



**TPSA** | CANADA-INDONESIA TRADE AND  
PRIVATE SECTOR ASSISTANCE PROJECT



# SUCCESS STORY

## Improving SMEs' Environmental Performance: Lessons Learned From the TPSA Project Initiative

### HIGHLIGHTS

- Most SMEs perceived that the cost of environmental improvement measures would undermine their business and profitability. To obtain company buy-in, program advocates must ensure that the measures are simple, doable, and economically advantageous.
- Active involvement and support by company owners and senior management from the start of the program is critical to success. Their business vision shapes the direction and extent of environmental improvements.
- All 10 companies recognized the importance of improving communication and cooperation between management and employees. This is the foundation for environmental and other improvements.
- SMEs practising 5S (sort, set in order, shine, standardize, sustain) methods have reduced wasted employee time and effort, excess inventory, and rejected products. Resource-efficiency measures have helped to reduce production waste, pollution, and energy consumption.
- Companies that invested in the most 5S changes and cleaner-production measures also reported the highest productivity increases (reduced costs/increased outputs).
- SMEs are more likely to implement cleaner-production measures when they can see the economic benefits (e.g., reduced costs, increased employee productivity).
- The most popular cleaner-production methods were 5S and more efficient electricity use. The most common measures to reduce electricity were to switch to LED lights and use transparent roofs to allow more sunlight in.
- The SMEs said one-on-one coaching and site visits were essential to their success. They appreciated that the program was not merely theoretical, but focused on concrete actions and change.

**Canada** 

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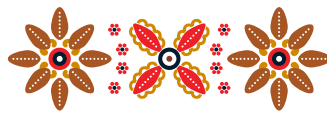
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## CONTENTS

<b>Highlights</b>	<b>1</b>
<b>Part I: TPSA's Environmental Activities in the Apparel and Footwear Industries</b>	<b>3</b>
SCORE Cleaner Production Methodology and Schedule	4
Outcomes	6
Lessons Learned	8
<b>Part II: Success Stories</b>	<b>9</b>
Maine St.	9
Company Profile	9
Success by the Numbers	9
Growth Requires a New Management Approach	9
Establishing Good Communication and Cooperation	10
Cleaner Production Through Good Housekeeping and Efficient Resource Use	10
Leaner and Cleaner Production Improve Productivity	11
Sustaining Success	13
Prisma Dwi Lestari	13
Company Profile	13
Wastewater Management	13
Leaner and Cleaner Production Through Good Housekeeping	14
Good Communication Is Key	16
Tiga Selaras Bersama	17
Company Profile	17
Success by the Numbers	17
Continuous Improvement in Good Housekeeping	18
Better Waste Handling	19
Good Communication Is Key	19
PT Raimondi Usaha Mandiri	20
Company Profile	20
Success by the Numbers	20
Realizing Power Efficiency	21
Realizing a Greener Production Process	22



One of TPSA's key objectives is to improve the environmental performance of targeted apparel and footwear SMEs. Environmentally responsible SMEs are essential to achieving a greener, low-carbon economy, as is sought by both the Indonesian and Canadian governments. Reduced and better-managed resource use and pollution/waste output are environmentally preferable, socially responsible, and contribute to a healthier work environment for SME employees.

This report presents success stories from apparel and footwear SMEs that participated in a TPSA-supported program to improve their environmental and social performance. The SMEs were assisted with planning and implementing cleaner-production measures suited to their capacity and needs. These measures aimed to help the companies achieve more efficient resource use and lower their pollution and waste generation. Five apparel and five footwear SMEs participated in the program, which began in September 2017.

Part I describes TPSA's environmental activities with SMEs in the apparel and footwear industries, the outcomes of those activities, and lessons learned that could be applicable to other SMEs. Part II presents case studies of selected apparel and footwear SMEs, detailing their experiences with the cleaner-production program.

## PART I: TPSA'S ENVIRONMENTAL ACTIVITIES IN THE APPAREL AND FOOTWEAR INDUSTRIES

TPSA's environmental improvement program focused on helping participating SMEs plan and implement cleaner-production (CP) measures suited to their capacity and needs. The goal was to achieve better and more efficient resource use and generate less pollution and waste. This included such measures as better housekeeping, reduced resource consumption and inputs (e.g., using less energy, water, and chemicals), and increased outputs (e.g., by reducing waste, product defects, and inventories).

The cleaner-production training modules used by TPSA were drawn from the International Labor Organization's (ILO) Sustaining Competitive and Responsible Enterprises (SCORE) Program, which is specifically designed for SMEs employing between 50 and 250 workers. TPSA's SCORE delivery partner was the ILO-approved Business Export Development Organization (BEDO), which has extensive experience delivering the program to Indonesian SMEs. Through a series of classroom training modules and personalized consultations and assessments, SCORE aims to increase efficiency, productivity, sustainability, and competitiveness.

The results of the TPSA-sponsored SCORE cleaner-production program reveal that SMEs can achieve leaner and cleaner production by practicing the 5S method of good housekeeping (sort, set in order, shine, standardize, and sustain)<sup>1</sup> and specific resource-efficiency measures. SMEs practising 5S have reduced wasted employee time and effort, excess inventory waste, and rejected-products waste. Resource-efficiency measures have helped to reduce production waste, pollution, and energy consumption. Equally important, a clean and orderly workplace provides a safer, healthier, and more pleasant work environment and boosts employee motivation. It has also improved employee efficiency and productivity.



Jeff Kristianto and Elisabeth Natalia from BEDO give an overview of the SCORE program.



Companies that invested in the most 5S changes and cleaner-production measures also reported the highest productivity increases (reduced costs/increased outputs). Despite these benefits, not all of the participating companies have fully implemented the measures. Implementation comes at a cost, including purchasing items such as new shelving units, floor tape, whiteboards, and LEDs to replace fluorescent lights. While these are relatively affordable, other implementation activities are more costly. They include the many hours it takes to promote employee buy-in, discuss problems and solutions, assign tasks and responsibilities, and create and execute an action plan. However, making that investment has a large payoff. For example, two SMEs closed down production for two weeks to focus on rearranging their production layouts. They report significant reductions in waste and increased efficiency after reopening.

### SCORE Cleaner Production Methodology and Schedule

The cleaner-production program offered by TPSA focused on two SCORE modules: Workplace Cooperation and Cleaner Production.<sup>2</sup>

Workplace cooperation is a foundation for business success. Successful adoption of cleaner-production processes can only take place if those processes are understood, supported, and collaboratively planned and executed by both employers and employees. One popular tactic is to establish an Enterprise Improvement Team (EIT) that includes both employer/management and employee members. The training aims to unite employees around shared targets and involve the entire workforce in continuous improvement. It emphasizes improved communication between management and workers, and leaner and cleaner production basics through 5S and good housekeeping practices.



Workshop participants interacting to demonstrate the power of cooperation.

The Cleaner Production module focuses on the three R's (reduce, reuse, recycle), particularly on more efficient resource and energy use and reduced waste. To ensure buy-in from targeted SMEs, the cleaner-production measures had to be doable and make economic sense: for example, reducing company expenses, product-rejection rates, and delivery times.

The TPSA-supported SCORE program consisted of 10 sequential activities that combined in-class training and one-on-one coaching.<sup>3</sup>

Preliminary program		Module: Workplace Collaboration		
Step 1 Introductory workshop	Step 2 Baseline assessment	Step 3 In-class training on workplace cooperation	Step 4 First one-on-one technical assistance on workplace cooperation	Step 5 Second one-on-one technical assistance on workplace cooperation
September 8, 2017	September 2017	September 19 and 20, 2017	September 2017	October 2017





## Module: Cleaner Production

## Field trip

## Follow-up

Step 6	Step 7	Step 8	Step 10	Step 9	Step 11	Step 12
In-class training on cleaner production Presentation of results of workplace cooperation	First one-on-one technical assistance on cleaner production	Second one-on-one technical assistance on cleaner production	Third one-on-one technical assistance on cleaner production	Field trip to learn good practices in cleaner production	SME presentations on final results	Final assessment
October 16 and 17, 2017	October 2017	November 2017 to March 2018	April 2018	February 26, 2018	April 23, 2018	August to October 2018

### Activities:

1. An **introductory workshop** was held in Bandung, where 18 of the 24 apparel and footwear SMEs who attended applied to join the TPSA-sponsored SCORE program. Some were deemed ineligible due to their size (more than 300 employees or less than 10 employees) or their inability to commit to the full program.
2. Site visits were conducted to produce a **baseline assessment** of the "before" conditions of the participating SMEs.
3. A two-day **workplace cooperation workshop** was held in Bandung. The training aimed to unite employees around shared targets and involve the entire workforce in continuous improvement.
4. The first of two **one-on-one technical assistance** sessions (site visits) was conducted to help SMEs implement workplace cooperation and effective 5S housekeeping.
5. The second of two **one-on-one technical assistance** sessions (site visits) was conducted to help SMEs implement workplace cooperation and effective 5S housekeeping.
6. A two-day **productivity through cleaner production workshop** was held in Bandung. The training focused on enhancing SMEs' capacity to recognize inefficient and environmentally unfriendly practices in their company and design response measures.
7. The first of three **one-on-one technical assistance** sessions (site visits) on cleaner-production implementation was conducted.
8. The second of three **one-on-one technical assistance sessions** (site visits) on cleaner-production implementation was conducted.
9. A **field study** was undertaken to learn first-hand about cleaner production best practices from two participating SMEs: CV. Prisma Dwi Lestari (apparel) and PT. Raimondi Mandiri Utama/McLacy (footwear).
10. A final **one-on-one technical assistance session** (site visit) on cleaner-production implementation was provided to SMEs.
11. A **final workshop** was held where SMEs presented progress from their baselines.
12. A **final assessment** was done to determine how well cleaner-production practices and good housekeeping (5S) had been integrated into companies' standard operating procedures (SOPs).



A participant at the cleaner-production workshop works on a new floor plan to make his company more efficient.



## Outcomes

Measures	Progress (as of October 2018)	Results (as of October 2018)	How the results contribute to cleaner and more efficient production
<b>Workplace cooperation</b> <ul style="list-style-type: none"> <li>• <b>Regular meetings between management and employers</b></li> <li>• <b>Use of information board to relay new information</b></li> </ul>	<ul style="list-style-type: none"> <li>• All companies formed an EIT.</li> <li>• Seven companies hold weekly meetings and two have daily meetings.</li> <li>• Seven of ten companies actively use information boards to communicate with or relay new information to employees.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved communication between management and employees.</li> </ul>	<ul style="list-style-type: none"> <li>• Good communication is an indirect but critical factor in company improvement. The company's EIT promotes management and employee representatives working together to identify cleaner-production problems and implement solutions.</li> <li>• Eight companies report that improved communication has helped avoid production mistakes and reduced production-reject rates and waste by 4 to 20 per cent.</li> </ul>
<b>Good housekeeping (5S)</b> <ul style="list-style-type: none"> <li>• <b>Reorganizing the factory space</b></li> <li>• <b>Reorganizing inventory</b></li> </ul>	<ul style="list-style-type: none"> <li>• All 10 companies cleaned up and reorganized their factory space to varying degrees. The most common activities were establishing in-house garbage collection and disposal systems, de-cluttering, and removing criss-crossing cables and wiring that impeded movement and posed a safety hazard.</li> </ul>	<ul style="list-style-type: none"> <li>• Clean and decluttered working spaces provide a healthier, safer, and more pleasant work environment.</li> <li>• The new sequential production layout increased productivity, since employees do not have to walk as far to deliver their work to the next production phase.</li> </ul>	<ul style="list-style-type: none"> <li>• Seven companies reported that their employees were more motivated as a result of the improved work environment. Three of these companies showed an average decrease in absenteeism of 3 percentage points.</li> <li>• Three companies reported that the new layout increased production (ranging from 5 to 40 per cent) while using the same number of employees.</li> </ul>



Measures	Progress (as of October 2018)	Results (as of October 2018)	How the results contribute to cleaner and more efficient production
	<ul style="list-style-type: none"> <li>• Four of 10 companies rearranged their production layout so that it logically follows the production process.</li> <li>• Nine of 10 companies reorganized their warehouse and supplies using the FIFO (first in, first out) system. This system prioritizes using raw materials and supplies according to the earliest expiry dates.</li> </ul>	<ul style="list-style-type: none"> <li>• The FIFO system promotes more efficient use of raw materials and avoids unnecessary waste and expired items. It also allows employees to find supplies easily, thereby increasing efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>• Nine companies applying the FIFO inventory system reported less time spent storing and finding supplies, thus increasing company efficiency. One footwear company estimated it saved Rp24.7 million by returning expired glue and selling unused inventory.</li> </ul>
<b>Cleaner production</b> <ul style="list-style-type: none"> <li>• <b>Using energy-saving LED lights</b></li> <li>• <b>Using more skylights</b></li> <li>• <b>Using environmentally friendly materials</b></li> <li>• <b>Reusing production by-products/waste</b></li> </ul>	<ul style="list-style-type: none"> <li>• Three companies switched from fluorescent to LED lights.</li> <li>• Three companies renovated their factories to allow more daylight to come in.</li> <li>• One footwear company switched to non-toxic glue.</li> <li>• Two companies received additional income by selling production by-products.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced electricity use.</li> <li>• Increased renewable energy leading to decreased electricity use.</li> <li>• Reduced pollution.</li> <li>• Reduced waste/prolonging by-products' life cycles.</li> </ul>	<ul style="list-style-type: none"> <li>• Four companies reported reduced electricity use per unit of product.</li> <li>• One company reported reduced pollution.</li> <li>• Two companies reported reduced waste/prolonging of by-products' life cycles.</li> </ul>



## Lessons Learned

Some lessons learned from the program implementation:

- Active involvement and support by company owners and senior management from the start of the program is critical to success. The owner's business vision shapes the direction and extent of the company's environmental improvements.
- All 10 companies recognized the importance of improving communication and cooperation between management and employees. This is the foundation for environmental and other improvements.
- SMEs are more likely to implement cleaner-production measures when they can see the economic benefits (e.g., reduced costs, increased employee productivity).
- The most popular cleaner-production methods were 5S and more efficient use of electricity. The most common measures to reduce electricity were to switch to LED lights and use transparent roofs to allow more sunlight to come through.
- The SMEs noted that the one-on-one coaching and site visits were essential to their success. They appreciated that the program was not merely theoretical, but focused on concrete actions and change.

Program implementation challenges:

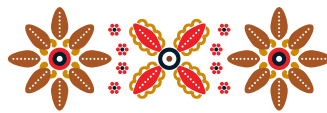
- Most SMEs perceived that the cost of environmental improvement measures would undermine their business and profitability. To obtain company buy-in, program advocates must ensure that the program measures are simple, doable, and economically advantageous.
- SMEs were very busy during Ramadan and Eid, Christmas, and New Year. Therefore, program implementation should avoid these holiday periods.
- SMEs are not accustomed to documenting change. Positive and/or negative changes were not always measured or quantified.
- Sustainability of environmental improvement practices is not guaranteed. It is an ongoing process that must be integrated into the company's standard operating procedures and manufacturing culture.



Participants at the results workshop celebrate their successes.







## PART II: SUCCESS STORIES

Maine St.

### Company Profile

SME name	PT. Mainest Gaya Creatif (Maine St.)
Location	Bogor, West Java
Staff	80 to 100 employees (25 per cent women)
Established	2011
Product	Men's dress and casual shoes
Destination	Domestic and international (30 per cent exported)

### Success by the Numbers



Rate of defective products decreased from 32 per cent to 10 per cent



Production increased from 80 pairs of footwear per day to between 100 and 120 pairs



Sales of repurposed scrap materials totalled Rp18 million

### Growth Requires a New Management Approach

In 2011, young couple Randy Iwan and Lisa Yumi established Maine St., a footwear company specializing in assembling and producing men's leather footwear from raw materials (e.g., leather, rubber) sourced from all over Java. Maine St. had grown to the point where their small workshop was no longer able to house its sizeable production, so in 2016, they constructed and moved to a large workshop in their current Bogor location. They currently have between 80 and 100 employees, depending on the season, 25 per cent of whom are women.

As their company grew, hiring more employees and moving to larger workshop facilities, Lisa and Randy felt the need to restructure their operational management so that the company could operate more effectively. In addition to receiving support from TPSA on exporting to Canada, they decided to participate in the TPSA-supported SCORE–Cleaner Production program. Lisa and other senior management staff actively participated in the training and led the program's implementation.



### **Establishing Good Communication and Cooperation**

Senior management understood that sustainably implementing leaner and cleaner manufacturing is only achievable if employers and employees work collectively and collaboratively. Communication and teamwork between management and employees is the foundation for company improvement. During the SCORE program implementation, the company created an implementation team for each division (e.g., production, warehouse, research and development), led by the divisional manager. These teams, which meet regularly, are responsible for planning and executing the 5S system and resource-efficiency management plan.

### **Cleaner Production Through Good Housekeeping and Efficient Resource Use**

The first step of the company's cleaner and leaner production program focused on good housekeeping, using the 5S system to create a more efficient and effective workspace and warehouse. Important items and supplies were sorted and organized using labels, expiry dates, and colour-coding. The organized items and workspace were then cleaned. Unnecessary items were removed from the production space, and criss-crossing cables and wires, potential safety hazards, were tidied up. Employees were asked to wear masks when handling toxic substances. Production waste (e.g., leather scraps) was sorted; some items were sold, while others were repurposed into souvenirs.

“After participating in the cleaner-production training, I showed all the training videos to our company owners. We all agreed that our production operation was very inefficient. However, it was a challenge to find the right time to plan and reorganize our operations and production space while production was ongoing. To be able to do this, we finally took the drastic measure of closing our operations for two weeks in January 2018.”

—Jaantje JW, Head of Accounting, PT. Maine St.

One of the most difficult tasks undertaken to enhance the company's efficiency was to rearrange the factory's haphazard layout so that it logically followed the sequential production process. For example, the raw material room needed to be adjacent to the cutting room, so that employees do not have to walk far to get raw materials. Similarly, the cutting division had to be close to the stitching division. To accomplish the necessary changes, the company took the major step of closing down its factory for two weeks.



Before



Unorganized and cramped production layout.



After



Orderly and spacious production layout.

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In parallel, the company has made attempts to use resources (such as energy) and raw materials more efficiently and to minimize, manage, and reuse production waste (e.g., rejected products, leather parchments). Rejected products were sold, bringing in additional income of Rp18 million.



Before



Production waste (leather scraps) that was regularly thrown away.



After

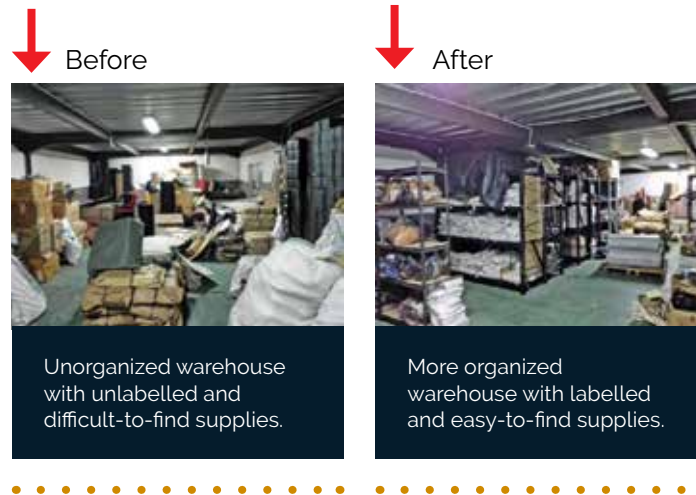


Leather scraps are repurposed into bracelets/souvenirs.

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### Leaner and Cleaner Production Improve Productivity

After eight months of implementation, the results have been tangible and positive. The newly organized and systematically documented inventory has improved efficiency. The FIFO (first in, first out) system has been put in place: Each item is now used according to its expiry date to ensure there are no expired or unused items, as was commonly the case before. This has helped reduce waste and prevent unnecessary spending and hoarding of supplies. Well-organized and clearly labelled items also mean employees do not waste time looking for supplies.



The company's workspace is now cleaner, tidier, safer, more spacious, and a more pleasant place to work. A more efficient production layout has also improved employee productivity. The company previously produced 80 pairs of footwear daily; now, with the same number of employees and working hours, production has risen to between 100 and 120 pairs, a 50 per cent increase.

“We learned a lot from participating in TPSA's SCORE program. We now sell and monetize unused inventory. Because of the program, our work is now more organized, production has increased because of improved efficiency, and employees are happier and more motivated because of a more pleasant working environment. Absenteeism is also reduced. The bottom line is, this program has been very useful.”

—Lisa Yumi, Co-owner of Maine St.

Lisa and other senior management report that one of the most important program benefits is the significantly improved management–employee communication. Good communication is key to implementing the company's 5S and resource-efficiency measures and to ensuring that production goes as planned. At its peak in September 2017, the company's defective-product rate was 320 pieces per 1,000. In April 2018, it had been reduced to 100 pieces per 1,000. The advantages of good communication have resulted in the company institutionalizing daily meetings between managers and employees, where daily plans and targets are discussed.





## Sustaining Success

While the company has reaped many benefits from the 5S and resource-efficiency/cleaner-production methods, it will take work to ensure that the results are sustainable. Lisa and the managers recognize this, and have made conscious efforts to sustain good practices by formalizing them into standard operating procedures (SOPs). Employees are now responsible for cleaning up and maintaining their own workspaces, and divisional managers are responsible for ensuring that their division implements 5S and resource-efficiency measures. With this system in place, Lisa is optimistic that the company will again expand its business.

Prisma Dwi Lestari

## Company Profile

SME name	CV Prisma Dwi Lestari
Location	Bandung, West Java
Staff	46 employees (31 permanent and 15 contract; 22 per cent are women)
Established	2000
Product	Denim-washing company
Destination	Domestic and intermediaries for international buyers and retailers

Lia Marlina is the founder and owner of the denim-washing company Prisma Dwi Lestari. Denim washing creates attractive fabric patterns and improves softness. Her clients are denim-producing companies from Bandung and the surrounding areas.

She started her business in 2000 with two washing machines and five employees. She now has 46 employees (31 permanent and 15 contract), 10 large washing machines, and six large dryers. Before starting the business, Lia worked for several years at another denim-washing company. This experience, combined with her formal education in textile chemistry, gave her the confidence to start her own business. Lia says running and growing a company as a single mother has not been easy, but that her family helped provide start-up capital and her mother assists with childcare.

The company's primary business, denim laundering, requires a lot of water. The denim is washed several times until the original dark-blue color fades to the preferred light "washed-out" blue. This faded, broken-in look is more appealing to consumers, especially the younger generation. The end products are sold domestically and to intermediaries for international buyers and retailers.

## Wastewater Management

Prior to joining the TPSA-sponsored SCORE-Cleaner Production program, the company had already implemented an environmentally friendly laundering process. As a denim-washing business, the company produces a lot of chemical-laden wastewater, which can have adverse environmental impacts if discharged untreated. However, unlike many other nearby denim-washing businesses, Prisma Dwi Lestari has wastewater treatment facilities that comply with government environmental regulations.



The treatment facilities consist of several 10-by-5-metre ponds where wastewater is treated with chemicals and enzymes, filtered, and treated again until neutralized and safe to discharge. The final treatment pond is populated by abundant tiny fish, whose proliferation is an indicator of good water quality. The company does not discharge its treated wastewater directly into nearby waterways; instead, it is used in its gardens to grow pine seedlings that are sold when they reach one to two meters in height.



Wastewater treatment facility.

Lia says the company's participation in the SCORE program has greatly improved her environmental knowledge and awareness. This has made her feel more confident that investing in an environmentally friendly wastewater treatment facility was the right thing to do. Therefore, she recently agreed to collaborate with a wastewater management company to expand her facility. The costs of the new facility will be covered by the wastewater company. In return, it will serve as a demonstration site where other companies can learn how to manage wastewater in an environmentally friendly way.

### **Leaner and Cleaner Production Through Good Housekeeping**

Although her company was already considered more environmentally progressive than most other SMEs in the area due to its wastewater treatment and other initiatives, Lia was eager to participate in the SCORE program. She was aware that the company needed to work on practising good housekeeping, which is key to improving production efficiency. Its production workspace was cramped and cluttered, slowing down the process and creating an unpleasant work environment. The warehouse was unorganized and inventory was stacked up, without proper labelling. Employees had to step around boxes to search for supplies, a waste of their time and energy.

“Each SME participant, including ourselves, has demonstrated positive changes as a result of implementing TPSA's SCORE–Cleaner Production program. In my opinion, this program is very useful, realistic, and properly targeted. I am grateful to have been given the opportunity to participate in the program.”

—Lia Marlana, owner of Prisma Dwi Lestari

After eight months of program participation, the company made significant improvements to its 5S practices. Production rooms are now clutter-free, making the workspace more spacious, airy, and pleasant. Production and other waste is sorted for reuse or disposal. Each production-process area has clearly demarcated lines, and employees can move from one production phase/division to another without obstruction. This helps the process run more effectively. Although the company has not documented its employee efficiency improvements, Lia indicates that these days, production targets are often reached prior to deadlines.



Before



Incoming and outgoing products piled in one area.



After



Demarcated lines for different product types.

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The warehouse is also more organized and its inventory system has been improved. Chemicals are kept in a special room, where boxes and jars are well-labelled and properly stored. Employees can find the right inventory more easily, saving time and energy for other tasks. To improve energy efficiency, all machines have new individual on-off power switches instead of a centralized switch.



Before



Warehouse inventory cluttered and unsafe.



After



Inventory neatly stacked and organized.



### **Good Communication Is Key**

Lia says one of the program's main benefits has been the significant improvement in management-employee communication. The company has daily meetings, as encouraged by the program, so that management and employees have the same understanding of daily production targets. Regular meetings also allow the company to discover and fix mistakes quickly. A whiteboard is used to communicate production status to all employees. A suggestion box was also installed, so that employees can give constructive suggestions anonymously.

“An important thing we have gained from the cleaner production program is the significantly improved communication between employer and employees and among employees. The importance of good communication cannot be overstated, as failed communication would lead to failed production.”

—Lia Marliana, owner of Prisma Dwi Lestari



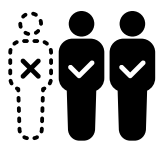


## Tiga Selaras Bersama

### Company Profile

SME name	CV Tiga Selaras Bersama (TSB)
Location	Solo, Central Java
Staff	300 permanent and contract employees
Established	1985
Product	Women's dresses, skirts, pants, blouses
Destination	Domestic and Europe

### Success by the Numbers



Absenteeism dropped from nearly 9 per cent to 3.8 per cent



Number of monthly employee complaints fell steadily from 31 to two



Rate of defective products fell from 6.4 per cent to 0.7 per cent



On-time product delivery increased from 71 per cent to 86 per cent

The Solo-based company Tiga Selaras Bersama, which means "three joining in harmony," produces women's apparel. It was started by Herlani Setyawati in 1985, but is now run by her children, Yvonne Purwanti, Suryo Budi Pradjitno, and Danny Avianto. Yvonne characterises their mother as hard-working, smart, capable, and concerned with SME development in general. In the early 1990s she received an Upakarti Award from the Indonesian government for her contributions to the advancement of Indonesian SMEs.

The company is now five times larger than when it was first established, with approximately 300 contract and permanent employees. It specializes in women's dresses, skirts, pants, and blouses. Since the early 1990s, the company has been the primary supplier for Indonesia's largest department store chain, Matahari, which has 150 stores across Indonesia. It also holds a Disney license, giving it the right to produce and sell apparel printed with Disney characters.



As a license holder, TSB is audited every year to ensure the company complies with Disney's responsible supply-chain standards, which include product safety, labour conditions, and environment. Danny, who is in charge of production, said TSB has never failed that audit.

### Continuous Improvement in Good Housekeeping

Despite having passed its audits, Danny was enthusiastic about participating in the TPSA-sponsored SCORE-Cleaner Production program. He wanted to learn about measures that could improve the company, particularly since they were facing such typical SME problems as high absenteeism, poor communication between divisions, high product-rejection rates, and sub-optimal productivity.



EIT meeting at Tiga Selaras Bersama.

Danny and three carefully hand-picked employees attended the Workplace Cooperation and Cleaner Production training. He believes that sending the right people—those who are respected and listened to by their peers—are key to the program's success. Employees, Danny says, are most likely to cooperate with program implementation if the training lessons are transmitted by trusted peers. The company established an EIT during the program to improve communications.

TSB had already implemented some good housekeeping (5S) measures, such as well-labelled inventories and a logical production layout, thanks to Disney's audit requirements. The challenge was how to maintain and improve these practices. Disney simply sets out requirements; it does not state how to achieve and maintain them, nor does it explain why they are important or required. Danny said the SCORE training helped to clarify the why and how of these measures. For example, even though their inventory was in order and well-labelled, employees had the bad habit of not returning an item to its original place. During the training, TSB realized that this seemingly trivial lack of care led to waste (e.g., wasted employee time spent looking for missing items; loss of company money to replace lost items; wasted goods if the found item was expired) and decreased productivity. The training methods provided many helpful examples.



Before



Unorganized warehouse inventory.



After



Inventory neatly stacked and organized.



### **Better Waste Handling**

Danny says the training helped him understand the different types of waste, and that his company does not have to produce waste. He used to think waste was only associated with harmful substances, but now realizes that it includes such materials as fabric scraps, leftover yarn, waste diesel, and cotton dust, which, if continuously inhaled, can cause serious respiratory problems. He also understands that good waste management directly correlates with worker health and safety, which he and Yvonne say is a major concern for most international buyers.

With this new understanding, another TSB improvement has been improved waste handling. Different types of waste are now separated based on their recyclability, reusability, and disposability. Fabric scraps are sold for Rp2,000 per kilogram. Unsafe substances such as waste diesel are placed in a separate room. Workers are required to use masks to avoid inhaling particulate matter like cotton dust.

### **Good Communication Is Key**

The biggest benefit of implementing the SCORE program, according to Danny, has been better communication and collaboration between management and employees and also among employees, which he credits with the company's increased efficiency and improvement. Employee complaints have fallen from 31 in September 2017 to just two in March 2018, and absenteeism has decreased from 9 per cent in September 2017 to 3.8 per cent in March 2018. The production process is more efficient, and the rate of rejected products decreased from 6.4 per cent in August 2017 to 0.7 per cent in March 2018. On-time product delivery has also increased by 15 percentage points.

“The TPSA-supported SCORE–Cleaner Production program has improved our ability to meet social and environmental standards as often required by international buyers like Disney. The training gave us practical tools and examples of how to meet these requirements. The program also made us more aware of the importance of proper waste handling, as it is closely linked with workers' health and safety.”

—Danny Avianto, TSB

To ensure that these positive trends are sustained, the good housekeeping and cleaner-production measures have been incorporated into the company's standard operating procedures (SOPs) and every division now has a reporting mechanism.

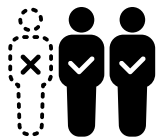


PT Raimondi Usaha Mandiri<sup>4</sup>

## Company Profile

SME name	PT Raimondi Usaha Mandiri (McLacy)
Location	Bandung, West Java
Staff	39 employees
Established	1997
Product	Footwear
Destination	Domestic and international

## Success by the Numbers



Absenteeism dropped from 16.4 per cent to 9.3 per cent



Savings of Rp60 to 80 million by applying 5S system



Product defect rate is zero



On-time product delivery increased from 83 per cent to 90 per cent



Monthly electricity bill fell from Rp5 million to Rp2 million

PT Raimondi Usaha Mandiri has been operating for 21 years, starting as a home-based business and expanding to supply footwear to other brands such as Buccheri, Crocodile, and Watchout. Ownership shifted to the next generation in 2016 and the new management made changes, including launching its own brand, McLacy. Under Hendry's leadership, the company has become more environmentally friendly. "McLacy wishes to be greener," Hendry says.





The SCORE program was a game-changer for McLacy. Hendry admitted that before participating in the training, he did not realize that he could reduce costs by rearranging his warehouse. He estimates that, with the help of SCORE, he has saved Rp60 to 80 million by applying a 5S system. He also noted that he and his staff never realized the potential income that could be generated from production leftovers. “We never thought of them, particularly leathers, which can be sold for tens of millions of rupiah,” he says. By selling these leftovers, he estimated that he could make Rp2 million to Rp5 million per sale. He has used this money to further upgrade the production area, particularly its electrical system.

### **Realizing Power Efficiency**

During the initial improvement process, Hendry replaced old electric cables in his factory with new ones to reduce high monthly power consumption. After replacing these cables, the company's monthly electricity bills decreased significantly. In addition, McLacy also replaced parts of its factory roof with transparent panels to provide non-powered illumination during the day. With this effective energy savings, the company could register its energy status with the state electricity company (PT PLN) and receive an industrial subsidy of 50 per cent.

With these savings, Hendry decided to buy a Rp5 million capacitor bank to maintain efficient power use at his plant. Before these changes, McLacy spent Rp5 million on monthly electricity bills; that number has been reduced to about Rp2 million per month.



Sunlight streams in through transparent glass ceiling inserts, replacing fluorescent lights at McLacy.

“I was excited when given the opportunity to learn through SCORE because it inspired me to keep improving.”

—Hendry, manager of McLacy





## Realizing a Greener Production Process

The next step was to adopt a greener production process by considering possible environmental risks. Hendry decided to replace the glues used in production. “We reduced the use of glues that contain abundant hazardous chemicals, and replaced them with more environmentally friendly glues,” he said. These advanced glues are more expensive due to their low toluene content (a toxic substance often found in industrial solvents), but they reduce health risks to those working on the production floor.

In addition, a special team was established to perform a factory-wide inspection of the warehouse and make changes as needed. The team found many rolls of unused items such as Velcro and elastic that were still usable. These goods were arranged by type and size and will be used for future production.

The assembly area was also improved. Before, glue was often spilled on the production floor because there was no dedicated space for storing it. The floors were then cleaned using detergent. Now, glue is stored in a dedicated space along with other materials containing chemicals, the production floor remains clean, the surrounding areas are safer, and materials can be accessed conveniently.



Before



Chemicals and glues are kept out in the open.



After



Chemicals and glues are securely stored and labelled.

After being cleaned, the two assembly areas, originally separate, were combined. The quality control and product finishing areas were also merged and moved to a larger area. These moves have increased efficiency because sequential work areas are now next to one another.

“After participating in the SCORE program, we are more motivated to apply good practices such as sorting trash. We now have increased production.”

—Sissy, McLacy employee



The new layout, along with improved employee awareness and attention, has had a significant impact. During final inspection processes conducted between August 2017 and March 2018, no product defects were found except in October 2017, when the defect rate was 3.25 per cent due to lack of material supply. Reduced defects have resulted in improved on-time delivery, reaching 90 per cent in February 2018, up from 83 per cent in September 2017.

A cleaner and more organized work environment has led to a more enthusiastic workforce committed to jointly improving the company's productivity and competitiveness. This is apparent in the employee attendance rate, which improved from 67.3 per cent in January 2018 to 90.7 per cent in March 2018.



Before



Unorganized and unsafe warehouse.



After



Organized warehouse means products can be easily found.

The SCORE training enabled Hendry and his staff to identify the potential in what looked to be unused materials, trash, and production leftovers. From there, they were able to make significant changes and improvements. With the knowledge and skills gained from the SCORE program, Hendry feels confident that he and his staff can continue to make improvements to the business.



## ENDNOTES

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- <sup>1</sup> 5S is the most common tool used by companies to improve efficiency and performance. 5S implementation helps to create an efficient, clean, and safe work environment, eliminate waste, and promote more efficient use of raw materials.
- <sup>2</sup> The SCORE Program has five modules: Workplace Cooperation, Quality Management, Clean Production, Human Resource Management, and Occupational Health and Safety. It is a modular programme that focuses on developing cooperative relations in the workplace (see <https://www.ilo.org/empent/Projects/score/lang--en/index.htm>).
- <sup>3</sup> Steps 1 through 9 were reported on in three Activity Briefs: *TPSA Project Organizes Workshops, Training, and Technical Assistance to Help SME Partners Improve Environmental Performance* [<http://www.tpsaproject.com/wp-content/uploads/2017-09-08-Activity-Brief-1123.04a.pdf>]; *TPSA Project Organizes Workshop on Resource Efficiency and Cleaner Production to Improve SMEs' Environmental Performance* [<http://www.tpsaproject.com/wp-content/uploads/2017-10-16-Activity-Brief-1123.04c.pdf>]; *TPSA Project Sponsors Field Trip to Expose SMEs to Best Practices in Cleaner Production* [<http://www.tpsaproject.com/wp-content/uploads/2018-02-26-Activity-Brief-1123.04e.pdf>]
- <sup>4</sup> This section is a modified version of a draft case study produced by the International Labour Organization and used with their permission.