



SMEs for environmental
Accountability,
Responsibility and
Transparency

SMART Myanmar
**Garment Factories
Improvement Program**

Success Stories and Results

Funded by the European Union



Implemented by:



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The SMART Myanmar Team with international garment and social compliance experts

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Message



U Myint Soe
Chairman
Myanmar Garment
Manufacturers
Association



Simone Lehmann
Project Director
SMART Myanmar
sequa gGmbH

Dear readers,

At sequa gGmbH Germany and the Myanmar Garment Manufacturers Association (MGMA) we are convinced that joint action between the private sector and development partners is beneficial and can produce quick and visible results.

SMART Myanmar 1.0 was designed to shape and influence Myanmar's economic recovery by focusing on the labor-intensive garment sector, an industry which is presently creating tens of thousands of job opportunities for low-skilled persons each year, providing such individuals with vocational training opportunities and stable employment. With Myanmar's opening and democratization, SMART Myanmar saw a need to push the garment industry's development in a responsible and sustainable direction, helping local factories learn about, and implement, international social compliance and production standards, ensuring improved safety, working conditions and efficiency.

This booklet aims to provide detailed information to show some of the concrete results achieved by one facet of the SMART project, with the hope that other factories less directly impacted by the project can understand that responsible business practices are achievable and, indeed, are a sensible and necessary investment in their future success. SMART Myanmar 1.0 "SMEs for environmental Accountability, Responsibility and Transparency" proudly presents these results to demonstrate some of the important contributions to sustainable development made by SMART Myanmar and the MGMA over the past two years.

Many difficulties and obstacles for Myanmar's garment sector remain on the road ahead, but looking back to where SMART Myanmar started, it is a positive surprise to see the speed of changes and the results which have been accomplished in a relatively short time. The opportunities and bright potential to create an ethically responsible and sustainable manufacturing industry surely outshine the challenges, which we are confident can be overcome.

It is our hope that you find this brochure both interesting and stimulating and that it may inspire further improvements as we all invest and plan for the future ahead.



U Myint Soe
Chairman MGMA



Simone Lehmann
Project Director
SMART Myanmar



Success Stories from SMART Myanmar

This publication documents the results of the cooperation between the SMART Myanmar project and selected Myanmar garment manufacturers. For a duration of two years SMART Myanmar promoted socially responsible and resource efficient garment production by implementing a comprehensive factory improvement program.

Part of it was a series of hands-on and practical consultations for a group of motivated garment manufacturers to support them in assessing their current production and suggesting actionable measures for improvement. Of these companies, ten are featured in this booklet to show their steps and achievements towards implementing factory practices oriented on sustainable production that is based on social standards and resource efficiency.

Objectives of SMART Myanmar

SMART Myanmar stands for “SMEs for Environmental Accountability, Responsibility and Transparency” and is a three-year Switch-Asia project funded by the European Union and implemented by sequa gGmbH.

Since early 2013, SMART Myanmar has been working in Myanmar’s garment sector on issues such as capacity building of the Myanmar Garment Manufacturers Association (MGMA), productivity improvements, social compliance, environmental awareness and promoting market access to European markets for sustainable garments made in Myanmar.

The project actively promotes sustainable production of garments “made in Myanmar” in order to increase the international competitiveness of small and medium sized

enterprises (SMEs) in this sector. Working closely with companies and business support organizations, SMART Myanmar aims to build capacity and increase skills and knowledge of local partner organizations, facilitating the development of marketing and export strategies for the sector. The local partners of SMART Myanmar are the Myanmar Garment Manufacturers Association (MGMA) and the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI).

The project has been designed to make an important contribution to shaping Myanmar’s economic recovery sustainably by creating employment for low-skilled persons as well as providing education and training opportunities in the labor-intensive garment sector in Myanmar.

Background and Challenges of the Myanmar Garment Industry

At present, the garment industry in Myanmar consists of approximately 350 (exporting) factories employing a work force of roughly 230,000. In 2014, Myanmar exported \$1.56 billion USD of garment products which accounted for about 14% of the country’s exports. Myanmar is regarded as a new producer country which has started competing successfully with established garment-producing countries, resulting in a shift of production facilities from other countries and changes in global supply chains. Myanmar is quickly gaining a strong reputation for making higher quality garments.

The Myanmar Garment Manufacturers Association has a vision of the garment industry becoming the highest revenue earning industry in Myanmar, penetrating the global market by offering high quality, value led products that can be manufactured in an ethical and sustainable manner with a skilled workforce that will enjoy a high quality of life and high salaries.

To achieve its vision, the industry needs to change the way it works and tackle the main challenges the sector is facing:

labor standards that are not yet fully enforced, lack of FOB capability, little provision for vocational training to develop a skilled workforce and sub-optimal infrastructure and energy resources.



How SMART Myanmar Works together with Garment Factories

SMART Myanmar has a team of local Sustainable Consumption and Production (SCP) consultants with expertise ranging from industrial engineering to accountancy and economics who were trained by SMART Myanmar's international garment and social compliance experts on the subject of sustainable consumption of resources, sustainable production and international social standards.

By participating in SMART Myanmar's Factories Improvement Program and in its Social Compliance Academy, factories have now the opportunity to avail of SCP services and qualified support in developing a more sustainable and competitive production. SMART Myanmar facilitates service provision by training groups of managers and technical personnel in workshops and classroom settings and by in-house consultancy to demonstrate practical improvement measures in production units. SMART Myanmar hired experts from ESGE-Textilwerk Maag GmbH & Co KG and Sustain Consulting (both from Germany) to train the local consultants, assess the production units of partner factories and support implementation of improvement measures on the factory floor.

The project collaborates with multiple stakeholders such as MGMA, owners and managers of garment factories and garment workers. Beyond its engagement with the garment sector, the project worked with local banks to improve access of garment producers to finance and with garment buyers from the European market. The interventions are a mix of capacity building, matchmaking with buyers and promoting an enabling environment for responsible manufacturing.

Furthermore, SMART Myanmar joined forces with the Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) in a pilot project to explore options to support the development of in-company trainings for sewing machine

ESGE consultant Mr. Oskar Loeffler at Shwe Sakar



mechanics. The consultancies of professional mechanics from ESGE-Textilwerk Maag which are part of the Factories Improvement Program belong to this pilot project. Findings confirm that there is a high potential for productivity increases through developing skilled workforce in that field. Discussions with company owners will be held to further develop a possible program linked to the GIZ activities with the National Skills Standard Authority (NSSA).

Main intervention areas

SMART Myanmar's Factories Improvement Program supports factories on three broad areas which are intrinsically linked - productivity, resource efficiency and social standards.

The following topics were addressed:

Optimizing productivity

- Production planning and production control by introducing "quick wins" and by implementing more sophisticated measures such as production planning and monitoring software
- Sewing techniques, line setting and work flow in production lines
- Payment systems which are more motivating for good performance, quantity- and quality-wise
- Setting up sewing lines for training, training of multi-skilled workers, introducing tailor training guidelines

Efficient use of resources

- Quality assurance, prevention of defects by introducing quality management systems such as AQL 2.5
- Good housekeeping measures, management of storage areas, work stations with shop floor management according to 5 S, a Japanese shop floor management system
- Repair and maintenance of machinery and equipment, training of machine mechanics and improving maintenance departments
- Energy efficiency, reduction of consumption of water, raw materials and auxiliaries.

Improving Social and Environmental Standards

- Compliance management systems
- Occupational health and safety (OHS) incl. fire safety, emergency escapes, layout of shop floors
- Child and young worker labor policy
- Working hours and overtime
- Wages and benefits
- Communication and workers participation committees

Structure of the Factories Improvement Program

The Factories Improvement Program had the objective to increase productivity and improve working conditions in partner companies.

The program was implemented in a three-tier approach:

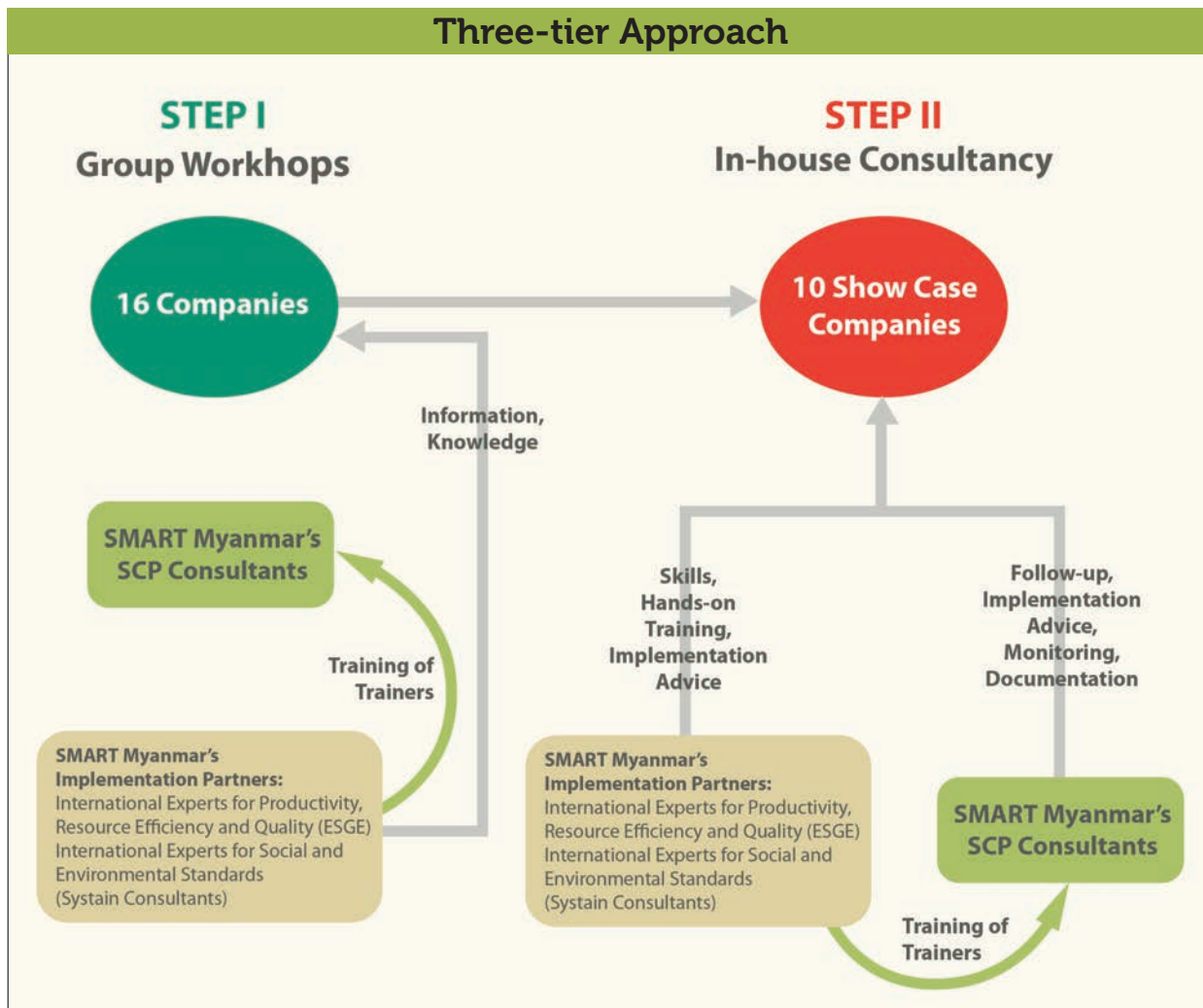
- i) Training a pool of SCP consultants of SMART Myanmar in order to build local capacity, i.e. future master trainers and consultants (ToT program)
- ii) Group workshops (in-class) for factory managers and midlevel technical staff and
- iii) In-factory consultancy for selected committed companies.

Trainings and consultancies were delivered by international consultants. After the train-the-trainer sessions, group workshops were co-moderated by the most promising of the SCP consultants. Regular follow ups after the in-house consultancies in factories, as well as further advice and support for implementing improvement measures during training intervals, were carried out by SCP consultants.

SMART Myanmar's Factory Improvement Program supported factories in three key thematic areas – resource efficiency, productivity and social standards.

Productivity and resource efficiency focused on topics related to production planning, process optimization, shop floor layout, quality management, machine maintenance and management of raw materials and waste.

Social and labour issues were addressed within the framework of a "Social Compliance Academy". The Social Compliance Academy focussed on workplace improvements, occupational health and safety and compliance with international standards and domestic laws.




A range of information workshops on industry-relevant topics and training workshops for groups of factories were held in class-room setting and attended by representatives of 15 to 20 companies. Participants had the opportunity to benefit from expert knowledge and register for more in-depth hands-on support. Those companies who were committed to improve and fulfilled the participation requirements of SMART Myanmar were offered in-house consultancy.

10 companies have received in-house consultancy on productivity, resource efficiency and quality issues. Out of 16 factories that have participated in 2 group workshops of the Social Compliance Academy 9 factories availed of in-house consultancy related to their social and labor standard performance.


The in-house consultancies started with a meeting with the management and an initial walk-through assessment of the factory. The management and the SMART Myanmar team identified focus areas for improvement and agreed on key performance indicators for improvements in the focus areas. In cases of social and labour issues a corrective action plan (CAP) with concrete recommendations for improvement was jointly developed by the consultants and the management. The consultants demonstrated recommended improvements on the factory floor.


For all improvement measures “before” and “after” situations were captured and compared with performance indicators. During intervals between training and consultancy intervals the companies were supported by SMART Myanmar’s SCP consultants. Future steps for continuous improvement were defined in cooperation with the SMART Myanmar team.

PRODUCTIVITY

	Line table	Machine sequence	Cost calculation SAM*	Dummy stitch elimination	Tailor taining	Pre-production Meetings	In-line quality inspection	Production monitoring software
Golden Jasmine								
Hallmark								
Maple								
Myanmar Synergy								
Princess Power								
Rising White Tiger								
Shwe Sakar								
Shweyi Zabe								
Thiri Sandar								
Tri Sea								

RESOURCE EFFICIENCY

	Energy	Water	Raw materials	Spare parts	Maintenance	Waste
Golden Jasmine						
Hallmark						
Maple						
Myanmar Synergy						
Princess Power						
Rising White Tiger						
Shwe Sakar						
Shweyi Zabe						
Thiri Sandar						
Tri Sea						

	Child labor policy	Emergency procedures	Fire safety	Working hours	Medical treatment	Renumeration/ bonus	Freedom of asso-ciation	TÜV appreciation on social compl.	Employment contract
Golden Jasmine									
Hallmark									
Maple									
Myanmar Synergy									
Princess Power									
Rising White Tiger									
Shwe Sakar									
Shweyi Zabe									
Thiri Sandar									

SOCIAL STANDARDS



**SMEs for environmental
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Transparency**

Success Stories from 10 Companies

1

Golden Jasmine Intimate Manufacturing Co., Ltd

Golden Jasmine Intimate Manufacturing Co., Ltd. is a Myanmar-Australian joint venture owned by Mr. Douglas Edward Zappelic and Daw Moe Moe Lwin, who is also the general manager of the company. Their main products are pyjamas, track pants, t-shirts and other knit wear.

The company strives to expand its business to EU buyers and wants to work with retailers that are interested in shifting their sourcing operations from China to alternative markets. Golden Jasmine values good social standards. It provides meals and accommodation to staff members who are not from Yangon. The factory has installed fire safety equipment and introduced occupational health and safety measures. Golden Jasmine is equipped with a large sample room, a warehouse and a well-organized finishing department.

Golden Jasmine participated in various SMART Myanmar trainings and workshops such as the Social Compliance Academy in June 2015 and the study mission to Europe to visit relevant trade fairs, get information on social compliance and understand the change from CMP to FOB.

As part of the improvement program the company had fourteen consultation visits by the SMART Myanmar SCP team. In ten of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.



Daw Moe Moe Lwin
Company Owner &
General Manager

QUICK FACTS

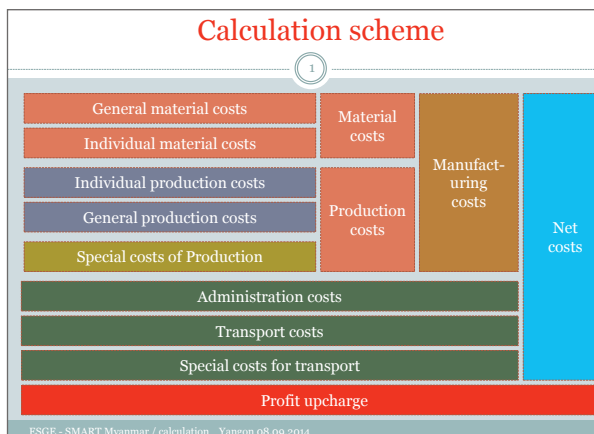
Founded:	2013
Number of employees:	288
Office Staff:	8
Production Workers:	280
Ownership:	Joint Venture with Australia
Production Mode:	CMP
Product Range:	Knit/woven
Production Capacity:	400,000 pcs/month
Market:	Australia



ENHANCING PRODUCTIVITY Production planning and cost calculation

The management of Golden Jasmine was not familiar with variable and fixed costs which are the basis for a precise cost calculation and serve as a guideline for calculating production lead time and capacity planning.

SMART Myanmar arranged a workshop with international experts for "Calculation and Costing" in December 2014. For Golden Jasmine there was an on-site consultation session with an international expert on cost calculation.



In order to get a complete overview of the production cost the management instructed the bookkeeping in-charge to compile the expenses of all departments for re-calculating the cost of one production order and to gather data for future production orders to assure full coverage of net cost plus a profit percentage. The calculation was an eye-opener for the management as it revealed all expenses by category and percentage-wise distribution. As General Manager Daw Moe Moe Lwin put it: "I was impressed in learning the calculation scheme because now I can calculate my costs properly."

As part of the in-house consultancy on improving productivity an assessment of production techniques and workflow was carried out on Golden Jasmine's shop floor. Several unnecessary work steps while sewing a garment were identified, which led to increased production time, higher cost and thus, decreased the profit of the company.

A demonstration for line supervisors and workers on how to construct a garment without using dummy stitches and hand cut check points was done by the SMART Myanmar international expert. The staff were fast to learn and were wondering why they had put the stitches and check marks in the first place.

Using the newly introduced calculation scheme and the SAM (Standard Allowed Minutes) time study method the international expert calculated the cost of the current production by excluding the unnecessary work steps in the sewing department. The calculation showed potential savings and higher profits by producing in a more efficient way.

BEFORE	SMART RECOMMENDATION	AFTER
		
<p>Dummy stitch.</p>	<p>Demonstration and Training by Ms Barbara Waeschle from ESGE, a SMART Myanmar international expert.</p>	<p>Sewing without dummy stitch.</p>

INVESTMENTS

Zero capital investment
only staff time for training.

SAVINGS in one production order

5.45% saving by removing unnecessary dummy stitches in sewing department.

3.18% saving by removing measurement hand cut check point.

Total **8.63% of customer's quotation.**

after GM Daw Moe Moe Lwin and Mr. Philipp Maag trying out the new calculation scheme



Removing measurement hand cut check point





USING RESOURCES EFFICIENTLY Energy saving measures

The production unit had more than sufficient lighting; lamps were even installed at unoccupied areas. Each table was lit by three light panels and additional lighting was installed between the tables. Some lights were placed at workstations but in an inefficient way. One central light switch controlled the lighting of the entire shop floor instead of each department which led to waste of energy.

example, SMART Myanmar advised to remove lights at unoccupied areas and to install individual light switches to control each workstation separately. A further advice was to consider exchanging all lights to energy saving lamps such as LEDs. SMART Myanmar also created a poster on ten "Energy Saving Tips" with many useful hints on how to save energy which was displayed in all departments. Most of the recommended energy saving measures require no financial investment.

SMART Myanmar encouraged the management to decrease their consumption of valuable resources. As a quick action

BEFORE	SMART RECOMMENDATIONS	AFTER
Too many lights installed. Placement of lights not efficient.	Remove unneeded lights; illuminate the working areas only.	53 lights have been removed at unoccupied areas.
Lights are turned on at unoccupied areas.	Apply Individual switches. Train staff to switch off lights when not needed.	108 individual switches were installed. Workers were trained to turn off lights when not needed. It will strictly be controlled by a designated staff to make prudent use of energy a habit of all workers.



before Inefficient lighting, wasting resources

INVESTMENTS

\$ 900 USD including complete new wiring system.

SAVINGS per month

20% reduction of electricity cost. Implementation done within 2 months.

after

Individual switches installed



Excerpt of energy saving poster

သင်၏စီးပွားရေးလုပ်ငန်းအတွင်း စွမ်းအင်သုံးစွဲမှု လျော့ကျစေမည့် နည်းလမ်းများ

1. TURN IT OFF. မီးခလုတ်များကိုပိတ်ပါ။
Did you leave the lights on or off? Did you forget to switch off machinery or equipment? Simply checking all electric outlets before leaving the workplace can save energy and money. မီးခလုတ်များကို သင့်ဖွင့်ထားခဲ့ပါသလား၊ (သို့) ပိတ်ထားခဲ့ပါသလား။ စက်ယန္တရားများ (သို့) ပစ္စည်းကိရိယာများကို ခလုတ်ပိတ်ရန် သင်မေ့လျော့ခဲ့ပါသလား။ လုပ်ငန်းခွင်မှ မထွက်ခွာခင် မီးခလုတ်ခုံ များအားလုံးကို စစ်ဆေးခြင်းဖြင့် စွမ်းအင်သုံးစွဲမှုကို လျော့ကျစေပြီး ကုန်ကျမှုစရိတ်ကို သက်သာစေနိုင်ပါသည်။

2. SWITCH LIGHTS. မီးလုံးများကို လဲလှယ်တပ်ဆင်ပါ။
Invest in compact fluorescent (CFU) bulbs which uses less energy and also last up to 10 times longer than incandescent bulbs, resulting in energy savings. စွမ်းအင်နည်းမီးလုံးများကို သုံးစွဲခြင်းသည် ပုံမှန်မီးလုံးထက် (၁၀)ဆ ပိုကြာရှည်ခံပြီး စွမ်းအင်သုံးစွဲမှုကို လျော့နည်းစေပါသည်။



Daw Thet Htar Swe
Company Owner



QUICK FACTS

Founded:	2011
Number of employees:	727
Office Staff:	22
Production Workers:	705
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Woven
Production Capacity:	80,000 pcs/month
Market:	Japan, Europe

Hallmark’s factory was established in three stages: Hallmark I and II were established in 2011 with three and one sewing lines, respectively, and Hallmark III was founded in 2013 with 5 sewing lines. The company is specialized in the production of woven products; mainly jackets, down jackets, pants, uniforms and children’s wear.

The management believes that business success does not only require quality products and client orientation but also investment in new technologies and in training of staff. Hallmark makes its annual factory production plan available to clients.

Hallmark participated in various SMART Myanmar trainings and workshops such as “From CMP to FOB”, the training for sewing machine mechanics and recently in the SMART Myanmar Social Compliance Academy.

As part of the improvement program the company had eleven consultation visits by the SMART Myanmar SCP team. In eight of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.

Floor flow and organization

ENHANCING PRODUCTIVITY



When SMART Myanmar and the international consultants from ESGE (Germany) visited the factory, all departments were disorganized, neither did they have a structured floor plan nor sufficient space. Due to the production area being overloaded, there was no smooth production flow.

The international consultants suggested to remove all items which do not belong to the production floor and place them in a storage area. The layout of the production floor and the set-up

of space between the workstations should follow international best practice. Thus, a space was assigned as a storage area and equipped with racks. The sewing department is no longer overloaded which allows the line in-charge to move the bundles from one workstation to the other without space constraints. Bundles of cut garment pieces that are ready for sewing are placed in a designated area, adjacent to the sewing lines and easily accessible for the line in-charge. Thus, the line-in charge can monitor the production flow and plan accordingly.

before Cluttered production floor



after Clean and organized production floor





USING RESOURCES EFFICIENTLY Raw material storage

The fabric warehouse was not organized. Rolls of fabric were placed haphazardly on the floor and became unwrapped. Dirt and moisture damaged the fabric (in average 1 to 2 meters at the start of the roll and 5 to 10 cm at the edges) and made it unsuitable for production.

Such practice caused Hallmark and their customers a considerable loss of resources, especially with fabric accounting for 2/3 of the total production cost. Likewise, a quality inspection and recording of incoming fabrics, accessories and packing materials was lacking.

SMART Myanmar's ESGE consultants explained that a well-organized garment production starts with a proper warehouse. A warehouse in-charge coordinates the quality and quantity inspections of delivered materials, attaches tags with customer information and production order and keeps inventory records about received and issued items. Materials are stored according to customer orders and production requirements.

Director U Moe Pwint instructed his team to clear the whole warehouse and install racks. The warehouse in-charge was trained to carry out the following steps for maintaining the factory's inventory:

- Check incoming goods by quantity, weight and quality
- Assure the fabric is properly packed to protect it from dust, dirt and humidity
- Store all fabrics from same customer and production order in one place
- Place information tags for identification
- Keep an inventory register by recording "in" and "out"

INVESTMENTS

\$ 150 USD for shelves and racks.

SAVINGS per month

approx. 3% reduction of raw material wastage due to arranged storage system.

Keeping track of the inventory through information tags



before Messy warehouse; damaging raw materials



after Well organized warehouse





HRM, OHS & fire safety **IMPROVING SOCIAL & ENVIRONMENTAL STANDARDS**

Occupational Health and Safety, Fire Safety

As a result of its participation in the Social Compliance Academy, Hallmark upgraded the fire safety of its factory – fire extinguishers were placed at the required locations and maintained according to a regular schedule. Fire exits were cleared and marked and escape routes identified. Large emergency evacuation maps were placed in all departments.

Tools with the potential to cause injuries were secured, e.g. scissors were tied with ribbons at each workstation and labeled with worker’s names.

Chemicals

Chemicals are used in various stages of manufacturing garments, e.g. ink for stamping cut garment pieces in the cutting department and stain removers in the finishing department. Previously, all workers that used chemicals had unrestricted access to these chemicals. Names of users and quantity of consumption were not recorded and chemicals not returned to the storage area which was reason for concern with regard to health and fire safety issues. Today, chemicals are locked in a designated storage cabinet and a log book is kept to monitor consumption.

before unrestricted access to chemicals



after chemicals storage area & log book



Human Resource Management (HRM)

As part of their HRM agenda, and in order to comply with international social standards, Hallmark made use of the training and advice of the Social Compliance Academy conducted by Systain, an international consulting firm, and made several changes to improve its human resource management.

- Labor contracts were prepared for all workers in the company. Previously, only workers who joined the company from 2013 onwards were given contracts.
- As birth certification and ID cards are not mandatory in Myanmar; it is advised that age identification for new workers is done by medical practitioners. Thus, Hallmark’s new entrants were sent for age identification in order to avoid employing under-age workers.
- For day-job workers actual working hours were registered in order to compensate them according to their actual working hours.
- Deductions from workers’ salaries for uniforms was abolished.

- A bonus payment system was adapted which takes into account the seniority (years of employment in the factory) and the skill level of workers.
- Management introduced a suggestion box for giving workers an opportunity to voice grievances.

Installed suggestion box



3

Maple Trading Co., Ltd.

Maple started in 1996 as a family business. At present the entire family is still actively involved managing the factory - Dr. Aung Win who is a vice-chairman of MGMA together with his wife Daw Kyway Kyway Zin and two daughters Winnie and Thet Su. The company's philosophy is to run the business with passion and respect.

The factory is located outside of Yangon. It is specialized in producing jackets, pants and trousers. Currently, the factory is being expanded and upgraded to meet EU safety requirements. Due to years of experience producing for the Japanese market, the products meet high quality standards. Most of the equipment is from Japan. Workers are trained in implementing a lean manufacturing system. The factory features a sample room to provide customers with a salesmen-sample collection, a closed down-filling room for producing down jackets and a fabric inspection machine.

Maple participated in almost all SMART Myanmar trainings and workshops including the Social Compliance Academy. Additionally, they participated in a study mission to Europe to visit relevant trade fairs and gather information on social compliance and plan for the change from CMP to FOB.

As part of the improvement program the company had twenty-four consultation visits by the SMART Myanmar SCP team. In sixteen of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.



Dr. Aung Win
Company Owner

QUICK FACTS

Founded:	1996
Number of employees:	800
Office Staff:	15
Production Workers:	785
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Woven
Production Capacity:	60,000 pcs/month
Market:	Japan, Germany, the Netherlands



ENHANCING PRODUCTIVITY Floor planning and organization

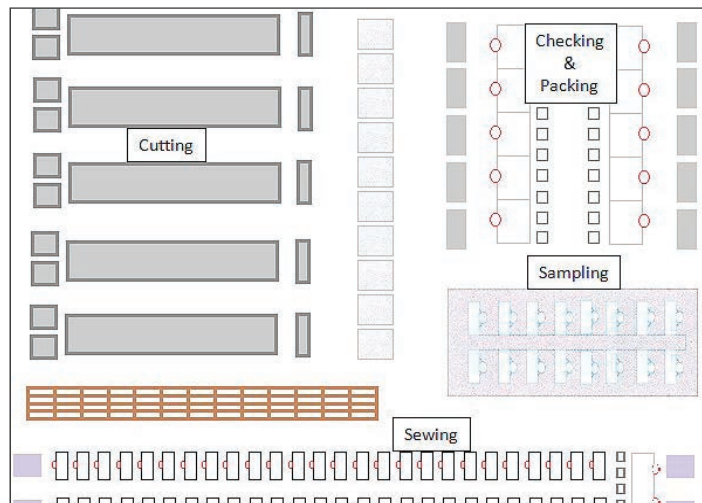
Maple successfully increased their business and thus, needed to enhance their production capacity. As a first measure they placed additional sewing machines on the production floor but quickly realized that this obstructed the production flow

and posed a challenge for achieving the required higher daily out-put. Therefore, they decided to do away with the space constraints and expand their sewing department using an area which was previously unoccupied.

before Crowded sewing department



Abridgement of floor plan suggestion



Maple asked SMART Myanmar’s international experts for suggestions on how to plan the new area. As they were also considering to shift and reconstruct the canteen, the expert from ESGE Germany along with SMART’s SCP trainees visited the factory several times to take measurements of the area. Based on good practice for the layout of garment factories the consultant created a floor plan.

Maple was inspired by the layout and implemented the majority of the suggestions. They were particularly impressed by the two rack station system. One functions as a partition between cutting and sewing department and

another between the sewing and finishing department but does not completely separate them. One rack station is for “bundles ready for sewing” and the other one for “bundles ready for finishing” that allows the department in-charge to oversee the production flow and work progress at any given time without having to move between sewing and finishing production floors.

According to Maple’s Executive Director Daw Win Ei Khine this “indirect communication” facilitates a smooth work flow and production planning.

Raw material savings USING RESOURCES EFFICIENTLY



The cutting department caused high and unnecessary raw material wastage, by not cutting the inner lining according to the paper pattern. The lining was cut out roughly along the contours of the pattern and needed to be re-cut by hand in the sewing department to fit the size of the main fabric to continue with the sewing.

Based on this example and an annual capacity of 600,000 pieces (50,000 pieces per month) the savings of material and labor amounts to approximately \$ 3,600 USD.

SMART Myanmar’s technical expert suggested that the sewing line in-charge has to be instructed to insist on receiving correct cuttings from the cutting department to avoid unnecessary work steps. As noticed in many other Myanmar factories the cutting departments often hurry to finish their job quickly without being aware that they cause additional work for other departments. For example: cutting 100 pieces might be completed in one hour but for sewing it takes one day. So staff of the cutting department should generally be made aware on how important their job is as quality of their work influences the efficiency of the other operations.

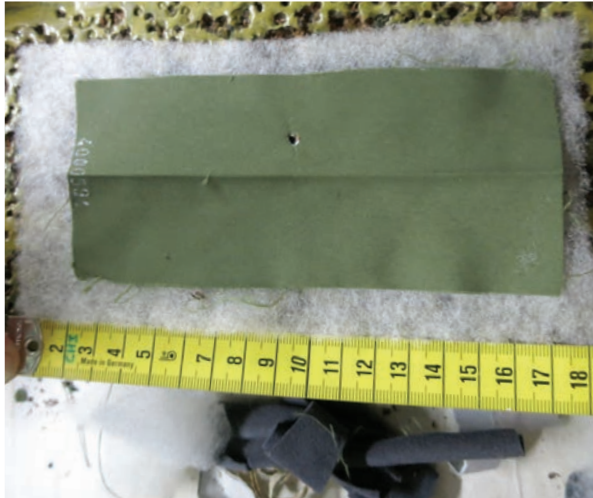
“Very practical, easy to catch up and efficient. It was very good that the expert and SCP consultants implemented [measures] together in the factory by leading as an example”

Comment Daw Win Ei Khine
Executive Director

BEFORE	SMART RECOMMENDATIONS	AFTER
Cutting department did not cut inner lining according to paper pattern.	Cutting department has to deliver correct cuttings to avoid unnecessary work steps in sewing department and reduce raw material use.	Cutting department does correct cuttings.
Need for re-cutting by hand to fit the size of main fabric in sewing department.		No re-cutting in the sewing department.

INVESTMENTS	SAVINGS (annually)
Zero capital investment	Based on this example and an annual capacity of 600,000 pieces (50,000 pieces per month) the savings of material and labor amounts to approximately US\$ 3,600* .
	Labor cost 34.6 % Material cost 65.4 % Direct savings for Maple: \$ 1,246 USD labor cost Direct savings for customer: \$ 2,354 USD material cost
	<small>*Labor cost per minute x time for hand cutting + wastage in cm² x lining cost.</small>

before Lining too large for main fabric



Inner lining wastage of 5 cm



IMPROVING SOCIAL & ENVIRONMENTAL STANDARDS

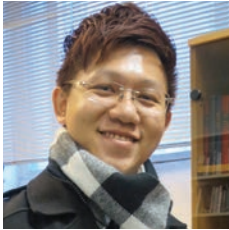
DISCUSSED DURING INITIAL VISIT Nov. 5 th 2014	1 st FOLLOW UP VISIT Dec. 13 th 2014	2 nd FOLLOW UP VISIT Jan. 20 th 2015
Child Labor		
Child labor policy	in process	DONE
Management process		
Labor contract	DONE	-----
Bonus regulation	in process	DONE
Wastage disposal	DONE	-----
Health and Safety		
Fire extinguisher check list	DONE	-----
Fire safety responsible person	under training	DONE
Chemical safety (MSDS)	in process	DONE
No protective equipment	DONE	-----
Evacuation map	in process	DONE
Emergency exits	DONE	-----
Emergency signs	DONE	-----
Working Hours		
Working hours policy	DONE	-----
Freedom of association		
Suggestion Box	DONE	-----

Maple participated in SMART Myanmar's Social Compliance Academy conducted by Systain Consulting. Within only eleven weeks the management of Maple implemented successfully 13 out of 19 improvement measures, a phenomenal improvement. The implementation of the remaining measures is in process.

It is especially praiseworthy that Maple installed a completely equipped medical treatment room with full time hired nurse.

Medical treatment room with nurse





Dr. Min Gaung Oo
Managing Director &
Owner



QUICK FACTS

Founded:	2012
Number of employees:	1,131
Office Staff:	31
Production Workers:	1,100
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Knit
Production Capacity:	300,000 pcs/month
Market:	The Netherlands, UK, France, South Korea

Myanmar Synergy is locally owned and was established in 2012. Besides the factory in Yangon which operates on CMP basis, Myanmar Synergy is part of a joint venture in Singapore that handles the FOB part of the production.

The factory is well organized and is situated in the Yangon region. A large canteen for the workers in a pleasant environment is part of its social standards agenda. A designated social compliance team is responsible for continuously improving working conditions. The company has set itself the target of complying with international standards and already passed the buyers' audit for TESCO and Primark. It strives to obtain BSCI certification within 2015 in order to expand its business to the EU market.

The production is managed by five foreign technicians and a Chinese production manager. Workers are trained on the job according to a standard training guideline.

The vision of the Myanmar Synergy is "To be a reliable garment manufacturer in the region". The objective of the company is "Creating and manufacturing garments with a well experienced management in accordance with best ethical practices".

Myanmar Synergy participated in almost all SMART Myanmar trainings and workshops including the SMART Myanmar Social Compliance Academy. Additionally, they took part in a study mission to Europe to visit relevant trade fairs and gather information about the EU market.

As part of the improvement program the company had twelve consultation visits by the SMART Myanmar SCP team. In ten of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.

Pre-production meetings

ENHANCING PRODUCTIVITY



Myanmar Synergy conducted pre-production meetings with department heads and other concerned staff as part of their internal procedures. In the meetings they discussed production orders with regard to workmanship and quality, lead times, production capacity and other customer requirements in order to ensure a smooth start into production.

Despite careful preparation, occasionally, the production unit had to deal with delays due to preparatory tasks not having been finalized on time, e.g. fabric relaxation delaying fabric cutting or sewing machines not being maintained and adjusted thereby hampering production flow.

Smart Myanmar's consultant, Ms Barbara Waeschle from ESGE, introduced Myanmar Synergy to a pre-production

meeting method which is commonly used in the garment industry internationally. A major component during pre-production meetings is to create a time table incorporating all production steps and setting deadlines for all department in-charges.

Based on the time table each department is obliged to plan and organize her or his area of responsibility according to start and end date well ahead of production start.

Myanmar Synergy confirmed that their previous pre-production meetings were similar to the version introduced by ESGE but a time table was not part of their proceedings. Myanmar Synergy took up the proposed meeting structure and included the time table and a few other suggestions as advised by SMART Myanmar.



Pre-production meeting template with time table

“[The pre-production meeting is] very well organized and an effective program.”

Comment from U Daewar Ye Htay (Mechandiser)

Pre Production Meeting

Participants: (incharge of each department)		P.O received date	08.01.2014
1. Factory Manager	Daw Than Than Aye	order quantity	5000
2. Production Manager	Daw Khin	delivery date	28/8/2014
3. Pattern Department	Daw Win	Style no.	#12345
4. Warehouse (Fabric)	Daw Khine		
5. Warehouse (Accessory)	U Ba	Needed Details	
6. Cutting department	Daw Hlaing	Original Sample	
7. Sewing line incharges	Daw Si	Discription Sheet	
8. Mechanics	U Toe	Measurement chart	
9. Ironing department	U Lu	Order sheet	
10. Packing department	U Kyu	Accessory details	
11. Final QC department	U Phyu	fabric details	
Discussion:			
Workmanship Discussion		Time table	
seam types		Departments	Start Date End Date
sewing support tools		Pattern Department	02. Aug 02. Aug
check points		Warehouse(Fabric & accessory)	10. Aug 12. Aug
		Cutting Department	14. Aug 14. Aug
Capacity Planning		Sewing line incharges (each line)	14. Aug 22. Aug
No of needed machines / Lines		Mechanics	14. Aug 23. Aug
Additional needed tools		Final QC department	14. Aug 23. Aug
		Ironing department	17. Aug 26. Aug
Critical points		Packing department	26. Aug 27. Aug
joint seam		AQL inspection	28. Aug 28. Aug
Packing fold technique		Delivery	Aug 31 st
Factory Manger		Production Manger	

Optimizing working steps

In the sewing department, an area was set up for workers placing position marks with chalk on cut fabric layers, e.g. for pocket positions on pants. After sewing, workers were busy removing the chalk marks from the ready garment with toothbrushes.

Garment expert Ms Waeschle advised to use textile magic markers for position marking instead of chalk as the marks dissolve after 4 to 5 hours without the need to remove them

manually. The markers are available in different colors for \$ 2 USD. It is sufficient to mark only small dots e.g. at the corners for pocket positioning.

By using the recommended textile markers Myanmar Synergy is saving a substantial amount of manpower which can be used elsewhere more efficiently. According to product style (no. of position marks needed) up to four workers less are needed.

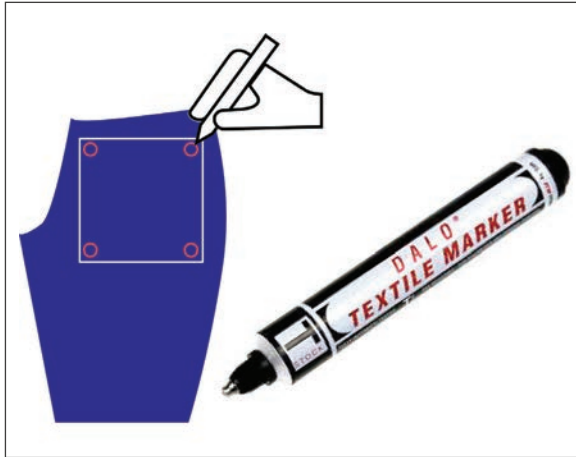
before Position marks made with chalk



Chalk marks have to be removed afterwards



Instruction of textile marker usage



INVESTMENTS

\$ 2 USD for one textile marker.

SAVINGS

Manpower of 1 - 4 workers, depending on product style.

IMPROVING SOCIAL & ENVIRONMENTAL STANDARDS



Myanmar Synergy participated in SMART Myanmar's Social Compliance Academy conducted by Sustain Consulting. Within only seven to ten weeks the management implemented successfully 15 out of 22 improvement measures, a phantastic achievement. The implementation of the remaining 7 measures is in process.

DISCUSSED DURING INITIAL VISIT Nov. 4 th 2014	1 st FOLLOW UP VISIT Dec. 31 st 2014	2 nd FOLLOW UP VISIT Jan. 21 st 2015
Working Hours		
No overtime recording	DONE	-----
Health and Safety		
MSDS missing	in process	DONE
MSDS in Burmese language	in process	DONE
Chemical list & training	in process	DONE
Emergency light in packing department	in process	DONE
Exit sign in packing dep.	DONE	-----
Evacuation aisles blocked in cutting dep.	DONE	-----
Evacuation map in Burmese	DONE	-----
Sign for fire extinguisher	in process	DONE
Scissors securely tied to the table	in process	DONE
First aid certificate	DONE	-----
Lift inspection	DONE	-----

DISCUSSED DURING INITIAL VISIT Nov. 4 th 2014	1 st FOLLOW UP VISIT Dec. 31 st 2014	2 nd FOLLOW UP VISIT Jan. 21 st 2015
Child Labor		
Young worker protection policy	DONE	-----
Management process		
Basic wages and job title in contract	DONE	-----
Resignation policy	DONE	-----

after Emergency exit signs installed



5

Princess Power Manufacturing Co. Ltd.

This company is a locally owned family business and was established in 2010 with an initial workforce of 150. The factory is housed in a 3-storey building and situated in Shwe Paukkan industrial zone. Over the last years the company has grown and currently employs 450 staff working on five production lines with 317 machines. Their main expertise is in manufacturing down jackets and pants.

Employees who migrated to Yangon for better jobs stay in company-owned dormitories. All employees are provided rice free of cost. Princess Power continuously works on improving working conditions and regularly trains their employees.

Princess Power Manufacturing participated in various SMART Myanmar trainings and workshops such as "From CMP to FOB" and the training for sewing machine mechanics. Recently, they started participating in the SMART Myanmar Social Compliance Academy.

As part of the improvement program the company had nine consultation visits by the SMART Myanmar SCP team. In seven of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.



U Tun Tun
Company Owner

QUICK FACTS

Founded:	2010
Number of employees:	450
Office Staff:	7
Production Workers:	443
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Woven, mainly down jackets & pants
Production Capacity:	15,000 pcs/month
Market:	South Korea, Japan



ENHANCING PRODUCTIVITY Good housekeeping

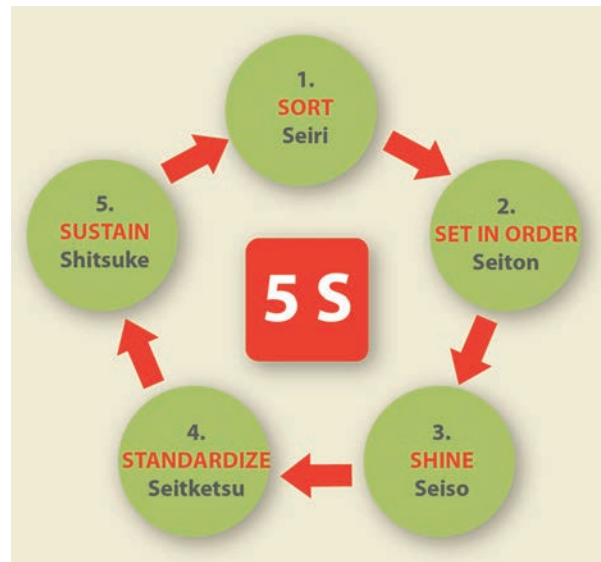
"A place for everything and everything in its place." This statement plus having no unnecessary items laying around is the essence of good housekeeping and the principle of 5S. 5S is the acronym for five Japanese words: Seiri (Sort), Seiton (Set in order), Seiso (Shine), Seiketsu (Standardize) and Shitsuke (Sustain) and represents the five steps for a systematic technique for good housekeeping. While general housekeeping is often underestimated of having a great impact on business, neglecting it causes loss of resources - employees' time, raw materials and equipment.

When the SMART Myanmar team along with the German experts from ESGE visited Princess Power for the first time, it was obvious that the company was struggling with organizing its production floor: All departments were running out of space which forced them to extend storage to aisles and walkways. Old machines and unused equipment occupied an area on the production floor, export cartons were scattered and wastage ready for dumping was stored in corners.

For Princess Power the visit of the experts was an eye opener. The management quickly realized that space constraints are not a by-product of an excellent order situation that they

have to live with, but a challenge that can be overcome with good housekeeping and department organisation. So the management put a complete overhaul of their production on its agenda.

The principles of 5 S



before Cutting department - the spread table cannot be used because of piled up bundles.



after The place is cleaned up. Only cut pieces that are needed for the daily sewing are prepared.



SMART Myanmar's SCP trainees and the German expert walked Managing Director Daw Lwin Lwin Than through all departments and requested her to join them in assessing the factory through the lens of a third party evaluator.

In the course of the walk-through it was noticed that "balancing" the production would facilitate a smooth production flow and remove space constraints.

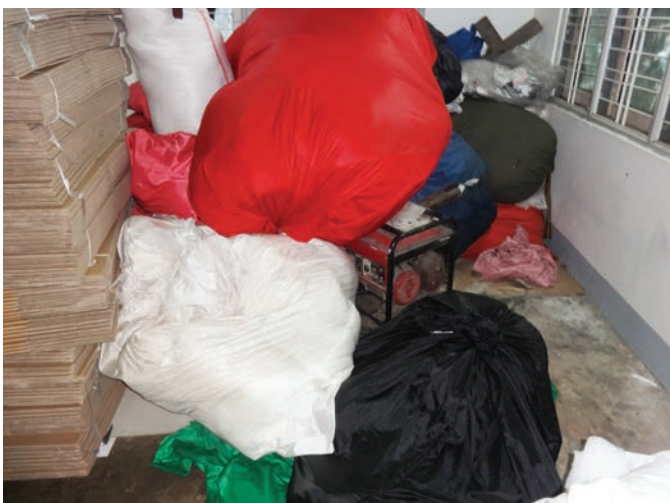
Management shall instruct the cutting department to only cut as many pieces as can be processed by the sewing department in a day. And the sewing department must only take in cut pieces according to their daily sewing capacity. If one department starts overloading then automatically the following departments end up in chaos which leads to decreased productivity.

The SMART Myanmar team and ESGE supported the company in training their staff to follow the 5S rules and clean up the workplace, to distinguish between necessary and unnecessary items (and remove the latter) and to look for ways to keep their workplace organized.

In Princess Power the management now encourages good housekeeping as a way of life – not just a special activity when visitors are coming.

As a result workplaces have become cleaner, well organized, safer and more pleasant for workers. Utilization of floor space has improved and the workflow has become smoother and more systematic and non value-added activities such as searching for tools, materials and documents have been reduced.

before Export cartons and wastage dumped in a corner.



after Export cartons collected and stored in one place.



before Drinking water bottles and empty water containers along with discarded equipment are scattered in the aisles.



after The management placed a new water tank for drinking water outside the production floor to be accessible for all workers



before Overloaded sewing floor due to feeding too many bundles into the line.



after The sewing line in-charge is only feeding as many bundles into the line as can be processed per day.



Princess Power is on a good way in attaining its goal for producing garments efficiently and ensuring safety for workers. A month after the clean-up the rate of rejected pieces had already decreased by 10%, and the productivity increased by 20%.

INVESTMENTS

Minimal investment; only the water tank and staff time for cleaning and training.

SAVINGS per month

20% increase in productivity.

10% decrease in rejection rate.

Rising White Tiger Manufacturing Co. Ltd.



U Saing Maung
Company Owner



QUICK FACTS

Founded:	2007
Number of employees:	367
Office Staff:	4
Production Workers:	363
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Knit/woven
Production Capacity:	20,000 pcs/month for down jackets
Market:	The Netherlands, Europe, Japan, South Korea, local market

Rising White Tiger was founded 2007 as “Oslo Garment” and is built on an area of 2.76 acres. In 2015, large investments were made in renovating and modernizing the factory.

Rising White Tiger is specialized in the production of down jackets. The company plans to expand its business with the EU, especially with retailers that are interested in moving their jacket production from China to alternative and reliable sourcing markets.

The company’s mission is to deliver an extraordinary level of personal and professional service to their customers.

Rising White Tiger participated in various SMART Myanmar trainings and workshops such as “From CMP to FOB”, the training for sewing machine mechanics and recently participated in the SMART Myanmar Social Compliance Academy.

As part of the improvement program the company had twenty consultation visits by the SMART Myanmar SCP team. In seventeen of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.

Maintenance and repair of equipment , OHS

ENHANCING PRODUCTIVITY



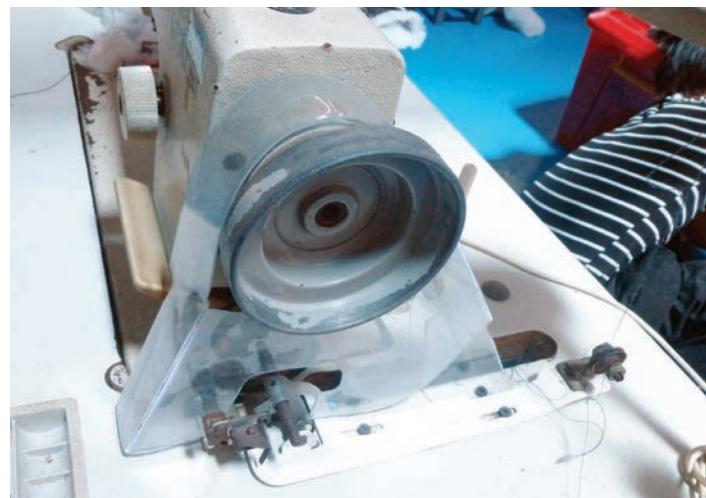
In Rising White Tiger, the majority of the sewing machines were not adequately maintained. Original parts from the manufacturer - such as safety and protection covers - were missing, risking injury of workers through moving machine parts and reducing the life expectancy of the machines.

Also, electric cables were sometimes damaged, exposing workers to accidents from electric shocks and causing short circuits. This resulted in inadequate safety standards and frequent repairs needed to upkeep the machines.

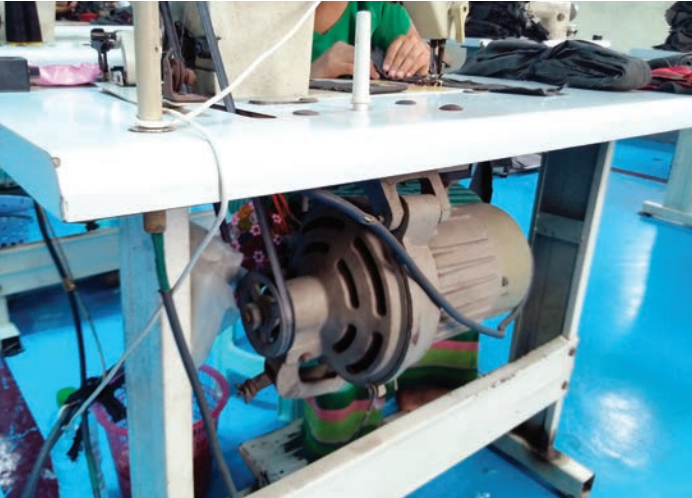
before Hand wheel without cover



after Hand wheel with newly built cover



before Motor unprotected due to missing cover



SMART Myanmar and international expert Mr. Oskar Loeffler from ESGE advised the management to instruct the team of mechanics to equip all machines with the missing original parts immediately to prevent accidents, avoid short circuits, reduce equipment breakdowns and costly repairs.

after Newly built cover protects motor and workers



Within three months Rising White Tiger's mechanics team built motor covers of metal sheets according to the original design of the manufacturers that only cost \$ 1 USD per machine. As a positive side effect, the modifications also stopped leakage of machine oil caused by clogged valves.



Quality assurance

During SMART Myanmar's first factory visit, a quite costly needle detector machine was spotted. The production in-charge confirmed that the machine was no longer in daily usage due to time pressure. The machine was occasionally used for metal detections, such as broken needles. Only randomly a few garments per order had been checked.

SMART Myanmar's international garment experts pointed out to the department in-charge the importance of assuring that workers do not modify or cancel individual production

steps because of time pressure. Furthermore, they emphasized the importance of quality control and that all garments should be checked by such kind of metal detector before packing to avoid customer complaints.

Today, the needle detector is now back in daily use assuring appropriate quality control and value-added production. The department in-charge allocates time for this quality control step when organizing the workflow and checks that the workers follow a proper procedure.

before Unused needle detector



after Needle detector as part of regular quality control





U Myint Soe
Company Owner



U Myint Soe is founder of the Shwe Sakar Co. Ltd. group and also chairman of MGMA. Shwe Sakar was a government run garment production unit until 2011 and was sold to the Shwe Sakar group. It is 100% locally owned. The factory is specialized in the production of jackets, pants, blouses and polo-shirts and has the capacity to produce suits and children's wear as well. The factory currently has 9 sewing lines with 425 machines and 800 workers. It also runs one designated training line.

The company is able to offer customers a competitive price on high volume orders. Due to its four segregated production units it also has the flexibility to mix fabrics and work with low minimum order quantities. Currently, the factory is only able to produce orders based on CMP delivery. However, it has plans to start FOB orders. Factory standards are based on company values: The management of the factory believes that working in a clean and organized environment motivates the workers to work efficiently. The factory aims to obtain BSCI certification in the future.

Shwe Sakar participated in almost all SMART Myanmar trainings and workshops and in the Social Compliance Academy. Additionally, senior management joined a study mission to Europe to visit relevant trade fairs, get information on social compliance and plan for the change from CMP to FOB.

As part of the improvement program the company had twenty consultation visits by the SMART Myanmar SCP team. Fifteen visits were supported by international garment and social compliance experts covering various topics.

QUICK FACTS

Founded:	2011
Number of employees:	857
Office Staff:	28
Production Workers:	839
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Woven - jackets, pants Knit - polo T-shirt
Capacity:	142,600 pcs/month
Market:	South Korea, Japan, EU

Machine maintenance ENHANCING PRODUCTIVITY

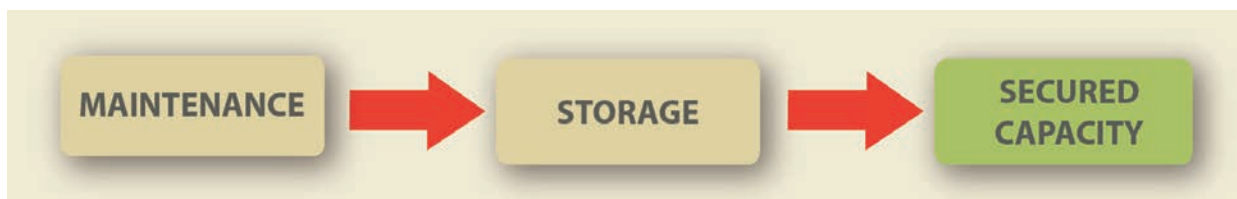


Previously, regular maintenance of machinery and equipment at Shwe Sakar was practically none existant. Unused sewing machines were stored in the production area and only partly in a separate storage room. None of these unused machines were covered to protect them from dirt and dust, nor were they serviced or repaired.

In cases of sudden machine break-downs in the sewing lines or an unexpected requirement to increase production capacity, stored machines needed to be cleaned and adjusted first to make them ready for production. This hampered the production flow and led to bottlenecks and, in the worst case, stopped the entire production.

SMART Myanmar suggested to develop a servicing schedule to ensure that machines in operation, as well as unused machines, are maintained at regular intervals. Stored machines are to be covered to protect them and oiled to prevent rust formation and, thus, keep them operational and ready for use at any given time. This ensures that the production unit is flexible and fast in replacing defective machines or setting up additional machines.

Within only 20 days the mechanics serviced all unused machines; oiled, adjusted and covered them. They are ready to serve as a backup. Shwe Sakar now has the flexibility to quickly set up additional machines to increase capacity or replace defective machines in a significantly shorter time than before.



before Machines not maintained or protected from dirt



after Machines are ready to be implemented in production at any time



USING RESOURCES EFFICIENTLY Machine spare parts

Generally, mechanics are lacking basic technical education. The mechanics informed the consultants that their existing knowledge is acquired from “learning by doing” and passed on from generation to generation. Due to a lack of knowledge, mechanics are often not aware of the causes of a defect and end up disassembling the equipment or removing parts. This is not only time consuming but also leads to abrasion and increased wear and tear of parts, which in turn makes it necessary to replace them more often. High consumption of spare parts is the result.

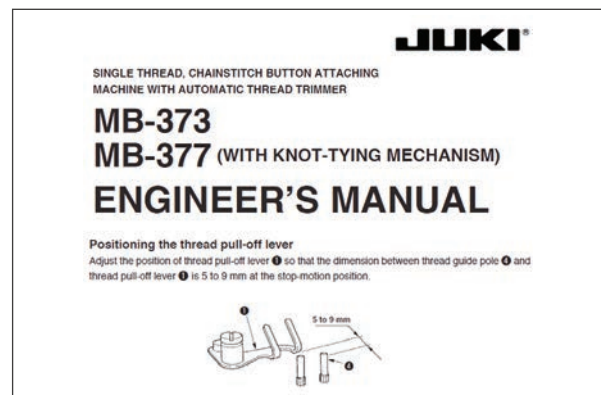
The international expert Mr. Oskar Loeffler from ESGE conducted a practical, hands-on training of mechanics in the factory. Furthermore, he suggested to avail of all training opportunities offered by machine suppliers in order to gain full knowledge of available machine functions and construction as well as maintenance and handling requirements. Mechanics shall also educate themselves by downloading the “Engineer’s Manuals” from the machine and equipment suppliers’ homepages.

After the training the mechanics downloaded the engineer’s manuals for most of the machines and kept them as hard copies for use in their daily work.

“I am really satisfied because now I have detailed knowledge of each machine and know how to handle all of them.”

Comment U Myint Htay – Mechanic Supervisor

Downloaded sewing machine manual



Wear and tear effect



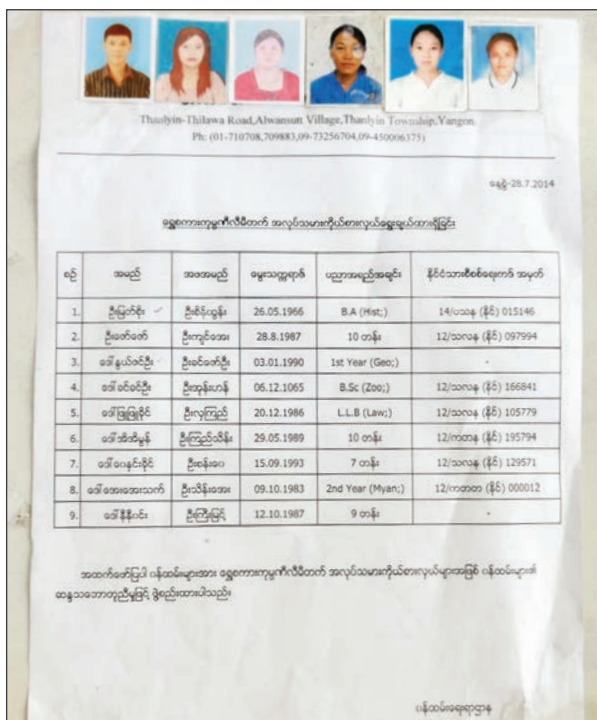


IMPROVING SOCIAL & ENVIRONMENTAL STANDARDS

As part of the Social Compliance Academy conducted by Systain Consulting, SMART Myanmar visited the factory with the experts of Systain Consulting to give advice on social standards. It was found that working conditions were not in line with international social standards, nor did a social compliance policy exist.

SMART Myanmar and Systain Consulting conducted an assessment of the working conditions and based upon the findings of the assessment drafted a Corrective Action Plan (CAP) jointly with factory management. The management of Shwe Sakar acted fast and implemented 13 out of 19 suggested improvement measures within ten weeks. The implementation of the remaining 6 measures is in process.

Worker committee members



DISCUSSED DURING INITIAL VISIT Nov. 11 th 2014	1 st FOLLOW UP VISIT Jan 1 st 2015	2 nd FOLLOW UP VISIT Jan. 19 th 2015
Child Labor		
Child labor policy	in process	DONE
Health check for new labors	in process	DONE
Management process		
Labor contract	in process	DONE
Human resource procedure	DONE	-----
Resignation policy	DONE	-----
Health and Safety		
Fire extinguisher signs, check list	in process	DONE
Clear evacuation escape route, signs	in process	DONE
Canteen	DONE	-----
Working Hours		
Working hours policy and overtime	in process	DONE
Remuneration (incl. benefits)		
Annual leave	DONE	-----
Freedom of association		
Suggestion Box	DONE	-----
Worker Participation Committee	in process	DONE
Discrimination		
Trainees not incl. contract and insurance	in process	DONE

“We are pleased to inform you that according to your suggestion about the trainees of the factory, now we will do an employment contract for each trainee and will cover social security. It will take effect from January 2015. Many thanks for your support and suggestion.”

Comment Daw Shwe Zin Oo
HR Manager

Ms Nancy Feng from Systain Consulting during a factory visit with staff



8

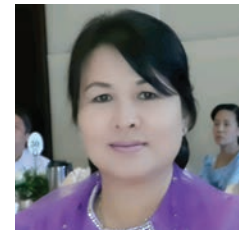
Shweyi Zabe Garment Manufacturing Co. Ltd.

Together with her husband, U Soe Than, Daw Aye Aye Han set-up Shweyi Zabe Gament Manufacturing company in 2000 with initially just three production lines for t-shirts and polo shirts for the American market. Through their focus on continuous skills development and training, Shweyi Zabe succeeded in broadening its product range and now has the capacity to manufacture a large range of diverse knit products. The company became known for producing swim wear and children’s wear. The factory presently has seven sewing lines with almost 400 sewing machines including one training line for newly recruited workers.

The factory has expanded its services and offers customers a sample room to develop their individual styles and patterns together with the factory’s production team. Shweyi Zabe acquired certification from the German Otto Group and is preparing for BSCI certification.

Shweyi Zabe participated in almost all SMART Myanmar trainings and workshops such as “From CMP to FOB”, the training for sewing machine mechanics and recently the SMART Myanmar Social Compliance Academy. Additionally, they participated in a study mission to Europe to visit relevant trade fairs, get information on social compliance and explore how to change from CMP to FOB.

As part of the improvement program the company had twenty-seven consultation visits by the SMART Myanmar SCP team. In twenty-one of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.



Daw Aye Aye Han
Company Owner

QUICK FACTS

Founded:	2000
Number of employees:	339
Office Staff:	21
Production Workers:	318
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Knit
Production Capacity:	100,000 pcs/month
Market:	Germany, South Korea



ENHANCING PRODUCTIVITY Production planning and monitoring software

Shweyi Zabe was not always able to achieve the expected and pre-planned daily output. They could not identify the problem, because the management had no data on the efficiency of each department and worker output due to inadequate record keeping. In addition, workers received the same wages based on their skill level no matter if they reached their daily target or no production bonus.

SMART Myanmar and experts from ESGE recommended a payment system which incentivize production according to each individual worker’s performance. Apart from transparency of workers’ performance, the payment system also captures figures of overall productivity throughout all production departments, thereby yielding powerful data essential for effective production planning.

The precondition for such a system is to have correct and up-to-date data of the whole production process starting from cutting to sewing to packing. ESGE recommended to install computer software which is linked to a barcode scanner and printer in order to generate all necessary data.

Computer software linked to barcode scanner and labels for bundles



Mr. Hans Creuzberger from ESGE and SMART Myanmar SCP consultants training a staff member



Office staff recording production data



ESGE consultants trained factory staff on how to operate the software and implement the related steps for continuous recording of in-line production data. The software set-up required to first enter detailed basic data related to workers, production orders and each step of the production from cutting and sewing to finishing and packing. Jointly, with the ESGE expert, the production technicians fed in the basic data and carried out trial runs, initially for only one test sewing line to capture the in-line production data they recorded the actual input and output figures based on bundles of work in the test line.

Likewise, the workers were also trained on how to handle the labels on garment bundles for recording their received and finished pieces. After each work step the workers collected the labels with the barcode they had processed during the day. In the evening the workers were instructed to hand over the labels to the department in-charge and the office staff scanned them into the software the next morning.

The first result was an eye-opener for the management. A precise overview of the overall daily production made it possible to intervene to ensure a smooth and efficient work flow and plan future production capacity in case of bottlenecks. The production data of workers informed management about their individual performance which is a precondition for introducing an incentive-based payment system.

U Soe Than, Director of Shweyi Zabe, explained that the improved wage system makes it necessary for an owner of a garment factory to know about the actual productivity of his workers.

“I am confident about the software. It gives me the information and I can also discuss with my employees concerning their wages and performance.”

Comment from Director U Soe Than

In-line communication

Previously, when tailors needed mechanical assistance the tailors informed the line in-charge. E.g. when workers faced mechanical problems with their sewing machines they informed their line in-charge who in turn looked for an available mechanic to plea for support in solving the problem.

When workers completed their bundles and needed fresh ones to continue working, they were either waiting for the line in-charge to be nearby to inform him about this or left their machine to fetch fresh bundles themselves.


SMART Myanmar’s ESGE experts suggested a very easy and efficient in-line communication system using signs at sewing machine tables. According to their needs the tailors choose the particular sign and place it in the thread stand. This gives the line in-charge and mechanics a clear message of needed support and speeds up their response.

USING RESOURCES EFFICIENTLY



“We recognize that the sign investments improved our internal communication and are time saving. The tailors appreciate quick support and fewer interruptions due to non verbal communication.”

Comment from Managing Director Daw Aye Aye Han and Director U Soe Than

BEFORE	AFTER		
Line in-charges have difficulties in managing work flow due to inefficient communication.	Easy and efficient in-line communication system using signs at sewing machine tables.		
Production interruption when workers needed fresh bundles to continue working.			
Longer production interruption when mechanic is needed due to communication hierarchy.			
	Work needed. (new bundles)	Mechanic needed. (machine defective)	Ready to move. (remove finished bundles)

INVESTMENTS

\$ 2 USD for a signage set per sewing machine.

SAVINGS

Production flow interruptions minimized.



IMPROVING SOCIAL & ENVIRONMENTAL STANDARDS Fire safety

In August 2014 the factory halted production for a fire safety workshop in the factory which all employees had to attend. The local fire fighting department of the Insein Fire Brigade of the Ministry of Internal Affairs trained the staff on fire safety issues, emergency procedures in case of fire and demonstrated fire safety equipment.

The workshop consisted of theoretical classes followed by a demonstration of the fire safety equipment outside the building. The workers had the opportunity to use a fire extinguisher and get familiar with the handling.

Theoretical classes were followed by a practical demonstration



Hands-on training for the workers



Thiri Sandar Garment & General Trading Co-op Society Ltd.

9



Daw Htay Htay Aye
Company Owner



Thiri Sandar is a family garment factory run by two passionate sisters. The company is based in Aung San Ward of Yangon and was set up by Daw Htay Htay Aye to produce both, knits and wovens. Thiri Sandar exported knitted wear for several years between 1994 and 2003 to USA and from 2005 to 2009 curtains and blankets to Germany. They also developed expertise in cut and sew knit garments over time. In recent years, Thiri Sandar has expanded its expertise to make pleated and highly styled woven dresses in fabrics such as chiffons, linens, cottons and silks. It also offers very fine cotton and linen women's wear fashion shirts for the Korean and Japanese markets. The company can work with smaller quantity and highly styled orders of a minimum of 3,000 pcs as well as high volume basic styles.

Thiri Sandar participated in almost all SMART Myanmar trainings and workshops and attended the June 2015 Social Compliance Academy. Furthermore, they took part in a study mission to Europe to visit relevant trade fairs, where they gathered information on social compliance and how to change from CMP to FOB.

As part of the improvement program the company had twenty-five consultation visits by the SMART Myanmar SCP team. In seventeen of the visits, the SCP team was supported by international garment and social compliance experts covering various topics.

QUICK FACTS

Founded:	1994
Number of employees:	320
Office Staff:	7
Production Workers:	313
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Mainly knit/woven
Production Capacity:	85,000 pcs/month
Market:	South Korea, USA, Japan

Middle line tables installed

ENHANCING PRODUCTIVITY



Thiri Sandar could often not achieve the daily output and lead time calculated by the customer. During regular working hours they reached around 80-85% and the remaining output was accomplished with over time work.

The productivity suffered due to quality issues that required garments to be re-worked. Profit margins decreased because the additional time necessary was not always considered in the calculation.

before No middle line tables



after Middle line tables installed



BEFORE	SMART RECOMMENDATIONS	AFTER
<p>Interrupted production flow, bottlenecks and limited space.</p> <p>Bundles could not be move properly and were spread all over, often getting dirty, thus causing high re-work rate.</p>	<p>Rearrange the sewing lines by machine sequence setting to avoid bottle necks and add middle tables for proper production flow.</p>	<p>Smooth production flow, bottlenecks are eliminated and daily output has increased to reach customers lead time by 100% and even more.</p>

INVESTMENTS

Zero capital investment for the rearrangement of sewing lines.

\$ 25 USD per line for middle tables.

SAVINGS

By reaching customers' lead time to 100% **overtime is no longer essential.**

The rate **of re-working reject pieces decreased by 60%.** Orders are sufficiently profitable now.



USING RESOURCES EFFICIENTLY

Containers for bundle movement

Since not all pieces with quality defects could be reworked, a substantial percentage had to be rejected. Thiri Sandar had an approximate rejection rate in their raw material purchase of around 10% which is much higher than the international average of 1-3%.

In addition, most of the pieces which had been re-worked needed to be washed with a high quantity of water, cleaning supplies and required other auxilliary equipment (e.g. racks, hangers). According to Thiri Sandar around 70% of the daily output previously had to be washed, especially the light colored garments.

A very positive side effect of the improvement by the middle line tables was that it provided clean space for bundle movement and eliminated bottlenecks in the production flow. Garments are no longer on hold and spread around. For more protection especially for light colored garments SMART Myanmar advised to purchase storage containers for movement between various departments.

Furthermore, regular housekeeping is a major factor to avoid garments getting into contact with dirt and stains. SMART Myanmar advised to implement a regular housekeeping schedule. To avoid production interruptions the team recommended cleaning should be done during break times.

before Drying stained garments after cleaning



after Containers in use

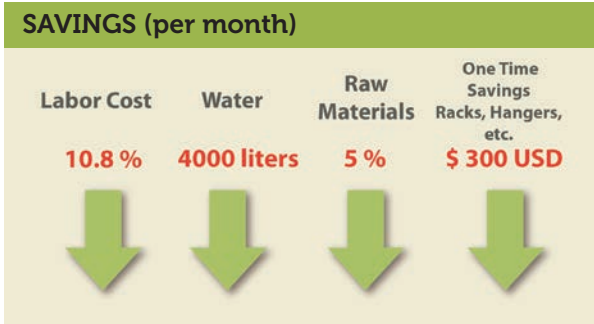




BEFORE	SMART RECOMMENDATIONS	AFTER
70% rework rate.	Middle tables between twin lines (see Productivity)	10% rework rate.
10% additional raw material cost.		Only 5% additional raw material cost.
Bundles cannot move properly and are spread all over getting dirty, hence high re-work rate.	Containers for convenient bundle movement. Regular housekeeping schedule.	Reduction of working hours and decrease of raw material and resources use.

INVESTMENTS

\$ 100 USD for all containers (for moving bundles).



Reducing staff fluctuation **IMPROVING SOCIAL & ENVIRONMENTAL STANDARDS**



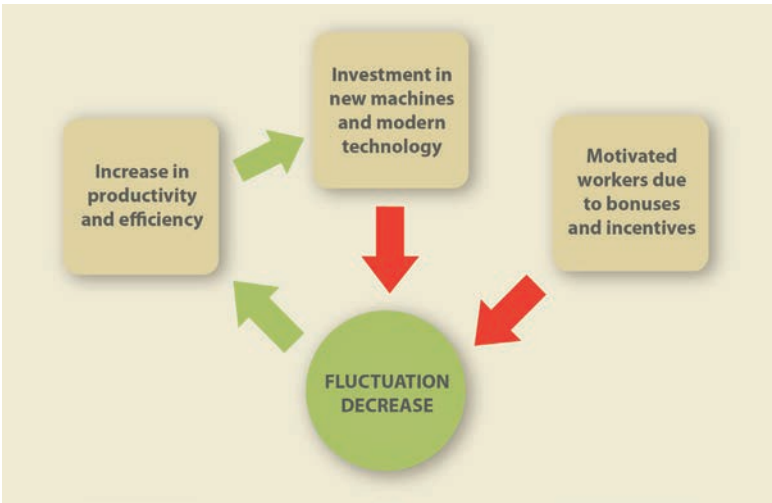
In the past, labor fluctuation in the company averaged 15%. The management explained that workers migrated to nearby competitors for slightly higher wages. High labor fluctuation is costly, training new workers is expensive, so too is managing a business with constant interruptions in production flow due to high turnover.

invest in new machines and modern technology. Workers also appreciate the cleaner work space and modern machinery as an investment which improves their daily work environment. As such, labor turnover decreased substantially.

SMART Myanmar’s suggestions to improve productivity, efficiency and resource reduction were implemented by the management within a short time. Savings from implementing SMART Myanmar’s suggestions led to more profit for the business, which allowed the management to

The **fluctuation decreased from November 2014 till February 2015 from 15% down to 7%**. To reward and incentivize good performance, the management provided 1 hour extra wages if daily output was reached without over time and one extra company outing day per year.

Mechanism in reducing staff fluctuation



“The SMART Myanmar project is very beneficial for our industry. We look forward to further technical help. We benefitted very much from the suggestions and methods to improve our overall function of the factory.”

Comment from Dr. Win Kyi,
President of Thiri Sandar

10 Tri Sea Co. Ltd.

Tri Sea is a family business engaged in garment production since 1996. Previously, Tri Sea exported to the USA but for the last several years has worked primarily with Japan and EU buyers. It is located in the middle of Yangon. Until 2003 the company exported t-shirts, polo shirts and men's trousers. After 2003 Tri Sea switched production and started to produce underwear such as brassieres, panties, sport bras, boxer shorts and camisoles for Japan.

U Kyaw Win is not only the managing director of the factory but also vice chairman of the Myanmar Garment Manufacturers Association (MGMA) and therefore highly interested in promoting and supporting the garment industry.

The factory utilizes quality equipment such as Juki sewing machines, a fabric inspection machine, a needle detector and a loose thread sucking machine.

Tri Sea participated in various SMART Myanmar trainings and workshops such as "From CMP to FOB", "Merchandising" and the training for sewing machine mechanics.

As part of the improvement program the company had thirty consultation visits by the SMART Myanmar SCP team. In twenty-two of the visits the team was supported by international garment experts covering various topics.



U Kyaw Win
Company Owner

QUICK FACTS

Founded:	1996
Number of employees:	300
Office Staff:	7
Production Workers:	293
Ownership:	Myanmar
Production Mode:	CMP
Product Range:	Knit/woven
Production Capacity:	210,000 pcs/month
Market:	Germany, USA, Japan



ENHANCING PRODUCTIVITY Tailor training

Tri Sea's workers were mainly trained on one type of sewing machine and often workers were not skilled to perform particular production steps without the help of dummy stitches. The line in-charge provided helpers to those

workers that asked for it, increasing manpower and hence, production cost. A more efficient way is to train workers extensively before they are placed in the production line.

Sewing training by Ms Barbara Waeschle (ESGE)

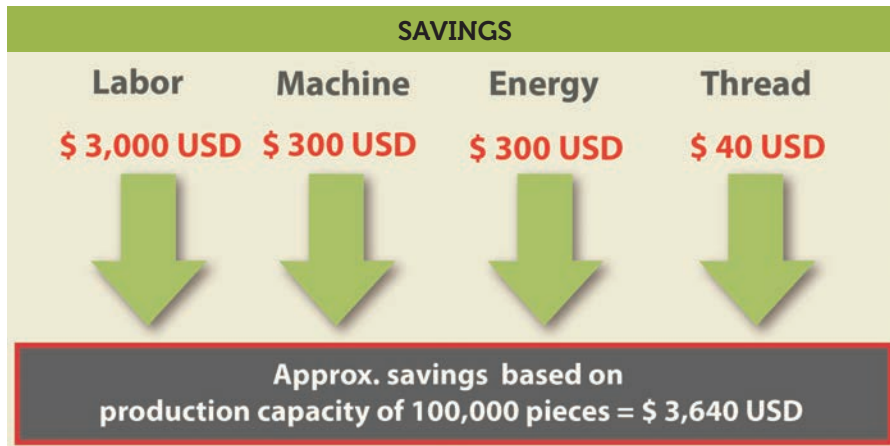


SMART Myanmar team at Tri Sea presenting the "Guideline for Tailor Training" to Tri Sea's staff



SMART Myanmar’s international consultant Ms Barbara Waeschle (ESGE) created a “Guideline for Tailor Training”. This guide-line describes in detail how an unskilled person should be introduced to sewing, but also shows in a practical way how to enhance the skills of experienced workers in order to upgrade them to multi-skilled workers.

Tri Sea’s line in-charge supported operators in practicing sewing without the help of dummy stitches. Since workers are better skilled, Tri Sea was able to save three staff for other operations and, thus, increased its capacity. In addition, the overall production time decreased which also saved production costs (labor, machine utilization, energy and raw material costs) per order.



Machine spare parts

USING RESOURCES EFFICIENTLY






The mechanics had difficulties sharpening the machine knives, often the knives were even less sharp after grinding. Since the mechanics were not aware of the correct grinding technique the life expectancy of the knives decreased and they needed to be exchanged more often which increased spare part costs.

U Tin Tun Aung picked-up skills very quickly and was able to teach the other mechanics. The life expectancy of the knives increased and the knife consumption dropped by 50%.

SMART Myanmar’s international expert, Mr. Oskar Loeffler (ESGE), taught Tri Sea’s chief mechanic U Tin Tun Aung the basics of grinding techniques according to various knife types.

“Thank you very much for precious training and knowledge. I would like to learn more.”

Comment - U Tin Tun Aung
Mechanic Supervisor

BEFORE	SMART RECOMMENDATIONS	AFTER
		
<p>Damaged knife due to incorrect grinding technique.</p>	<p>Training by Mr. Oskar Loeffler from ESGE on correct grinding technique.</p>	<p>Skilled mechanic supervisor who can now share his knowledge teaching others.</p>

INVESTMENTS

Zero capital investment, only staff training.

SAVINGS per year

Due to correct grinding technique the knives life expectancy increases by 50%.

Annual costs for new knives decreases by 50%.

Example for 40 machines:

Cost per knife pair (upper & bottom knife) \$ 0.80 USD x 40 machines x 12 (exchanging once a month) = \$ 384 USD

Decrease of resources by 50%: \$ 192 USD



IMPROVING SOCIAL & ENVIRONMENTAL STANDARDS

Occupational safety

SMART Myanmar's SCP team noticed that the operators in the cutting department were working at the table knife without wearing protection gloves. This was extremely dangerous. Injuries can be inflicted easily, in particular while cutting small patterns when the workers' fingers are very close to the knife.

SMART Myanmar advised the production manager that there are special chain gloves available in different sizes from S, M, L and XL for approx. \$ 60 USD per pair. Within a few days the production manager purchased gloves in all available sizes and instructed the cutting department in-charge to insist that his workers wear the gloves whenever operating the table knife, no matter if they are cutting small or large patterns, for their own protection.

before Cutting without gloves, no protection



after Cutting with gloves, well protected





SMEs for environmental
Accountability,
Responsibility and
Transparency

Summary and Aggregated Results

Summary and Aggregated Results

This chapter is a non-exhaustive compilation of SMART Myanmar's achievements, lessons learnt and observations in 10 show case factories. It represents the results of SMART Myanmar's efforts to contribute to the competitiveness of the sector by enhancing social and environmental conditions in the garment industry.

It also highlights the contributions of SMART Myanmar to productivity changes in the garments sector in Myanmar. The data presented in this chapter were collected in cooperation with the participating companies of SMART Myanmar's factories improvement program.



Results in the Thematic Areas Resource Efficiency & Productivity



The two SMART Myanmar key indicators for measuring results in this thematic area relate to quality and resource efficiency and to productivity.

Indicator 1

Significant improvement of the quality level of products and reduction of waste during production cycle up to 20 % based on current values in at least 5 show case companies.

Indicator 2

Significant improvement of current productivity up to 35 % based on existing production in at least 5 show case companies.

Training workshops and in-house consultancies that were delivered in the area of resource efficiency included topics such as:

- Quality assurance, prevention of defects using AQL 2.5, a quality management system.
- Good housekeeping using 5S, a Japanese shop floor management system.
- Pattern lay-out and cutting techniques.
- Machine repair and preventive maintenance using TPM (Total Productive Maintenance).
- Efficient use of energy and water.

In the thematic area of productivity trainings and practical advice focused on:

- Production planning and production control by introducing "quick wins" and more sophisticated measures such as line balancing and a special software for production monitoring and payment of performance based wages.
- Sewing techniques, line setting and work flow in production lines.
- Quick style change over.
- Payment systems which are more motivating for a good performance, quantity- and quality-wise.
- Setting up training sewing lines, training of multi-skilled workers, introducing tailor training guidelines.
- Introducing a traffic light system for in-line production flow.

Production improvement catalogues with practical suggestions and "before" and "after" scenarios were produced by the SMART SCP consultants.

The graph on the next page presents the outcomes of the factory improvement program for those companies that benefitted from both group workshops and in-house consultancy in resource efficiency and productivity.

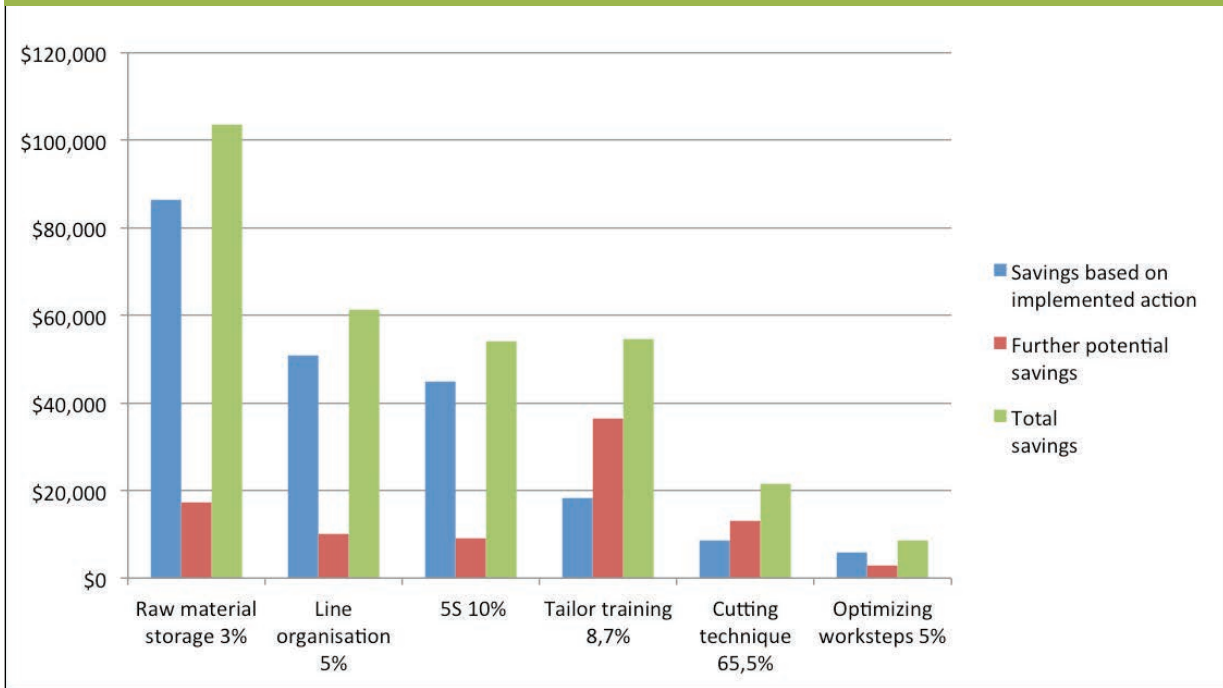
The graph distinguishes between realised and potential savings. **Six companies achieved reductions in wastage of raw materials and reduction in working time due to re-work in the range of 3% to 60% depending upon the type of improvement measure.** The improvements resulted in an enhanced overall productivity of the factory.

Owing to the fact that raw material costs (mainly fabric) account for the largest share of the total cost of a garment, companies that optimized usage of raw materials saw the highest positive impact on productivity. In all companies additional potential for quality improvements and efficient use of resources were identified. It is foreseen that with more training of mid-level managers and workers further cost benefits will be realized.

Two companies succeeded in reducing the manufacturing time for garments by eliminating unnecessary stitches, which in turn led to extra production capacity.

One of the participating companies implemented a computer software for production monitoring and payment systems with the intention to introduce a bonus system for workers which rewards skills and performance. The company expects that both technical factors and motivational factors will lead to a substantial increase in productivity. Two more companies are in the process to adopt the same system.

Benefits from Reduction of Wastage & Productivity Improvements in 6 Factories



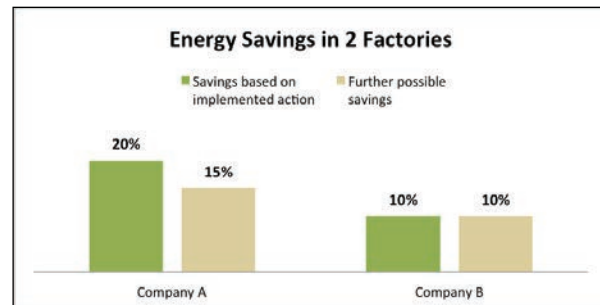
Indicator 3

Significant reduction of energy consumption, up to 15%, based on current consumption in at least 3 showcase companies.

Typically, companies took up the recommendations which required no or low financial investment such as energy saving bulbs, installation of individual light switches for work stations, insulation of steam pipes and reduction in use of compressed air.

The SCP consultants created a poster with ten "Energy Savings Tips" and useful hints on how to save energy which is displayed on the factory floors.

The two companies that installed separate switches for lighting reported energy savings of 10% and 20%, respectively.



Results in the Thematic Area Social Standards



The "Social Compliance Academy", as part of the Factory Improvement Program, focused on the 11 principles of the BSCI (Business Social Compliance Initiative) Code of Conduct and Myanmar labor laws.

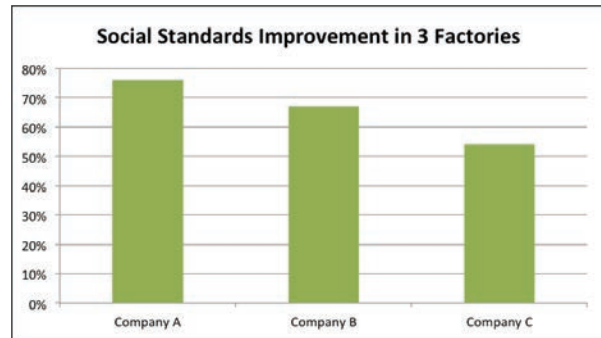
As in the other thematic areas, it was observed that companies made considerable progress by taking up "quick wins", i. e. measures that require no or low financial investments such as signage for fire safety, fire extinguishers, training staff on first aid, clear escape routes and exits, etc.

All firms acknowledge that social compliance is a success factor for business as is price, quality and lead time. Whereas firms recognized that there is a direct link between workers motivation and payment systems, it is felt that a business case based on local context needs to be built that reinforces that social standards, production output, absenteeism and fluctuation rates are interconnected.



After the group training and the in-house consultancy three companies improved their social standards ratings and reached 54%, 67% and 76% of the required compliance criteria (see graph to the right).

During a follow-up after three months of the first “Social Compliance Academy” two companies reported that they underwent external audits as per international standards and codes of conduct (BSCI and customers’ own codes) and were assessed with compliance rates of 70 to 80%.



Conclusion

While the data collected indicate that improvements are on par with the set goals of the project, it is obvious that there is still strong potential for further improvements in all thematic areas.

The current state of managerial knowledge that exists within the target factories suggests that mid-level management skills on the firm level are significantly under-developed. Increasing the skills of those managers is critical for the competitiveness of Myanmar’s garment sector.

SMART Myanmar has concentrated on in-factory capacity building via direct consultancies focused on productivity improvements, improved management trainings and modern HR management practices. This approach has coincided and reinforced advocacy aimed at the adoption of internationally accepted standards and best practices, which can help Myanmar’s garment sector in sustaining long-term benefits.

Working with factories individually, and in small group workshops, has been instrumental in quickly creating success cases for other factories to follow. With the work of ESGE and the visits of dozens of European brands and retailers, SMART Myanmar has also set a precedent for positive and fruitful cooperation between international buyers, the MGMA and the Myanmar government.

In terms of next steps, the MGMA has expressed a strong desire to continue building their association’s organizational capacity, including upgrading their vocational training center, in order to reach and consult with their member factories more broadly and to strengthen standards of best practice within the industry. First steps in this regard have already been taken, with the launch of MGMA’s new CSR desk (initiated by SMART Myanmar) and the organization of several seminars coordinated by the MGMA which have targeted the wider industry and which have succeeded in introducing topics to dozens of companies such as child labour remediation, chemicals management in apparel production and factory fire safety procedures and prevention.

List of Abbreviations

5 S	Workplace organization method originated in Japan
AQL	Acceptance Quality Limit (part of ISO 2859-1 standard). The AQL is the worst tolerable process average in percentage or ratio that is still considered acceptable; that is, it is at an acceptable quality level.
BSCI	Business Social Compliance Initiative
CAP	Corrective Action Plan
CMP	Cut-Make-Pack. The buyer keeps the development of new styles and the materials under his control, and outsources the labor-intensive jobs: cut, make (sew, trim, final QC) and pack.
EU	European Union
FOB	International Commercial Term for "Free on Board" – a term of sale under which the price invoiced or quoted by an exporter manufacturer includes all charges up to placing the goods on board a ship at the port of departure specified by the buyer. In the garment industry a mode of production in which the manufacturer purchases its own inputs, rather than assembling inputs provided by a buyer (CMP).
GIZ	Deutsche Gesellschaft fuer Internationale Zusammenarbeit
HR	Human Resources
MGMA	Myanmar Garment Manufacturers Association
MOQ	Minimum Order Quantity
MSDS	Material Safety Data Sheet
NSSA	National Skills Standard Authority
OHS	Occupational Health and Safety
QC	Quality Control
QS	Quality Assurance
SAM	Standard Allowed Minute. A term of industrial engineering. SAM is a method for calculating the cost of a garment based on cost of labor per minute to finish a garment.
SCP	Sustainable Consumption and Production
SMART	S MEs for environmental A ccountability, R esponsibility and T ransparency
SME	Small and Medium sized Enterprise
ToT	Train of Trainers
TPM	Total Productive Maintenance
UMFCCI	Union of Myanmar Federation of Chambers of Commerce and Industry



**SMART
Myanmar**



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The views expressed in this publication do not necessarily
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