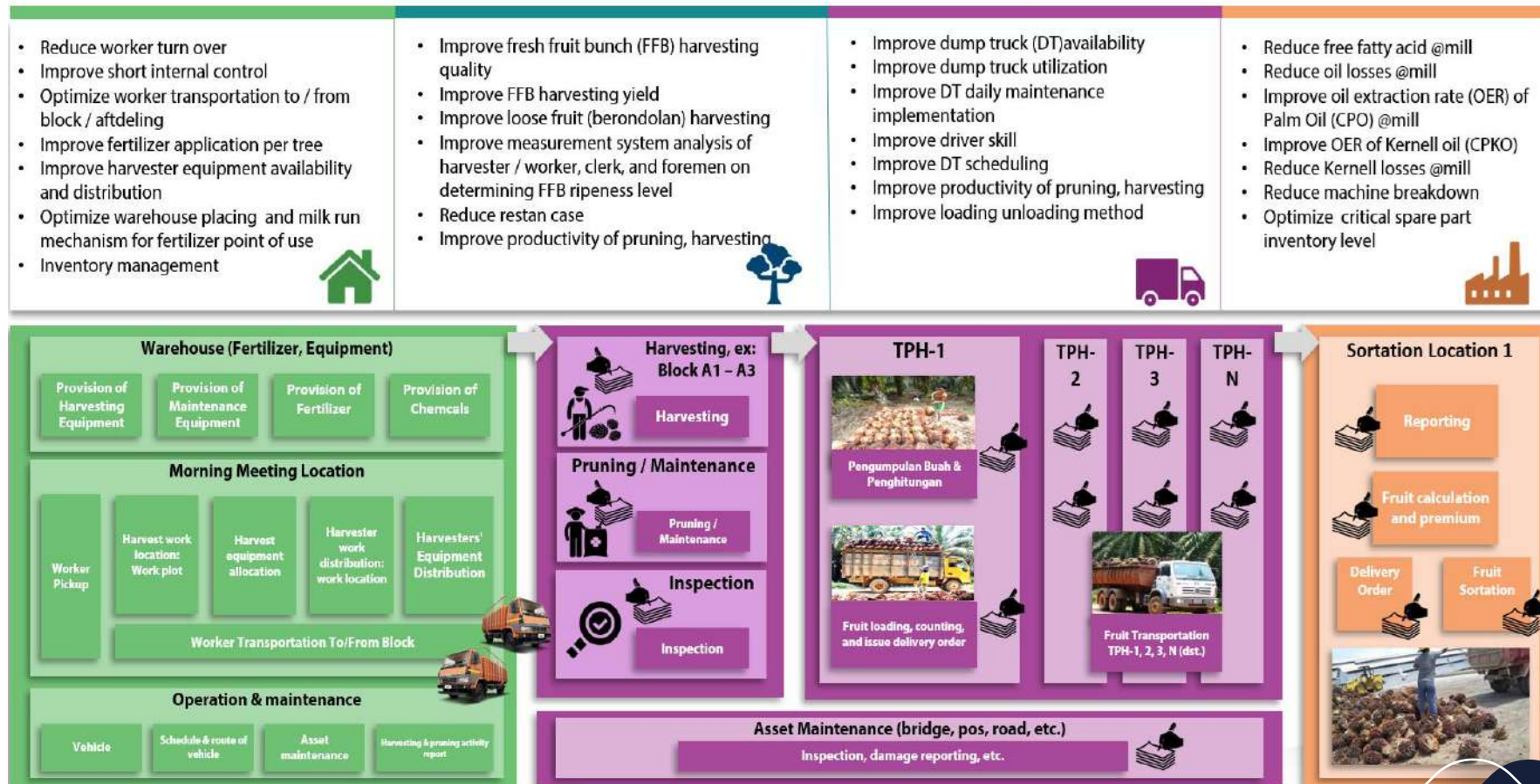
- **Zero Restan:** Achieved zero restan in specific areas, resulting in savings of > IDR 1.4 Bio.
- **Mill Operations:** Reduced mill breakdowns from XX% to YY% and increased throughput from AA to BB, resulting in savings of > IDR 32. 6 Bio.
- **Oil Loss Reduction:** Reduced oil loss from XX% to YY%, resulting in savings of IDR > 4.2 Bio
- **Inventory Management:** Optimized inventory management, reducing zero stock from XX to 0% and increasing SKU availability from AA% to BB%, resulting in savings of > IDR 55 Mio.

Client Case Study

Well-Known Agriculture Company in Indonesia

Improvement Summary

Our End to End Improvement Summary in Agriculture & Agri-industry





Financial Case Study

- 01** Background & Objectives
- 02** Key Projects & Outcomes
- 03** Methodology
- 04** Results
- 05** Achievement
- 06** Conclusion

Client Case Study

Well-Known Financial Company in Indonesia

Background & Objectives

Background

In 2008–2009, a major bank undertook an extensive initiative to improve various operational aspects, executing more than 50 projects. These projects were part of a broader effort to enhance customer satisfaction, reduce costs, and increase process efficiency.

Objectives

The primary objectives of these projects included:

1. **Reducing** response times and lead times across various services.
2. **Improving** service levels and customer satisfaction.
3. **Reducing** operational costs and inefficiencies.

Client Case Study

Well-Known Financial Company in Indonesia

Key Projects & Outcome

1. Reducing Email Response Time at Contact Center

- **Outcome:** Successfully decreased the response time for emails, enhancing customer satisfaction.

2. Lowering Outgoing Call Costs at Contact Center

- **Outcome:** Achieved significant cost savings by optimizing outgoing call processes.

3. Decreasing Staff Unavailability

- **Outcome:** Improved staff availability, leading to better service levels.

4. Enhancing Service Level at Priority Call Center

- **Outcome:** Increased service levels, providing faster and more efficient service to priority customers.

Client Case Study

Well-Known Financial Company in Indonesia

Key Projects & Outcome

5. Reducing Lead Time for TRM Opening in Batam

- **Outcome:** Streamlined the TRM opening process, reducing lead time and improving customer experience.

6. Reducing Queue Times at Branches

- **Outcome:** Implemented measures to reduce queue times, enhancing branch efficiency.

7. Improving Export Examination Process

- **Outcome:** Reduced lead time for export examination, improving process speed and customer satisfaction.

8. Reducing Lead Time for Export Advising L/C in Jakarta

- **Outcome:** Achieved faster processing times for export advising L/C, benefiting customers.

Client Case Study

Well-Known Financial Company in Indonesia

Key Projects & Outcome

9. Improving Import Examination Process

- **Outcome:** Streamlined the import examination process, reducing lead times.

10. Reducing Lead Time for IMIS Process

- **Outcome:** Enhanced the efficiency of the IMIS process, achieving quicker turnaround times.

Client Case Study

Well-Known Financial Company in Indonesia

Methodology

The projects followed the DMAIC (Define, Measure, Analyze, Improve, Control) methodology and utilized various tools, including:

- **Value Stream Mapping (VSM)**
- **Value Analysis**
- **Capability Analysis**
- **Fishbone Diagram**
- **5 Whys**
- **Piloting**
- **Statistical Analysis**



Client Case Study

Well-Known Financial Company in Indonesia

ID	Improvement Project Title	Coaching Session														
		1	2	3	4	5	6	7	8	9	10	11	12	14	15	
		27/8-31/8	3/9-7/9	10/9-14/9	17/9-21/9	24/9-28/9	1/10-5/10	8/10-26/10	29/10-2/11	5/11-9/11	12/11-16/11	19/11-23/11	26/11-29/11	3/12-7/12	10/12-14/12	
1	SLA Special Finance Department			D		M				A				I	C	
2	Call Acceptance Rate					M		A				I			C	
3	Efisiensi Pelayanan Pelanggan			D			M		A				I		C	
4	Proses Aplikasi KTA			D			M			A			I		C	
5	SLA Call Center					D			M			A		I	C	
6	Kesalahan transfer value of rekening			D			M		A				I		C	
7	Pemenuhan SLA					M		A				I			C	
8	Delivery time			D			M				A			I	C	
9	Minimize suspension Account deposit			D			M			A			I		C	
10	Konsistensi pelayanan			D				M					A		I	
11	Menurunkan biaya transaksi					D			M				A		I	
12	Percepatan Proses			D			M				A			I	C	
13	Kecepatan Proses			D			M			A				I	C	
14	Penjualan TR					D			M			A			I	
15	Lead Time NPL			D			M			A				I	C	
16	NPL Makasar			D				M				A			I	
17	Lead Time CE			D			M			A				I	C	
18	Lead Time Ap			D			M			A				I	C	
19	Efisiensi Pelayanan					D			M			A		I	C	
20	Lead Time L/					D				M			A		I	
21	Tingkat Kehadiran Transaksi			D			M			A				I	C	
22	Transaksi teller			D			M			A				I	C	
23	Penyelesaian kredit macet regional			D			M			A				I	C	
24	Utilisasi e-Learning					D			M				A		I	
25	Lead Time Ap					M				A				I	C	
26	Lead Time Ap					M				A				I	C	
27	Lead Time Ap			D			M			A				I	C	
28	TAT Proses KTA			D			M			A				I	C	
29	Time delivery			D			M			A				I	C	
30	Lead Time Ap					D				M				A	I	

Results

The projects collectively resulted in:

- **Overall Productivity Improvement:** Approximately 20%
- **Cost Savings:** Around 15%
- **Error Reduction:** Approximately 25%
- **Speed Improvement:** Around 30%

Client Case Study

Well-Known Financial Company in Indonesia



Left: Champion received **The Best Banking Service Excellence** from Marketing Research Indonesia, handed to *Mr Agus Martowardojo*, CEO of Bank Mandiri.

Right: Champion and Greenbelt received **Top Ranking Performer Best Contact Center** from Contact Center World Award in Sydney in 2008.



2009 Asia's Six Sigma Conference BEST DEFECT ELIMINATION IN SERVICE/TRANSACTION winner!



Client Case Study

Well-Known Financial Company in Indonesia

Achievement

- **World-Class Call Center:** Recognized for exceptional service and efficiency.
- **Service Excellence Award:** Honored for outstanding customer service.
- **Golden Award for IPQC Project Asia Pacific Region:** Awarded for excellence in project quality

Conclusion

The bank's initiative to undertake these projects demonstrated a strong commitment to operational excellence and customer satisfaction. By systematically addressing inefficiencies and implementing targeted improvements, the bank was able to achieve substantial benefits, setting a benchmark for future projects.



Operational Excellence & Cost Optimization Case Study

- 01** Background & Challenges
- 02** Key Projects & Outcomes
- 03** Operational Excellence & Cost Optimization Journey
- 04** Initiatives Impact
- 05** Project Journey and Result

Client Case Study

Operational Excellence & Cost Optimization Case Study

Background & Challenges

Background

A multinational electronics manufacturing company in Indonesia was tasked by its US headquarters to optimize operations, aiming for a direct impact on business performance, including the P&L, balance sheet, and cash flow. A comprehensive operational excellence program was implemented across various divisions. Priority initiatives were selected based on inputs from financial report analysis, business process analysis, voice of customer insights, and feedback from key leaders in each division.

Background & Challenges

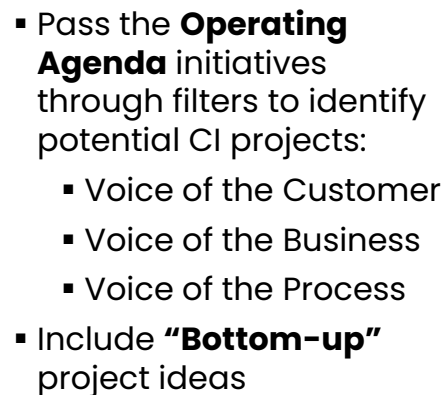
Challenges

The primary objectives of these projects included:

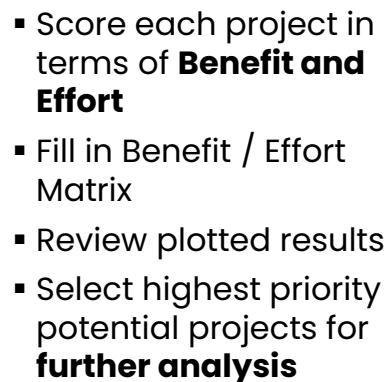
1. **Reducing** response times and lead times across various services.
2. **Improving** service levels and customer satisfaction.
3. **Reducing** operational costs and inefficiencies.

Operational Excellence & Cost Optimization Journey

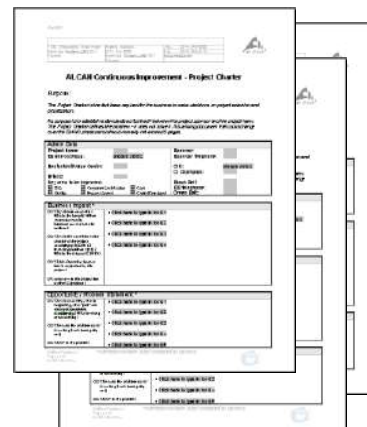
Identify Potential Projects



Screen Initial List of Potential Projects



Scope and Define Projects

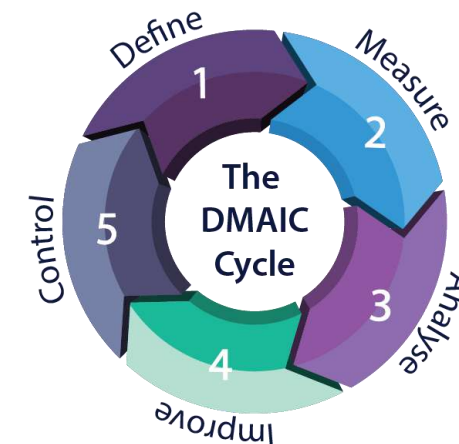


- Assign potential projects to project sponsors for **better definition of the project** (creation of the “project charter”)
- Complete Draft Project Charters / Definitions

Prioritize List of Defined Projects

- Evaluate projects using Evaluation Criteria
- **Update Benefit / Effort Matrix**
- Review plotted results
- **Rich discussion / Prioritize projects**
- Schedule project launches based on resource availability

Project Execution, Monitoring, Evaluation, and Replication



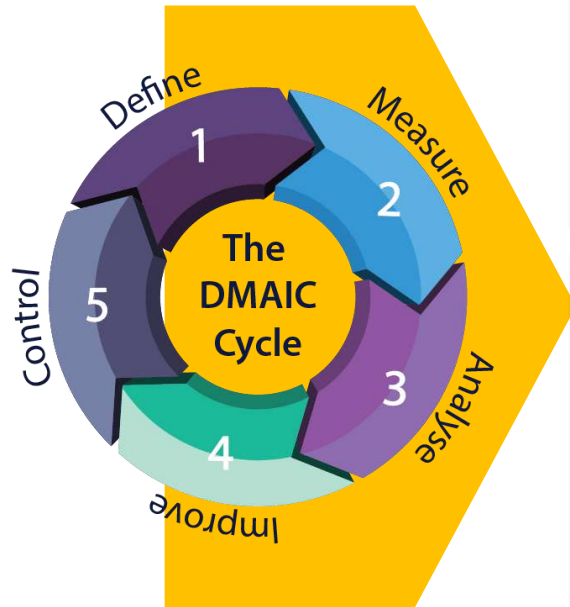
Client Case

Operational Excellence Initiatives Directly Impact Business Performance and Are Directly Connected to The Financial Statements

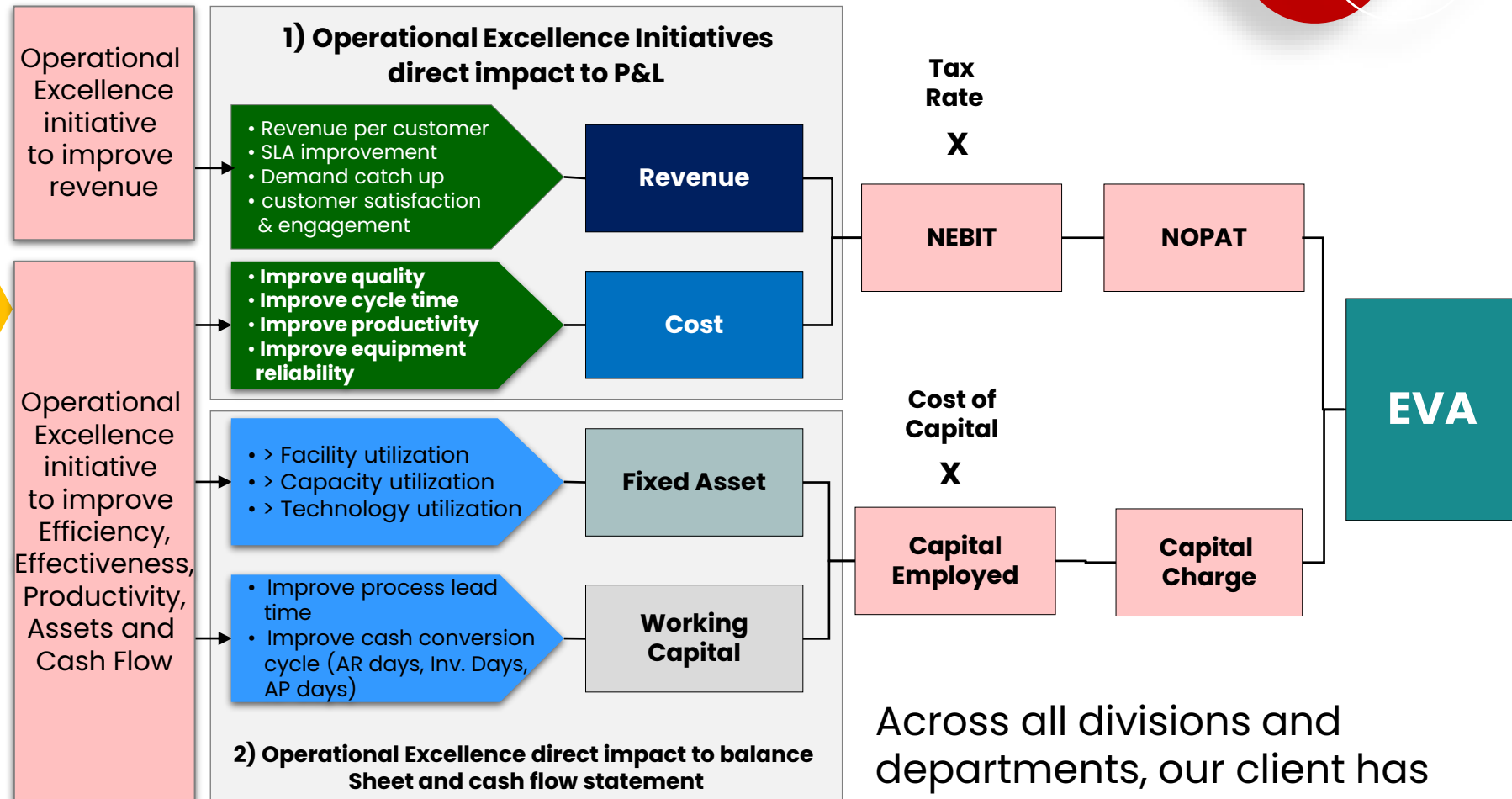
No	Financial Statement Impact	Business Benefit Category	Project Title
1	Profit and Loss (PnL) – Reduced Cost of Goods Sold (COGS)	Hard Benefit	Reduction of Material Waste in Production
2	Profit and Loss (PnL) – Increased Revenue	Hard Benefit	Improved On-Time Delivery to Boost Customer Retention
3	Profit and Loss (PnL) – Reduced Operating Expenses	Hard Benefit	Optimization of Energy Consumption in Manufacturing
4	Balance Sheet – Reduced Inventory Days	Soft Benefit	Inventory Turnover Improvement
5	Cash Flow Statement – Lower Working Capital Requirements	Soft Benefit	Accounts Receivable Collection Time Reduction
6	Capital Exp Plan – Avoided Future Investment	Soft Benefit	Elimination of Unnecessary Equipment Purchases
7	Profit and Loss (PnL) – Reduced HR Expenses	Hard Benefit	Streamlining Workforce Scheduling
8	Balance Sheet – Improved Asset Utilization	Soft Benefit	Preventive Maintenance to Increase Machine Uptime
9	Profit and Loss (PnL) – Reduced Rework Costs	Hard Benefit	Reduction of Defective Products in Assembly Line
10	Intangible	Intangible	Enhanced Employee Engagement through Training Programs
11	Profit and Loss (PnL) – Increased Revenue from Upselling	Hard Benefit	Improved Cross-Selling Strategies for Existing Customers
12	Cash Flow Statement – Faster Cash Conversion Cycle	Soft Benefit	Streamlining Procurement and Payment Processes
13	Profit and Loss (PnL) – Reduced Freight Costs	Hard Benefit	Optimization of Logistics Routes
14	Balance Sheet – Reduction in Scrap Inventory	Soft Benefit	Implementation of Rework Process for Scrapped Items
15	Capital Exp Plan – Reduced Future Capex	Soft Benefit	Extension of Equipment Lifespan via Predictive Maintenance
16	Profit and Loss (PnL) – Reduced Warranty Costs	Hard Benefit	Reduction of Product Failures in Customer Usage
17	Cash Flow Statement – Faster Billing Cycle	Soft Benefit	Automation of Invoice Processing
18	Intangible	Intangible	Improved Customer Satisfaction through Quality Improvements
19	Balance Sheet – Reduced Finished Goods Inventory	Soft Benefit	Implementation of Just-in-Time (JIT) Production System

Client Case Study

Project Execution Journey and Result



At the end of initiatives this company was able to boast a 65% reduction in work in process (WIP) Raw material inventory has been reduced by 50% with total inventory turns improving dramatically at the same time.



Across all divisions and departments, our client has achieved efficiency savings of approximately **USD 12 – 18 million per year over the past three years.**



Project Highlight

Tackling Long – Standing High
Defect Rates with a
Data-Driven Approach

Project Highlight

Operational Excellence & Cost Optimization Case Study

Quality Improvement

Electronic Manufacturing for Export Market

Background

A multinational manufacturing company in Indonesia specializing in the production of electronic components essential for camera products. The company currently holds a 45% market share. Due to a significant increase in demand, the company needs to double its production capacity. However, the defect rate in its products remains high, leading to increased costs of goods sold (COGS). There is an urgent need for a focused quality improvement effort to address this issue promptly.

Project Highlight

Operational Excellence & Cost Optimization Case Study

Quality Improvement

Electronic Manufacturing for Export Market

Challenges

1. High defect rates leading to significant losses in production, impacting overall efficiency and increasing costs.
2. Rising customer complaints, putting the business at risk of losing key clients and damaging its reputation.
3. Unstable processes, which contribute to inconsistencies in product quality and overall performance.
4. Frequent machine downtime, disrupting production schedules and further affecting output.

Project Highlight

Define → Project Charter: Defining Scope, Baseline and Quality Target

Quality Improvement Description	Business Impact
Project Description: Coating defects are divided into 3 highest priorities. They are Nesa Patches, External White Fume, and Thin Coating. The Goal is to Reduce Coating Defects from 3.5% to 0.5% for 4th gen. Devices	Improved Yield Reduce Defect Reduce Cost Improve Customer Satisfaction

Saving Goal

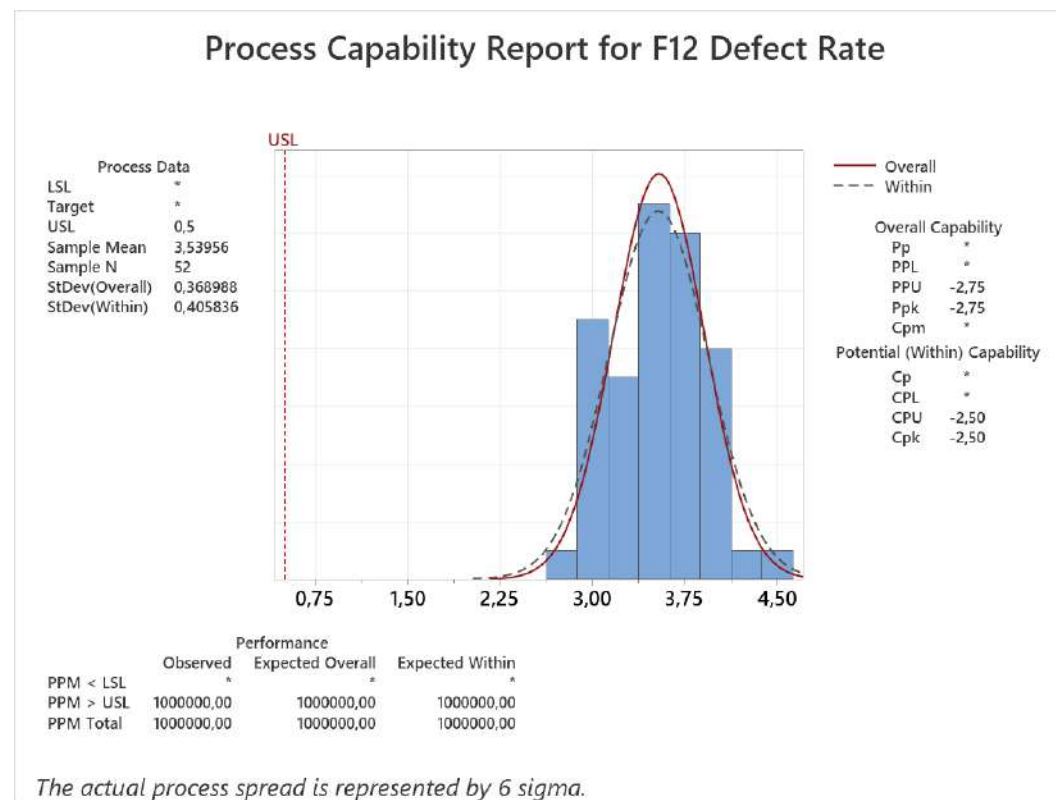
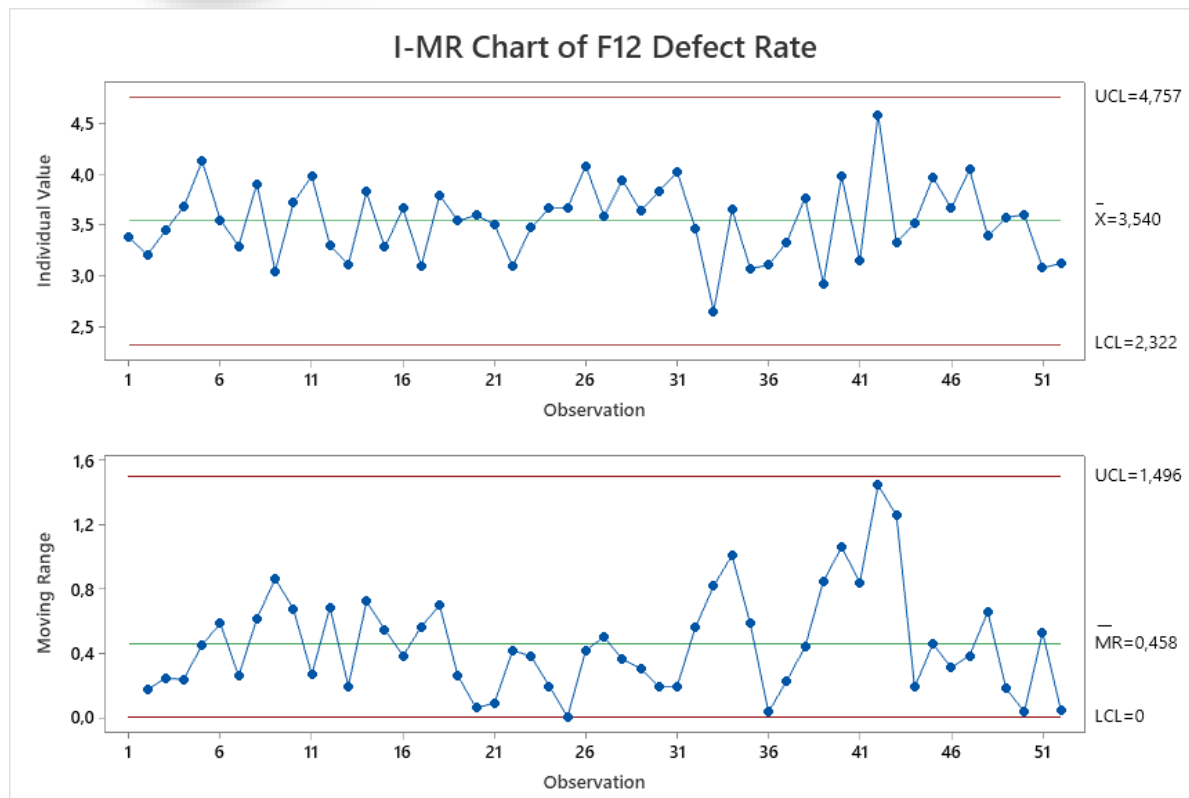
USD 378K / Year

Project Scope

Photo Flash Lamp Department
Chemical Vapor Deposition
Process,
Ultrasonic Washing Process,
Stage 1 Visual
Inspection Process, Final Visual
Inspection
Process, Electrical and
Functional
Testing
Process

Project Highlight

Measure → Control Chart & Capability Analysis for Baseline

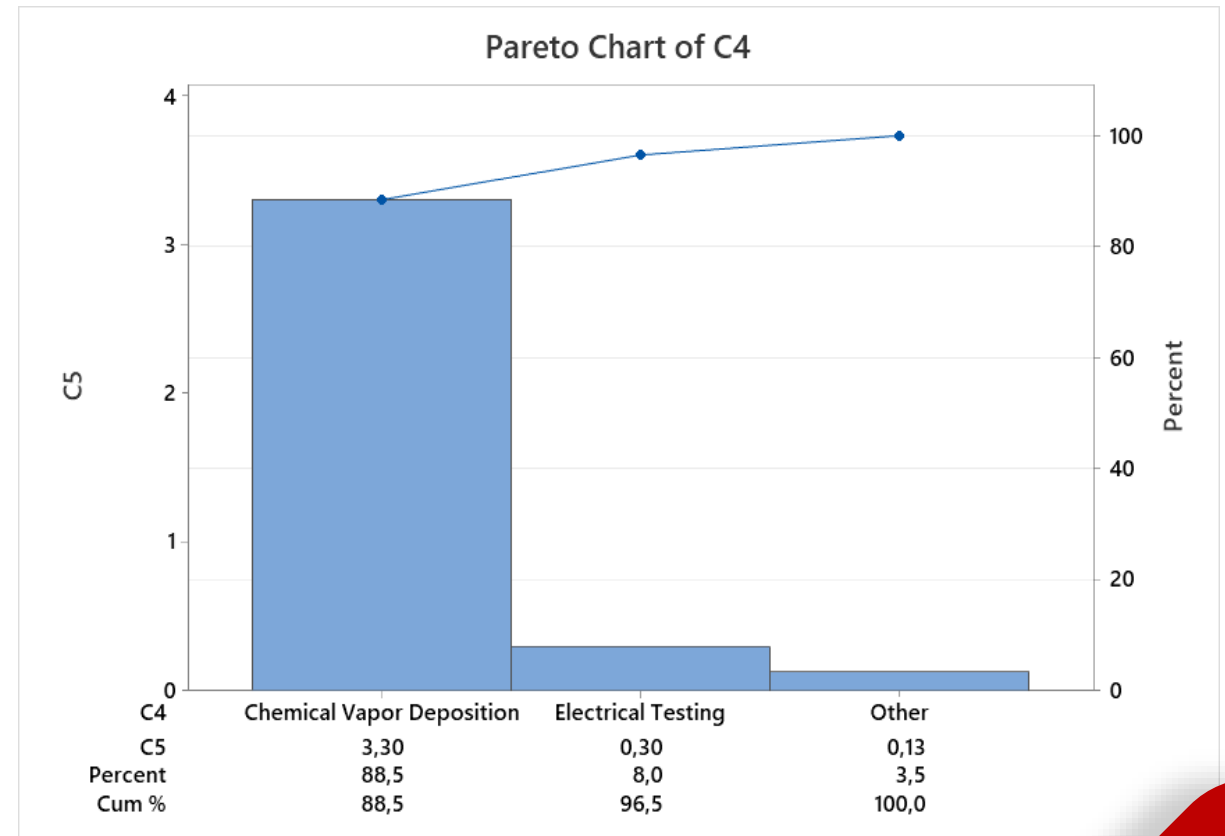


Key Takeaway: The baseline defect percentage over the course of one year has been confirmed to remain stable at 3.54%, exceeding the company's maximum tolerance of 0.5%. Improvement efforts are required to achieve the target of an average defect rate of 0.5%.

Project Highlight

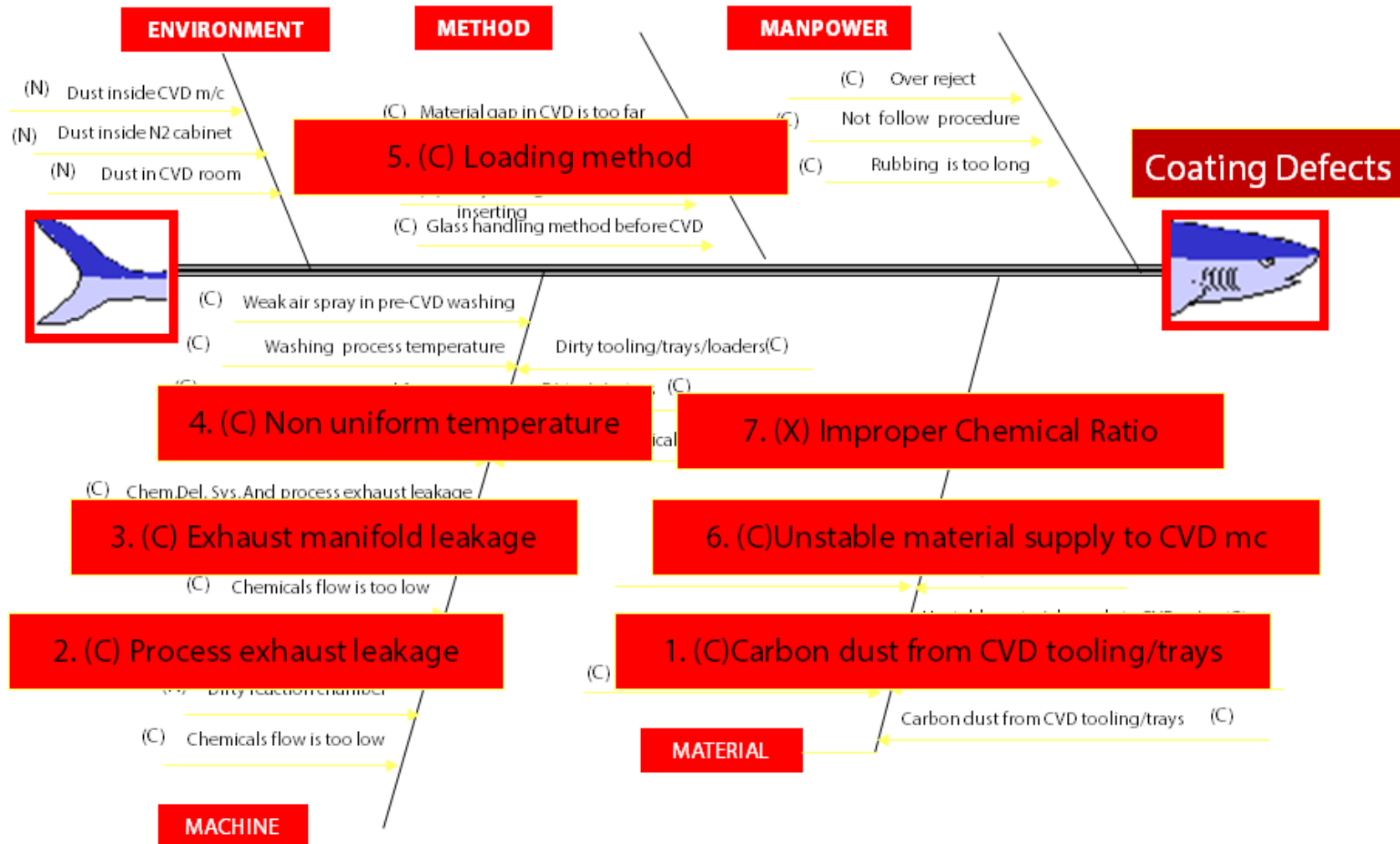
Measure → Mapping The Process to Identify The Points Where Defects Occur (Simplified)

No	Process Flow	Type of Coating Defect	Defect Percentage
1	Chemical Vapor Deposition	Nesa Patches, Thin Coating, White Fume	3.3 %
2	Ultrasonic Washing		
3	Electrical Testing	Nesa Patches	0.3 %
4	Tinning	Nesa Patches	0.1 %
5	Aging		
6	Sand Blasting	Nesa Patches	0.03%
7	Thermal Shock		
8	Fluorescent		
9	Final Visual Inspection		



Project Highlight

Analyze → Identifying The Root Causes



Key Takeaway: After conducting brainstorming using the Fishbone diagram, we categorized each factor based on C, N, X (C for constant, N for noise, X for experimental factors). Then, we performed hypothesis testing to validate the root cause. After filtering and validation, **seven main factors were identified as the root causes.**

Project Highlight

Improve → Addressing The Root Causes

Action:

1

Before



Key Takeaway:

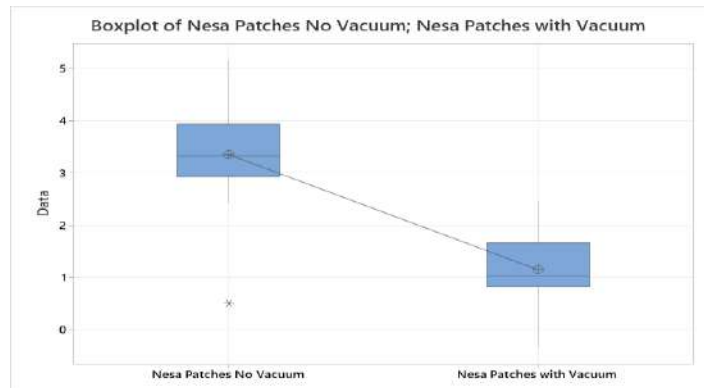
We have more than 95% confidence that this vacuum equipment can effectively reduce Nesa Patches.

After



Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
Nesa Patches No Vacuum	15	3,35	1,03	0,27
Nesa Patches with Vacuum	15	1,151	0,662	0,17



Test

Null hypothesis $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis $H_1: \mu_1 - \mu_2 \neq 0$

T-Value DF P-Value

6,95 23 0,000

Project Highlight

Improve → Addressing The Root Causes

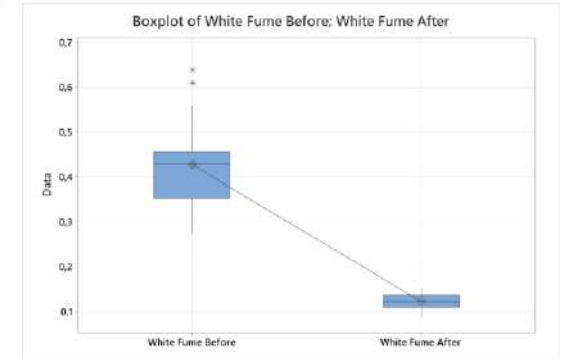
Action:

2



Key Takeaway:

- Stainless steel is corroded by CVD chemical waste, leading to leakage.
- A new material (PVDF) is more robust against corrosive chemical waste, offering a better alternative to stainless steel.
- This action can help reduce White Fume defects.



Test

Null hypothesis $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis $H_1: \mu_1 - \mu_2 \neq 0$

T-Value DF P-Value

15,01 24 0,000

Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
White Fume Before	23	0,4273	0,0939	0,020
White Fume After	13	0,1235	0,0187	0,0052

Project Highlight

Improve → Conducting Design of Experiments to Optimize Processes in the X Category of the Fishbone Diagram

Input	Process	Output
SnCl4	Chemical Vapor Deposition	
H2O	@CVD Machine	Resistance @Coating Surface Targeted @ 5 KOhm
DFE (Difluoro Ethane)	Brand: SIERRATERM	
Chemical Reaction in The Chemical Chamber of CVD Machine @1000 – 1200 Degree Celcius: SnCl4 + 2H2O → SnO2 + 4HCl Ion F-minus is injected through DFE to render the coating layer semi-conductive.		

Project Highlight

Improve → Design of Experiment – 3 Factors – 2 Levels – Full Factorial for Modelling Design

Factor	A	B	C	Y = Resistance (Kohm)							
Row	DFE	H2O	SnCl ₄	Y1	Y2	Y3	Y4	Y5		Y bar	S
1	0,1	3	0,5	52	53	60	64	72		60,2	8,258329
2	0,1	3	4,5	34	31	27	24	35		30,2	4,658326
3	0,1	10	0,5	18	17	17,5	19	18,5		18	0,790569
4	0,1	10	4,5	15,4	16,3	14,8	15,2	16,1		15,56	0,626897
5	1	3	0,5	11,2	10,9	11,1	11,1	11,3		11,12	0,148324
6	1	3	4,5	11,2	11,4	11,4	11,6	11,3		11,38	0,148324
7	1	10	0,5	7,9	8,1	8,2	7,8	7,9		7,98	0,164317
8	1	10	4,5	0,412	0,415	0,41	0,409	0,411		0,4114	0,002302

Takeaway : 5 Replications per experiment is run to get 95% confidence in Y bar & S bar

Project Highlight

Improve → Design of Experiment – 3 Factors – 2 Levels – Full Factorial for Modelling Design

Y-hat Model					
Factor	Name	Coeff	P(2 Tail)	Tol	Active
Const		19,356	0,0000		
A	DFE	-11,634	0,0000	1	X
B	H2O	-8,86858	0,0000	1	X
C	SnCl4	-4,96858	0,0000	1	X
AB		5,34143	0,0000	1	X
AC		3,14143	0,0000	1	X
BC		2,46643	0,0001	1	X
ABC		-4,42358	0,0000	1	X
Rsq	0,9708				
Adj Rsq	0,9644				
Std Error	3,3725				
F	152,09				
Sig F	0,0000				

Factor	Name	Low	High	Exper
A	DFE	0,1	1	1
B	H2O	3	10	8
C	SnCl4	0,5	4,5	3,4

Prediction	
Y-hat	4,998
99% Prediction Interval	
Lower Bound	4,772
Upper Bound	5,225

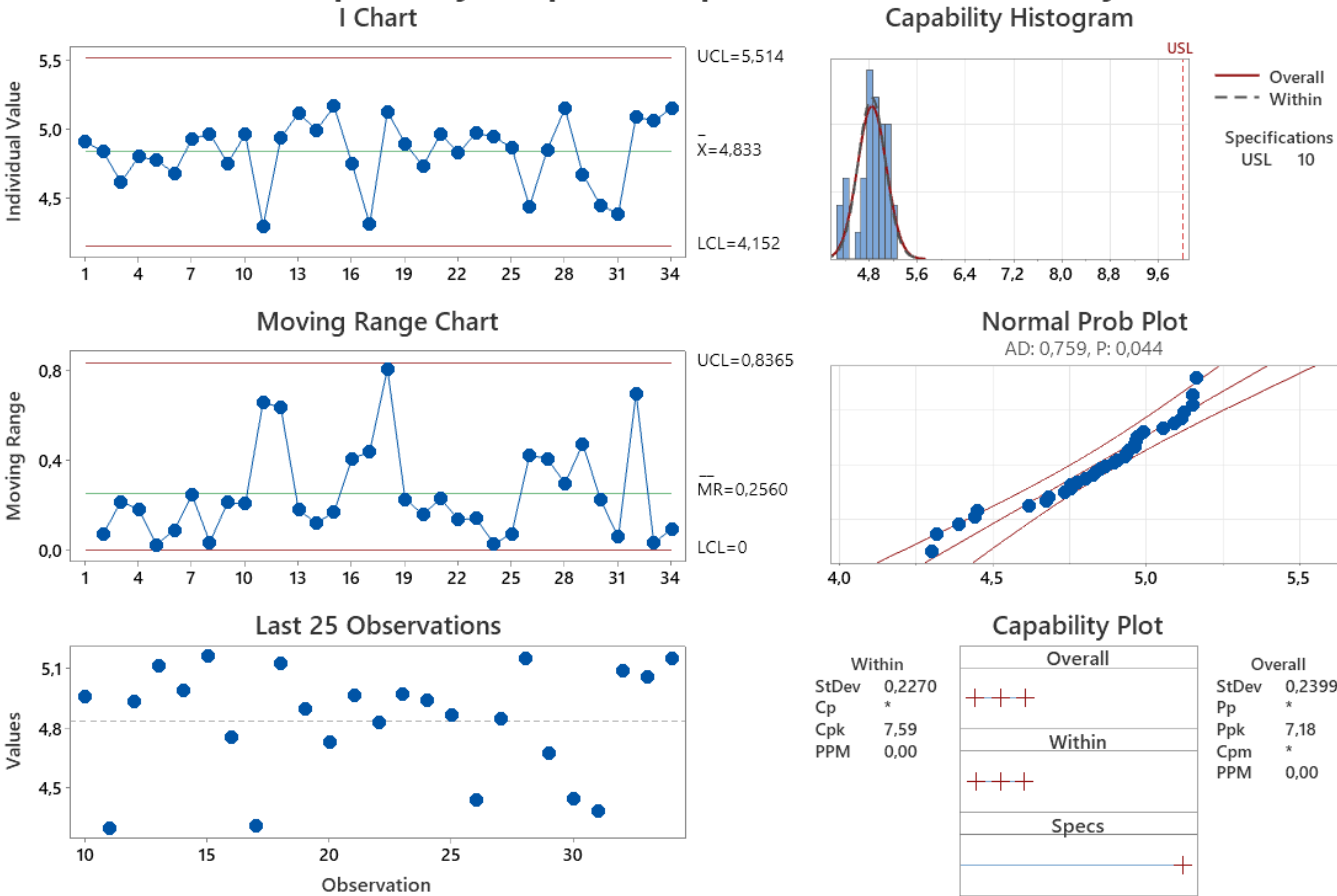
**Key Takeaway :
Predicted
Optimum Setting :**

- **DFE = 1**
- **H2O = 8**
- **SnCl4 = 3,4**

Project Highlight

Improve → The Prediction Model Has Been Confirmed as Suitable for Production Operations

Process Capability Sixpack Report for Confirmatory Test



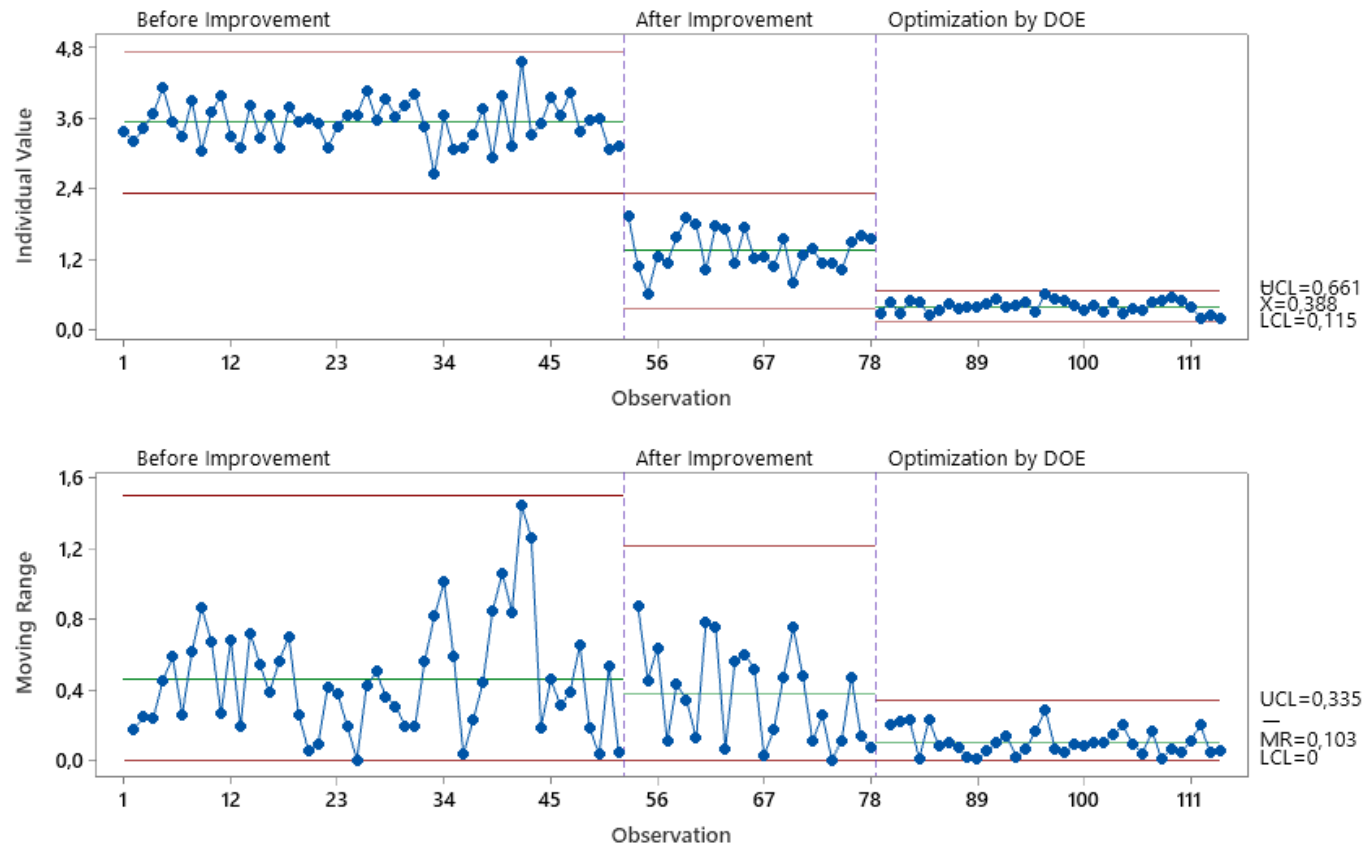
Key Takeaway: The optimum setting is governed by HB-WI-H24-0369 (CVD Parameters Setting)

The actual process spread is represented by 6 sigma.

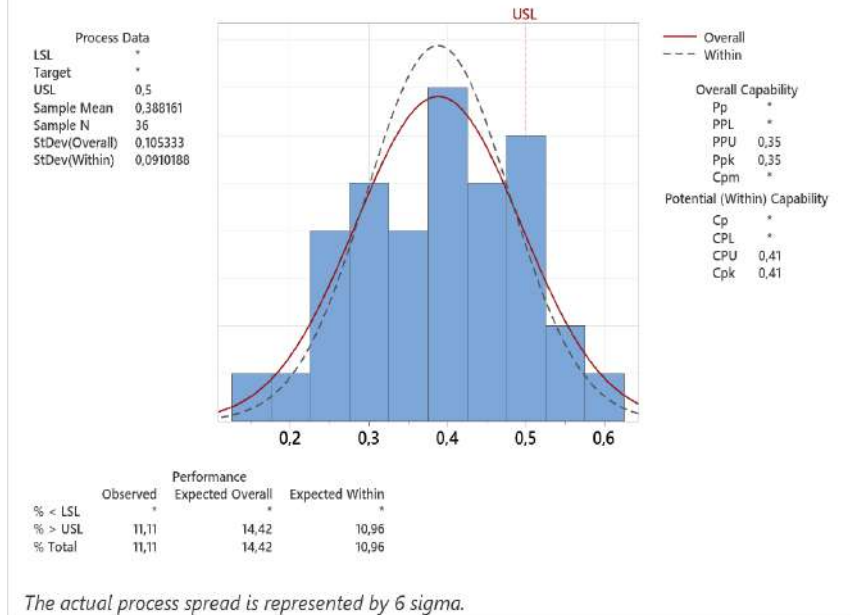
Project Highlight

Control: Monitoring and Managing Processes to Sustain Improvement Results

I-MR Chart of F12 Defect Rate by C2



Process Capability Report for F12 DOE



After optimization, defects significantly decreased, and the process became increasingly stable.

Project Highlight

Summary of Project Improvement



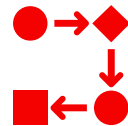
Reduce Defect from
3.5% to **below 0.5%**



More Reliable Machine due
to new material application
for some critical parts



**Enhancing Customer
Satisfaction** through
improved product quality



**Established Standard
Work** within the project
scope area



Established Modelling for
process optimization

**Realized Cost
Saving**

> \$398K / year



Project Highlight

Improve Yield of an Estate
(Ton / Ha / Month)

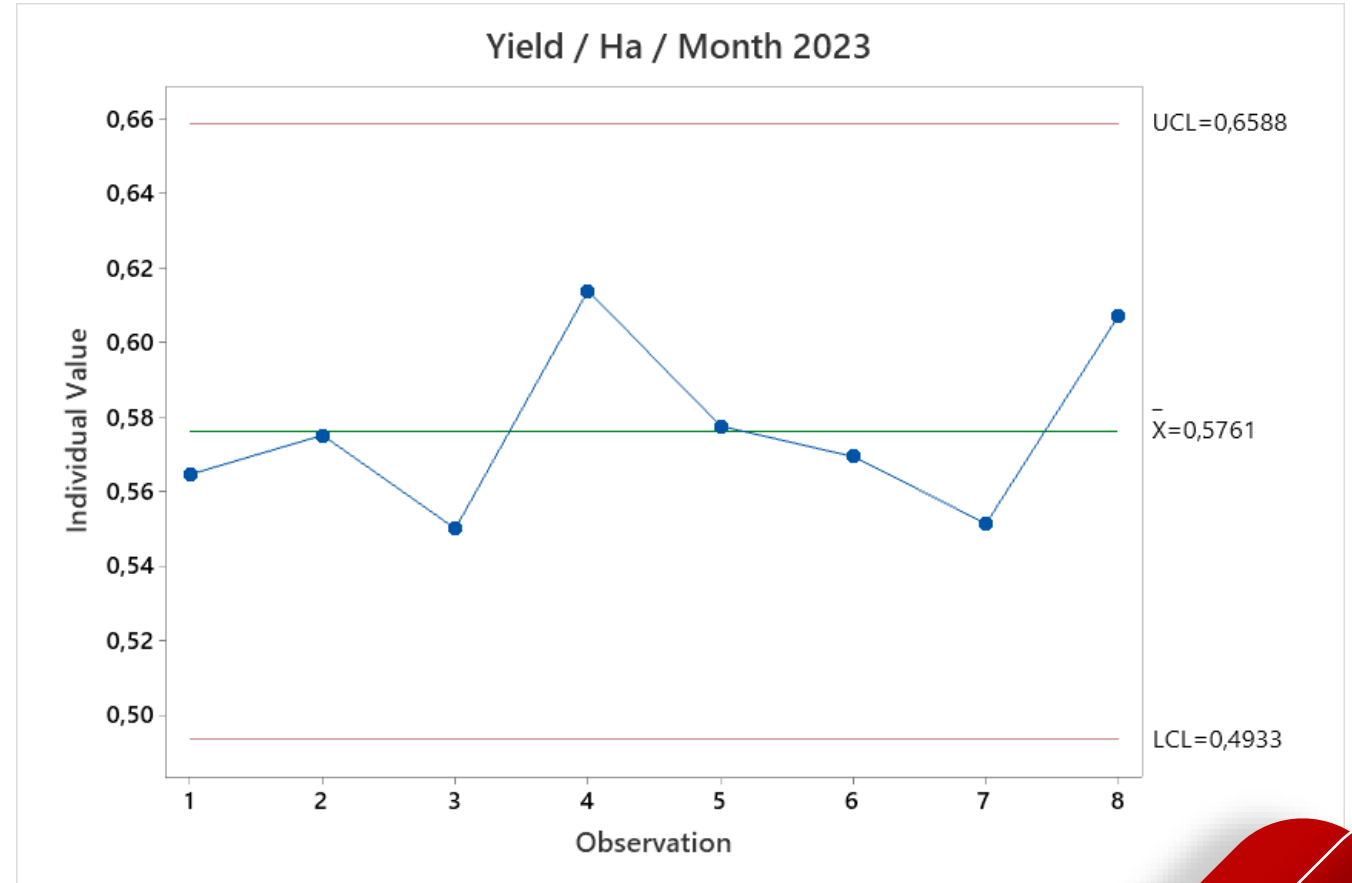
Project Highlight

Improve Yield of Estate XXX from 0.6 Ton / Ha / Month to 0.9 Ton / Ha / Month

Problem Statement

The average yield from January to August 2023 at the XXX Oil Palm Plantation was 0.6 tons/ha/month, while the standard yield potential for the superior genetic variety of oil palm at 11 years of planting age is 2 tons/ha/month, assuming all productivity-limiting factors are met.

Management has requested an increase in yield from 0.6 to at least 0.9 tons/ha/month.



Project Highlight

Supplier – Input – Process – Output Mapping

Process/Project Name: Potong Buah						
Date: 11/09/2023						
Prepared By: Dariyatno Ginting						
Notes:						
Suppliers	Inputs		Process	Outputs		Customers
Provider	Input Description	Input Requirements (optional)		Output Description	Output Requirements (optional)	Recipient of Output
Mandor Panen & Asisten Afdeling	Data Pusingan Potong Buah		Pembuatan RKH	RKH		Mandor Panen
Mandor Panen	RKH		Penugasan RKH	Absensi Wajah (Ceck in) dan Pengancakan		Pemanen
Mandor Panen	Absensi pemanen	Transper data via HP EPCS	Transfer Data Pemanen	Data Pemanen Bekerja		Keani Panen
Kerani Panen	Data Pemanen Bekerja		Potong Buah/Panen	Tiketing Buah		Pemanen
Kerani Panen	Tiketing Buah	Input Hasil TBS, Alas Berondolan dan	Perhitungan Hasil	Tiket TPH	Print	Pemanen
Kerani Panen	Tiketing Buah		Pembuatan SPBS	SPBS (Beberapa tiket TPH)	Input	Mandor 1/Asisten
Mandor 1 / Asisten	SPBS (Beberapa tiket TPH)		Verifikasi SPBS	SPBS dan Segel Terverifikasi		Kerani Panen
Kerani Panen	SPBS & Segel Terverifikasi		Pengiriman Hasil Panen	SPBS & Segel	Pemasangan Segel & Penyerahan SPBS	Operator Dump Truck
Operator DT	SPBS	Verifikasi SPBS & Segel Oleh Security	Penimbangan Hasil Panen	Slip timbang	Upload	Operator Timbang Pabrik
Mandor Transport	Slip timbang Pabrik		Report Hasil Timbangan	Report Hasil Panen (SAP)	Input	Kerani SAP

Process Scope:

- Start: Preparation of the Harvest Work Plan (RKH)
- End: Reporting of mill weighing results

Stakeholders:

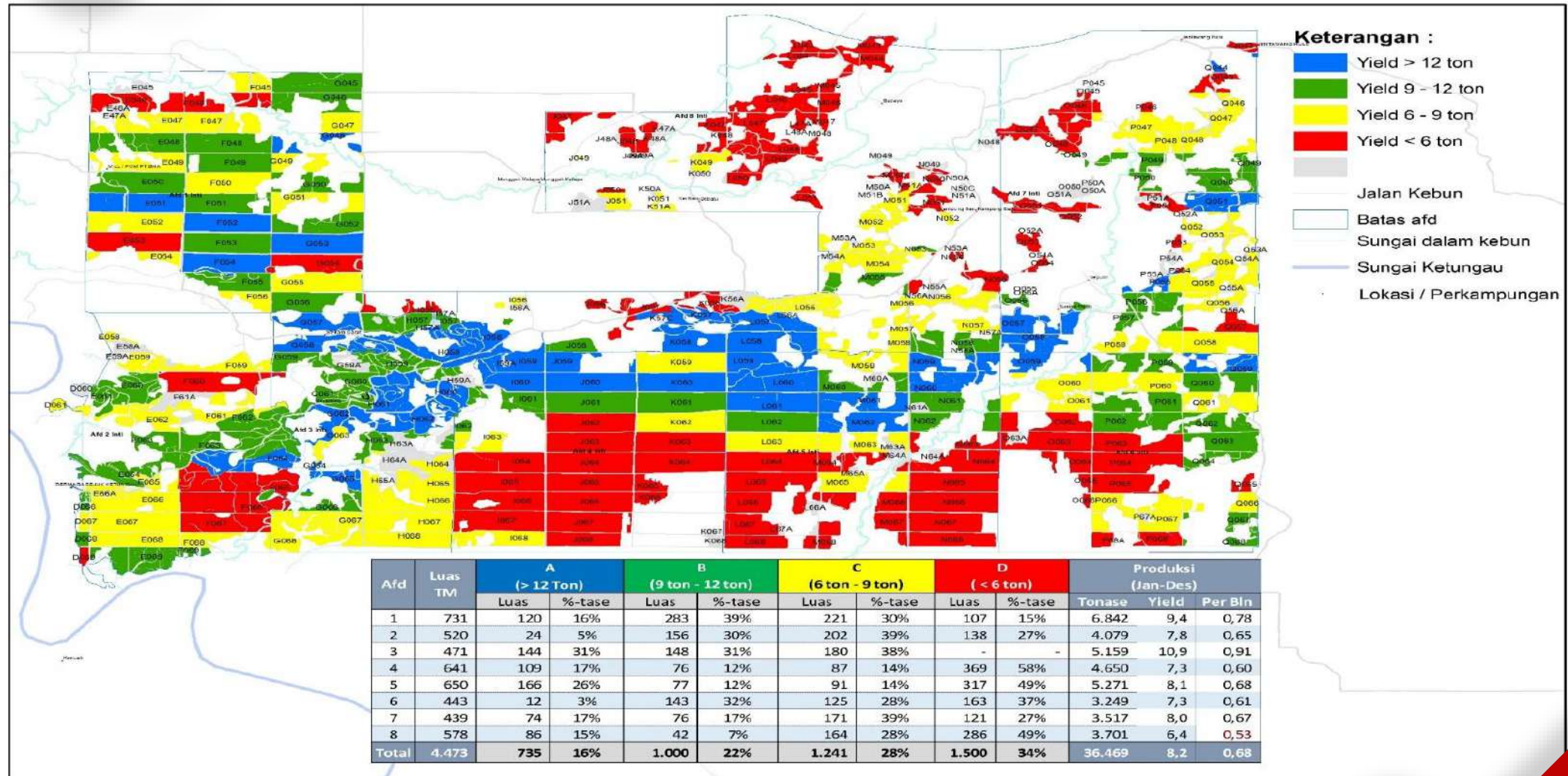
- Afdeling Assistant
- Harvest Supervisor
- Harvest Clerk
- Harvester
- Loading Crew
- Dump Truck Operator
- Mill Security
- Weighbridge Clerk
- SAP Clerk

Documents:

- Harvest Cycle Form
- Harvest Work Plan (RKH)
- Fruit Transport Delivery Note (SPBS)
- Fruit Ticket
- Weighing Slip
- EPCS System

Project Highlight

Estate XXX Mapping – Yield Mapping by Afdeling



Project Highlight

Yield of Harvesting Key Driver Analysis

No	Fishbone	What	When	Where	Who	How	Result
1	Man	Lack of Harvest Workers	Jan – Dec 2024	MW	Plantation Clerk	Average shortage per year	56 workers
2	Man	Loose fruits left behind	Apr – Dec 2024	Report QA	QA	Routine checks twice a month	0.7%
3	Man	Weak supervision	Apr – Dec 2024	Report QA	QA	Routine checks twice a month	0.7%
4	Material	Low SPH (Stems per hectare)	Nov-24	Aresta	GIS	Aerial photos	121 trees/ha
5	Material	Peatland not compacted	Jan – Dec 2024	Logbook	Workshop Clerk	Logbook	0 ha
6	Material	Under pruning	Jan – Dec 2024	MW	Agronomy Support	Severe pruning category	1,161 ha
7	Material	Rehab area (young plants)	Jan – Dec 2024	MW	Agronomy Support	Rehab area	2,011 ha
8	Method	Harvest rotation below 3 times a month	Jan – Dec 2024	MW	Plantation Clerk	Harvest rotation record	2.8 rotations
9	Method	Harvesting in scattered areas (plots)	Jan – Dec 2024	Aresta	GIS	Scattered area map	Afd 7 and Afd 8
10	Method	AV Dump Truck	Jan – Dec 2024	Logbook	Transport Clerk	Dump truck logbook data pull	70% availability
11	Machine	AV Tractor	Jan – Dec 2024	Logbook	Transport Clerk	Tractor logbook data pull	85% availability
12	Machine	Flood	Jan – Feb 2024	BHA2S Map	GIS	Flood area data	804 ha
13	Environment	Damaged harvest bridges	Jan – Dec 2024	Harvest Bridge	Plantation	Harvest bridge census	1,977 units
14	Environment	FFB Theft	Jan – Dec 2024	Theft Report	PR Team	FFB theft report	24 tons
15	Environment	Wooden bridges prone to damage	Jan 2024	Data Bridge	Plantation	Wooden bridge census	95% wooden bridges

Project Highlight

Improvement to Address Root Causes



Field Observation Finding:

After recalculation based on standard, there was a shortage of 66 harvest workers at XXX Estate.

Improvement:

Gradually began reducing the harvest workforce shortage gap.



Harvesting and fertilization in former rehab (peatland) areas are still hindered by limited access to trees. It is solved by pathway reinforcement



Field Observation Finding:

- Harvesters face difficulty in extracting fruit and loose fruit to the collection point (TPH)
- Thrown fresh fruit bunches (FFB) risk falling into the ditch.

Improvement:

- Harvesters can easily transport harvested fruit to the collection point (TPH)
- Minimized the risk of fresh fruit bunches (FFB) falling into the ditch.

Project Highlight

Improvement to Address Root Causes

Compacting The Harvesting Path



STATUS JUMLAH POKOK ESTATE BHA2-S (ARESTA NOV 2023)

URAIAN	AFD								BHA2S
	1	2	3	4	5	6	7	8	
Ha TM	731	520	471	641	650	443	439	578	4.473
Ha TBM							2		2
Total Ha	731	520	471	641	650	443	441	578	4.475
Pkk TM	90.822	56.112	58.602	74.414	77.691	54.105	57.567	71.616	540.929
Pkk TBM							102		102
Total Pkk	90.822	56.112	58.602	74.414	77.691	54.105	57.669	71.616	541.031
SPH TM	124	108	124	116	120	122	131	124	121
SPH TBM	-	-	-	-	-	-	51	-	51
Total SPH	124	108	124	116	120	122	131	124	121



Replanting (insertion) is carried out to plant additional trees in areas with low density.

Project Highlight

Improvement to Address Root Causes



Field Observation Finding:

- Slow collection of loose fruits
- Loose fruits left on the ground



Improvement:

Standardize loose fruit rakes
Banner/Warning: Collect Loose Fruits

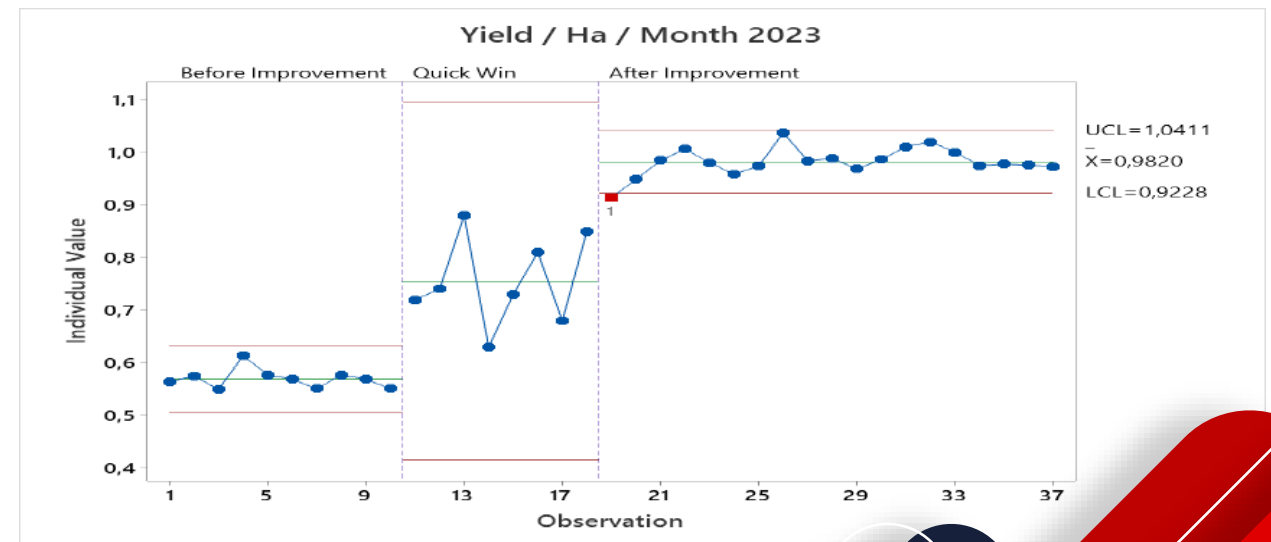
Project Highlight

Improvement Result



After improvements were made to address the identified root causes, the yield increased from an average of 0.57 to 0.98 tons/ha/month.

This Project Alone Resulting Real Benefit IDR > 30 Bio





SSCX Approach

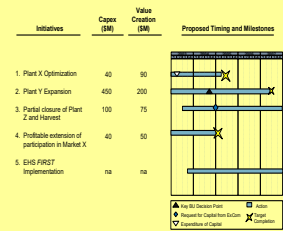
Our Methodology to Help
Clients Improving Their
Efficiency, Effectiveness and
Productivity

SSCX Approach

High Level Methodology to Help Clients Improving Their Business Process

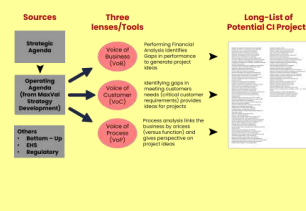
**Leadership
Commitment**

Operating Agenda



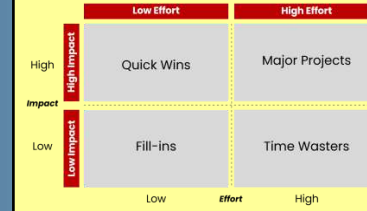
Determine Highest Value Initiatives

VoB, VoC, VoP, VoE

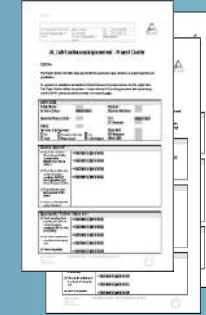


I.D. Potential Projects

Benefit-Effort Matrix

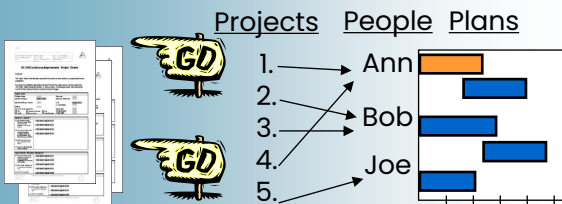


Perform Initial Screen



Detail Projects – ID Sponsor

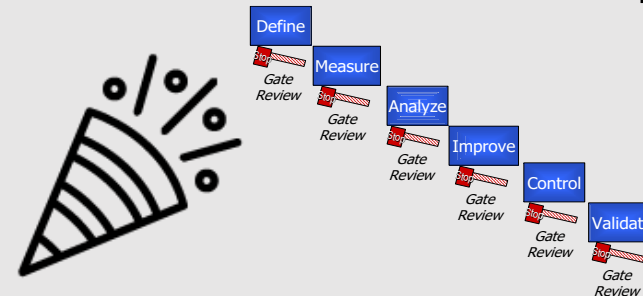
Project Selection/Release



Prioritize Projects

Commit Resources

Project Execution



Project (Team) Launch

Monitor Project Results

Celebrate Wins / Share Lessons Learned

Report Results / Control for Long Term

SSC>X

Thank You

Head Office

Satrio Tower, 25th floor
Jl. Prof.Dr. Satrio Kav C4
Jakarta 12950 Indonesia



SSCX International



@SSCXInternational



SSCX International